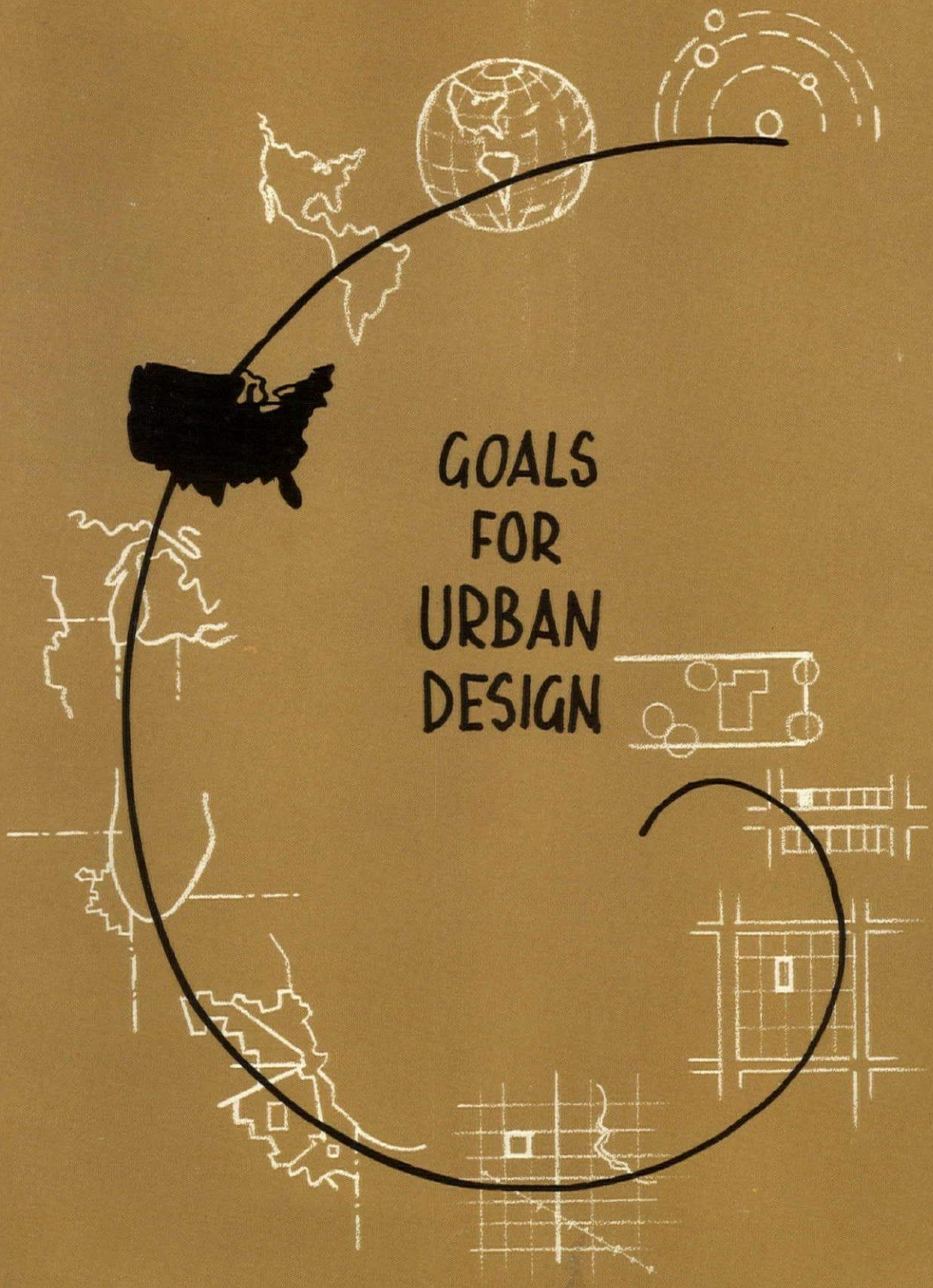
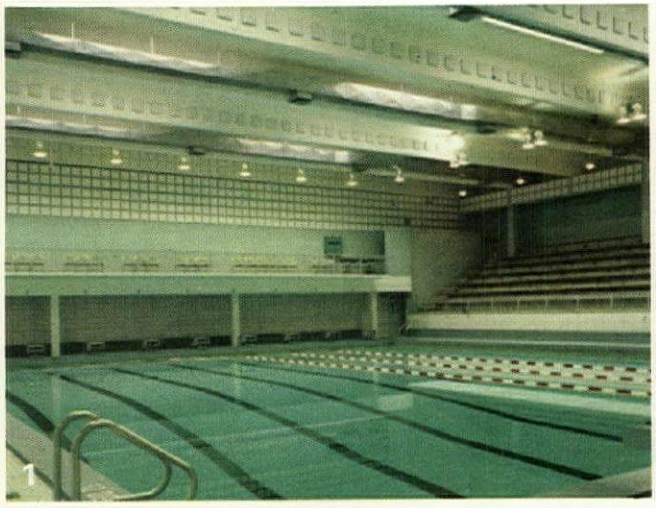
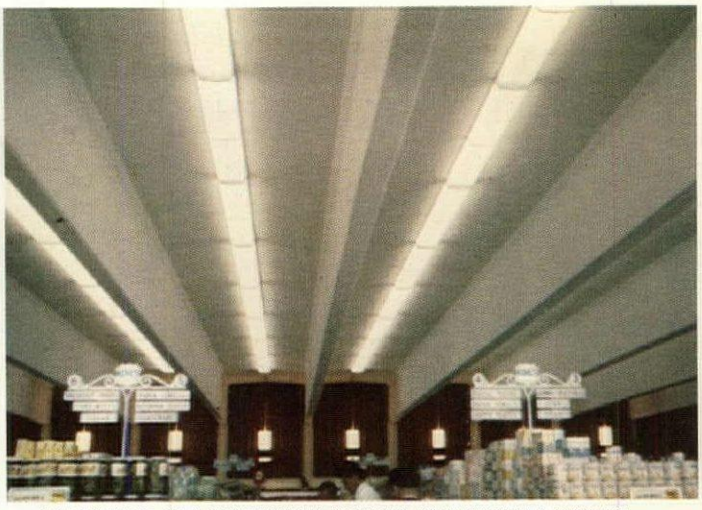
AIA JOURNAL

OCTOBER 1969

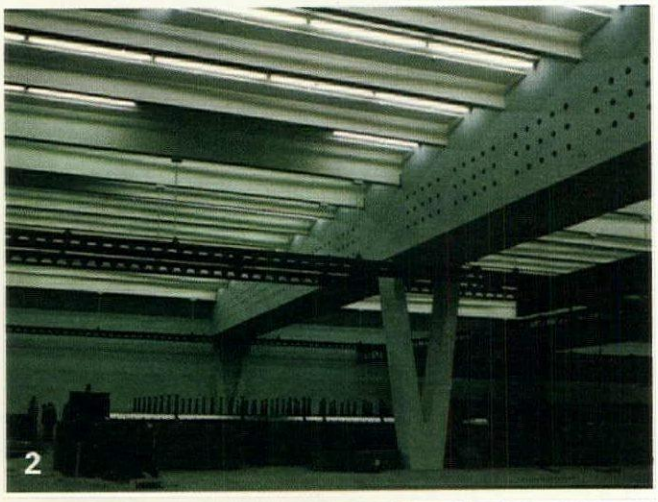


GOALS FOR URBAN DESIGN





ARCHITECTS: *(1) J. ALFRED HAMME & ASSOCIATES; (2) HARRY PAYNE & ASSOCIATES; (3) ALEXANDER KEAY & ASSOCIATES; (4) J. ALFRED HAMME & ASSOCIATES; (5) PIERSON, MILLER, WARE & ASSOCIATES*



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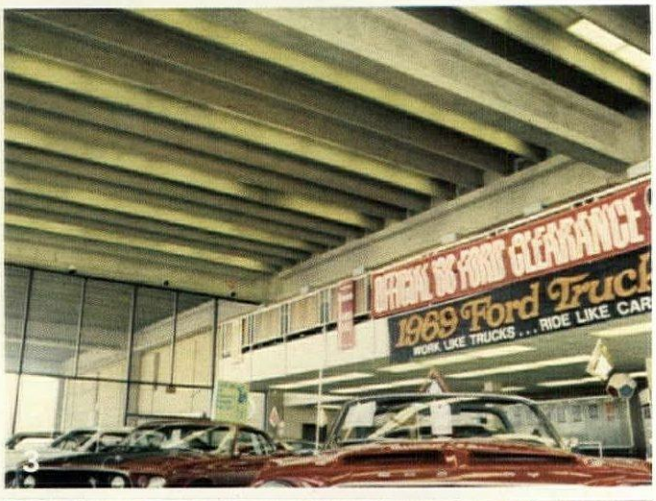

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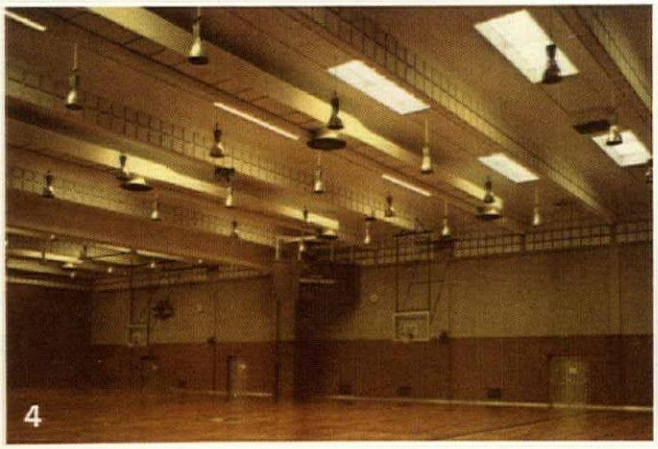

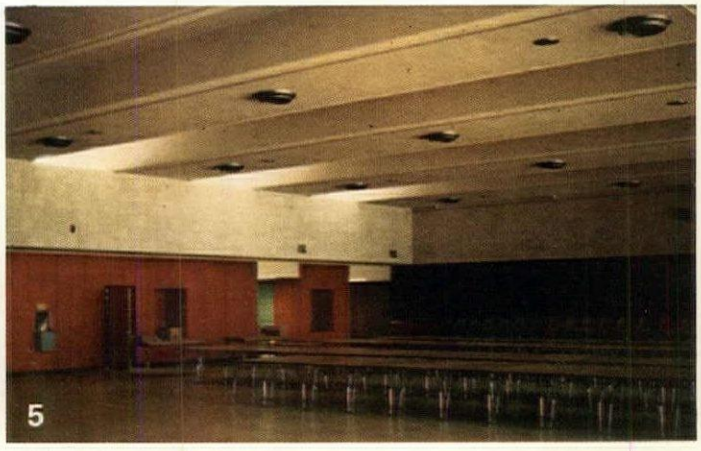

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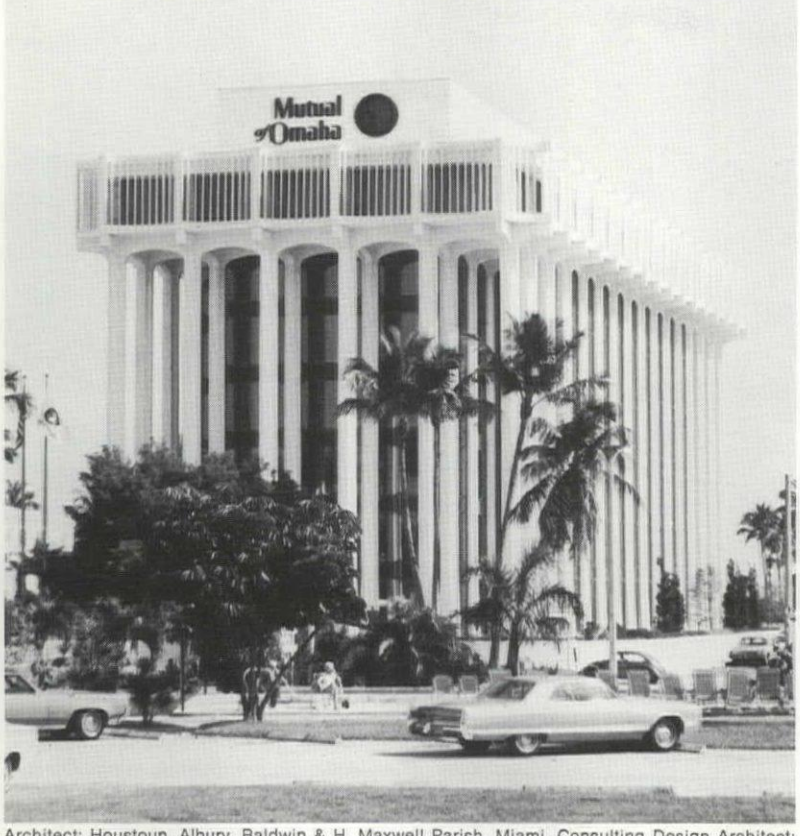

Architect: Houstoun, Albury, Baldwin & H. Maxwell Parish, Miami. Consulting Design Architect: Leo A. Daly Co., Omaha, St. Louis, Seattle, San Francisco, Washington, D. C., Hong Kong. General Contractor: M. R. Harrison Construction Corp., Miami. Elevators installed by: Miami Elevator Company.

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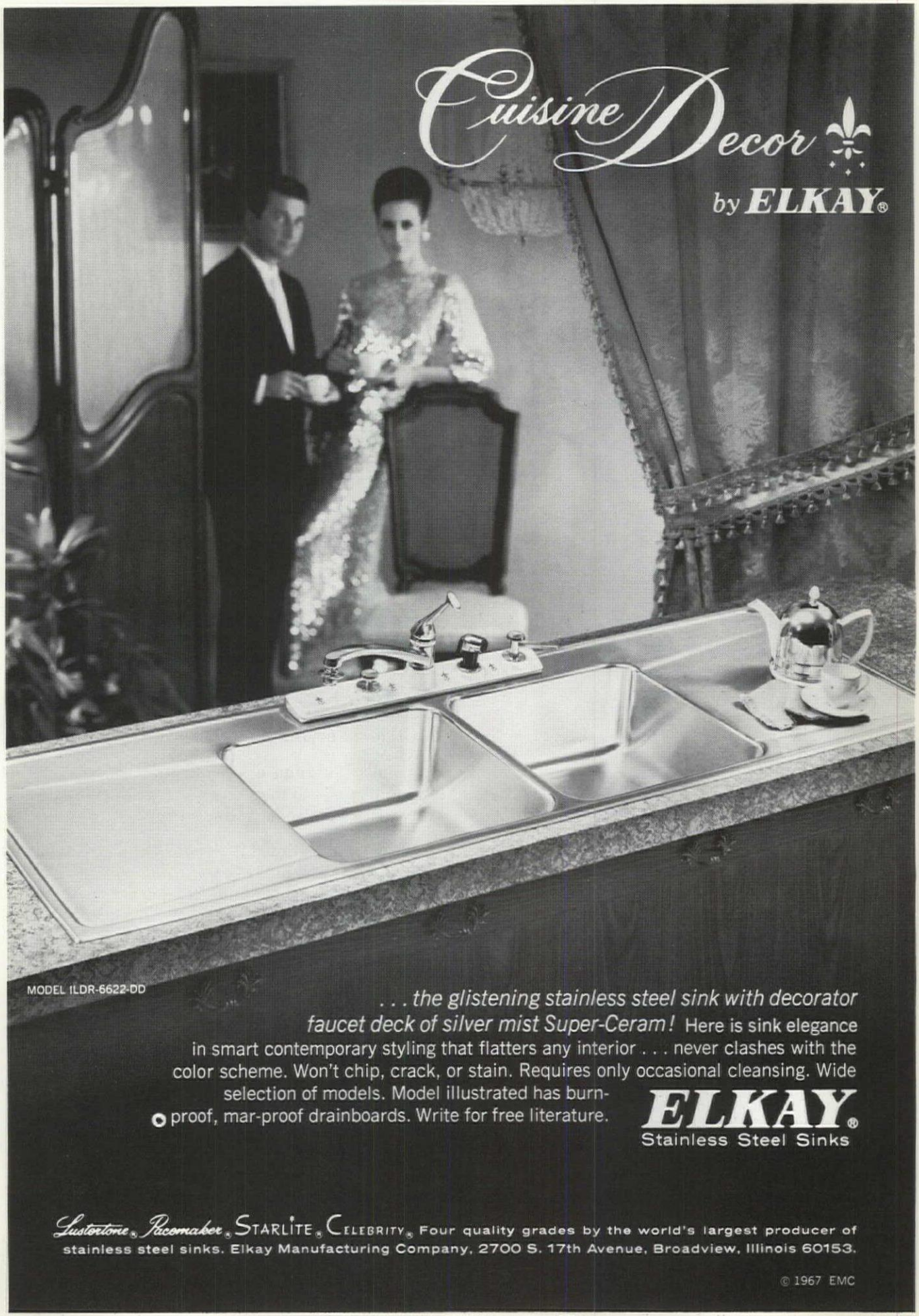

AIA JOURNAL

PUBLISHER
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AIA Journal, Official magazine of The American Institute of Architects, published monthly at the Octagon, 1735 New York Ave. N.W. Washington, D.C. 20006. Telephone: 393-7050.

Subscriptions
For those who are, by title, architects, engineers, architectural employees (specification writers, designers, draftsmen, estimators, planners or landscape architects), and to those in architectural education (faculty and schools), and to libraries, building construction trade associations, and building product manufacturers and their employees: basic rate—$5 a year, $8 two years, $4 to architectural students in the US, its possessions and Canada. For the same titles elsewhere: $10 a year. For all others: $10 a year in the US, its possessions and Canada; $18 a year elsewhere. Single copy: $2. Payable in advance. Publisher reserves the right to refuse unqualified subscriptions.

Change of Address
Give Circulation Department both old and new addresses; allow six weeks.

Second class postage paid at Washington, D.C.

Microfilm copies of this publication available from University Microfilms, 313 N. First St., Ann Arbor, Mich. 48107.

VOL. LII, NO. 4

Cover: UD goals from Charles W. Brubaker's sketchbook

Asides

Next Month: "Where is Architecture Going?" was the cover article in March 1968. We knew then that it was an open-ended question, and so in November we continue the search for some answers, devoting the entire issue to that subject. Our readers will get a sneak preview of the first report to be published by the AIA Committee on the Future of the Profession.

Reinforcing the central theme will be discussions of new licensing guidelines to be considered by both the AIA and NCARB boards; of practice with emphasis on incorporation; of education based on an ACSA survey; of building systems and the practitioner.

On the Move: A photographic exhibit of the work of the 1969 AIA Gold Medalist, William W. Wurster, FAIA (see AIAJ, July), will tour universities and museums around the country, beginning in Atlanta in mid-October. Persons interested in arranging for the exhibit should contact the sponsoring California Redwood Association, 617 Montgomery St., San Francisco, Calif. 94111.

One Good Turn: When the awards in the first annual Business for Beauty program were handed out in the nation's capital last month, one of the co-sponsors didn't know whether to laugh or cry. For Cities Service Oil Co., which arranged the contest with the General Federation of Women's Clubs, found itself presenting the third-place prize to Joe's Richfield Service Station of Ajo, Arizona.

But Stanley D. Breitweiser, executive vice president of CITGO, wearing another hat as head of the American Petroleum Institute's Committee on Service Station Environment, was most gracious about the whole thing. His article "An Oilman Talks Esthetics" appeared in August 1966. R.E.K.

PHOTO & ART CREDITS: 32 above left — Rondal Partridge; 32 above right — Julius Shulman; 32 center left — Morley Baer; 32 center right — Dwain Faubion; 51 right — Leo Holub; 56 left — News & Publication Service, Stanford University; 56-57 center, 58-59 center — Pratt Institute School of Architecture; 61 — Warren Reynolds & Associates, Inc.; 62 above — Ken Gorder; 62 center — Warren Meyer; 62 below — Jordan Lagman; 63 above — Shin Koyama; 63 center — Starks, Jozens, Nacht & Lewis; 63 below — Peter R. Bromer; 79 — Stanford Hughes; 98 — Norman McGrath; 102 below right — Jack Laxer. Sketches 46 through 60 courtesy Industrial Designer Society of America. Mort Goldsholl, designer.

A winning design uses Buckingham® Slate... naturally

St. Louis Architects Hellmuth, Obata & Kassabaum received the 1968 total design award from Institutions International and St. Louis Producers' Council for their distinguished and creative campus complex, Southern Illinois University at Edwardsville, Illinois. 40,000 square feet of unfading BUCKINGHAM® Slate flooring in 30" x 30" x ¾" squares adds natural beauty, texture and utility to the interior traffic areas. Make your next design a "winning design"... Specify BUCKINGHAM® Slate. Information in SWEETS and STONE Catalogs.

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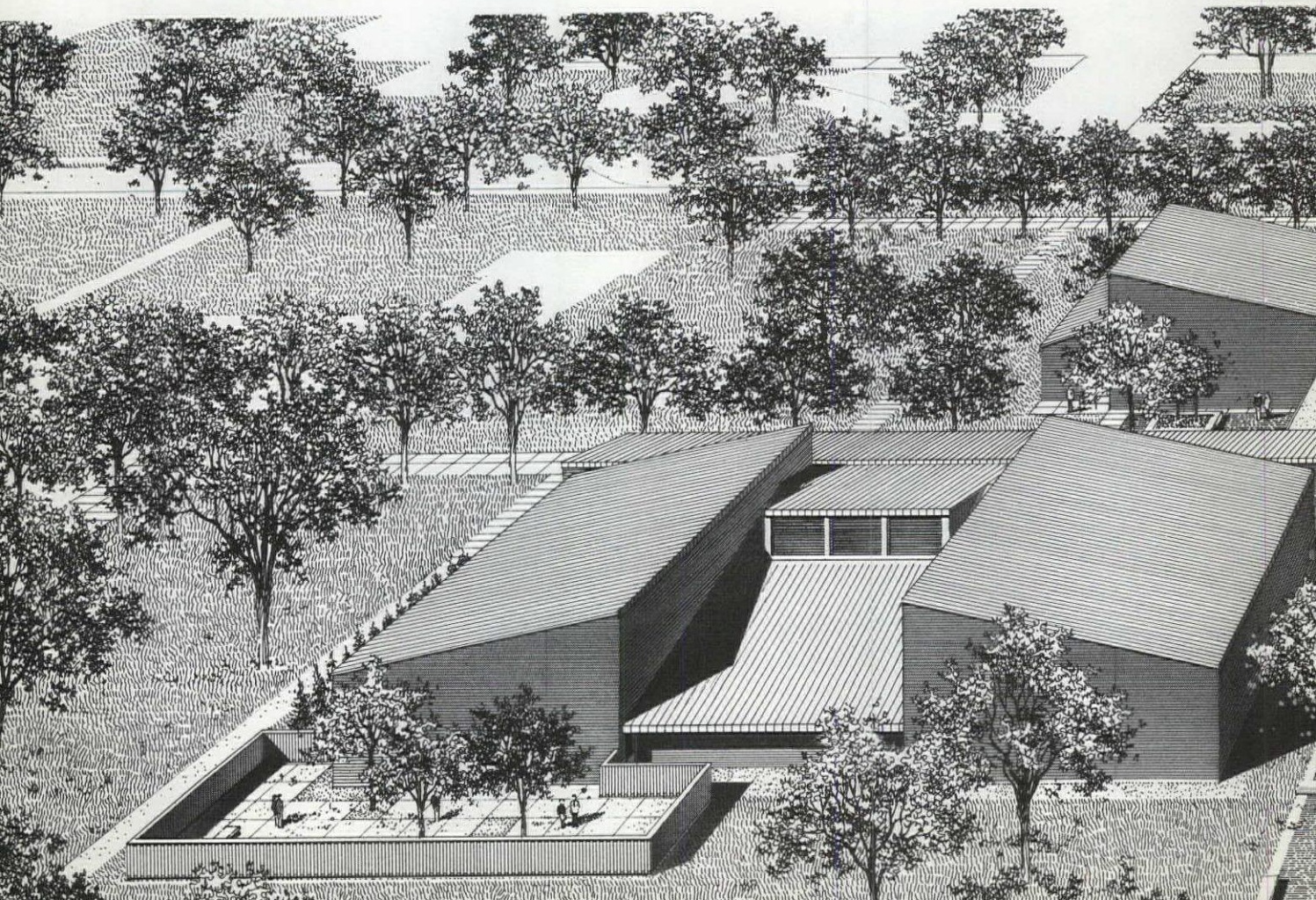
Buffalo, New York

Rendering by Brian Burr

Architects: Milstein, Wittek, Davis & Hamilton
Buffalo, New York

A project of the New York State Health and Mental Hygiene Facilities Improvement Corporation for the New York State Department of Mental Hygiene



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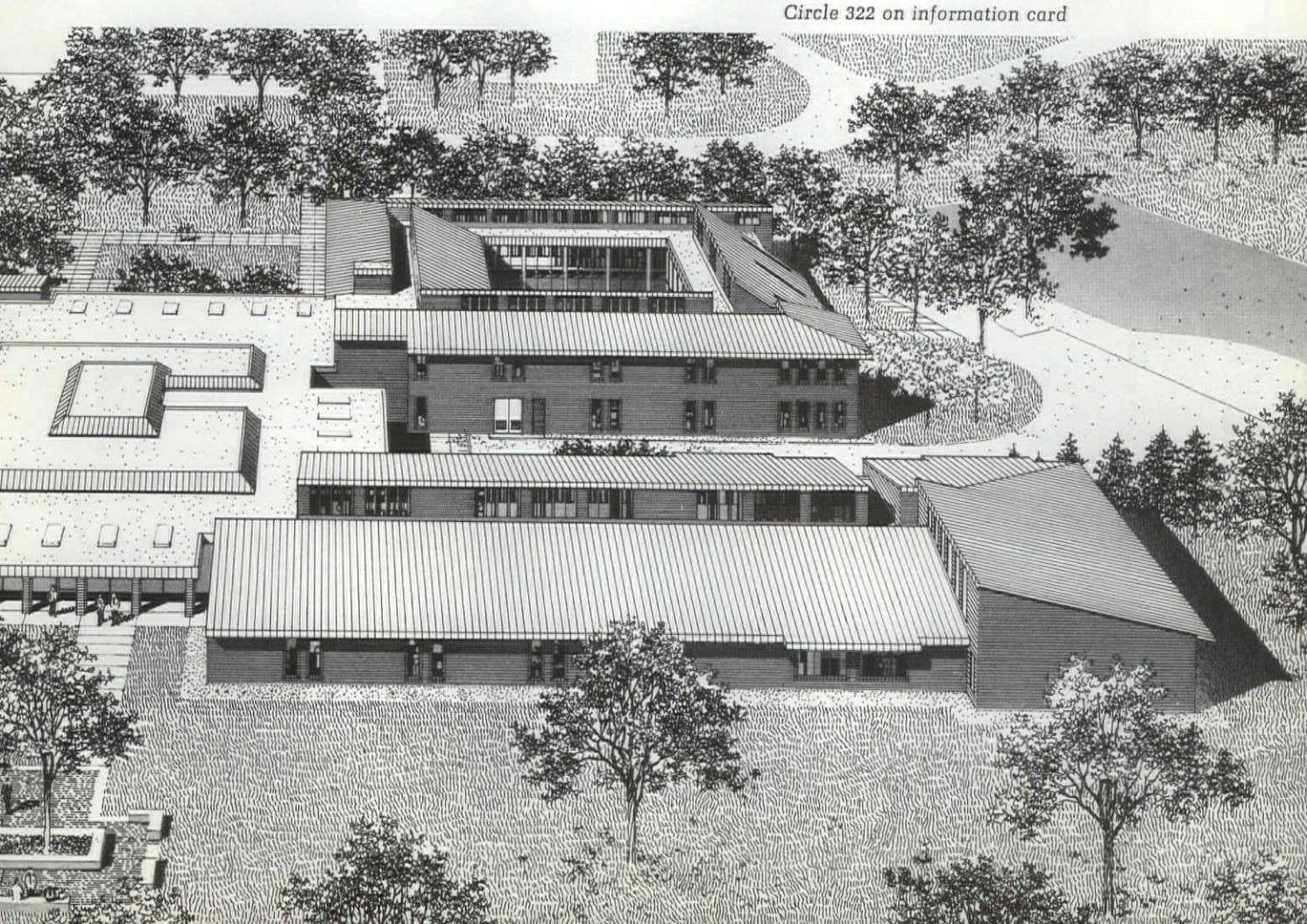


Newslines

Cutback in Construction, Other Steps, to Provide For Orderly '70s: Nixon

The cutback in federal construction and other steps taken by President Nixon last month are aimed, he said, at getting the nation started "toward more orderly building" during the fast-approaching 1970s.

"For this next decade, which may very well call for over $1 trillion of new construction, we are preparing for another great chapter in the building of our nation," Mr. Nixon said.

Not only did the President direct that all federal agencies immediately put into effect a 75 percent reduction in new contracts for construction, but he:

- "Strongly" urged state and local governments to follow the federal government's example.
- Warned state and local governments that "the degree and promptness with which they respond to this plea for partnership in action will be watched carefully. If the response proves insufficient, I shall need to restrict the commitments for construction that can be financed through federal grants."
- Urged businessmen to "reappraise their current construction plans, and to postpone projects that are not immediately essential."

Many segments of the building industry responded in a somewhat less than ouchless tenor. "If there are going to be massive cutbacks in construction, as far as this industry is concerned, I think wage-price controls would be preferable," said Carl H. Halvorson, president of the Associated General Contractors of America.

No Artificiality: But the President in his cutback statement said that "artificial means of holding down housing prices — whether through persuasion or coercion — cannot be effective in the long run. We must take action that will directly affect construction supply and demand, which is what really determines prices."

It was to assist housing that the President issued his decree. "The cost of building a home or an apartment house," he said at the outset of his statement, "has become exorbitant."

Unless fundamental action is taken now to reduce the rise in housing prices, Mr. Nixon asserted, the nation will fall "far short" of the 10-year goal of 26 million houses specified in the Housing Act of 1968. "Low income groups, and a large share of Americans who are better off as well, face the danger of being priced out of the housing market," he said.

Mr. Nixon said the *demand* for construction is clearly present and that it is for government to affect the *supply* — "specifically, to enlarge the industry's capacity and thereby reduce the upward pressure on the cost of construction of new housing."

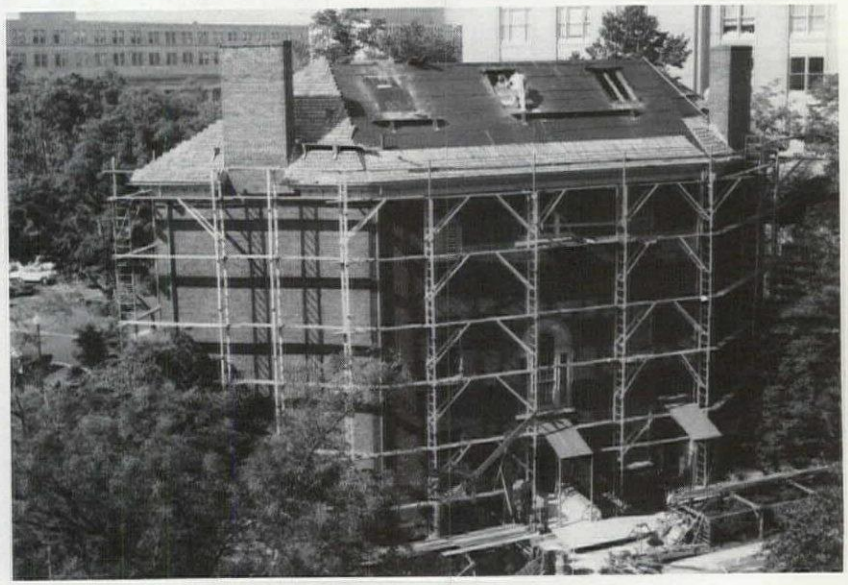
Two Kinds of Action: The President said that both short- and long-term action was needed, and his long-term or non-cutback measures were received more warmly by the industry.

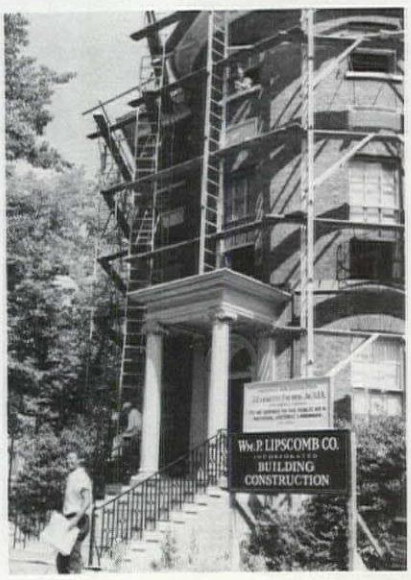
He said he was ordering the Secretaries of Labor and Health, Education and Welfare to "move promptly to provide for manpower training and vocational education in order to achieve a major increase in needed skilled labor for the construction industry."

He found, he said, that at the

Continued on page 16

Restoration of the Octagon Nearing Completion





Come the first of the year and the Octagon will be better than new and ready for its official reopening after its extensive restoration. The old house will look much the same as before, but new attractions will be the wine cellar and the kitchen, which are both completely overhauled. It will take some time, however, to collect the right furnishings for the latter.

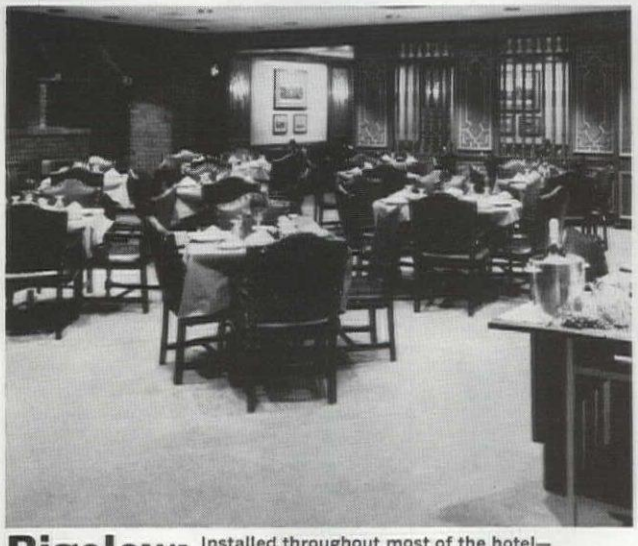
The framing structure in all principal rooms on the third floor has been replaced; the staircase between the second and third floors has been raised and strengthened. Heating and plumbing systems have been modernized; airconditioning has been installed; the roof has been shingled.

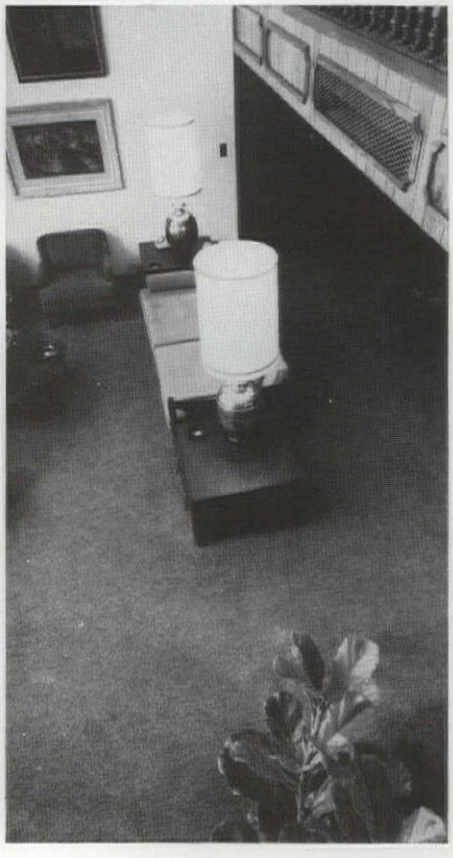
Restoration architect is J. Everette Fauber, AIA, Lynchburg, Va.

The place: The plush Marriott Motor Hotel, Houston, Texas

The man: Mr. Robert Greiner, General Manager

The carpet:





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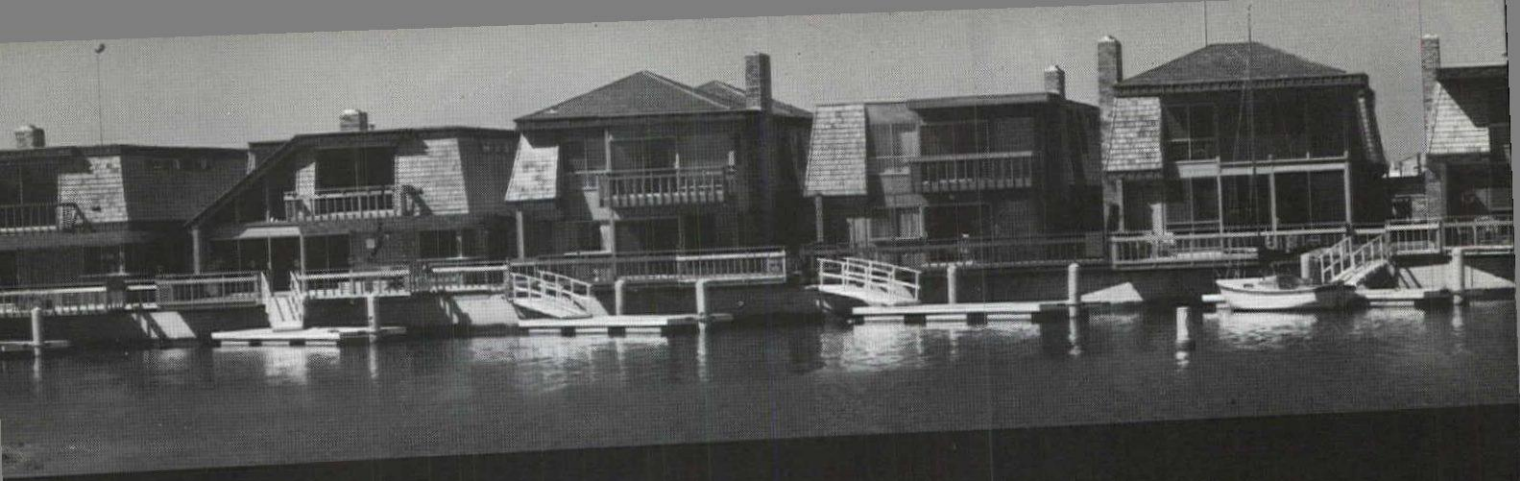
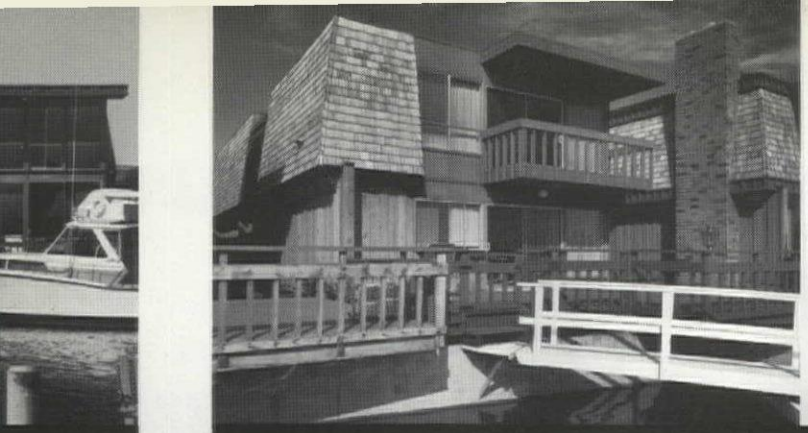
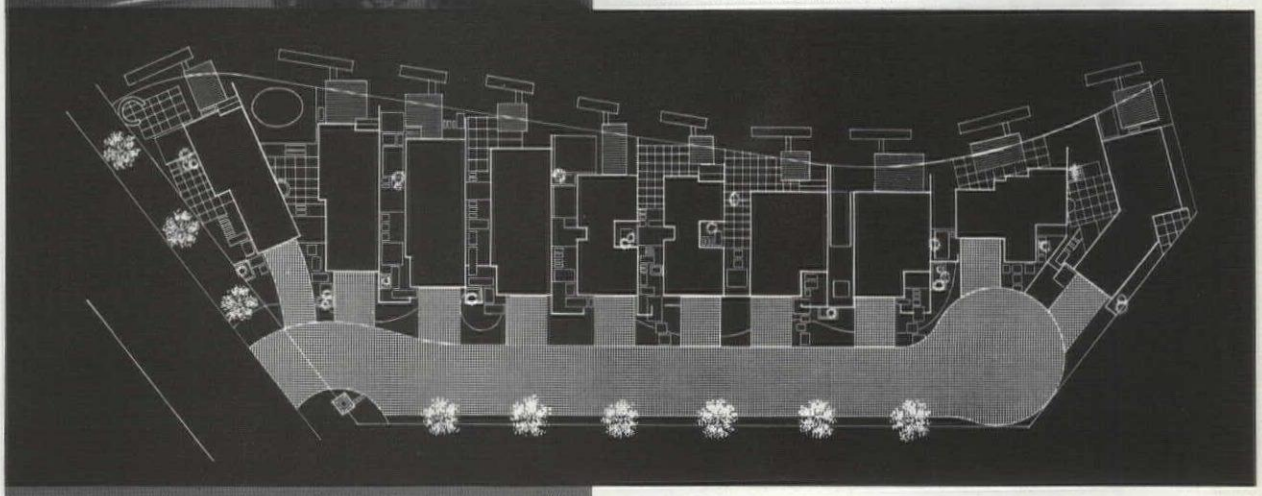
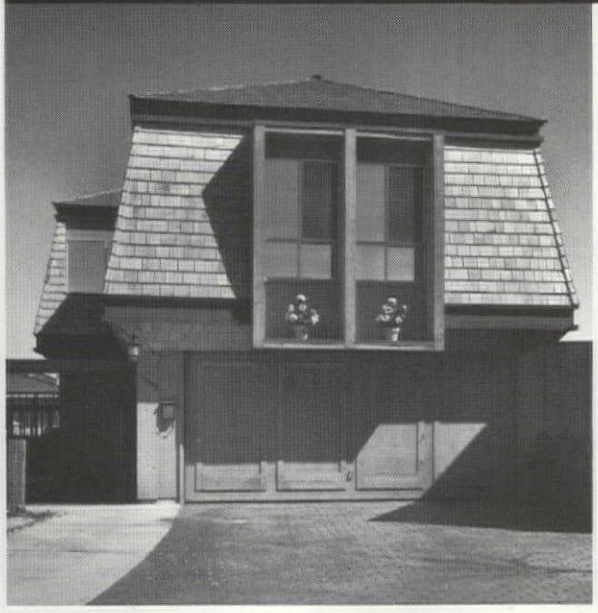


Red Cedar Shingles bring enduring beauty
to a colony of waterfront townhouses.



Certigrade Shingles, No. 1 grade, 16" Fivex.
Architects: B. A. Berkus Associates.





Tiburon Bay: an exclusive ten-home community in Huntington Harbor near Los Angeles. An enclave of rustic beauty in an urban environment, this colony promises to maintain its charm and elegance without change, for decades.

One reason is that man-made and natural barriers prohibit haphazard expansion of the site. Owners are free of future incursions into their secluded waterfront realm.

Another reason is the lasting protection afforded to exteriors by extensive use of red cedar shingles. Naturally insulative and weather resistant, cedar sidewalls project a timeless beauty and require no maintenance.

Cedar's contribution extends further. The adaptability of the shingles permits diverse design statements for individual townhouses. And the rich texture of the wood complements brick and cobblestone to bring continuity to the development.

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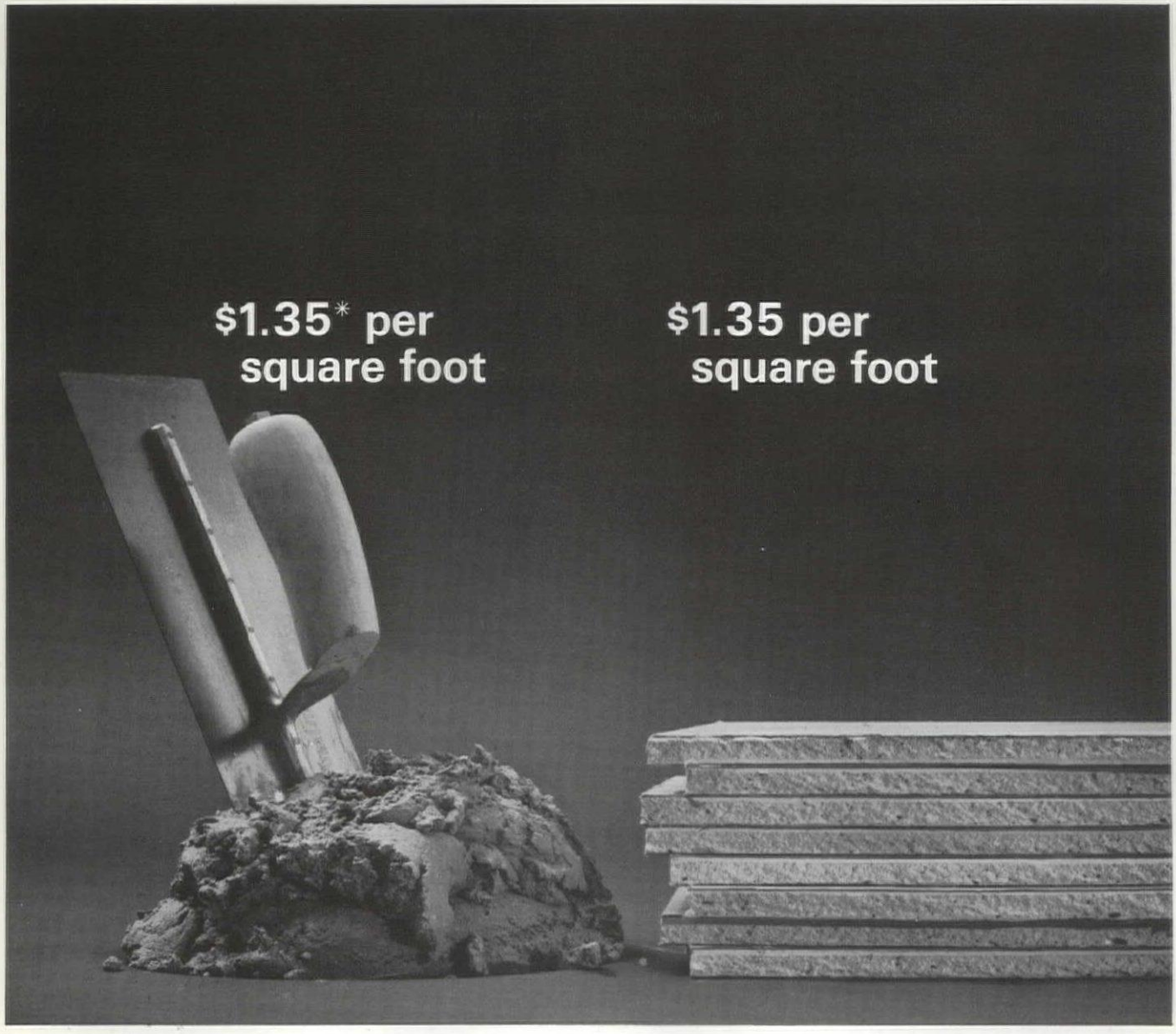

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Is the tight mortgage money market hurting your business?

by **Norman Strunk,** *Executive Vice President*
United States Savings and Loan League

If you are in the home construction industry, you know by now that a housing "crunch" is here.

The demand for homes is strong. We are at least half a million units a year behind estimated need. Looking ahead, the need will keep growing as family formations rise through the 1970's and beyond.

Notwithstanding the strong demand, we are building single-family homes at about half the rate we built ten years ago. A lot of prospective buyers and willing builders have to stand pat right where they are. Construction workers, builders, real estate salesmen, contractors and the thousands of companies who supply the industry with everything from air conditioners to zinc flashing are feeling a gradual cooling of demand for their services and products.

What has happened, as you know, is that mortgage money has become scarce, and the cost of available money has climbed. This is because some people recently have not been putting their customary savings in mortgage-lending institutions. Instead, they have been seeking a higher rate of return, even though it may also involve greater risks.

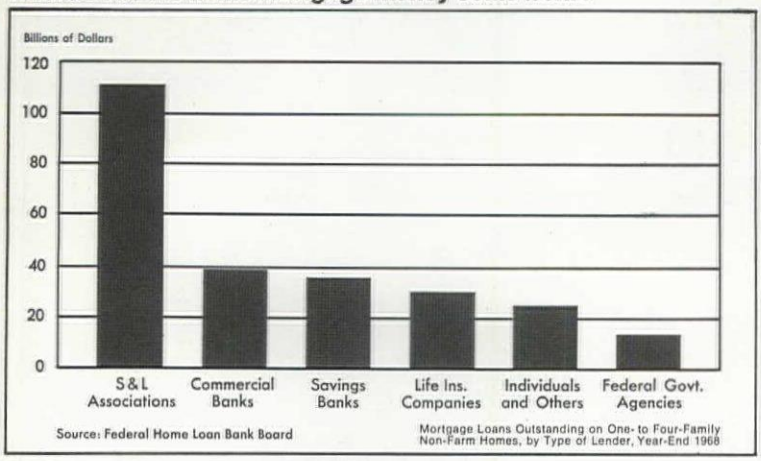
In most cases, the amount of interest or dividends these forms of investments pay is not controlled by Federal Government rulings as are the interest rates Savings and Loan Associations are allowed to pay.

What can be done about the housing "crunch"?

We have a suggestion. The building industry *could help* solve its own problem—simply by putting its cash reserves into Savings and Loan Associations. That's right—put dollars where the mortgages come from and increase the dollars available for mortgages.

Why Savings and Loan Associations? Because Savings and Loans invest at least 80% of their deposits in residential mortgages. And finance more homes than all other financial institutions combined . . . well over half the homes in this country . . . as the chart below shows.

Where does the home mortgage money come from?



Last year alone we financed over 200,000 *new single-family homes,* and we expect to do the same this year. We would like to do much more, and we would if we had additional deposits! The total mortgage money made available for all purposes by Savings and Loan Associations last year was $22 billion.

If your business is building or supplying homes, the money you invest with a Savings and Loan Association is your most effective weapon to counter the recession in your market. So, if the tight mortgage market is hurting your business, use your money to make more money and profits by placing it in a Savings and Loan Association. It could be your most profitable investment.

Savings and Loan Associations

Saving makes the difference®

Circle 213 on information card

Newslines *from page 10*

root of many problems faced by the industry was a shortage of skilled manpower.

Another long-term move on the part of the President was the establishment of a Cabinet Committee on Construction. He assigned to the committee responsibility for reviewing "the vast range of federal activities affecting the industry in order to assure that government is not in its own programs and policies a major source of industry problems."

The committee, consisting of the Secretaries of Commerce, Labor, Housing and Urban Development and Transportation, the Postmaster General and the chairman of the Council of Economic Advisors (who will also function as the committee's chairman) has the additional mission of appraising, in the President's words, "the nation's needs for construction, trends in resources available for building and financing, developments in wages and other costs and prices, problems of seasonality and technology, labor-management problems, and other matters pertinent to assuring that the nation's on-going construction needs are served in an orderly and efficient manner."

The President said the committee will consult regularly with representatives of industry, unions and the public. In this connection, he directed the Secretary of Labor to explore the establishment of "a mechanism to facilitate cooperation with union and employer groups in the solution of collective bargaining and related problems."

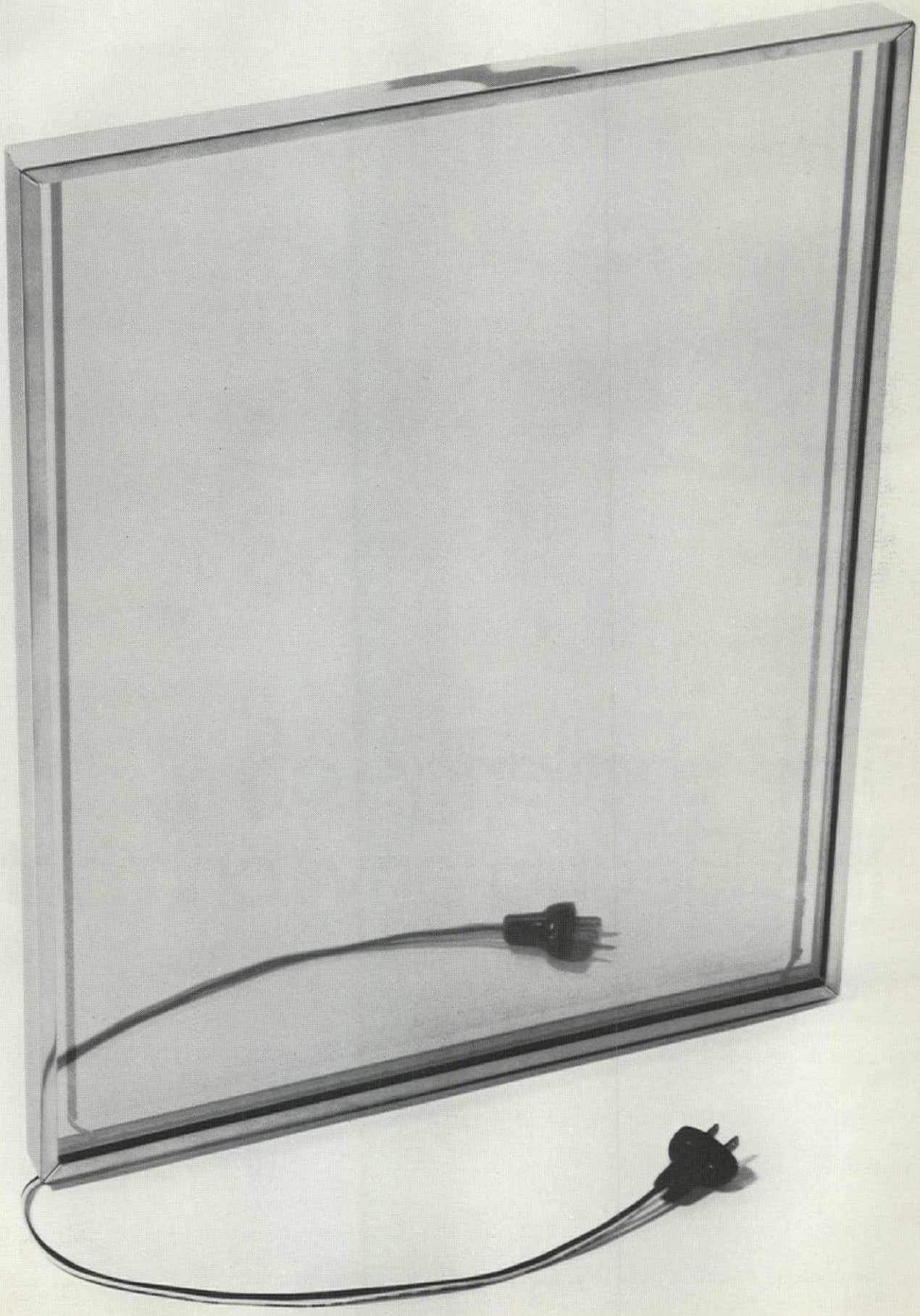
West Front Fight Reopened With Appropriations Bill

The controversy over the West Front of the Capitol was reopened last month.

"No one is predicting that the Capitol Building will slide down the hill tomorrow. Neither is anyone saying that it can't happen. No one is predicting that the 4,500-ton cast-iron dome will topple tomorrow. But clearly, if any really major emergency did occur, it would be an event of national proportions not even to be thought of."

With testimony like that still ringing, the House Appropriations Committee, as part of a $284.5

Continued on page 24



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All you do is plug it in.

For information about this remarkable new window for custom installations, write for our new booklet.
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PPG is Chemicals, Minerals, Fiber Glass, Paints and Glass. So far.

PPG INDUSTRIES

Newslines *from page 16*

million appropriations bill, approved a $2 million budget request to enable architects to prepare plans and specifications for the extension of the West Front — a proposal vigorously opposed by the AIA some three years ago.

The appropriation had the Institute, which favors restoration of the wall that faces the mall and the Washington Monument, springing to its feet again.

Among actions taken were the placement of full-page advertisements in two newspapers in Washington and New York in opposition to plans of the Commission for Extension of the Capitol.

The commission is composed of Vice President Agnew, Speaker of the House John W. McCormack, Rep. Gerald R. Ford and J. George Stewart, Architect of the Capitol. (The late Sen. Everett M. Dirksen was also a member.) "So far as we can tell, and so far as past projects on Capitol Hill give evidence, none of these men knows much, if anything, about architecture — and that is what the changes in the West Front principally involve," editorialized the *Washington Post*.

The West Front decision was expected to touch off hot debate among members of Congress.

It would provide 4½ acres of additional space for auditoriums, restaurants, committee rooms, storage rooms and offices for key members of Congress.

Also in the appropriations bill was $2.8 million for plans and specifications for a third library building for the Library of Congress — the James Madison Memorial Library.

Social Responsibility Unit Of AIA Develops Program For Presentation to Board

Question: Is the official position of the AIA pointed toward "social action" rather than professional improvement?

Answer: We can't get along without both — partly because wisely directed social action is one important way of achieving professional improvement. Because we have paid relatively little attention to "social action" in the past, we now face an urgent need to attack the problems which have accumulated.

Question: Why should the AIA get involved in missionary work?

Answer: We are not talking about missionary work. We are proposing work that is essential for the health of our society and the prosperity of our profession. We are not suggesting a handout but an investment which will have both long-term and short-term rewards. A more humane environment for all people is the eventual goal. But as an example of more immediate results, the Philadelphia Workshop, whose operations have cost about $100,000 in funds and $250,000 in volunteer time, has been instrumental in generating an estimated $25 million worth of construction, much of it involving private architectural firms.

Question: Is the AIA committed to raising $15 million in contributions from its members?

Answer: The amount of $15 million is significant only as a symbol. It represents a massive commitment by the AIA to contribute money, time and effort, as well as to mobilize the resources of foundations, the government, corporations and individuals. It is also symbolic of a major reorientation in the point of view of the architectural profession.

The foregoing questions and answers were taken from a preamble to an action program the AIA Task Force on Social Responsibility was slated to present to the Institute's Board of Directors at a board meeting late last month in Santa Fe, N. M.

The program has four main stresses — educational, social, political and financial (or what is called in the task force's presentation, "creative economics").

It was developed following a task force workshop held earlier last month and attended by several outside consultants.

The task force program is a lengthy itemization of specific undertakings, procedural outlines and the identification of AIA commissions or committees which would have primary implementing responsibility for the projects.

"Asserting the irrevocable responsibility of the architectural profession for contributing to the improvement of the human condition, the Task Force on Social Responsibility urges The American Institute of Architects to carry out the directive of the Chicago convention in the educational, social, economic and political areas of our society," the task force said in its prepared statement.

Continued on page 28

Circle 259 on information card ▶

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Windows, column and spandrel beam facings, louvers, storefronts, entrance doors, trim—all are integral-color hardcoat anodized KALCOLOR aluminum. No dyes were used. The finish is gemhard, lightfast, durable, corrosion-resistant; its color uniformity is excellent.

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Seattle-First National Bank. Architect: Naramore, Bain, Brady & Johanson.
Project Designer: Donald A. Winkelmann.
Consulting Architect: Pietro Belluschi, FAIA.
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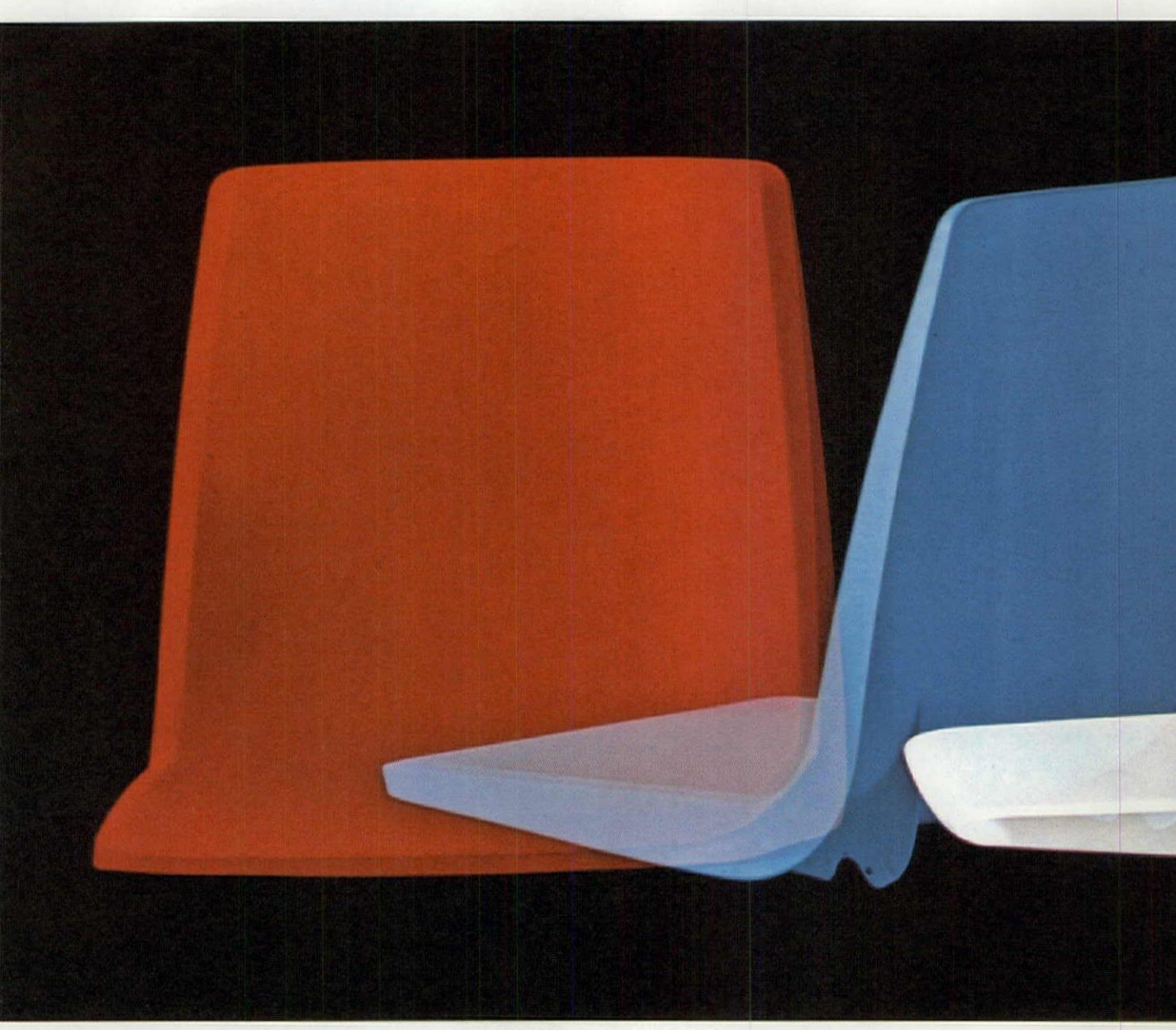

The new Sundberg Chair: the difference is "agelessness," in both style and structure.

The *style* of the Sundberg Chair is ageless, because it is so deliberately simple—there are no extraneous details to outdate its design in five, ten, even twenty years. The studied simplicity of its compound-curved shell, with its faceted edges and clean crisp lines, blends softly into any modern architectural decor—never dominates or intrudes.

The *structure* of the Sundberg Chair achieves its "agelessness" through the sculpturing of a new seating material: Cast Nylon. This versatile and durable material resists cracking, chipping, scratching. Another plus—its surface is static-free, so little time is needed for cleaning or maintenance.

The shell lends itself to a broad variety of mounting options. In one room it is a stacking chair, in the next a Swingaway lecture seat, in another—part of a waiting room sectional. Seven beautiful colors and upholstery options expand its versatility even more, allowing the practical use of this single design to achieve visual continuity and flow throughout an entire building.

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Circle 240 on information card

Newslines *from page 24*

Industrialization's Role In Housing Forum Topic

A Nov. 5-7 conference in Washington, D. C., on "The Housing Crisis — The Role of Industrialization," is expected to draw some 500 architects, engineers, manufacturers, builders, researchers and government personnel, according to its sponsor, the BRAB Building Research Institute.

In addition to treating the industrialization of homebuilding, the conference, to be held at the Hotel America, will include a presentation on the progress of the Department of Housing and Urban Development's "Operation Breakthrough."

The forum is the fall conference of BRI, now a function of the Building Research Advisory Board of the National Academy of Sciences, National Research Council, National Academy of Engineering.

The conference registration fee for BRI members is $50 and for nonmembers, $75. Additional information is available from the BRAB Building Research Institute, 2101 Constitution Ave. N. W., Washington, D. C. 20418.

Suit Prepared for Client In Penn Central Matter

The Grand Central Terminal controversy, which has been seething for more than a year over a proposal to build an office tower on the historic New York City site, appeared to be headed for the courts at presstime.

Following the third rejection by the Landmarks Preservation Commission of a scheme by Marcel Breuer, FAIA, the principal applicant, Penn Central Co., issued a notice to the City of New York on Sept. 2 of intent to sue.

If, at the end of a 30-day waiting period, the city and the applicant do not reach an agreement, said attorney Murray Drabkin, Penn Central will ask that 1) the decision be reversed, based primarily on its unconstitutionality, and 2) it receive $8 million a year in damages for each year during which the project is blocked.

Arguments pro and con were heard during public hearings in April and August. The opponents include the AIA on the national level and the Architects Council of New York City.

Continued on page 32

Strength and beauty of the forest

...engineered Southern Pine

Architects: Hugh J. Leitch, AIA of The Associated Architects for the University of West Florida; R. Daniel Hart, AIA; Look & Morrison, AIA; Bullock & Marshall, AIA, in association with Forrest M. Kelley, Jr., AIA, Architect to the Florida Board of Regents

The students at West Florida University study in unique surroundings which reflect the versatility, economy and strength of Southern Pine for engineered timber structures. □ In this ultra-modern food, health and study complex, laminated arches of Southern Pine and wood roof decking impart a massive air of permanence combined with a congenial environment. □ For an illustrated case history on this building, write: Southern Pine Association, P. O. Box 52468, New Orleans, La. 70150.

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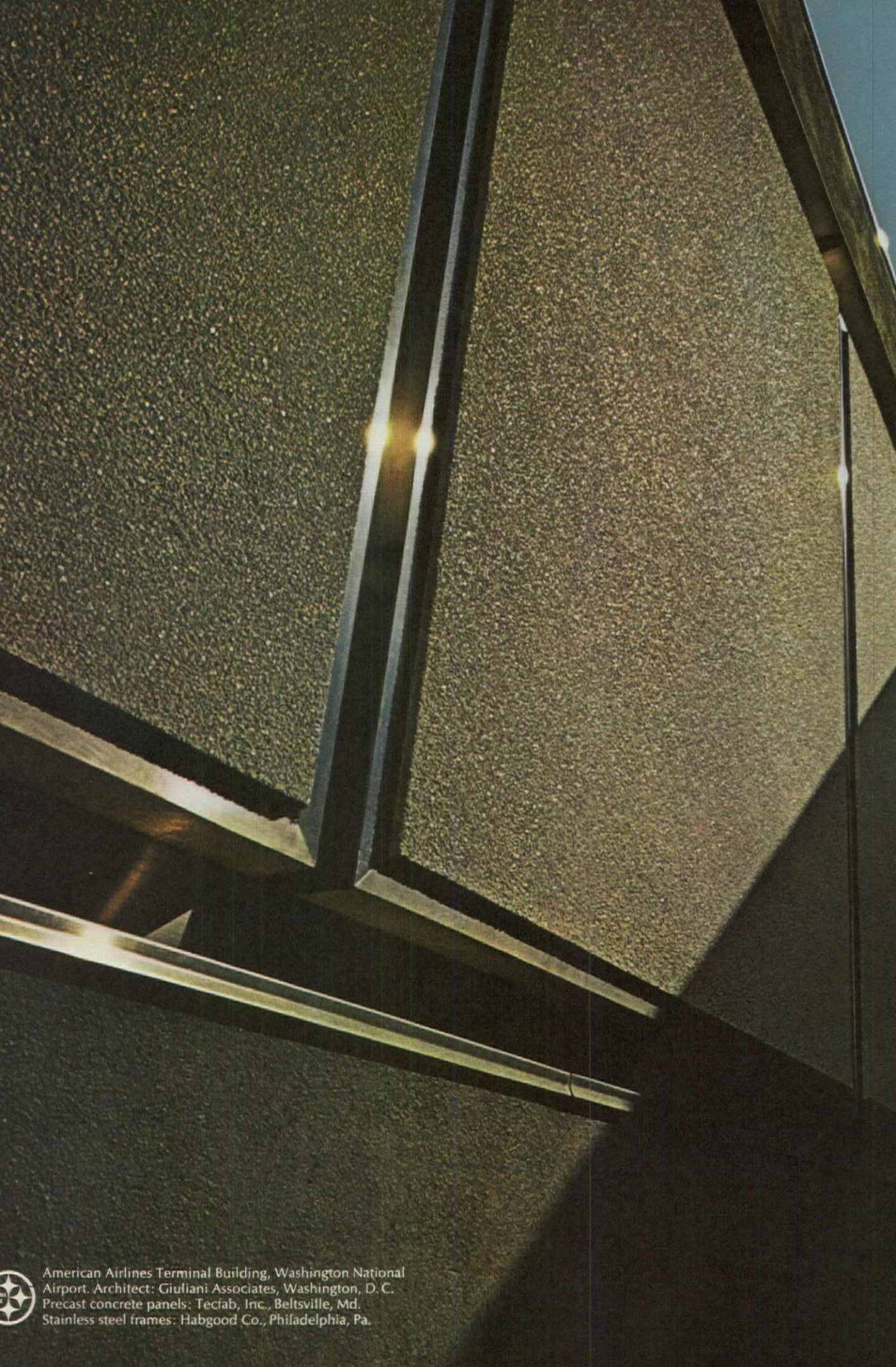

American Airlines Terminal Building, Washington National Airport. Architect: Giuliani Associates, Washington, D.C. Precast concrete panels: Tecfab, Inc., Beltsville, Md. Stainless steel frames: Habgood Co., Philadelphia, Pa.

r rod c ng stair less conc e e.

No concrete curtain wall was ever improved by brown or green streaks of metallic corrosion.

Giuliani Associates' design for American Airlines solves this problem

by combining the best features of precast concrete and nickel stainless steel. Architect and client can be confident that the wall will be free of corrosion streaks for the life of the building.

The 4⅛-inch thick panels were custom-made by leaving .063-inch thick Type 304 stainless forms in place as the concrete hardened. The forms thus became framing members, and were polished just before erection.

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Newslines *from page 28*

Western States Applauded For Home Design Quality

"What's impressive is the high quality of the entries. You'd see this only in the West," was a jury comment following the selection of the highest number of winners ever in the biennial AIA/*Sunset* Magazine Western Home Awards program.

Of the 41 houses singled out among submissions from the 13 western states, the five shown here, all designed by California architects, won top Honor Awards.

Additionally, 11 entries were given Merit Awards, 24 were granted Citations (a new level of recognition) and one received a Special Award for Prefabrication.

Merit Awards went to houses designed by these architects: Ronald G. Brocchini, AIA, and Myra M. Brocchini, San Francisco; A. O. Bumgardner & Partners, Seattle; John Louis Field of Bull, Field, Volkmann, Stockwell, San Francisco (two awards); George Homsey of Joseph Esherick & Associates, San Francisco; Wendell H. Lovett, AIA, Bellevue, Wash.; McCue, Boone, Tomsick, San Francisco; Paul W. McKim, San Diego; Robert C. Peterson, AIA, & Victor K. Thompson, AIA, Menlo Park, Calif.; K. Shinomiya, Berkeley; Ron Yeo, Corona del Mar, Calif.

The jurors included four architects — A. Quincy Jones, FAIA, Los Angeles; John M. Morse, FAIA, Seattle; Charles W. Moore, AIA, dean of the Department of Art and Architecture, Yale University; Héctor Mestre, Mexico City — landscape architect Peter Walker, San Francisco, architectural photographer Ezra Stoller, Mamaroneck, N.Y., and editor Proctor Mellquist of *Sunset*, whose October issue will feature the premiated houses.

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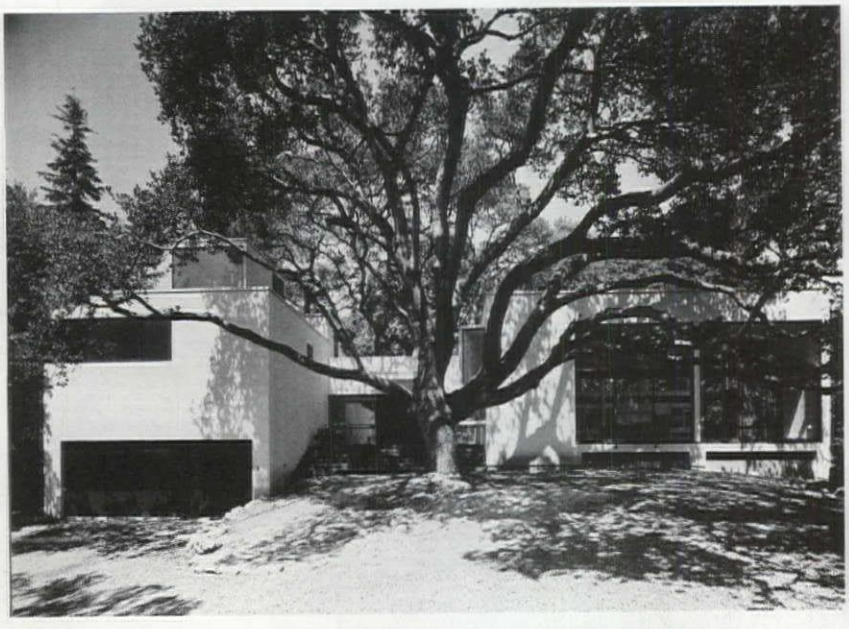
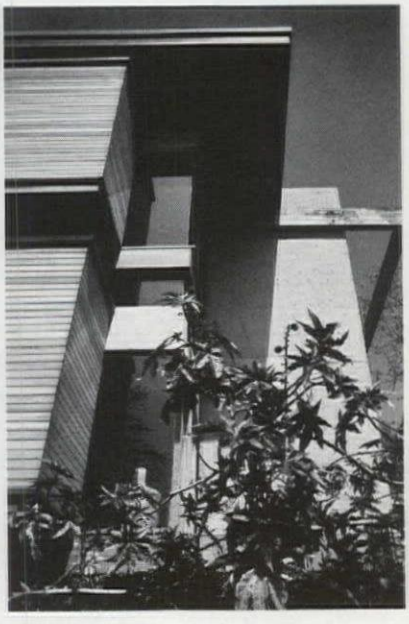
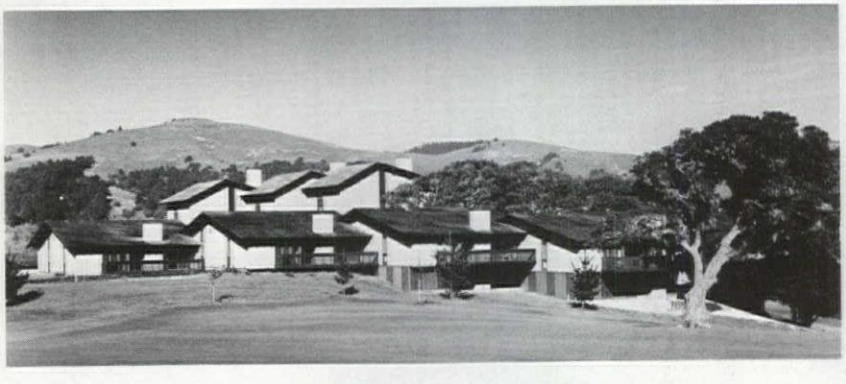
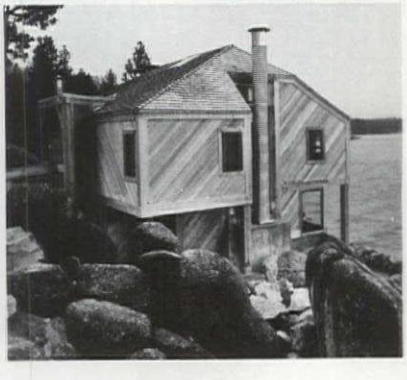
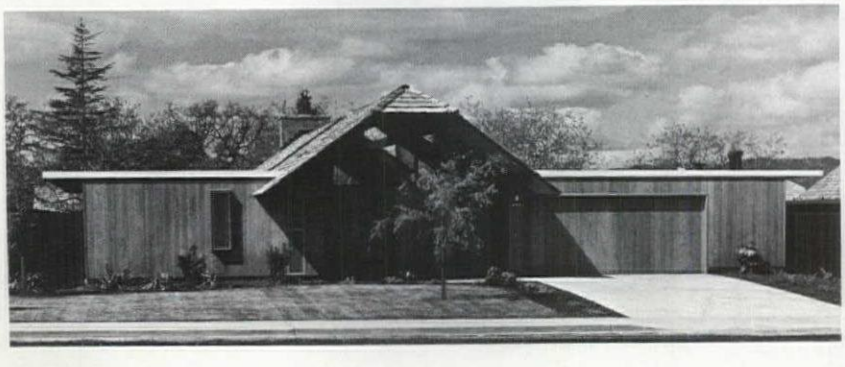


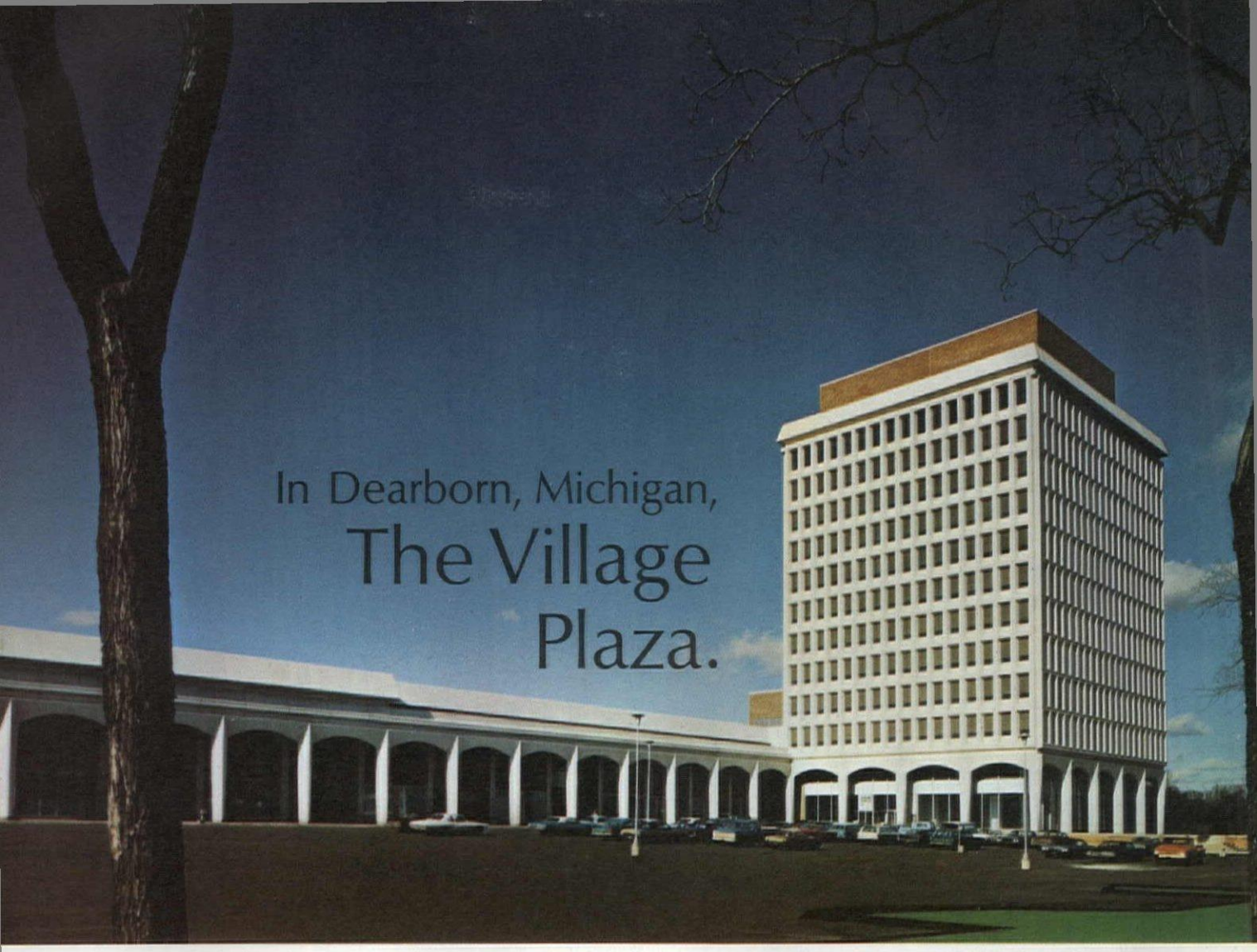








Top winners, clockwise from upper left: custom-built house for Mr. and Mrs. Herman D. Ruth by Donald E. Olsen, AIA, Berkeley; architect's own house for Raymond Kappe, FAIA, by Kahn, Kappe, Lotery, Santa Monica; vacation house for Dr. and Mrs. William G. Hoover by Sidney H. Hoover, project designer, of Campbell & Hoover, San Francisco; merchant-built houses for J. L. Eichler Associates, Inc., San Francisco; townhouses for Burchfiel Meadows, Inc., by Hall & Goodhue, Monterey.



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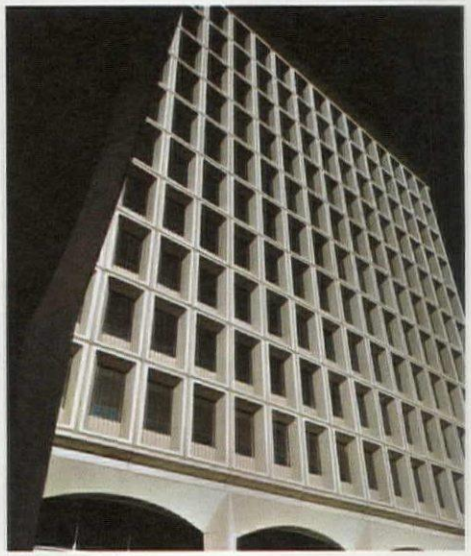

VILLAGE PLAZA, Dearborn, Michigan. *Architect: Harley, Ellington, Cowan & Stirton, Detroit, Mich. Gen. Contractor: A. Z. Shmina & Sons Co., Dearborn, Mich. Precast Producer: Precast/Shokbeton, Inc., Kalamazoo, Mich.*

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COLISEUM
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Newslines *from page 32*

Institute Produces Books On Programming, Fees

Two publications, one to assist the practitioner in programming and the other to help him in seting fees for his services, have been turned out by the AIA.

A collection of programming techniques — 55 in all — to aid the practitioner in improving the quality of his services has been issued by the AIA Committee on Research for Architecture.

Called "Emerging Techniques — 2 — Architectural Programming," the study was prepared by Benjamin H. Evans, AIA, 1967-68 director of Education & Research Programs for the Institute, and C. Herbert Wheeler, AIA, associate professor in the Department of Architectural Engineering at Pennsylvania State University.

"Methods of Compensation for Architectural Services," prepared by the AIA Task Force on Compensation Methods with the assistance of Case & Co., Inc., discusses traditional and newer methods of compensation.

It concludes by urging architects to carefully match the method of compensation with the project.

Copies of both books are available from the Documents Division at the Octagon, the programming book at $2 for members and $5 for nonmembers, and the compensation methods book at $4 and $8, respectively.

AIA Again to Join NAHB In Houston Convention

Continuing a rapport between architects and builders which began last January, the AIA is preparing for official participation in the 1970 annual convention-exposition of the National Association of Home Builders.

The Institute's Committee on Housing will gear its program to the theme "Better Design, Better Building, Better Profits" during the Jan. 18-22 sessions in Houston's Astrodome complex.

Plans call for the utilization of four architect-builder teams, each from a different part of the country, discussing not only their own successful projects but also other design considerations.

An attendance in the neighborhood of 50,000 is predicted for NAHB's 26th convention, and more than 450 exhibits will occupy the 500,000-square-foot Astrohall, where the program itself will be held.

AIA Offspring, UDDC, Has Nonarchitect Trustee

The Urban Design and Development Corp., chartered earlier this year with AIA funds, has elected the first nonarchitect to its board of trustees.

Sherrill D. Luke, director of urban affairs for Aetna Life & Casualty Co., Hartford, Conn., becomes the seventh trustee — five will be named later — for the nonprofit corporation headquartered in the nation's capital.

Luke, who has had 16 years of experience in government, urban affairs and law, formerly was program development director for the mayor of Washington, D.C., where he administered the District's Model Cities program among other duties.

Necrology

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3. Explore more than 450 exciting exhibits of the Nation's leading suppliers for building materials, equipment, and services in the 500,000 square foot Astrohall.
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6. Registration Forms Available Upon Request

For Further Information Write:

National Association of Home Builders
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Here's just a partial listing of categories that will be covered in the Houston Cram Course — Building Systems ★ Sex in Housing ★ Building Codes ★ Neighborhood Shopping Centers ★ Nursing Homes ★ Money Management ★ Leisure Home Design ★ Condominiums and Co-ops ★ Sound Control of Apartments ★ Nursing Home Design ★ Land Development ★ and Special Programs for Design Professionals.

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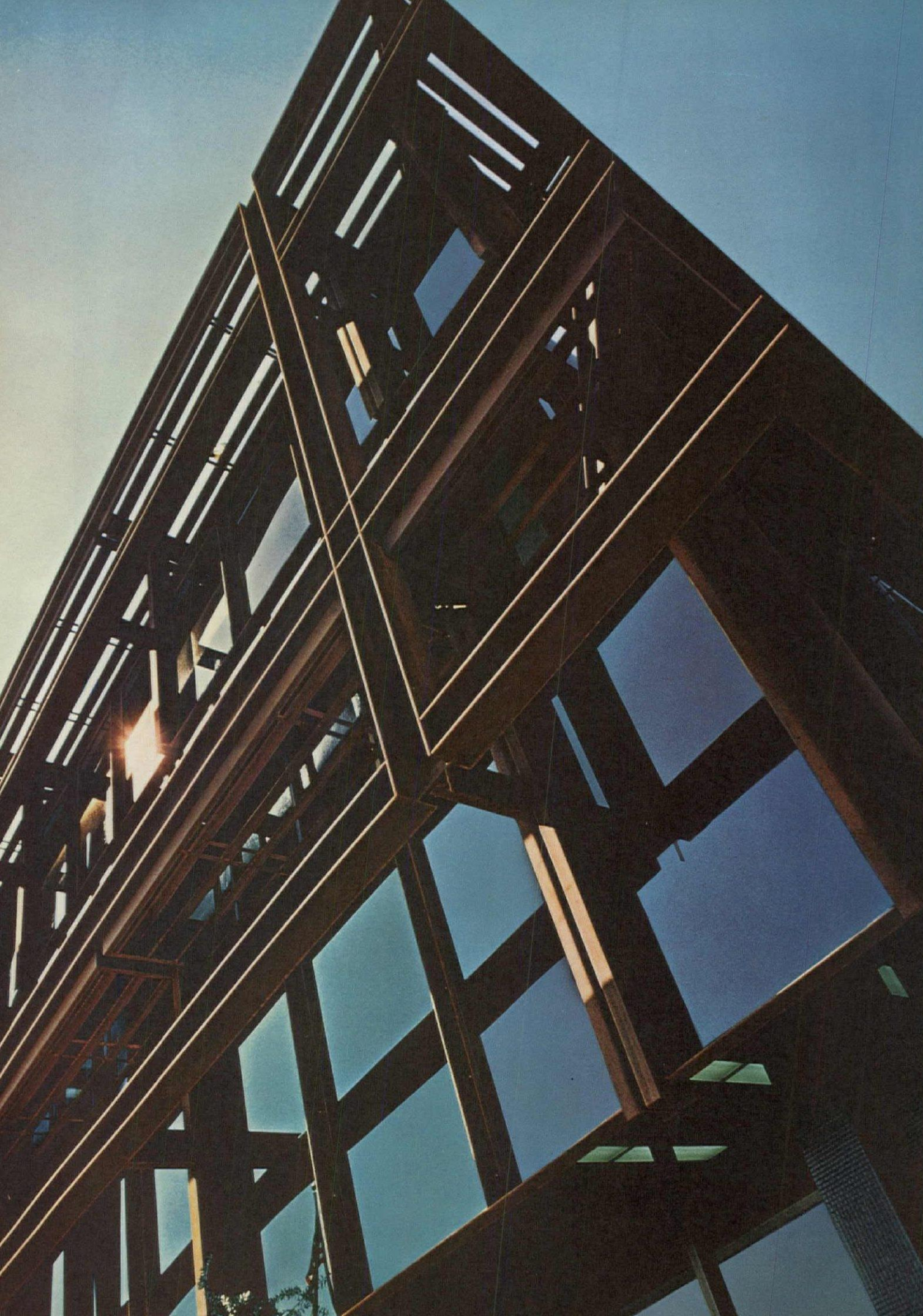

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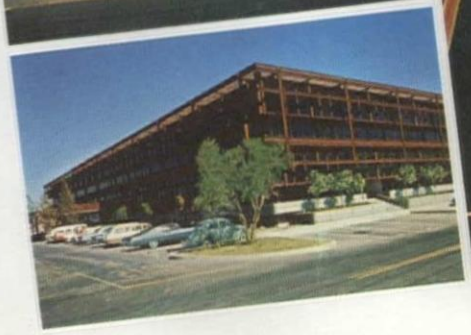

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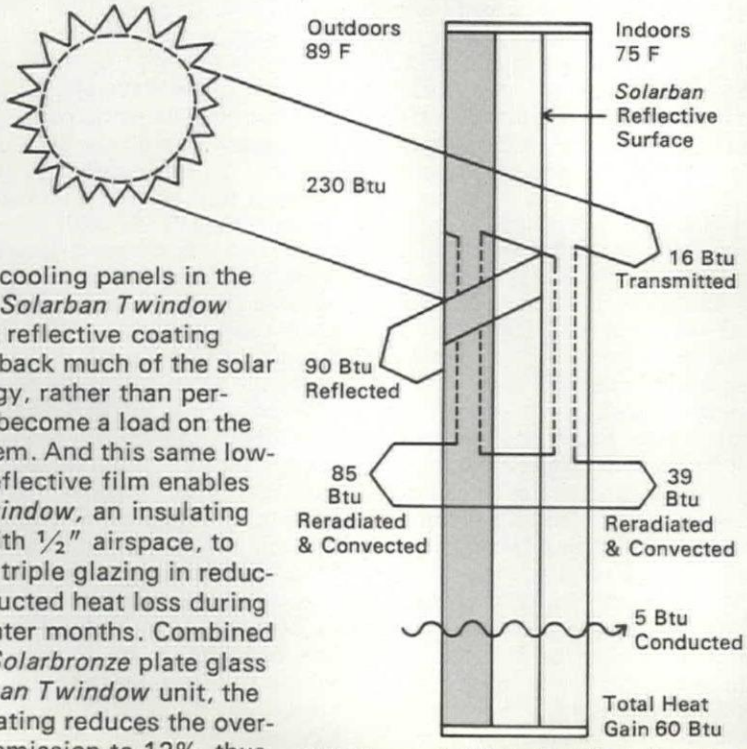
Other factors influenced the selection of *Solarban Bronze Twindow.* Its excellent insulating capabilities permit higher, more comfortable humidity levels to be maintained without condensation. This heat-strengthened glass also meets strength requirements, and its color complements the bronze tone of the exterior metals.



This diagram is illustrative of relationships for a given specialized set of conditions.

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Consulting Engineer: Breiterman, Jurado & Associates, Miami

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PPG INDUSTRIES

UNFINISHED BUSINESS

BY FRANK L. CODELLA, AIA
Administrator, Department of Professional Services

Specs Quicker and Easier

Wouldn't it be nice if an architect could unshackle himself from the dronelike, repetitive and time-consuming chores of preparing THE BOOK? Wouldn't it be grand to be able to save up to one half the time and cost that it now takes to produce specifications manually? Wouldn't we be serving the client better by spending that time researching new materials, applications and costs?

The profession is on the threshold of such a possibility: By the end of this year, practitioners can have their specifications produced via the computer through Production Systems for Architects and Engineers, Inc., a nonprofit corporation sponsored by the AIA in response to members' demands. Briefly, here is how it will work:

With a copy of the master index, supplied by PSAE, the architect will check off sections needed for his project. He will send his list to the PSAE, which will return to him up-to-date copies of the required master sections.

As production of his drawings proceeds, the architect (or specifier) will edit the master section copies, simply by striking out unwanted choices and writing in any new requirements. When the whole set has been edited, he will mail it or have it delivered to the nearest data processing center.

From the set, a trained girl will prepare the necessary coded input for the computer which stores the entire master specs. It will return to her, in minutes, a reproducible master of his final specification, which can be duplicated in the architect's office.

The computer will store master specifications in the most comprehensive and self-explanatory form, so that the individual firm's process of considering alternatives, making decisions and recording those decisions will be held to an absolute minimum of time and effort.

Smaller firms may engage a specifications consultant to apply the system in their office, on a job-to-job basis. It is anticipated that a new, up-to-date set of masters will be mailed out by PSAE for each project.

The system will respond to the feedback (regional problems, erroneous information, product information, etc.) from users, including architects, engineers, independent specifiers, contractors, manufacturers and others.

Format, technical content, language, manner of specifying and other considerations for the system are now being developed by the PSAE staff, using upper/lower case printing.

The 16 divisions of the Uniform System will be employed, appropriately fragmented into sections for automation. The latest of applicable trends and recommendations by the Construction Specifications Institute and others are being considered, including incorporation of both proprietary and performance type specifications, along with the use of reference standards.

The instructional notes, nominal product evaluation information and drawing coordination notes which accompany each section are of great importance to the user's efficiency and proficiency. It is anticipated that the system will store separate information to accommodate special requirements from government agencies and unique requirements resulting from regional differences. Many firms are anxious to be able to use the system on a nationwide basis and not be limited to regional practice.

Existing master specifications systems which have been made available to PSAE for reference will be used to prepare the text of the new masters. However, it is doubtful that any substantial amount of existing text can be used without some editing.

At the outset, PSAE's operation will provide a limited scope of sections written and automated. Ultimately the entire spectrum of building types will be covered, from the nearly 100 percent architectural structure with minor engineering to the nearly 100 percent engineering structure with minor architectural work.

Later phases will possibly include coded or magnetic tape or other means for transmittal by telephone. Reproduction and binding may be included as part of the service. Higher levels of automation may make feasible, among other things, continuous dialogue between architect and master specification.

The new corporation is presently fully controlled by AIA. A charter was granted by the state of Illinois in May; official operations began in June with offices in Chicago. Officers are John Schruben, AIA, president and treasurer; Robert L. Petterson, secretary; and Thomas F. Walsh, specifier. All are members of CSI.

CSI has initially, for various reasons, declined to join the venture. Other professional organizations will be invited to join at appropriate times during development of the system, making it available to all professionals.

Uniform fees will be charged for the service, sufficient to repay the funds invested by AIA. Rates are now being developed.

Firms which anticipate using the system should assign certain persons the responsibility of applying it to their office and should become acquainted with all information as it is released. Interested firms should write to Production Systems for Architects and Engineers, Inc., Suite 1709, Fisher Building, 343 S. Dearborn St., Chicago, Ill. 60604.

Firms now in the early stages of developing their own master specifications should consider curtailing expenditures at this time in anticipation of using this system. Later, it is intended that other coordinated production systems, such as computerized cost accounting, will be developed by this corporation for practical use by all firms — especially the small-to-medium sized ones which can ill afford the development and updating costs. □

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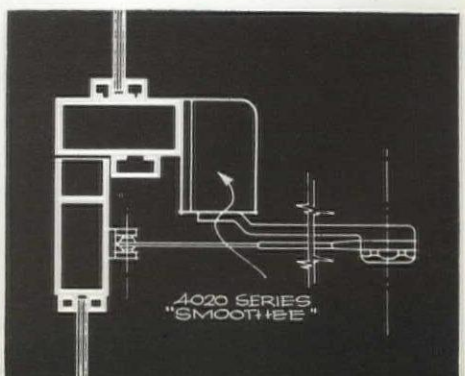

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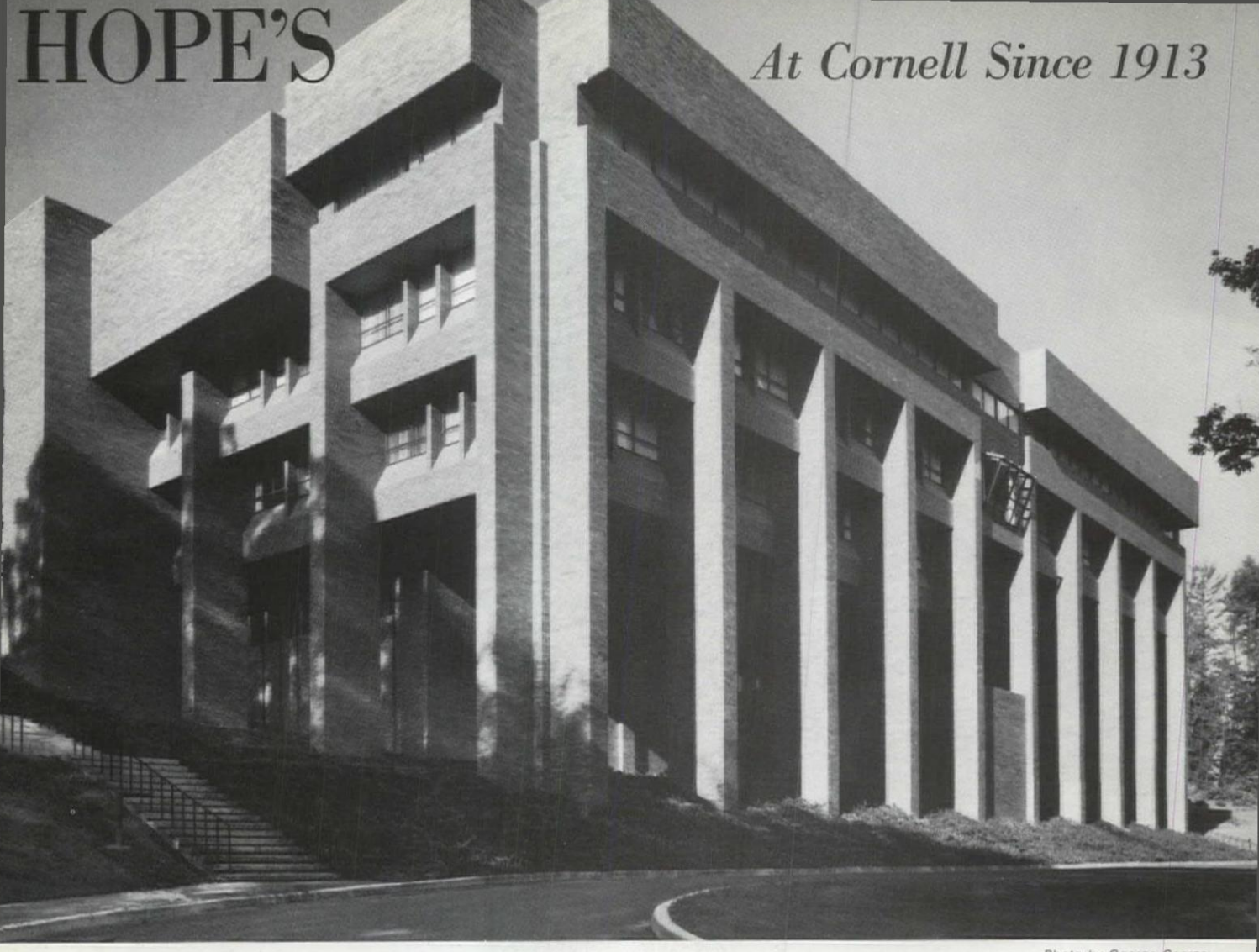

Photo by George Cserna

1966 Home Economics Building, Cornell University, Ithaca, New York — *Ulrich Franzen — Architect*

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1929 Balch Halls (Women's Residence)
Architect: Frederick L. Ackerman

1946 Savage Hall (School of Nutrition)
Architects: Skidmore, Owings & Merrill

1950 Anabel Taylor Hall (Interfaith Center)
Architects: Starrett, VanVleck & Eggers & Higgins

1953 Riley • Robb Hall (Agricultural Engineering)
Architect: New York State Department of Public Works

1954 Willard Straight Hall (Student Union) (Addition)
Architect: Searle Von Storch

1954 Veterinary College
Architect: C. J. White, State Architect

1954 Aeronautical Laboratory (Buffalo, New York)
Architect: Jacob Fruchtbaum

1959 Poultry Research
Architect: New York State Department of Public Works

1962 Charles Evans Hughes Hall (Law Student Residence)
Architects: Eggers & Higgins

1963 Clark Hall (Physical Sciences)
Architect: Jacob Fruchtbaum

1966 Martha Van Rensselaer Hall (Home Economics)
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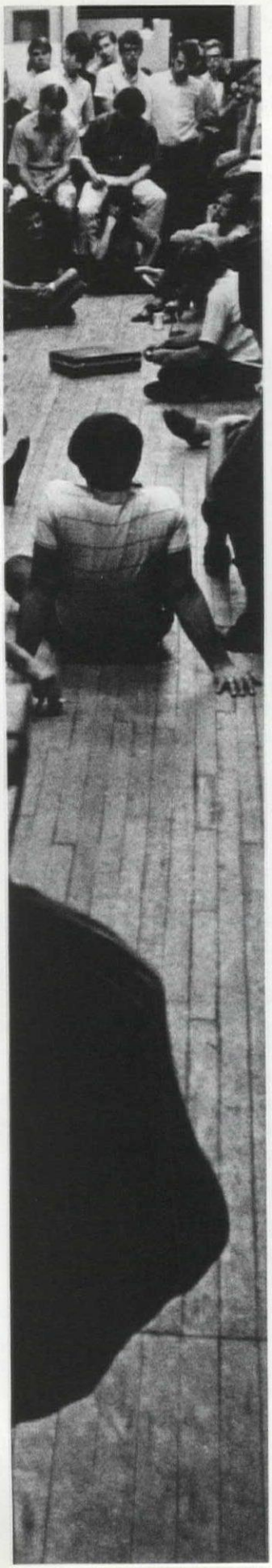


Comment & Opinion: Reluctantly, the toddler in the blue shirt told his friend he was soon to leave for a shore vacation. "We're going there, too," his friend exclaimed, asking, "Where will you be?" Blue shirt was caught short, but he thought it was a place called Cincinnati. "Cincinnati or somethin' like that." His friend was overjoyed. They'd be staying, he said, at closeby resorts. "Why, where will you be?" sought the now-radiant blue shirt. "It's a place called Mismar or Marwich or somethin' like that. But it's close," assured his friend, "to Cincinnati."

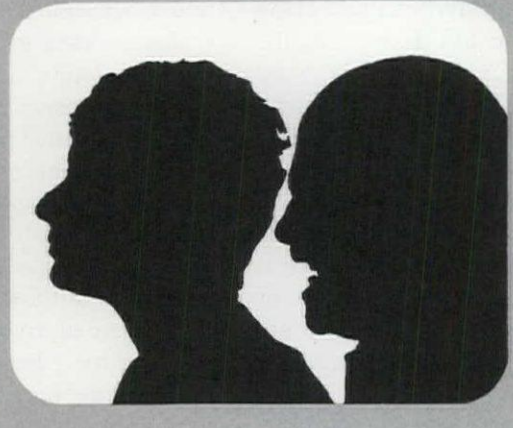
The youngsters were handicapped (or blessed?) by an absence of the first requisite to an understanding of relationships: the facts. Or if essences are preferred along with the barren facts, by an absence of reality.

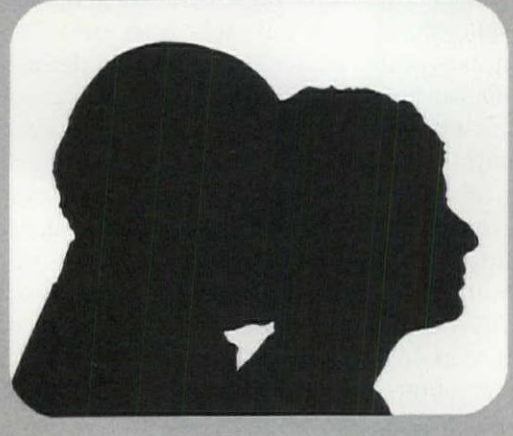
How the young in architecture relate to the reality of current practice, or how the established in architecture relate to the way the young say architecture should be practiced, can only be assayed from a base of reality. And yet there is no reality, no one reality. Reality differs as people differ, for in the end it is an accumulation of one's own experiences, some of which are unique while others, though they may be generally or even universally shared, are uniquely interpreted.

All this is to suggest a rather small point, one inspired by discussions on the subject of the young in architecture, including the four articles immediately following. It is that architecture not only is immersed in complex issues but is subject to individualized and disparate experiential bases from which these issues are examined. A small point, but one worth trying to make all the same, especially so in view of a tendency to become so issue-transfixed as to overlook the plain fact that the urgings with which the profession is inundated flow from a human watershed where "reality" is at best an approximation and at worst mere imitation or even recitation.

NEIL GALLAGHER

Architecture's Young and THE GREAT ADVENTURE





Found afflicted with shortcomings and beset by frustration, the new breed of architect is urged to become specialized, to join the team force and to plunge into "staggering" opportunities.

BY LEO KORNBLATH, AIA

I am concerned that we in the design profession are unaware of the new breed of architect who is trained in the most far-reaching manner, yet finds anger and frustration within himself. He is very concerned with the part he plays in our confused world and the sociological impact he is making — or should I say the impact he is *not* making. He is unwilling to cope with political, social and economic conditions as they exist.

Our design schools have long recognized that formerly accepted methods of instruction no longer are valid. They have had to re-examine their role, the scholastic program they present and the needs and desires of the new breed of student who is prepared to seek perfection in a world of mediocrity.

Where formerly our schools were simply concerned with training in design and in the technological aspects of construction — training of the master builder — we find today a greater emphasis on the training of the architect as the esthete, as a person who can create a viable and agreeable environment. No longer can the phrase "form follows function" be the catchall answer to all design. The new breed is aware that in any design analysis a point is reached when function by itself ceases and form or esthetics — coupled with economics — must be considered.

The author: Mr. Kornblath is founder of the architectural firm of Leo Kornblath Associates, New York. His article is adapted from an address given before the Thiokol Technical Club, Trenton, New Jersey.

Recognizing the needs of our exciting and ever-changing society, design schools have begun to expose students to a myriad of environmental design studies. As a result, the new breed becomes concerned with the big picture, so to speak. He is not only interested in providing a solution for an individual project but also aware of that project's relationship to a total complex.

He has deep concern for social injustices of minority groups: the lack of proper housing, the decay of our cities and the resultant slums — all the ills and deficiencies which exist. And he feels qualified to erase them.

He believes that the firebrand he holds in each hand can bring light to the darkness by ignoring any connection with the past as a prologue to the future. He is convinced that past generations have failed to meet the challenges

brought about by an ever-increasing society — and he means to do something about it.

His motives are honorable, yet his results fall far short of his established goals. In failing, he only increases his anger and frustrations.

Why does he fail? It is due to a lack of proper training for a specific job. Though he tries to solve the ills of the community, he is unprepared in the language or semantics of the construction industry.

Sure, he can design a structure or group of structures, but he fails miserably in attempting to detail a stair or a window. He can arrive at a commendable solution to an established program, but he fails in providing the coordinated documents needed to carry it out. He is unprepared for what he considers minor tasks, having been trained only for the major evaluations.

As a result, he is dissatisfied with his own implication. He would prefer to operate in a lawless society because he will not permit himself to be fettered by what he considers outdated and outmoded zoning and building codes. Although he recognizes architecture as an art and as a profession, he fails to recognize architecture as a business. He thinks of himself only as an individual, when he should be thinking of himself as a member of a team force. For it is only a team force that can act in our highly complicated society.

Today's architecture can only be as good as the clients permit architects to be, as good as the lending institutions permit us to be, and as good as the industries providing the component materials permit us to be. A deeper understanding of the problems and more intense collaboration among all who contribute to man's environment are necessary requirements before the architectural process can take more meaningful steps to eliminate the ills of society.

The new breed of architect is unaware that he cannot make major contributions until he recognizes the close relationship between technological advances and economics and management sciences. He must realize that he cannot be all things to all people. He must be prepared to "captain the team" of expanded services of both professionals and nonprofessionals.

It is difficult for this new breed to accept the fact that an architectural office — widely acclaimed as a design leader in the profession — would insist upon an association with another architectural firm recognized for its technical competence to provide the construction documents from their design study.

It may appear that this initial shock wave of realization, brought about by the new breed's awareness of its limitations, has been the more visual factor creating the dissatisfaction. But there are additional facets of a much more subtle nature which tend to decrease his personal contribution — and to increase his volatile reaction in striking back at the faults which inhibit major advancement by radical solutions for our social ills.

He believes that his training has qualified him to establish a program and analyze the approach to a solution — only to find that a vast army of specialists has already taken over the analytic process. What knowledgeable client for any major construction project would proceed without first having real estate professionals determine proper marketing requirements and site location feasibility? The accuracy of computers in determining and shaping the construction methods and economics inherent in any project has become axiomatic. The memory bank provides the answers to what, where, why and even when. Change of program requirements affecting esthetics and design, relationship of capital investment to profit return and tax advantages, the mortgage probabilities, even the decision of whether the project will go forward or die in its infancy — all is controlled by the money counselors representing the lending institutions.

Even if the member of the new breed is fortunate at clearing these hurdles at a tortoise pace he finds himself in the arena with the construction management specialist who becomes the "Big Daddy." It is he, with his cost information, his union expertise and his construction knowledge, who determines how to proceed.

Oftentimes the Big Daddy consultant contractor bases his decisions on market availability of labor and material and on trade conditions, and seeks only a flexible climate for his operations. He well realizes that what may work or has worked in one area at any one time may not be the most appropriate answer in another area at another time. He also realizes that his services may be the eventual key to the success of the project with time as the irretrievable commodity on his side. Getting the building up in the shortest period of time can result in a saving to the entrepreneur far in excess of fees paid for Big Daddy's services — for who among us can forgo collecting rents earlier or reducing carrying charges at the earliest moment?

But as the sophistication becomes more refined we find the Big Daddy assuming the true role of master builder when he takes on the cloak of package dealer. If Big Daddy is qualified to review all design processes afterward, why not make him captain of the team beforehand, not only controlling the construction management but the professional services as well?

Is it any wonder, then, that our highly trained

new breed is frustrated and angry? He has so much to give but is allowed to give only so much. He refuses to accept the basic premise established that a better environment can be achieved through computer analysis and limited building products. He resents the impersonal analytical approach handed to him and his professional status limited to "facade architecture." It is any wonder that he seeks to strike back at what he considers to be the underlying causes of his personal dissatisfaction with what he is contributing — his training?

It is our higher institutions of learning that must learn to relate to the needs of the community and direct their educational processes toward the development of separate specialties. There should be a greater freedom of exposure in our precollege training — in our elementary schools and high schools — with the resultant establishment of a specialized junior college which would permit students actively to seek and decide on the direction they wish to pursue.

Of what value is the training of an architect in an all-encompassing profession when his ability and capability are limited to only one small phase? Shouldn't some architects be trained as specialists in construction sciences — professional draftsmen, if you will — others with different abilities and capabilities as architectural researchers? We need architects trained as specialists in this highly specialized world, performing highly specialized tasks.

The medical profession has long been aware of its complexities and has established plateaus of specialization. A basic background is provided with a training program of internship required for further study, the specialization determined by the student's personal desires. He may go forward in surgery — another plateau — or restrict his contribution to general practice.

Even in the selection of a plateau there are successive plateaus to be reached. If surgery is his forte he can decide on opthalmology, orthopedics, internal or pediatric surgery with study, training and professionalism limited to these exacting areas. There are those who during their formative years even decide that public participation is outside their province and prefer research and teaching.

Only in more recent years have the educators in primary schools had the tools for training as a replacement for the basic, outmoded three R's. Today we see a proliferation of teaching aids so sophisticated that elementary school students are being taught with computers, leaving the teachers more time to relate themselves to program needs rather than mundane, repetitious multiplication tables as we knew it.

So, we must prepare our youth for exposure at an earlier age. The mental development process can establish a definitive direction by this exposure long before one's college days.

Change is necessary if we are to accomplish all the things which require doing in our society. But change just for change's sake is not the answer, nor can these changes take place in one fell swoop. It still requires an evolutionary process, experimentation and time if we are to succeed in satisfying our projected needs.

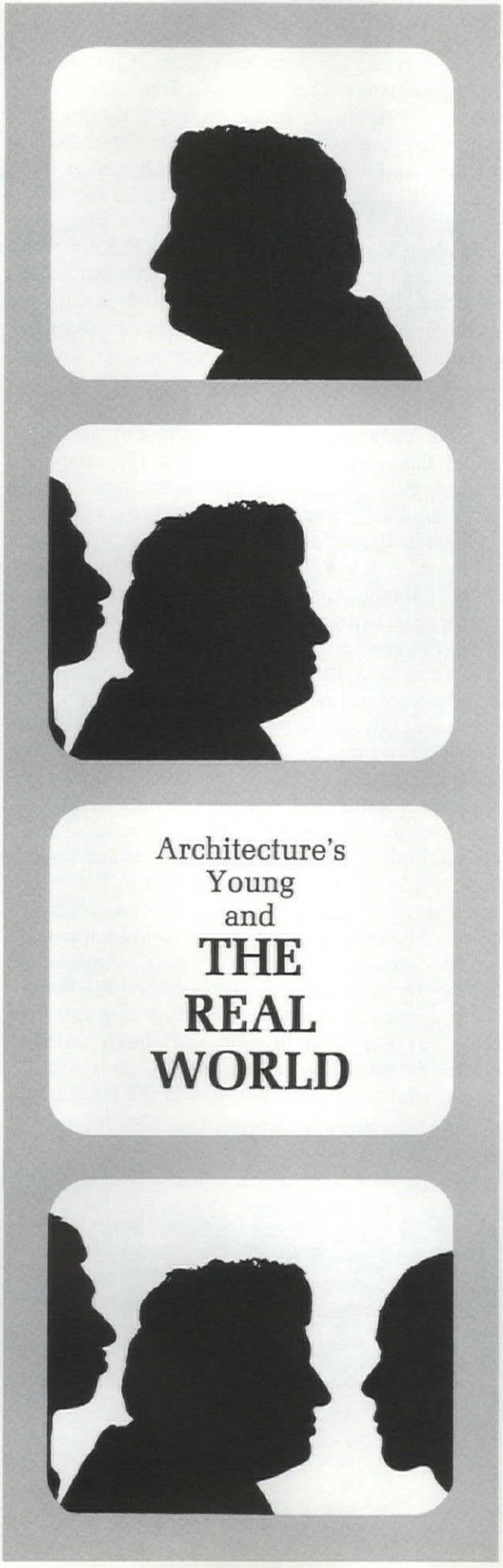
Recently the *New York Times* carried a front-page report on the National Committee on Urban Growth, composed of senators, representatives, governors, mayors and county commissioners. Based on projected estimates that this nation will increase by 100 million persons during the next 30 years, the commission maintained that existing cities cannot cope with this expansion and decided that new cities — not new towns — would be necessary. The committee members recommended that the United States build, before year 2,000, 100 new cities for a minimum of 10,000 persons and 10 cities for a minimum of 1,000,000 persons.

This distinguished group had made a study of European cities and towns and was impressed with the planning order there: "They can show just how pleasant an urban environment can be if the full talents of planning and design professionals are brought to bear. They can bring man, buildings and nature once again into proper balance."

The committee further recommended that there be created a federal agency to oversee the development and to coordinate national policy, citing the fact that the British have built 13 new towns since 1962, making a total of 28 since the end of World War II.

These new towns would provide for the needs of 65 to 70 million persons by the end of this century. They should not, contends the commission, be created, nor should persons be induced to populate these new cities "without the assurance of having employment, adequate housing, recreation and like facilities." They should, the report went on to say, "be attractive to all classes, creeds and races, to all types of businesses (and) to a mixture of citizen talent that will insure new town success."

The opportunities existing in providing a better environment for man are staggering and challenging to all of us who can make a contribution. But a vast reorientation in education must take place, not only as to what is needed but to what is outmoded and merely contributing to mediocrity. If the new breed can accept this challenge as members of a team of specialists, they can become a viable force in solving our architectural ills. □



The value of field service work could be great, it is maintained, provided students have the time and energy community problems require. A dissenting view, however, follows this report.

BY C. W. HARTMAN AND JON PYNOOS

In recent years education in city planning and architecture — in particular its central institution, the studio — has come under increasing criticism. Complaints center around the issue of relevance: Many of the young persons in or coming into these professions feel that designers and planners have not really faced the central urban issues of our time — race and poverty — and that, like Nero, they are merely fiddling while our cities burn.

Generational gaps are evident; many students maintain that their teachers are out of touch with needs and currents in their fields. The simulated models of reality presented in studio, it is charged, are defective because the nature of the problems they present and because of the inherent limitations of the studio setting.

Architects and planners, students argue, must become more deeply and passionately involved with the real issues that are tearing our cities and our society apart. In order to do so they must learn about the problems at first hand, learn how to work with the people and who should make the basic decisions on changes that are to take place.

The authors: Mr. Hartman, assistant professor of city planning, Graduate School of Design, Harvard University, and Mr. Pynoos are director and assistant director, respectively, of the Harvard Urban Field Service. Their report on this field work is presented here in abbreviated form.

Instead of working on such studio problems as suburban schools, master planning and beautification, the student should spend much of his time in low income neighborhoods, working directly with and for indigenous groups on problems defined as relevant by these groups and for which they have requested assistance.

The other side of the picture is the vast unmet and largely unrecognized need of low income communities for professional assistance, which as a rule they cannot afford.

In the fall of 1967, the Harvard Graduate School of Design started a program which attempted to engage these issues. Under the program (assisted by a grant of $25,000 from the Stern Family Fund), graduate students in architecture, city planning, landscape architecture and urban design, working in small teams under supervision of a faculty member or practicing professional, offered free assistance

to community groups in low income areas who had specific design or planning problems

A brochure describing the Harvard Urban Field Service (UFS) was mailed to several hundred groups and individuals in the Boston area and announcements appeared in many local newspapers. Within a few weeks 30 requests for assistance had been received. Discussions and site visits reduced the list to 15 apparently eligible and educationally worthwhile projects.

Several criteria were used in evaluating the requests: The community group had to be sufficiently strong and well enough organized to direct the student team;there had to be a specific, well-defined job to be done, at once within the capabilities of the students and rich enough to be of educational value to them; there had to be a reasonable probability, politically and financially, of implementing the students' design and planning work. And, of course, entrance into the neighborhood had to be at the community's request — there was to be no imposition of outsiders, no "using" of the community.

From the final list five projects were chosen, each with four to six students and a supervisor. The best way to describe UFS' work is to give a thumbnail description of these projects, undertaken in the spring of 1968.

• East Somerville Citizens for Action is a group of white working-class families interested in a community school for their neighborhood. The city plans to replace the present elementary school; the parents want a facility which will meet a range of needs for adults as well as for children. The student team worked with the group in developing plans, political strategies, community support and actual design for the school. Working under the Somerville group's steering committee, the team undertook neighborhood surveys, gathered information about community schools, organized community meetings, interviewed potential architects and issued a report on architectural criteria which would satisfy the community's requirements. The group and its student advisers are now participating in urban renewal planning for the area as well.

• Hawthorne House, a multipurpose community education center in Roxbury, Boston's Negro section, asked for a team of architects to help with space planning and redesign of its facilities. Hawthorne House runs a multitude of programs (including Manpower Development Training and Head Start) in a compound of old wooden buildings and, as its first priority, wanted to convert an unused upstairs chapel into a gymnasium for teenagers. The student team, under the direction of one of the city's few black architects, set up drafting space in Hawthorne House and, with local teenagers as aides, investigated and projected the space needs of each of the programs and drew up a master space-usage plan. For the gym, the students not only drew the plans, they undertook the actual construction.

• Boston's South End has one of the largest urban renewal projects in the country, now one year into its projected seven-year execution timetable. Six low income neighborhood groups have organized to fight the present renewal plan, demanding more low rent housing, a phased plan that will not require residents to move until new housing is available, and greater participation in the planning. The student team has helped these grassroots organizations design and undertake housing surveys, investigate the results of relocation, look at local real estate trends and collect data to place the South End effort in the larger context of the area's housing problems and programs. The team produced two well-documented reports, which were crucial in obtaining support from both the Boston City Council and the Boston Redevelopment Authority. It now appears certain that the original plan will be drastically altered to meet the neighborhood's demands.

• One of the six neighborhoods of the Boston

Learn about the problem firsthand; learn how to work with the people.

Model Cities area received technical assistance, the aim being to submit a plan for the physical and social redevelopment of the area to the Model Cities Board. Although the team worked hard with the community the effort was largely unsuccessful, due primarily to insufficient community organization and community divisions.

• The Bromley-Heath housing project in the Jamaica Plain section of Boston is typical of many big-city projects: old, large, in transition from mixed to all-black occupancy. A program sponsored by the Department of Housing and Urban Development and the Boston Housing Authority organized initial efforts for modernization, stressing changes in social and managerial features and calling for active tenant involvement. In addition, the Office of Economic Opportunity introduced a related program to create a tenant management corporation. The students worked with the Bromley-Heath Modernization Committee and tenant groups to implement both programs.

One difficulty inherent in any school-based effort to assist communities is time: Real problems do not begin neatly in September and end in January or June. There is no way of knowing if a student group can accomplish its intended purposes in the course of the term. No student effort can succeed or should even be attempted without a commitment to follow through.

At the end of UFS' first term none of the projects was completed. Additional funding of $41,000 was obtained from VISTA and the newly created National Association of Student Planners and Architects, which enabled UFS to hire both students and neighborhood residents and thus continue four of the five original projects on a full-time basis during the summer months, as well as begin a fifth. This gave the students a chance to work more closely with neighborhood residents, helping break down barriers.

VISTA extended its commitment by converting some of the summer associates plus some other community people into full-time VISTA workers. This strengthens the community's ability to deal with its own problems and makes it more likely that skilled neighborhood workers may eventually be brought into the design and planning professions. In the future, technical training and extension courses for neighborhood residents may be introduced as a regular part of UFS involvement in community work.

During its first term, UFS relied exclusively on outside professionals for supervision, as most faculty members were fully committed to teaching and outside work. By and large this worked out well, although it may not always prove easy to find a sufficient number of persons both with time available and with instructional abilities who can appear on short notice. In the second round of projects, an attempt has been made to draw on Harvard faculty. Some reliance on outside personnel will probably continue to be necessary, however; apart from the issue of time it must be recognized that not all faculty members are interested in or qualified for such work.

UFS' second term has seen a move toward making it a more regular part of the School of Design curriculum, involving a greater number and diversity of students and a greater variety of projects. Students in any department of the school may receive degree credit for UFS work, providing the specific student and project are cleared in each case, and each department has a UFS liaison responsible for recommending how much credit to give and what specific part of the degree program the work will fulfill.

In the second term nine teams, with a total of 65 students, staffed 11 projects. Among them:

• Provision of technical backup to the Cambridge Housing Convention which seeks to stop rising rents and university takeover of the Cambridge low and moderate rent housing stock and to pressure public agencies and private institu-

tions to provide more housing (five city planning students).

- Work with local groups in two affluent Boston suburbs to develop plans and strategies for providing housing and supportive services for low and moderate income families, black and white (six city planning and architectural students).
- Assistance to a tenant group which aims to organize tenants in Boston's South End to negotiate collective bargaining agreements with large landlords and to formulate plans for cooperative home ownership (four law, city planning and social work students).

Students from the departments of architecture and city planning at Massachusetts Institute of Technology, graduate programs in education, law, social relations and social work from other Boston universities took part, as well as a few undergraduates from Harvard and Radcliffe.

In addition to the larger projects, UFS frequently receives requests for short-term assistance (e.g., a group of mothers wanting help in locating a site or building for a day care center). Students with a few days of spare time can work on such a project.

Attempts are underway to secure donations of professional time from graduate architects and planners for projects beyond the capacity of students or without sufficient educational value. The service is currently working with representatives of the Boston Society of Architects; efforts will soon be made to enlist the voluntary help of landscape architects and city planners.

The results of UFS' work have been promising, but by no means without problems. Perhaps the two most important problems intrinsic to community work are: 1) the degree of organization within the community, necessary to provide leadership and implement plans, and 2) the amount of commitment students can give.

If a community group is to become a client for students, it must have adequate leadership to give direction. It is probably impossible for the student team to do both the basic community organizing (even assuming they have the skills and willingness, which is rare) as well as its more defined professional tasks. But an essential part of the educational experience which UFS provides is exactly this interplay of professional skills in a context of community involvement and direction. How much time ought to be spent "plying one's trade," in the narrow sense, and how much time should be spent in direct contact with communities, which provide the basis from which professional skills are to be exercised, is a controversial question. This of course relates to the question of the proportion of total academic time the student spends on this work, and the associated issue of academic credit.

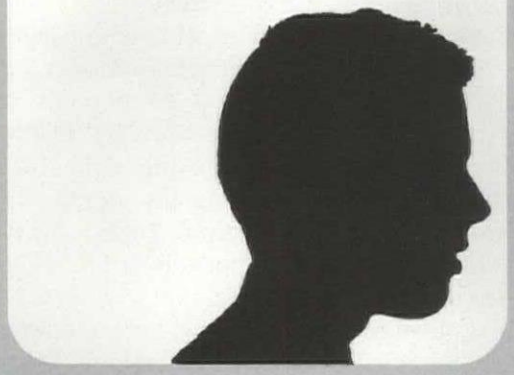
To do the professional work as well as getting to know the community and gaining its confidence in order to get a solid basis on which to found plans and designs, takes more time than is possible under present arrangements. Some students have suggested that the program be made full-time for a term or a year: The students, under faculty supervision, would become planners/architects for the community, combining traditional professional work with a close relationship to the community (which might involve living in the neighborhood).

Another approach is to build course work around the needs and demands of the field work situation. Working with the community, students would seek out formal instruction in those matters which directly relate to and support their work with it. At present some UFS students are finding it possible to integrate their community and course work quite closely.

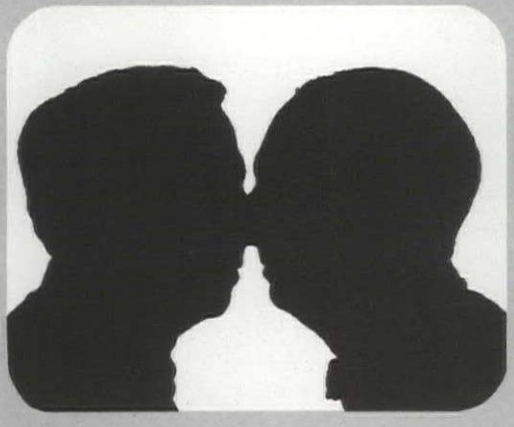
The related issue of academic credit is crucial to UFS' future and basic to the controversy the program has engendered within the school — a conflict rooted ultimately in differing views about the role of the professional, his clientele and his style of work. Opinions range from those who feel that UFS-type work ought to be a permissible alternative for all current studio requirements in the curriculum, to those who feel that some mix of both experiences is desirable, to those who feel that the experience is creditworthy, but not as a substitute for traditional studio, to those who feel that it should exist (if at all) strictly on an extracurricular basis.

Proponents of the UFS consider credit necessary not only to insure that a substantial and predictable commitment of student time will be forthcoming, but because of the basic educational issues involved: recognition of the validity of this planning and design process and of the necessity to train young people for this role and function as part of the regular curriculum.

The issues of student time commitment, educational value of field service work and relationship to the community thus become joined. Communities, particularly black communities, have an understandable mistrust of outsiders and their reasons for being involved in the community's problems. Students cannot go into this kind of work on a casual basis; they will be resented and get little out of the experience, have little to offer the community. If the arrangement is to work symbiotically, a commitment of time and energy which surpasses the present arrangement is probably necessary. Such time commitment implies recognition of the value of field work as a regular part of the curriculum. It is an issue which must be faced by every planning and design school in the near future. □



Architecture's
Young
and
THE REAL REALITY



The value to students of field service work, as described in the Hartman-Pynoos report, is seen as overrated. Indeed, the program is regarded as misleading if not downright detrimental.

BY SIBYL MOHOLY-NAGY

The authors of the Harvard Urban Field Service report have performed a valuable service to architectural education because they have issued a summary of intentions and results that is absolutely characteristic for all advocacy planning curriculums now operative in the United States. In describing their work, Chester W. Hartman and Jon Pynoos have availed themselves of all current clichés which make up the particular lingo of social planning. It is therefore justified to summarize an opinion without reiterating the report's statements; they are entirely familiar to teachers, planners and architects.

It is not only a calumny but a statistical falsehood to support a student "feeling" that architects "have not really faced the central urban issues of our time — race and poverty — and that, like Nero, they are merely fiddling while our cities burn."

There is no big or small architectural firm that has not concerned itself with the redesigning of cities, from entire communities to neighborhoods, multiple dwellings and communication lines. In the majority of cases this is done at great financial and chronological sacrifice be-

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cause every architect knows by now that the agencies receiving rehabilitation funds, and the speculative developers implementing renewal plans, are unanimous in their rejection of designed solutions. This is not because architects are, as the UFS report says, "out of touch with needs and currents in their field," but because they are committed to seeing each constituent element of the city as part of the whole.

Most architects are aware of the long-range effects of ill-planned and ill-constructed environments on the well-being and constructive contribution of the population, and therefore unwilling to cater to temporary windfall profits and political power struggles. The well-rehearsed cliché of architectural obsoleteness has obscured the actual causes of the urban crisis.

Urban field service, whether at Harvard or any other school of architecture, proposes to "involve" future environmental designers in "the central urban issues of our time" by opening store front "planning and advisory offices" staffed with students who receive full academic

credit for the time spent away from the campus. The net result of one year of close observation of this change in training are four fatal misapprehensions accepted as truths by these students.

1. It presumes that there is such a thing as a ghetto (a quarter of a city in which members of a minority racial or cultural group live coercively because of social, legal or economic pressure). The mere concept of "entering the ghetto" smells from racist paternalism because it denies the fact that all citizens are at liberty of choice, movement and noninterference. It also presumes that there is such a thing as "a community" in the highly volatile immigrant population that makes up a metropolitan district.

The anthropological concern with ethnic traditions among minorities has produced a questionnaire syndrome that is already meaningless when the first child goes to public school and so becomes part of a homogenized culture.

2. "Entering the ghetto" fosters in every college student a feeling of his own superiority as an enlightened outsider — whether he admits this to himself or not. "Teaching basic professional skills to residents" and dispensing "professional advice" misleads "the community" into believing that the student knows about architecture and planning, when all he knows is either how to assist a professional already working in the district, or how to change an abandoned church into a community hall by patching up what sags and painting over what is dirty.

Since the student is always under the umbrella of his college status, he will never acquire that sense of ultimate and irreducible responsibility to his clients which is the pivot of every architectural practice.

3. Doing good "for the community" will foster the misapprehension that the student is doing something for others while in reality he is saving his own conscience, or — more frequently — is catering to his own aversion against the dry, inevitable routine of learning competence.

In this he is abetted by college administrations and boards of trustees who have rushed into "neighborhood service" to protect their campuses from armed violence and their public image from the onus of "middle class ideology."

This lobbying for "social justice" carries today such a miasma of phony altruism that it becomes increasingly difficult for responsible academic teachers to ask for tangible proof of the advocacy student's performance and progress. Any censure becomes a crime against society — and students are quick to catch on to this golden opportunity.

4. Perhaps the most destructive misapprehension fostered by the field service and advocacy curriculums is the student illusion that they, as architects or as architectural planners, will be called upon to design social housing and "neighborhood facilities" or carry any weight in the layout of roads and expressways.

The proof for this statement is so overwhelming that it has not to be elaborated. United States cities are rebuilt by 23 percent profit speculators who, in the gratifyingly frank admission of the builders of the ugliest co-op housing project anywhere in the world (Bruckner Boulevard Housing, New York), "have no time to haggle over inconsequential elements like esthetic design."

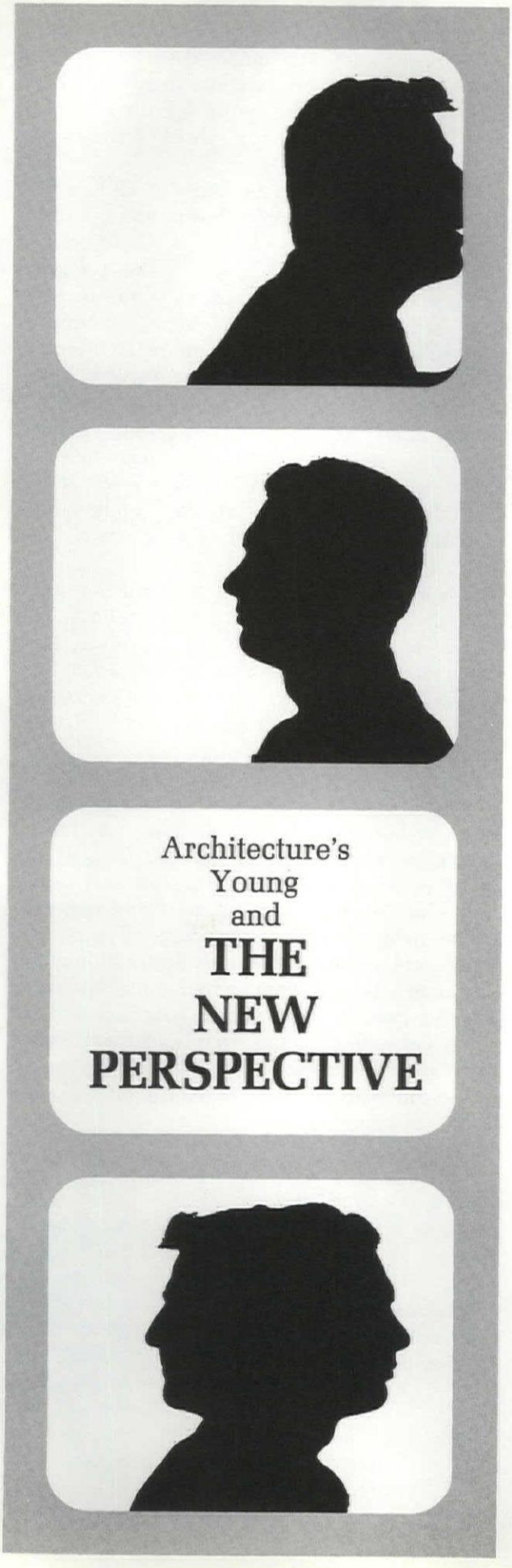
If, as the UFS report states, "the student has to get acquainted with those whom he is to serve," his teachers better admit that his future clients are the socio-economic power structure: the ruling politicians, the banks, the corporations, the vast organized charity boards and, every now and then, a wealthy enlightened private client. It is a pitiful lie to tell a student that Mrs. Ortiz or the Bedford-Stuyvesant Tenant Association are the clients, and a serious crime in professional responsibility to tell him that the future of architecture can dispense of design on an individual monumental scale.

The most evident "unmet need" in architectural education is not that of getting the student "involved" for four credits a week — this has been since time immemorial the personal responsibility of each individual. It is information about the actual forces that decide over designed environment The established power structure shows not the slightest signs of vacating its position of free enterprise, profit economy and competition, and it is the architect's responsbility to impose the highest possible architectural standards on the environmental influence of those who hold the means.

The basis of such a contact with the decision making powers must be a full understanding of the historical role of architecture as a shaper of urban environment.

This historical role is a combination of the highest available professional knowledge which can be acquired only in years of specialized training, and of a profound cultural insight into the influence of esthetically memorable, morale-building forms and spaces, open to all citizens, whether "elitist" or "ghetto inhabitant." If architecture has any meaning at all as distinctly separate from "building industry" it is the achievement of maximum as against minimum standards.

Unless we can give to our students this sort of realistic knowledge of his future role in society, we have no right to dissipate the years of his greatest learning potential in fragmentary, parochial and resultless do-gooderism. □



The profession's old defenses, it is suggested, may have outlived their usefulness. A realignment of interests and mediating pathways are perceived — and the user's call is clearly heard.

BY FRANCES L. PORTNOY

Architecture is an old occupation which has contributed structures of "commodity, firmness and delight" to a variety of societies and under vastly differing conditions. It has been admired for its broadening, experiential and artistic qualities. Only in recent times has it come under criticism for its essential conservatism and compliance with the patron, and for its lack of concern and involvement with the important social issues of the period. Afoot is a notion that the individual has social responsibilities that extend beyond professional role definitions, a notion born of a sense of crisis in which well-intended participation can become collaboration in what is socially undesirable.

Established architects have been weighing the era's dilemmas but have not shown the sense of urgency expressed most forcefully by the new generation of architects. Under the impact of rapid population growth, unplanned technological advance and misplaced social priorities, the student or young architect, himself often the embodiment of changing values, lacks adequate role models in his field. The result is a generation gap in the profession mirroring that of society as a whole.

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The old image of the ideal practice — the modest office doing good design for high-prestige clients, becoming published, winning awards and later serving as a "crit" on a university faculty — to many students today is simply irrelevant. Students are asking how a profession can use its special techniques not for profit or self-glorification but for improvements in the quality of life.

They are considering a new model for the client-professional relationship, a model in which the welfare of the user, or the total social group, has prior claims on those of professional loyalty. They are wondering if the authority of the professional must necessarily derive from possession of knowledge distinct or distant from that of the user — an extension of the idea of participatory democracy. But the vehemence with which they accuse their elders of "social irresponsibility" may, unfortunately, obscure the really important issues. Occupations are not

static but are continually affected by the great changes in technology and social policy.

The ideal "simple relation between professional and client," always a convenient fiction, exists no longer even in imagination. The single client is now only a pleasant anachronism. The architect serves new clients: corporate, institutional and community who, as Michael O'Hare points out, are "complex and inaccessible." Not only is the architect required to define the nature of the ultimate client — heretofore a simple task — he is now called upon within the new ethos to provide what is considered a public right — the "good environment for all."

Other service professions (i.e., medicine and law), also seek to preserve their occupational cores while accommodating to social and technological change. Architecture is not alone in its dilemmas. But each occupation is faced with dilemmas unique to itself and which stem from the precise nature of its work. In architecture, strains have developed out of the professionalization of the occupation in an age of technology, and out of the conflict between architecture as an art and architecture as a profession.

Professionalization is a historical process that occurs in occupations as technological development demands increasing specialization. Most occupations can be placed somewhere on a continuum of professionalization; they can be measured against a "model" type of occupation performing a public service, awarded public trust and possessing the attributes delineated by one source as "systematic theory, authority, ethical codes and a culture."

By the 19th century the practice of architecture came to require a somewhat formalized course of study. Gradually university training became one mode, though not the only one, of entering the occupation. Participation in long and common training helped to create a group with common interests and attitudes, and this group perceived that status was awarded to occupations that could demonstrate their possession of an esoteric technique used for the welfare of the client. Architecture might have been the very essence of the "genteel profession," but gentility alone was not sufficient to ensure everlasting prestige.

Aspiring professions need first of all to define the boundaries of their authority and technical competence, and in architecture, tradition and historical development asserted the predominance of the artistic component of the occupation. Architecture did not assume a monopoly over all building, although it did make attempts to extend its province through government regulation and licensure. Architects accepted the dictum that "nearly everything that encloses space on a scale sufficient for a human being to move in," to quote from Nikolaus Pevsner, "is a building. The term 'architecture' applies only to buildings designed with a view toward esthetic appeal."

This appears to be a stringent self-limitation if viewed from the perspective of the total system. It has a definite function, however, as a rationale for powerlessness in the larger system in which industry and the builders, supported by government, produce the bulk of what passes for building and design.

But such a limitation became problematic when professionalism, with its stress on autonomy, authority and responsibility, generated frustration over issues of control. Even if the architect asserted his authority over only buildings with "esthetic appeal," he could not help but be aware that valued buildings of great "delight" were not safe from rapid destruction when economic interests were served, and that buildings for housing vast publics, unconcerned as they were with esthetics, were nonetheless constructed with considerable "firmness."

Like other groups frustrated in their achieve-

The young have the feeling of "selling out" if they do not become involved in design.

ment of goals, professional bodies create myths of omnipotence. Architects often have strong beliefs, but they are about style, art and their superiority as social planners. It is not uncommon to find architects presenting an image of the master builder-coordinator capable of creating an environment that would transform the very nature of man.

But the professional can avoid frustration by constricting his province of responsibility, confining himself to a technical advisory role on the planning and construction of buildings. Most architects would consider this a necessary but insufficient definition of their work; the occupational core has somehow been removed without the element of "esthetic appeal," or the artistic manipulation of space. They argue that architecture is an approach, that it is not a group of special techniques and that the architect, as Gropius maintained, is a "generalist in an age of specialization."

Still a profession must have a theory, and there are those architects who seek to establish a unique body of knowledge, specific techniques based on "science or a group of sciences." Professors of architecture are very concerned about what constitutes a theory of architecture. Is it based on esthetic, social, scientific, economic or political theory? Trying to establish a basis in intellectual operations, the artist-architect believes he must have a program of research but wonders whether it might not be a program of search that really makes the creative architect.

Architecture's element of artistry is more specific than in other professions; it is an unspecifiable, judgmental element which transcends technique. The architect is clearly expected, both by himself and the public, to provide something more than "mere building." Le Corbusier has told us that "the purpose of construction is to make things hold together; the purpose of architecture is to move us."

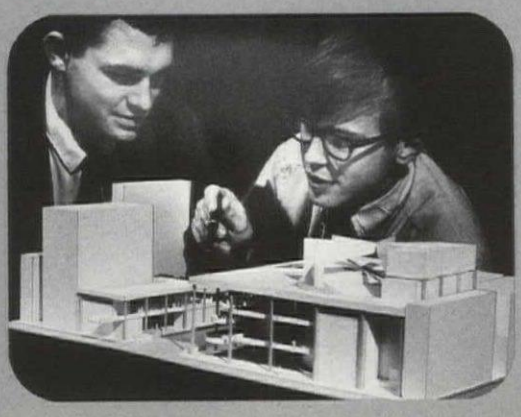
This artistic element, rather than the professional, is paramount in architecture's view of its own history. It is a view which focuses primarily upon the esthetics of structures, or more recently, and in the tradition of art history, upon their historical and social contexts. Professional associations, journals and schools of architecture give scant attention to the organization of work, or to what might be called "professional practice." In any case, students soon learn that this is not a highly prized aspect of their study, that essentially it is relegated to a lowly position on the scale of occupational values.

If the architect were purely professional he could employ his technical competence and advice-giving skills in many ways. In fact, this is precisely what most architects do — from those who embark on careers with one office and rise, perhaps, to office manager or supervisor of construction, to those who work for industry or government.

The architect lacking a strong commitment to the prevailing architectural image may want to, or have to, settle for such employment. Yet most young architects and architectural students have the feeling of "selling out," of not testing their mettle as architects, if they do not become engaged in what they regard as the core activity of architecture — design.

It is from his own talent and imagination that the designer expects to do creative work. From individual effort comes creative results, he believes, and his view is lent credence by a recent study of creativity which concludes that team action is "entirely antithetical to the personalities of creative people."

The quality of the completed building stands as evidence of the architect's ability. The unbuilt design is merely of academic interest, perhaps then only because it is the work of an already successful architect. Under present forms of practice, the completed structure is also the



architect's most potent advertising. This can account, in part, for the cult of novelty in architecture; what often appears as a rejection of tradition and a search for new forms is also a way of achieving recognition or attracting the attention of the relevant publics.

Of course, design was never a purely free artistic function. It has been constrained by client wishes, building codes, contractor and labor interests and the cost and availability of materials. And, as the technological functions of buildings multiplied, the architect in a sense became the client of the engineer.

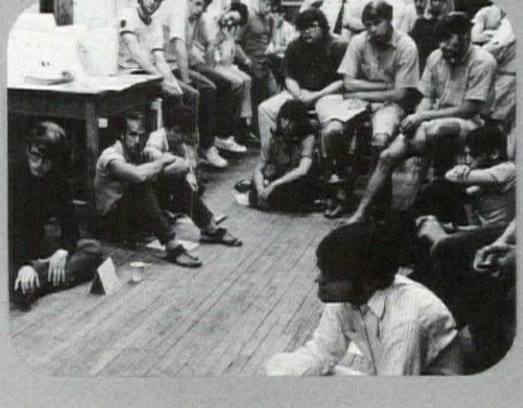
The prefabrication of parts imposed endless limitations on the manipulation and organization of structural components into something more than mere shelter. In one attempt to mediate between art and such technological impositions, architects developed the theory that scientific knowledge could hold the key to true artistic design. The most perfect expression of the dictum of "form follows function" would come, they believed, if the architect truly understood the scientific nature of materials and of behavioral functions.

The greatest possibility for the artist-architect to create his own design appeared to lie in his having his own practice. A small practice, he thought, could acquire a reputation if its work were competent. But even here he discovered he had to be firmly committed to design if he wished to continue designing. There seemed to be a point of diminishing returns as the office grew larger. Work and authority had to be delegated and the architect lost control over design. Someone was needed to drum up the clients, administer the office and take care of business details, and often the architect found he had traded in his soft pencil for the telephone, desk and airplane seat.

In his practice, the architect-as-artist would like to spend most of his time and attention designing buildings, although he realizes that the design process can be endless. He is never completely satisfied that he has considered all possibilities, and though the computer may prove to be of assistance in this process, it is still he, the architect, who must make the choices. He is further pressed by his professional responsibility, his obligation to see that the building goes into construction as rapidly and efficiently as possible.

Architecture as a business or means of livelihood is not necessarily in conflict with either artistic or social responsibility objectives. What is at issue, however, is the preservation of professional autonomy. To the businessman seeking the buyer's approval, "the customer is always right" and "the man who pays the piper calls the tune." Professionalism, on the other hand, asserts the independence of educated judgment unfettered by the pressures of the market-place or elsewhere (professionals in all fields have come to recognize the potential conflict arising out of the "channeling" of research interests according to the availability of government funds; also there are the problems of loyalty to employer, client and self when the professional is a salaried employee).

The physical objects created by architects are also social objects. They may be monuments to the most powerful elements of society and symbols of society's most central values, but they also fulfill utilitarian needs and are seen and used by all kinds of people. As artist, the architect need not be concerned with control or prediction on the use of these objects, but the professional claim to authority and responsibility injects him, in spite of himself, into issues that are political as well as artistic. Recent events have made it extremely difficult to ignore the fact that professional and even artistic decisions can have great political and human consequences, and indeed, the architect's concern



with such consequences is a logical extension of his professional posture.

Although the architect is sometimes criticized for being compliant, in reality he has always had to assert his judgment with his client; he has had to convince, cajole and educate in a kind of bargaining process, a process which to a great extent has been concerned more with the artistic elements of his role than with the professional.

The more his services were based on what the client interpreted as judgment rather than technical competence beyond his own comprehension, the more his advice tended to be questioned by the client. His position improved somewhat with regard to the technological aspects of building, but even *he* found it difficult to make a clear distinction between judgment and technical competence. The expansion of the concept of client to include the user added to the difficulty of making such distinctions.

The architectural process brings together a person whose full-time activity is centered around the occupation, and whose self is deeply involved in it, with others whose relations with the field are fragmentary. Yet it is the latter who are ultimately affected more deeply by the process' outcome.

The client-user may have a picture of professional services and priorities widely deviating from the architect's. Buildings are available for all to see, experience, use and judge. At some point every man becomes a critic. If it is a question of style, taste or the knowledge that comes from experience, then the consumer's opinion may be worth as much, or more, than the next man's — and that includes the architect's.

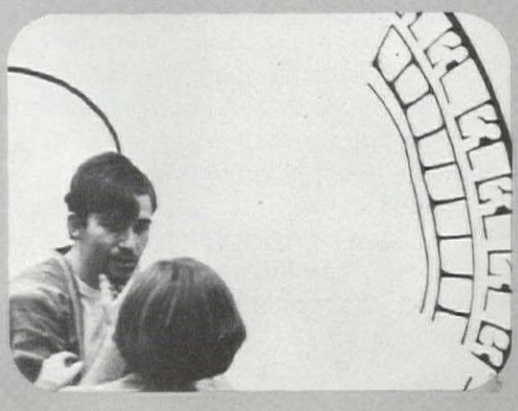
There is no doubt that every occupation needs some form of defense against public intrusion into its special domain, that it needs to preserve the "secrets behind the counter." But under the new condition of disintegration in the cities, the old defenses may have outlived their usefulness. Some served merely to preserve the illusion of authority through assumed distance from the client and, more importantly, from the user, while fending off the inevitability of the bargaining process.

The architect transformed judgment into competence beyond the client's comprehension by a belief that the public does not have the visual sensitivity to fully appreciate a work of architecture. He rationalized that criticism of architecture even by those able to "see" had to be of a tempered sort since architecture by definition is imperfect.

"To meet the demands for commodity, solidity and esthetic satisfaction," said John Burchard and Albert Bush-Brown in *The Architecture of America*, "a building must not compromise in any area. Unfortunately, this is impossible, for the several measures make contradictory demands and cancel each other. . . . Perhaps the greatest buildings are those that exhibit a compromise made powerfully and decisively." In this way the architect confused artistic and professional planes of analyses. He presented artistic defenses against what should have been considered professional criticism. The case was too important to be left to the sociologists, so to speak; the failure of the design was due to professional, not artistic, ignorance, with the architect neglecting the total system in which he was involved.

The architect has refused, by and large, to return "to the scene of the crime," to examine the functioning of the buildings he has designed. Even when he wished to take this functioning into account, he could not afford to be held responsible over an indefinite period. Occasionally, when a study clearly indicated failure to comprehend the needs of the users (as in the case of a large public housing complex that was to become a "battleground"), the architect might wonder whether he should have ever taken the

Events make it difficult to ignore the fact that professional, even artistic decisions, can have great political and human consequences.



commission. At the least, he could have dealt with the client in terms of the professional elements of negotiation instead of the artistic. Or so he might well speculate.

In other instances the architect has accepted work of dubious inception by assuming that someone with less ability would design the building if he refused to. When he was unconcerned with the use to which buildings were put, or their affect on the environment, he functioned solely on artistic criteria.

But professional architects can now prepare to question such outworn defenses. The drive toward professionalization legitimizes criticism through the more neutral concept of research. In this way architects can preserve some measure of colleague solidarity. It has been said that too much colleague control over the artistic aspects of architecture could result in bland conformity (though this might be preferable to other more devastating results), but too little professional criticism can lead to the abdication of social responsibility.

The new generation of architects wants to preserve its artistic integrity while acknowledging, at the same time, the implications of professional decision making. Its members may wonder at the seeming inability of older professionals to accept its assumptions and criticisms; but the fact is that the economic interests of architects have long tended to be identical with those elitists who could afford the expenditure of man and materials architectural construction demands.

The new perspective of concern with the general good rather than with the more specific interests of the possessor of resources requires quite a different alignment of interests. Realignment rarely takes place without some degree of conflict, but this conflict can be tempered by at least two approaches: One is the use of the trend toward professionalization to strengthen colleague controls, and the other is the consideration of previously undervalued career lines.

Those who reject the ideology of professionalism in the belief that it implies staidness or conservatism are unaware of the order that it brings to vocational life. Standards of excellence, responsibility and collective control can serve as barriers to the abuse of a public trust as well as protection for the profession.

This implies going beyond concern with ethical practices, fee schedules and regulation of competition — moving toward a concern with the implications of architectural decisions.

The rewards of recognition which have heretofore been more or less restricted to those fulfilling purely artistic criteria can be extended to those who comprehend the total system within which architectural choice takes place. This may require the development of a new colleague group, one sensitive to the possibilities of professional organization for more constructive uses (a process of group formation perhaps already underway in some of the new protest activities).

What may be more important for the occupation as a whole is the realization that political considerations and new alignments are also career contingencies. As Everett C. Hughes, the author of *Men and Their Work,* has said, "The old career lines change quite rapidly under the impact of the new concerns." Yet the bright young architect will be torn between advocacy roles and the necessary perfecting of his skill as designer. He has not previously looked with favor on career in industry, in large planning agencies or in government.

Fortunately, some of the existing institutions have demonstrated their creativity in the development of mediating pathways which permit the young architect to perfect his skills. Such mediating forms as design panels for the poor, consultant boards, work projects on the real problems of the city help the architect to solidify that stubborn artistic individuality that will stand him in good stead as a salaried employee. Well trained and sure of his ability, he can then examine and question the demands of the institution or agency which employs him. The young architect will discover that the more developed his skills, the more he can serve as a legitimate advocate.

Such a role is not only applicable to the situation of the poor and powerless. The changing nature of client from individual to community means that agencies and users of all sorts — school committees, hospital patients, prisoners, students — need a professional ally who will assist them in their negotiations with architects and other professionals, bringing together diverse and often conflicting groups within the client "community."

Still, it may be crucial that some architects continue to perform under the old definitions, although they are thus limited to one small aspect of social contribution. Yet, in the increasing rationalization of mass society, the presence of beautiful or symbolic structures may be more essential than ever before. Although such structures may symbolize the beliefs or power of only a small segment of society, the spiritual interplay between such structures and those people outside this segment does not depend on acceptance of the system of belief.

But this aspect of architecture applies only to a very few practitioners. For the rest, an inability or unwillingness to heed the call of the user will increasingly subject the architect to professional scrutiny and political criticism. □

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AWARDS PROGRAM

co-sponsored by
The American Institute
of Architects
and
the American Association
of Medical Clinics

Jurors

H. Samuel Krusé, FAIA
Joseph Blumenkranz, FAIA
James J. Feffer, MD
Associate Dean
for Clinical Affairs
George Washington Medical
Clinic

Jury Statement: The projects submitted for evaluation this year placed the jury in a quandary. There were projects which were, in the jury's opinion, meritorious of recognition for beauty and skillful functional development but questionable as facilities for meeting the requirements of group practice.

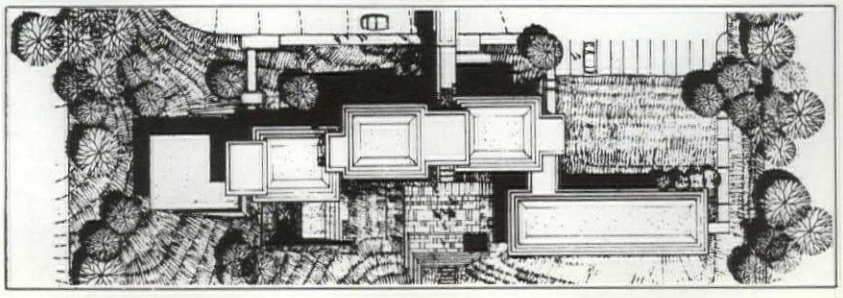
The jury showed a concern over the frequency with which the entrants were faced with what seemed to be an incompatible program: the dichotomy between the requirements for private office suites for individual practitioners and a facility for group practice. The jury, in fact, found no project that it believed exemplified the architectural manifestation of group practice generally associated with a clinic — and that, after all, was the purpose for which the awards program was devised.

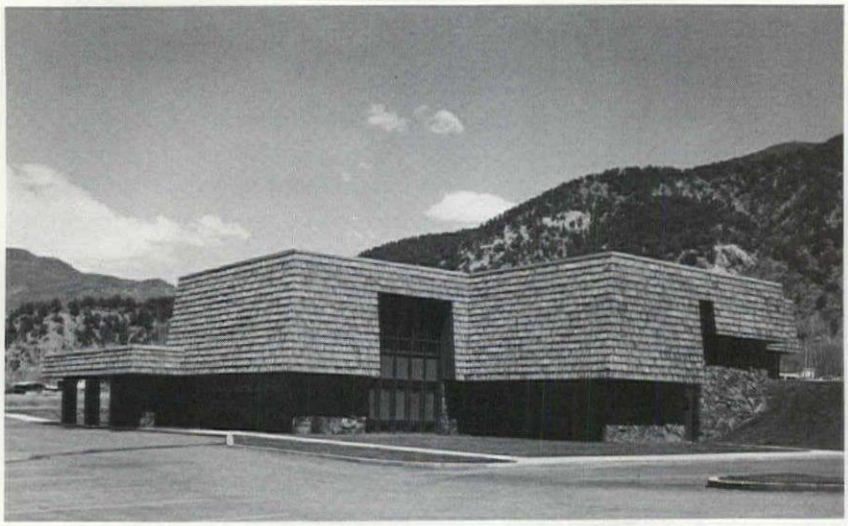
Many of the submissions this year reflected the designers' preoccupation with one aspect of the clinic design problem and ignored many other important considerations. Generally, projects were very efficient functionally, but some at the expense of patient sensibilities; for example, waiting spaces as efficient and impersonal as railroad station waiting rooms and communal dressing rooms for X-ray suites.

These criticisms suggest that a more sophisticated understanding of the aims and benefits of medical group practice is needed before an architectural manifestation is possible. The jury believes that joint educational programs for both medical and architectural practitioners who are interested in this emerging field of health care could be mutually beneficial to architects and doctors.

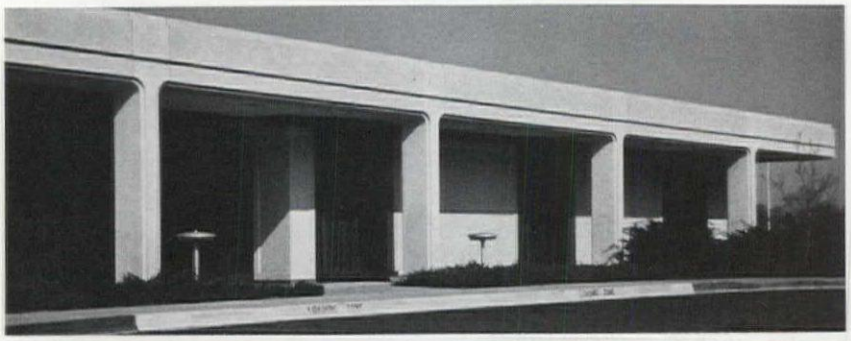
FIRST HONOR AWARD

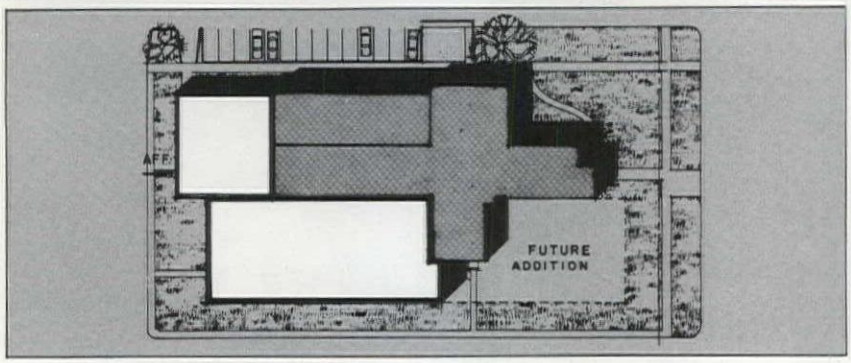
Minneapolis Clinic of Psychiatry and Neurology, Minneapolis, for 16 or more physicians: Hammel Green & Abrahamson, Inc. "A serene and therapeutic environment for the emotionally upset patients it serves. The aspect of the lake and beautiful landscape from the waiting rooms and doctors' is exceptionally noteworthy. The scale is human, and spaces are skillfully organized for function. The non-institutional character makes it unique but not at the expense of the pragmatic requirements for a successful clinic."



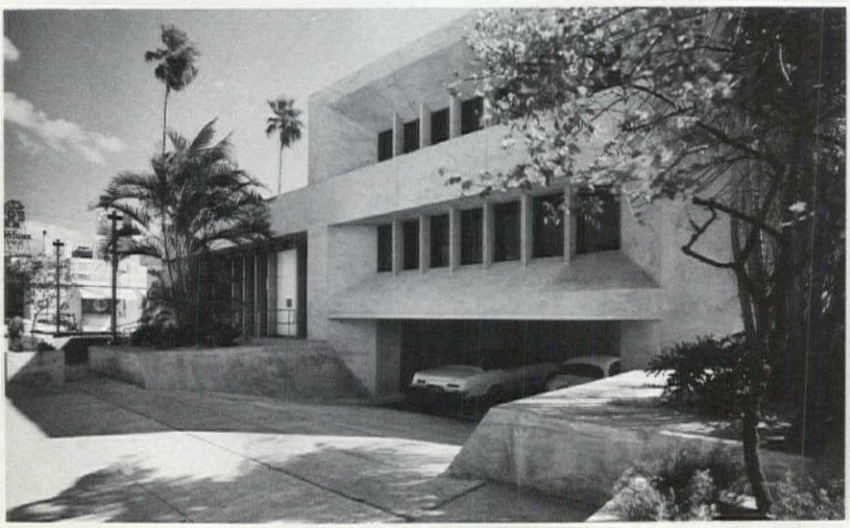


Casper Clinic Building, Casper, Wyoming, for 16 or more physicians: Henry Therkildsen. "One of the few projects outstanding as examples of clinics with concern for people. The pleasantly exciting, warm atmosphere combined with such human considerations as ramp, fountains and works of art for the patients' convenience and enjoyment impressed the jury."





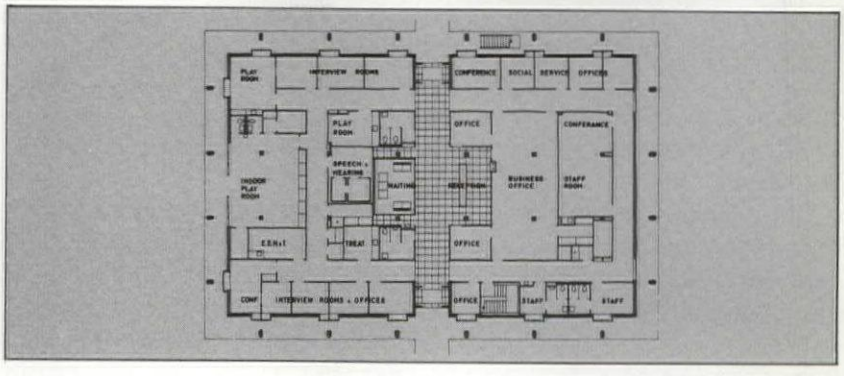
Rockford Clinic, Rockford, Illinois, enlargement of facilities: Larson & Darby, Inc. "Skillfully enlarges the existing structure and melds the aspects of each. Its plan is very efficient and provides a variety of alternatives for assignment of spaces."



Marysville Medical Clinic, Marysville, California, for 16 or more physicians: Rochlin & Baran. "Very efficient plan for a variety of services at a large scale. Placing the support facilities of laboratories, diagnostic services and administration central to the clinical services is done both logically and artfully."

Glenwood Medical Associates, Glenwood Springs, Colorado, for 7-15 physicians: Ellerbe Architects. "Form, color and variety of materials blended to create a warm, hospitable environment for patients and staff. The organization of the functions separate laboratory service from the treatment services in a logical, efficient and simple design. Furnishings and illumination are integrated to provide a relaxed, noncommercial setting for an unobtrusively functional operation."

Sutter Diagnostic and Treatment Center, Sacramento, for 7-15 physicians: Starks, Jozens, Nacht & Lewis. "A beautiful, pristine structure in classical proportions, an ideal environment for the treatment of emotional problems in children. The functional arrangement is simple and direct, devoid of complex corridors."



M. S. Fox Medical Center, Miami, for 7-15 physicians: Lemuel Ramos & Associates. "Adapts well to climatic constraints and is an excellent example of urban architecture. The concern for the setting, fountain, terraces and courts shows a regard for amenities often ignored. The plan is an example of functional arrangement well suited for an emerging type of group practice organizations."

ECUMENOPOLIS: Solution

In his book Ekistics, Doxiadis presents a new concept which he sees as the foundation stone of the world's urban future. Here, that idea is challenged by an admirer who has known the Greek planner for some 30 years and who worked for him for a time in Athens early in his career.

BY HARRY A. ANTHONY, AIA

Constantinos A. Doxiadis first used his coined term "ekistics" in 1942 during lectures at the Athens Technical University where he was an assistant professor of city planning — and this writer's instructor. He introduced the word to the international city-planning community with the initial issue in October 1957 of his monthly periodical *Ekistics*, a collection of abstracts and articles that deal with the problems of human settlements.

Now, with the publication of his major book *Ekistics* (New York: Oxford University Press, 1968, 527 pp. $35), Doxiadis presents us with his awe-inspiring "Introduction to the Science of Human Settlements" and shakes up the conventional wisdom that architects and planners apply in trying to find solutions to the problems of their communities. And with it comes yet another new concept: "ecumenopolis."

We can still do a good job of planning for the future development of cities, he says, but only if we consider them as being parts of the future ecumenopolis, the coming universal city that will cover the entire earth as a continuous urban system, that will be with us some 100 years from now, that "will inevitably take shape," and the birth of which "we are already witnessing in several parts of the world." Doxiadis gives us "a very simple way" to approach our planning tasks: "Instead of thinking of ourselves as the forebears of our grandchildren . . . let us not think of [the past] any more. Let us think of the future and acquire the imagination and the ability to connect the ideal forms of the future with the cities of the present. This is the only way."

The author: Dr. Anthony, who is also a member of the American Institute of Planners, is professor of urban planning at Columbia University's School of Architecture and a practicing city planning and urban design consultant.

Like so many other important works by influential authors, the book, at many places, sounds like a manifesto: "We are living through a crisis; and because we have failed to respond properly, we are heading toward disaster . . . . We must set our goals . . . . We must develop ekistics . . . . We must carry out an extensive program of research . . . and education . . . . Public opinion must be mobilized . . . . We must organize ourselves in the best possible way . . . . We must reverse our thinking, switch our thoughts from the past to the future, turn our heads in the other direction. Only then will we have the ability and the vision to lead ourselves, our cities and our nation toward the creation of the city to come, the city which can justify our existence and our efforts . . . . In this book man is going to take action in his hands . . . . His action will mean a therapy for human needs." (One is reminded of the beginning of Le Corbusier's half-century old *Vers une architecture:* "A great epoch has begun! There exists a new spirit!")

The main text is divided into four "books": The Subjects and Their Study; Facts; Theory; and Action. Book 1 discusses thoroughly the nature of human settlements, the way they are studied today and the way they should be studied by future "ekisticians."

Book 2 presents in its 200 or so fact-loaded pages a rich and thoughtful analysis of the world's urban regions, cities and rural communities (types, numbers, sizes and other characteristics), examines their evolution in time, classifies them into "static" and "dynamic" settlements (introducing other new terms: sector, dynapolis, dynametropolis, dynamegalopolis), discusses their "pathology" and the causes of their various diseases, and gives a method of diagnosis.

Book 3 formulates an outline of an ekistic theory concerned with the relationships among the five ekistic elements — nature, man, society, shells and networks — and guided by 54 ekistic laws, develops goals on the basis of human needs and presents a method for ekistic synthesis — or what the rest of us call plan-preparation.

Finally, Book 4 deals with the kinds and methods of action needed to bring about better human settlements through ekistic theory, ekistic development, enlightened ekistic practice and the building of the ecumenopolis.

or Nightmare?

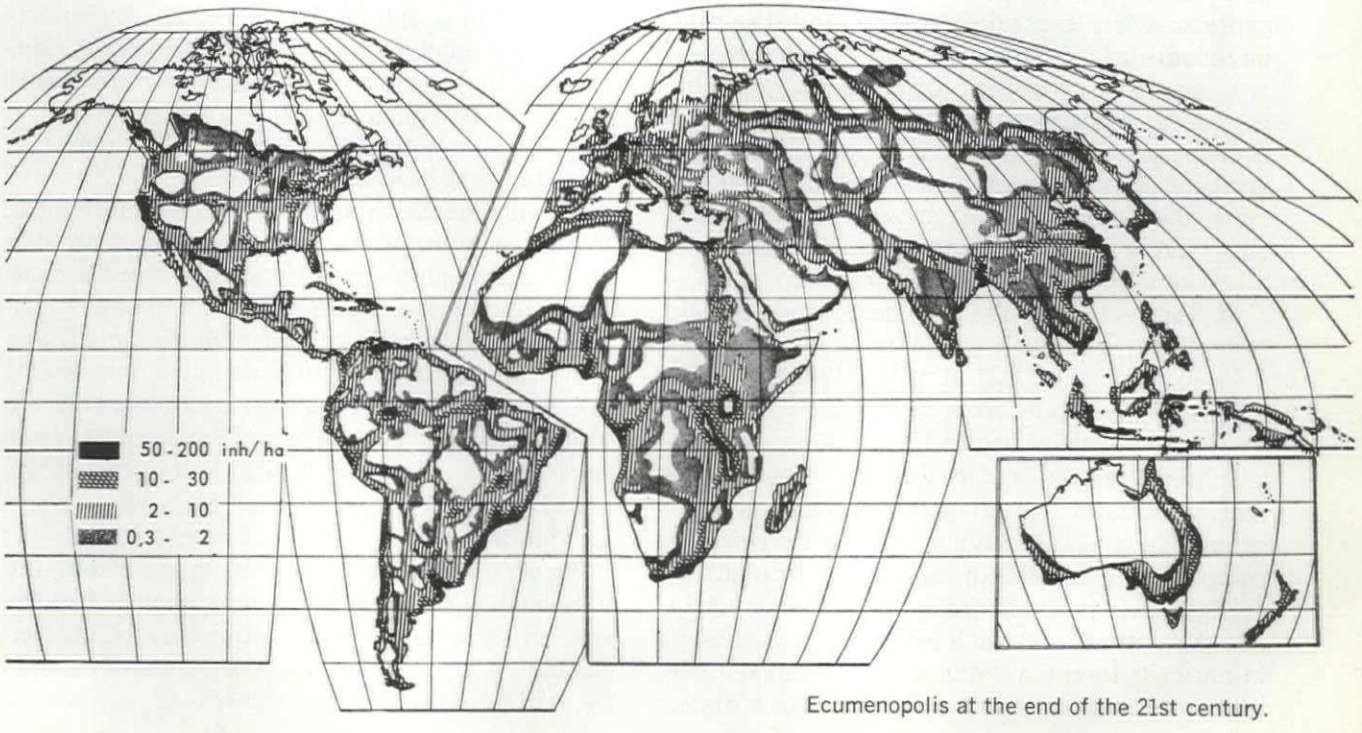
Included are about 500 illustrations, very instructive graphs, sketches and understandable plans all drawn to scale and with the same orientation, depicting human settlements of all kinds and sizes from the whole world, ranging from Tokyo, which appears on the book's jacket, to Myconos and Metsovo, a fishing settlement and a small mountain village in Greece, respectively. These carefully prepared line drawings add a great deal to the knowledge gained by the reading of this weighty volume.

Doxiadis is an excellent author, just as he is an excellent speaker: neat, orderly, direct, disciplined and enthusiastic. Starting with the Aristotelian precept that the ultimate goal of human settlements is to satisfy man's need for safety and happiness, he submits that all human settlements are living organisms in continuous process of development and renewal and composed of the *content* (man and society) and the *container* (nature, shells and networks, constituting the physical settlement, natural and man-made).

These five ekistic elements, in their interrelations in space and time, constitute the essence of ekistics as the science of human settlements. One of the gravest mistakes currently made in considering settlements is that they consist of only the container, thus depriving them of the fourth dimension: *time*. Time is their life, which is expressed in functions. It is impossible to concentrate on physical forms and forget about functions. In actual life we are interested in functions — living, running, working — but these are not easily expressed physically; therefore, we tend to think only in shells. The essential nature of human settlements must be understood as interrelationships of the ekistic elements.

As Doxiadis attempts to transform planning as we know it into science, he searches for order by classification. He proposes a study of settlements by ekistic unit (man, room, dwelling, dwelling group, small neighborhood, neighborhood, small town, town, large city, metropolis, conurbation, megalopolis, urban region, urban continent, ecumenopolis) and gives us a grid with these units arranged horizontally on a logarithmic scale, incorporating the five ekistic elements on a vertical scale. The resulting ekistic logarithmic scale is a graphic tool which can be used in studying and presenting clearly various human settlement phenomena (area or number of people corresponding to each unit, etc.).

For each of his 15 ekistic units, Doxiadis compares the five ekistic elements to the strongly interconnected and interrelated atoms of a molecule. In fact, his own photograph on the book



Ecumenopolis at the end of the 21st century.

jacket shows him holding such a five-atom molecule. In plants and animals the nervous or circulatory systems tend toward only one center and therefore are open circuits. In human settlements networks develop two characteristics: one connecting the parts to the center and the other connecting the parts to one another, thus creating a closed circuit.

In addition, there are connections between various settlements. His Law No. 34 states that "All communities and therefore all ekistic units tend to be connected to each other in a hierarchical manner. Every community of a higher order serves a certain number of communities of a lower order, and the same is true of specific functions within ekistic units."

At the bottom of the hierarchy are the small static human settlements: practically all of the settlements of the world, with very few exceptions, until the 18th century, which were growing very little; the villages and small towns of today; and the much needed static cells in our present cities, the sectors, as Doxiadis calls them. Like the Radburn superblock or Le Corbusier's residential sector in Chandigarh (and it is very unfortunate that Doxiadis does not mention these precedents but takes this idea which others have initiated and uses and treats it as if he had just invented it), the sector must become the modulus of the contemporary city, equaling in size about a dozen blocks of the past, allowing cars to enter but not to cross it, and reserving its green nucleus exclusively for pedestrian use.

Higher up in the hierarchy Doxiadis places his dynapolis, or dynamic city, a parabolic settlement with undirectional growth. The city of the past had a center and a periphery. During its evolution, the central functions and the core have spread into the built-up area of the periphery, altering the entire structure and creating a variety of difficult problems. The usual concentric growth of the contemporary city has strangled its center. Doxiadis finds the solution in an interesting new form: a parabola-shaped city having a linear core expanding along one direction of development and one main axis. The changing center and the periphery would remain in constant balance as the city expands in this fashion. Doxiadis illustrates this dynapolis with numerous examples from his own work: Caracas, Karachi, Islamabad and other major cities.

Dynametropolis comes next: a metropolis which exhibits continuous growth and which should be planned with a multinuclear center, each nucleus growing lineally in a different direction, thus producing a system of several dynapolises parallel to each other (with some gaps in-between their parabolic forms and some overlaps) or resembling a star-shaped urban organism (with agricultural lands and open space in fingerlike intrusions).

Dynamegalopolis, an urban area grown beyond control and of a megalopolitan character, is the organism in need of very drastic change in order to avoid the certain death of its presently choking centers. Doxiadis recommends that we create a new system of major centers and transportation networks of a higher order, which will take the growth and thus allow the existing built-up areas to remain relatively static, or at least to have as little additional pressure as possible and, hopefully, give themselves the time to solve their problems. This seemingly holding operation should continue until such time as the ecumenopolis is created in a static form and dynamegalopolis becomes a part of it.

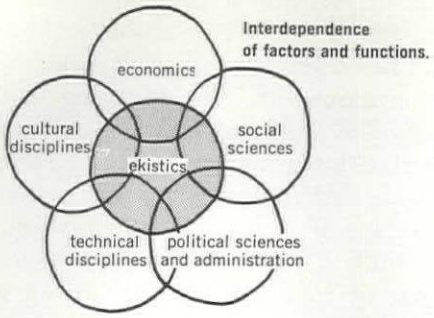
Ecumenopolis (deriving from the Greek, meaning the inhabited or settled part of the earth) is at the top of the hierarchical scale. This universal city will be relatively static, not growing any more, as was the old *polis,* because all growth in nature slows down and eventually stops "for many reasons mostly related to densities affecting biological, psychological, personal and social factors. This is inevitable," he declares.

During the phase of the ecumenopolis — and Doxiadis gives us its plan at the end of the 21st century, covering about the entire habitable part of the earth — humanity will once again reach a period of static balance between all the elements of its then corpulent, and one and only, human settlement. He believes that life in ecumenopolis will continue normally and "it may even reach great heights of culture and civilization." Its population will be on the order of 20 to 30 billion people, a number which, by coincidence and much to the author's amazement, happens to be the number of cells in the thinking organs of the human body.

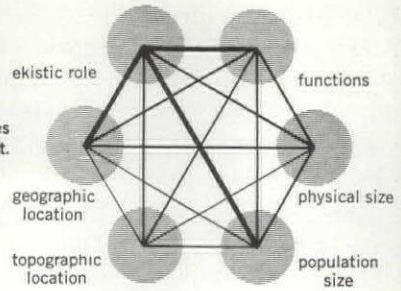
And so the question rises: Who will do all this planning that has to be done?

The ekistician shall be the expert. He will be trained to unite all the many disciplines capable of influencing human settlements. Doxiadis challenges the profession to produce minds that can combine theory with practice, think at night and build during the day, be both philosophers and masons. The goal of an ekistic education is the knowledge of the science of human settlements and the development in future ekisticians of creative ability that develops from reason and imagination.

An example of the "method of synthesis" the ekistician should use is given in the study of the Detroit urban area, currently being conducted by the office of Doxiadis Associates. It is well beyond the scope of this review to report on this

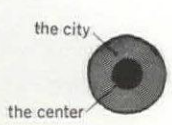


Interdependence of factors and functions.

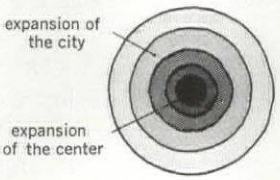


Ekistics and the sciences directly contributing to it.

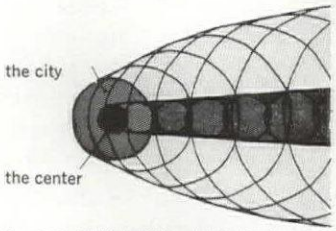
From the static city to the ideal dynapolis.



The static city of the past.



The static city which grows into a dynapolis.



Proper evolution of the dynamic city. The ideal dynapolis is a parabolic settlement with uni-directional growth.

method in any detail, particularly as, at first glance, it does not appear very convincing. Suffice it to say that a matrix of alternatives for the future development of the Detroit urban area "which includes 11 types of parameters with five assumptions for each parameter" led to the conclusion that there are 49 million possible alternatives! Too many?

Doxiadis developed two methods to reduce their number (first to 524,880; then to 11,544; then to 312, to 28, to 7 and to 2; and lastly to the once accepted alternative): the Isolation of Dimensions and Elimination of Alternatives (IDEA) method and the Continuously Increasing Dimensionality (CID) method.

Much as all this appears to be very scientific, this reviewer, at least, does not see how the application of IDEA and CID combined can eliminate all possibilities of a future behavior by the people of the Detroit urban area and by their decision makers, builders, real estate operators and the thousands of their elected officials that would produce development and physical patterns of land uses and networks and community facilities drastically different from the Doxiadis solution. With all our scientific progress, we are still unable to predict exactly what human behavior will be under such and such conditions — which may not be so bad, after all, as this inability of ours makes life more interesting and our cities more vibrant with variety and surprise.

But Doxiadis does not seem to worry whether what he proposes will indeed happen. His efforts are to find what theoretically appears to be the optimum and the best, as measured against the principles and the "laws" he has established, and to promote action and education to make it probable that more and more concerned people will think and act like *he* does, thus assuring a long-term worldwide implementation of his proposals. "Even this book," says he, "is inspired by the faith that a solution can be found and represents one of the actions being taken."

There are, of course, detailed critical comments one could make. The discussion of our urban blight and slums, socio-economic conflicts in cities and urban renewal practices is weak. Almost no effort is made to look at America's present corpulent and urgent urban problems and serious conflicts due to overcrowding, race and poverty conditions. Doxiadis seems to say: "Work toward the building of the ecumenopolis and all these problems will be solved by themselves." There is throughout this book — where the first person singular is very frequently used — a disturbing arrogance based on the assumption that the author alone is capable of preconceiving exactly the final product that will result from millions upon millions of individual decisions. Unfortunately, the crystal ball has rarely been more opaque than now!

Finally, and most importantly, one could argue against Doxiadis' strong belief that the building of the ecumenopolis is the essential foundation stone of our urban future. Although present trends clearly indicate that most of our future populations will concentrate in already crowded urban areas, this reviewer at least adopts the admonition Albert Mayer has put in his *The Urgent Future* (McGraw-Hill, 1967), "Trend is not destiny," and would have liked to see a first-rate mind, an experienced planner and a world

traveler like Doxiadis — who sees almost daily from his airplane windows the vastness of the open spaces of the earth — propose, instead of his universal city, an alternative dispersing future urban populations to new cities in new areas, rather than concentrating them where we present urbanites now live.

Why, after all, should 75 or 80 or 90 percent of the people of the year 2069, the earth's urban population of that time, crowd themselves on only 5 or 6 or even 10 percent of their nation's lands, sprawling around only a few points that will center on the metropolises of today? These metropolises are already groaning under the burden of populations increasing faster than they can absorb them. Urbanites in Tokyo, London, Paris, Los Angeles and New York are too familiar with the litany of the big city's illnesses: the choking traffic, the overcrowding, the pollution of air and water, the crisis of public safety and crime, the sprawl and the time wasted in going from here to there, the near-impossibility to walk anywhere, the health epidemics, the constant strikes, the noise and, more frequently, the steady deterioration of civic pride. We here in New York seem, in recent years at least, to have "the most of everything" and to suffer conditions beyond normal endurance and below a minimum for human decency.

With our present experiences, why should we, and the other metropolitanites elsewhere, as Doxiadis advocates, work toward ecumenopolis, which will certainly result in a much larger and sprawling New York, a monstrous Tokyo, a messy Paris and a completely unlivable Los Angeles? This reviewer not only remains unconvinced that we should but also happens to believe that it is the duty of all concerned citizens, particularly of scientists, politicians, educators, philosophers, doctors, planners and even clergymen to apply their best efforts in order to avoid this terrifying population increase and to help our planet earth achieve a stable status well before the time Doxiadis foresees it arriving.

Planners and urban designers would then be able to conceive a clear and strong image of the earth's future urban patterns, with each city hopefully keeping its own visible identity and having its own open lands, water bodies and recreational areas all around. Such an image, if properly invented, advocated, accepted by the political leaders and loved by the people, cannot but create the magnetism, the enthusiasm and the power that will, for certain, help us implement it in the decades ahead, thus avoiding the ecumenopolitan horror of combined complete congestion and complete sprawl that Doxiadis would have our grandchildren and great-grandchildren inhabit.

Except for these criticisms, everybody will agree that a formidable amount of excellent material has been assembled and clearly presented in this unique volume. Planning badly needs a theory, and this remarkable book comes closer to a start toward establishing one than anything we have had up until now. It is written by a man whom his friends and admirers know to be a very nice person, noble, enthusiastic, polite, amazingly intelligent and endowed with a gargantuan energy, who by sheer force of will and hard work has become by now internationally known as the most pre-eminent figure in the field of city planning.

Those who do not know him or who are envious of his extraordinary success and achievements see him as a character out of a Greek Western: ambitious, rich, talking a lot about good planning and good building but unable to produce one really fine piece of architecture, concerned more with dominating the world rather than with improving it, and being able to get a beautiful ship and invite all kinds of famous people from all over the world for a pleasant trip to the Aegean Sea and a symposium (from the Greek *symposion*, as preferred by Doxiadis) at Delos — and to do this every summer! But most admit that his personal magnetism and the excitement he engenders wherever he is or lectures create more public interest in planning than any other media now at our disposal.

And if, as Marshall McLuhan taught us, the medium is the message, what difference does it really make what Doxiadis writes or what his critics say about him? Planning becomes better known through him and *does* go forward, and this is what really matters at this time.

Some American readers of the book may become offended by the author's self-appointed omnipotence — and Doxiadis does epitomize what America's own Frank Lloyd Wright called "honest arrogance," which he also chose, as opposed to "hypocritical humility." But together with his sometimes overwhelming pronouncements, he certainly offers much informative and provocative reading.

American planners who may feel annoyed with Doxiadis after reading his book may wish to remember Mark Twain's pertinent words: "Few things are harder to put up with than the annoyance of a good example!" At some point, surely, such a book had to be written; and Constantinos Doxiadis deserves credit for this splendid, though far from perfect, achievement.

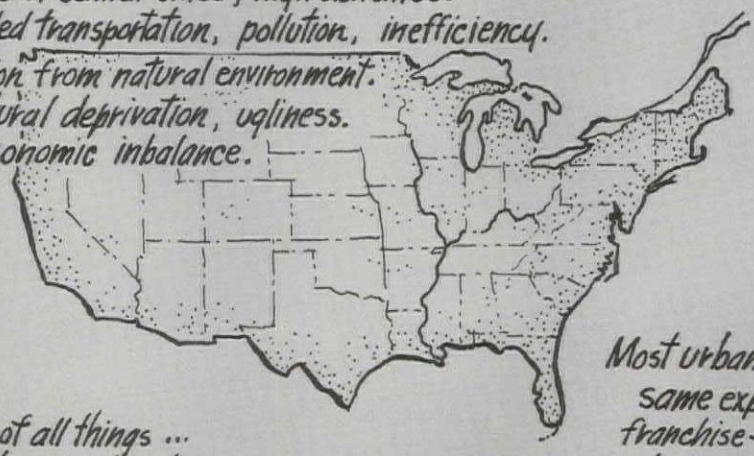
Like the world's first known city planner — a Greek of 2,400 years ago, Hippodamus — Doxiadis may live in city planning history: He seems to be the right man from the right place at the right time. □

URBAN DESIGN AND NATIONAL POLICY FOR URBAN GROWTH

by Charles William Brubaker
and Robert Sturgis, chairman
Subcommittee for a national design strategy

The American Institute of Architects
Urban Design Committee
John Fisher-Smith, chairman

The Problem =
100 million more citizens by year 2000.
Growth of metro areas, uncoordinated sprawl.
Decline of central cities, high densities.
Overcrowded transportation, pollution, inefficiency.
Separation from natural environment.
Cultural deprivation, ugliness.
Economic imbalance.



Trend =
Most Americans will live in a few huge urban regions .... but "trend is not destiny"...
- Mayer

Note the interrelatedness of all things ...
... especially ... urban growth policy, rural policy, environmental policy, & economic growth policy.

Most urban areas enjoy the same expressway design, franchise-dominated roads, standardized offices, plants, hospitals, schools, homes and neighborhoods.

Question -
Should national design policy encourage broad variety and diversity, as suggested by our great range in climate & geography?

WE PRESENT THESE NOTES AND SKETCHES TO HELP STIMULATE INTEREST, CONCERN, AND ACTION — TOWARD THOUGHTFUL URBAN DESIGN GOALS IN NATIONAL POLICY.

TWELVE SCALES FOR PLANNING

THE INDIVIDUAL = 6 feet

THE HOME = 4 people 50 feet

THE STREET = 100 people 300 ft.

THE NEIGHBORHOOD = 4000 people ½ mile

THE AREA = 100,000 people
typical Paris arrondissement = 130,000
typical Chicago ward = 70,000 3 miles

THE CITY = 3,000,000 people 25 miles

THE METROPOLITAN AREA = 10,000,000 people 80 miles

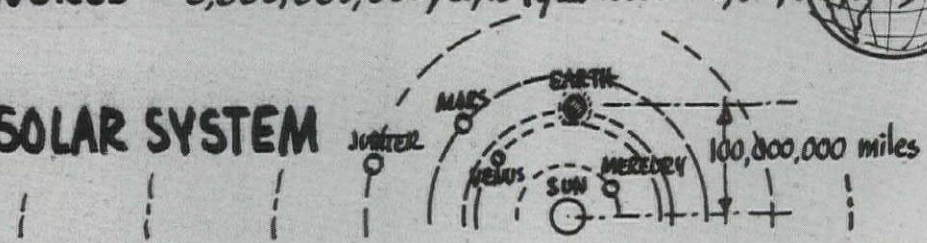
THE REGION = 20,000,000 people 300 miles

THE NATION = 200,000,000 people (year 2000 = 300,000,000) 1500 miles

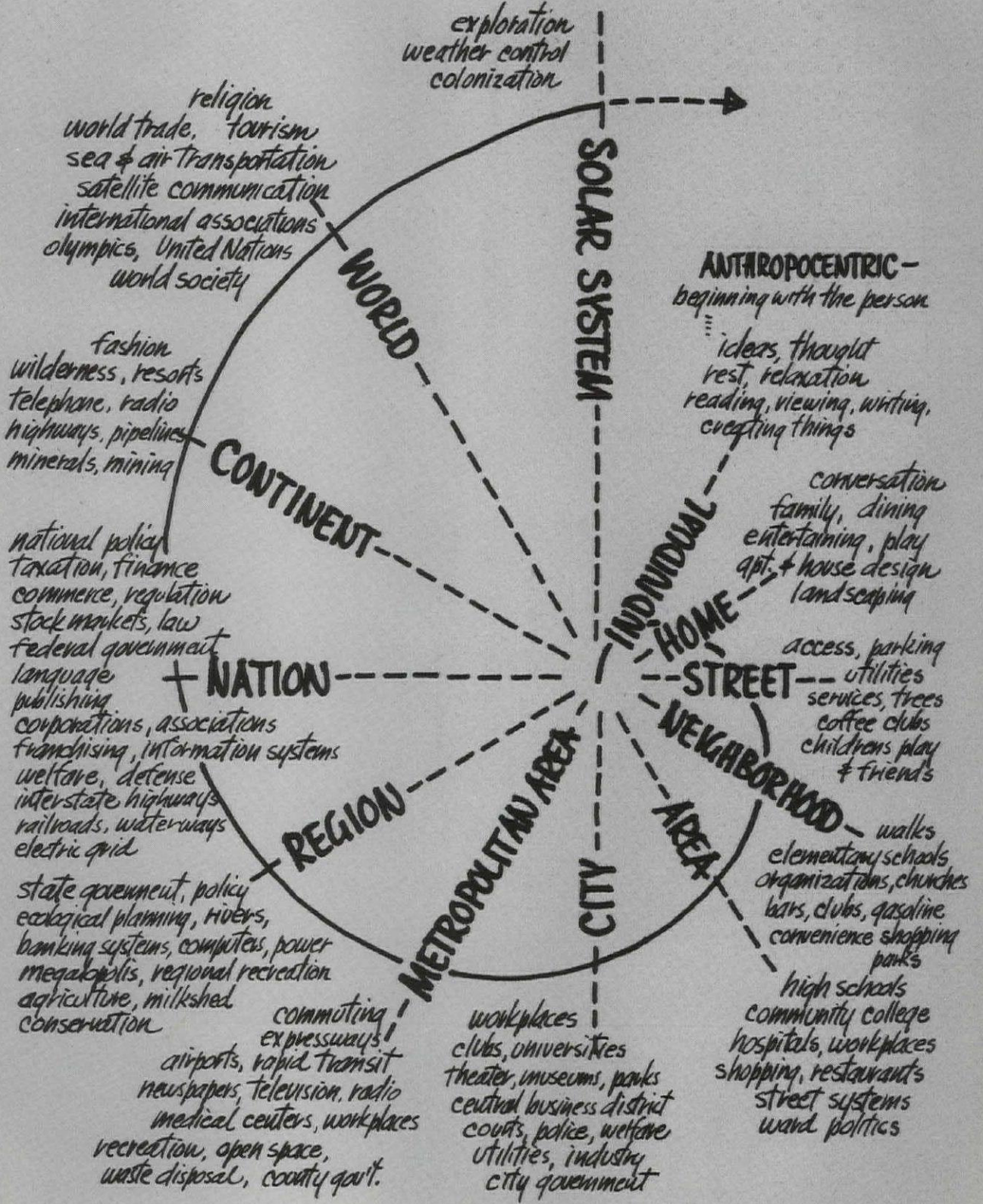
THE CONTINENT = 500,000,000 people 5000 miles

THE WORLD = 3,000,000,000 people (year 2000 = 6,000,000,000) 8000 miles

THE SOLAR SYSTEM



ACTIVITIES AND CONCERNS AT EACH SCALE ...



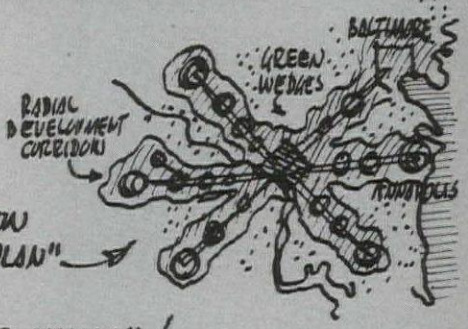
THE UNITED STATES CONTINUES TO GROW WITHOUT INTENT, WITHOUT DESIGN, WITHOUT POLICY

EXAMPLE=

WASHINGTON, D.C.

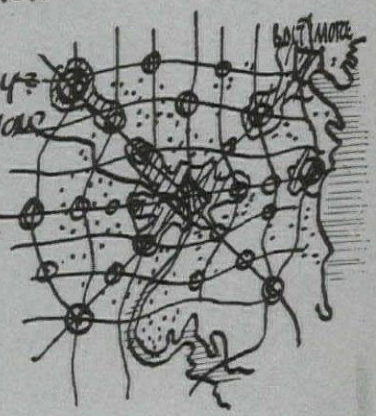
THE METROPOLITAN AREA, CURRENTLY 3 MILLION,
A FEW YEARS AGO, WAS PROJECTED TO BE 5.3 MILLION
BY "YEAR 2000 PLAN"

BUT NOW, METRO COUNCIL OF GOVERNMENTS
EXPECTS YEAR 2000 POPULATION TO BE 8.9 MILLION!



QUESTIONS—

1) WHO WILL CREATE A NEW PLAN, CONSISTENT WITH NATIONAL POLICY?
2) SHOULD WASHINGTON METRO AREA BE ALLOWED TO GROW TO 9 MILLION?
3) SHOULD A FINER SCALE BE ENCOURAGED?
.. PERHAPS A GRID TRANSPORTATION SYSTEM?

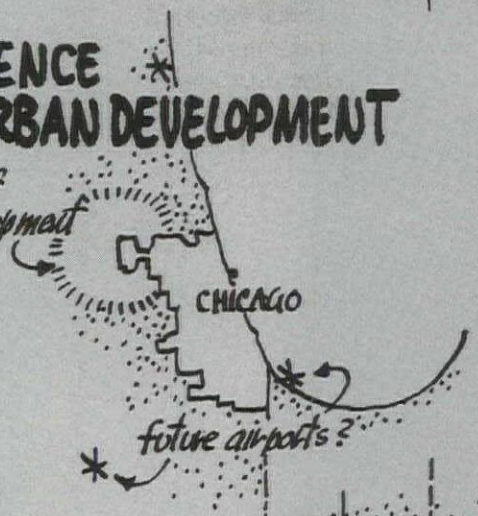


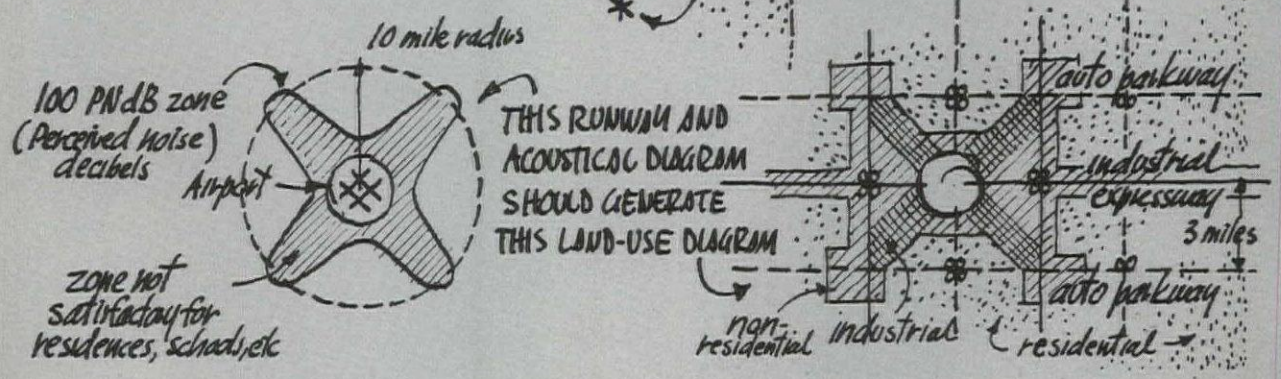
MANY THINGS INFLUENCE ECONOMIC GROWTH AND URBAN DEVELOPMENT

EXAMPLE=

AIRPORTS

NOTE HOW O'HARE CAUSED
UNEXPECTED AND UNPLANNED
DEVELOPMENT N.W. OF CHICAGO

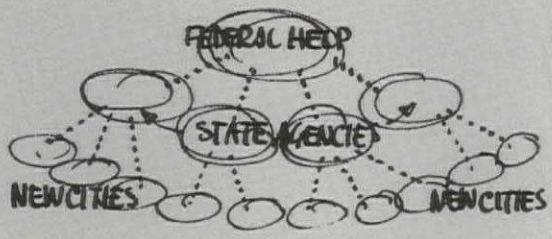




THE NEED = A NATIONAL POLICY FOR URBAN GROWTH

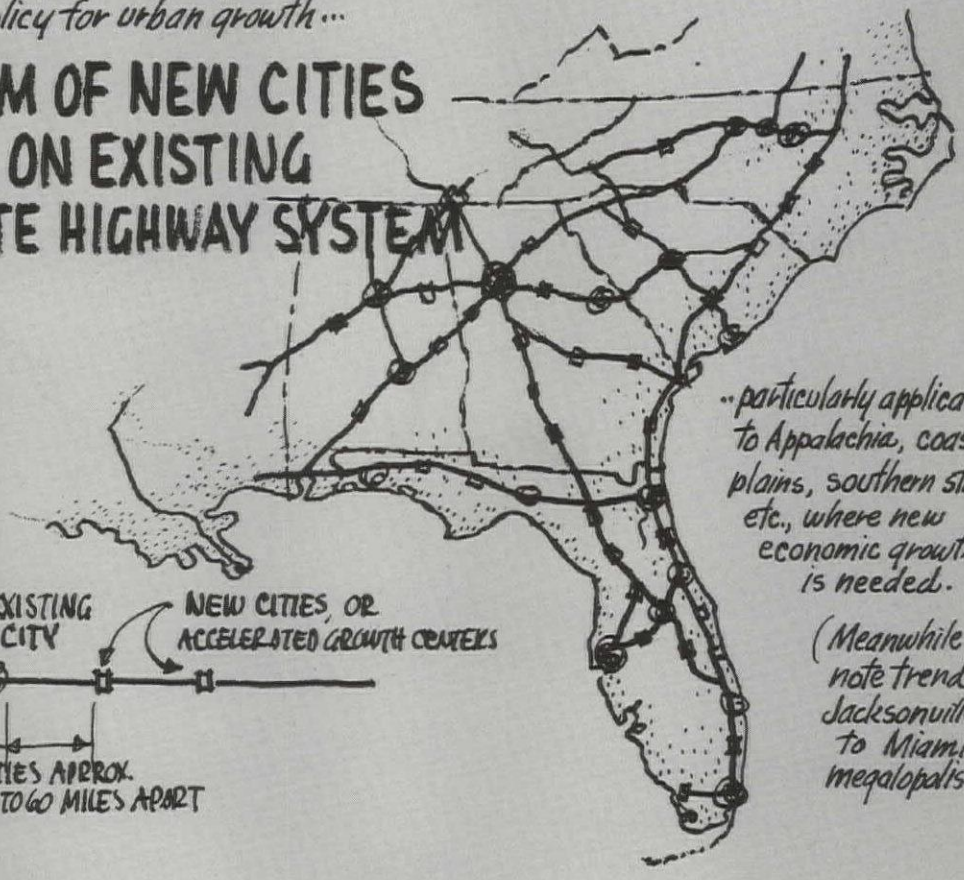
THE ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS RECOMMENDS NATIONAL POLICY FOR URBAN GROWTH COORDINATED WITH STATE POLICIES FOR ECONOMIC GROWTH & URBAN DEVELOPMENT

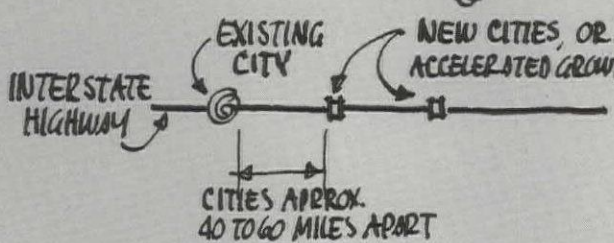
THE NATIONAL COMMITTEE ON URBAN GROWTH POLICY RECOMMENDS FEDERAL FINANCIAL ASSISTANCE FOR 100 NEW CITIES OF 100,000 EACH PLUS 10 NEW CITIES OF 1,000,000 EACH



An example of a possible component of a national policy for urban growth...

A SYSTEM OF NEW CITIES BASED ON EXISTING INTERSTATE HIGHWAY SYSTEM



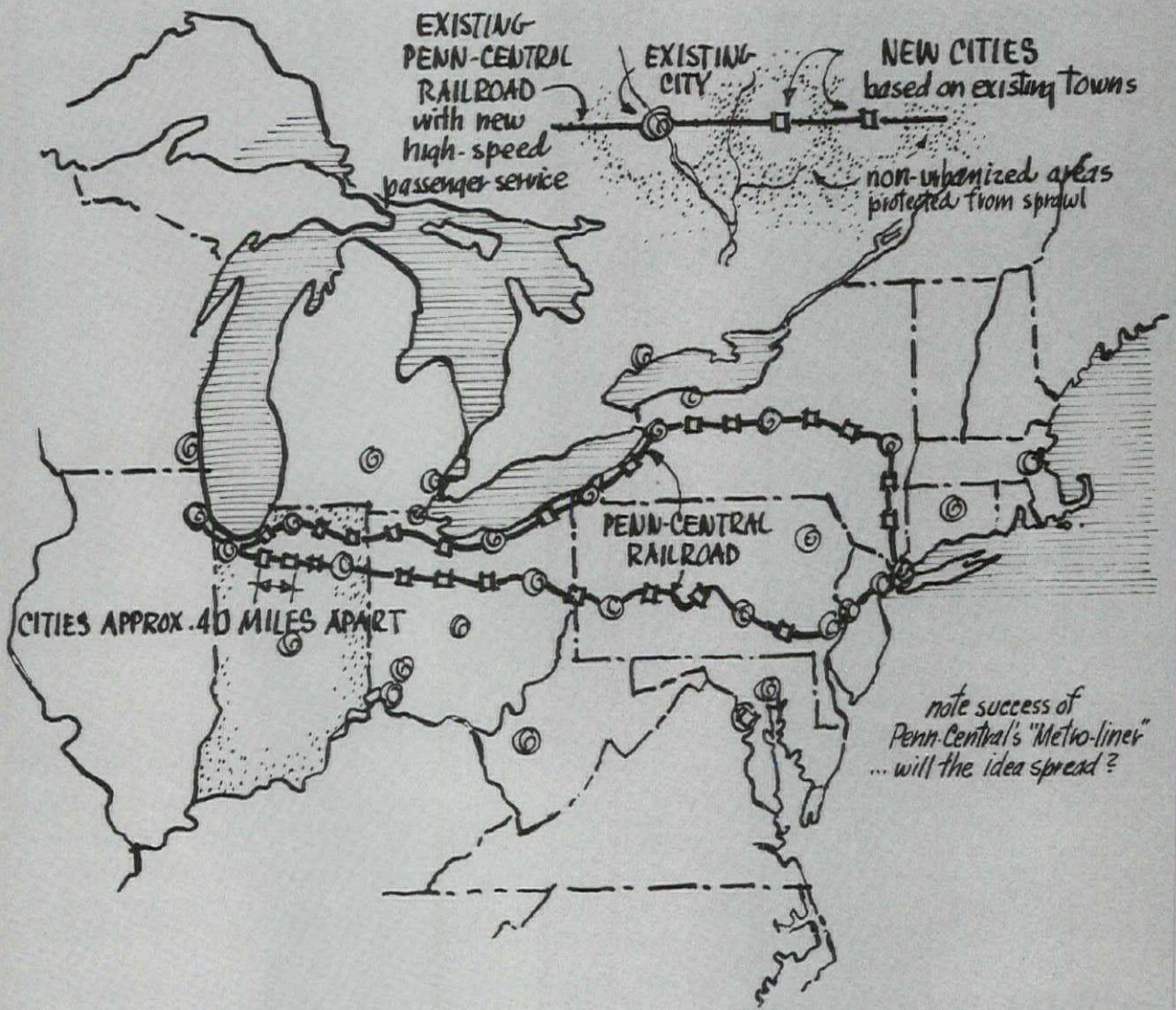


..particularly applicable to Appalachia, coastal plains, southern states etc., where new economic growth is needed.

(Meanwhile... note trend = Jacksonville to Miami megalopolis..)

An example of a possible component of a national policy for urban growth...

A SYSTEM OF NEW CITIES BASED ON AN EXISTING RAILROAD SYSTEM



Where to build ...
and where not to build — that is the question ....
Needed = a national inventory of agreeable natural places ...
... environments to be protected from urbanization.

An example of a possible state policy for urban growth ...

NEW CITIES FOR INDIANA

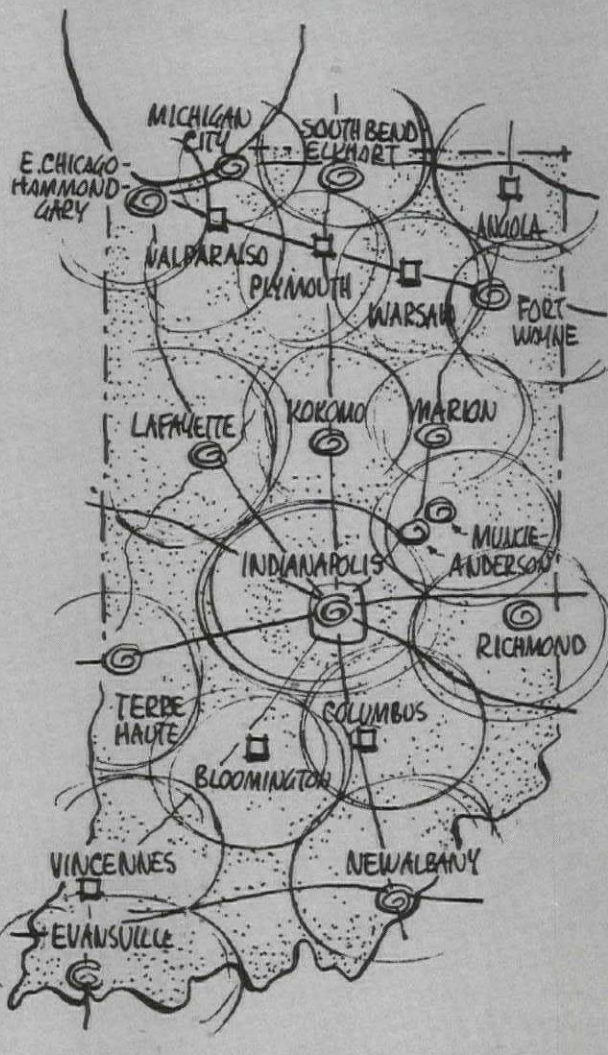
BASED ON THE TRANSPORTATION SYSTEM AND ON EXISTING CITIES AND TOWNS

.... gaining the economic advantages of existing infrastructure, and the social advantages of existing culture, history, identity, character, and continuity.

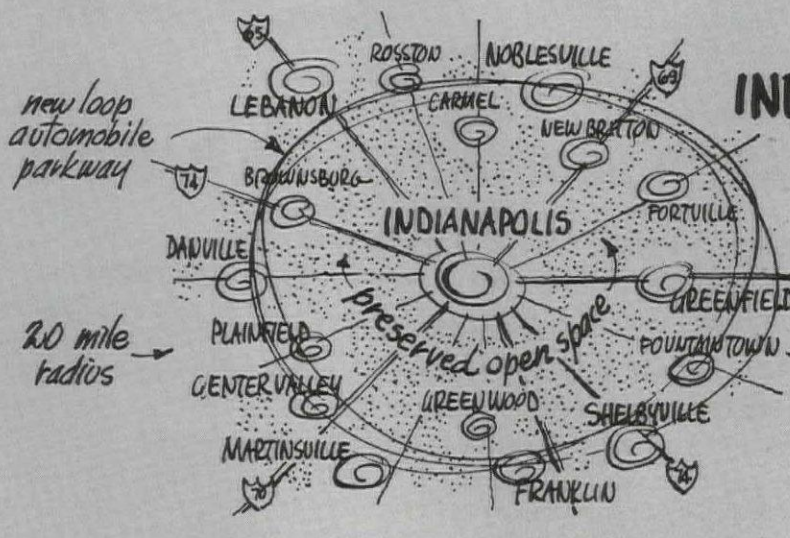
Growth based on 20 existing cities and towns →

◎ = cities over 40,000 now to grow to 100,000 and more ...

□ = towns under 30,000 now to be identified as "accelerated growth centers"...



Then, based on smaller existing towns — a cluster of new towns around each city ....



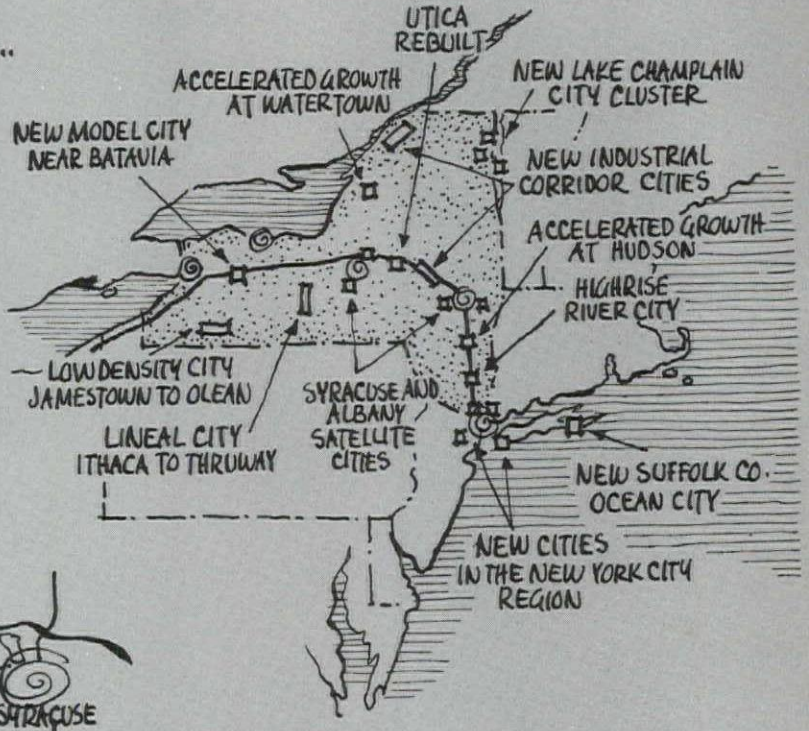
INDIANAPOLIS SYSTEM OF NEW TOWNS

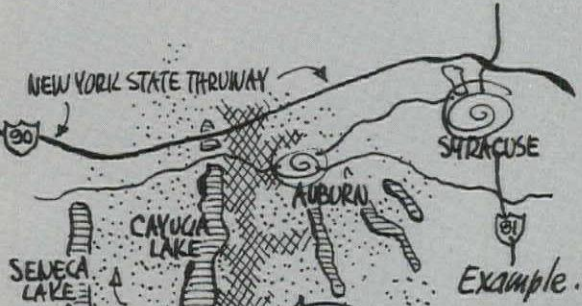
16 existing towns ...
present average size = 5000 people.
year 2000 average size = 20,000 people.

An example of a possible state policy for urban growth...

NEW CITIES FOR NEW YORK

New York State has great variety in natural setting...
.. new cities should vary widely in character...

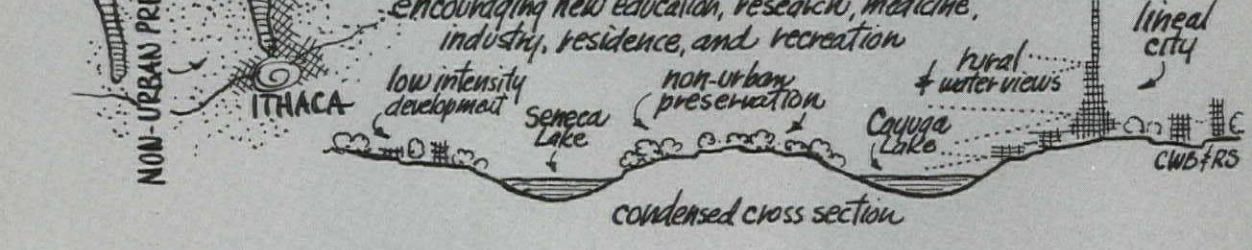




Example...

40 MILE LONG NEW CITY ITHACA TO THRUWAY

encouraging new education, research, medicine, industry, residence, and recreation



condensed cross section

THE CHALLENGE TO AMERICAN ARCHITECTS AND PLANNERS-

Analyze your own region, the areas you know best.
Consider the possibilities for growth – where continued growth and/or urbanization would be desirable, and where it would not be.
Consider growth of existing places, new cities, new-towns-in-town, and establishment of experimental new communities.
Sketch alternatives, weigh advantages and disadvantages.
Advocate what you deem proper.

Editor: *Philip Dole, School of Architecture and Allied Arts, University of Oregon, Eugene.* **Contents:** *The Urban Crisis by Robert J. Heifetz; The Money Problem by Daniel Solomon; Design Role-Playing at the School of Architecture by James W. Fitzgibbon and Thomas L. Thomson; Current Information: Literature Surveys by Jerry Finrow; The Process of Activity and the Built Environment by Donald Watson; The Bartlett 1969 by Dean Latourell.*

The Urban Crisis

Advocacy and social responsibility of the profession, of the ACSA and the elements of the new curriculum in architectural education.

BY ROBERT J. HEIFETZ

Urban America and the Urban Coalition tell us that one year following the report of the National Advisory Commission on Civil Disorders, nothing much has changed:

"The nation has not reversed the movement apart . . . black neighborhoods in the cities remain slums marked by poverty and decay; they remain ghettos, marked by racial concentration and confinement. The nation has not yet made available — to the cities or the blacks themselves — the resources to improve these neighborhoods enough to make a significant change in their residents' lives. Nor has it offered those who might want it the alternative of escape.

"Neither has the nation made a choice among the alternative futures described by the Commission, which is the same as choosing what the Commission called 'present policies.' The present policies alternative, the Commission said, 'may well involve changes in many social and economic programs — but not enough to produce fundamental alterations in the key factors of Negro concentration, racial segregation and the lack of sufficient enrichment to arrest the decay of deprived neighborhoods.'

"It is worth looking again at the commission's description of where this choice would lead:

" 'We believe that the present policies choice would lead to a larger number of violent incidents of the kind that have stimulated recent major disorders. First, it does nothing to raise the hopes, absorb the energies, or constructively challenge the talents of the rapidly growing number of young Negro men in central cities . . .

" 'Second . . . Negroes in disadvantaged city areas might come to look upon the deprivation and segregation they suffer as proper justification for violent protest or for extending support to now isolated extremists who advocate civil disruption by guerrilla tactics. . .'

"The commission's description of the immediate consequences of the present policies choice sounds strikingly like a description of the year since its report was issued. . . If the commission is equally correct about the long run, the nation in its neglect may be sowing the seeds of unprecedented future disorder and division. For a year later, we are a year closer to being two societies, black and white, increasingly separate and scarcely less unequal."[1]

The author: Mr. Heifetz is associate professor in the Department of Urban Planning, University of Illinois, Urbana. This paper is adapted from his address to the 1969 annual meeting of the ACSA.

Advocacy

One response to this urban crisis has been the rising popularity of what has become known as the advocate role of professionals. Now in vogue, even institutionalized — including consultant fees and contracts — what impact is it actually having and on whom? Or is this simply the format for architects to catch up to their

brothers in the medical profession in the delivering of charitable services to the poor — while business goes on as usual, e.g.: business that includes a $50 million Carlton Center project in South Africa undertaken by Skidmore, Owings & Merrill? — or design for a new and improved fallout shelter for the Office of Civil Defense?

There are many faces of advocacy — the central planning or renewal office seeking support for centrally designed redevelopment strategies through locally based advocate outposts aimed at forestalling potentially disruptive actions which might threaten achievement of predetermined program goals.

Or there are efforts of designing a more creative and sensitive job of community displacement while leaving intact the institutional structure which establishes the ground rules and the private market which sets those limits.

Or is it a counter-insurgency, pacification movement keeping the colony cool through store-front initiatives and black capitalism — confronting the dominant regional and national initiative of the military-industrial complex with backwater skirmishes by powerless and isolated holding operations?

Or is it a strategy of social change, seeking to democratize the process of environmental design by contributing to the building of new constituencies toward structural reform, including recruitment and financial support for minority groups and the less affluent into the schools of architecture, toward popular control and initiatives in urban reconstruction, toward serving those housed in the 90 percent of nondesigned structures and the 99 percent daily abused by nondesigned space?

Profession's Social Responsibility

This latter form of advocacy can be no extracurricular activity to a mainstream practice. This is a radical shift in direction, in commitment, in allegiance. It means choosing sides — politically. Now. It means making new friends — and possible enemies of former friends. It means association with new groups and disassociation from older, obsolete, possibly more familiar groups. It may embarrass the universities and their cultivated relations with the status quo. It means building linkages with new constituencies in the ghetto, among students and young professionals concerned with diverse aspects of urban reform, with religious organizations and trade unions — some of which are slowly making the same painful transition from ally to opposition critic; to challenger of existing power and privilege.

For the universities this prospect is especially exciting, for the potential for change is, despite major barriers, more open to initiatives if creatively developed. The linking up of urban reform oriented professionals, students and community-based constituencies for common action for social change for a shift in national priorities for increased social control over the allocation of the nation's resources — this is the hope of a new and productive advocacy at one with the challenges confronting us. It is a fitting and necessary role for universities —the social critics and advancers of knowledge in a democracy.

ACSA — Curriculum and Reconstruction

But will the schools of architecture and the Association of Collegiate Schools of Architecture take the lead in all this?

EDITORIAL

Within the panoramic demands for relevant professional and educational involvements, two areas of action seem more clearly defined, therefore more useful, than others: the need for expertise and the need for concerted action. Certainly the two needs go hand in hand and both are dependent on communication among those concerned.

We see signs that architectural education has been involved for several years in a critical, positive evolution in its concerns and in its skills.

Architectural education has made astonishing advances from a comparatively prehistoric operational context to one distinctly literate. Accomplishments in research, documentation and writing have opened up areas of study ranging from behavioral studies to carefully designed approaches to learning. Yet a large percentage of these responsible involvements occur in a kind of vacuum explained by poor communication and enhanced by a long-standing tendency for each school, each instructor to go-it-alone — a survival of that artist-master-apprentice climate.

Those involved with responsive educational programs may be bored or annoyed at negative observation. Yet it is possible to hear (and serious because sufficiently apt), that archaic teaching methods, elitist design concerns, vague knowledge and intuitive understandings prop up the architectural schools. These commentators clearly demand revolutionary change in architectural education for the slow uneven pace of evolutionary change is seen with impatience, if changes are seen from this viewpoint at all. Demands for vigorous change stem from a concern for environmental reforms but find that the commitments and the competencies developed by education are hardly deep or broad enough.

These divergent views indicate that architectural education is in an anachronistic condition: marked by developments on the one hand and atrophied institutions on the other. Such conditions and interpretations are able to exist because of the few and feeble ways the schools of architecture act in concert, communicate with each other and to others outside architecture.

The schools might look at their provinces within the total activity of architectural education, not to dilute individual efforts but to expand levels of effectiveness. Putting a designed effort into education would include documenting and reporting on efforts, putting them out for response and anticipating a gain of new information. PHILIP DOLE

The ACSA is no vanguard organization charting new paths to any glorious future.

It is not a group charged with the vitality of the young.

It is not free of its many commitments to institutions of the status quo.

It is not sufficiently motivated by threats to its privileged status in society to join with others less privileged.

If this be true then the ACSA, the schools of architecture and the architectural profession desperately need the help of groups such as the Architects' Resistance to establish its credentials and credibility in the broader community of the less affluent. Support should be provided for such projects as:

- student critiques and campaigns regarding the relevance of current standards, codes, ordinances, administrative regulations to end poverty and discrimination and to improve the quality of the physical, social and economic environment as well.
- monitoring of professional practice as part of the courses in professional practice, evaluating that performance in terms of ending poverty and discrimination and improving the quality of urban living. To what degree are current and proposed programs of university expansion, urban renewal or highway programs supporting the needs and ends of the affluent at the cost of the less affluent?
- critique of the national fallout shelter programs, withdrawal of ACSA sponsorship of the OCD's summer institutes training architectural and engineering faculty to teach courses in shelter design;[2] support of schools like Yale whose faculty voted against having such a program; and finally, censure of those schools which continue to accept invitations for running institutes on fallout shelter design.
- join those in the design and planning fields in protesting the misallocation of over 80 billion dollars to support an enormously inflated military machine used to give support to antidemocratic regimes dedicated to maintenance of the status quo, thereby draining the energies and resources away from the essential social, economic and physical reconstruction so essential both at home and abroad. Toward this end, the ACSA and schools of architecture might lend support to the concerns raised by Lewis Mumford over one year ago in an address to the Committee of the Planning Professions to End the War in Vietnam at the Ethical Culture Society of New York City:

"What right has the American government to preach law and order, respect for life and property, in American cities, when it has carried lawlessness and disorder, dehumanization and moral degradation to their ultimate limits in Vietnam? The group of architects, planners, engineers and technicians that have come here tonight are right in believing that the state of our cities today is directly connected with the shame of our presence and our actions in Vietnam. They are right, likewise, in believing that the tens of billions of dollars that have been squandered on putting a huge military establishment into Vietnam, and on poisoning crops, burning villages, defoliating

BUCKMINSTER FULLER'S WORLDGAME GAME

R. Buckminster Fuller's new project — "The Centennial World Resources Center to be constructed on the Edwardsville campus of Southern Illinois University — will consist partly in an enormous computer program, with an international data bank to store information on everything from natural resources, world events and conditions, to population and energy distribution, to historical and current trends, needs, and behavior patterns. The cost of the first stage of the center has been estimated at $16 million. The state of Illinois has agreed to set aside $4 million on the condition that SIU can collect the remaining $12 million from outside contributions.

The center's other, and more spectacular, facet will be the installation of Worldgame, a computer feeding facility whereby scientists could 'predict in advance, and solve before eruption, potential world problems associated with world resources and bearing on human poverty and suffering.' The program, Fuller explains, is based on general systems theory, combined with Von Neuman's game theory as 'played' by the national defense leaders and joint chiefs of staff in the development of computerized world war games. Worldgame's computers, however, will be concerned instead with the abolition of war. The program's aim, indeed, is nothing less than to make the world work by redesigning the utilization of resources so that all of mankind will share in the benefits of the earth's riches and technological advances."

From "The Worldgame Game" by Lynne Ballew, *Yale Alumni Magazine*, May, 1969; reprinted with permission of the publisher, copyright © 1969, by Yale Alumni Publications, Inc.

vegetation, spraying napalm on innocent civilians, or saturating North Vietnam with TNT bombs by the multimegaton, should have been invested in permanent works of construction and education in the United States. Our moral bankruptcy, our political bankruptcy and our economic bankruptcy have gone hand in hand, one re-enforcing the other. . . We have a big job on our hands, and it would be foolish to imagine, impatiently, that if only the war in Vietnam were ended and American forces withdrawn, our own country, and the rest of the world, would be out of danger, and we might leave our economic system and our political affairs safely to those who have so flagrantly mismanaged them. What we should have learned from the Vietnam fiasco is that the bankrupt policies and strategies and technologies that have involved us in this ugly episode must be liquidated and replaced at every point. The grim truth is that for the last 20 years our whole economy, both civil and military, has been dedicated to destruction and death. What we have to question is [not just the immediate policies of the Johnson administration, but] the much-praised American way of life, which has sacrificed human health and safety, freedom and happiness to increasing power and speed, quantitative output and financial profit."[3]

For a New Curriculum

The rediscovery of poverty and racism and the growing opposition to military involvement in the internal affairs of nations seeking freedom from domination by Western democracies establish new challenges and demands for the universities and the curricula of professional schools. And architectural education is as good a place as any to initiate the needed changes for redefining and restructuring this American Way of Life. This curriculum must go beyond the traditional abstract, elitist studio projects aimed at serving only the affluent. It must go beyond patronistic and ameliorative forms of advocate architecture giving the illusion of change while affecting an almost insignificant portion of the problems defining the urban crisis. This new and developing curriculum will demand a new type of faculty — from various disciplines, from "nonprofessional" community organizers. It will demand new relationships with new organizations, not producing grandiose plans for renewal agencies, but in support of community as well as regional and national groups seeking radically new alternatives with far different objectives and styles of work, often in opposition to agency plans, goals and styles of work. It will demand resources and commitment to this new agenda beyond the semester, on a continuing basis. It may well call for parallel training of nonprofessionals from poor and minority group backgrounds, with an aim of recruitment into the profession. Whether part of the traditional studio project, separate student projects or internships, these efforts must be rapidly initiated.

Such efforts, already occurring in increasing number, could set the stage not only for the structural reforms essential for achieving a more human and livable environment, but for building the necessary coalition among the many concerned parties for redirecting the vast potential of this society away from destruction and the defense of privilege, into the constructive, productive and creative force in behalf of all mankind which it could become. □

References

1. Urban America, Inc. and the Urban Coalition, *One Year Later*. Urban America, Inc. and the Urban Coalition, 1969, pp. 116-118.
2. AIA JOURNAL September 1969. (The ACSA at its June annual meeting voted to withdraw sponsorship of the OCD fallout program.)
3. Address by Lewis Mumford at the Ethical Culture Society in New York City, May 3, 1968, "Vietnam Before and After," for the Committee of the Planning Professions to End the War in Vietnam.

The Money Problem

A first-year introductory investigation of the interrelationship of physical and economic factors in diagrammatic models.

BY DANIEL SOLOMON

The course I developed was influenced by several factors including its relationship to the curriculum as it was last year and, of course, my own interests and what I felt I was able to do competently.

Unlike some first year design courses, Environmental Design 3 was not intended as an all-embracing introduction to the field of environmental design. It was part of a three-course package and its objectives were quite narrow. The other parts of the package were a visually oriented skills course and a very generalized introduction to the historical and political situation of the design professions. ED 3 was an introduction only to the technical and economic side of design. Its orientation was visual only in an indirect way, and sociological only by inference.

The nucleus of the course was a series of optimization problems designed to illustrate the impact of various preoccupations on physical

things. Problems had titles such as: construction, structure, movement, money, etc., and I think the problem statements are more or less self explanatory. The money problem was given twice in slightly different forms and both times it began the quarter. "Money" was first because it established a context for the other problems; that is, a rather hard-nosed, capitalistic notion of environmental design as a system of payoffs. Light, air and proximity to amenities had to be justified in terms of the optimization objective — profit after one year, profit after five years, or revenue per year. The rules of the problem were carefully adjusted so that different economic objectives resulted in quite different physical solutions.

The money problem was not intended to teach or even introduce real methods for determining an optimal development package. It was designed only to demonstrate in a quick, dramatic and generalizable way the interrelationship of physical and economic factors in a design problem. Subsequent problems in the series, whether their objectives were the minimization of labor, material, time or drawing, could be related to the view of the world presented in the money problem.

The author: Mr. Solomon, an assistant professor of architecture in the College of Environmental Design, University of California at Berkeley, is a practicing architect whose current work includes a student housing commune.

After giving the problem once, we determined that it might be given a secondary objective as well. As you know, various people have for years thrashed over the question of whether the teaching of basic skills such as drawing and model building should be built into problem solving exercises or whether they should be taught independently. I have always believed that basic skills taught *in vacuo* are a drag and that they can be integrated with problems which have other objectives without diluting either those objectives or the teaching of basic skills. On the contrary, by combining basic skills with design exercises one is able to get across some sense of why a particular skill exists, when it's used and what its limitations are.

The money problem, we discovered, was a neat vehicle for teaching orthographic projection and something about the difference between pictorial drawing and diagramming. The second quarter (which was the second time we taught the course) we asked students not to build a three-dimensional model for the money problem but develop a solution using plans, sections, elevations and isometrics. Some drawings had to show what the thing looked like, and others had to show certain abstract relationships such as the spheres of influence of the "amenity items" — balls and cylinders.

I felt that the money problem illustrated an important point in a clear way, although the process of actually getting the rules to work was a bit of a nightmare. If I were ever to give the problem again I would want to make it quicker — three or four days at the most.

The photographs show several of the first term's solutions and indicate certain constraints and variables. The maximum development envelope was a 7½-inch cube. Students did not have to fill it, they did not have to build at all. But they did have to examine the financial investment and return and justify their solution accordingly. Variations resulted, too, from the combinations of 1½-inch cubes, ¾-inch cubes, cylinders or spheres, studied and then selected as optimums. Although drawings, not models, were called for winter term, this second go-around with the money problem was similar in rules and specifications. Criteria for evaluating solutions noted their amount of accumulated profit, completeness and clarity of drawings, clarity and correctness of tabulations, craftsmanship and graphics and their adherence to rules.

The winter term problem statement went about as follows:

Problem One, Two Weeks. ED 3, Winter 1968.

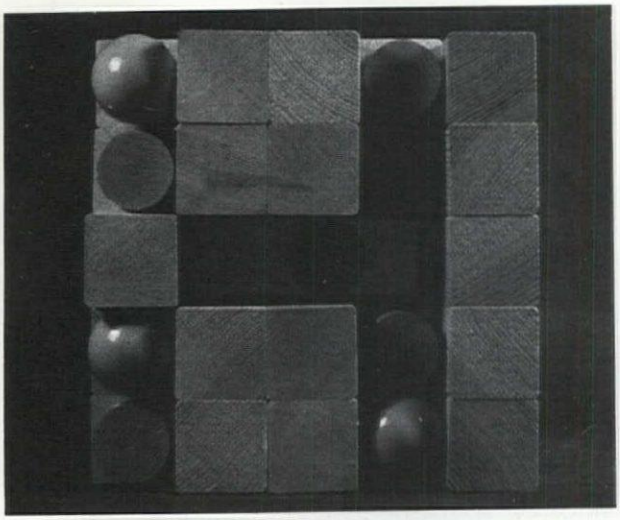
Using the rules and specifications described below, design an object which will produce a maximal accumulated profit after four years. All revenue will be from rental receipts earned by cubes 1½ inches on a side. They have a basic rent of $250 per month and cost $12,000 to build.

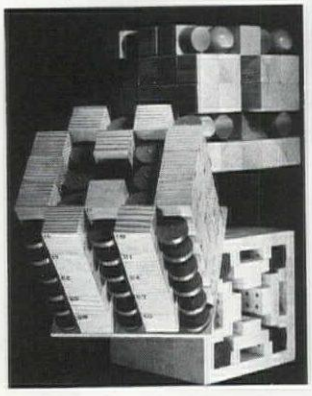
All cubes must be exposed on at least two sides. Exposures may be vertical or horizontal. A space may qualify as an exposure if its volume is equal to that of an adjacent cube. A single volume may serve as an exposure for more than one cube.

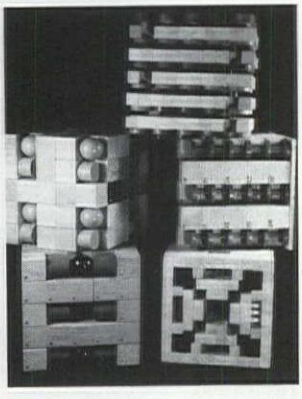
South facing cubes may increase their rent 10 percent. Cubes that face both south and west may increase their rent 15 percent. A cube is considered south facing only if it has an unobstructed view in that direction. The same holds true for south and west facing cubes.

Cubes within ½ inch of cylinders 1 inch in diameter may increase their rent 15 percent. Cubes within 2 inches of cylinders may increase their rent 5 percent. Cylinders cost $300 per inch and must be at least 2 inches long. No cylinder may be partially or totally on axis with another cylinder within 2 inches of it. A cylinder's influence occurs perpendicular to its axis only. (*See* Fig. 1.) Each separate cylinder costs $50 per month to maintain.

Cubes within 1½ inches of a sphere 1½

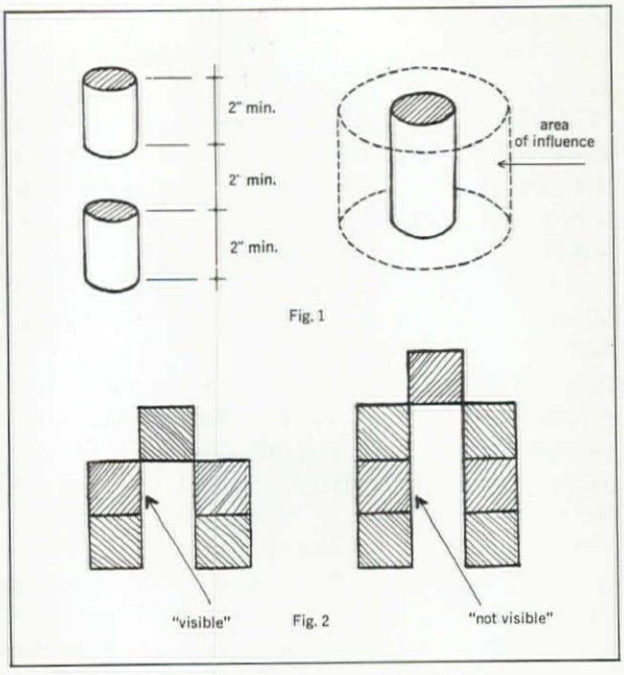






inches in diameter may increase their rent 20 percent. Spheres cost $1,000 each. Spheres must be at least 4½ inches apart. All dimensions are taken face to face.

Each cube should be numbered for purposes of tabulation, and all numbers should be visible



from outside the structure. Numbers are considered visible if they can be viewed from an angle of not less than 30 degrees. (See Fig. 2.)

All rent bonuses are calculated against the basic rental rate of $250 per month.

Unit characteristics: $(1\frac{1}{2})^3$ cubes cost $12,000 and rent for $250; 1x2-inch (min.) cylinders cost $300 an inch and $50 a month to maintain; spheres, 1½-inch D, cost $1,000.

Bonuses are given for the following: 15 percent for a cylinder @ ½ inch, 5 percent for a cylinder @ 1½ inches, 20 percent for a sphere @ 1½ inches, 10 percent for south orientation and 15 percent for south-west orientation. □

Design Role-Playing at the School of Architecture

A client-architect activity introduced into the second-year program at the School of Architecture, Washington University, St. Louis.

BY JAMES W. FITZGIBBON
AND THOMAS L. THOMSON

The accomplishment of design tasks in the nominal "real world" is more often than not the result of hard-won compromises among a wide range of disparate opinions, goals and personalities. While the procedures common to studio instruction touch on practical matters of program preparation, there is seldom an opportunity for design students to exercise skill in exposing and resolving differences of opinion and fact that arise as clients, experts, consultants and other design decision participants interact in public meetings and board room confrontations; design decisions are typically resolved in this manner. Indeed the decisions that are made at the programming stage of the design operation are often the major determining actions. The skill with which the designer participates and directs the problem's resolution in the preliminary-formative confrontations has large scale effects on the object he eventually constructs.

A secondary theme of activity was introduced in the second year of Architectural Design at Washington University during the spring semester to suit the following purposes: 1) to give the students an overview of the activity design; 2)

to expose the students to a variety of design experiences; 3) to exercise skill in exposing and resolving differences of opinion and fact; 4) to exercise skill in identifying major areas for decision making in designing for a particular situation; 5) to develop skills for effectively obtaining information from various situations.

This theme of activity was a simple form of structured role-playing, which was devised and conducted as a public class event every other week or two. Sessions were held in a seminar room. The general format had a student play the role of architect meeting for the first time a 5 to 8 man board while other members of the class group were generally spectators during the initial confrontation period lasting perhaps an hour. They then became critical participants whose task was to assess and describe the actions of the board and architect whom they had observed. Roles changed with each session and a majority of the class members played at least one role during the term.

More elaborate sessions were arranged using telephone equipment such as 'Speaker Phones' — the scene was set in an architect's office with a critical audience listening to all conversations. As clients called in, the architect also talked to his designers over the phone, other role players phoned the architect establishing a series of crises and conflicts which had to be resolved and ordered into the context with the client's demands for information, ideas and advice. This particular session had been carefully designed beforehand in conferences between the instructors, the "clients," and other role players. But the architect and his designers had no previous knowledge of the problems or events that were scheduled until the phone began to ring.

The authors: Professor Fitzgibbon, who teaches at the School of Architecture, Washington University, St. Louis, is president of Synergetics, Inc., Raleigh, North Carolina. Mr. Thomson, assistant professor of architecture at the same school, is president of the Design Programmers Association, St. Louis, and editor of the *Design Methods Group Newsletter*.

The problems used in the beginning sessions were commonly small in scale, modestly complex in plan and site requirements and sufficiently ordinary so that students could reasonably exercise expertise and judgment. For problems later in the semester, information was transmitted verbally rather than written. This appeared to require another type of information handling skill on the part of the designer. These problems were: "A Small College Library Building Located Between Two Buildings on a Midwest College Campus," "A Doctors' Clinic in a Small Town," "A Small Urban Community Grade School, Grades One Through Four," and "A Large Office Complex for the Central Business District of St. Louis."

It is noticeable that sessions varied in interest and spirit according to the vigor and assertiveness the role players brought to the occasion. It was usually invigorating to have one or two board members from a class group other than the architect's. They tended to be less concerned with his feelings than was the case where architect, board and audience were classmates. The format for each of the sessions was generally similar, with four types of participants: the moderator, the audience, the client and the designer (architect).

The typical situation was that an 'architect' would have a meeting with a group of people or 'board.' The architect in all instances had no previous knowledge of the problem that he was asked to consider. The board was usually organized a day or two ahead of the meeting, giving board members an opportunity to discuss the problem, think about the role each member would play and establish strategies of action. The architect met the board in front of a white, butcher-papered wall armed with a heavy duty pen. He could use this wall for recording information, listing data, making diagrams, charts, sketches, as he wished. For a variety of reasons the white paper and the pen worked to better advantage than a blackboard, not the least reason being that erasures are impossible.

The architect's role has been played out in several ways. 1) The architect attempts to develop and list all opinions present from the board. He puts these in some kind of hierarchical order; notes important conflicts; sometimes offers a procedure for resolving these conflicts of fact and opinion. This method depends in large on the architect's willingness to allow his board and consultants to design the building for him by a kind of concensus finding in which he acts as an interested but slightly detached umpire. 2) The architect sets some kind of formal or heuristic rule and attempts to guide the board toward those goals by questioning, suggestion and by using his position as a man on his feet to direct events toward his intentions. 3) The architect uses some facts or events related to the site to establish basic rules and requirements that will guide his procedures. This was usually done by telling the board that a site analysis is first necessary and using this opener to establish a few guide lines to carry over to a building or functional analysis.

The board was usually instructed that they must ask questions only and that they must respond to questions asked of them by the architect. In practice this instruction was difficult to conform to but it worked well as a loose general

rule. The architect is informed that one board member is designated as the 'client' or the 'client's spokesman' and that all matters of program clarification may be addressed to him. The client may call on other board members for specific information or he may well have to supply the answer out of head and hand. All client answers become 'facts' and as such may be used by the architect.

Role players at a single session might be somewhat as follows:

- the chief librarian of the college and the client; a faculty representative from the art faculty; a faculty representative from the general faculty; a member of the board of trustees — very cost conscious; the library janitor and maintenance man; a student representative; a contractor who will build the building;
- the chief medical partner; one of the younger medical staff; a contractor who will build the building; the clinic comptroller and financial expert; a representative of the nurses; the janitor; someone to represent the patients; the chief medical partner's wife;
- a superintendent of schools; a representative of the Ford Foundation, putting up building money; a representative of the teachers; a representative of the PTA; an interested civic personality; the school janitor; the principal and, also in this instance, the client; a contractor who will build the building; a child psychologist on behalf of the children (midway through this session the audience demanded that the school children have more voice in the design of the school. The audience was then designated as the school children);

For the telephone session:

- an important architect and his assistant; the architect's design staff — on another floor; an important and demanding out-of-town group of clients; an important lady civic leader objecting to the use of the site as intended; out-of-town architects who phone the architect to caution him about this particular client group.

The audience was instructed to ask questions only for clarification and information. They were not allowed to act as designers by suggesting possible designs to the architect. The architect was free to use the audience for information. In fact, he might even assign them roles which he finds missing, or organize them as a pressure group against the client.

The moderator must see that the audience does not become designers, and that the session proceeds. He may even change the problem situation by introducing new information. However, his main task was to introduce the problem and conduct the summary.

A session may begin when short written descriptive programs, previously prepared, are passed out to all participants and spectators. The architect is introduced, the board members are introduced and their roles named. A brief description of the few rules with an instruction to the spectators that they will be called on after the confrontation concludes for comment and evaluation of the series of events that have taken place.

It must be noted that, other than definition of roles and the establishment of a few procedural rules, no instruction was given prior to the role playing sessions. The session was allowed to develop ad-hoc and usually ran for about an hour. Advantage was taken of a high point of interest or involvement at which time the session was terminated and the spectators asked to begin a critical assessment.

Some typical discussion issues are as follows: 1) What happened? 2) Can you generally describe the sequence of events? 3) How did the architect (what procedures did he use to) organize his data? 4) Did the architect follow a main line of design procedure? 5) Was the architect deflected from this line by minor detail considerations? 6) To what extent did the board establish the central design idea? 7) Was any central design goal established by architect or board? 8) What information did the architect assume? 9) How did the architect assess information for the clients? 10) How did the architect get across his ideas?

We found that the operation of these sessions was enhanced by the use of humor, surprises, arguments and showmanship. For instance, a designer or client who could keep the audience entertained was more successful than the strictly serious designer or client. The infusion of discussions also kept up the pace of the sessions. Discussions were usually resolved by the moderator or an appointed expert. The infusion of surprises into the situation also helped. For instance, the negating of a basic assumption of the designer or client midway through the design was useful for observing the designer's reaction.

We tried to avoid a problem whose objectives were complicated, where too little pre-information or experience existed for the client, informing the designer of the problem before-hand, and being a design process psychiatrist. Given the short period of time, approximately one hour, complicated problem objectives were too much to handle with sustained interest of the class. If the designer or the client has not had at least some presession information or experience with the problem, the sessions tended to be artificial.

The problems which appeared to work most effectively were those which came from everyday experience but with an innovation of some

sort attached. The innovation removed the ordinary preconceptions from the problem and added a tease for the imagination. The use of problems with options to designing a building as the solution have been successful. The use of the session summary needs to be carefully designed. Its use as "where did you go wrong" discussion should be avoided for this type of discussion-antagonized designers. The best summary technique we have found was to merely ask the class to describe what happened, then display the various versions and discuss the accuracy of each. A final or consensus version was offered. The summary then tried to find how the information changed through time based upon the consensus description.

The summary session need not immediately follow the design session, but it has been found that a discussion immediately after the session of the desired issues was good for getting everyone thinking about them. It was useful to make a tape recording of the session, transcribing and distributing it to the class. The summary sessions then proceeded more effectively with the transcription as base information.

Without doubt this semester's experience can be enlarged to allow the introduction of other structure role playing experiences. 1) Where design or planning functions or parameters are assigned as roles to be worked out in a confrontation. 2) Where the architect is instructed to maximize a certain aspect of the design program requirement — viz: to make all decisions in favor of the doctors' viewpoints and ideas for a clinic problem. 3) Where the role playing is specifically pointed and structured toward a program analysis rather than toward any design conclusions.

We found that the design role-playing helped the students to see design situations. These were variously described by the participants: "Design studio with a group of hecklers"; "an opportunity to watch the designer in action without the 'real world' penalties attached"; "a nonstop morality play"; "a chance to watch problems change through time"; "a chance to examine the roles of the architect without the schizophrenia of the design studio attached."

The technique discussed here is not one aimed at the exchange of information on the level of personal encounters. It is aimed at minimizing the effects on the designer of any one personal encounter by exposing the designer to a large variety of viewpoints, having him field these opinions and facts as they relate to his design ability and information processing aptitude. This is not expected to send anyone to the psychiatrist after an encounter, but it is aimed at exposing the students to the situations they might experience regardless of their design bias. □

Current Information: Literature Surveys

BY JERRY FINROW

This is the second article on "Current Information," a series planned as a regular column in the ACSA section to feature practicable information relating to research resources and strategies useful to architectural education programs. Volunteered material reporting on specific topics, resource descriptions as well as addenda to those already printed here would be welcomed.

The author: Mr. Finrow, assistant professor of architecture and head of the Center for Environmental Research at the University of Oregon, is regional editor of the *Design Methods Group Newsletter.*

Profiting from collective experience is a fundamental precept underlying man's search for knowledge. Unless one shares his findings this search ceases to be meaningful. The burden of responsibility for communicating with others lies on all of us, making it incumbent to speak and to listen. This article will attempt to outline ways of listening.

Gaining a fundamental and detailed understanding of the current state of any specific environmental problem can be an awesome task. There is no handy abstracting center or central documents file that we can consult to get all the information we would like. Indeed, this problem plagues most disciplines; however, the problem of developing collective experience in environmental disciplines seems somewhat more acute.

Perhaps from as much a traditional as a leisurely attitude toward careful examination of the work of others, design researchers seldom attempt to compre-

hensively or rationally approach literature search strategies. Our past experience in this area, reinforced by inadequate learning experiences, encourage a *laissez faire* attitude to the problem rather than seeing literature search and information gathering as an intriguing problem in itself.

The generation of literature sources is essentially a design task. It requires the assessment of a number of alternative materials about which decisions must be made concerning their appropriate use in meeting intended objectives. When such a search is successfully carried out, complex problem histories can be clearly spelled out giving at least a much better picture of what is not known.

It is possible to identify a number of important aspects of good literature search programs. They are:

1) clearly spelling out the "universe" of sources.

2) defining the primary (and secondary) sources within a universe.

3) making an extensive and detailed list of all possible document titles w/abstracts relating to the problem.

4) examination of each document to evaluate: a) its originality in terms of dealing with the issue (new ideas), b) its relevance to the problem (primary or secondary), c) the scale of its contribution to the questions at hand (major new directions, subproblems, central concerns, etc.).

5) evaluation of material to be used (examination of original document if possible), keeping in mind the primary objectives which are: minimization of redundency and maximization of breadth, scale and originality of content.

The evaluation phase is very critical to the success or failure of a literature survey. Reference leads that may appear relevant in part 2 above, upon actual examination, may prove to be not only insignificant but also may be of only secondary concern.

Not every literature search will require the same degree of skill or depth of involvement, yet the same basic methodology would appear to apply. Proper literature search implies the correct use of ones own time and resources; basic decisions must be made concerning the overall design of a literature survey. The rational design of inquiry systems to acquiring collective experience is really very critical to not only the researcher but also the student and professional.

By spending a considerable amount of time searching problem or issue histories, it often happens that new and more profitable directions for research are found which were not originally anticipated. There is also the possibility that research proposals that were thought to be original turn out to have been settled long ago.

Because of the lack of a timely scholarly tradition in the design disciplines it would seem useful to go over the common and not so common source materials. Possible source locations are (from White, 1964): guides to literature, reviews of literature, books, abstracts and digests, news digests, bibliographies, newspaper indexes, dictionaries, encyclopedia, handbooks, yearbooks, scholarly contributors (journals, organizations, monographic series, etc.), sources of current information and government documents, sources of unpublished information (dissertations, research reports, etc.).

In addition to these sources there are also tape, film, computer program and other specialized libraries. It is assumed that specific references in environmental design are fairly well known by the reader (art index, architectural index, etc.). A few specific references that are common to other disciplines and which are easy to overlook are:

Research reports

Research in Education, published by the Office of Education (US Department of Health, Education and Welfare) abstracts research projects having educational implications including questions about the environment.

Outdoor Recreation Research systematically reports research in recreation and outdoor leisure time studies. Published by the Department of the Interior.

Monthly Catalogue of the US Government Printing Office gives listing of government publications available for purchase, departments and how to order such documents. Lack of extensive abstracts make evaluation difficult.

Abstracting Services

Psychological abstracts, a compilation of the world's literature dealing with psychological issues. Includes several subareas (i.e., developmental, social, industrial, etc.)

Sociological Abstracts essentially provides the same service as the psychological abstracting service. Other abstracting services are: *Masters Thesis in Education; Perceptual — Cognitive Development; Geographical Abstracts; Dissertation Abstracts,* giving abstracts of Ph.D. dissertations, location of work, author and availability.

Bibliographies

International Bibliographic series: Anthropology, Economics, Political Science, Geography and Sociology. Each discipline has its own volume of a cumulative bibliography of world literature on specific topics.

International Bibliography of Historical Sciences, (International Council for Philosophy and Humanism Studies) is a good source of historical documentation.

Current Geographical Publications and also, *International Bibliography of Crime and Delinquency.*

Indexes

"Public Affairs Information Service" gives listing of all materials (books, pamphlets, articles, etc.) related to economics and public affairs.

"Social Sciences and Humanities Index," "Anthropological Index to Current Literature," "Business Periodical Index," "New York Times Index."

The above material is a small list of a great many publications that can assist in comprehensive literature survey. Each item acts at different levels of the general literature survey question. Guides to bibliographies often are less timely in terms of urgent questions than are newspaper indexes. However, such index material tends to be less objective in its treatment although it can be of tremendous value for attitudinal research.

Various literature source areas need to be evaluated carefully in terms of their own special contribution and how each set of items can best support particular research objectives. The literature search deserves as much or more careful attention to detail as does any aspect of a specific research design because it can often be the foundation upon which significant work is built. □

The Process of Activity and the Built Environment

Summary of some of the topics covered by the author under the ACSA-AMAX Research Fellowship, which he won in 1967.

BY DONALD WATSON

What begins as an expansive curiosity for lessons to be added to architecture from other disciplines soon gives way to entirely new concepts and working terms. This is, I suspect, the case today with the emerging conceptions of our built environment.

An approach of obvious relevance to the designer is to view the environment as a place through which various processes move, each with its own requirements and rate of change. A list of such processes would include: human communication and interaction which take different forms each second; movement patterns which can be monitored in minutes or days; partitioning, for example by means of walls or furniture which are rearranged monthly or yearly; technological equipment and mechanical servicing, which have a predictable life of as little as six months in some buildings, e.g. hospitals; and finally those systems whose cost and construction require a permanence of 30 years or more: structure, transport, etc.

In some environments, educational institutions particularly, the effectiveness of human communication is (or rather, ought to be) a prime consideration which justifies changes in the other systems. Most typically, material and fabrication costs determine the organization that the other processes must take.

Having conceived of the environment as a set of interrelated processes, the creative challenge is to properly identify those that can be studied and accounted for in design. The term "model" is generally used to refer to a representation of a situation, such as an iconic diagram or symbolic abstraction. Models are those mental constructs by which we "grasp" or "pick up" a

The author: Mr. Watson, who has served as an architect in the Peace Corps and as a consultant to the Government of Tunisia, now practices in Guilford, Connecticut.

STRATEGIES FOR RESPONDING TO ACTIVITY IN BUILDINGS

Adjustment in Activity System	Physical Prerequisites	Disfunction to be Corrected
1 Relocate Activity Cells	Relocatable furniture, walls, etc. Short-term, re-useable materials	a. Generator activity becomes obsolete or discontinued b. Structure of activity changes: subdivided or regrouped c. Space required by higher priority activity
2 Create New Linkages	Add or eliminate stairs, elevator stop, hallway, doors, etc.	d. Traffic overloads capacity of existing circulation space e. Use-conflict created in existing zone due to undesired traffic f. Previously unrelated or separated activities require connection
3 Create Network of Multi-use Zones	Transportation technology (elevator, shuttle, etc.) plus prerequisites listed above	g. Single-point hierarchy or other overload creates single-use zones h. Activities requiring time-distance proximity not possible due to locational constraints i. Lack of space in existing zones for new activity cells
4 Allow for Separate Service Routes	Service zones and channels for future service needs	j. Linkages and activities disrupted by servicing, installation or repairs

particular phenomenon. The word "system" is often heard. We don't know about systems except through models of systems. To "identify a system" then is to attempt to treat a phenomenon as a set of related variables with models that we invent for our own purposes. There is a reason for belaboring this issue: The generating concepts of the architect, his analysis and creative synthesis, are based on conceptual building blocks which in a sense predetermine his design. To increase the range of innovation in architecture, one's proper base is the generic role of conceptual models in creative thought.

Of all the sets of information on which an architectural designer depends, the category of activity is the least developed; it is no wonder that many contemporary buildings are hardly responsive to behavioral requirements. To model the activity system requires a description of the patterns of human communication, social interaction and movement as they are seen to interrelate in the physical environment.

Activity and circulation spaces can be analyzed in terms of intensity and frequency of use (percentage of user population and duration of stay). It is in the medium-use medium-term areas, the "semi-public zones," that occur the structured interactions necessary for community relationships. Such analysis makes clear a distinction important in architectural programming, between those areas whose use is dependent on an immediate and accessible *location* on existing circulation paths, and those that depend on assigning to them *activities* that draw the user population independent of location.

The elements of activity systems can then be set forth: 1) *activity cells* or sets of structured interactions that develop spontaneously or as programmed, some of which are "generators" and others "generated"; 2) the connecting circulation patterns or *linkages*, measured by frequency and intensity of use; and 3) the *activity zones* or areas having various use potential due to their location or the activities that are structured within them.

The conception of the activity system as a balance of inter-related elements suggests that adjustments be made in a building as the activity patterns change over time. The strategies by which to respond to the dynamics of activity in buildings are enumerated in the chart on the preceding page, together with the corresponding prerequisites of the physical design. □

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The Bartlett 1969

An account by an American architect who has lectured at the Bartlett since 1965.

BY DEAN LATOURELL

Last year students from many architectural schools in England came to the Bartlett School of Architecture, University College, London, for a meeting of BASA, the British Architectural Students Association. Six heads of British schools were there. One of the questions asked of them was "What are schools of architecture for?" Professor Llewelyn-Davies, head of the Bartlett, answered that schools of architecture should help to initiate change in society.

Since 1960, when Lord Llewelyn-Davies became head, the Bartlett has emphasized education for change. Bartlett students, like many students now, see an intent for change and an assumption of initiative as a necessary part of their own involvement in architecture.

Education for change has been interpreted by the school as an education which encourages each individual to develop his unique combination of ability and interests. Both the need of students and the profession's development have suggested a diverse and individually guided pattern of education, for the wide variety of students' interests probably matches the profession's demands for a very wide range of individual contributions.

Forty-five students enter the undergraduate school each year. Most come directly from the state secondary school system but a few begin architecture after completing a first degree in another subject. They are joined by students who come to the Bartlett for graduate education from other schools in Great Britain and abroad. By exploring many opportunities in the school, students can discover their own commitments.

The potential variety and quality of opportunities open to students can be radically extended by the recent consolidation of the Bartlett and the Department of Town Planning to form a new

school at University College: the School of Environmental Studies. This pooling of resources gives architectural education at University College a new context. Prior to the creation of the new school, the Bartlett had been widening its concern for the whole of environmental studies by including areas of study and research in urban planning, building and environmental engineering, in addition to architecture. These interests will be represented in the School of Environmental Studies and there are opportunities for growth in other related areas.

Unlike many large university groupings, the School of Environmental Studies will have no internal departmental structure. The undergraduate degree will be common to the whole school and there will be a number of interest areas with specialist subjects available for advanced degrees. Interaction between the school's many interests should be encouraged by reducing isolation often associated with traditional academic departments and providing opportunities for teaching and research to grow where areas of study converge.

The growth of research at the Bartlett has been particularly important. The school anticipates that research will become a primary force in environmental studies and it has initiated major research programs through research units in architecture, building economics, environmental engineering, sociology, architectural education and the Joint Unit for Planning Research. Industry supports much of the research at the Bartlett and two of the present four professional chairs. Research units and individual staff members involved in research collaborate through the University College Research Group.

Progress toward realizing the school's intent in education is sometimes decisive and immediately effective, but often it is experimental and alters through trial and error. Recently the rate of change has increased. School policy has initiated change and Bartlett students have been forcefully stating their own aspirations. A description of the present should be a reference for the future and indicate some of its possible directions.

The author: Mr. Latourell is with the firm of Llewelyn-Davies, Weeks, Forestier-Walker & Bor, London, where he participates in the planning of the new city Milton Keynes.

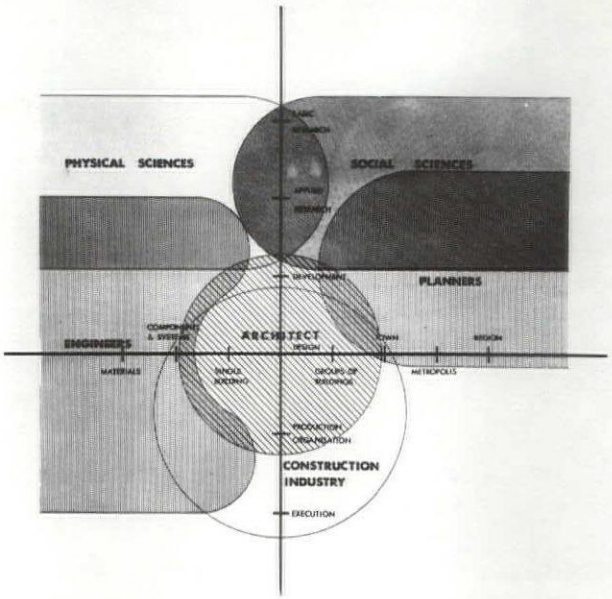


Diagram: relationships between the professions, industries and sciences involved in building the environment; a reference for the Bartlett's interests and its conception of an integrated education.

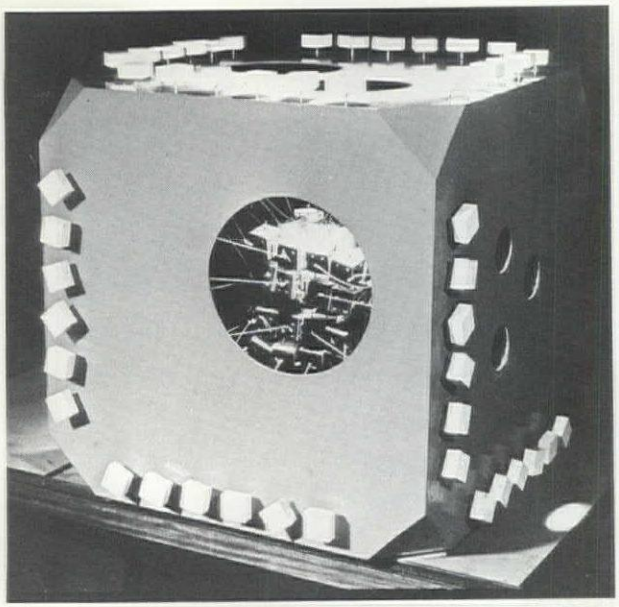
Graduate Program: Practice and Research

Graduate education is becoming a more important part of the school and like graduate education in similar American institutions, it reflects many concerns in practice and research. There are two areas of graduate education: independent research within M.Phil. and Ph.D. programs, and graduate design and specialized professional education within a program of three one-year periods, an M.A./M.Sc. course, a diploma course and a year's supervised field experience.

M.Phil. and Ph.D. programs are closely associated with the school's research units and there are now about 30 Ph.D. candidates investigating a wide range of subjects which include noise criteria in hospitals, spatial allocation in teaching hospitals, the economics of precast concrete construction, development in speculative housing, a cross-cultural study of urban space uses and the German classical tradition in modern architecture.

The diploma year concentrates on architectural design and uses design to extend students understanding of the profession and society. By combining the diploma year with either a year of supervised experience in architectural practice and the building industry, or the M.Sc. degree, students can achieve RIBA qualification. The Master of Arts/Master of Science course prepares a limited number of students for advanced professional specialization or research.

Students select options from a range of subjects in architecture, planning, social sciences, building economics and management. Environmental engineering, mathematical model building and systems analysis techniques from a fundamental expertise in much of the M.A./M.Sc. study. Engineers, sociologists, builders and students from other disciplines are expected to enter the master's course in addition to architects and the architects will often be those who



First Year, Allometry Model: Suspended within the 2' -6" cube is a cluster of 125 small cubes inter-connected by elastic bands. Small cubes on the cluster's perimeter are attached to ratchets on the inside surface of the large cube. Turning the ratchet handles changes relationships between the small cubes. Assigning a value to the ratchet turns gives some formulation of the effect of different stresses on the small cube 'body'.

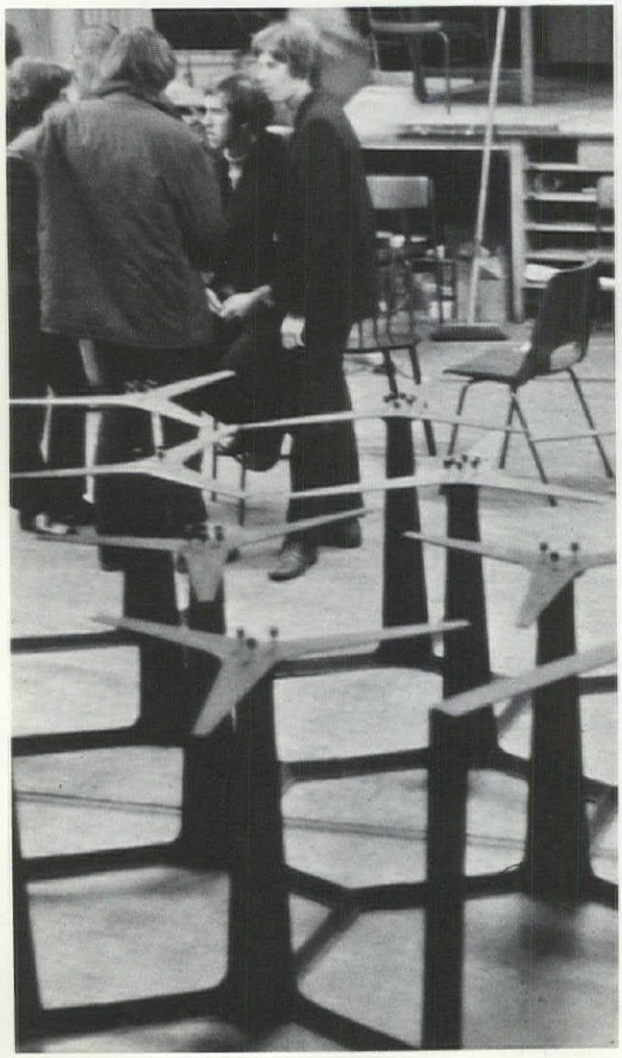
have been in practice and are returning to the university for specialized education.

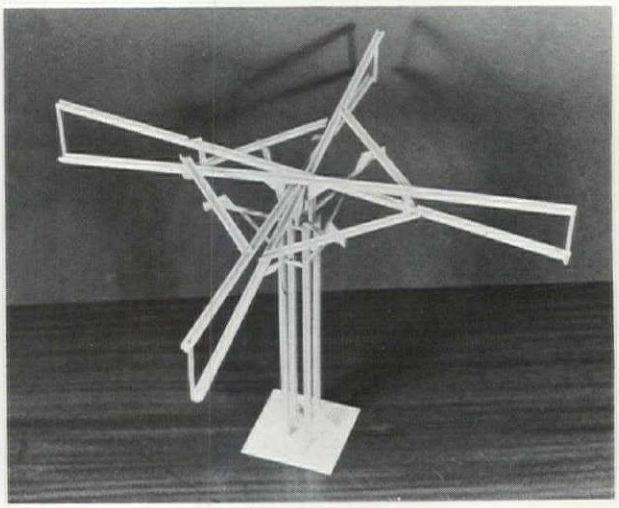
Broadly Based Undergraduate Program

Undergraduate education, intended to be broadly based, focuses on architecture but also contains potential for students to prepare for other career directions within the School of Environmental Studies. The course is structured by a unit system into three years. Regardless of their eventual role, all students study a common course for the first two years and choice of elective units then begins in the third year.

Achievement in a set of units which include professional requirements gives a student intermediate qualifications at the end of the third year. The three-year university undergraduate degree and qualification are, however, not directly linked, and students may elect to receive a degree without gaining intermediate professional qualification.

The dual nature of undergraduate education which attempts to present at once a closely integrated pattern for design education and a potential for sampling separate specializations has





First Year, Model, Self-Regulating Systems: Four steel balls begin movement simultaneously from the extremeties of the construction toward the opposite sides. In the self-regulating system, passage of balls is controlled by a balancing mechanism to maintain equilibrium.

First Year, Model, Markovian Processes: Turnstile pivots are 'coded' with a concealed jig. A demonstrator enters the system at the turnstile. Using an instruction card, he operates the pegs in the turnstile which engage the coded jig, and movement is allowed into the next space. Once through the system, he sees that the instructions have led him past the turnstiles in a way analogous to either Markovian or stochastic processes.

resulted in the development of year teaching teams with a dual task. Each of the three undergraduate years has staff who participate in studio programs in addition to their other teaching responsibilities.

A year team usually has three or four architects, a quantity surveyor, an urban planner, a construction specialist, a structural engineer and an environmental engineer. A landscape architect, communications specialist, social scientist or an architectural historian are occasionally part of the team. Team members jointly plan the year and students join in influencing the year's operation. The whole production is brought together by a coordinator and one of the school's professors acts as a year team's chairman.

The school has been experimenting with interpretations of the team's operation. Initially, the team preplanned and coordinated all studio and course work in an attempt to integrate all work in the school around studio projects and to generate studio projects from the course work. The team has been reinterpreted recently as a more adaptable resource. Team members can agree to coordinate work and concentrate on studio programs when required, but students are now expected to seek out information rather than receive it prepared by the team.

Content of each undergraduate year is essentially the same but seen in varying situations and different levels. Architecture, building and planning are part of the intellectual, social and technical world. Students are encouraged to make these relationships apparent and to commit themselves to studying the environment as part of their involvement in important current issues. Studio programs stress initiative and responsibility by involving students in demanding problems within a framework that balances individual choice with tutorial guidance. Two of these programs should illustrate some of the interests in studio work.

First-Year Studio Work

The introductory first year is primarily a series of programs common to the group but moulded and altered by individuals. One of these programs, last year, was a term-long project to design and build man-sized devices which would represent or demonstrate the essential principles underlying allometry, semiotics, Markovian process, sensory thresholds, self-regulating system, Boolean algebra, theory of measurement or the theory of limits.

A number of constraints on the object were imposed, including the requirement that all components must fit into a mini-van, that its operation should be perceivable from all directions, that any action carried out by the device last not less than 30 seconds nor more than 5 minutes and that it cost not more than £5 to build.

Individuals chose subjects and formed groups which cooperated in understanding the principles of their subject. Each student prepared a one-fifth scale model of his proposal and developed the design to a prototype for testing.

One design representing each of the theoretical principles was chosen to be built at full scale and teams carried out the object's construction. The program suggested that the problem involved more than simply representing the principles and that many of the design considerations were outside the immediate purpose of the object. Students kept a detailed log book of their work to record the process of inquiry and the finished products were remarkably inventive. They functioned to demonstrate the principles.

Second Year: Problems and Institutions

Second and third year have had a similar organization recently. The first part of each year involved building-design projects in which the whole year participated in investigating architectural problems and the role of institutions in

Third Year, Context Projects: a team's study model investigation of development in an area of a new city.

society. Project contexts were then set, within which more individually directed study was expected.

The second-year project context last year for two terms was two adjoining problem areas in central London where local government planning and housing programs have been relatively ineffective and action groups hope to stimulate and influence rebuilding. The diploma year shared the central area project with the second year but each year had a separate and different emphasis. For second-year students the project was an opportunity to become familiar with a wide range of problems very early in their school careers and to understand the simultaneous development of social awareness and professional skills.

Armed with lists of about 20 community organizations and government agencies, teams of students went into the two areas. Community workers were interested in the project by the students, helped the teams gather information and worked with students during the project. Papers and illustrations exploring social and physical planning issues in the two areas were prepared by the students and their strategies were discussed with community workers and local government authorities. Within or near the 150-acre study area there were a wide variety of projects suggested by the students' different strategies by current building programs. Students could choose and develop two or more projects or they could use the context as a reference for studying a subject they thought important.

They began by exploring "support structures," temporary housing, noninstitutional services, community education, housing rehabilitation, large-scale redevelopment and small scale rebuilding, building near a new motorway, a street market and adventure playgrounds and many other subjects. For second projects it was agreed that the tutors prepare a limited number of well-defined building programs chosen by both students and tutors. A parallel stream of work in urban planning, social studies, building economics, construction and environmental engineering courses related to the central London context ran concurrently with the studio project. Students' challenge to establish values; the rela- London problems and a few students chose to work more directly with community organizations during the project.

An education for change should change itself, and the new School of Environmental Studies should provide an excellent framework for the Bartlett's development. There are many areas for progress at the Bartlett relating specifically to Bartlett or university problems, or the problems and opportunities inherent in education: the students' challenge to established values; the relationships between teaching and research; the problems of an education that responds to choice while preparing students to take advantage of alternatives. Within the Bartlett's primary interests there is new experiment as students and staff restate goals for education in a complex society. □

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ARCHITECTURAL EDUCATION FROM GREAT BRITAIN

"One result of the growth of architectural knowledge has been the articulation of such knowledge into separate categories in which new specializations can develop in detail and in depth. The model for this program has come from the natural sciences which have tended to organize themselves into specialist subjects for the purposes of intense research.

F. A. Hayek has pointed out some of the difficulties in applying the model of the natural sciences, to the social sciences, where the intentions of the two areas are basically different. The social sciences, like architecture (which frequently attempts to incorporate findings from the social sciences), rely upon an overall view in order to understand the nature of their problems and thus how best to deal with them. But the competences required for an overall view become increasingly difficult to achieve — to the architectural educationalist whose job it is to decide whether educational courses should be oriented toward specialist skills or general approaches, this question is central. Buckminster Fuller has warned that specialization leads to obsolescence (and obsolete activities tend to perpetuate themselves through their inability to see, from a general point of view that they are no longer relevant); and Norbert Wiener — has made the case that a machine can be programmed to process precise (specialist) data with far greater speed and accuracy than man himself can ever achieve, but man, with his mobility and with his scanning and self-learning machinery (the eye and the brain), is enormously competent at generalizing and hypothesizing, superior to and more economical than any machine. This suggests a man-machine partnership which could eventually come to the aid of the problem of specialization. Mechanization may well supersede specialization. It is less likely to take over the more complex task of generalization."

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Small Towns and Their Plight

The dilemma of small towns was the subject of the symposium and here are the highlights, provided by Ruth Layton, a member of the American Institute of Planners and a partner with husband Emmet Layton, AIA, in the St. Louis firm Layton, Layton & Associates. The Laytons served as commentators throughout the symposium and contributed to the program with a slide presentation, "Planning for Progress."

Life can still be good in small, isolated towns, but chances for it are getting slimmer. All too often, the young head for points of greater promise, leaving behind towns without vivacity, kept going primarily by the neighborliness of their residents.

Such small towns in Iowa came up for discussion recently when Iowa State University's Department of Architecture, together with the Iowa chapters of The American Institute of Architects and the American Institute of Planners, sponsored a symposium on "The Good Life." It was funded in part by a title I federal grant and directed by Bernard J. Slater of Iowa State University's Engineering Extension Division.

The symposium drew such participants, among others, as Samuel J. Simmons, Undersecretary of Housing and Urban Development; former Secretary of the Interior Stewart L. Udall; and Des Moines attorney Robert Wright, Iowa president of the NAACP.

While these small towns are removed from direct urban pressure, they still interact with metropolitan expansion and contemporary technology. This gives them a potentially good position — but the state representatives and small-town fathers often fail to encourage a sufficiently friendly relationship with the outside world, or to relate their towns with the mainstream of excellence.

And so the young continue to leave as soon as they finish school, anxious to avoid involvement with the modern-day agricultural industrialists who absorb the small farms.

And faces in the community get older and life less good. Today, the elderly compose between 15 and 20 percent of many small-town populations. Opposite camps for the young and the old seem to be developing.

Dewitt Nelson of the Department of Forestry, Iowa State University, and a speaker at the symposium, held that a better environment for *all* is one answer, not just for the slum dweller or city suburbanite or big Iowa farmer.

Another commentator, Alan Temko of the Center for Planning and Development and Research, University of California, Berkeley, found a discrepancy in values that grant higher priority to improving the environment for pigs than for people. He suggested that more Iowa graduates might be persuaded to stay home if their state gave them equal time.

Even the transportation experts, said Temko, seem strangely satisfied with highway systems that concentrate on Chicago and Kansas City, bypassing the national population centers to the southeast near St. Louis. The towns are no longer served by passenger trains, the bus system is sporadic and expensive, even the local taxi service has usually disappeared. Older citizens cannot afford to drive cars even if they could get insurance and licenses.

Former Iowa governor Robert Blue, now chairman of the Commission for the Aged, related how the state's "Old Folks Homes," which he during his administration had converted into curative institutions, now evict the chronically ill and often leave them without care or shelter. Housing for the elderly is in short supply, and the state inadvertently compounds the problem by allowing substandard nursing homes to persist.

Housing for the poor is also in short supply, said Alan Seitz, president of the Iowa Home Builders — so short that there is a dangerous willingness to settle for second best, or even for programs already proved to be disastrous elsewhere.

Seitz seriously suggested that planning and zoning are handicaps to progress in construction of low income housing. But while the Home Builders might benefit from reversion to discredited construction practices now being considered by FHA, other members of the panel felt that families who move from their present slum into a new one would not — nor would the community.

Iowa's small towns would be especially vulnerable to such construction since even the more substantial settlements do not have adequate public transportation, medical facilities or tax base. A badly designed low income housing subdivision could demolish a small town already in precarious financial and physical condition, and the community would grow more squalid with every passing year.

Undeniably, there is squalor and there is poverty in Iowa's small towns, but their delights are vivid and real for those who appreciate them, said Percie Van Alstine, mayor of Gilmore City (population 700). But hardships somehow seem more bearable in a place where every man, woman and child is a valued contributor to the community as an individual.

If the people of Iowa ever recognize their responsibility for maintaining and improving their heritage, they may find it easier to persuade their bright young graduates to stay home, with pride. For a small town in Iowa, with new parks and playgrounds, new medical, recreational and cultural facilities for all ages and conditions of residents, improved homes and a landscape equal to the full capacity of the remarkable soil and climate, such a place would lose very few of its young. On the contrary it might attract thousands of others to join them, since it could capture and hold the hearts of those anxious to live where they love to live, and help create their own opportunities. □

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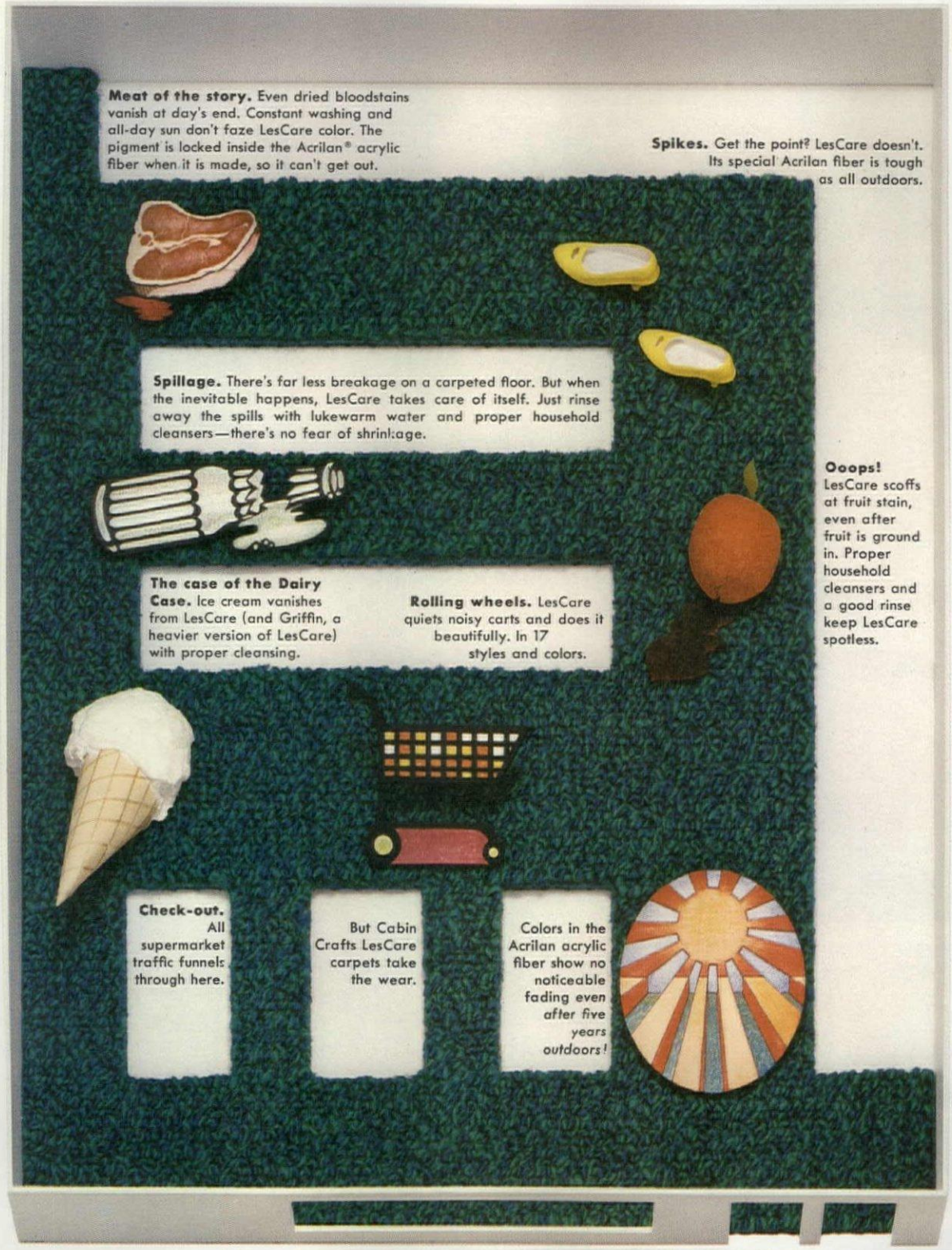

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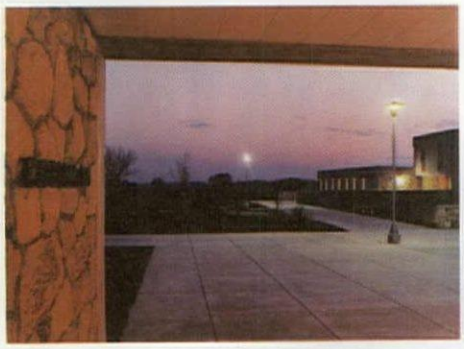

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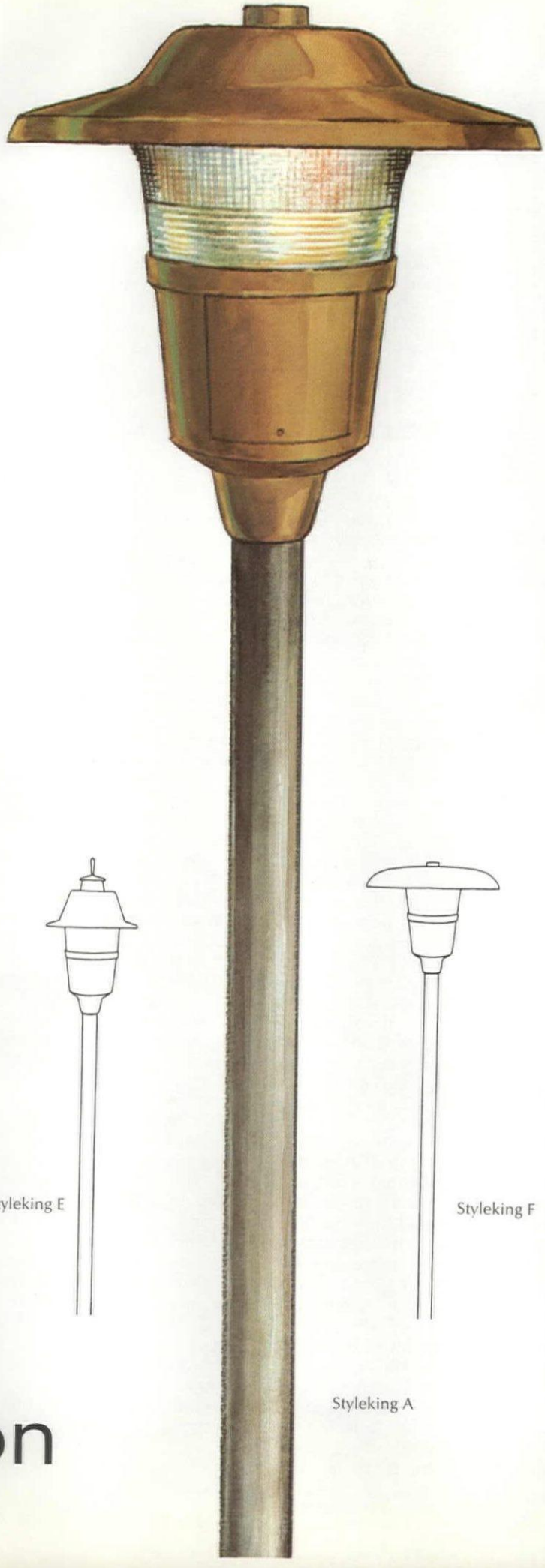

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Exhibit of Goodwill

The urban poor may be able to come to the museum but they gain much more when the museum comes to them — and in a form with which they can identify. Hugh Hardy, AIA, tells here about a neighborhood museum in Brooklyn, designed by Hardy Holzman Pfeiffer Associates.

Images of temples, marble halls and axial vistas are, to the urban poor, symbols of an oppresive establishment. Cultural institutions are thus particularly objectionable.

Like the public school, which so often tyrannize rather than appeal to mind and spirit, cultural institutions often stand physically and programmatically apart from the communities which surround them. Many stand wrapped in enigmatic administrative rules, aloof authority and outmoded dogma. Some are like gigantic frosty lockers for freeze-dried art.

Several major institutions are now seeking to find ways to provide more direct response to the disadvantaged through small community galleries where local talent can compete for attention with acknowledged masterpieces and where the urban poor can define their identity and cultural pride.

The Metropolitan Museum of Art recently went a step further with the attempt to establish a cultural identity for Harlem through an ambitious photographic exhibition, Harlem on My Mind. The Philadelphia Museum has constructed a small handsome gallery for African culture in its Student Center. But all such solutions assume that experience occurs only within the distant reaches of a large impersonal building. Pilgrimages by bus from ghetto to remote temple are too hectic and too infrequent to have much effect.

Now a new concept is emerging which brings the expertise and resources of existing cultural institutions directly into the numerous communities of the inner city. In Brooklyn the Children's Museum has established its first such project: MUSE, a Neighborhood Museum, near the Bedford-Stuyvesant area.

The validity of culture lies in its

ability to establish community identity and relate the immediate realities of the neighborhood to the origins of its people. The programs of MUSE, therefore, are designed to provide an immediate expansion of comprehension. Experience here is *not* reading labels or looking through glass cases; it is beating a drum, wearing a mask, or writing a poem about a cat.

MUSE — one of many satellite structures planned, some merely storefronts — offers programs of discovery and innovation. As Richard Madigan, MUSE's adventuresome young director, notes: "To do this we have tried many approaches, including becoming accessible in a way that makes great sense to us while causing many traditionalists to shudder: MUSE remains open until 10 p.m. weekday evenings. To the kids in this area MUSE is "where it's at," with a wide range of activities and exhibits always available."

From its packing crate graphics to its maze-like interior, MUSE is made out of the objects of everyday. Built without historical associations, its bold surfaces are studded with things to touch, places to look, with a circulation pattern which itself is a game, and an entrance tunnel which deposits visitors in the middle of the action.

In addition to finding an appropriate architectural language which would encourage immediacy and participation, there were three problems common to contemporary architecture:

• Architecture takes too long. (The former Brooklyn's Children's Museum building was condemned and a new structure could not possibly be ready before three years' time.)

• Architecture costs too much. (Although $1 million was available for construction for a new building by the New York City Parks Department, no major funds were available for immediate needs.)

• Architecture is too inflexible. (The programs of MUSE would be subject to continuous change and no one could predict how community reaction might cause major revision in space requirements.)

MUSE stands now as victor over this trilogy of woe. In four months' time a 15,000 square feet automobile showroom and pool hall were transformed by a local contractor for a cost of $40,000.

Perhaps the most important architectural aspect of MUSE is its flexibility; its random order gives programs a rich possibility for change. MUSE goes beyond the *flexibility of walls* to explore a *flexibility of use* with the spaces open and activities free to assume the configuration they require. Walls do not meet the ceilings; the prosaic parts (offices, plumbing, bookcases, storage, etc.) are used to shape a variety of places. The result is many different sizes and shapes of implied enclosure. As activities change in intent, they are free to move into a space better suited to their needs.

Activities structure this museum, not the walls. The activities of MUSE constantly change, therefore the walls do not enclose a series of identical spaces. This also permits space to be added (or taken away) without compromise to the original organization.

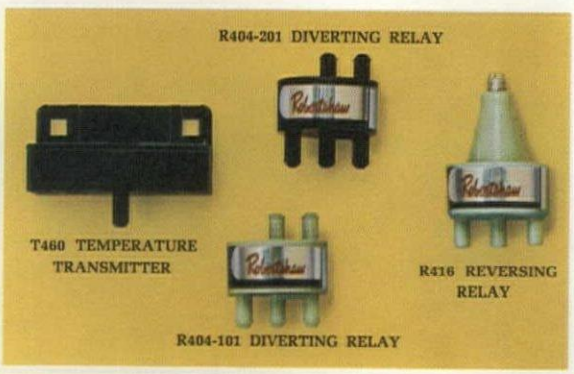
The Bedford-Stuyvesant community has accepted MUSE so completely that it has become a matter of intense local pride. To date there has not been a single act of vandalism or theft. Although large areas front the street, no rocks have been thrown.

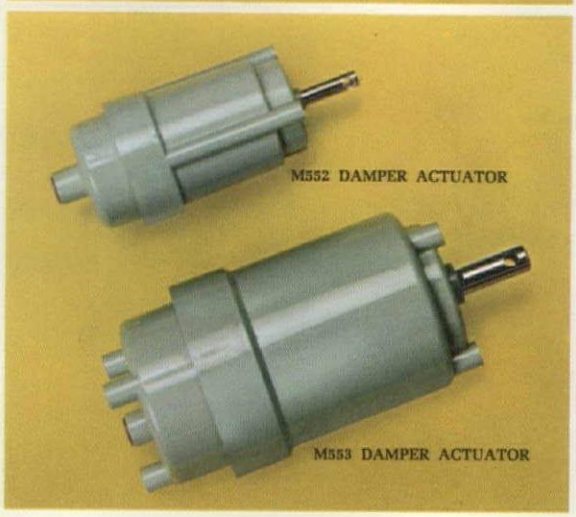
It would be brash to assume that cultural institutions alone can heal this fragmented society and unify its goals. However, the neighborhood museum concept of MUSE has generated great response and active support from many disparate elements of its immediate community. Once released from the bondage of their marble halls, the knowledge and artifacts of museums will be able more directly to enrich all our cities. □

Robertshaw research tackles rising installation and servicing costs

(Actual Size)

MARK II





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3. Four years of experimentation and field testing have shown that the new controls possess extraordinary performance capabilities. The Mark II responds to temperature changes twice as fast as older pneumatic thermostats. The low mass of the miniature thermostat plus the poor conductivity of the new material does it!

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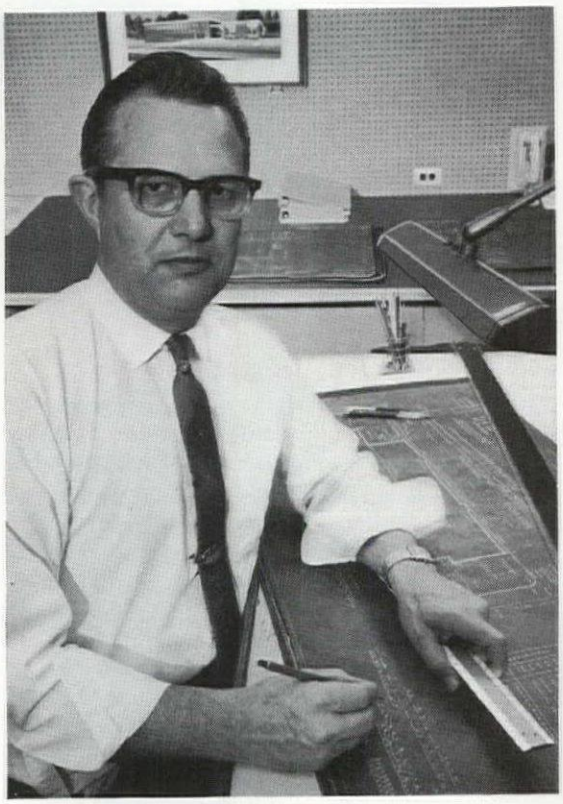

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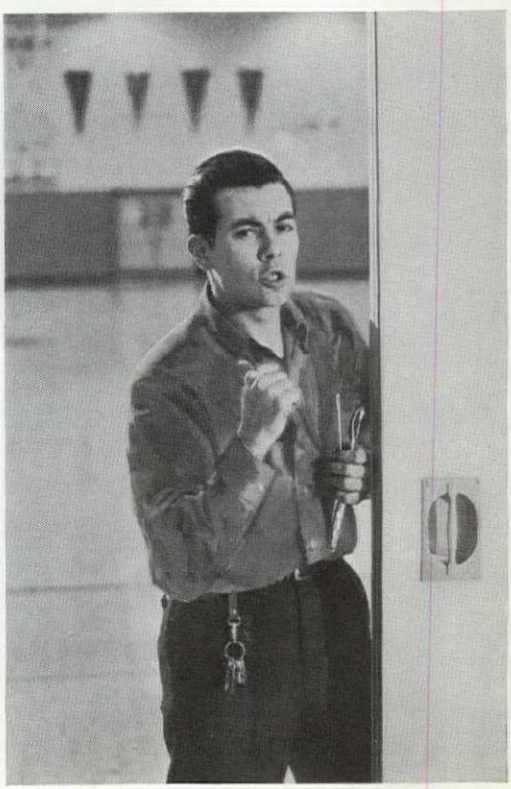

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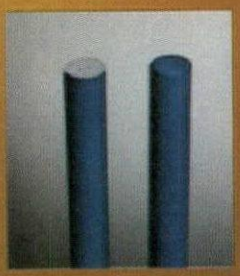

Solution dyed—color all the way through. Others—color only on surface.

So much so, Monsanto has set 2000 as the minimum rating acceptable on the wet weather-ometer test. So no matter how much wear it gets, the color won't wear off.

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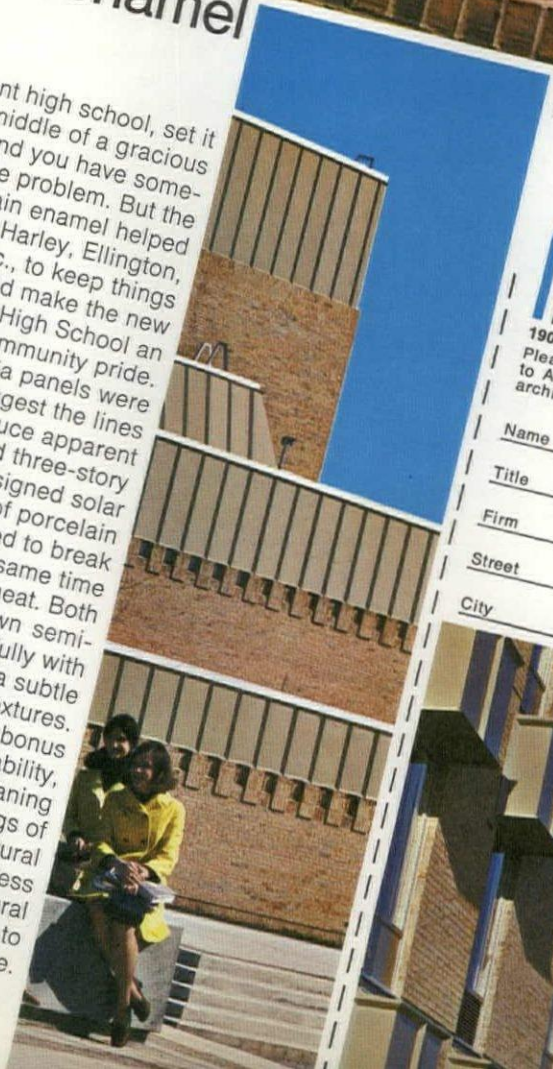

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Books

Boeckh Building Valuation Manual. Milwaukee: Boeckh Division, American Appraisal Co., 1968. 3 vols. $99 per set; individual volumes, $44 each.

Boeckh's *Manual of Appraisals* has long been a standby and a valued source of information when trying to find building costs. In 1962 E. H. Boeckh & Associates was acquired by American Appraisal, a firm which has been engaged since 1896 in property valuation. Now the Boeckh Division has issued a new valuation manual, enlarged to three volumes, based on 1967 cost data.

The research staff responsible for the manual theorized that buildings fall into three general categories. A corresponding division, therefore, was made, and the manual is in three volumes of a convenient size for easy use.

Volume I concerns residential and agricultural structures, and included here are single-family residences; two- and three-family; four- to seven-family; cottages and mobile homes; and agricultural buildings. Volume II deals with commercial buildings, and among the building types considered are apartments, banks, grain elevators, hospitals, hotels, nursing homes, service stations, supermarkets, theaters and warehouses. Volume III is devoted to industrial and institutional structures, and among the building types for which information is given are bakeries, canneries, textile mills, libraries, schools and churches. Each volume is complete within itself, and each may be purchased independently of the other two.

All three volumes have an introductory section on valuation theory and principles, and all consider depreciation and valuation of land. Each volume includes also supplementary information on land description and measurements, a glossary and a bibliography. Color photographs are provided to help the user of the books approximate the model or type in which he is interested. The computer-produced cost tables give accurate information about unit-in-place costs converted to costs per square foot of floor area or of ground area.

The volumes contain data for developing the cost of structures by three methods: general estimate (building costs complete on one page); model method (costs in three-page spreads); and component method (detailed costs in sequence from excavation to roof). Careful instructions are given for the use of the volumes.

Users of this work can estimate construction costs of proposed buildings or additions to buildings; estimate the cost of replacing or repairing a deficiency in a building; estimate depreciation and calculate the cost of reproduction; and analyze comparable sales and rental properties used in the market data and income approaches to value. The information is accurate, and the system of valuation is flexible. The volumes would seem to be indispensable to anyone concerned with building costs, whether new to building valuation or well versed by experience in the field.

A new feature is included to keep the data current. The publisher issues a bimonthly serial called the *Boeckh Building Cost Modifier*, the subscription price being $15 per year. The bimonthly periodical provides the means of adjusting the manual costs to a specific location and for a specific time. There is also information about the general field of valuation.

MARY E. OSMAN

With Benefit of Architect, a Manual for Those about to Build. Edward X Tuttle Jr. New York: Macmillan, 1968. 277 pp. $7.95.

This is a book that an architect can recommend to a client who wishes to know more about the client-architect relationship and what is involved in the building process. Particularly suited to the potential homebuilder — its examples are mainly from house construction — it is general enough for anyone approaching a building project.

After introductory chapters on approaches to architecture and the effects of buildings, the author describes an architect's services, considers the need for an architect and offers suggestions on choosing an architect, with comments on fees and contract.

Then follow chapters on the program; budget vs. cost; design; and drawings. The procedures which occur, once the design is approved, include preparation of contract documents; selection of the contractor; process of construction; and completion and moving in.

To point up the entire process the author has related in several chapters the experiences of a fictionalized family in the construction of an actual house.

The author says the book is concerned with how the client can handle client-architect-contractor relations to obtain a building of maximum value at minimum cost. In thus creating an informed client, it should contribute to a better climate in client-architect relations and understanding.

Planning for Diversity and Choice: Possible Futures and Their Relations to the Man-Controlled Environment. Edited by Stanford Anderson. Cambridge: MIT Press, 1968. 340 pp. $12.50.

This volume is the documentation of a conference held at Endicott House, Dedham, Massachusetts, in 1966 under the sponsorship of the AIA Princeton Educational Research Project, the Graham

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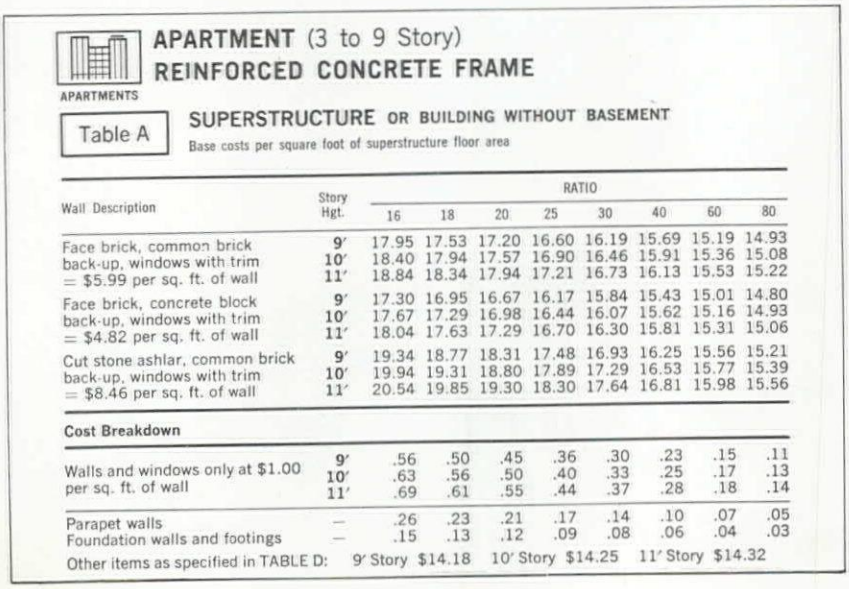

APARTMENTS

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Table A — **SUPERSTRUCTURE** OR BUILDING WITHOUT BASEMENT

Base costs per square foot of superstructure floor area

Wall Description	Story Hgt.	RATIO 16	18	20	25	30	40	60	80
Face brick, common brick back-up, windows with trim = $5.99 per sq. ft. of wall	9′	17.95	17.53	17.20	16.60	16.19	15.69	15.19	14.93
	10′	18.40	17.94	17.57	16.90	16.46	15.91	15.36	15.08
	11′	18.84	18.34	17.94	17.21	16.73	16.13	15.53	15.22
Face brick, concrete block back-up, windows with trim = $4.82 per sq. ft. of wall	9′	17.30	16.95	16.67	16.17	15.84	15.43	15.01	14.80
	10′	17.67	17.29	16.98	16.44	16.07	15.62	15.16	14.93
	11′	18.04	17.63	17.29	16.70	16.30	15.81	15.31	15.06
Cut stone ashlar, common brick back-up, windows with trim = $8.46 per sq. ft. of wall	9′	19.34	18.77	18.31	17.48	16.93	16.25	15.56	15.21
	10′	19.94	19.31	18.80	17.89	17.29	16.53	15.77	15.39
	11′	20.54	19.85	19.30	18.30	17.64	16.81	15.98	15.56
Cost Breakdown									
Walls and windows only at $1.00 per sq. ft. of wall	9′	.56	.50	.45	.36	.30	.23	.15	.11
	10′	.63	.56	.50	.40	.33	.25	.17	.13
	11′	.69	.61	.55	.44	.37	.28	.18	.14
Parapet walls	—	.26	.23	.21	.17	.14	.10	.07	.05
Foundation walls and footings	—	.15	.13	.12	.09	.08	.06	.04	.03

Other items as specified in TABLE D: 9′ Story $14.18 10′ Story $14.25 11′ Story $14.32

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Books *from page 104*

Foundation for Advanced Studies in the Arts and the department of architecture of the Massachusetts Institute of Technology. It suffers the shortcomings of all attempts to record the deliberations of a conference. On the other hand, there are significant papers presented that deal with the concept of "the future."

The future has become an important theme for thoughtful people, particularly planners. This book is a series of essays into the future with all too brief sections on the discussions generated by the presentation of the papers. The book, of course, is concerned with relating architecture and planning to the future, and it involves investigations into inventing the future. The accent is upon innovation in order to design for diversity and change. Perhaps in some ways the mission of a developing democratic process is to open up the opportunities for optimum choice for all.

There is the theme of the transition from the natural to the man-made environment embodied in these essays. Indeed, the book is an important contribution to the literature on "the future," and it provides insights into the shape of things to come.

It is difficult to single out any particular paper, as all of them are highly provocative and will bear careful reading by all architects concerned with creating the forms of the future. Almost all the papers hint of how man can control his environment through the new technologies becoming available to him. Invariably in a book of this kind the emphasis is upon planning, and a number of new approaches are appraised.

Representatives from a number of disciplines presented the papers and participated in the discussions. The product has especial relevance to architects and planners, although any serious student of the future will find the book invaluable.

My Pleasures and Palaces: An Informal Memoir of Forty Years in Modern China. Harry Hussey. Garden City, N. Y.: Doubleday, 1968. 384 pp. $6.95.

In 1911 Harry Hussey, a successful Chicago architect, went to the Orient in connection with the planning of buildings for the International Young Men's Christian Association. He set up an office and a residence in Peking and became a fascinated spectator for 40 years of the drama of China's unfolding history.

This is the story of his life there and of the officials and diplomats he knew. As he writes, he had a "grandstand seat on history," and he gives his reader a vivid look at China during a crucial period and of some of the interesting people he knew.

Tidewater Virginia in Color. Parke Rouse Jr. New York: Hastings House, 1968. 94 pp. $4.95.

The four-color full-page photographs in this book greatly enhance the informative text. A general introduction on Tidewater Virginia's history and culture is followed by photographs of 32 historic structures and gardens. There are accompanying descriptive captions for the photographs. The book is part of the Profiles of America series.

Architettura dei Giardini. Francesco Fariello. Rome: Edizioni dell' Ateneo, 1967. 226 pp. No price given.

So-called "green thumbs" must

Continued on page 108

beauty

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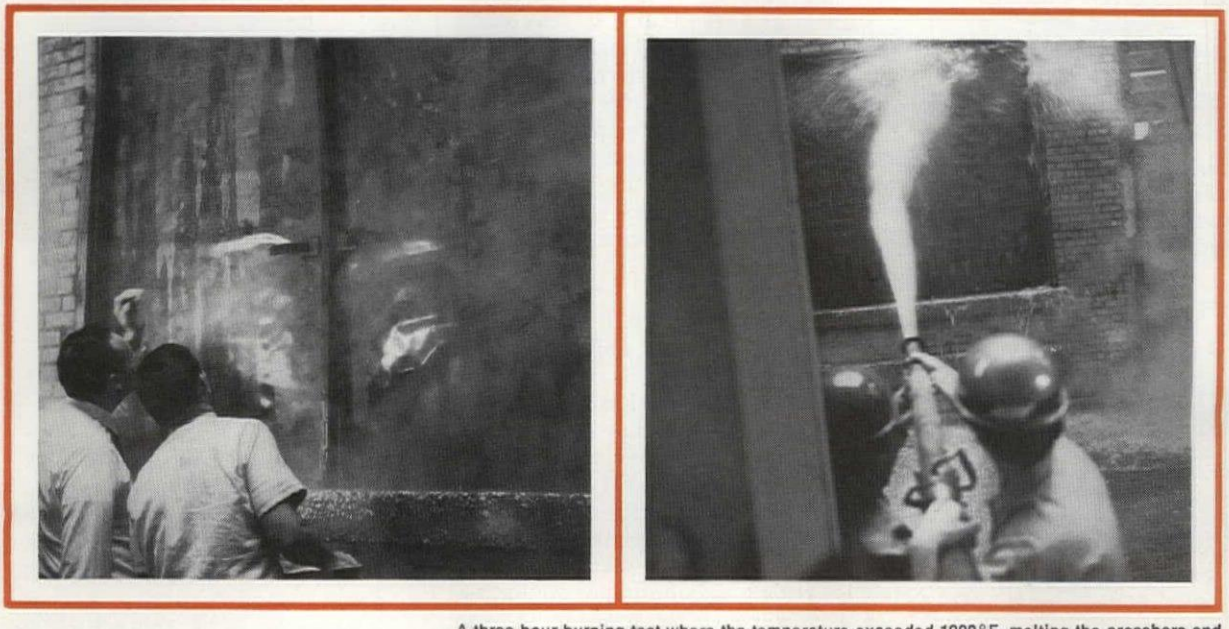

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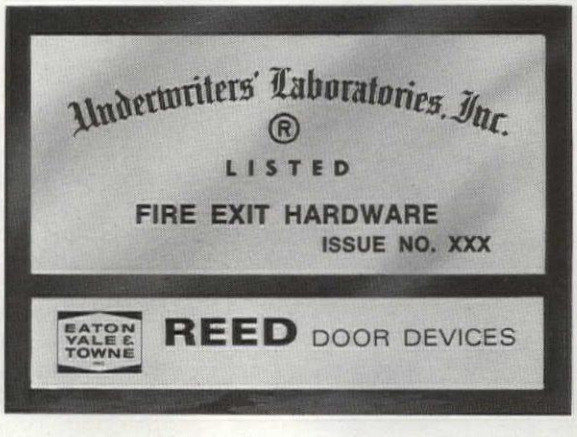

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Books *from page 106*

be an inherited trait, for every Italian seems to have a way with plants and flowers, and certainly Italian gardens are among the world's loveliest. Fariello, author of this well-illustrated history of garden art, is poetic about landscape architecture. He believes gardens are esthetic compositions, structured similarly to a masterpiece of painting or music or architecture. Through gardens one can possess nature, as a painter takes possession of an object when he paints it.

Fariello thinks that gardens reflect the civilization, the taste and the sensibility of those who create them, and this theme is developed as he surveys gardens in all parts of the world and in various stages of man's history from the ancient Romans to modern man. He discusses gardens not only of the Italians but also of the French, the Spanish, the Arabs, the English, the Germans, the North Americans, the Japanese, etc.

Victorian Edinburgh. J. Brian Crossland. New York: Hillary House, 1968. 93 pp. $6.50.

Crossland, an associate member of the Town Planning Institute and a Fellow of the Society of Antiquities in Scotland, reveals in this book that some of the major buildings in Edinburgh were erected during the reign of Queen Victoria. He began his study in order to prepare a series of articles for the Scotsman Publications, and his sketches have a "newsy" air.

Crossland found that comparatively little attention has been paid to the 19th century architectural history of Edinburgh. He praises the Victorians as being "adventurous and inventive," and through his writing as well as through the drawings he supplies he hopes to inspire in his readers something of the enthusiasm he himself has for Victorian architecture.

Visionary Architects: Boullee, Ledoux, Lequeu. Houston: University of Saint Thomas, 1968. 240 pp. $6.

This praiseworthy catalog was prepared in connection with exhibitions held at the University of Saint Thomas in Houston, the City Art Museum of St. Louis, the Metropolitan Museum in New York, the Art Institute of Chicago and the M. H. De Young Memorial Museum in San Francisco. It contains drawings by three French archi-

Continued on page 110

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Books *from page 108*

tects of the 18th century: Boullée, Ledoux and Lequeu.

For those who search the past for forms "that anticipate and vindicate those of the present," this catalog and its bibliography of sources to other readings will prove keenly interesting.

Impressions of Japanese Architecture and the Allied Arts. Ralph Adams Cram. New York: Dover, 1966. 242 pp. $2.

This series of essays by Cram was first published in 1906. The present edition is an unabridged and corrected republication of the work published by the Japan Society, New York, and Marshall Jones Company, Boston, in 1930. At the time Cram wrote the essays, the art of Japan was less appreciated than it is today. Cram looked at the architectural structures of Japan with a perceptive eye and related his impressions in a clear and masterful manner.

Arquitectura Finlandesa en Otaniemi. Maria L. Borràs. Barcelona: Ediciones Polígrafa, 1967 (distributed in the US by Wittenborn). 60 pp. plus plates. $15.

Three buildings are featured in this book, all part of the Polytechnical School complex of Otaniemi near Helsinki. They are presented in an attempt to study the imaginative trends in present-day Finnish architecture. The three structures are different, but each is integrated into the beautiful Finnish landscape. Each is typically Finnish, and each speaks of Finnish genius.

The architects are Alvar Aalto, designer of the central building at Otaniemi; Heikki Siren, architect of the chapel; and Reima Pietila, creator of Dipoli, the students' club. This is really a photographic essay with the pictures supplied by Matti Jaatinen. The buildings are portrayed in all seasons of the year, from every angle, interior and exterior. It is difficult to say which time or pose is more pleasing. The brief accompanying text, by Maria Borràs, is in Spanish, English, French and German.

Kaduna: 1917, 1967, 2017: A Survey and Plan of the Capital Territory for the Government of Northern Nigeria. Max Lock & Partners. New York: Praeger, 1968. 245 pp. No price given.

Max Lock & Partners have made surveys of physical, technical, economic and social factors in planning for Kaduna, the capital of Northern Nigeria. The legal, administrative and esthetic considerations due a capital city have been emphasized.

The work has been thorough as well as comprehensive. The methods and techniques adopted make this minutely documented study a prototype that will be of considerable usefulness to planners of other cities and regions. It is a handsome work; many photographs, tables, diagrams, maps and plans augment the text.

In conclusion, the planners call for four things: the establishment of a planning law; the setting up of a unified government for city and capital territory; the engagement and training of the best skills in both technology and esthetics for the service of the capital; and the maintenance of a continuity of planning and control of all levels. "For fine cities like good buildings, good philosophies and even good people can only grow upon firmly established . . . foundations."

The Gates of Jerusalem. Solomon H. Steckoll. New York: Praeger, 1968. 54 pp. $5.95.

The walls around the Old City of Jerusalem and its gates have figured prominently in the city's history and are the subject of many fables and legends. Steckoll is a journalist and historian writing for the *Toronto Daily Star* in the Middle East, and in the course of his stay there he has been intrigued by the history, architecture and archeology of the gates to Jerusalem.

After the hostilities ended in June of 1967, it was possible once more to walk around the ancient walls and admire the towers, bulwarks, arches and gateways. Steckoll takes his reader on such a tour, and as he goes he blends history and legend into his story. He also describes the 13 gates of the Temple and tells about the religious customs and beliefs associated with them. The photographs, part in color, by Dalia Amotz add considerably to the beauty of this little book.

Art and Architecture on the Mediterranean Islands. Erich Arendt. New York: Abelard-Schuman, 1968. 37 pp. plus plates. $17.50.

This is a very handsome book, which consists primarily of more than 200 photographs by Arendt, 30 in full color. They are magnificent. The text traces dramatically if briefly the history of art and architecture in the sun-drenched

Continued on page 112

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Books *from page 110*

Mediterranean islands. The book was first published in Dresden in 1966.

Hydra: A Greek Island Town, Its Growth and Form. Constantine E. Michaelides. Chicago: University of Chicago Press for Washington University, 1968. 93 pp. $10.50.

Hydra, the Greek island which Michaelides uses as a document in this book, is about 11 miles long and 2 to 4 miles wide, situated about 4 miles off the southeast coast of Argolis. The only large modern town on the island is Hydra, which in 1961 had a population of 2,500.

Hence, Hydra presents a fascinating study of the nature of urban forms. Michaelides's aim has been to analyze the form of Hydra, "in the hope that the process will enrich our understanding of how and why cities grow, what cities are and what they are made of."

The book is a handsome one with many maps, photographs and plans. Michaelides, born and raised in Athens, is now an associate professor at Washington University in St. Louis. This study was supported in part by a grant from the AIA.

Planning and Architecture: Essays Presented to Arthur Korn by the Architectural Association. Edited by Dennis Sharp. New York: Wittenborn, 1967. 169 pp. $10.50.

This *Festschrift* was compiled and published in honor of Arthur Korn upon his retirement from the School of Architecture at the Architectural Association, London. All the contributors have known Korn for a considerable length of time, and all admire his work.

Sharp says in his preface that Korn and his work have been neglected by the English-speaking public, except within his sphere of influence at the AA and apart from his book *History Builds the Town*. In spite of the lack of recognition until now, Korn has helped mold generations of architects and planners. This volume serves to put the record straight and to accord him deserved gratitude.

Building in England down to 1540: A Documentary History. L. F. Salzman. New York: Oxford University Press, 1967. 637 pp. $10.10.

When this book first appeared in 1952, it received the highest praise from reviewers. John Harvey, writing in *Architectural Review* (April, '53, p. 265) said that the book marked an epoch and that "it should have an honoured place in every library." Others predicted it would become the classic work on medieval building.

It has been out of print; so those who did not buy it before now have an opportunity to acquire this treasury of information, in a corrected impression. Salzman says that his book is not concerned "with artistic deductions from existing buildings but with contemporary documentary evidence on the actual processes of building." The book sheds tremendous light on the tools and materials used, the hours worked, the wages paid, etc. Half of the book is devoted to appendices, and they form a veritable source book of contemporary chronicles, contracts, texts and records.

Floors: Selection and Maintenance. Bernard Berkeley. Chicago: Library Technology Program, American Library Association, 1968. 316 pp. $12.50.

This book is indispensable for the architect who is concerned with

Continued on page 114

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Books *from page 112*

the selection of floors for a new building or for a renovated older structure. It covers resilient floor coverings, carpet, masonry, wood and floors poured in a liquid state and "formed-in-place." The text is thorough, unbiased and detailed in its information about selection, installation and maintenance of floors. There are illustrations, diagrams and an abundance of tables to assist the reader further.

The book was prepared under a grant from the Council on Library Resources, Inc., to the Library Technology Project of the American Library Association. The information is applicable to more than library buildings, however, and it can be used with profit by architect, interior designer or maintenance engineer in matters concerning floors in any institutional or commercial building.

It is also useful for industrial or residential structures. Even a housewife will be glad to learn what to do about a spilt martini on her tufted carpet.

Engineering and the Liberal Arts: A Technologist's Guide to History, Literature, Philosophy, Art and Music. Samuel C. Florman. New York: McGraw-Hill, 1968. 278 pp. $8.95.

This is a timely and thoughtful endeavor to turn the thinking of the engineer toward the values of a liberal education. Florman states that his purpose is "to advocate the cause of liberal education" and "to explore some of the ways in which engineering is related to the arts." He is singularly successful in building what he calls "natural bridges" between the two cultures of engineering and the humanities.

In some ways the volume is simply an elaborate bibliography of books and of recommended works of art and music to view and hear —all of which would be helpful in liberating the engineer from his enslavement to technology. The volume reveals an amazing amount of familiarity with the basic books of a liberal arts education.

Unquestionably, any person, engineer or not, who has an impulse to pursue a study of the liberal arts and sciences will find this guide highly helpful. In a time when technology threatens to appropriate the mind of man, the author advocates an approach that can humanize.

Piping Handbook. Edited by Sabin Crocker. Revised by Reno C. King. 5th ed. New York: McGraw-Hill, 1967. 1616 pp. $31.50.

The first full-scale revision since the fourth edition was published in 1945, this is a hefty tome filled with authoritative information by many experts. King, the reviser, says that the new edition's scope, contents and arrangement reflect the tremendous advances that have been made in piping design over the past 20 years. The recently new fields of nuclear and cryogenic piping systems are given attention. Indeed, there is treatment of every aspect of design, materials, installation and other practical considerations.

Standard Structural Details for Building Construction. Morton Newman. New York: McGraw-Hill, 1968. 358 pp. $14.50.

This book will be a time-saver

Continued on page 116

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Books *from page 116*

inations given by the various state boards. It reviews the basic theory and the application of that theory to the design of steel and reinforced concrete structures. The new edition has been updated to embrace the latest specifications and codes.

Structural Concrete. R. P. Johnson. New York: McGraw-Hill, 1968. 271 pp. $12.50.

Intended for use by both undergraduate and postgraduate students, this book outlines the fundamental theories underlying present designs for structural concrete and relates the theories to the observed behavior of steel and concrete.

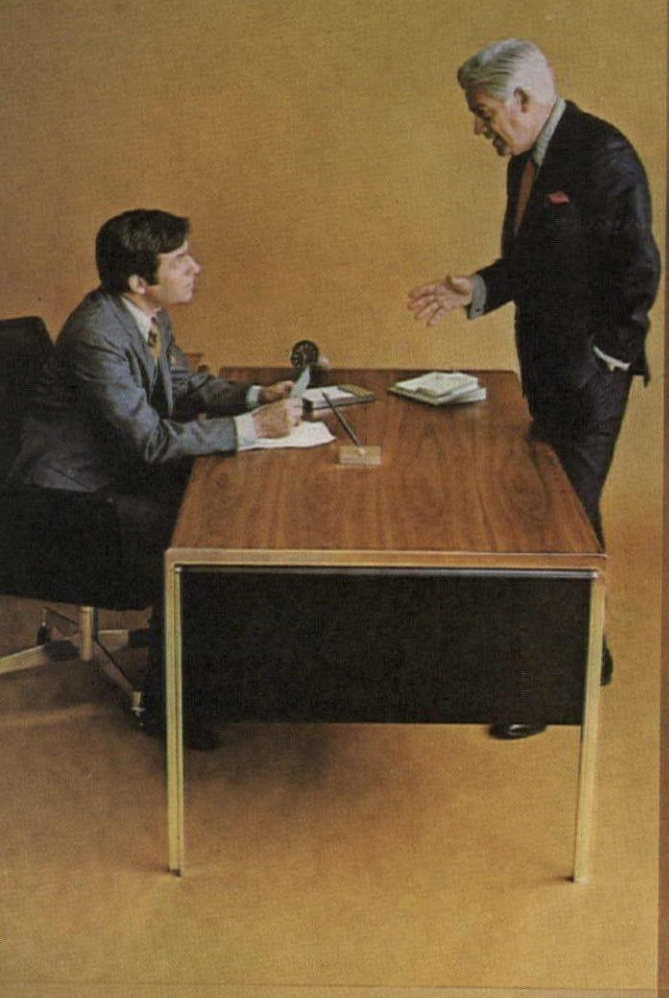
There are chapters on the properties of concrete and reinforcement; elastic theory of reinforced concrete beams and columns and of prestressed concrete beams; ultimate strength of reinforced and prestressed concrete beams and columns; shear and torsion; reinforced concrete slabs; yieldline theory of concrete slabs; and design philosophy and its expression in codes of practice. Johnson has provided numerous examples to illustrate the principles he sets forth.

Corrosion Guide. Erich Rabald. New York: American Elsevier Publishing Co., 1968. 900 pp. $60.

Since the first edition of this work appeared in 1951, there has been a tremendous increase in research in the fields of materials and corrosion. Rabald states that he took into account many thousands of new communications in the preparation of the new edition.

Not only is the content changed but also the form of presentation. The original tabular arrangement has been abandoned in favor of a plan whereby the materials are listed consecutively in the sections devoted to each corrosive agent. The introductory theoretical text of the first edition has been eliminated to allow for the new wealth of practical information; nor has Rabald included treatment of the physical and technological properties of the materials as standard works have eliminated such a necessity.

Rabald writes that particular value has been attached to the behavior of materials toward the pure corrosive media and also toward technical mixtures and to the demonstration of the resistance of materials under working conditions. It is in this emphasis, he believes, that his work differs from other tabular publications in this field. ☐



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Arcology: The City in the Image of Man
by Paolo Soleri
The sprawling, essentially flat cities and suburbs that are eating up the surface of the earth are "utopian" in the negative sense that they are absurd and unworkable, asserts Paolo Soleri. He proclaims an alternative, one that is utopian in the positive sense of an ideal against which to measure the direction and extent of future change. Although the need for change is immediate, Soleri's concern embraces the possibilities of human life on this planet over a time period almost cosmic.

In the opening part of the book, Soleri presents his indictment and his alternative verbally and with prophetic fervor. After this, he proceeds to give his vision concrete form and visible reality in drawings that illustrate a new man-made earthscape: the arcologies.

While arcology contains its own implicit aesthetic, the free-flowing invention that Soleri — imagination's architect — has worked into his realizations is fantastic. **$25.00**

Two Chicago Architects and Their Clients: Frank Lloyd Wright and Howard Van Doren Shaw
by Leonard K. Eaton
with an appendix by Elizabeth M. Douvan
The study of architectural patrons and clients is a vital if neglected part of architectural history, and this book marks an end to this neglect by revealing in depth the backgrounds, personalities, and attitudes of two groups of clients involved in the dramatic confrontation between Frank Lloyd Wright and the established eclecticism around the turn of the century.

One group of clients consists of individuals who commissioned private residences from Wright. The other, a control group, roughly similar to the first in their economic means, had their houses designed by Howard Van Doren Shaw, one of the ablest of Wright's conventional contemporaries.

The results are presented not as cold statistics but in the form of lively vignettes. In each case, the clients are studied first as a group, and a composite type emerges. They are then individually sketched in their social contexts. In each case, some sociological surprises emerge. **$10.00**

Stone Shelters
by Edward Allen
The essence of this book is its documentation — through text, photographs, and scaled maps and drawings — of the development, from the Stone Age to the present, of vernacular architecture in a well-defined region of southern Italy.

This region, known as the Murgia of the Trulli, is an oblong limestone terrace set high between the Adriatic and Ionian Seas. Here, from prehistoric times, a remarkable variety of shelters have appeared, almost all of them built from stone. Many of these survive and are occupied to the present day. **$13.50**

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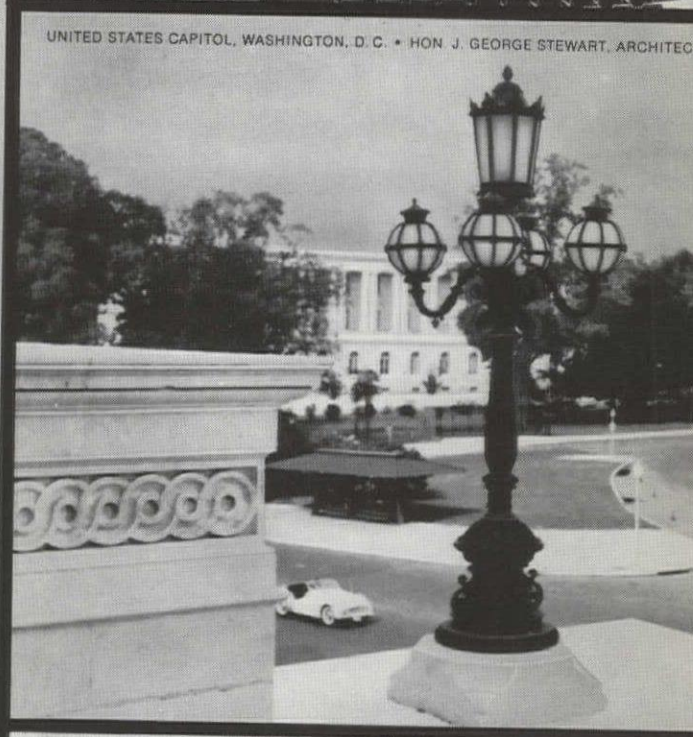

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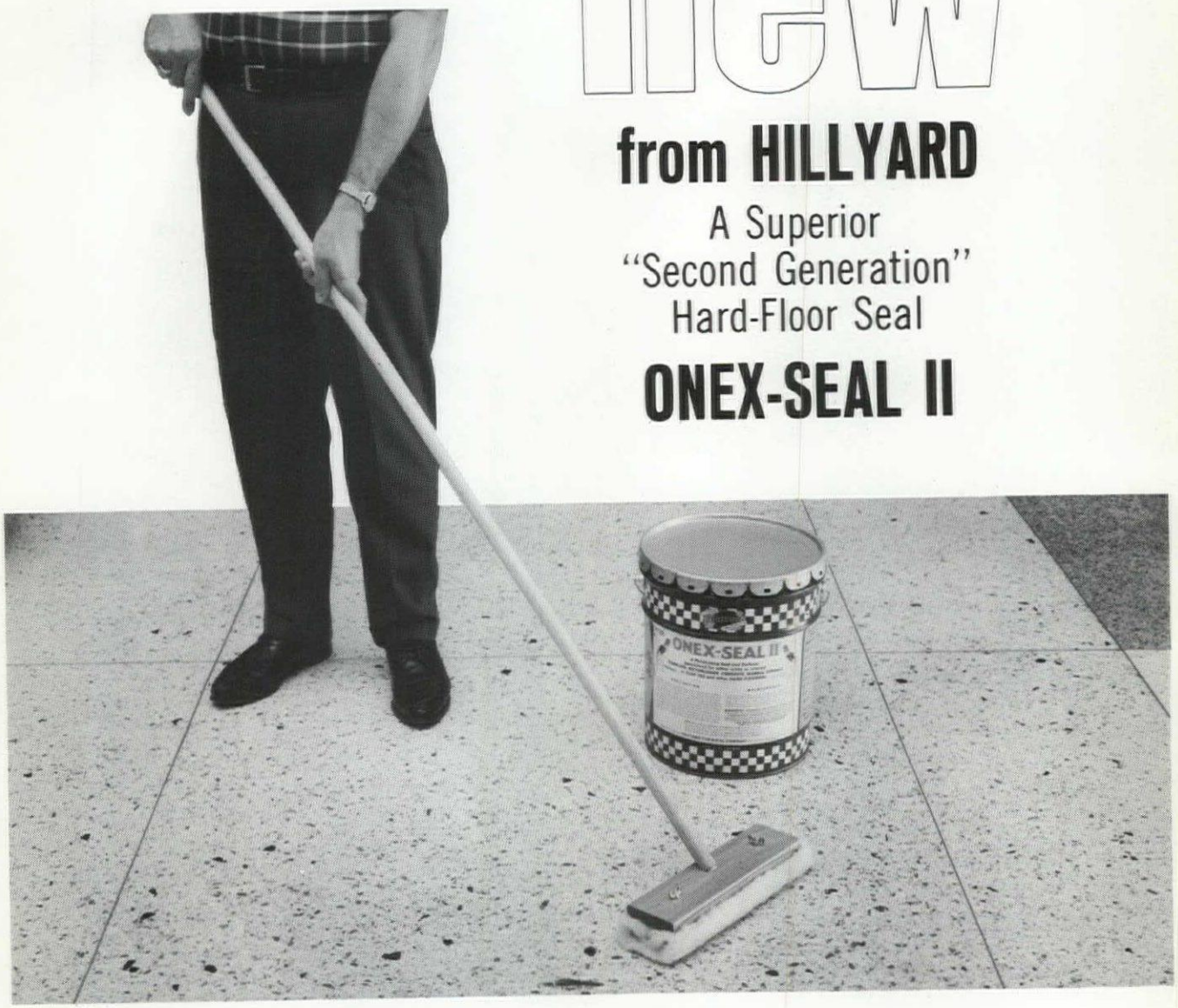

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National

Oct. 16-17: AIA Architects/Researchers Conference, Houston

Oct. 21-22: Urban Lighting Symposium, Hotel America, Washington, D.C.

Oct. 26-30: AIA/ACSA Teachers' Seminar, Miyako Hotel, Japanese Trade Center, San Francisco

Nov. 2-7: American Concrete Institute Fall Convention, Pittsburgh Hilton Hotel, Pittsburgh

Nov. 17: Color Marketing Group Conference, Marco Polo Hotel, Miami Beach, Fla.

Dec. 5: Joint Committee on Employment Practices Third Conference ("Employee/Employer — A Relationship in Transition), Arlington Park Towers, adjacent to Chicago's O'Hare Field

Jan. 18-22: National Association of Home Builders Annual Convention-Exposition, Astrodome, Houston

AIA Regional and State Conventions

Oct. 11-14: Northwest Region, Salishan Lodge, Gleneden Beach, Ore.

Oct. 15-19: California Council, El Mirado Hotel, Palm Springs

Oct. 16-18: Louisiana Association, Ramada Inn, Monroe

Oct. 17-19: New England Region, Wentworth-by-the-Sea, Portsmouth, N.H.

Oct. 20-23: New York State Association, Nevele Hotel, Ellenville

Oct. 23-25: Illinois Region, Wagon Wheel Lodge, Rockton

Oct. 23-25: Middle Atlantic Region, Lord Baltimore Hotel, Baltimore

Oct. 24-27: Florida Association, Grand Bahama Hotel, West End, Grand Bahama Island

Oct. 29-31: Texas Society, Hilton Palacio del Rio, San Antonio

Nov. 5-7: North Central States and Minnesota Society of Architects, Hilton Hotel, St. Paul

Nov. 9-14: Western Mountain Region, Dunes Hotel, Las Vegas

International

Oct. 13-25: UIA Assembly and 10th World Congress, Buenos Aires

Continuing Education

Nov. 14-15: School Conference. Contact: School of Continuing Education, Box 1099, Washington University, St. Louis, Mo. 63130.

Awards Programs

Feb. 2: Nominations due, R. S. Reynolds Memorial Award for distinguished architecture with significant use of aluminum. Contact: Reynolds Award, AIA, 1735 New York Ave. N.W., Washington, D.C. 20006.

Tours

April 3: Architecture and Garden Tour of Japan, departing from Vancouver, B.C., for 23 days with optional extension to Hong Kong and Bangkok. Contact: Kenneth M. Nishimoto, AIA, 263 S. Los Robles Ave., Pasadena, Calif. 91106. □

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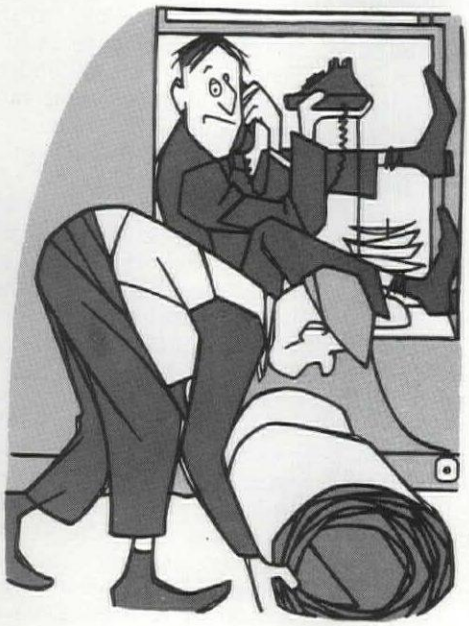

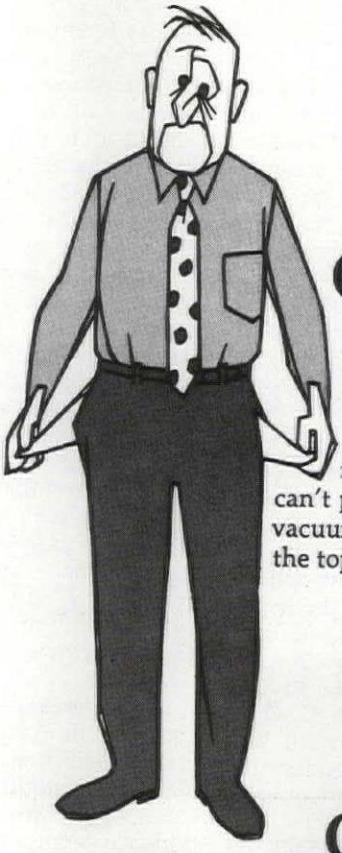

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Letters

More on Jargon

EDITOR:

Regarding Letters for July, may I refer to "It All Comes Back to Fees." Like Jack H. Coleman, I am unhappy with some of the "jargon" approach to the very important problem of "Planning of Capital Investments."

This responsibility is so important and so often ill-handled by our profession that I find author Paul B. Farrell's "witty wisecrack" reply to be discouraging to constructive review and criticism. Mr. Coleman's letter is deserving of more than a facetious reply.

COLLINS C. DIBOLL, AIA
New Orleans, La.

Moon Mission Queried

EDITOR:

In the *New York Times* of July 13, 1969, Isaac Asimov, a biochemistry professor, wrote: "There are so many mysteries about the moon, and about the earth too, to which the (moon) dirt *may* hold the key." (Parenthesis and emphasis are mine.)

However, in his article in the July JOURNAL, Professor C. Herbert Bowes, AIA, has no such reservation. In the last section he makes the following categorical statements:

"The much-needed changes in the art on earth must and will evolve directly from the man-in-space program. Through them, more will be known about the nature of man, biologically, medically, psychologically and sociologically. New, stronger but lighter materials will be developed, present ones will be improved. We will have greater and more sophisticated use of computer-operated machines and devices, both in the factory and in the field, for manufacturing processes. Engineering systems will be changed to a degree difficult to visualize today. Much more efficient transportation systems could be one of the earlier manifestations of byproducts of outer space technology."

No evidence is offered in proof of any of these statements. They seem to be merely the products of his own imagination and create the impression that the author doesn't know the word "perhaps."

On the basis of the author's thinking, he presents drawings of a "two man shelter module" and of a development comprising 18 such structures, a radio and TV antenna and a "rocket port." In this assemble a group of men are supposed to live a six-month stay of work and research.

Professor Bowes does not state the total weight of the "module," but if, as he writes, it will contain 900 pounds of nourishment in each unit, is it unreasonable to assume that, what with the two occupants, the component materials, the machinery within it and that necessary to mound it over with moon dirt, the weight per unit might well be two tons?

It has cost several billion dollars to place two men on the moon for a few hours, dropping them in a lightweight "spider" in order to bring back to earth dirt and rocks of a carefully limited weight. What, then, would it cost to make 18 trips with a possible total weight of 36 to 40 tons which could cost as much as $75 billion?

Should architects advocate such a program with the very dubious prospect of any of the benefits to mankind on earth which the author claims with such assurance? One fifteenth of that amount spent on earth would probably give better results.

I have great admiration for the trend of thinking in the AIA toward the assumption of greater social responsibility. I believe that this is the proper direction in which to apply our efforts. I think we should avoid involvement in any such scheme as that proposed by the author which would demand astronomical expense with very doubtful prospective benefits. Let's work directly for man on earth, not indirectly through Mars.

EUGENE HENRY KLABER, FAIA
Quakertown, Pa.

And the Author Replies

EDITOR:

First, I'd like to mention that I am not a novice to the subject of architecture, having participated in office, field and educational work for the past 31 years.

Apparently Mr. Klaber would have me preface all my deductions with "may" or "perhaps." Truthfully, I am tired (and I believe the public is also) of having some segments of the architectural profession batter them with phrases such as "your job *may* be ready to go out for bids on . . ." "your project may cost between $20 and 30,000."

As to his remark, accusing me of having an imagination — all that I can say is thanks!

As for offering proof of my quoted conclusions (referred to as statements in his third paragraph), all one needs to do to be cognizant of these facts is to follow the news media.

Next, with reference to his statement, "He does not state the total weight of the module," may I respectfully refer him to the lower right corner of page 54 of the July issue, where he will find the gross weight of the shelter module on earth and on the moon.

Mr. Klaber jumped to the conclusion that it would require 18 trips to the moon, costing about $75 billion, in order to physically deliver shelters and equipment for an 18-man base. The present Saturn V rocket has the capability of boosting 101,000 pounds into translunar injection.

Therefore, each of six trips could include three shelters, six persons, plus 40,000 pounds allowance for a newer type reusuable lunar lander, which hasn't been produced yet. The 18-man base, including support equipment and vehicles, could be delivered with a total of 12 trips. Even using the recent cost of about $400 million for a lunar landing, with no reusable equipment, the 12 trips would cost about $4.8 billion.

I couldn't agree with him more regarding the need for a "greater social responsibility." I thought that is what my article was all about. *Perhaps* I was wrong.

C. HERBERT BOWES, AIA
School of Architecture
University of Colorado
Boulder

A School by Any Other Name

EDITOR:

I read recently that Princeton University decided to change the name of its "School of Architecture" to the "School of Architecture and Urban Planning." Changing and/or abandoning such names is a trend I have noticed happening in many of the universities throughout the country.

Frankly, I think it is something we of the architectural profession should seriously consider and maybe plan to halt or at least clarify somewhat.

Why do the universities stop at

Continued on page 132

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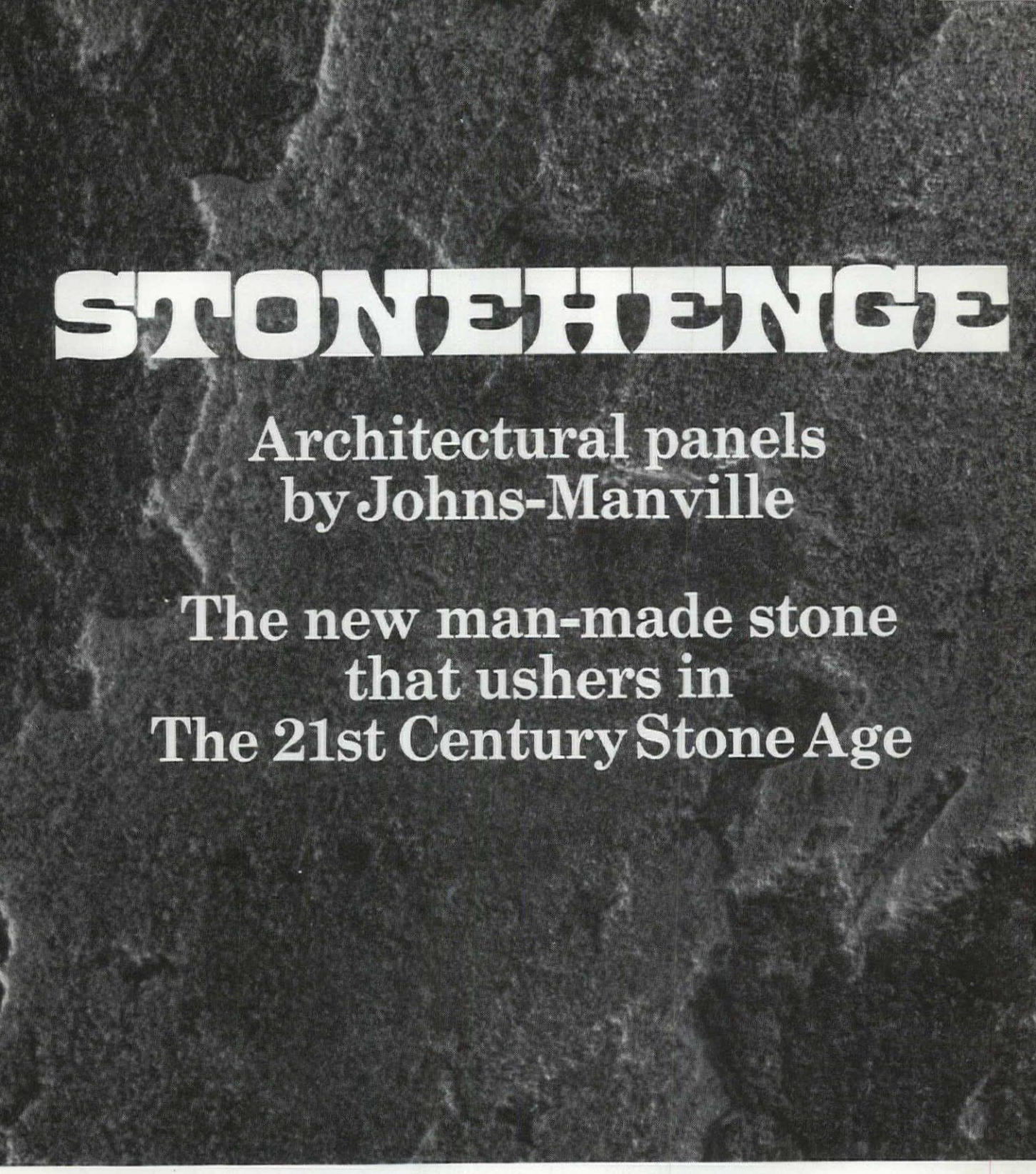

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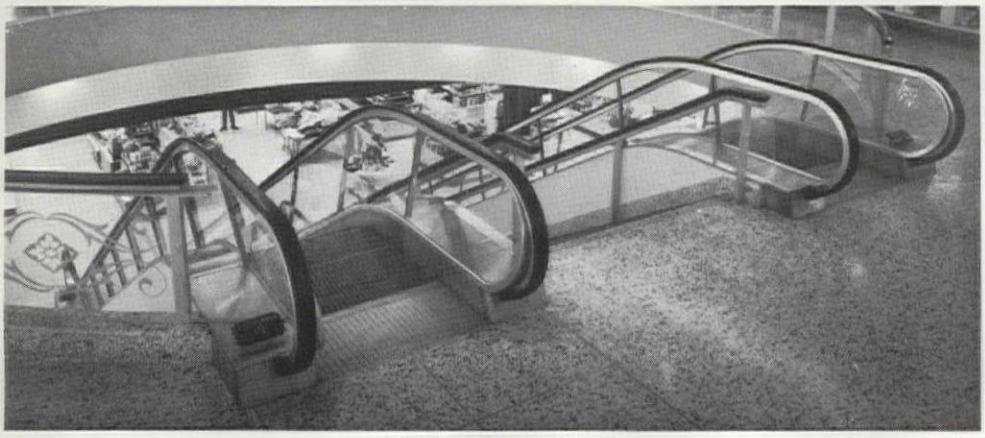

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Letters *from page 128*

"School of Architecture and Urban Planning?" Why don't they add "City Planning," "Structural Engineering" and all other related disciplines of an architectural school?

Professions such as medicine, law and engineering haven't found it necessary to add their specialties to the name of their school or college. I don't know of a "School of Medicine and Psychiatry" or "College of Medicine and Gynecology." Those who wish to specialize become doctors of medicine first and then go on to study psychiatry or gynecology.

I strongly feel that the colleges should require a degree in architecture before permitting anyone to specialize in such areas as urban planning, city planning or industrial planning. City planners may know many facets of the multiple problems of cities, but unless they know how buildings function, what the problems are to design, plan and specify all the things that go into a structure, they are not qualified to decide the relationship of buildings to each other, their esthetic values, their three-dimensional appearance, their placement in the environment.

Undoubtedly there are many architects who do not feel as strongly about this trend as I do. I have been annoyed at men in related fields — all frustrated architects — picking away at the architectural profession. If we don't put a stop to this, one of these days we will find ourselves not the leader in shaping the physical environment, as we should be, but as just one of the specialists.

SAMUEL SCHEINER, AIA
Massapequa, N.Y.

Hurrah for a Hangup

EDITOR:

George Kassabaum's "The Highway Hangup" [Unfinished Business] in May was excellent.

I hope the Board of Directors in its "infinite wisdom" will tackle other controversial items. When we architects develop the courage to create discussions on key problems facing society, we will truly take our position on center stage.

PHILIP J. MEATHE, FAIA
Detroit, Mich.

Taking Mr. Wade to Task

EDITOR:

John Wade's "A Curriculum Structure" in the ACSA section for March has the potential of becoming an all-time classic. If you could get Martin Gardner to annotate it, this article would take its rightful place alongside *Alice in Wonderland* and *The Hunting of the Snark.*

However, as a precaution against any possibility of misunderstanding, I suggest that you plainly label it "humor."

JAMES T. DARROUGH, AIA
Columbia, Mo.

Mr. Wade's Retort

EDITOR:

To have an article on our curriculum ranked with *Alice in Wonderland* is certainly not an insult, as the letter writer undoubtedly intended. While Lewis Carroll's work on the surface is full of nonsense, at another level it is full of profundity. If my article and our teaching program can share these qualities with Carroll and his work, I believe that

Continued on page 136

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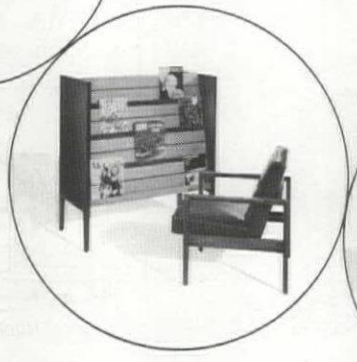

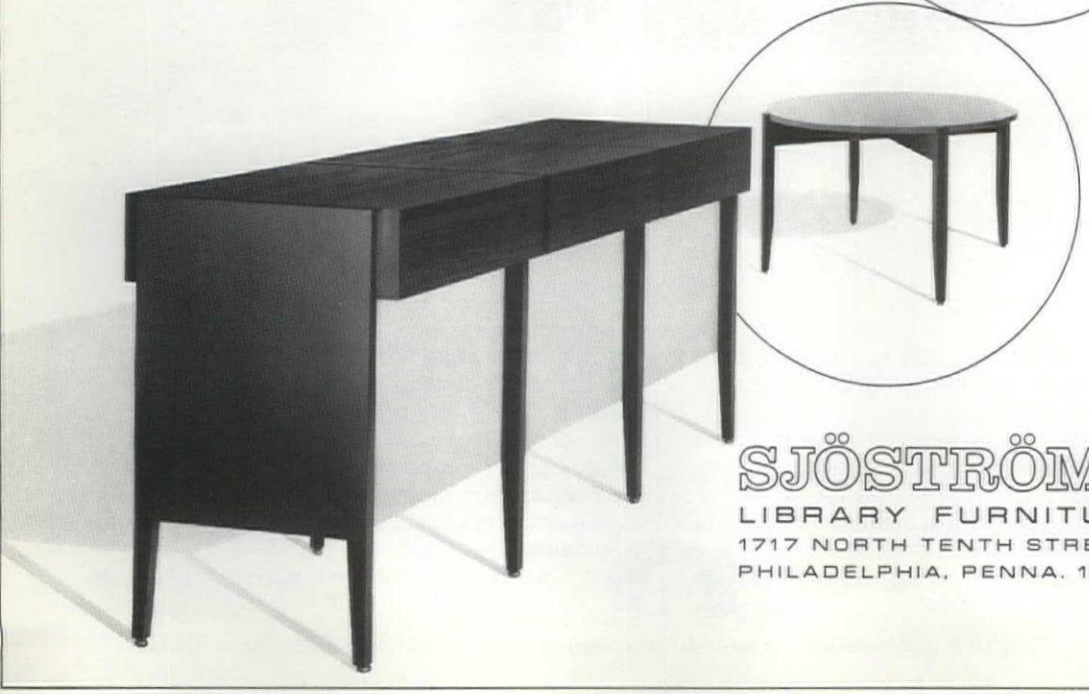

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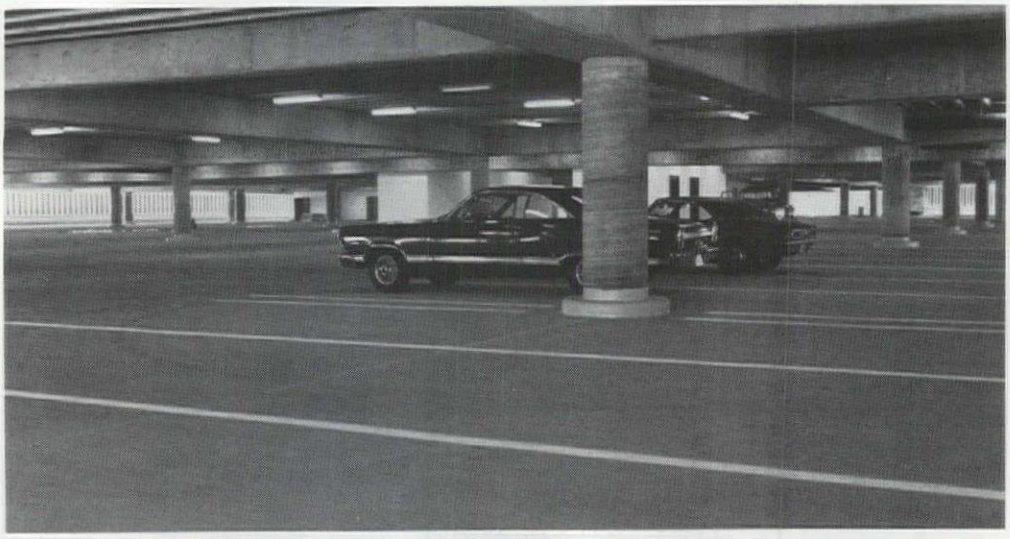

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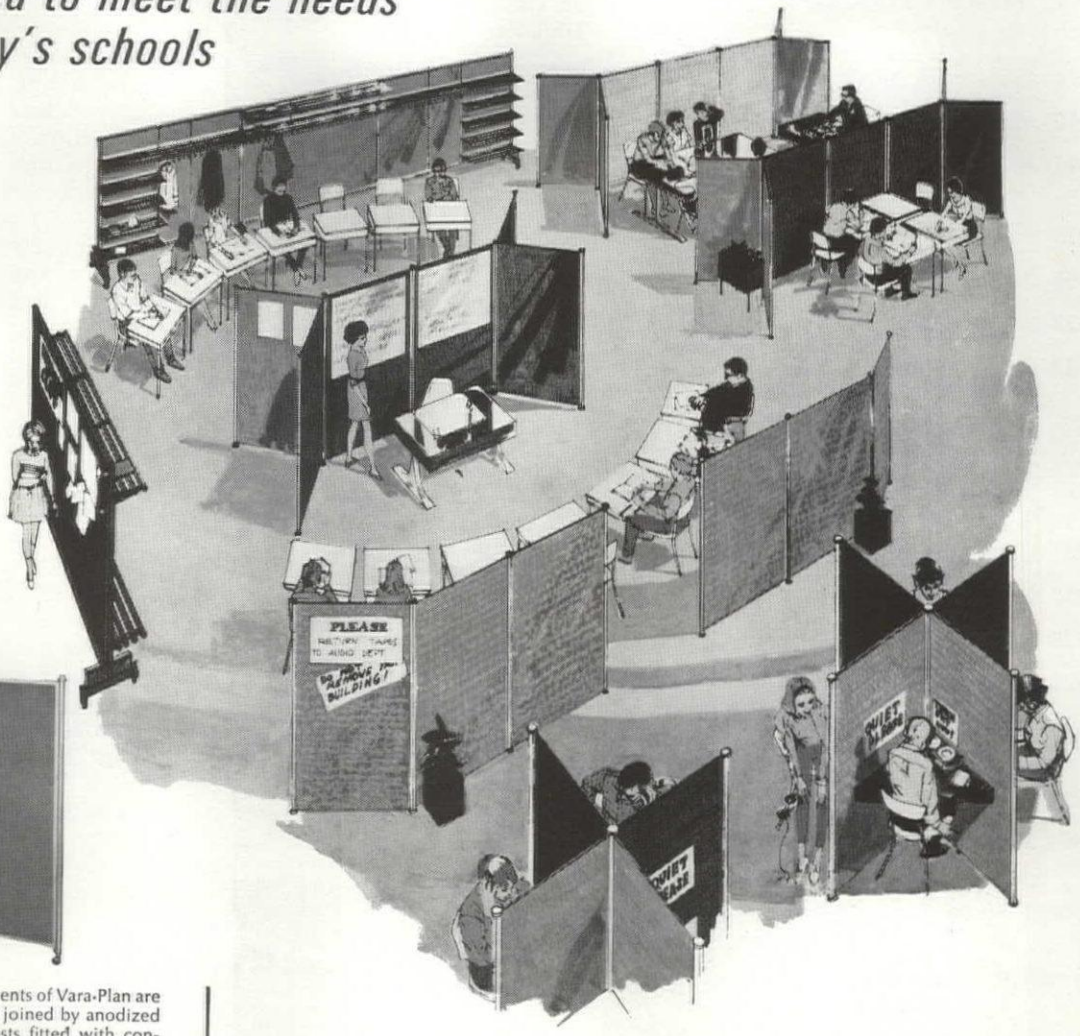

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Letters *from page 132*

we shall be deeply fulfilled in our efforts.

It is, of course, easy to respond so to a flippant and sarcastic letter. But we should be more serious. The difficulty of answering this letter is exactly that it doesn't specify anything but the writer's outrage. We have many examples of this in recent years. If Mr. Darrough will take the trouble to list his objections in a letter to the AIA JOURNAL or directly to me, I will be glad to respond to them one by one.

I am seriously interested in hearing such comments on our new program; that was, after all, why we prepared the article on our curriculum.

JOHN W. WADE, AIA
Dean, School of Architecture
University of
Wisconsin-Milwaukee
Milwaukee, Wis.

Corrections

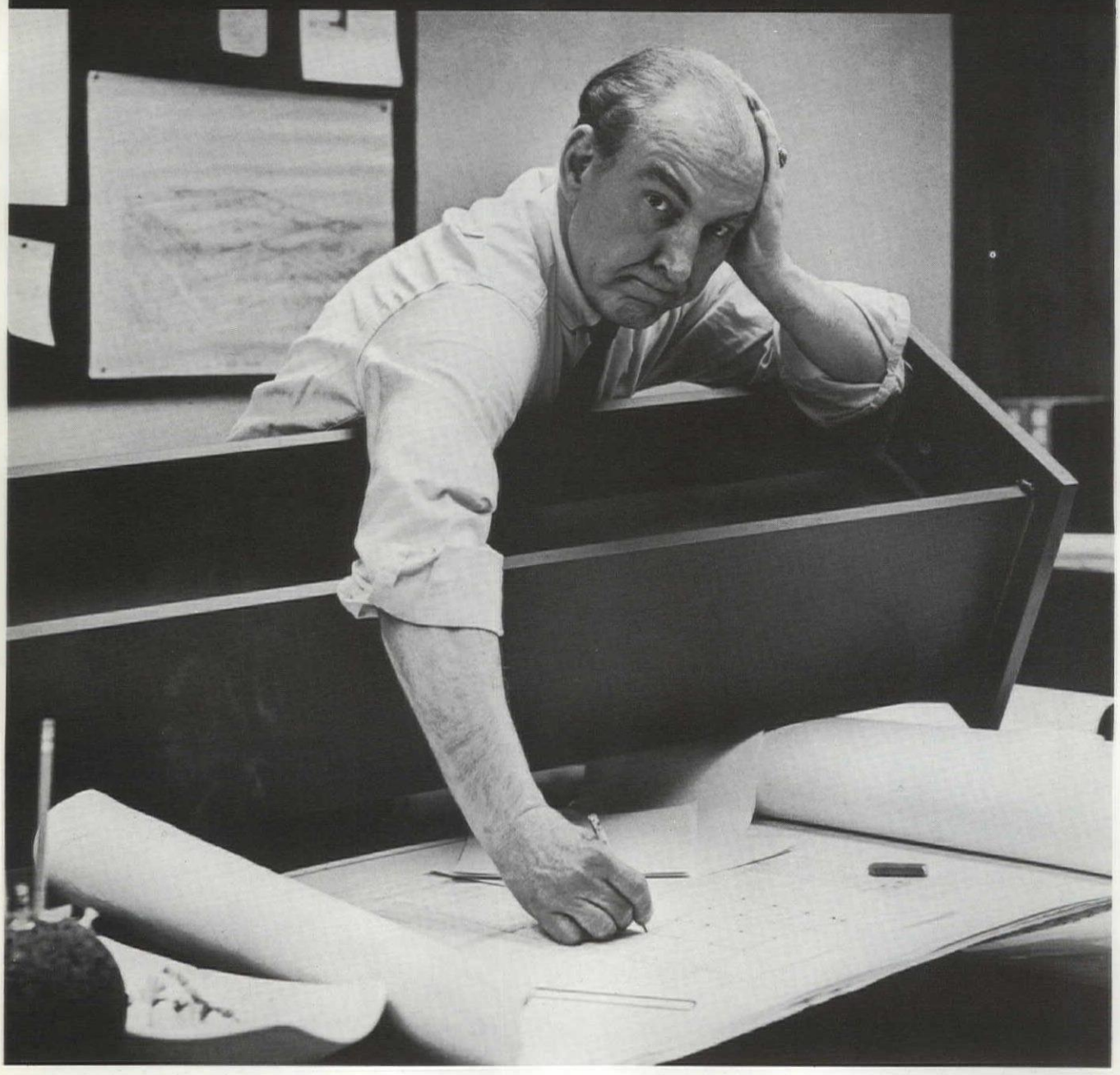
Six of the 27 resolutions acted upon at the AIA's Chicago convention were not adopted, as reported in last month's AIA JOURNAL, but were referred to the Institute's Board of Directors. The resolutions, by number and brief descriptions of what they would have the Institute do:

No. 1, sponsor a national symposium on architectural education; No. 2, issue a statement against component involvement in political campaigns; No. 3, authorize a study of functions and relationships as between the national AIA and its components; No. 14, develop computer software programs on a national basis and establish regional service bureaus; No. 17, aid and encourage community design centers; No. 18, offer bylaw changes to the next convention that would permit the New York Chapter to become an AIA region.

In the Workshops section of the Chicago convention coverage in September, the names of two moderators inadvertently were omitted: Robert J. Piper, AIA, for "Component Systems" and James Searle, FRAIC, for "Professional Interaction." □

The AIA JOURNAL encourages expressions of opinions from its readers but reserves the right to edit for length and style. Address letters to the Editor at the Octagon.

something in the way?



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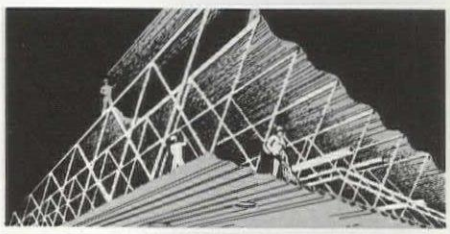

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