

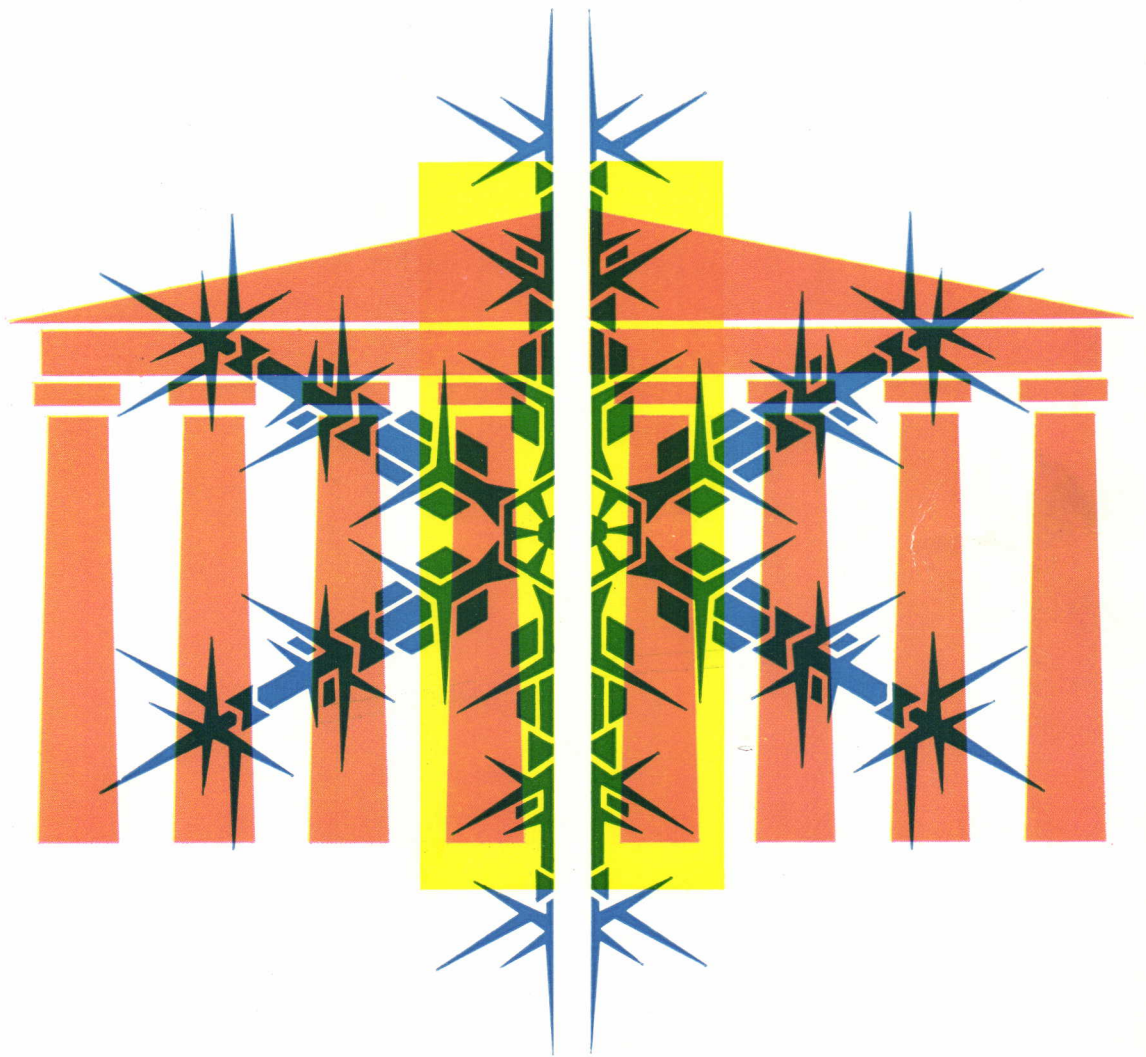


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July 1961

Journal

OF THE AMERICAN INSTITUTE OF ARCHITECTS



Symmetry in Nature and Architecture • The Boscobel Restoration • Day Case Decision
Toward Better Design • Construction and the Government • Correctional Architecture

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Journal

VOLUME XXXVI, NO. 1

JULY 1961

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THE COVER

Classical symmetry in nature and architecture (see story on page 37) is executed for us by Graham Associates, Inc, from a design by Wolf Von Eckardt, Art Director for the *Journal*.

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How Armstrong Acoustical Fire Guard is saving this Indianapolis school \$34,000 and eight weeks' construction time

THE NEW Perry East Junior High School was especially designed to be a "laboratory of learning" by Indianapolis architects Fleck, Quebe, and Reid Associates, Inc., in association with Mr. Paul W. Seagars, education consultant. It will have facilities for such advanced techniques as language labs, closed circuit television, and block-time teaching. Yet with these many advantages, this school will cost only \$14.07 a square foot. One factor making this low figure possible is the specification of Armstrong Acoustical Fire Guard ceilings.

Acoustical Fire Guard 24 x 48-inch *lay-in units* are being installed in all classrooms, including the Art Room featured in this rendering. Fire Guard 12 x 12-inch *tile* is being used in the corridors. Including both tile and lay-in units, there will be 121,000 square feet of Armstrong Acoustical Fire Guard ceilings. The savings in money: \$34,000. The savings in time: eight full weeks. Here's why:

Intermediate fire protection no longer necessary

Both acoustical and fire-retardant qualities are built right into Fire Guard. This eliminates the need for installing intermediate fire protection above the suspended acoustical ceiling. Based on the cost of installing conventional "intermediate" fire protection, the architect estimates that Acoustical Fire Guard will save this school approximately \$34,000. And the floor-ceiling assemblies using Acoustical Fire Guard easily met Indiana's two-hour assembly and three-hour beam protection fire code requirements.

Fire Guard saves 8 weeks' construction time

With Acoustical Fire Guard, installation is a completely *dry* operation. Carpenters, painters, and other building trades are not delayed while wet work dries. They work right along with the acoustical contractor. Project designer, Mr. C. C. Shropshire, of Fleck, Quebe, and Reid Associates, Inc.,

estimates Fire Guard will cut this school's construction time 8 weeks.

Exposed grid suspension system

Because of a unique exposed grid system, the lay-in ceiling can be installed quickly and economically. Frequently, it costs considerably less than a combination of conventional fire protection and an acoustical ceiling. And, equally important, the lay-in ceiling allows accessibility to the plenum chamber.

Distinctive designs

To beautify, while they protect, Acoustical Fire Guard tile and lay-in units are available in both the Classic and Fissured designs. Tile also offers a Full Random design. General Contractor for this school is the F. A. Wilhelm Co., Inc., and the Acoustical Contractor is Commercial Floor Covering and Acoustics, Inc., both of Indianapolis.

For full details about Acoustical Fire Guard, call your Armstrong Acoustical Contractor (he's in the Yellow Pages under "Acoustical Ceilings") or your nearest Armstrong District Office. Or write to Armstrong Cork Company, 4207 Sage St., Lancaster, Pennsylvania.

Here are 9 Acoustical Fire Guard UL ratings most frequently used to meet fire code requirements

FIRE GUARD LAY-IN		FIRE GUARD TILE	
Floor & Ceiling Design	Rating	Floor & Ceiling Design	Rating
#30	2-hr. (Beam— 3-hr.)	#31	4-hr.
#13	2-hr. (Beam— 3-hr.)	#21	4-hr.
#21	2-hr.	#8	2-hr.
#8	1½-hr.	#7	1½-hr.
		#9	1-hr.

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Letters

Letter to the Executive Director

Dear Mr Scheick:

When I read, as I always do, the current *AIA Journal*, I was astounded at the letter from the lady in Philadelphia. Your answer was very thorough and should dispel any doubt in her mind as to what the Institute is and does for its members, but I would like to express some thoughts, also as the wife of a member for many, many years.

My first thought was that she expressed a philosophy that is, unfortunately, all too prevalent today. That is a materialistic philosophy that believes there must be a return of a dollar's worth of tangible, measurable and personal benefit for every dollar paid in dues to organizations such as The American Institute of Architects.

If her husband were an active member of the Institute during his "many, many years" of membership, he should be able to answer her questions, and if she were as interested in the activities, problems and programs of the Institute as many wives are, she would not have needed to ask the questions.

Surely no one who has even the most superficial knowledge of the Institute's service to members in the fields of professional affairs, public information, architectural practice, contract documents, education and research, technical information, pending legislation, etc. reported in the *Journal*, the *Memo* and many available documents, could doubt that the dues are well accounted for right there.

Intangible benefits are far too many and varied to list. The association and fellowship with colleagues and serving with them in a common cause broadens the individual and his horizons, benefiting him while enabling him to be of more service. In the aggregate the laws of mathematics are defied and the whole is found to be even greater than the sum of its parts.

Service by dedicated members of any group is the basis and center of the progress and prestige of the group and while some of the benefits may be intangible they are nevertheless very real and rewarding. We know! My husband has been serving actively at all levels (local, state and national) since he joined the Institute. He joined the year he completed his academic work and has been a member continuously for 36 years. Not only has he never questioned or wondered where the dues money goes, he has been very keenly aware of the rewards of membership in

and service to the Institute and the profession.

And I, as his wife, feel that the rewards of this membership and service are just as real to me.

When the lady asks for help for architects in need she mistakes the purpose and objectives of the Institute and she was obviously ignorant of the scholarship endowment funds. In addition to these, many Chapters, State Associations, individuals and firms have established scholarship and fellowship funds. These component organizations of the Institute also have architectural competitions with money awards as well as medals and certificates of award. I feel sure a Chapter as active and dynamic as the Philadelphia Chapter, AIA (the second oldest of the Institute's 136 Chapters and with a long history of loyal service to the community, the profession and the Institute), must have similar programs and activities.

Over the years, I have met many wives of AIA members at meetings and Conventions and not once have I heard expressed by them the thinking reflected by the lady from Philadelphia.

It is my belief that if she becomes more keenly interested in the activities and programs of the Institute and her husband's Chapter, and his participation in them, she will become increasingly aware of the many rewards and satisfactions accruing not only to the AIA member but also to his wife and their community.

I want to wish you many happy and successful years as Executive Director of the Institute and I am looking forward to the pleasure of meeting you and Mrs Scheick at the Institute Convention in Philadelphia.

HARRIET S. GAMBARO
New York, NY

About Pedestrians

EDITOR, *Journal of the AIA*:

Your article, "The Role of Design in City Planning" in your May issue correctly points out the need for municipal planning to incorporate architectural forms.

However, both have long neglected the pedestrian although the author points out needs of the pedestrian. City planning and architectural development have both neglected the needs of the pedestrian because each is thinking of development on a specialized level.

One must admit however, no other group has done as much for the pedestrian as architects as far as setbacks, promenades and ornamentation and other features of street beauty conducive to pedestrian well-being.

MURRAY SPACK
Pedestrian League of America



WOOD POST

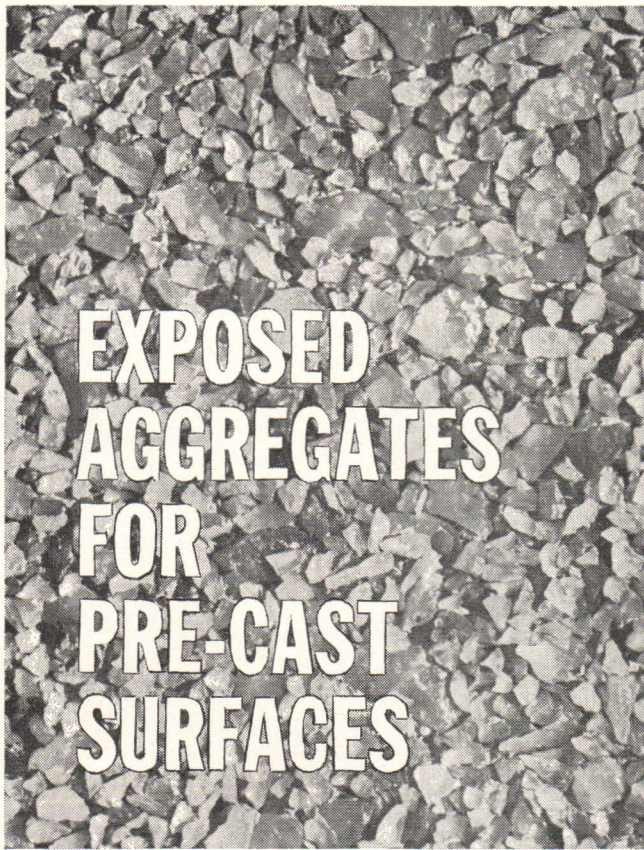
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Architect: Welton Becket and Associates, Los Angeles, Cal.
Mfg. by: Wailes Pre-Cast Concrete Corp., Sun Valley, Cal.

Wayne State University, College of Education, Detroit, Mich.
Architect: Minoru Yamasaki & Associates, Birmingham, Mich.
Mfg. by: Aggregate Surfaces, Inc., Dearborn, Mich.

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Wheel Chairs

EDITOR, *Journal of the AIA*:

Mr Charles A. Dilley's comments (Letters April, 1961) regarding access to public buildings by persons in wheel chairs poses a very prevalent problem for persons so handicapped. However, some action has been and is being taken to eliminate physical barriers in public buildings.

In 1957 the state of Pennsylvania required that all public buildings with an excess of 30,000 feet have a grade level entrance or ramps with handrails. Other states are taking similar action in revising their building codes.

Accessibility of public buildings and their functional design for use by the physically handicapped is the subject of a study being conducted by the American Standards Association, known as Project A-117. Representation on this project includes The American Institute of Architects and approximately fifty professions, trades, associations, societies, and Government agencies. The study not only involves the consideration of access to public buildings but circulation of persons within the structures, including corridors, width of doors, hardware, elevator details, toilet layouts and details, light switches, public telephones, etc. This is a fairly comprehensive study of the total building in relation to the physically handicapped person including those using crutches as well as persons in wheel chairs and others with disabilities not requiring mechanical devices for mobility.

It is expected that the report of this committee will be completed this year. Although this committee of the American Standards Association is an advisory one it is hoped that many states will eventually adopt many of its recommendations in their building codes.

F. CUTHBERT SALMON, AIA
Oklahoma State University

New Houses

EDITOR, *Journal of the AIA*:

I wonder, looking at the plans of country "homes" and city apartments, even in the highest price bracket, as advertised in the Sunday papers, just what kind of persons make the layouts. Surely, nobody used to the "gracious living" emphasized in decorators' magazines, or, one might suppose, with any architectural training at all!

It is, of course, quite possible to live graciously even in one room, if it has to be done, but the

(Continued on page 12)



Fannin Street looking north from Gray Street

HOUSTON DISCOVERS that traffic congestion either ends at curbside or extends into building lobbies—depending upon the kind of elevating used. Why? Because there is more to completely automatic elevating than simply leaving the operator out of the car! Any elevator installation that fails to provide complete automation for all of the constantly changing, widely varying traffic patterns that occur throughout the day and night—invites curtailed service, long waits and traffic congestion. This applies in a like degree to the greatest skyscraper and the smallest commercial or institutional building. How do tenants and visitors react? After all, they are people. They react in a like manner to elevator service. And a building's reputation soon reflects their reactions. The mark of a CLASS "A" building—large or small—is completely automatic AUTOTRONIC® elevating. It accurately predicts and delivers a magnificent performance. Since 1950, more than 1,100 new and modernized buildings across the United States and Canada have contracted for AUTOTRONIC elevating by OTIS—the world's finest!



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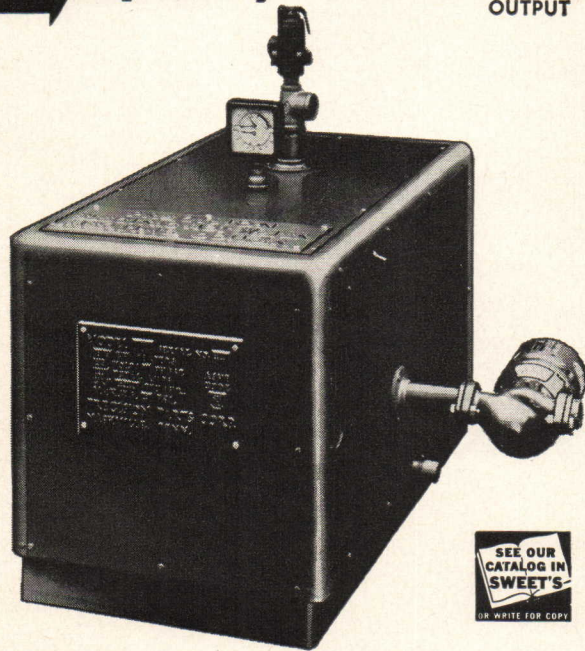
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Letters *(Continued)*

planners of these things seem to go out of their way to subdivide a given area as inconveniently as possible, even with plenty of space to spare; and if there's more than they know what to do with, provide an inside dressing-room or something like that. But they do not provide rooms of gracious shape and in the larger apartments one finds only a series of cells with windows at the narrow end; they show maybe an excess of baths (inside) but for the living-rooms nary a vista in spite of the current fad for "flowing space"—though there's nothing modern about that, antedating Frank Lloyd Wright by some fifty years. A customer who can pay a hundred thousand dollars "and up" for living quarters can surely expect a proper arrangement of the space he buys.

The fact is, however, that the average young designer, by which I mean anyone who grew up in the Great Depression or War II, probably has had no experience of gracious living or gracious planning and at school his teachers, possibly in the same plight, in any case are not apt to stoop from the amazing possibilities of new structural techniques or sociological theories to showing their pupils how to plan for decent living. While there are many fine architects who now specialize in domestic work, their influence does not show in the commercial developments.

Too bad! Often the most minor changes in a plan would set it right—but the house or flat is already built and it is too late.

EDWARD STEESE, AIA
Scarsdale, N. Y.

The March Issue

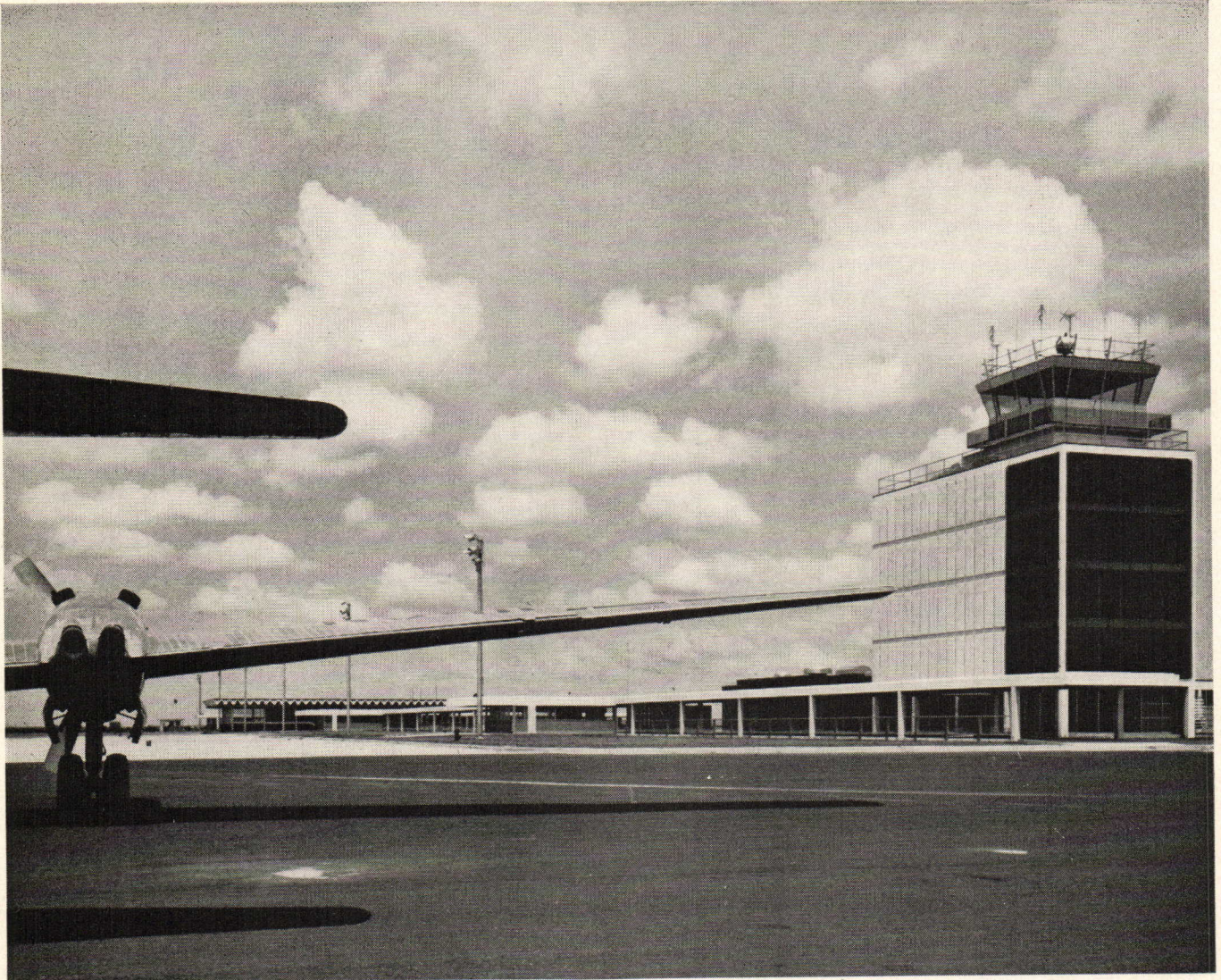
EDITOR, *Journal of the AIA*:

For the March, 1961 issue on Urban Design I would award you a cluster to your fellowship. It is one of the most—if not—the significant issue of the *Journal*.

In my capacity as Architect for the State of Wisconsin, the problems of the community are more than just a passing interest. Milwaukee, Madison, Superior—to cite a few—concern me, as they do the future of the State and the city.

To that end I would like to pass around a few copies to properly placed people. Would you, then, send me four extra copies.

KAREL YASKO
Madison, Wis.



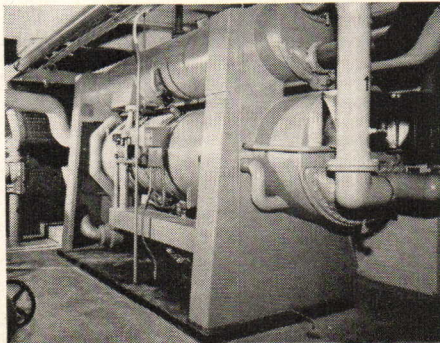
Mechanical Contractor: Texas General Air Conditioning Company; Consulting Engineers: Regan and McCaughan; Mechanical Engineer: A. S. Vener, Bill Miller and Associates; Architect: Donnelly & Whittet; General Contractor: Braselton Construction Company. All of Corpus Christi, Texas

CORPUS CHRISTI INTERNATIONAL AIRPORT Sets a new standard in comfort with GAS and CARRIER absorption refrigeration

There's a 600-foot run from the Operations Tower to the Terminal buildings at the new Corpus Christi Airport. In view of this extensive layout, a medium temperature hot water system was considered most practical for heating and cooling all buildings.

The Airport owners chose *gas* and Carrier absorption refrigeration for this system, to insure optimum temperature control, dependability, and economy. A gas-fired boiler supplies hot water for heat in winter, and in summer, the same boiler delivers hot water to energize

This Carrier absorption unit at Corpus Christi International Airport delivers 42 F. chilled water for cooling when supplied with 267 GPM hot water, at 280 F., from a gas-fired boiler. System is first of its kind in Corpus Christi area.



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Seminar in September

Four basic areas of study will be covered during an engineering seminar on Structural Aspects of Architectural Engineering, to be held at Pennsylvania State University September 10 to 15.

The areas are analysis and design of structural systems, fire protection aspects of structural systems, modular coordination and new developments.

Included will be a review and development of basic concepts of ultimate strength design for concrete and plastic design for steel, design of elements and structural systems based on ultimate load theory; review of latest developments relating to the influence of fire protection on the design of structural systems; review of latest developments relating to the influence of modular coordination on the design of structural systems; and review of new developments relating to structural aspects of architectural engineering, including structural plastics, laminates, new materials, and atomic shelter.

Enrollees should have the equivalent of a bachelor's degree in architectural or structural engineering to obtain the maximum benefit.

Seminar co-chairmen are Gifford H. Albright, associate professor of architectural engineering, and Melvin W. Isenberg, associate professor of architectural engineering.

Further details may be obtained from Architectural Engineering, 133 Hammond Building, Pennsylvania State University, University Park, Pa.

Smithsonian Institution Traveling Exhibitions

Six exhibits on architecture are now available through the traveling exhibition service of the Smithsonian Institution in Washington, DC. For rental fees ranging from \$100 to \$250, the exhibition is shipped to the rentor for three weeks.

Titles of the exhibits on architecture include "Architectural Photography," (first shown in March at the Octagon); "Brasilia—A New Capital"; "One Hundred Years of Colorado Architecture"; "Irish Architecture of the Georgian Period"; "Swedish Architecture," sponsored by the AIA; and "Swiss Industrial Architecture."

Along with the exhibits on architecture, the rental service also lists more than six other exhibit categories ranging from painting and sculpture to science. Requests and inquiries regarding exhibitions should be addressed to: Mrs John A. Pope, Chief, Traveling Exhibition Service, Smithsonian Institution, Washington 25, DC.

"Inland Architect" on Microfilm

Pennsylvania State University has microfilmed fifty-two volumes of the *Inland Architect*. Prints of the microfilm negative can be obtained for \$70 by writing to Professor Winston Weisman, Department of Art, 116 Sackett Building, Penn State University, University Park, Pennsylvania.

Biographical Dictionary of Architects

The biographies of nearly 2,000 architects who have practiced in the United States during the past 200 years are conveniently wrapped up in this 700-page book by Henry F. Withey, FAIA. Published in 1955, and covering only the lives of deceased architects, the book could be a handy reference guide for those engaged in American architectural research. Only one hundred copies of the book remain unsold. Information on price, etc can be obtained from Henry F. Withey, 14906 Ventura Boulevard, Sherman Oaks, California.

Names in the News

President Philip Will, Jr, at the 1961 Convocation of the College of Fellows of the Royal Architectural Institute of Canada, was invested as an Honorary Fellow of the College. . . . Arthur F. Schwarz, St Louis, has been presented with a certificate of appreciation by the St Louis City Plan Commission for his work as former Chairman of the organization. . . . Chandler C. Cohagen has been elected a Fellow of the International Institute of Arts and Letters. Membership in the organization is limited to approximately 1,760 members, with only 350 of them living in the US.

Architectural Index

The 1960 edition of the *Architectural Index* is now available, indexing all the 1960 issues of seven magazines related to architecture: *Architectural Forum*, *Architectural Record*, *Arts and Architecture*, *House and Home*, *Interiors*, *Journal of The American Institute of Architects* and *Progressive Architecture*.

Editorial material from these magazines appears under each of three headings: Type of project, location and architect or designer's name; articles on general technology are listed by subject matter. Therefore, the *Index* is a guide to published information about a specific building or building type, materials and methods of construction, the architecture of one region or the designs of one man or firm. It gives quick reference to one article, or to a series of related articles.

The "Architectural Index" is compiled and published by Ervin J. Bell, Architect, 517 Bridgeway, Sausalito, California. 1960 is the eleventh year of publication; back issues are available for all ten previous years, starting with 1950. Cost per issue is \$5.00.



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Journal

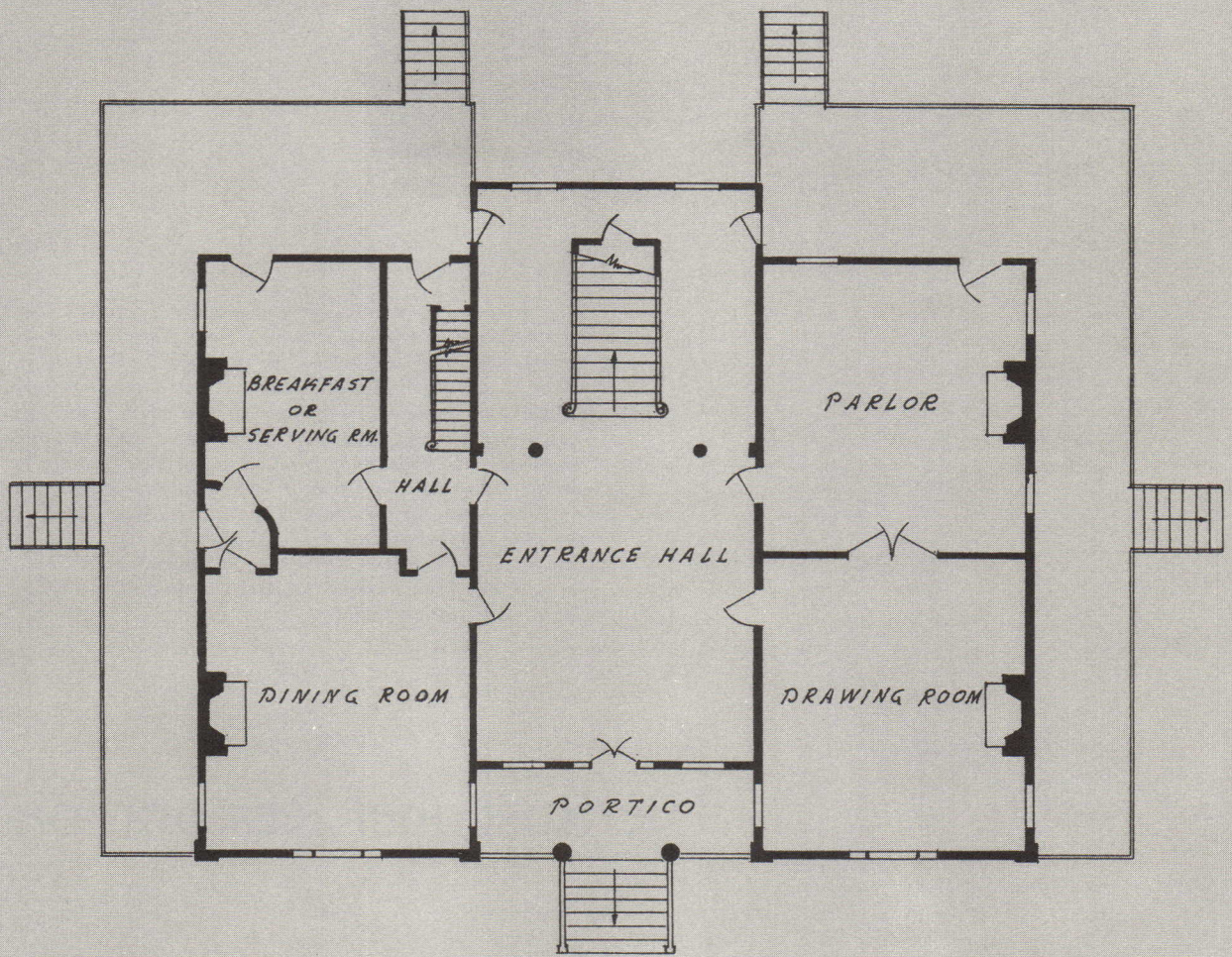
The destruction of fine old architecture continues, but every once in a while a ringing victory for preservation occurs—inevitably through the dedicated efforts of a small group of saints rather than by any official action. Officialdom, in fact, is often the demon of the story, as in the story of Boscobel. Few houses have been actually dismembered, their parts sold, and then re-assembled, as has Boscobel. This unique and exquisite design has no counterpart in America. The Journal is grateful to the author for bringing it to its attention. Mr Mathieu was formerly Preservation Officer of the Brooklyn Chapter AIA and a member of the AIA Committee on Preservation of Historic Buildings

The Boscobel Restoration

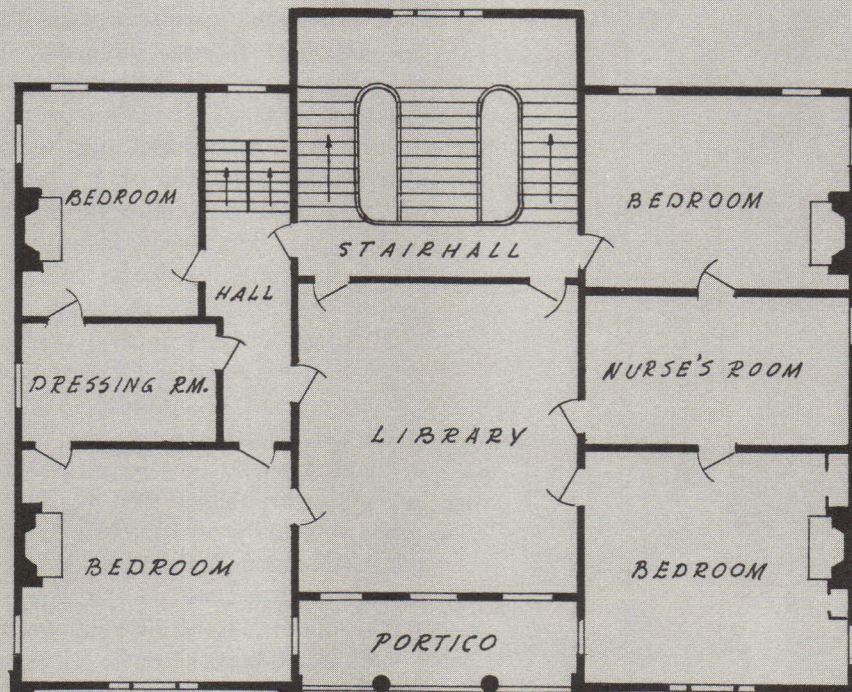
by **Joseph Mathieu, AIA**

► Boscobel is an early nineteenth century house of wood frame construction on a stone and brick foundation. It was originally located on the Cruger estate of 251 acres, at a spot called Cruger's Point, a beautiful location on the east shore of the Hudson River in Westchester County, about thirty-five miles north of New York City. It faced directly south affording an unobstructed and commanding view down the river.

It was built by Staats Morris Dyckman, the fifth son of Jacob Dyckman, the first of the Dyckmans to come to this country from Holland. He was named after General Staats Morris and later became his protégé. For many years he was private secretary to Sir William Erskine, in which capacity he accompanied the latter to Europe. Sir William died in 1795, leaving a large and valuable property to his secretary. Soon after he returned to his native country, purchased the estate and erected the present mansion, calling it Boscobel. The name Boscobel was taken from that of an historic estate in Staffordshire, England. Having spent so many years of his life in England, the contacts he made there largely influenced his tastes. Hence, in Boscobel, there is



FIRST FLOOR PLAN



SECOND FLOOR PLAN



Main facade

much evidence of the Adam period in architecture, then at the height of its vogue in England.

Boscobel was started in 1804. In 1806 Dyckman died before the completion of the house. It is recorded that the final bills were paid by his widow in 1807, but various details of the house were left unfinished, such as the roofs of the side porches which were never executed and the absence of ornamentation on the north side of the building, would seem to imply that the "builder's plans were not fulfilled."

There is no mention of an architect or a possible assistant or designer of any kind, so credit for the design of the house is generally given to Staats Dyckman. However, it is inconceivable that anyone, other than an experienced and talented architect, could possibly have designed this architectural masterpiece, with its many unusual features. For example, its main facade of clas-

sical design with its central recessed porticos, the lower one for the main entrance and the upper one approached through the three high windows of the beautiful library, all seem to have emanated from some especially resourceful individual with imaginative ideas. As for the much-discussed carved wood swags between the columns of the front portico, they too show a truly original touch.

The high and spacious windows present another interesting feature, doubtless having been so designed to afford a maximum measure of daylight for the various rooms as well as for the enchanting vistas in many directions, especially the dramatic sweep of the river.

As one enters the house, one is immediately struck by the expanse of the foyer and stair hall, reminiscent of the traditional English manor house stair hall. This hall is twenty-two feet



Details of porticos



Entrance hall and stairway



Drawing room mantel details

wide and forty-two feet long. The length is divided by a triple arch supported by columns across the hall. The wide stairway is approached through the central arch, ascending to an intermediate landing upon which is a finely designed and proportioned Palladian window. Two runs from the platform, against the side walls, to the second floor, complete the stairway.

The remainder of the first floor contains the usual two parlors to the right of the center hall and the dining room with service room to the left, with kitchen in the basement. The second floor contains the library, quite the largest and finest room in the house. It is centrally located with three very large and high windows affording a wonderful view to the south. There are four large bedrooms on this floor.

The house has four chimneys with fireplaces in every room with the exception of the central library on the second floor. There is an exquisite array of delicately carved wood mantels for the various fireplaces. They vary in design importance according to location, the one in the front parlor with its serpentine shelf, being outstanding in every particular.

The interior doorways are of special importance. Doors from the central hall to the various rooms are outstanding and differ in design. The same beautiful woodcarving appears on the hoods and casings of the doors. The doors to communicating rooms are also well treated with attractive carvings at the heads. Throughout this house there is a continuous evidence that no part of it was ever slighted. Every detail seems to have been of sufficient importance to have received the utmost care and attention of the designers and builders in the actual execution of the work.

So much for a general description of the original mansion. Dyckman's widow and children occupied it after his death. A granddaughter who inherited it married John Peach Cruger, and the house ultimately passed into the Cruger family. It was known and often referred to as the Dyckman-Cruger Mansion. No other family has occupied the house and so it remained without alterations, almost exactly as when built, until the Cruger heirs sold the property to the Westchester (N. Y.) Park Commission in the middle nineteen-twenties for a public park, at which time it was named "Cruger's Point."

From the time of public ownership to the present year, a period of approximately thirty-five years, there developed a most fantastic chain of events concerning this property, especially the mansion. In 1940 the Park Commission contemplated the demolition of the house. It was saved through rigorous protests by such organizations as the Westchester County Historical Society, the

Hudson River Conservation Society and numerous other groups and individuals. The effect these protests produced was but a deterrent until 1942, and the house would have been doomed had it not been for the formation of a group headed by Harvey Stevenson, FAIA, who leased the house from the Park Commission for a period of five years. We were then in the midst of World War II. After the war, the Park Commission sold the entire property to the Veterans Administration as a site for a new hospital.

Upon taking over, the Veterans Administration, referring to the house, said: "The historic value is realized, and it is anticipated that it will be reconditioned and utilized in some appropriate way." However, during a period of seven years, the VA took no steps to "utilize" the building in any manner. It was then declared "surplus property" and turned over to the General Services Administration for disposal.

Then followed a long series of events, legal and otherwise, with the result that this treasure of American architecture was sold to a house-wrecker for \$35. To quote from a short history of Boscobel: ". . . hardly to be matched for absurdity in the long annals of historic shrines—was that Boscobel was sold to a house-wrecker for \$35. Some Boscobel devotees insist that this sale represented a bargain second only to Peter Minuit's purchase of Manhattan Island for \$24."

Harvey Stevenson, who had saved Boscobel in 1942 and tried so ardently to do it again in 1954, reluctantly came to the conclusion that since there was no chance of saving Boscobel on its original site, he could at least save for posterity many of the architectural features, by incorporating them into a house which he had been commissioned to design for Mrs Henry P. Davison. The vision and generous understanding of Mrs Davison afforded the opportunity of recreating the major features of Boscobel on her estate on Long Island, instead of their being destroyed forever.

Many of the important features of the house were removed with the greatest care and transported to Long Island. However, when the present renaissance of Boscobel began to crystalize, a complete understanding and cooperation between the present ownership and Mrs Davison resulted in the return of all materials already in process of erection on Long Island to the present site.

Finally, the task of traversing the hard and difficult road in quest of a solution to save this building terminated on Monday morning May 16, 1955, when the group which so courageously had fought its way to victory, was in possession of Boscobel, having bought it from the house-wrecker for \$1000.



Mantel in drawing room



Main entrance doorway—interior view



Main facade

On May 26, 1955, Boscobel Restoration Inc, came into existence.

Since the building had to be moved, the next problem was to find a suitable site for the restoration of Boscobel. In this, good fortune prevailed. It so happened that there was on the market a parcel of rolling land of approximately sixteen acres, ideally suited, at Garrison-on-Hudson, on route 9-D, approximately ten miles north of Cruger's Point. It was being sold to settle an estate. All efforts were doubled in trying to raise funds to buy this property. The complete story of this episode is a lengthy one, filled with trials and disappointments. However, the money was raised, the obstacles removed and the property finally purchased. The officers decided upon a specific location for the house, placing it once again in the same relative position as its original site; in fact the new site affords a more impressive view which includes West Point, as well as a western vista looking toward Storm King and Crows Nest mountains, with the expanse of the river below.

An invaluable service was rendered by the Historic American Building Survey (HABS). It had in its files a complete set of drawings: plans, sections and details of each and every part of the building including an unlimited supply of full-size details, all carefully drawn. These drawings made possible an accurate and complete restoration.

It is conservatively estimated that at least sixty-five per cent of the existing building materials are original. This too is amazing when one considers the hazards attending the shifting of materials from one place to another. The brownstone on the exterior of the basement walls was taken from the original foundations, after the superstructure was removed to its present location.

Now will follow the great task of furnishings. It has been said: "When Boscobel is completed, its two main floors will be a museum of the decorative arts of the late eighteenth century, and will be furnished with the finest pieces of that period." Truly a worthy objective. As of the moment, some of Boscobel's original furniture, silver and china has been secured and it is hoped that in time more will be obtained.

The Wedgwood Company has been approached to duplicate the original order for the superb set of Wedgwood which Staats Morris Dyckman brought back from England in 1804. A number of family portraits will be loaned, others will be copied for permanent display. It is also quite interesting to know that from two different sources, clothing of an early period, made by ladies of the house, has been promised as gifts.

One of the objectives is to recreate the library as Staats Dyckman had it. He installed in Boscobel

one of the largest private collections of books then in this country. It will be "The Library of the Hudson River Valley," in which all manner of material pertaining to the River Valley, both past and present, will be available. Already an offer has been received of what is probably the largest collection of source books on the River Valley as a nucleus for this particular endeavor.

It is planned to landscape the property as was the practice in the year 1800, including a large formal garden at the rear of the house, for which a surrounding low brick wall has already been built. Landscaping as an adjunct to museum houses, is largely overlooked and since Boscobel is now on totally new ground, there is no reason why its surroundings should not be developed to the utmost. At least that is the intent.

All of the foregoing is by no means the complete story of Boscobel. To tell of the trials and vicissitudes brought about by legal entanglements and heart-breaking discouragements, etc, would require the writing of a very long chapter.

From the time the Westchester County Park Commission contemplated the demolition of this house, to the day it was recreated on its present site, those who worked so assiduously for its preservation must now feel a great sense of gratification, in that their dream has come true. When one reads the record, one marvels at the fortitude of those who persisted so valiantly in their efforts to effect this restoration. Credit for this extraordinary undertaking is due mainly to the efforts of the following Officers and Directors of Boscobel Restoration, Inc:

Carl Carmer, President and Director

Benjamin W. Frazier, Chairman of Building Committee

Mrs DeWitt Wallace, Vice President and Director

Lt. Col. M. Campbell Lorini, Vice President and Director

Mrs Charles Stearns, Vice President and Director

Harry G. Wilcox, Secretary-Treasurer and Director

In addition to the foregoing, the many devoted ones, particularly Harvey Stevenson, FAIA, who worked tirelessly through the years, must also be given a large measure of credit.

In conclusion, it is comforting to know that not only are the funds at hand with which to complete this great work, but still more gratifying is the realization that a substantial endowment fund has been established to assure the preservation and perpetuation of Boscobel. ◀

Ten Steps Toward Better Design

by William Lyman, AIA

Most Journal readers will remember Mr Lyman's stimulating article "Day of the Stunt" in the September 1959 issue. This one was re-written by the author from his article which appeared in the MSA Bulletin last year

► I recall a student who came to study under Walter Gropius twenty years ago. This man had been trained under the Beaux Arts and had practiced for a good number of years. He was now returning to academic life, at considerable inconvenience to himself, where he hoped, in a year's time, to master the art of modern architecture. He came looking for a "formula" but he failed to find it.

His biggest battle, so it seemed to him, was with symmetry; he couldn't stay out of its grasp regardless of the type of building he was designing. On one occasion we were designing a city hall for one of Boston's suburbs. As usual our Beaux Arts classmate had ended up with a symmetrical parti (no reason why not) although he had started the problem with every intention of doing otherwise. But here he was, back in the old mold, and in a moment of forgetfulness or possibly resignation, he had sketched a cartouche above each of his two side entrances. Gropius eventually got around to his desk and exclaimed, "I see you have laid another egg!"

All of us will probably admit to an "egg" or two; except for the late Frank Lloyd Wright I have never met an architect who considered himself to be perfect. Unfortunately we are laying a large number of "eggs" to which no one will admit. It would be overly generous to state that for every good building designed by an architect there is a poor one. This is not too surprising at a time when the nation as a whole is lacking a common social purpose; there has been hopeless confusion regarding our goals ever since the end of World War II. But this is no excuse for turning out poor buildings; it is all the more reason why architects should strive to do a better job.

If one general recommendation could be made, it would be to do a lot more thinking before doing any drawing; we are usually too anxious to get on with the job. Specifically, there are at least ten areas where we could improve our architectural performance.

1 We must give more attention to local climate in evolving the basic conception of our buildings. Climate is a timeless factor in architecture which is not changed by advances in building technology. We must recognize this factor as being ever-present, a major determinant in the evolution of an indigenous architecture.

2 We must find ways of making our buildings belong to a given site. We must look harder to our sites for clues to the basic spatial organization of our buildings, particularly where sites are small and there are adjacent structures to be taken into consideration. When necessary we must be willing to sacrifice individualism to gain harmony of the whole.

3 We must think more about the space surrounding our buildings. We need to design them from a greater distance, to think more about how people will react as they approach them. We must remember that the great buildings of the past were notable as much for their treatment in space as for the buildings themselves.

4 We must concentrate on over-all ideas rather than isolated parts in the early development of our buildings. This requires that we maintain a broad perspective and that we understand the meaning of the term "organic architecture." We must learn more about people's reactions to different types of space.

5 In its final development we must direct our minute attention to all the details of a building. We must seek greater quality and consistency of the whole; in both design and execution we must strive for perfection. This requires that we recognize the limitations of field labor, particularly in the architectural trades.

6 We must do a better job of functional planning. This requires that we develop our programs in greater detail and think beyond the stated limits of the problem. We must remember that most people judge a building on its usability.

7 We must experiment with structure not as an

end in itself but in response to a particular architectural need. We should avoid abstract speculation, striving rather for a direct solution to the problem. We must abandon the notion that structure must always be expressed. This is a design consideration that will vary from problem to problem.

8 We must do a better job of selecting materials. This requires thinking more about people and their need for a tie with nature; new materials have tended to sever this tie. We must keep in mind the two extremes: using one material in many different ways and using everything in the book.

9 We must seek to simplify the construction process through better integration of building elements. We must do more than give lip service to the word "integration." The responsibility in

this area rests more with the architect than with the engineer or the manufacturer of building materials but the challenge is there for all three.

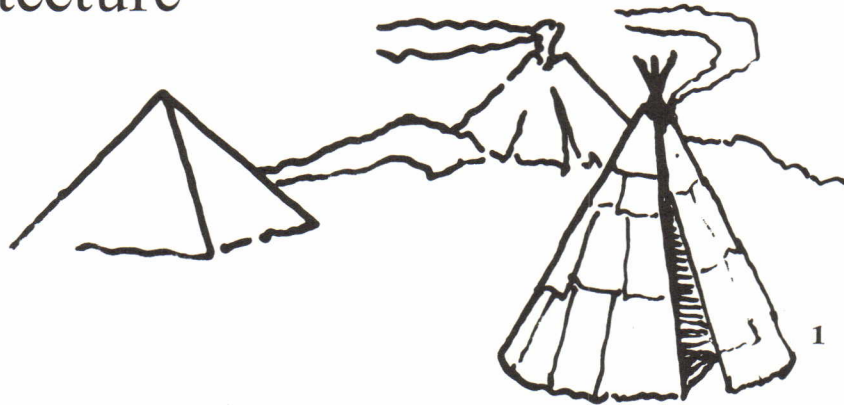
10 Lastly, we must think more about architectural expression, the ultimate goal in architecture. We need to define our problem before we rush into it. What feeling are we trying to create? Our buildings suffer from a sameness and monotony that little bespeak their variety of purpose; they mirror the shallow conformity that characterizes our society.

These ten points do not constitute a "formula." There is no easy shortcut in architecture. All we can do is work to the best of our capabilities, ever questioning our own thinking, humble in the realization that we may yet reach the threshold of a great age in architecture. ◀

Tree fungus—"When nature advances, there is hesitation and experimentation . . ."



Classical Symmetry in Nature and Architecture



by William Roger Greeley, FAIA

► Architecture down through the ages (ie. classical architecture) has displayed varying characteristics, such as heaviness or lightness; simplicity or complexity; durability or perishability. From beginning to end, however, it has been characterized by its prevailing symmetry.

The pyramids, the temples of Greece and Rome, the Colosseum, the baths, the Gothic fanes, the palaces and legislative halls, and even the Indian tepees, Eskimo igloos and Cape Cod cottages, have revealed man's perennial devotion to symmetrical forms.

Today, during our period of revolt against established standards in the arts, symmetry is challenged as never before, and must yield place to some more valid principle or pattern unless it can be strongly defended against all asymmetrical innovations and vagaries.

What can be said in its favor? Is it an idle conceit of man or is there something deeply and profoundly and elementally insistent in its appeal?

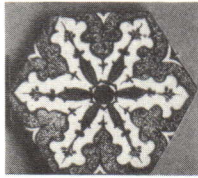
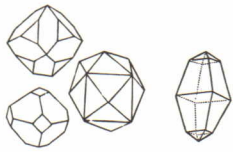
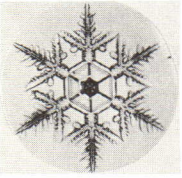
The structures built all around us by nature have conditioned our tastes and formed the foundation for our instincts and our thoughts. Even in the inanimate world of dead matter, symmetry is obviously present. The crystal, for instance, is often symmetrical and the snowflake, in all its millions of patterns, exhibits profusely the tendency to symmetry.

When nature advances from the inanimate to the animate, there is much hesitation and experimentation in the earlier structures, but soon, with

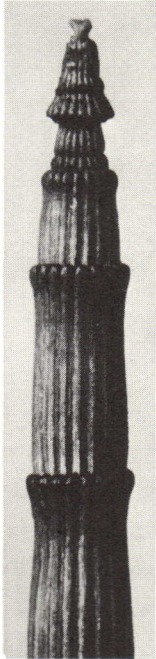
The distinguished Boston architect reminds us, through a number of striking examples, of nature's almost universal predilection for symmetry and her "endless repetition of good units of form." From this he draws an excellent lesson for architects who seem to be deliberately trying to avoid symmetry and abhor to repeat a form

the gradual evolution of form as in the vegetable kingdom, for instance, equilibrium is established and we find the mushroom, the tree and the blossom growing into balanced patterns. Nature does not stop with the adaptation of form to function, until she has also brought the form itself to perfection. Nature is dogmatic in this field. The tree should bear all or most of its leaves toward the sun, therefore on the southerly side. Instead of this, nature requires it to extend its branches equally to all points of the compass and become a conical or otherwise balanced structure. The spruce and the elm and the thousand other species all feel the impelling urge to symmetry. Where there are no branches, but the plant consists of a single stem, the same balance inheres in the form. To compare the scouring rush shown here with the stone tower in Delhi, is to appreciate some of the harmonies that underly the art of nature and that have influenced that of the architect.

Not only the branch systems of trees and the structure of stems follow balanced patterns, but the individual branchlets present dramatic examples of this same trait. The stem arrangement of the common comfrey, for instance, is striking



Ukichiro Nakaya 2

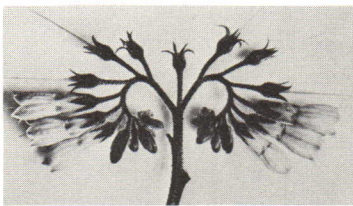


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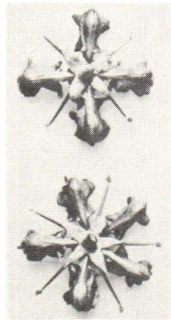


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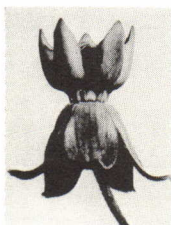
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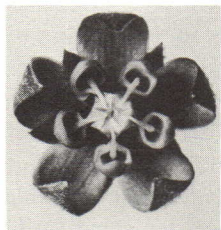
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almost to the extent of being incredible. By what correlation of growth controls is it possible to achieve such balance, not only in form but in the rhythm of bud, bloom, and fruit? This and similar plant precedents have found their place in architecture in wrought ironwork and fixture design.

No less astonishing are the controlled patterns of the blossoms of plants. Figure 6 shows the flower of the rue. Figure 7 displays in three-dimensional clarity the common milkweed blossom, suggesting a mass fit to inspire a brilliant solution for a noble building. There is bewildering profusion of forms among flowers, and yet the blossom is almost universally balanced upon a central axis. Exceptions are negligible. Even the orchids yield to this demand. Every shape and form is exploited, but always with respect to an axis. Nature seems to have little interest in developing imbalance in her works of floral art.

When the flower fades and falls the fruit matures, commonly with two axes of symmetry, almost universally with at least one. Cross sections through the seed pods of plants uncover to the eye a great variety of balanced forms; circles, pentagons, hexagons, octagons, duodecagons, cartwheels, and many combinations of straight lines and curves displaying perfect geometrical regularity.

Ascending nature's ladder from the vegetable to the animal kingdom the observer is struck with the almost universal rule of symmetry. In the sea, where life first developed multiple forms, the shells that we pick up on the shore tell the story with their endless geometrical designs. Bivalves are usually alike in their two halves. The oyster is notable as an exception, and the countless spiral forms cannot be called symmetrical although there is a rhythmic formality in their lines.

Among crustaceans the crab carries the honors for one-sidedness, and this is so unusual that it has made him famous, but the horseshoe crab displays a composite design of perfect symmetry and so evens up the score.

When it comes to fish, the approved pattern employed by nature is symmetry about a vertical axis from head to tail. Even the flounder is born this way, but soon moves the nether eye around to join the upper one, much to his detriment as far as his presentability is concerned.

If we come ashore and inspect the creatures moving about on the land, it will tax our powers of observation to discover a living organism that lies outside the realm of symmetrical beings. Among animals the dolphin that disports himself in the sea, the bat that flutters through the circumambient air, the snake that wiggles, the toad and the flea that hop, the kangaroo that jumps, the mole that burrows, the caterpillar that crawls,

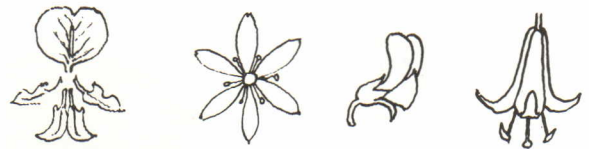
the mountain goat that leaps, the duck that waddles, the horse that trots, gallops, ambles and paces, and the eagle that soars—one and all are subject to this law of nature which decrees that one side shall be like the other!

And then there is man! What of his body? Its lines are smooth and graceful, and its form is the same on either side of its main axis. What a triumph of sophistry and misrepresentation! What a masterpiece of artistic insincerity! Here on the left is a heart with nothing to correspond on the right, yet wholly unrecognized in the design. Lower down is an enormous amorphous gland called the "liver" dishonestly concealed beneath a smooth and unaccented exterior! Any respect at all for honest expression of function would demand a swelling or protuberance to recognize the position and importance of this mighty organ. No, it is only too clear that nature is not satisfied to let function determine design, so she makes it subordinate to ideal form. Functional needs are met but may be concealed in the interests of rhythm and harmony.

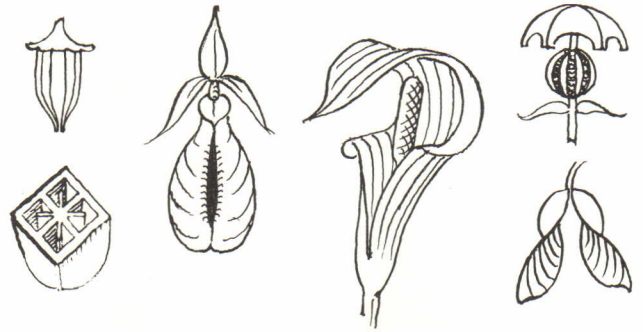
If we carry our thesis beyond the world of living things and focus our attention upon their architectural creations, we see the spider spinning a web which has the pattern of a wheel, a wasp whose nest is top-shaped, and countless birds with circular nests.

The last of the builders, man himself, has covered the habitable earth with his architecture, and has learned to devise every kind of building, using his playful instincts to try out a profusion of forms. Among these we find no great inclination to discard nature's own predilection for balanced compositions. We are able to call to mind at once the temples and pyramids of Egypt, the mosques and towers and temples of the East, the Parthenon and all its sisters, the Roman temples and baths, the Colosseum and the triumphal arches, the Gothic fanes (with their asymmetries, chiefly in their towers, so infrequent that they are notable), the palaces of the Bourbons and the Hapsburgs and of the Georges of England, the colonial churches and mansions, and even the cottages and barns of the common people. We can look north to the igloos, and at our own country where in pioneer days we were destroying the tepees and hogans of the Indians, and we can look south to the thatched huts of the Africans, and the tents of the nomads of the desert, and behold architecture in its characteristically symmetrical forms.

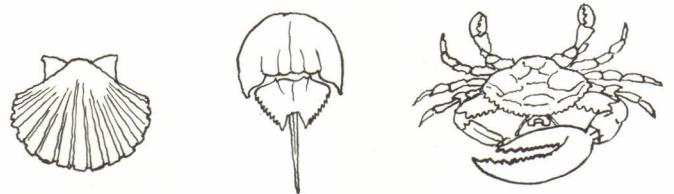
The symmetries of nature do not mock our efforts at originality. She herself has tried everything—every strange experiment, every weird and dramatic tour-de-force. Her motto seems to have been "try everything; hold fast that which is good."



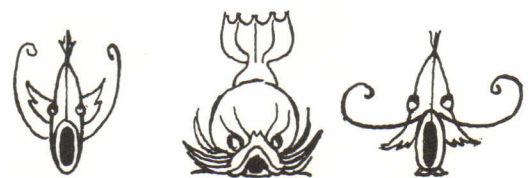
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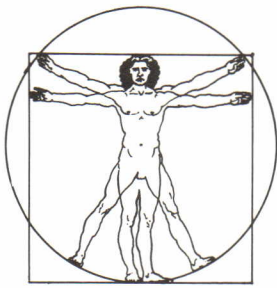
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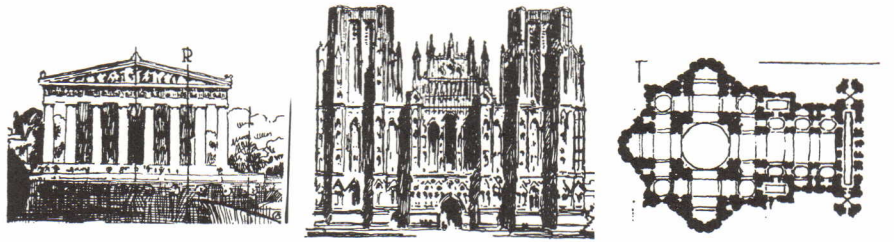
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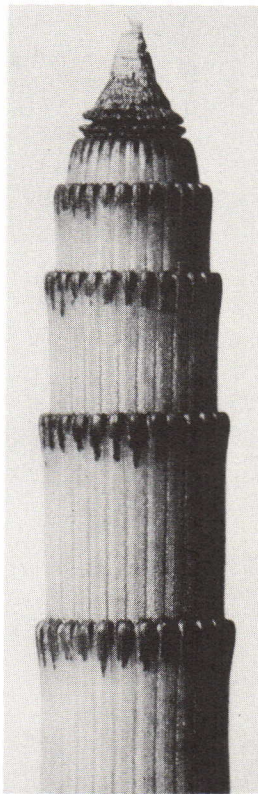


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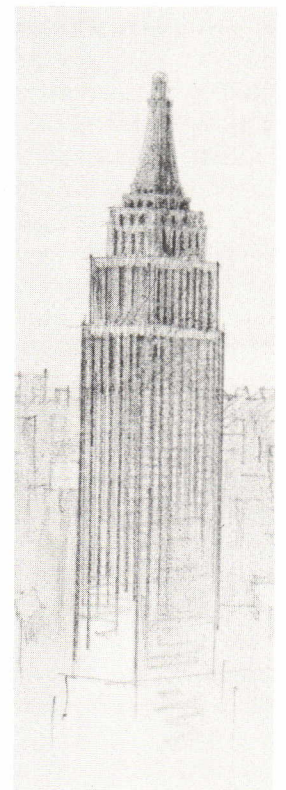
Figures 5, 6, 7, 15 from "Urformen Der Kunst"



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17

In this endless search of hers extending through untold ages she appears to have discarded unbalanced forms and preserved and proliferated the patterns that arrived at balanced perfection.

The architect today, as in the past, can and probably should study nature as the great master-experimenter of his world. He should try everything but in this process he need not throw away anything that is found to be good nor fear to multiply endlessly such forms as are simple and satisfying. A cemetery with a thousand identical headstones is more impressive than one with stones in every shape, color and size imaginable. Our cities tend to follow this jazzy pattern of our burying grounds, but the "all-star" performance

that results is restless and chaotic. Some ten thousand centuries ago, Mother Nature arrived at a design for man. The preliminary sketches at least were completed. In all the ages since then she has not felt the urge to depart from the original conception, nor do we ourselves criticize her design although it is repeated in countless billions of examples. Yet we ourselves in creating architectural forms, decry imitation and repetition as unworthy. We demand that each masterpiece shall be novel and unprecedented.

The endless repetition of a good unit of form is nature's way and warns us not to try to make each building that we design a unique and original masterpiece. ◀

THE CONSTRUCTION INDUSTRY AND THE U.S. GOVERNMENT

BY EDMUND R. PURVES, FAIA

Consulting Director of the Institute

I. As seen by the Government

► A series of positions, some elective, some appointive, landed me in Washington where, because of the "Preparedness" and "Defense programs," I was brought as a professional architect active in the affairs of The American Institute of Architects, into close contact for the first time with the United States government and with that congerie of vocations referred to by the knowing and unknowing as the Construction Industry. I discovered like most of my fellow architects (probably like most of my fellow Americans) that I was rather ignorant of both our government and of our industry. My homely concepts were due for transformation.

While I can claim no expert qualification I can give the benefit of my experience and observations and essay two views, one that of the government by the industry, and secondly, that of the industry by the government. I shall start with the latter.

The construction industry is, dollar-wise, the leading American industry. That the construction industry lacks cohesive organization such as is enjoyed by other industries like transportation, automotive or air-borne, is manifest. That the industry is incapable of cohesive organization is not commonly realized, especially by the fervent idealistic enthusiasts for organization as that word is currently interpreted whose ranks invariably include more than a sprinkling of architects.

The architects like others naturally see themselves as leaders, forgetting for a moment that in a democracy, control is generally by number. That leadership is not gained by fiat is apparently sometimes forgotten, judging from the resolutions and exhortations that appear perennially. That leadership is dependent upon ability to lead and power to control is sometimes overlooked. Leadership is an individual asset and power to control is derived in a democracy from wealth and political domination, in neither of which areas is the architectural profession regarded as affluent. That the architectural profession enjoys a uniquely universal respect in the industry can be attributed to the architect's technical knowledge, his imagination, his energy and the recognition of his qualities as a just and learned man. And not too infrequently architects forge to the front because they are bright.

The construction industry includes hundreds of thousands of people all of whom appear more often than not to be the lineal and spiritual descendants of the independent souls who founded and built this country. In no other industry in these United States is there to be found a similar passionate maintenance of independent self-reliance (and I do not except farmers). The organizations which represent the hundreds of vocations in the industry enjoy a spirit of independence and self-reliance which is a reflection of their members as individuals.

To appreciate the construction industry and the Government's relationship to it, the fundamental character of the industry should be understood. The construction industry in this country, as is probably true of other countries, is universal. It is not concentrated in centers here and there. There is no community, no village, no hamlet whose inhabitants are not capable in some way or other of providing themselves and their fellows shelter for their livelihoods, recreations and religion. People in the smallest villages, in the remotest farms and ranches are capable of producing shelter. They are kin to the designers, the contractors, the producers of the great metropolitan centers.

There are men in the farther places like the ranchers in Wyoming who still hold that no man is fit for marriage and raising a family who cannot himself build the house in which he expects his bride to live. In a sense he is as much a part of the construction industry as the chairman of the board of a far-flung contracting empire.

They are people of the same inherent persuasion and the same inherent philosophy. They are the same active and patriotic citizens who participate in their community affairs. It is therefore not surprising that the United States government sees in the industry a sort of second nation within the nation and so does not regard the industry as a single vocation operating on a narrow front for a unified objective.

In fact, it may be impossible for the government, including all three branches, to entertain the single entity concept of the industry. It is reported that

Herbert Hoover, when Secretary of Commerce, stated that as far as he was concerned there was no such thing as a construction industry but simply a service located universally to furnish construction to the people of the country. The industry has done little or possibly has been powerless to do very much to correct that concept. So let us look at the industry through governmental eyes, and assume therefore that construction and its procurement is something that the government takes for granted. Let us assume further that government ignores the industry as a contentious factor in the American scene.

An analysis of the composition of the industry offers a logical and clear approach. The industry may be broken down by its major elements. Although each major element may in turn be broken down into groups and organizations, the components in each element are sufficiently related to enable us to perceive readily the distinction of each element.

The elements are: First, design, which includes the architects, the planners (not quite yet a generally recognized profession), landscape architects, and those branches of the engineering population engaged in the design of construction. These are civil, structural, mechanical, electrical, heating, airconditioning engineers and probably others. The sum total of these categories constitutes only a small percentage of the engineering fraternity. The engineering profession as we think of it, is not greatly engaged in construction.

Independence of thought and action and self-reliance are exemplified in each element of the construction industry. Architects, a profession made up of individuals who have been taught to think as such to solve problems as such and to question every proposal made by any other individual. We are not a profession which always agrees with itself in matters of technology and even in professional welfare. We do not hesitate to air our divergences of opinion, an honest attitude but one that can scarcely be conducive to instilling apprehension in the minds and hearts of those who would encroach upon what we regard as our preserves.

The architectural profession is understandably without political influence or impact, as those terms are generally employed. In our country members of the profession do not seem to be attracted to the political arena. As far as numbers are concerned, as one successful politician observed to me some years ago, if all the architects in the United States voted the same way it would not make any difference. We do, however, enjoy respect which we have earned as honorable creative members of society interested not only in the production of a sound and attractive America, but also in the

common good. We also are respected for our skill, knowledge and our expertness.

Apparently, the laity attributes an occult quality to our calling which makes us impressive.

Engineers, at least those in the construction industry, are similar to architects in their attitudes, in their vocations and in their political attitudes. However, they are a little closer to politics than we are. So many members of the engineering profession are to be found in governmental service of one kind or another and occupy positions in governmental activities that here and there they have developed a certain political acumen. People in government feel that they understand engineers a little more than they understand architects.

Architects in government are too few and too widespread to have created a general governmental concept of the profession. This is no derogation of those few capable and influential architects who are in government. They are, however, vastly outnumbered by engineers in government. On the staffs of practically every governmental agency which is engaged with the procurement of design or of construction are to be found many civil servants with engineering degrees.

Landscape architects are too few in numbers to have any particular political impact. There have been, however, individual members of that profession who have occupied governmental positions of considerable importance and influence.

Just exactly what influence the planners will come to enjoy is conjectural. The odds are that the impact will increase perceptibly. Although this vocation is relatively new it is so intimately and deeply immersed in community problems and progress that it is bound, if it is to remain in existence, to have influence in government especially at the community level.

I find a similarity between the activities and concepts of the planner and of the economist, a professional who, with the enthusiastic encouragement of the President, is becoming the American spokesman.

Whether or not the architect will become a factor in governmental thinking and policy will depend to a large extent on the profession, on the architect and on his organization. Although The American Institute of Architects can exhort, it cannot force its members to engage in activities which may be distasteful or foreign to the architect's training and disposition.

The second principal element is the general or prime contractor. The contracting element has broken itself down into three classifications—construction; light construction, which takes in practically all building in which architects have been interested so far; and highways and heavy construction, a field increasing in prominence politi-

cally and probably of ever-increasing interest to architects. Highway construction hitherto has been regarded as outside the area of interest of architects except for the design of service buildings and other appurtenances. However, as the architect assumes his future role, he will doubtless make a contribution to highway design as he pursues the over-all development.

Contractors range from the small builder doing a modest but successful amount of business every year to the enormous concern operating over the face of the globe. As the amounts collectively and individually entrusted by the Federal government to the general contractors are staggering it is no wonder that officials are well aware of the prime contractor and his role in the building of America. There seems to be something in the contractor's philosophy which makes him no stranger to politics. Not infrequently contractors are found actively engaged in politics, local and national. The political influence of the Associated General Contractors of America is not likely to be disregarded as so many of its successful members are themselves sound and successful politicians.

Contractors are usually knowledgeable in the political world and some of them possess considerable political acumen. The contractor is an enormous purchaser of supplies and a great employer of labor — two factors which themselves are sufficient to afford him automatic political influence almost automatically. Politically speaking, the contractor is not exactly in an obscure position.

In dealing with the Associated General Contractors I have found that although we may be on opposite sides of an argument at times, the discussions were candid and when we were in agreement the cooperation was heartwarming.

A third element is the specialty or sub-contractor. On occasions various sub-contractor organizations have formed associations for a common cause. There is variety in this group. Sub-contractors are, of course, organized into their own vocational associations. It is doubtful if the subs and their organizations are regarded by the government as enjoying any particular political influence or power. Rather the government looks upon them as people in various vocations who can furnish and install certain of the ingredients in buildings and other construction work.

Oddly but logically enough it is the sub-contractors who have the money and not the prime contractors. This was brought to the front in the discussion between the representatives of the subs themselves and the AIA in the matter of retained percentages. The subs who met with us at the Octagon spoke out frankly and firmly and afforded us information which we hitherto had not known or had not realized.

The fourth element is the producer of building materials. This is a category which is greatly misunderstood in the construction industry, especially by The American Institute of Architects, probably because of the existence of the Producers' Council.

The average member of the AIA thinks of it in terms of the local Producers' Council club, generally a collection of agreeable salesmen representing nationally-known manufacturers whose principal activity would appear to the average AIA member to be the cultivation of the architects for business purposes and to that end his host at convivial gatherings. The national Producers' Council is probably thought of in a rather nebulous way as a powerful industry spokesman in the body economic and an ally politically. The first concept is largely erroneous and the second is completely so.

The Producers' Council is unique in being the only affiliate of The American Institute of Architects and the affiliation the only one in the construction industry.

The Producers' Council was conceived in the 'twenties by The American Institute of Architects as a vehicle for improving the quality of building materials and improving the quality of building products literature. The relationships between the Producers' Council and the AIA is very close at the national level. Our national relations with the Producers' Council are geared to the lines of the original concept. Local relations probably are also, to a greater extent than is realized.

The Producers' Council has virtually no political impact or influence. This may not be necessarily true of some of the individuals and some of the industries in the building products manufacturing world. Producers are so diverse in their interests and in their products as to make any real organization of the producers for purposes other than those of the original concept almost an impossibility. Certain of the producers who manufacture materials in the same field have banded together but I am not aware that such associations have any real bargaining power.

Probably the only influential body which in any way advances the political interests of the producers is the National Association of Manufacturers, an organization which has little in common with the elements of the construction industry.

A fifth element consists of the distributors of building products. Here again there is virtually no association, no single entity, which can wield a political influence. It is doubtful that the government looks upon the distributors as anything but suppliers, and it is conjectural whether the government ever recognizes it as a component of the construction industry.

A sixth element, and one which has come into considerable prominence since World War II, con-

sists of the homebuilders. This is a large collection of people of single purpose who operate on a relatively narrow front as contrasted to the architects who operate professionally and politically on a very wide front. The objective of the homebuilder is to produce and sell houses to the American public. There are many homebuilders in the United States. They are to be found everywhere. There is scarcely a community of any size whatsoever which is not aware of the existence of the homebuilders. The homebuilders are solicitous for the preservation of free enterprise, for the competitive system and for what many regard as the American way of life.

In a sense their philosophy is basically correct. They have produced in fact the face of the American community.

The homebuilders are not without political power and impact, not only as a group but also by virtue of the fact that not infrequently a homebuilder is a political power in his own right. There are homebuilders who are successful politicians and who are actively engaged in the political arena. It is safe to assume that the Congress views the homebuilders with care and respect. The homebuilders' interests are directed chiefly to the Housing and Home Finance Agency and especially to the Federal Housing Administration.

That they have been able to exert their influence and accomplishment so much is due in no small part to their natural concentration in and on a single phase of construction and development.

The seventh element in the construction industry is, of course, labor. It is centered in the building trades unions of the AF of L-CIO. Despite conjecture to the contrary, the political influence of labor as such is overestimated. Or rather its political impact is economic rather than partisan. It is often held out to be a political influence of major importance. However, some labor leaders have found to their amazement and possible chagrin that the average union member in the construction industry is an individualist himself, self-reliant, thinks for himself and at the ballot box follows chiefly his own advice and not necessarily that of the union officials.

Attempts in the construction industry by labor leaders to guide the political thinking of their unions as a whole have not met with outstanding success. The cross section of labor in the construction industry is pretty much a cross section of the United States. It can be said in the construction industry that labor is a democracy within a democracy.

Now possibly the most powerful and vital element in the entire construction industry is that which includes the financial powers. This is quite natural. Not only is it impossible to plan and con-

struct without money, but it is often money which determines the pattern of the project. So we find the financial people in a very powerful position indeed insofar as the construction industry is concerned, and presumably by the same token their political impact is commensurate with their power in the industry itself.

It is a little difficult to draw a line of strict definition of those financial elements which are exclusively engaged in construction, but when the construction industry gathers itself together for any purpose, representatives of the building and loan associations, of the mutual savings banks, of the mortgage bankers, and of the life insurance companies, are usually present. The last named because its investments in construction are so tremendous as to make it a factor in the industry.

The government, especially HHFA, does look at the financial element with concern and a respectful eye.

The last element is the realtors. Their interests are quite closely allied to the interest of the homebuilders and of some of the financial elements and there is no question but that the realtors are in a position to exert a considerable amount of political influence. Lately, however, the financial people, the homebuilders and the realtors have shown an inclination to go their separate ways. The ways may sometimes be parallel and they may even converge.

Taking an over-all look at the industry from the government's point of view, we are not aware so far of any sentiment to regard the industry as unified or as a single entity capable of wielding its power as such. The elements of the industry do, however, have a singular way when their leaders are intelligent and knowledgeable, of banding together for a common cause. A common cause may not extend throughout the entire industry. It may include only a few of its elements. But the cause has to be common.

Each and every one of the elements of the industry and each and every one of its subdivisions or components is primarily engaged in advancing its own causes in defending itself and in protecting the interests of its own people.

Fundamentally I have found the elements of the industry to be independent and conservative and to possess a strong tradition of individual self-determination even self-reliance. It is difficult to conceive of a single organization of the entire industry until such time as the American philosophy and character may be lowered to a point where such an organization would be politically and spiritually possible. When that point is reached we may have also attained a nation which none of us would recognize as the America we have been brought up to believe in. ◀

The Bureau of Contract Information

by **William F. Frakes**, *General Manager,
Bureau of Contract Information, Inc*

*A casual encounter on a bus last year
between the Editor and Mr Frakes
led to the preparation of this article. Well-
established though it is, it appears that
not enough architects, as "awarding
officials," know of BCI and the important
service it can perform for them*

► To one unacquainted with construction and its complex operations the architect is the professional man called upon when a building program is being considered. Here there is a similarity to the doctor or lawyer. The architect is consulted for guidance in coordinating the ideas and needs into a functional and structurally sound building of pleasing design completed on time and free of liens.

The architect's duty to his client is best set forth in the Eighth Edition of the "Handbook of Architectural Practice" which states in part as follows: "Because of the extent of the specialized knowledge and skill necessary for practice, architecture is recognized not only as the foremost of the visual arts, but also as one of the leading professions. Its practice involves skilled planning; an understanding of sound and economical construction, and structural, mechanical and electrical engineering, as well as many sciences; proficiency in the production of contract documents and in the administration of construction; and familiarity with business practices, accounting, finance and law."

A most important duty of the architect is the selection of a responsible contractor to perform the contract according to the plans, specifications and within the time specified. In addition to requiring a contract performance bond, an essential part of today's construction procedure, the architect should exercise care in the selection of the contractor before awarding the contract. To aid them in their selection many architects regularly call on the Bureau of Contract Information, Inc, for its factual reports. Obviously there are many architects who are not familiar with the Bureau's services available to them, therefore, the story of its background and functions for the construction industry should be interesting and useful.

The Bureau of Contract Information, Inc, located in the nation's capital, Washington, D. C., celebrated its thirtieth anniversary in 1959.

Its organization was the result of a recognized need for an institution designed to investigate the past and present performance records of the individual contracting concerns throughout the United States, and to make available the result of such investigations to those responsible for the awarding of public and private construction contracts,

the writing of surety contract bonds and the extension of credit.

The recommendation for the establishment of such an institution was first made at a conference held in Washington in June 1924, and attended by committees of ten national organizations representing the surety industry, the professional societies of architects (AIA) and engineers, highway officials, and general contractors.

During the following five years there were a great many discussions between surety executives and contractors' groups. Some will remember that during this period all businesses, even the most conservative, were smitten with the "jazz" fever of the times. It was a period during which the greatest spiral of inflation of all time in America ran its course.

Among casualty-surety companies there were drives for increased premiums because premium volume was looked upon in some quarters more as a means of securing larger investment returns than as a source of normal underwriting profit. In the contract bond field competition was further intensified by the entrance of many new companies eager to get adequate representation and a share of the business. Before long the competitive situation got pretty much out of hand, causing the more conservative element among contractors and surety companies to complain in no uncertain terms.

Many criticisms were directed at the bonding companies for their loose handling of contract bonds in that they supplied suretyship for irresponsible contractors. Many of the criticisms came too close to the mark for comfort. The truth was, of course, that surety interests were by no means all to blame. Contractors themselves had become infected by the boom virus and were in the midst of rampant, uncontrolled competition. In fact, bank, material suppliers and the machinery people and other elements making up the great construction industry had been gripped by the current business hysteria.

The recommendation of the committee in 1924 found wide favor, not only among contractors themselves, but in technical and professional societies, and with public officials and trade groups. Subsequently, representatives of the bonding companies met with officials of the AGC with the result that the Bureau of Contract Information, Inc, was finally organized and incorporated on August 22, 1929 as an institution separate from any existing organization.

The original plan was for BCI to supply information only to surety underwriters, but almost at once it became apparent that awarding officials needed its services even more than did the bond men. To meet this need, operations were expanded

to furnish reports without charge to bona fide awarding authorities, architects and engineers.

The filing of a Performance Record with the Bureau of Contract Information, Inc, by contracting concerns is recognized as an act of good faith toward those with whom they deal. It represents cooperation with those responsible for the award of construction contracts, the writing of surety bonds and the extension of credit, in establishing responsibility and further qualification of contracting concerns. It is in the interest of all responsible contractors to assist in eliminating irresponsibility in contract awards.

The Bureau sets up a file on a contractor the basis of which is the filing of his Performance Record on a form furnished by BCI. There is no charge to the contractor for the filing of this report. It contains signed authority to verify the information submitted. A verification form is sent to the owner or awarding officials, as the case may be, to develop whether or not the contract was satisfactorily completed; to commercial references to develop the payment record for material and equipment requirements; and to banks and bonding companies to inquire about their experience with the particular contractor.

Upon receipt of a legitimate and interested inquiry a confidential report condensing the information developed is prepared showing the following pertinent facts:

Performance records of contractors listing annual volumes and types and amounts of contracts completed, thus indicating the class and size jobs on which they have demonstrated past competence in performance.

Credit record of contractors; the ability to finance their work based on verified credit standing.

Bonding record of individuals and construction firms in fulfilling responsibilities under surety bonds.

Personnel of construction firms; if a principal has ever been connected with a defaulting firm, the Bureau's records will usually reveal that fact. Special investigations of bidders and an indication of their ability to perform work for which they are being considered.

Disclosure of information by the Bureau is submitted without recommendation, favor or prejudice, but as facts, after proper determination. No information is disclosed to contractors concerning their own concerns or competing concerns.

The Bureau is operated without profit and makes no charge for its reports. There is no cost to a contractor for filing his performance record and keeping it up to date as respects subsequent awards. The major financial support for operating expenses comes from thirty-eight subscribers rep-

representing fifty-four companies writing surety contract bonds. In addition, contributions are made voluntarily by construction firms which appreciate the value of such a clearing house although such contributions in no wise secure personal advantage to the contributor but are accepted only to aid the work of the Bureau. The Association of Casualty and Surety Companies also contributes toward special public relations in the contract bond field.

The Bureau over its thirty years of existence has no doubt been a steadying influence for the contracting industry in the United States. Numerous compliments are received for the good work it is doing. To our knowledge there is no other institution quite like BCI in any other industry and we are proud of the reputation it enjoys.

Although the activities of BCI have been publicized many times since its organization one of its most perplexing problems is the existence of other enterprises operating under names which might be confused with this Bureau. Occasionally its requests for performance information are ignored by a contractor who is under the impression that they are prompted by some shady motive. He does not want to get on any sucker list. It is to be expected that there will always be some contractors who are unacquainted with BCI's background and objectives.

Annually the stockholders elect fifteen Directors chosen from subscribing surety companies. The present Directors are: Louis F. Ballerene, Assistant Deputy Manager, Employer's Liability Assurance Corp, Ltd; Norman A. Burgoon, Jr, Vice President, Fidelity & Deposit Company of Maryland; A. A. Christian, Manager, Bonding Department, Royal-Globe Insurance Group; George M. Douglass, Secretary, Fidelity & Surety Division, The Travelers Indemnity Company; Donald A. Gillum, Assistant Secretary, New Amsterdam Casualty Company; Thomas M. Gregory, Vice President, American Surety Company of New York; R. A. Hubbard, Vice President, Central Surety and Insurance Corp; Edwin G. Hundley, Vice President, United States Fidelity & Guaranty Co; James F. Joyce, Superintendent, Fidelity & Surety Department, Phoenix Assurance Company of NY; C. A. Keppler, Vice President, National Surety Corporation; Norman C. Keyes, Manager Contract Department, Maryland Casualty Company; Carroll W. Laird, Secretary, Indemnity Insurance Company of NA; J. A. Swearingen, Secretary, Fidelity & Surety Department, The Aetna Casualty & Surety Company; Wm. H. Wallace, Vice President, Hartford Accident & Indemnity Company; Carroll R. Young, Vice President, The Fidelity & Casualty Company of NY. These Directors appoint the Officers, namely:

President, Vice President and Secretary-Treasurer, to serve for one year. It has been the practice for officers to serve two terms with the Vice President usually moving up to the Presidency. The General Manager is under the supervision of the Board of Directors.

Control of BCI affairs is in the hands of subscribers as previously mentioned. None of the founding organizations or any other authorities have any status insofar as the Bureau's operations are concerned.

The foregoing is a rough outline of Bureau of Contract Information activities. All contractors are welcome, be they large or small and without regard to their bonding connections, if any. Owners and awarding officials, too, know that every resource of the Bureau is available in their behalf. BCI is a common meeting ground for owner, contractor and surety.

The Bureau has found favor in foreign countries. Early this year its activities were explained to a team of Japanese contractors touring the United States under the sponsorship of the International Cooperation Administration in Washington. They asked for all details of BCI activities and corporate set-up together with copies of all forms so that they could arrange for a similar organization in Japan. Through the national office of the Associated General Contractors of America the Federation of the Finnish Building Industry, Helsinki, Finland, requested late last year the same information to aid the stabilization of the construction industry in that country.

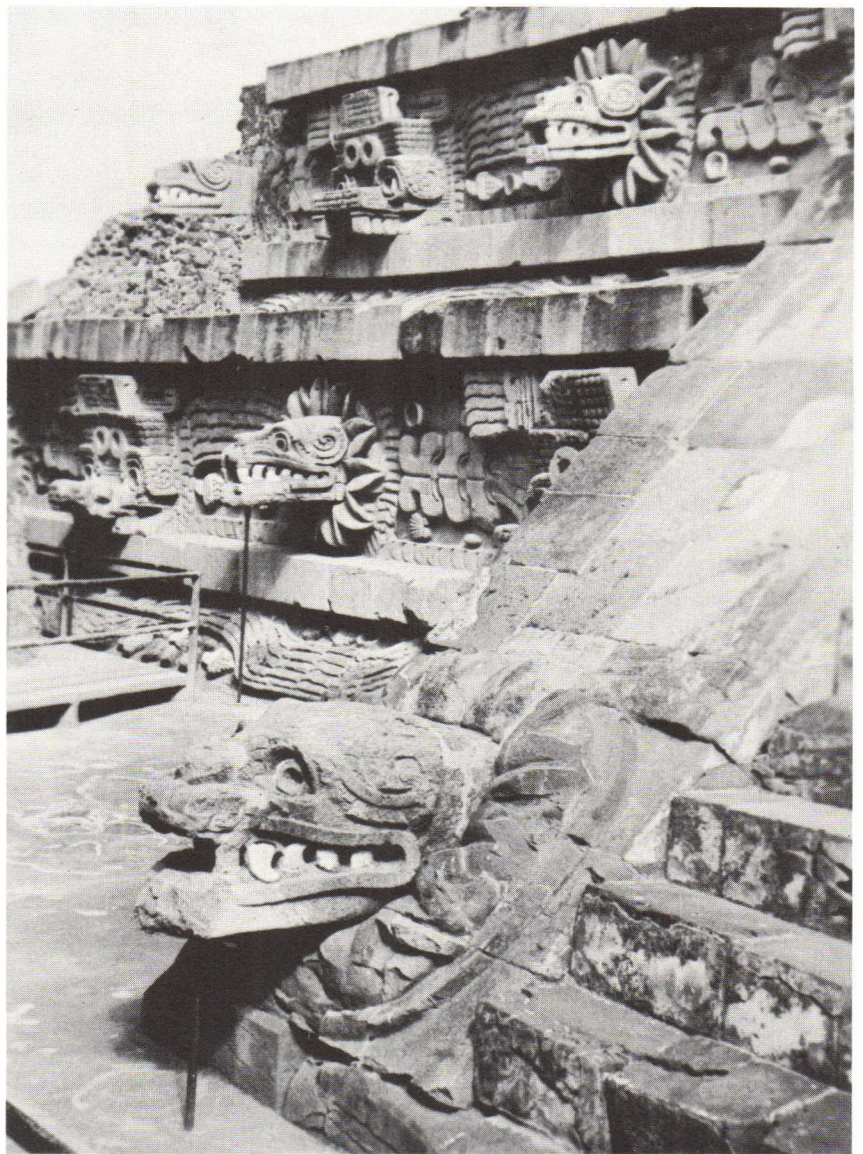
Construction is the largest industry in the nation and its importance rests not only upon its size and usefulness of its products, but also upon the economic activities it generates for other business groups including property transfers, financing, land development, planning, insurance, manufacturing, distribution and government. The contracting industry is given much credit for softening the 1958 recession.

A very large part of all private construction consists of small residential work, farm buildings and similar construction. Much of it is done by contractors of very limited or dubious responsibility, working under vague contracts and sketchy plans and specifications, without architectural supervision. The bonding companies cannot guarantee such operations. Indeed the sureties look with great disfavor on any construction large or small if the plans, specifications and supervision are not in the hands of architects or engineers.

BCI is doing its part in maintaining good relations between sureties and contractors and their representative groups as well as with awarding officials, architects, engineers and others responsible for the award of contracts. ◀

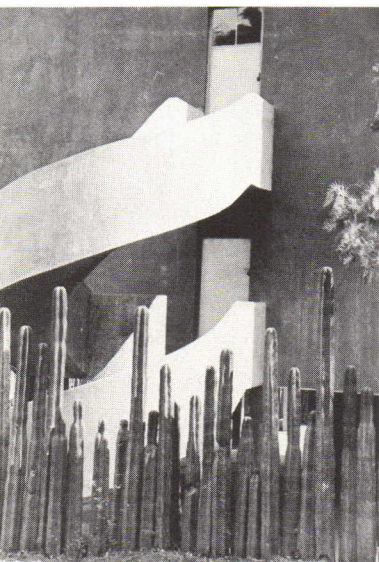


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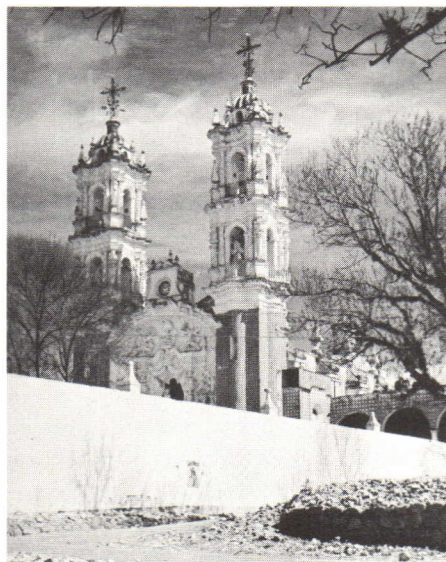


Teotihuacan

Diego Rivera's House



Tlaxcala Ocotlan Convent



Ocolman Convent



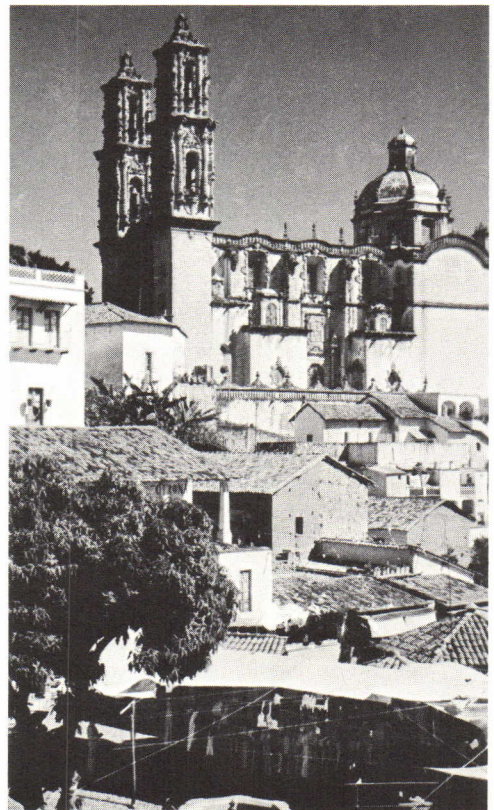


Calixtlahuca

Mexican Miscellany

Photographs by William Lyman, AIA,

who speaks his mind on design on page thirty-five



Taxco

The Day Case Decision

SUPREME COURT OF LOUISIANA

REVERSES COURT OF APPEAL

► On March 20, 1961, the Supreme Court of Louisiana in the case of *Day v. National-US Radiator Corporation* reversed the judgment which the Louisiana Court of Appeal had rendered against the architectural firm of Wilson & Coleman of Baton Rouge and their insurer for \$83,283.28. (The Court of Appeal opinion is published in *Southern Reporter*, 2nd Series, Vol 117, p 104.) The case arose out of the accidental death of an employee of the plumbing subcontractor when a domestic hot water boiler exploded. The Louisiana Architects Association and The American Institute of Architects considered the case to be of such importance to the architectural profession that they joined in filing an *amicus curiae* brief.

The primary issue involved was the extent to which an architect is liable, because of his supervisory duties, for personal injuries or death of an employee on a construction job. Another issue was whether the architects were negligent in approving a shop drawing and were thus liable to the plaintiff.

The architectural firm of Wilson & Coleman was employed by the Louisiana State Building Authority to design a new patients' building at the Greenwell Springs Tuberculosis Hospital at Greenwell Springs, Louisiana. In the course of construction the plumbing subcontractor put steam on the domestic hot water boiler to test the hot water system. Since no pressure relief valve had been installed, the boiler exploded, killing Willie Day, an employee of the plumbing subcontractor. The suit was brought by Day's next of kin. The architects' specifications called for a pressure relief valve, and the evidence was clear that the failure to install it was the cause of the accident. The contract between the architects and the State Building Authority was not an AIA standard form contract, but under it the architects had the usual duties to make periodic inspections of the progress of the construction work. They had done this. They had not, however, inspected the hot water system as it was being put in. There was expert testimony to the effect that it was customary in the architectural

by **Samuel Spencer,**

Legal Counsel to the Institute

We have asked Mr Spencer to prepare a full account of the case, *Day v. National-US Radiator Corporation, et al*, because of its possible far-reaching effect upon future cases involving members of the profession. Not that decisions of the Supreme Court of Louisiana are binding in other states, but that the decision may be effectively quoted by attorneys in the courts of the other states

profession and in the construction industry for the subcontractor to give the architects notice when the installation of a system such as this was complete and ready for testing. The architects would then inspect it, and tests would be made. In this case the plumbing subcontractor put steam on the boiler without notifying the architects that the system was complete and ready for testing and without an inspection of the system having been made by the architects or by the consulting engineers.

The trial court rendered judgment against the architects and their insurer for \$58,704.68, limiting the liability of the insurance carrier to \$50,000., which was the limit of the policy. The suit was dismissed as to the other defendants, including the consulting engineers and the manufacturers of the equipment. The consulting engineers were freed from liability on the ground that their only obligation to inspect was when requested by the architects to do so and they had received no such request. The contractor and the subcontractor were not joined as defendants because under the Louisiana Workmen's Compensation Act they were released from liability for negligence under the common law. The plaintiff had recovered \$9,537.60 from the insurer for the subcontractor under the Workmen's Compensation Law.

The case was appealed to the Court of Appeal, which increased the judgment against the archi-

fects and their insurance carrier to \$83,283.28. The Court's opinion appeared to extend the area of the architects' responsibility for supervision considerably beyond the limits laid down in earlier cases and to leave uncertain where the line would be drawn in the future. Had this decision been permitted to stand, the case could have been an unfortunate precedent for the architectural profession. An appeal was taken to the Louisiana Supreme Court. The American Institute of Architects intervened at this time and joined with the Louisiana Architects Association as an *amicus curiae* urging reversal.

The Supreme Court, consisting of seven judges, unanimously held that there was no negligence on the part of the architects in carrying out their duties of inspection and supervision of the construction work. Judge McCaleb concurred in the holding but did not subscribe to the discussion in the opinion of hypothetical situations not presented by the case. The Court said:

"Let us now consider the holding of the Court of Appeal that the terms and conditions of the architects' contract with the State Building Authority imposed upon the architects the obligation of supervising the installation of the domestic hot water system, that the architects breached this obligation because neither they nor their agents, the engineers, were aware that this system was being installed and neither they nor the engineers inspected the system during installation or after completion, and that all of this constituted negligence by the architects.

"Before discussing this holding we should point out that we do not have here a case where the architects failed to provide in the specifications for a pressure relief valve on the boiler and for other safety devices; or a case where they inspected and approved the installation, or even where they had knowledge of the installation and stood by and permitted the boiler to be tested without having proper safety devices; or a case where they visited the site after the completion of the installation and, knowing that the boiler was to be tested, failed to observe that the boiler was not equipped with the safety devices stipulated in the specifications. Under such circumstances we should not hesitate to say that they breached a duty and that they reasonably should have foreseen that this breach would cause damage.

"The narrow question here presented is whether the architects' contract with the owner imposed upon them the duty to be aware that the boiler was being installed by Vince, the plumbing subcontractor, and whether they were required by their contract to inspect the hot water system, of which the boiler was a part, during installation and before the boiler was tested by the subcontractor Vince.

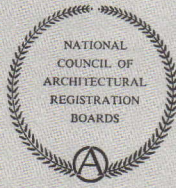
"In their contract with the owner the architects bound themselves to exercise 'adequate supervision of the execution of the work to reasonably insure strict conformity with the working drawings, specifications and other contract documents,' and this supervision was to include 'frequent visits to the work site.' If this provision of the contract required the architects to know that the boiler was being installed and required them to inspect the installation while it was in progress and before the system was tested, then the decision of the Court of Appeal may be correct. We therefore must determine the meaning of the above quoted provision of the contract.

"As we view the matter, the primary object of this provision was to impose the duty or obligation on the architects to insure to the owner that before final acceptance of the work the building would be completed in accordance with the plans and specifications; and to insure this result the architects were to make 'frequent visits to the work site' during the progress of the work.

"Under the contract they as architects had no duty to supervise the contractor's method of doing the work. In fact, as architects they had no power or control over the contractor's method of performing his contract, unless such power was provided for in the specifications. Their duty to the owner was to see that before final acceptance of the work the plans and specifications had been complied with, that proper materials had been used, and generally that the owner secured the building it had contracted for.

"Thus we do not think that under the contract in the instant case the architects were charged with the duty or obligation to inspect the methods employed by the contractor or the subcontractor in fulfilling the contract or the subcontract. Consequently we do not agree with the Court of Appeal that the architects had a duty to the deceased Day, an employee of Vince, to inspect the hot water system during its installation, or that they were charged with the duty of knowing that the boiler was being installed."

A second issue in the case was whether the architects were liable because they had approved a shop drawing or brochure of the plumbing subcontractor which did not specify a pressure relief valve. The Court held that they were not liable because the brochure was not intended to be a complete list of all parts in the domestic hot water system and did not supersede the specifications, which clearly required a relief valve. The Court said that an additional ground for not holding the architects liable was that the shop drawing or brochure was not the proximate cause of the accident because the subcontractor did not rely on it in installing the boiler. ◀



A. Reinhold Melander, President, Duluth, Minnesota; Chandler C. Cohagen, 1st Vice President, Billings, Montana; Paul W. Drake, 2nd Vice President, Summit, New Jersey; A. John Brenner, Secretary, Phoenix, Arizona; C. J. Paderewski, Treasurer, San Diego, California; Earl L. Mathes, Director, New Orleans, Louisiana; John E. Ramsay, Director, Salisbury, North Carolina; George F. Schatz, Director, Cincinnati, Ohio; Walter F. Martens, Past President, Charleston, West Virginia

The Practice of Architecture — A Definition

by **Paul W. Drake, AIA,**
2nd Vice President, NCARB

Mr Drake is a member of the firm of Drake, Tuthill, Convery & Cueman, Summit, New Jersey; Past President of the N. J. State Board of Architects; Past President of the N. J. Chapter, AIA and N. J. Society of Architects

► The profession of architecture which we practitioners like to believe is the “next oldest” profession appears to have reached maturity in the USA. At its Fortieth Annual Convention assembled at Philadelphia in April, 1961 the National Council of Architectural Registration Boards agreed upon the following definitions:

“In order to safeguard life, health and property and to promote the public welfare, the practice of architecture in this State is reserved to those persons who have the proper qualifications and have been registered by the Board after examination.

“The practice of architecture is defined as the professional activities of a registered architect. This includes advice concerning and preparation of necessary documents for the design and construction of buildings and their environment, with the principal purpose of providing space for human use whether interior or exterior, permanent or temporary, and including, but

not limited to, structures for social, political and economic service in fulfilling domestic, religious, educational, recreational, memorial, financial, commercial, industrial and governmental needs and the like.”

Among architects there have never been too many serious differences in the basic concept of what constitutes the practice of architecture, although hundreds of definitions have been written.

Why is it so important that we are concerned with these definitions?

Perhaps the practice of no other profession has become so complicated as that in the field of architecture. We are no longer “picture makers,” but master planners and coordinators of the countless services that, because of the rapidly changing contemporary way of life, impose greater demands and responsibilities upon the architect.

In order to protect the public safety, health and welfare, each of our states has attempted by statute to regulate the practice of architecture. None has been wholly successful. Hence, outside forces stronger numerically, or in other ways, are whittling away at the field of our profession, to a point where we shall be fortunate in the future to share with them the privileges which are now being usurped from us. To wit: The McCamy case in New Jersey, wherein a professional engineer was charged with violating the N. J. Statutes, in that he prepared plans for a residence and plans for a new club house. This case is over two years old, is still unresolved, and its outcome is uncertain. The defense claims that both projects are engineering—not architecture.

Attempts are being made by both architects and engineers to introduce legislation acceptable to both professions, wherein the limitations of practice will be clearly defined. This is a difficult problem. Such legislation must define the practice of architecture, as distinct from engineering.

The difficulty in phrasing develops because of the use of words that are common to both professions. In law they carry a single connotation, yet design, plan and structure are distinctly different in their concept and execution by the practicing architect and engineer.

Attempts to clarify the definition by specifically categorizing the fields of practice are found to be restrictive. The classifications cannot hope to be sufficiently descriptive to cover all phases of professional activity.

An unusual structure, site or combination of types of buildings could very easily prove to be a test of the definition's inflexibility and thereafter subject it to misinterpretation or, worse, to amendment by legislative act. This would only serve to further dilute it.

General definitions, without classification or categories, have also proven to be weak in interpretation, because so many parts are applicable to either profession and would be so construed if tested by legal means.

This raises the desirability of a "Model Law" for adoption by all states and territories. The following is quoted from the 1961 report to NCAR Boards from the Committee on Licensing.

Data have been and are continuing to be assembled for study of a model law with features that could be, with the assistance of understanding legal talent, incorporated into an act for acceptance by the states and territories as a basis for inclusion within their statutory provisions.

The administrative and organizational phases present no great problem other than to insure that the law would be administered by an independent State Board composed only of qualified Architects.

Educational requirements, qualifications and reciprocal licensing provisions written into the act can be easily established from the data accumulated by the Council over the years and on which almost universal agreement could easily be reached.

If possible the standards of the National Council could be screened and modified to the extent that it would be possible to include them by identity into the act so that revisions or amendments as they occurred would automatically become part of the law without requiring legislative action.

This prediction is not unduly optimistic as several states have in some form or another accepted these requirements.

Penalty provisions against violators would of necessity conform to the statutory regulations and could vary from state to state.

The troublesome and seemingly insurmountable problems have to do with establishing limits when unqualified and unlicensed persons may be permitted under certain conditions to prepare documents acceptable to the authorities because of exceptions written into the law. These exceptions when first included caused little concern as they were considered a means of permitting an owner to effect repairs or even to construct a dwelling for his own use or that of his immediate family.



The author,
Paul W. Drake

The expansion of building since the depression has attracted many people into the field of development and construction and due principally to the legal ambiguities compounded by unchallenged legal decisions, advantage has been taken to circumvent the intent of the law. Buildings have been erected for human or other occupancy on the strength of a small portion of the area being delegated to the Owner's use although the preponderant remainder has been utilized as rental living units, business and mercantile establishments, and for industrial purposes.

The National Council Board of Directors has been increasingly conscious of the desirability for a model architectural registration law which might be accepted by all of the states. Such a law must of necessity define the practice of architecture. It is therefore, significant that the acceptance of the definition above quoted represents the thinking of a national body of architects composed of individuals appointed to local State Boards of Architects in each of our fifty states and three territories. ◀

“It’s the Law”

by **William Stanley Parker, FAIA**

Consultant to the Institute on Contract Procedures

Mr Parker continues his remarks begun in our May issue on Judge Bernard Tomson’s book, “It’s the Law”

► Many wise comments are made in the discussion regarding Agreements between Architects and Owners. In some cases the references to the provisions in the AIA Agreement form seem inaccurate and are, therefore, confusing, due in some cases to the fact that the references may be parts of articles written some time ago and do not refer to the current forms of Agreement.

For instance, on page 139, it is stated that there is no clause providing for a retainer fee—which actually is included in AIA Doc. B-131, the new form first printed in 1958. It also states that there is no provision for periodic payments during the preparation of preliminary studies and working drawings. Such payments have long been provided during the making of the working drawings and now the new Doc. B-131 provides for periodic payments during preparation of preliminary studies also.

In discussing the basis for computing the Architect’s fee it is stated that the AIA standard agreement provides a definite base only after the preliminary sketches have been completed. In the Agreement Form issued in 1917 the following provision occurs:

Payments. Whether the work be executed or whether its execution be suspended or abandoned in part or whole, payments to the Architect on his fee are, subject to the provisions of Art. 5, to be made as follows:—Upon completion of the preliminary studies, a sum equal to 20% of the basic rate computed upon a reasonable estimated cost.

This basis for the payment is established when the agreement is signed. Presumably an understanding has generally been reached by the Architect with his Client as to the approximate anticipated cost of the project and the amount of the payment would be clearly indicated. By the time the sketches had been completed, the estimated

cost might have changed in which case the later estimate would form the basis. The present Agreement, Document B-121, includes the following: “Upon completion of the preliminary studies, a sum equal to 25% of the basic rate computed upon a reasonable estimated cost.” In Document B-131 the fee is related to the project construction cost which is clearly defined.

It seems strange that on occasion of a dispute concerning this payment when the project has been abandoned, a Court has in some instances stated that the Architect was not entitled to any payment. Obviously, as indicated in the agreement, the major part of the Architect’s work is involved in the making of the working drawings. If there has been a definite agreement in writing with the Owner that the Cost must not exceed a stated amount and the lowest bid obtained on the completed documents greatly exceeds this amount, then the Courts properly hold that the Architect is not entitled to any payment for the plans since they are of no value to the Owner. If, however, no such definite agreement has been made as to cost, the Architect is reasonably entitled to payment for the service rendered, even if the Owner, for his own reasons, decides not to go on with the project. The cost involved in making the drawings will be in general related to the character and cost of the proposed work, and the Architect is not merely gambling that the Owner will go on with the job, he is performing a professional service.

Where for some reason the Owner abandons the work even before preliminary studies have been completed, the Architect should be properly reimbursed for the service rendered on a quantum meruit basis, what it is reasonably worth. If a clash of personalities prevents an agreement as to the amount properly due, the Agreements provide that any dispute shall be referred to Arbitration. Problems involved in the use of Arbitration will be discussed in a subsequent issue. ◀



A I A C O M M I T T E E S

COMMITTEE ON PRESERVATION OF HISTORIC BUILDINGS, *Earl H. Reed, FAIA, Chairman*

Tennessee

The Downtown Presbyterian Church in Nashville, designed by William Strickland and first used in 1851, is to undergo a \$295,000 remodeling program. This fine and massive building, designed in the "Egyptian style" popular at the time, will be completely renovated, with new wiring, heating and air-conditioning systems, new classrooms, and an elevator installed in one of its twin towers. The building was used as a hospital during the Civil War, and during the 1880's the interior was decorated with Egyptian motifs in full color, and the stained glass windows installed. Praised by some and condemned by others, the old decorations will be cleaned and restored as they were.

California

Architects in California have been busy building up support for two preservation measures in their state, one in the Assembly and one in the Senate. The Assembly Resolution, which has been passed, takes cognizance of the fact that the state is facing a crisis in the rapid disappearance of its many historical landmarks, and directs the Division of Beaches and Parks to undertake a survey and formulate a plan for the preservation and restoration of "the historical values and resources of the State."

The Senate passed a constitutional amendment which requires counties and cities to adopt ordinances establishing historical landmark areas and limiting the taxes within those areas, prohibiting demolition or alteration without special permit, and furthermore requiring that new construction conform architecturally to the architecture of the historical landmark area. This last requirement, it will be noted, is quite a drastic innovation.

* * *

A striking example of classic Greek architecture has been preserved as a state monument at Benicia, California. It is a brick and wood building with the historic distinction of having served as the third seat of state government in California.

Architecturally described as a distypt temple with portico in antis, the building was rushed to completion for the Fourth Legislature of California in 1852.

Restoration in Greek Revival style has been as authentic as research could make it. The original stairway has been reproduced and the lock on the front door dates back to the time the statehouse was built, as do some of the furnishings.

While the original cost of construction was \$24,800, the reconstruction bill came to \$230,000 when restoration was undertaken four years ago by the State Division of Architecture in cooperation with the Division of Beaches and Parks.

Wisconsin

"Historic Wisconsin Architecture," a thirty-six page book sponsored by the Wisconsin Chapter, AIA, went on sale last September, and according to reports remains a best-seller. The book was written and compiled by Richard W. E. Perrin, FAIA, Executive Director of the Housing Authority of the City of Milwaukee.

A cross-section of Wisconsin architecture, the book contains examples of residential architecture, churches and industrial architecture. Altogether there are seventy-six examples of pre-Civil War architecture, a stopping point chosen by Perrin to avoid getting into the Victorian era. In addition, there are twelve examples of FLW's work in Wisconsin. The price of the book is one dollar.

Chapters interested in a similar project can contact Mr Perrin or the Wisconsin Chapter.

Pennsylvania

A pot-pourri of poetry, art, antiques, history and preserved architecture is presented in a pleasant little book, "Chester County," edited by Berenice M. Ball for Chester County (Pennsylvania) Days, a sort of historical County Day always held "the first Saturday in October," the little book says.

A painless and pleasant excursion

into the past, the book could well serve as a guide for chapters thinking of going into a publishing venture. Copies may be obtained from Chester County Day, Box 1, West Chester, Pennsylvania.

Massachusetts

Boston's third oldest structure, the historic Old Corner Book Store Building, has been given a new lease on life by a six-week's drive to raise \$50,000, its purchase price. Historic Boston, Inc, is now its official owner. The Corner Book Store, in its day, was a meeting place of New England's literary great. Here the firm of Ticknor and Fields published Hawthorne, Longfellow, Lowell, Dickens, Thackeray, Holmes, Whittier, Tennyson and others; here Ralph Waldo Emerson conceived the Saturday Club; and here James T. Field edited the young *Atlantic Monthly*. Historical societies, publishing houses, corporations, private charitable trusts and over 1,000 individuals across the country contributed to the purchase fund.

New Jersey

The Board of Trustees at St Mary's Hall, a preparatory school for girls at Burlington, New Jersey, is looking for a suitable organization which will lease (at the rate of one dollar a year) "Riverside," the one-time palatial residence of the Bishop of the Episcopal Diocese of New Jersey. The 122-year-old

The Institute

building is located on the campus of St Mary's Hall and has been empty since 1953. Officials are reluctant to tear down the structure which is a reminder of the time when Burlington was the official and social center of the church in New Jersey. Renovation costs have been estimated at \$8,000. The twenty-room house was designed by John Nottman, a Scotsman, who won fame as one of the leading architects in America in the 1830's.



Memo from William H. Scheick

Meet Bill Perreault

► Again it is my pleasure to use this page in the *Journal* to introduce a new member of your Headquarters staff to the membership. Maurice William Perreault, AIA (pronounced Per-row), is the new Head of the Department of Education. This staff position was vacant when I became Executive Director, and I made it one of my objectives to find the right man for this important job in the Member Services Division as soon as possible.

Architectural education is an extremely live topic today. President Philip Will, Jr, brings it into his writing and public speaking. The Committee on the Profession gives it prominence in its reports. Meetings of the educators are full of dynamic debate.

As in everything else related to the profession, the essence of discussions on architectural education is *change*. Mighty changes in our urban society, our economy and the construction industry are confronting the profession with challenges to keep abreast of the times. The education of the architect is a means to this end.

One noteworthy aspect of our present thinking on education is its scope, which goes far beyond the consideration of the architectural school's curriculum as a neat package. Our concept of education extends to the young architect-in-training, and beyond that to the continuing education of the professional practitioner. What is to be done in post-college education is yet to be worked out, and this is a job for the Institute, not the schools.

What happens in the colleges is of equal interest to the AIA. A frequent starting point for debate is the statement "over-emphasis on design," which unfortunately is readily misunderstood. We all know that the talent and ability to design and plan is the distinguishing characteristic of the profession. It is the invaluable commodity we have to offer society. But the practitioner who causes good designs to be built understands the complexity of specialized talents he must find in his architectural team to effect this realization.

Robert Hastings is trying to define what this

means to education when he points out that architects "gravitate" into areas of specialization in the framework of an architectural firm without educational preparation. The more we talk about "expanded architectural services" to "provide the package without the deal," the more we see the necessity for broadening the education of the architect in college and afterwards into subjects such as finance and land economics.

The AIA does not attempt to dictate what architectural education should be. We believe it can *define* the educational needs of the profession. Changes will take place through the teamwork of the AIA, ACSA, NAAB and NCARB.

The foregoing discussion is intended to give you an idea of the importance of the activities of the Education Department in AIA and the size of the job facing Bill Perreault.

He is no novice to the educational program of AIA. An educator himself, he has participated in the Teachers' Seminars for three years, once as a student, twice on its arrangements committee. His work will be guided by the AIA Committee on Education. We look forward to a shift into high gear in the educational program of the Institute.

Maurice William Perreault, AIA, the Institute's new Head of the Department of Education, comes to us from Cornell University where he was Assistant Professor of Architecture.

Born in 1923, Perreault attended schools in his native Kansas City, Kansas City Junior College, and continued his education while in Navy service. He received his architectural degree from Cornell in 1951 and practiced with Roy Larson, FAIA, in Philadelphia for five years.

After joining the Cornell school, he continued with some private practice and has acted in the capacity of consultant on rehabilitation of the old student union project at the University.

Academically, he has been active with the R-17 Committee on Scholarships for teachers of architecture. He serves as full commander of a Naval Air Reserve Squadron in New York City. ◀

International Cultural Exchange

► Institute support of legislation “to provide for the improvement and strengthening of the international relations of the United States by promoting better mutual understanding among the peoples of the world through educational and cultural exchanges” has been made known to Senate and House committees by Philip Will, Jr.

Bills introduced by Senator J. W. Fulbright of Arkansas and Representative Wayne Hays of Ohio (S. 1154 & H.R. 5203) would:

- Authorize the President to provide for educational exchanges of American citizens and nationals of foreign countries
- Provide the financing of visits and interchanges between the US and foreign countries
- Consolidate and up date all existing exchange programs
- Provide greater flexibility in the use of funds and permit more intelligent, comprehensive planning of programs than now possible

At the Centennial Convention in Washington in 1957 the following resolution was adopted: “Resolved, that The American Institute of Architects, in Centennial Convention assembled, strongly endorses programs of interchange of persons in the arts, sciences and allied fields, as exemplified by the Fulbright Program, and urges the utmost possible support of such programs.”

To carry out this mandate, President Will appeared before a Senate Foreign Relations subcommittee and wholeheartedly endorsed the objectives of S. 1154. “As we all know,” he said, “our world is growing smaller and at the same time ever more complex. We must intensify the exchange of ideas, technical and professional know-how and personal relations for the benefit of all. This is particularly true of the architectural profession.” Will said this bill offers just such an opportunity—“an opportunity we have seized with our own limited means and which we know must be seized far more extensively.”

The AIA president told the committee of the Institute’s long-time interest and programs in the

international field including membership and broad participation in activities and congresses of the Pan American Federation of Architects and the International Union of Architects. “Our participation in these international professional organizations brings us into continuous contact with our colleagues abroad,” he said. “At our headquarters and our local chapters throughout the country, we entertain visiting teams of architects and others in the building industry as well as individual leaders of the profession from all parts of the world. In our discussions with these people we establish helpful, professional contacts and are able to both learn and teach much of benefit to the practice of architecture.

“On our travels we find that our fellow professionals abroad usually enjoy a higher prestige in their own countries than we do here. They have great influence on their governments and these foreign governments, in turn, go far to support the international exchange of professional knowledge. Most, if not all, international professional meetings are subsidized by the government of the host country and so are exhibits and foreign travel.

“In contrast, in the architectural world our efforts to maintain and strengthen international professional relations are to date supported entirely by our own members.”

President Will concluded his statement with the comment that he believes the bills recognize the existing situation and said, “we are happy to note that it will give the whole area of international exchanges a new primacy in government affairs. We welcome this approach and urge favorable action on the legislation.”

A temporary committee of leaders in education, the arts and sciences has been formed to rally wide public support for the proposed legislation. Architect members of the Advisory Committee of the ad hoc Committee for International Cultural Exchange are President Will and Dean Pietro Belluschi. ◀

P. S.

Library Notes

Town and Davis

Ithiel Town and Alexander Jackson Davis formed in 1829 "an association to practice architecture professionally in New York," which, continuing until shortly before Town's death in 1844, linked their names forever in architectural history. So also are their names joined in close association in three books in the Institute's library. These are respectively two works by John Howard, eminent British prison reformer, "State of the Prisons in England and Wales," 1777, and "An Account of the Principal Lazarettos in Europe," 1789, and one by Robert Castell "The Villas of the Ancients Illustrated," 1728.

The first is inscribed "Presented to the NY Chapter, AIA by A. J. Davis" and below "Library of Alex J. Davis from Ithiel Town's Collection 1840." The other Howard item is inscribed "Presented to the NY Chapter by . . ." and below in an earlier hand "Alex J. Davis NY from Ithiel Town's Library." This was evidently purchased for \$10 for it is so marked on the inside front cover. The third is inscribed "Am. Inst. of Architects from Alexander J. Davis 1827-1835" this latter having been rewritten over an earlier inscription, with below "of I. Town." The dates in this instance are puzzling as the book can hardly have belonged to Davis at this early date if it had been in Town's library, and there seems to be no real indication of what they mean. Again, we know the price, for on the front cover appears "Of Town at \$5.00."

The varied wording in the two Howard books almost suggests different dates of acquisition by Davis, but both indicate that he felt it significant that the books came from Town's library. The reason for this is easy to find for Ithiel Town had the most important library on art and architecture of his time. At his death, it numbered over eleven thousand volumes with many thousands of engravings. His library was widely recognized for its quality by his contemporaries and was generously made available to those who would share it. William Dunlap in his "History of the Rise and Progress of the Arts and Design in the United States," 1834, wrote "His li-

brary of such works [on art] is truly magnificent and unrivaled by any thing of the kind in America, perhaps no private library in Europe is its equal." He further notes the "splendid library is open to the inspection of the curious and freely offered for the instruction of the student." Mrs Lydia Sigourney in 1839 wrote an article for *The Ladies Companion* in which she describes "The Residence and Library of Ithiel Town, Esq." She visited it in New Haven, Connecticut, where he had an especially constructed library on the second floor. This room was forty-five feet in length, twenty-three in breadth, and twenty-two in height. He had taken extra precautions to guard against fire. "Every partition in his building even to those in the closets are of brick; all the inside plastering is upon bricks, without laths, except the ceiling, and all the floors are of mortar two inches in thickness, with a coat of water-cement, and the rooms without woodcases."

Ithiel Town, who is estimated to have spent \$30,000 on his library by 1839, was a successful architect who was responsible for the design of several state capitols. However, his financial success stemmed more from his engineering skill, for he was granted a patent on what became known as the Town Truss. Widely used in bridge building, the royalties were evidently quite substantial.

Before his death in 1844, Town had begun to sell some of his collections and the dispersal was completed by auction afterwards. The catalogs survived and from them we learn that emphasis was put on the great number of illustrated works. Town had estimated in discussing his library with Mrs Sigourney that the books contained over two hundred thousand illustrations. To this must be added the some twenty- to twenty-five thousand separate engravings he owned, making his collection certainly one of the most outstanding from the point of view of illustrative material.

Talbot Hamlin writing in his *Greek Revival Architecture in America* says "Yet the number of books in these catalogues is far below the number we know he owned, and what happened to the

rest of them is still a fascinating conjecture." We know that Town had begun disposing of his collection before his death and it is reasonable to suppose that many volumes were sold to friends, such as the three mentioned above. It may well be that it was only duplicates and copies of extra editions that were disposed of, for we find from the auction catalogues that he had other editions of Howard and what is probably another copy of the Castell. The Castell item appears as lot no. 644 in the catalog of the sale beginning Nov. 20, 1848 in New York and an edition of Howard's work on prisons dated 1760 (evidently an error for 1780) is lot 714. Similarly in the catalog of the sale held in Washington from April 30, 1844 on, item 1042 is Howard's *Prisons* of 1784 and item 1043 is the *Lazarettos* of 1791.

That Town had duplicates is readily apparent from the 1844 catalog which lists two copies of Benjamin's "Rudiments of Architecture" of 1814. It seems likely that a detailed study of all the catalogs (some available only in New York) would reveal more duplication.

In any event however Davis secured these volumes from his partner's library—and purchase at auction seems doubtful in view of the markings—he valued them and felt them worthy of presentation to his professional society.

These are but a few of the volumes in the Institute Library which have an association interest. Many volumes in the Library have been inscribed to the American Institute of Architects by their authors. Other books have been presented by the authors to other individuals from whose libraries they have found their way here.

A volume linking two other prominent nineteenth century American Architects is a copy of Richard Upjohn's "Rural Architecture" New York, 1852. This is inscribed "Rich^d. M. Hunt, With the compliments of the author—Rich^d. Upjohn." Both founding members of the Institute and both Presidents, this volume has a high association interest for us. Inscriptions such as these can often remove a book from the ordinary and make it take on an interest and even an importance far surpassing a copy without such an inscription.

We hope that eventually equally significant items will be received thus adding more spice and flavor to the collection.

G.E.P.

Book Reviews

Motopia, A Study in the Evolution of Urban Landscape. G. A. Jellicoe. New York, Fred A. Praeger, 1961. 168 pp illus. \$9.50.

The title of this book refers to the project for a utopian motorized city as conceived by its author. It is not surprising that it comes to us from England where there appears to be a greater appreciation for the natural landscape than in this country. But in view of this, this reader finds the "severity of the geometry," as Mr Jellicoe puts it apologetically, the proposed solution surprisingly objectionable. "Motopia" should be widely read in Detroit, if only as a semi-serious reminder that research for the means to separate automobile and pedestrian deserves further support from the producers themselves. The book describes a residential project where automobiles utilize roof-top travel. Not usual in a book of this type, the graphics are superb. They are also surprisingly persuasive, if not conclusive to Mr Jellicoe's case.

MATTHEW L. ROCKWELL, AIA, AIP

Creative Color. Faber Birren. New York, Reinhold Publishing Corporation, 1961. 123 pp illus. 8½" x 10½". \$10.00

When a new book is written by an authority in any field, it becomes an event worth noting. Faber Birren, well-known scientist and artist, has just written one that he aptly calls "a dynamic approach for artists and designers."

Color has been used by artists, or at least by artisans, before history was recorded, down through the ages, to the present day. This is true of the painter, the sculptor (to a lesser degree), the architect and the designer.

In recent times the scientist also has studied color; first the physicist and the chemist, and later the physiologist and the psychologist, each from a different point of view. As has often been said, color has become a science in itself.

The color scientist has made great strides during the past few years and is now in a position to bring to the attention of the artist certain conclusions that may be of

value; new discoveries by which the artist may be able to develop new art forms in color.

In the past the artist has worked almost exclusively in terms of feeling and intuition. But, nearly a hundred years ago, the Impressionists took an interest in what the scientists had discovered. They attempted to translate effects of atmosphere and light into the language of paint on canvas. Today these experiments are considered great achievements.

In the first part of his book Mr Birren presents in a fresh manner some of the basic facts that are generally accepted by colorists.

The real contribution of this work, however, lies in what the author calls perceptivism, the part that the beholder plays when he looks at a work of art. This participation brings about in the mind of the beholder perceptions of such phenomena as luster, iridescence or luminosity, through the medium of paint.

Birren not only explains in detail how the artist can produce these effects, but he gives explicit descriptions of thirty fixed palettes with which these effects can be achieved.

WALDRON FAULKNER, FAIA

Building for the Aged. F. H. J. Nierstrasz, Ed. Princeton, Van Nostrand, 1961. 187 pp illus. 8¼" x 11¾". \$16.50

The editor of this book, as secretary for various study groups on houses and other buildings for the aged, has gained an expert knowledge of all aspects of the problems involved. Research in Holland on facilities for the aged has been carried on by Bouwcentrum of Rotterdam. This book is published for Bouwcentrum by Elsevier Publishing Company of Amsterdam, and distributed in the US by D. Van Nostrand Co, Inc. This edition is in English. While the discussion relates to conditions in the Netherlands, much of it is applicable to the situation in the US and other western countries. The examples are Dutch, their design quality varies, but many of them are interesting. Many data are given and metric dimensions are translated into feet.

In Holland as in the US, the proportion of old people in the population is increasing, "three generation" families are disappearing, and purchasing power of oldsters is reduced because of inflation. Old people are neglected by medical practitioners. The sociological problem of the aged, it is affirmed, is not to be solved solely by providing suitable housing.

Investigations in Holland reveal a definite preference for facilities which provide independence. It is interesting to note, however, that in Holland as in the US many old houses are unsuitable because of their size and arrangement. An attempt has been made in this study to indicate types of housing and nursing care which are suitable for needs and resources of the different classes of occupants. The assertion is made that: "The existing old-fashioned nursing home without these (rehabilitation) facilities must either be modernized or replaced."

A type of facility which is rare in the US (to say the least) is the en-pension home. This is intended for oldsters "who live in self-contained units consisting of at least one room and where they need to do little or no domestic work, because this work is done by the staff of the home." Meals are prepared centrally and generally are served in community dining rooms. Recreation rooms are also included. The number of occupants varies from fifty to 250.

Another type of housing for the aged which is not common in the US is the "service flat." It provides more complete facilities than the en-pension home, and consequently it is occupied largely by the well-to-do.

The importance of long-range planning for the community is recognized. The aged should not be segregated. They should be located where they can take advantage of community facilities and where they may have contact with people of all ages. The following facilities should be as close to each other as is practicable:

- hospital
- nursing homes
- physio-therapy and rehabilitation
- en-pension homes
- service flats
- self-contained homes for aged

This book should give American architects a fresh view of the problem of housing and caring for the aged.

C.H.C.

Creation Is A Patient Search. LeCorbusier, translated by James Palmes with intro. by Maurice Jardot. Praeger, New York, 1961. 312 pp illus. \$15.00

This book, as its jacket blurb says, "is not merely by and about LeCorbusier—it *is* LeCorbusier." In a delightfully chaotic and spontaneous potpourri of his sketches, text, drawings, exclamations, renderings, plans, prose poems, clippings, reproductions of his paintings and tapestries (some in bold, rich color), aphorisms and photographs of his architecture and sculpture all of which this great artist-architect personally assembled and presents. He may reveal more of himself than he intended. There is more than a touch of bristling paranoia, missionary zealotry and heroic pathos in this self-portrait. But there is also overwhelming evidence of his prophetic vision and unquestionable genius. Expertly translated and beautifully designed and printed, this comprehensive account of LeCorbusier's life and work is more than a fascinating autobiography in words and pictures. It vividly reminds us of his enormous influence not only on city planning and architecture but also on many other facets of the often frightening, often inspiring, and sometimes beautiful brave new world that is rising about us.

W. V. E.

India — 5000 Years of Indian Art.

Hermann Goetz. NY, McGraw-Hill, 1959. 275 pp illus. slipcase 7¼" x 9½". \$7.95

One of the Art of the World series, this was originally produced for Holle Verlag in Germany. It is well-printed on soft matte paper with over seventy exceptionally good color photographs tipped-in. Where objects are essentially monochrome, very pleasing background color is introduced.

The author's career of twenty-five years in India has prepared him well for this task of summarizing fifty centuries of most complex political, social and religious changes with their inevitable effects upon artistic expression.

There are several rather arid stretches of names and facts-end-to-end—sample: ". . . the *stupā* proper was surrounded by a railing (*vedikā*), consisting of posts (*thaba*) connected by horizontal beams (*sūchī*) and covered . . ." another sample: ". . . cave temples of Ma-

hendrarman I, in the neighborhood of Kānchī, at Pallāvaram, Vallam and Tirukkalukkunram near Chingleput . . ." Such blocks of information can be spotted and skipped by the alert reader seeking general understanding, appreciation of styles and character, which other parts of the text amply provide in a more interesting manner. An appendix includes a useful parallel of art periods in other regions, selected references, a glossary, and there are generalized maps.

It is startling perhaps to realize that although existing, known monuments in this region are more numerous than in all of Europe, most of the famous cities of the past are huge, unexcavated mounds and that every year more finds are made. Much was irretrievably destroyed, of course, by the iconoclasm of Muslim invaders who smashed innocent representation along with the decadent—to them both were immoral. Goetz clearly recognizes the changes induced by milder conquest, the tendency to absorb local deities into the new hierarchies of the invaders. This is by no means absent today in primitive areas where another religion has been superimposed on what it calls "paganism." Art and the beliefs and social practices of its time reflect each other and affect each other—the "solid history" of archeology brings them to light, perhaps centuries later.

In Indian art, the varied use of erotic elements cannot be overlooked. A review of another book on India refers to "endless vistas of erotic sculpture . . . no longer fashionable to consider immoral. . . ." In more than one instance this eroticism seemed a conscious strategy of preparation for conquest through social decadence induced by debased art, orgiastic religion, or official inter-regional marriages.

In other periods, the human body in various regal semi-deifications has possibly never been represented with such nobility and expressive grace. These most charming "loving couples" are dated late Gupta, before AD 600, deep in rock-cut caves in south-central India, some of them unseen for more than a thousand years.

Goetz states that Gupta sculpture was the ". . . collective product of the poets and priests who provided the imagery, of the actress-hetairae (*Ganikā*) who explored the potentialities of expression through the medium of the human body, and lastly of the sculptors who had a

perfect knowledge of anatomy, but could never regard that latter as a means of expression by itself . . ." The reference to "hetairae" is a significant link to many other highly-developed civilizations. Whether the "girls" are called *Hetairae* in classical Greece, *Ganikā* in Hindu, *Geishas* in Japan, or courtesans as a category — these were elegant women, educated in the classical literature and speaking the Sanskrit of the upperclass, good musicians, dancers, actresses, principal *communicators* of culture — schooled like Gigi.

Our Western world began the twentieth century with a hard glaze of Victorian prudery. On this, in our time, the joyless Dr Freud has so scratched and scribbled his graffiti that the innocent eye is confused and a natural visual morality is rare. The works of Georg Kolbe, a pre-World War II German sculptor, have some matter-of-fact nudity, rather cold, but in better works infused with rhythmic grace. The playful sea-boys in Carl Milles' famous St Louis railway station plaza fountain, The Meeting of the Waters, readers may recall, showed up one morning wearing pants. No joke—"outraged" citizens did it. A recent article in *Harpers* (November 1960) "Pornography Is Not Enough," by Eric Larrabee, takes several wholesome and thought-provoking tacks over the rough water of censorship and the anomalies of our attitudes.

Architecture and sculpture united again? Perhaps the second half of the twentieth century will see this cyclic change. The pendulum will inevitably swing away from abstraction to the figure. (Actually, the figure rides the pendulum!) We may never attain the Indian architects' design mastery (or ever again, the time, money or craftsmanship) displayed in the subordination of rich and vigorous sculptural texture to building mass. We may not swing that far in taste from the inverted sensuousness of Mies van der Rohe's "less is more." But the question is, how will we handle sculpture and mural when more cities adopt the enlightened requirement that a certain percentage of every public building contract be allocated for art? In Germany this varies from place to place (1% or 2%). In Philadelphia it is 1%. In some of these Indian periods it must have been 85%. Our gadget-ridden civilization insists on mechanical allocations of 50% of total cost, or

more, depending on building type and function.

Sic tempora mores!

The section of this book dealing with Indo-Islamic art handles smaller objects, the quite lovely Rajput miniature painting, for instance, with more detail and illustration than the architecture.* There are a few final pages on Indian art of today. E.P.

California's Architectural Frontier.

Harold Kirker. San Marino, Huntington Library, 1960. 224 pp, 64 plates, 6" x 9½". \$7.50

Harold Kirker, Assistant Professor of History at MIT, manages to fully and finally shatter the long-standing myth of early California's lovely haciendas, in a well-documented treatise.

Although this small book is well illustrated with more than sixty plates, the complete lack of sketches of pertinent architectural details as well as the lack of any floor plans of some of the early structures discussed, may hinder the understanding of some of the architectural developments, by the average lay reader.

Extensive footnotes throughout the text, as well as bibliographical notes included at the end of the text, point to the very gratifying thoroughness in research for which the author must be fully credited.

Mr Kirker states in his preface, that his aim was to create "a social history of California architecture," rather than concentrating on the esthetic or purely technological development of building techniques. This he has accomplished very well indeed, and the chapters on "The Abode Builders" and "The Pioneer Builders" are particularly well-written and very enlightening. A short chapter follows these, which concerns itself with "The Great Migration" following the discovery of gold in California; here Professor Kirker explores the sociological influences of the gold rush days on the types of buildings developed during these hectic years. "The California Renaissance," a period rich in architectural technological development is treated next. Here we find clear and lucid explanations of the historical development of balloon framing, the "two-by-four stud" and the extensive brickwork and excellent stucco

construction which followed. Many of California's early architects are discussed briefly and their work is described. A short list of biographical source material at the back of the book will prove most helpful to any reader who desires to do further research on any of the lesser known architectural lights of the last century.

The publishers of "California's Architectural Frontier" have performed a real service in giving us this long-needed treatise on the style and tradition in California's early period of development, and although this book deserves a far more scholarly review than is given here, it can without reservation be recommended to the bookshelf of any architect or layman interested in California's architectural past as well as anyone seriously interested in the history of the Far West.

ROBERT P. MEYERHOF, AIA

The Fowler Architectural Collection of The Johns Hopkins University.

Catalogue compiled by Laurence Hall Fowler and Elizabeth Baer. Baltimore, The Evergreen House Foundation, 1961. 383 pp plates. \$20.

Eagerly awaited for several months, this most important addition to architectural bibliography appeared early this year. As Miss Baer points out in her preface there has been no adequate source of detailed descriptions of architectural books. For the 448 titles in the Fowler collection this deficiency has been remedied for the catalogue makes a point of full bibliographical descriptions.

To satisfy his own curiosity the reviewer made a rough count of titles by date and by place of imprint. The figures are approximate only and do not include undated volumes or those with no place of publication stated. By date: 15th century—4; 16th—110; 17th—133; 18th—143; 19th—31. By country: Italy 162; France and England 105 each; Holland 31; Germany 19. Other countries represented are Spain, Switzerland, Belgium, Austria and USA.

For several authors—Vitruvius, Alberti, Serlio, Palladio, Vignola and Scamozzi the holdings are so numerous that a really comprehensive view of the widespread publication of these authors is possible. For Vignola a special chart has been prepared comparing the thirty-two plates appearing in six-

teen different folio editions. In addition to a detailed description of each title, notes are given of other editions and variant copies of the editions described insofar as located. We are pleased that several such in the Library of the AIA have been so noted.

Some illustrations have been included indicative of the rich illustrative materials to be found in many of these early architectural books. Most effectively presented in the fine typographic style one has come to expect from the Anthoensen Press, this is a book which should be on the work shelves of every collector or library dealing with early architectural books.

G.E.P.

The Age of Grandeur: Baroque Art and Architecture. Victor-L. Tapié.

New York, Grove Press, 1960. Translated by A. Ross Williamson, 195 plates, 317 pp illus. \$12.50

The author, a professor of modern history at the Sorbonne, states that it is the historian's task "to disperse prejudice" and applies it to Baroque. "It is surely unworthy to dismiss it [Baroque] as decadent or as a deviation from the Renaissance," he writes. "It is truer to say that it was a derivation from the Renaissance . . ." He then develops this thesis, showing relationships between historically conditioned societies and their emerging tastes. Religion, different concepts of royalty, feudalism in repose or challenged by royalty and the middle class, all were significant in determining the degree of acceptance of Baroque art and architecture. It spread, he states convincingly, because less responsibility was assigned to the Jesuit order and relatively more to a popular regard for royalty. Tapié demonstrates that Baroque was a full-blooded, robust development which occupied the minds and talents of a great many geniuses and master craftsmen. Excepting Spain, Tapié draws examples and deals in some depth with every major area of Baroque influence. He shows greater verve and persuasiveness in the chapters of socio-historical analysis, however, than in those limited to detailed discussion of individual works. Only in the analyses of Bernini and Wren does Tapié's esthetic equal his history. Recommended as history, social commentary and serious appreciation. G.H.

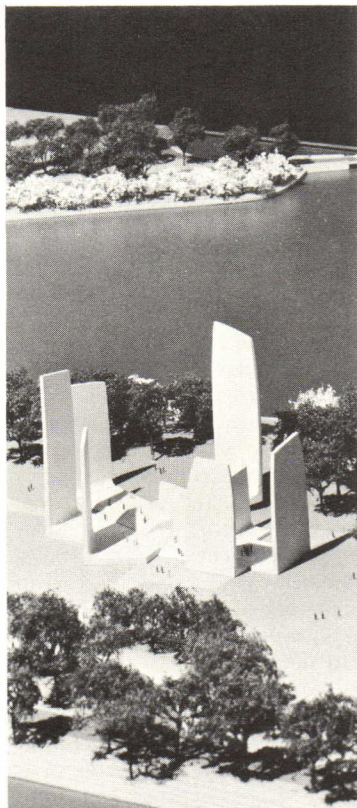
*see "Shadows from India," by Roderick Cameron (1958), reviewed in *AIA Journal* May 1960:60

► A successful design in architecture must be a clear, strong statement. Weakness in design is revealed by an incoherent handling of masses, a fumbling at intersections, a lack of rhythm or order in fenestration, poor proportions, even by thoughtless siting or designing without due regard for the building's environment—in fact, many things. One has only to compare the Pirelli building or the Seagram building with the typical many-planed, many-faceted Park Avenue office building; or a house designed by a good architect with a typical builders' house.

A lesson might be drawn from the still-controversial FDR Memorial competition designs. Although, after a careful study of the models, I feel that the jury made the only possible choice when all factors are taken into consideration, I still feel that some of the other finalists achieved a greater unity and coherence than the winner, they made a stronger statement, thus better expressing the powerful personality memorialized. The soaring tablets are a noble concept, but one has a feeling of confusion, a lack of coherence in their grouping. This is not by any means to imply that I feel they should have been arranged in a druidical circle or in stiff classic rows. But one should receive more of a sense of order—which certainly can be achieved without symmetry. Furthermore, the monument is sited wrong, it faces the wrong way. Although it may not be apparent from photographs, this group has a definite front and back, and the front faces the river, with its back to the Tidal Basin, the White House, the city and the thousands who will view it from the mainland. People driving by in Virginia will see the front, or those paddling by in canoes. Another weakness is the *actual* approach to the monument. There is a drive sweeping across the front, with a space to pull over for passengers to get out, but the car must move on. For every one visitor who arrives in such style, and is thus enabled to approach the memorial from the front, a thousand will approach from the parking field. And their only approach, unless they walk quite a way around, is a path which sort of sidles in between slabs—a decidedly left-handed approach. While I'm talking about the winning design, I might make one further comment: The design, if built, will benefit greatly from the collaboration of a landscape architect. A bit of greenery within the enclosure will do much to relieve the stark, glaring whiteness of it all, which, in the intense sun and heat of a Washington summer, could become overpowering. The whiteness itself is, however, a virtue, for whiteness is the tradition for monumental Washington, whiteness properly relieved by rich planting.

I didn't set out to write a critique of the already overly-criticized FDR Memorial competition. I was talking about the need for good architecture to speak clearly and with strength. To illustrate how siting alone can make a structure powerful, no matter how small it may be, consider the obelisk in the center of the Piazza of St. Peter's in Rome. Ed Bacon pointed out in his talk at Philadelphia, and the pictures on page 78 of the June *Journal* graphically illustrate, how the great "square" lacked coherence until this slender needle was centered. It now both dominates the composition and gives form and meaning to it.

So, in closing this bit, I return to my opening statement: A good design is clear, strong and unequivocal.



Recent Solutions: The Criminologist's View

by **Norman B. Johnston,**

Department of Sociology, University of Pennsylvania

New ground was broken in the field of correctional architecture when criminologists, penologists and architects came together for a conference held at the Octagon March 6-7. The major topics considered were: Correctional philosophy and architecture; treatment and security; discussion of recent projects. Four papers from the conference appear in this issue. Other papers given are of great interest and may be printed in later issues. The consensus of the participants and those who observed the conference was that this experiment in mutual intellectual stimulation was very successful and may prove to have a healthy effect upon the future development of correctional architecture

► By the end of World War II most of the countries of the world with well-developed prison systems were struggling to put into practice a twentieth century correctional philosophy in a series of Victorian buildings, usually designed for solitary confinement night and day. This great gulf between physical plant and correctional policy is only now being bridged by ambitious building programs in many parts of the world, and we are now witnessing the greatest prison building boom since early in the nineteenth century.

A Look at Western Europe

In Europe, because of continued shortage of housing, government efforts have usually been directed to civilian needs rather than to replacement of antiquated prison facilities. In France and Italy, 200 year old converted church properties continue to be used for long term offenders. Holland, Belgium and Germany rely largely on the prisons built during the nineteenth century reform period. In Sweden and Denmark these older prisons have been considerably augmented by new construction or conversion of older country estates for small open colonies of various sorts. Until Britain launched an ambitious construction program in 1958, new

prison building in Europe has largely been confined to two countries:

Spain and Portugal— Strong Conservative Elements

Spain, which probably built more new prisons than any other country in the 1920's and 1930's, has erected 19 since 1943. A few of these must be considered as replacements for structures damaged during the Civil War, but most represent replacements of older and inadequate institutions. With two or three exceptions, the new Spanish prisons have been built in the traditional radial style, which has continued to be used since the first reform prisons of the mid-19th century. These prisons represent highly conservative architecture. Built with prison labor, they usually have an elaborate, traditionally Spanish exterior and are surrounded by a double wall with guard towers manned by army personnel. A corridor connects the front offices with a central rotunda, from which radiate two, three or four wings of outside cells on two or more galleries. Wings are tapered in the traditional style, the corridor becoming wider as it approaches the rotunda. In this way each prisoner can observe the Mass which is conducted in the rotunda. (Such wings, again making their appearance at

Moberly, Missouri, the Philadelphia House of Detention, and other institutions, have been used in Spain for over 100 years.) Most of these new prisons contain completely separate sections for women and for political prisoners, and all have complete medical and recreational facilities.

In recent years the government of Portugal has embarked on a very extensive program of construction of detention facilities and prisons as well as agricultural colonies for convicted offenders. Two new central prisons have been built near Lisbon. Linho prison for 500 men is an "H" shaped three story structure of white stucco and a simple external style. The new prison at Porto is similar.

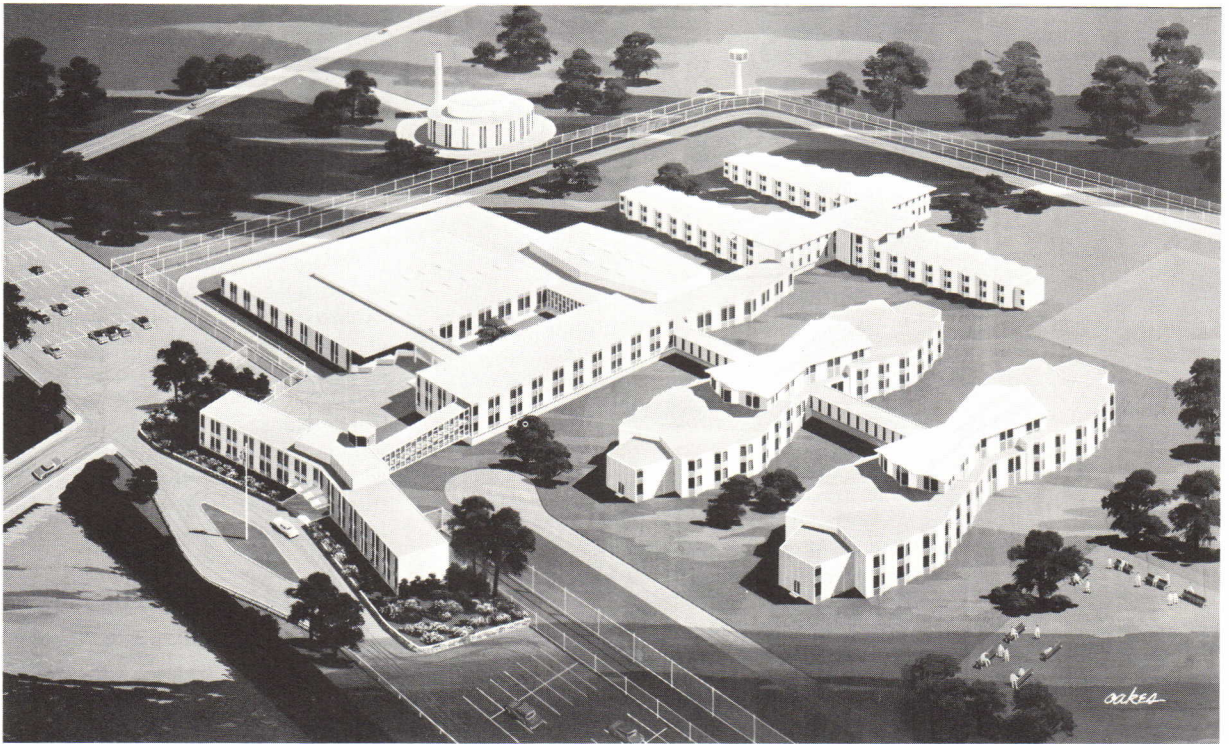
Reforms in Great Britain

The Prison Commission in England has developed a long range program of replacing older prisons and augmenting present facilities. The first of these new prisons has been opened at Everthorpe, near Hull, in 1958, and is the first to be built in that country in over 50 years. A new prison is currently being erected at Blundeston, in Suffolk, which will be a prototype institution. It consists of an "H" shaped body of buildings containing two pairs of "T" shaped housing units facing each other and joined by a service building. The latter contains a school, library and hobby rooms on the first floor, a kitchen and four dining rooms on the second, with two chapels above. All buildings, with the exception of a front administration building and industrial shops, are joined by corridors. Housing units contain bathing facilities and day-rooms on the first floor, and three upper stories of outside cell rooms accommodating 75 with a lavatory on each floor. A 12 ft. fence surrounds the prison for security and an 8 ft. wall for privacy.

Technical

Latin-American Trends

The various countries of Latin America show as much variation in their construction programs as we have seen in European states. Brazil, Argentina, Venezuela, Uruguay and Ecuador have erected a number of prisons and agricultural colonies in recent years. The larger



New House of Detention, City of Philadelphia

prisons have usually been on the conventional telephone-pole plan, but recently some notable exceptions have appeared.

Brazil was the first South American country to build a model cell prison along American and European lines and the first in the Americas to erect a telephone-pole plan prison, at São Paulo in 1911. Because of a federal system of state governments much like our own, considerable variation exists in different parts of the country. In the state of Rio Grande do Sul alone, in a four year period from 1952 through 1955, 32 small and two large jails were erected. (From correspondence with Major Victorio Canepa, of the Brazilian Prison Association and an outstanding figure in Brazilian penal affairs.) A large number of open colonies, farm prisons and special institutions have been erected in Brazil in an effort to decentralize the prison system. The penitentiary opened in Rio in 1942 on a telephone-pole plan contains 1650 individual cells with wash basin, toilet and shower; and complete service facilities and quarters for conjugal visiting.

Two other prisons, both opened in 1959, might be mentioned. Estadual Penitentiary at Porto Alegre is being built in stages. The first group of buildings, now com-

plete, consists of two free-standing cellular pavilions containing a total of 300 individual cells with automatic locking devices, on three floors. Each building has its own dining facilities and shares a common chapel, laundry, library, theater and maintenance workshops. The second stage, consisting of industrial buildings and an additional cellhouse, is scheduled for completion in 1963. The surrounding wall will be constructed somewhat later. (A photograph of Porto Alegre and a description appear in J. Carlos García Basalo: "Introducción a la arquitectura penitenciaria," to appear in a forthcoming issue of *Revista Penal y Penitenciaria*, published in Buenos Aires. Mr. García Basalo is Inspector General of the Argentine prison system and has long been a scholar of South American penology and its architecture. The references to the above noted article in this paper are without page numbers as Mr. Basalo has kindly supplied me with page proof in advance of publication.)

Perhaps an even more advanced plan is that of the Penitenciaría Agro-Industrial de Goiás, the only penitentiary for this state and located 200 km. from the new national capital, Brasilia, whose sentenced offenders it will hold. Designed by the architect Enrico

Godoy, the prison contains minimum and medium security housing for 300 inmates in a single rectangular structure of three floors. Cells are of the outside type, 12 ft. by 6 ft. by 9 ft. At the rear of each cell, behind a partial partition, is a w.c., wash basin and shower. Each cell has a radio connection and is decorated in one of a variety of bright colors. The prison enclosure is made cheerful by many grassy areas and by the light blue and white exterior of the buildings. A 12 ft. wall is formed by prefabricated steel and concrete sections 6 ft. by 12 ft. Outside the walls the minimum security section provides individual quarters for inmates with families and collective housing for bachelors, each prisoner cultivating his own small parcel of land. The state provides equipment as well as medical and school services, and the prisoner upon release receives some payment for his production. The prison was erected within a year.

Two other outstanding correctional institutions in Latin America are worthy of description. One, the Colonia Educative de Trabajo in Uruguay, commenced some years ago and only recently completed, is a rectangular building on stilts with five floors of cells above. Taking almost 25 years to erect because of lack of funds, this pris-

on has 500 cells for all sentenced men in the country. Meals are served in the cells and security is provided by an electrified fence, observation towers and a system of tear gas piped throughout the structure. (Juan Carlos Gomez Folle, *Institutos penales de Uruguay* (Montevideo, 1947), p. 225. See also Basalo, *op. cit.*, and photographs in Uruguay, Dirección General de Institutos Penales, *Gestión cumplida en el periodo marzo 1938-marzo 1943* (Montevideo, 1943), pp. 20 and 28. It is interesting to compare the model prison proposed by John Howard in 1780, which was raised on arcades for security, with this ultra-modern example also with cells raised to the second story level.)

The second structure, opened in 1957, is the New Penitentiary of the Federal District in a suburb of Mexico City known as Ixtapalapa. Designed by Ramón Marcos Noriega and built at the cost of 49,000,000 Mexican pesos, the institution was intended to relieve the terrible overcrowding at Lecumberri Prison, the old penitentiary within the city. A double wall surrounds a nearly square enclosure containing four unconnected housing units in line with a 54 bed hospital building and chapel. On the other side of the enclosure near the entrance is the administration building, which also contains conjugal visiting suites. Flanking this building is another structure 90 ft. by 450 ft. containing workshops for 400, an auditorium seating 700 and a school. The rectangular inmate housing units have an interior patio which divides nearly the whole structure into two separate areas. In three of the buildings these areas contain two banks of 12 inside cells back to back on two floors, and built to accommodate three men apiece, making each unit's capacity 288. The cells have barred fronts like most U. S. cells. The remaining housing unit is similar but contains 152 individual cells for more dangerous offenders and homosexuals. Each cell has a w.c. and lavatory. Collective baths and dining areas with small tables are located at the end of each building. In threeman cells, a double decked bunk and single bunk are on one side of the cell, a table and bench are on the other side, and sanitary facilities are at the rear. (Descriptive material on this institution appears in Alfonso Quiros, "La nueva penitenciaría de Mexico, D.F.," *Revista penal y*

penitenciaria, XXI (1958), 157-180; and in Constancio Bernaldo de Quiros, "La nueva penitenciaría del Distrito Federal," *Revista jurídica Veracruzana*, IX (July-August, 1858), 337-374; and Basalo, *op. cit.* A photograph of a model of the prison giving a clear idea of the layout appears in Alfonso Quiros, *op. cit.*, p. 159, as well as photographs of cells and other structures.)

Crime and Clinks in North America

In North America our problems have been somewhat different. The U. S., with higher rates of crime and a rapidly expanding population must provide for a larger number of prisoners relative to the size of the general population. This has always been done by the use of large institutions. The contrast to Europe can be seen in Sweden, which has over 50 institutions to house the prisoners that we could place in any two of our larger state prisons. Differential prisoner attitudes towards the use of violence, higher construction costs and greater availability of land constitute important differences between American and European construction problems. The trends in post-war building are familiar to us all. The continued enthusiastic use of the telephone-pole plan, sometimes in a rather stereotyped fashion, sometimes with imaginative modifications; the use of zones; smaller capacity wings; floors instead of galleries; and small dining areas have all been attempts to remove the curse of bigness from the American prison. These efforts have been variously successful, as we have repeatedly observed in these meetings. More informal and convenient layouts of open institutions have also been developed at such places as Moberly, Missouri; Fox Lake, Wisconsin; Enfield, Connecticut; and St. Vincent de Paul, Quebec. California has experimented with the use of so-called satellite institutions. Continued pressure for economy has at least partially been responsible for a reduction in security devices, new building techniques and materials.

Today's Solutions and Future Demands

All this is but an introduction to a few brief suggestions which follow. First, it seems that the history of prison architecture has been characterized by too heavy a reliance upon "fashions". We may not need drawing board novelties any

more than we need an undue reliance upon standard solutions, but we do need imaginative searching for new ways to solve architectural problems. Prisons built during the nineteenth century were expected to last for centuries, as indicated by cell partitions that were a foot thick and by strong walls of granite. The very solidity of such construction and the basic inflexibility of the older type of layouts have proved a great disadvantage. Correctional philosophy however is in a fluid state. Behind this cliché lurk some of our family quarrels in penology. In all frankness, we must face up to the unpleasant fact that while definite trends in correctional philosophy can be noted, the effectiveness of most of these programs has not yet been established. Honest differences of opinion among penologists reflect differences in training, experience, age and personality. The treatment approach, with its usual ameliorations of prison harshness, currently claims the most articulate and numerous spokesmen. Nevertheless, the architect may not have the satisfaction of being able to cull out foible and fad from fact, but must instead rely on the best-informed judgments available to him at the time.

Understanding that these best-informed judgments may change, that the character of the inmate population may also change in a generation, the architect must provide a physical plant and plan which possess some flexibility. The prison of 1962 may have to take on some strange functions by 1972. Some of these functions we cannot anticipate. Pre-release housing is a good example of the latter. Already, some prisons provide separate facilities for men about to be released on discharge or parole. There are good psychological and sociological reasons to separate these men from the general inmate population. There are also good reasons that such facilities should be physically less isolated from the outside community. In some European prisons inmates work for private employers in the daytime and return to the prison enclosure at night. Whether such a housing unit is inside or outside the prison proper, serious new administrative and architectural problems appear. Another new or augmented function appears with the increased use of group therapy in its several varieties as well as with more conventional individual interviewing by

professional staff. Some ingenuity will be needed to provide such activities with settings that are at the same time informal, attractive and conveniently accessible to prisoners while providing necessary dignity, separation and privacy. It is also probable that more states in the future will adopt the use of conjugal visits. When or if they do, special facilities like those in some South American countries will have to be provided.

Form Follows Function

We have suggested that hackneyed architectural solutions be avoided, one could add another and perhaps unnecessary caution. At one time prison style was expected to do wonders; later it became almost a matter of indifference, and now it seems to have recaptured some of its former importance. It has become a commonplace to suggest that style should be the logical outgrowth of function and of the materials used in construction. Although we are not in complete agreement regarding the functions of prisons, the types of building materials and the general nature of imprisonment as a socially disapproved status would suggest a lean and austere style, but not necessarily a grim one. A prison should not look like a college campus, unless a campus is the proper place for prisoners. Neither should it look like a concentration camp, unless by the same token, we decide that such a repressive regimen is efficient in changing criminal habits. Certainly expensive architectural decoration which serves no useful purpose is inappropriate in an institution that provides no other luxuries for its inmates and must remain at least mildly punishing, no matter how much mitigation is introduced into classical penal treatment.

Who Knows What?

The third point deals with the need for systematic research not only in the field of correctional administration, but also in the area of correctional architecture. For example, we do not know at this point which types of prisoner personalities react best to which types of treatment. It may be heresy in 1961 to suggest such a thing, but it is quite possible that the "treat-'em-rough" school is in fact effective for a small minority, that the humanitarian-vocational training approach will also work on a

small number of prisoners. In a more fundamental way we do not know very much about changing adult behavior in any predictable fashion, although the art of successful practitioners may show a high degree of success from time to time. Consequently the criminologist is partially limited by the generally unsatisfactory state of the behavior sciences.

From the standpoint of architecture, some very fruitful but exceedingly elusive research might be done on the relationship of physical structure to social groupings and organization, and the latter to rehabilitation or non-recidivism. Some of the finest correctional institutions in the world are operated not in the "old red barn," but in old country estates in Europe. However, one suspects that with an increase in size, the structure becomes of greater and greater importance. Do bright colors favorably affect prisoner morale and reduce vandalism and disciplinary problems? I have recently had the opportunity to visit most of the English prisons, many of whose interiors have been repainted in lively colors instead of the traditional greys and greens. There is no agreement among prison wardens in that country on the effect of these changes. There are only impressions and opinions. As difficult as it may be, it is time we moved from this shadowy realm of impressions and opinions and tried to apply real research methods to some of these problems. The financial and societal stakes are high.

Information Clearing House

A final suggestion—more limited and more specific: namely, that some sort of modest clearing house be set up so that the innovation and mistakes as well as the plans from one construction effort might become available to other correctional administrators and architects. The participants of this conference, for instance, have a tremendous accumulation of experience which somehow should be made available to others. The planning section of the Federal Bureau of Prisons has channelled many such requests and information in the past, but there now seems to be a need for a more formal arrangement. Correctional construction is taking place at an increasing pace. Although less extensively than in the past, architects are frequently sent to nearby

states to inspect new prison structures. But there are financial limits on the distance which can be travelled and the number of institutions which can be seen. This problem becomes particularly serious when foreign countries, especially in underdeveloped areas, decide to embark on a program of construction. Representatives cannot easily be sent abroad but they are often anxious to learn of developments in America or Scandinavia or Britain. An inquiry came to me the other day from an Australian official whose government intends to build a treatment center for alcoholic prisoners. He wanted plans and details of any such institutions in the United States. Not so long ago an official of the French Ministry of Justice was anxious to learn of new jail construction here and in South America because of a planned expansion of detention facilities. The Director General of a South American prison system wanted plans for the new minimum security housing unit erected at Walla Walla, Washington. These requests and others like them represent a very sensible desire to profit from developments elsewhere, to avoid costly mistakes and to emulate successful innovations. If some kind of clearing house could be established on a small scale, with cooperation among state correctional departments, architectural firms, and foreign governments, the likelihood of financial savings and the prevention of unfortunate mistakes would seem considerable.

Plans and descriptions might initially be supplied, with some details of the success and failure of given features provided after a year or so of operation. Whether the proper location of such a clearing house would be in the Social Defense section of the United Nations Secretariat, in the Federal Bureau of Prisons, or in the A.I.A. itself, would be a matter for further exploration.

Looking backwards 150 years, it becomes quite evident that not since the 1840's has the field of prison architecture shown so much vitality, so great a willingness to experiment and such a high proportion of talented architects among the duds. These facts, in addition to publications such as the *Handbook of Correctional Institution Design and Construction* by the Federal Bureau of Prisons and this conference itself, makes for an optimistic future. ◀

Correctional Philosophy and Architecture

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► The "Handbook of Correctional Institution Design and Construction" published by the Federal Bureau of Prisons, states, "No other single factor has so retarded the development and success of rehabilitative programs as has the lag in correctional architecture."¹ On the other hand, Austin MacCormick has said, "modern penology can be conducted in a barn."² Unfortunately practically no penal programs in the United States are conducted in barns. More often such programs are being undertaken in what I have called massive, medieval, monastic, monolithic, monumental, monkey-cage monstrosities. Such structures without doubt reflect a philosophy now 100 years out of date, but they still dominate the over-all climate of many of our prisons and hence the penal philosophy which struggles to emerge in spite of them. It is this conflict which has resulted in a schizophrenic type of personality in the current penal philosophy of the United States. It is this basic conflict which we are gathered here in this conference to help resolve if we can. How did we get this way? And what can we do about it?

Penal Philosophy—1787

Modern penal philosophy had its beginning in the United States when a small band of Quakers and Free-thinkers met at the home of Benjamin Franklin in 1787 and listened to a paper by Dr Benjamin Rush, father of American psychiatry. Dr Rush called for a new program for the treatment of criminals. In his paper he proposed the establishment of a prison which would include in its program (a) classification of prisoners for housing, (b) a rational system of prison labor, (c) indeterminate periods for punishment, and (d) individualized treatment of convicts ac-

ording to whether crimes arose from passion, habit, or temptation.³

While the principal recommendation made by Dr Rush, namely the treatment of offenders not according to the crimes committed but rather according to the problems underlying the crimes, was not put into effect until approximately 150 years later, the more obvious recommendation that "doing time" should replace capital and corporal punishment was in 1790 written into American penal philosophy for all time. And it was written in the remodeling of the Walnut Street Jail in Philadelphia by architect-builders who sought to carry out the philosophy of these early prison reformers. Indeed among the best evidence we possess today of what this philosophy meant in practice, are the plans of this and other early American prisons as they have come down to us. Thus did architects and architecture begin to mould and fashion penal philosophy.

However, within thirty years the faint-hearted beset by the problems which still plague us today—overcrowding, idleness, political influence, poor personnel, and the unsuitability of prison structure—were ready to throw the whole thing overboard and return to the simpler and swifter methods of dealing with criminals which had previously prevailed. The penitentiary program was saved in 1820 by a stalwart prison warden and two architects.

Penal Philosophy—Circa 1830

The warden was Elam Lynds who established the famous Auburn System of prison discipline at the State prison in Auburn, New York and who was aided and abetted by his architect-builder John Cray. The other architect was John Haviland who helped dream up and establish the Pennsylvania System at Eastern Peni-

tenentiary, Philadelphia. The penal philosophy behind these two systems was that offenders not only should "do time" as penance for their misdeeds, but that they should do time also under a strict discipline of non-communication in surroundings which were "fearsome and forbidding."

Elam Lynds expressed the core of his philosophy when he "contended that reformation of the criminal could not possibly be effected, until the spirit of the criminal was broken."⁴ And thus his system proceeded to do in ways which persisted long after Lynds had passed from the scene.

In both the Auburn and the Pennsylvania systems, prison architecture played a leading role. In the Auburn System, prisoners were housed in "inside cells" and worked together in congregate workshops under the silent rule. In the Pennsylvania System, prisoners were housed in "outside cells" where they worked and lived in solitary confinement. Thus within forty years of the inauguration of a new penal philosophy in America, architects and architecture began to play a lead role in determining and in implementing that philosophy. In spite of many succeeding developments, and modifications, this penal philosophy persisted for over 100 years and still continues to play a part in current penal thought.

What did this "prison discipline" (or penal philosophy) stand for?

How has it been modified over the years?

To what extent does it persist today?

What will take its place?

To answer these questions will be the purpose of this brief presentation.

"Prison Discipline"—1830-1930

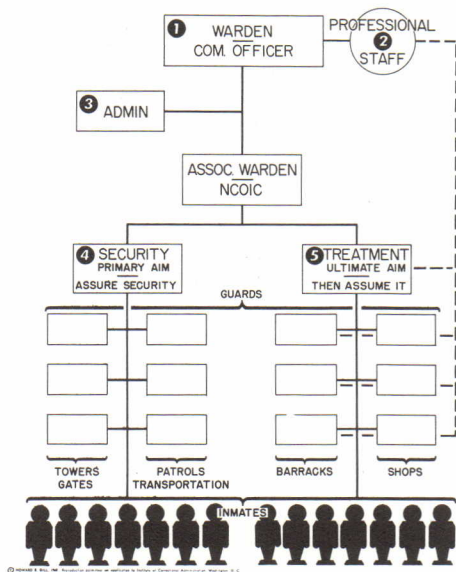
Modified though it was by the introduction of religion, education, industrial training, medical care, recreation and parole, as late as 1925 this prison discipline represented a harsh, cruel and futile philosophy as Barnes and Teeters have pointed out in the text just quoted.⁵ Its chief tenets were hard

¹ US Bureau of Prisons, *Handbook of Correctional Design and Construction*, Leavenworth, Kansas, 1949; p 2

² Personal comment to author

³ Attorney General's Survey, Vol V, *Prisons*, Leavenworth, Kansas, Federal Prison Industries, Inc Press; p 1

⁴ Barnes, Harry E, and Teeters, Negley, *New Horizons in Criminology*, New York, Prentice-Hall, revised edition 1945; p 532



and punitive labor, deprivation of all but the bare essentials of existence, monotony of the most debilitating sort, uniformity, degradation, corporal punishment, non-communication with normal society, no interpersonal relations with non-criminals, subservience to petty rules, no responsibility, isolation and self-absorption, mass living and movement, reform by exhortation. If this seems like a pretty grim description, one has only to recall the clichés of these years—some of which are still current—to realize to what extent these were the bases for the accepted penal philosophy for 100 years in the United States from 1830-1930. Typical of such clichés are such catch phrases as, "We treat all prisoners alike," "No fraternization," "Do your own time," "No prisoner is going to tell me how to run my prison." The very housing of offenders in cage-like structures is itself an aspect of this penal philosophy.

Such a penal philosophy denied every essential need in the human personality including love, independence, and interdependence, imagination and truth, achievement, identity, intimacy and the need to belong, creativity and integration. Indeed this philosophy we now know emphasized every pathology in the human personality—rejection, doubt, guilt, inferiority, diffusion, self-absorption, apathy, and despair. Not only did it avoid developing normal person-

alities, it actually produced pathological personalities. Men came out of prison worse than when they entered.

Such was the prison discipline of Elam Lynds and his successors for 100 years.

The Beginnings of a Modern Penal Philosophy—1916-1930

In 1916 a movement started at old Auburn Prison in New York by Thomas Mott Osborn which brought the first rift in this armor. He dared to show the world that prisoners knew more about what was going on in prisons than the guards did and moreover that the contribution of prisoners was essential to the effective management of prisons. He was crucified for such heresy, but he broke the back of the old guard. Moreover by bringing groups of prisoners into discussion with staff members regarding prisoners' problems, he anticipated a movement which is of prime importance in today's penal philosophy.

Almost at the same time, (1916-1918) at Sing Sing, New York, Dr Bernard Glueck began the individual study of prisoners. He was followed by Dr W. T. Root at Western Penitentiary, Pittsburgh. Then came the organization of such studies by W. J. Ellis and others in New Jersey under a system which we know as "Classification." Massachusetts adopted the system in 1930 and the Federal Bureau of Prisons in 1934. This system of classification destroyed once and for all another basic tenet of the old prison discipline, namely, "All prisoners should be treated alike," for once given case histories of offenders, treatment must be individualized.

A Transition State in Penal Philosophy

These then were the beginnings of a new penal philosophy—a philosophy which we are still trying to translate into programs, personnel, and architecture. Slowly these two basic concepts are changing the character of prison discipline. I say "slowly changing" because we must recognize the present as a transition state which contains much of both old and new, if we are to plan for the future, especially in the construction of penal institutions which will persist long after we are gone.

What are the characteristics of this transition state? And what is

the penal philosophy which will emerge from it?

The outstanding characteristics of any transition state are anxiety and confusion. That, I take it, is why the American Institute of Architects has called this Conference on Correctional Architecture. Penal philosophy is today in a state of anxiety and confusion.

One thing for which we must give the Old Guard credit however, they knew what they meant by prison discipline. They had a penal philosophy which was definite and easy to understand. I have outlined its harsh concepts. Any prison employee who did not abide by it was guilty of a serious breach of the prison discipline, and was treated accordingly. I am not so sure that we have as yet substituted a penal philosophy as well recognized as the old prison discipline. We have a number of conflicting philosophies at present.

The Custodial Prison

One penal philosophy still in vogue is founded in the past and attempts to carry on the philosophy of Elam Lynds. It has regard for only one basic concept, security, and beyond that only grudgingly modifies the harsh terms of penal servitude. These are still "Custodial Prisons." They are fighting a losing battle.

The Progressive Prison

Another group has super-imposed upon the old discipline, a philosophy of treatment which substitutes programs of medical care, industrial training, education, religion, social work and recreation for the monotony of hard labor, and the deprivation and degradation of the old prison. Radios and rodeos, entertainment and college courses, some vocational training, bright and shining hospitals, eager social and religious workers, libraries—all these abound. The demand is always for more and more such services—larger appropriations and larger staffs. The result is called "rehabilitation," but unfortunately the recidivism rate remains fairly constant at 60-65 per cent. Some of the toughest prison wardens in America are running "Sweet Jails." These are the so-called "Progressive Prisons."

The Progressive Prison holds the center of the stage today and it presents a very attractive kind of humanitarianism in the treatment of offenders. It represents a nat-

⁵ Ibid, Chapter XXVI, *The Cruelty and Futility of the Modern Prison*, pp 582-639

ural swing of the pendulum away from the harsh cruelty of the old penology, and it somehow fills the vacuum caused by the decline in prison industries due to the opposition of free labor and capital to the sale of prison products on the open market. It is one of the characteristics of the transition state, but it is not the ultimate answer to the problems of corrections and should be examined critically by both penologists and their architects.

While the progressive prison presents a fine facade, it does not go to the heart of the correctional problem—criminality. It is not the purpose of the prison to become a great medical clinic, a substitute for public education, a profit-making industrial factory, or a recreational and social center for convicts. The success of a prison is not to be measured by its medical, surgical or psychiatric services, by the number of school graduates it may produce, by the amount and value of its prison products, or by the number and diversity of its recreational and social activities. Neither will the establishment of “programs” for individual prisoners avail simply by outlining a list of activities for such prisoners which have little or nothing to do with their criminal problems.

The Professional Prison

A third, small but growing, group of prison workers are recognizing the need for a more precise professional approach in penal philosophy. It is to some of the intimations of this philosophy that I want to call your attention because this may be the penal philosophy which the institutions we are building today will be called upon to serve. I have called this a professional penal philosophy as distinguished from the custodial or the progressive penal philosophy.

As I see it, this professional penal philosophy is built around five simple concepts:

- That security must be assured in order that it may be assumed—and kept in its proper place.
- That prisoners are classified primarily into four groups—new, intractable, tractable, and defective.
- That for tractable (or treatable) prisoners the first concern is *problem-solving* before programs, and the second concern is the *acculturation* of such prisoners to the society to which they will return. (For the new and the intractable

and the defective, there are other concerns, but since this conference is devoted to the needs of the tractable or treatable prisoner, we shall not consider these at this time).

- That correctional staffs will operate in five areas: (1) executive, (2) administrative including fiscal and clerical, (3) professional, (4) security, and (5) treatment.
- That prison architecture must meet all four of these concepts.

The Philosophy of Security

I shall mention only seven basic points relating to the philosophy of security. There are more, but these will illustrate the trend:

1 Security is the primary business of the prison; but not its ultimate goal. Having assured security, it may then be assumed and the main business of the prison—reform—got on with.

2 Security deals with three basic elements—escape, contraband, and disorder. Hence maximum, medium, and minimum risks deal not only with escape but also with contraband and disorder. Equal in importance to the escape risk are the dope peddler, the addict, the “alkie,” the “kite” artist, the disturber, the agitator, the conniver, the politician, the stool pigeon, the wolf, and the punk. Hence open-mesh fences, while sometimes sufficient to prevent escape, are not adequate protection against the introduction of contraband, or adequate for control of disturbances. The so-called bad psychological effect of walls on prisoners is a myth of progressive penology. Wire fences are characteristic of concentration camps; walls are characteristic of gardens and privacy. It is not necessary that walls be obnoxious; it is essential that they be adequate.

3 Maximum, medium, and minimum refer exclusively to security and should not be confused with treatment classifications. The acting-out prisoner or the escape artist may be the most hopeful prospect for reform because he has character—bad character maybe, but character nevertheless. The moron who does not have brains enough to escape has the least potential for reform. He may be rated minimum in security but certainly neither best nor better for treatment. Hence the correlation of maximum, medium and minimum with bad, better, best is a myth—but unfortunately a very popular one in many texts and with some architects.⁶ The hopeful, treatable

prisoner may be a maximum, a medium or a minimum security risk, similarly with the intractable or defective prisoner. The new prisoner is automatically a maximum security risk.

4 Security is a specialty just as case-work for treatment is a specialty and should be so regarded in the administration of prison guards, methods, equipment, and architecture. It should not be confused with or combined with treatment. Security is best served when a special corps of prison guards are trained in security policies and practice as the police of the prison community. They will man the gates, the walls, the towers, patrol and search grounds and buildings, and be responsible for initial reception, final discharge, and transportation of prisoners. They will not fraternize with prisoners, but at all times be firm, stern and authoritarian. They will be interested in treatment only as a general policy of the institution.

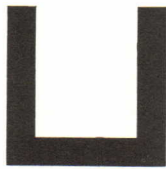
5 The place of the security force should be recognized as primary, and neither incidental to nor dominating the operation of the prison. It should be a division *co-ordinate* with the administrative, the professional and the treatment divisions of the organization.

6 The security force can operate most effectively from a control center outside the prison enclosure, with auxiliary stations at strategic points within the prison proper. Such control center will house the arsenal, the central telephone switchboard, the central key board, all emergency utilities, inspection of all mail and all persons or packages entering or leaving the prison, offices and training facilities for the guard force, all plans affecting escapes, contraband, or disorder, and quarters for the stand-by guard force.

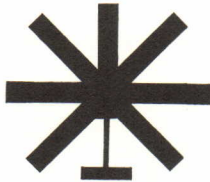
7 “Divide and rule” is a sound security principle and supplements the small group principle of treatment. It is applicable in security planning especially to housing prisoners in as many and as small groups as possible and to providing recreation for prisoners in as many different and separate areas as possible.

Specifically how these seven principles may be applied to prison architecture, is subject-matter for a whole text in itself and cannot be included in this paper.

⁶ Tappan, Paul W., editor, *Contemporary Correction*, New York, McGraw-Hill, 1951; pp 277-296



Original Auburn 1816-1826



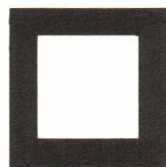
Eastern Penitentiary 1819-1829



Standard Auburn 1835-1935



Telephone (Fresno) 1898



Hollow Square - 1704-1940

Prisoner Types

With regard to prisoner personnel once having determined security, it is good philosophy not to deal with prisoners according to the crimes which they have committed or the activities which the institution offers, however various these may be. If it may be assumed that all new prisoners will be put in a class by themselves for observation, our first concern then will be whether a prisoner is amenable to treatment or not, that is whether he is tractable (wanting and capable of treatment), intractable (not wanting treatment), or defective (limited or incapable of treatment).

Obviously a prisoner who wants treatment and is capable of responding to it will require a different sort of staff, program, and architecture than those who do not want, or are extremely limited or incapable of treatment. The tractable prisoner may be seventeen or seventy, but he will ordinarily cooperate with the staff, respond to mutual trust, and be capable of living under fairly normal conditions in his daily activities. Such prisoners represent perhaps half of the offenders in our state and federal prisons today.

In contrast, those prisoners who want to "do their own time," who either do not desire to change or are not capable of change, require another type of handling. Some are hostile, hardened, professional thugs, hoodlums, racketeers, swindlers, sex deviates, who will not cooperate with the prison staff, who cannot be trusted, and who cannot be kept confined except under abnormal measures of restraint. These are the intractables or the untreatable. They may not be disturbers or escape risks. They may just want to be left alone. They are sometimes described as "good prisoners."

The Philosophy of Prisoner Types

However, the philosophy governing the lives of such prisoners is rule by fear, force, and deprivation. Therefore within the bounds of decency, this is the philosophy which must be met with fear, force and deprivation. One fights fire with fire. Perhaps this is what Elam Lynds had in mind when in accord with the light of his day he called for "breaking the spirit of the criminal." Today we call it shock therapy.

Other prisoners are mentally ill or so low-grade as to be defective.

To mix either intractables or defectives with tractable prisoners is obviously poor penal philosophy. Yet most of our state prisons have been built on this kind of hodgepodge intermingling.

It seems only sound philosophy to suppose then at least four types of prisons for these four types of prisoners: the new, the intractable, the tractable, and the defective offender. In other words, a professional penal philosophy proposes to be selective in its treatment. It frankly proposes to "take the best apples out of the barrel first"—and if some rotten ones get left on the scrap heap, that is just too bad.

Architectural Considerations re Prisoner Types

If we accept as basic four types of prisoners: new, intractable, tractable, and defective, we shall postulate four distinct types of penal institutions. A reception center or section for new prisoners, very simple custodial type of institution for the intractables, a normal type institution with treatment facilities for the tractables, and a specialized partly custodial, partly hospital, and partly educational type institution for the defectives.

Since each of these four types will contain among them maximum, medium, and minimum risks, provisions for all three types of risk must be made in each institution.

The reception center will contain facilities for orientation, diagnosis, classification and planning. It may be expedient in the average state to plan the reception center in conjunction with the institution for the intractables. Since all new prisoners should be kept under maximum security and since a large percentage of the intractables will also require maximum security, the two groups may be housed in the different sections of the same institution. This will also make available to the intractables the advantages of the professional staff assigned to new prisoners if and when they desire. The door should always be left open.

Since "treatment" is not yet possible with the intractables, the barest minimum of facilities for decent confinement is sufficient—both architecturally and otherwise. This does not imply the use of monkey-cages or mass living. On the contrary it calls for simple, secure living quarters including dining facilities in small groups for ease of control, and sufficient work and

recreational facilities also for diverse small groups to keep prisoners healthy.

However, since most states have inherited a number of penal institutions which may be classed as custodial and will probably not abandon them, the problem here involves chiefly how such institutions may be remodelled to serve as reception centers and as places for confinement of the intractable according to professional penal philosophy. This is beyond the scope of the present inquiry and will not be pursued further.

The type of institution for tractable prisoners represented by a professional penal philosophy, is called the community prison—sometimes the therapeutic community. It may be noted in many of the newer state correctional institutions such as in California, Connecticut, District of Columbia, Massachusetts, Michigan, Missouri and Wisconsin and in some countries in Europe. This type of institution will be considered further under *Treatment of Prisoners*.

The Philosophy of Treatment

As a result of the establishment of the Classification System and its Classification Board, the progressive prison has developed around a single concept, namely "programs." Such programs are usually only a reflection of the facilities for medical care, industries, education, recreation, religion, and social work available in each particular institution. As has been forcefully pointed out by such authorities as Dr. Ralph Brancale of New Jersey, such "programs" have frequently little or no relationship to prisoners' problems.⁷

It is the philosophy of the Professional Prison first, that *problem-solving* must *precede* programs and in fact problem-solving must *determine* the program for the most part; and secondly, that only those programs are justified which help solve problems and/or which will acculturate prisoners to the society to which they will return. Now this is revolutionary philosophy for it will change the entire nature of correctional institutions for tractable prisoners.

Programs are institution-oriented. Problem-solving is client-oriented to borrow a phrase from our friends in social psychology; in psychiatry, it is sometimes called sector-therapy. At once we sense a com-

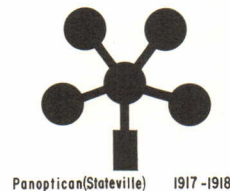
plete shift in emphasis. Under "programs," all prisoners receive the "full treatment," i.e. they go through a system which is ideally so complex that it has fallen of its own weight. The zeal of our system has eaten us up. Under "problem-solving" the prisoner with a \$50 problem gets \$50 worth of treatment. Most prisoners are not \$50,000 cases, yet the Classification System proposes to give every prisoner the time and attention of at least that amount of professional service. It has proved tremendously expensive in personnel and facilities so much so as to become utterly unrealistic.

On the face of it, the philosophy of problem-solving looks equally elaborate for it will require all the professional skills now employed in the Classification System, but it will have these differences: (1) it will enable the same professional staff to cover a much larger clientele, and (2) it will go to the heart of such problem instead of skirting all around it in a vague, indefinite manner. One is "bird-shot penology;" the other is "bull's eye penology."

Architectural Considerations re Treatment

Architecturally, the effect should be to reduce the demand for elaborate medical, industrial, educational, recreational and other facilities which have become so popular under program philosophy. While problem-solving has many facets, the goal of this penal philosophy is to reach and solve as quickly as possible the significant problems related to criminality leaving other areas of activity to those best suited to deal with them. This penal philosophy assumes the position that crime is a symptom of a mal-adjustment—situational, medical, psychological, anti-social, or custodial—and that the job of the prison is to resolve the specific mal-adjustment as far as possible, and *only that*. This philosophy applies the scientific principle of parsimony; it does as little as is *necessary* to achieve its goal—the reduction of criminality. The effect on prison planning should be obvious.

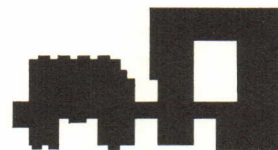
Yet this professional philosophy will not neglect medical care, industry, education, recreation, or religion. It proposes that prisons should seek to acculturate prisoners to the society to which they will return, and in so doing it will take the bombast out of progres-



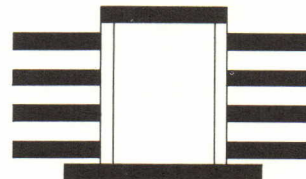
Panopticon(Stateville) 1917-1918



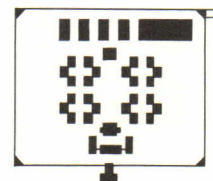
"Last Word" (Terre Haute) 1940



"Sky-light" Super-Security Fed. Bur. Pr. 1949



Dormitory (Lorton) 1916-1926



Community (Norfolk) 1927-34

⁷ Ibid, p 193

sive penology by trimming these activities down to normalcy. Except for problem-solving related to criminality, there is no reason why prisoners should be given more elaborate hospital care, or greater vocational, and educational, and recreational advantages than the average citizen. However, the most startling result of the philosophy of acculturation will be seen in its effect on the daily living conditions and the participation in them by tractable prisoners.

To return tractable prisoners to a society in which men live in small family groups, in ordinary dwellings, under normal conditions affecting their basic needs of nourishment, work, play and other human relationships, we need to accustom them to the advantages of such living by confining them under similar conditions. This is the concept of the community prison—sometimes called the therapeutic community. It is as far removed from monkey-cage cells or mass living as black is from white. It calls for a complete reorientation of our thinking about prison architecture. Imagine what this would do to a 500-man cell block, or a dining room seating 1000 inmates, or a single recreation yard where the same 1000 prisoners mill around in aimless confusion or stupidly watch a few performers, or to the prison rule that denies prisoners the opportunity to participate in any responsibility for the activities which make up their daily life. But before tackling prison architecture, we shall need to examine the effect of this new philosophy on staff personnel.

The Philosophy of Staff Personnel

The philosophy I am proposing for staff personnel is based on a five-fold classification: Executive, administrative, professional, security, and treatment. (See "Five Essentials in a Correctional Agency"). The executive group will include the warden and his immediate associates or deputy wardens and the heads of departments. The warden runs the front office and with his staff sets the policies; the associate warden runs the office "inside" and directs the operation of the prison routine carrying out the policies adopted. The administrative group will comprise the fiscal, clerical, personnel administration, purchasing, store-keeping, and routine maintenance functions of the institution. The professional group will include the physician,

psychiatrist, psychologists, dentist, nurses, teachers, vocational, avocational and recreational instructors, librarian, industries manager and all his technical personnel, chaplains, social workers, and other specialists. The security force will include those primarily responsible for the prevention of escape and the introduction of contraband, and the control of disturbances—i.e. the police force of the prison community. The treatment staff will include all those guards who are in personal contact with the prisoners either in living quarters or at work or play, and their supervisors.

These are not startlingly new concepts of staff organization, but may I point out certain principles of organization which differ from current custodial or progressive philosophy.

It is now the general practice in progressive prisons to have two deputies; one in charge of security and one in charge of treatment. The deputy in charge of security controls the entire guard force, handles the general operational routine of the prison, and is in authority over prisoners. The deputy in charge of treatment has charge of certain professional activities including classification, education and training, religious services, recreation, but usually medical care and industries are left under the direct control of the warden. The deputy for treatment and his staff have advisory powers only. Hence we see the unfortunate situation where the deputy for treatment has responsibility for treatment but no power to make it effective. This has been the cause of one of the most serious conflicts in progressive prisons—the conflict between custody and treatment. It is my philosophy that this conflict can be resolved and security and treatment given their proper setting by observing three changes in current practice.

- The deputy in charge of security will be responsible only for the three basic problems of escape, contraband, and disorder and will limit the contact with prisoners of his guard force to these functions. He is no longer in charge of the general operation of the prison or its over-all routine.

- The deputy in charge of treatment will be responsible for the daily operation of the prison and for carrying out the recommendations of the professional staff in the contact with prisoners of his guard force.

- The entire professional staff will derive its authority directly from the warden and have advisory powers only. Similarly with the administrative staff.

The Philosophy of Prison Architecture

Finally we come to prison architecture. (See "Types of Prison Structure"). What effect will this professional penal philosophy in security, prisoner personnel, treatment, and staff personnel have on prison architecture?

• *Maximum Security Prisons for Intractables*

As regards prisons for the intractable, there are in existence in federal and state prison systems enough maximum security facilities now to care for all intractable prisoners for some time to come. The Federal Bureau of Prisons alone has approximately 5000 such cells which is 20 per cent of their total population, a figure set by some authorities as sufficient for intractables in any system.⁸ Even in states where some remodeling of existing prisons may be necessary, this should suffice to care for the intractables without further construction.

Let me illustrate. Under the direction of political Commissioners of Correction who knew little or nothing about corrections, the Commonwealth of Massachusetts within the past 10 years replaced the old Charlestown prison with a new "Super-Security Prison" of the skylight type⁹ at South Walpole, Massachusetts. It is known as the "concrete horror" and is condemned most roundly by the officers employed to run it for reasons which we need not detail here. In 1878 a new state prison was opened in Massachusetts at Concord but was taken over for a reformatory. It has always been a state prison and still is. In fact, when riots recently occurred at Walpole, the worst prisoners were transferred to Concord for safe-keeping. Had Massachusetts remodelled the Concord institution for its intractable prisoners and used the \$10,000,000 spent on the Walpole prison to construct additional facilities for tractable prisoners, professional penology would have been advanced and the future served. As it is, \$10,000,000 has been spent ex-

⁸ Barnes and Teeters, op cit, Second Edition 1952; p 498

⁹ US Bureau of Prisons, 1949, op cit, Chapter V, pp 44-59

travagantly on an institution which is almost as out-of-date as the disgrace at Charlestown which it replaced.

In addition to the anachronism at Walpole, one has only to mention the state prisons at Greenhaven, New York, Graterford, Pennsylvania, Jackson, Michigan, or Stateville, Illinois,¹⁰ to understand why a re-examination of prison architecture is needed. Other examples of more recent construction of this unfortunate type of prison may be found in a pamphlet entitled "Recent Prison Construction 1950-1960" just issued by the Federal Bureau of Prisons.¹¹

Prison administrators, federal or state, and their architects who propose to add more cellular facilities of the maximum security type, may be liable to the charge of extravagant and unnecessary expenditure of public funds, and may find on completion of such facilities that they are already from 60 to 100 years out-of-date. Moreover they will enjoy the dubious distinction of having wished on posterity for many years to come additional monolithic monstrosities in penal architecture. This is worse than the "lag" referred to by the Federal Handbook on Construction already quoted, since it will be positive action of a sort which will perpetuate a past no one wishes to impose on future generations. The time has come to call a halt to this type of prison construction.

• *Institutions for the Defective Delinquent*

Institutions for the defective fall into a class which combines many aspects of the prison, the hospital, and the training school following the best practices in all three. The Medical Center of the Federal Bureau of Prisons at Springfield, Missouri,¹² the Medical Facility at Vacaville, California, the Institution for Defective Delinquents, Wilkes-Barre, Pennsylvania,¹³ and the John Howard Pavilion of St. Elizabeths Hospital, Washington, D. C., are notable examples. We shall not discuss these here.

• *Correctional Institutions for Tractable Prisoners*

When we consider the type of correctional institution which will fit the needs of tractable offenders and which will be in line with the professional penal philosophy outlined herewith, we are confronted with a variety of excellent examples in the United States. Several institutions for women may be

mentioned including State Industrial Home for Women, Muncy, Pa. (1913), the Federal Institution for Women at Alderson, West Va. (1927), and a somewhat similar Federal institution originally built for women at Seagoville, Texas (1940). (Once a "give-a-way" institution as far as the men were concerned, the Seagoville institution for a time became synonymous with the latest philosophy of prison building for tractable male prisoners.) Massachusetts built such an institution for men at Norfolk (1927-1934). New Jersey opened one at Annandale in 1929; Missouri at Algoa Farms (1932), and California at Chino (1941).¹⁴

More recently (1950-1960) institutions for the more hopeful type prisoner (tractable) have been opened or are under construction at Corona, Calif., Enfield, Conn., Lorton, Va., Ionia, Mich., Moberley, Mo., and Fox Lake, Wisc.¹⁵ These institutions have promise of providing the facilities for a penal philosophy which fits the second half of the 20th Century.

There are too many details involved in such institution plans and programs to present here. However, some outstanding characteristics may be found in common in all of them.

1 The over-all atmosphere which is conveyed by personnel, program, and architecture is one of normal living under normal conditions where mutual trust and respect, cooperation and willingness have replaced the old prison discipline. However, the new prison discipline as a way of life distinguished from mere obedience to rules and regulations, has still to be defined and made clear. This will come in due time.

2 The small group principle is reflected in housing, dining, recreation, and all important activities. The "institution family" attempts to approximate the family unit in outside society which is the norm.

3 Prisoners are expected to participate with the staff in the duties and responsibilities of running the institution with the staff always in control. This joint undertaking provides the everyday atmosphere of a society built on sound democratic principles. Advisory committees and councils made up of prisoners who work with staff members do much to develop and enrich prison life, and build social responsibility.

4 Security, while primary, is not the dominant or the ultimate goal.

5 There still exists some confusion as to the relationship of security and treatment, as to the authority and obligations of the professional staff, and as to whether "programs" or problem-solving is paramount. One thing is outstanding, acculturation to normal, responsible living has taken over.

6 Evidence of the emphasis on both acculturation and problem-solving is shown in the architecture. Housing units contain individual rooms in simple one- or two-story buildings with seldom more than fifty prisoners to a unit. Group recreation is provided for each unit. Multiple dining rooms follow out the small group principle. Group meetings and discussions are provided for. A large variety of contacts with the normal world outside brings the "good life" into the institution. Facilities for individual counseling on the part of both guards-in-contact and front-office professionals, are included in the over-all plan. Supervising each group are "guards-in-contact" who work closely with the professional staff to carry out their recommendations for treatment.

7 From Europe word comes that the philosophy of normalcy has been extended to establish some institutions where the prisoners "live in" but "work out" in the community.¹⁶ Others permit conjugal visits both in the institution and outside.¹⁷

Such correctional institutions for tractable prisoners are called therapeutic communities or community prisons. These experiments today are significant; they will form the penal philosophy of tomorrow. For to paraphrase Truman Kelley:

Philosophers are never
dismayed; for in markings
near about, they discern
the contours of the land
and glimpse the portals
of the future. ◀

¹⁰ Ibid, pp 32, 64, 65, 67, 69

¹¹ US Bureau of Prisons, *Recent Prison Construction 1950-1960*; Washington, D C, 1961

¹² US Bureau of Prisons, 1949; op cit, p 14

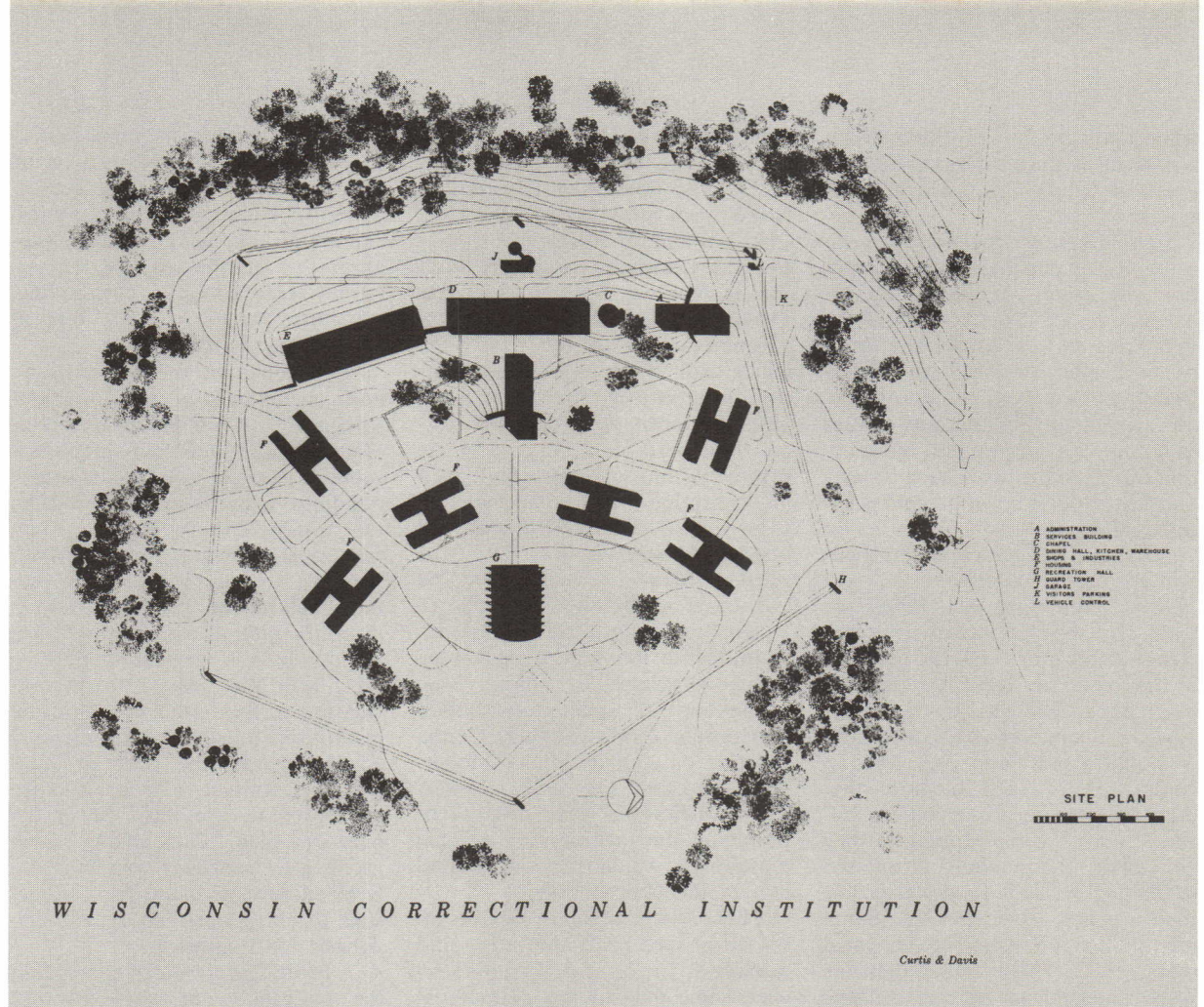
¹³ US Bureau of Prisons, 1961; op cit, pp 9, 48

¹⁴ US Bureau of Prisons, 1949; op cit, pp 97, 99, 103, 118, 119, 130, 133

¹⁵ US Bureau of Prisons, 1961; op cit, pp 18, 21, 22, 35, 38, 53

¹⁶ Federal Probation, Dec '60, Washington, D C, *Prisoners in German Institution Employed by Private Employers*, p 80. Also see, United Nations, Dept of Economic and Social Affairs, Publication ST/SOA/SD/5, June '55, *Prison Labour*, United Nations, New York City

¹⁷ Federal Probation, op cit, Morris, Charles V, *Worldwide Concern With Crime*, p 27



W I S C O N S I N C O R R E C T I O N A L I N S T I T U T I O N

Curtis & Davis

The Importance of a Program

by **Sanger B. Powers**, *Director*,

Division of Corrections, State of Wisconsin; President, American Correctional Association

► Treatment and security are regarded by some as antithetical. They are not. They are closely interrelated. You can't have one without the other. You can't, for example, treat people you can't keep with you and thus, in this sense at least, security is vital to treatment. Security and discipline are a part of a good, solid treatment program, and on the other side of the coin, a good, positive, individualized treatment program based on respect for the God-given worth or dignity of man provides a sort of psychological security. Perhaps there is a need here to define or elaborate on terms.

Security implies the ability to maintain custody of an offender who is committed or sentenced to an institution until such time as he is released either through discharge or under field supervision on parole. It does not necessarily mean keeping a person locked up or within a

given enclosure, but rather implies the maintenance of constructive custody. Treatment, on the other hand, is everything that is done to, for, or with a prisoner or inmate during the time he is in the custody of the institution or corrections agency. It implies the presence of a planned, individualized program for meeting a prisoner's needs and aimed at restoring him to constructive living as a useful member of society. The problems of the maintenance of security and the carrying out of a positive treatment program are greatly affected by the design of the physical plant. These problems thus become of concern to the architect as well as the corrections administrator.

I believe it is quite generally conceded that the primary job of a correctional institution is the protection of society. Since a correctional institution or system will

normally have custody and control over an offender for a relatively short period of time, any long-term protection which society is to receive must come through a positive, treatment-oriented program focused on meeting the needs of the individual offender, on the substitution of pro-social for anti-social attitudes, or rehabilitation and return to useful living. Given the right kind of staff with adequate training, this type of program can be carried on, although it is difficult, in a poorly designed, inadequate physical plant. On the other hand, such a program can be immeasurably enhanced by a plant intelligently designed *around the program* with the idea of making the maximum possible architectural contribution to this concept. I speak here of buildings designed to facilitate and implement a program as opposed to the unfortunate situation of having to

adapt the program to buildings not intended for that purpose.

Certainly with respect to treatment and security, but with all other aspects of an institution operation it is important that the corrections agency have an extremely well-thought-through statement of program and philosophy which has been reduced to writing in detail. In Wisconsin, for instance, we spent better than a year of intensive staff work planning and detailing the program for the new medium security prison. We visited institutions and talked with correctional administrators from coast to coast, borrowing an idea here and an idea there. We sought, in short, to borrow from other people's experiences and to include in our plans that which was generally accepted as desirable and to eliminate that which had been tried and proved unsuccessful.

We were able to set down in writing precisely what we planned to do at this new institution, what types of prisoners we expected to have, their age groups, their aptitudes, their education, treatment and training needs. We were able to include a staffing pattern noting the numbers of employees in each classification and their planned duties. We were able to set out the basic operating philosophy of the institution and the proposed operating procedures (including such things as bathing, visiting, feeding, etc). Then, and only then, we employed the architects. Thus we were able to provide them a precise statement of what we wanted to do in the institution and our program plans in the area of treatment, education, industries, housing, medical care, and for the many facilities and services which go to make up an institution.

What we wanted, we said, was something which would help us create the climate necessary to do the job we defined, something which would create in the prisoner, perhaps, a contagious enthusiasm for helping in his rehabilitation. Some of the things we said to the architects in this statement of philosophy were:

"While medium security will be provided by development of a fence and guarded perimeter that envelops a group of buildings, it will be desirable to develop an institution which physically will avoid the appearance of unyielding punishment and yet which will afford the safe custody and provide for the inmates' academic, vocational, social, reli-

gious, and industrial training and guidance.

"The physical construction of the institution should be of such a nature as to provide for maximum operational efficiency and an attractive environment. We hope the institution will in no way give the appearance of a security type facility. There should be no high encompassing walls, no reinforced cell blocks or telephone pole type construction. Housing units will be separated by spacious areas for outdoor sports with separate buildings provided for administration, recreation, dining and food preparation, academic and technical training, industries, warehousing, and truck and car housing.

"The success of the program will result from the wholesome and constructive relationships that can be developed between officers and inmates. To accomplish this requires a departure from the old line prison construction and management to new facilities that emphasize the positive features of the treatment program. While discipline and security remain a component, these phases should be handled in such a manner that they enhance character rather than degrade the dignity of the individual. We hope to provide every possible opportunity to establish habits of industry, a furtherance of education, and a building of a sound sense of social responsibility in addition to specific skills."

The statement of basic philosophy was coupled with a very detailed statement of program and planned operations. Knowledgeable and resourceful architects working with the statement of philosophy and program came up with an excellent design of an institution which from the road, from the air or from within will accentuate the positive and which is as unprison-like in appearance as possible. Building security, for example, is provided by a most attractive masonry grille such as is increasingly used for sun and heat control in the South. This masonry grille will serve to hold down temperatures during the hot summer months and provide an interesting, attractive facade without the conventional bars, grilles, or security windows, and yet will provide most adequate security at minimum cost.

The physical plant has a very profound effect on climate that cannot be discounted. One of the best examples I know of this would be an experience I had when I was

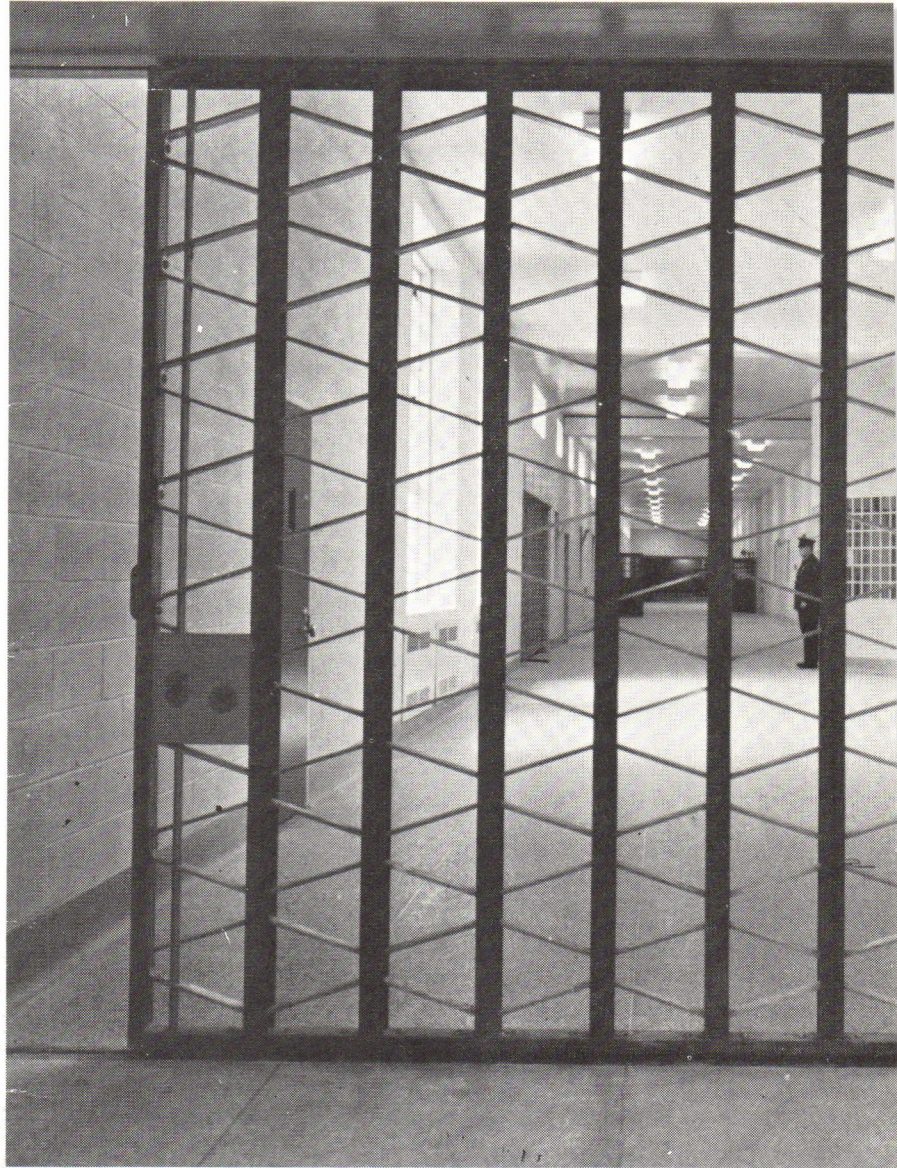
Superintendent of the Wisconsin State Reformatory. When I arrived we had a "vocational training facility" in an old building totally unsuited for that purpose and which at best could be described as dingy. Discipline and vandalism were omnipresent problems. When construction began on a new million dollar vocational training plant, there were many among the old line guard force who forecast that the place would be a shambles very shortly. They pointed to such things as glass mirrors in the rest rooms, the marble partitions in the toilet stalls, the marble window sills, glazed tile corridor walls, and other really very nice features that would be the immediate subject of prisoner vandalism. And yet five years after the building was occupied there had not been one instance of vandalism, and disciplinary problems disappeared to the point where the employment of women teachers was possible. It was the dignity and decency of the new plant which set the tone or climate which was responsible to a large degree for the positive program changes.

One cannot underestimate the importance of what might be called the psychology of the setting or design, the tone which is established. There are, of course, numerous examples of this—the dignity one associates with the well-designed impressive court room, the effect on the customer of the spacious, dignified, expansive and expensive banking facility or the well-designed, smartly appointed professional office. And so it is with the prison or correctional facility. I might add that dignity and decency do not spell added expense—frequently the reverse is true.

Architects have an obligation to understand and interpret the program, to come up with something new, to steer clear of the stereotype, to seek to capture in the design that which will make the administration of a forward program not only possible, but completely logical.

The challenge for us in corrections is to put in use all that is presently known about human behavior in the correcting of criminal conduct. The challenge for architecture is, through the creative use of color, light, materials, design and form, to insure in a correctional institution a climate and physical setting which will enhance rather than inhibit the correctional process. We can contribute one to the other, and working together can insure that the challenges will be met. ◀

The Lebanon Correctional Institution, Southern Ohio Reformatory



by **John Noble Richards, FAIA**

Past President,

The American Institute

of Architects

► The excellent program, the program which was given to the architects, for this 1500 inmate institution was prepared by Maury Koblentz, Chief of the Ohio Division of Correction, and Blayne Haskins, Assistant Chief and their staff—and this program and advice of these two men was invaluable in the solution of the problem. We worked as a team with these gentlemen and our consultant architects, La Pierre, Litchfield and partners, in particular with my long-time friend, Clarence B Litchfield.

Lebanon is part of a master plan for prisons in Ohio.

Our theme was every man in a single cell doing something for himself every waking minute of the day—working, learning and preparing to return home. We, as architects, devoted months of intensive study and research, endeavoring to find out what experience had shown was good and what was bad. We visited many institutions, and always asked, if you had to do it again, what would you change?

When completed late this year, Lebanon will house 1,500 men between the ages of 16 and 30 who are first offenders. Lebanon was built in three phases; the first two phases are now completed and occupied by about 400 inmates; the third phase under construction will be completed early in 1962.

At Lebanon, the men are now using: Four cell blocks, three of three tiers, one of two tiers. Six cell blocks are under construction and will complete the institution. Each cell block will house approximately 124 inmates.

Each man has a single cell which is 6' wide and 10' long. The window is barred and the door locked by means of a manual gang locking device. The toilet is adjacent to the door. The wash basin has push button valves designed to be almost damage proof. There is nobody in the cell but the man assigned to it. He still rises at a fixed time, plays at a fixed time, works at a fixed time and must have his lights out at a fixed time. It is felt that this is a

The crash gate makes a contemporary pattern across the corridor of the new Lebanon Correctional Institution

long step toward making him want to re-establish himself in society and toward helping him maintain or regain his self-respect.

Lebanon has one receiving unit designed to accommodate new inmates committed by the courts, during their classification periods—when the institution staff is finding out what they can do, what they want to do and what they should do. One 42-bed hospital, with patient rooms, treatment rooms, and surgical and dental equipment. Ten academic classrooms, where much needed education—through high school levels—can be given. A library with capacity of 6,000 to 8,000 volumes, for reading, study and research. Recreation facilities, including a day room with television in each cell block, a large visiting room where members of the inmates' families can be received, plus an outdoor area for warm weather, and cell block corridors, 18' wide not only for inmate traffic but for bad weather and evening games. A chapel seating 350, where Catholic, Protestant and Jewish services can be conducted. A revolving altar makes it possible for each faith to have its special altar. The mess hall is divided into three eating areas, each capable of serving 300 or more men at a sitting. We seat 8 to a table, with loose chairs, in keeping with the attempt to maintain the prisoner's personal identity and dignity, leading toward a planned rehabilitation. A large kitchen laid out along the most efficient institutional lines, and completely equipped to prepare nourishing food specified by dietitians. A 12-chair barber shop.

In addition to the six cell blocks now under construction in the third phase, we are building a completely equipped laundry, a gymnasium with bleacher seating and stage and a workshop building—about two acres in area. In this area there will be facilities for the manufacture of license plates, highway signs and metal furniture and it will also house the maintenance shop.

Much outdoor space, 40 acres enclosed by a double fence, 25' apart and guarded by 5 towers. The reformatory is located on the property of the Lebanon Honor Camp, a long-established satellite of London Prison Farm. Lebanon is lo-

cated in the southwestern part of Ohio in verdant and rolling country.

In the design of Lebanon, the scope of our engineering services included electric power and lighting, water supply and treatment, storm water drainage, sanitary drainage and treatment, heating ventilating, refrigeration, fire protection and communication. All electric power, steam, hot and cold softened water are generated in the power plant located outside the security fence, primarily to assure continuous operation in the event of riot. The power plant is connected to the institution by a utility tunnel 300 feet in length containing the piping for 5# heating steam, 100# steam for hospital and laundry use, hot softened water for general domestic uses and cold softened water for use in the laundry. All condensate is collected at the various buildings and pumped back to the power plant. Water, supplied from wells, is passed through a complete water treatment plant then to an elevated tank which is connected to a combination water supply and fire-main looped around the institution. A connection is made to the boiler plant and to a distributing main in the 800 feet long institution utility tunnel. All sewage passes to a treatment plant with special attention paid to ample pipe sizes and clean-outs as plugging of the system by inmates is a constant.

In general, the occupancy of the building determined the type of heating system for instance: The school building employs unit ventilators to provide a continuous supply of ventilating air. The chapel's heating system consists of direct radiation plus air handling units for ventilation. The administration building and hospital contain a steam-to-water convertor to supply the forced air heating system. The auditorium, mess hall and kitchen are heated by conventional heating and ventilating units with separate exhaust systems for the necessary air change.

The cells presented a problem in that each cell is a combined toilet and living-sleeping room which rules out heating by the conventional radiator, piping or radiant panel, as a separate ventilating system would be demanded to meet code requirements. The best solu-

tion was one that combined heating and ventilation, a forced warm air system. A utility chase was provided between each two cells, which not only served the cell plumbing but included a combined heating and ventilating supply duct for each cell and also provided an exhaust to atmosphere connection at each cell. This system provides heating and ventilation during the heating season with fresh air plus some circulation of return-air. The fresh air supply intake louvers and duct work are designed for a maximum supply of 100% fresh air. This permits a maximum of cell ventilation in the off-heating season.

The primary electric line is brought into the building through the pipe tunnel from the power house and runs through the main pipe tunnels where at various points are transformer rooms from which secondary distribution is made. The institution has both* public and inter-communicating telephone systems.

A television antenna system has outlets in all the cell block day rooms, chapel and gymnasium. There is a combined public address and music system throughout all the buildings. A monitored radio system will be installed with outlets and pillow speakers in all cells. Exterior walls of all buildings are floodlighted by fixtures located on the vertical walls. Perimeter fences are lighted by flood-lights on poles at intervals along the fences. Each guard tower has a movable search-light controlled from within the tower.

Construction cost for entire project was about 12 million dollars.

Another institution is being planned for Grafton, Ohio, to house 1,500 inmates, the basic plan of which is very similar to Lebanon. A future institution has been proposed to be located in the central part of the State of Ohio. These three institutions, when completed, will eliminate Ohio's existing penitentiary which is located in the central part of Columbus, Ohio. The first building for this penitentiary was constructed around 1878.

These three new institutions are all part of a master plan for the state of Ohio's correctional institution program. ◀

On the Design of New Housing for the Aging

by **George E. Kassabaum, AIA**

*Excerpts from the paper
delivered at the
White House Conference on Aging,
January 9, 1961, Washington, DC*

► There is no single building type, no matter how clever the architectural solution, that will, in itself, solve all of the problems of the aging. Our new buildings can be expected to do some things. We must be able to say that they have added beauty to the community as well as to the lives of the individuals living there. Our new technology should provide more physical comfort and safety. But there are other things equally important if our aging are to live full and satisfying lives.

Psychiatrists tell us that there are four conditions which must be met if we are to have any chance of leading a happy life. They are:

- physical security
- emotional security
- social recognition
- adventure

The designs of new buildings in the years ahead must provide for physical means of encouraging the development of these four elements of life.

Need for adventure

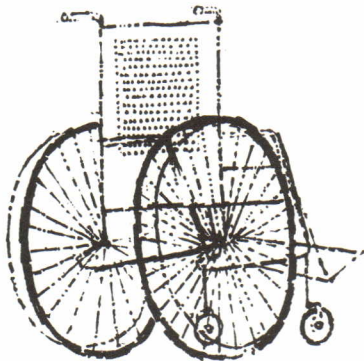
To satisfy these needs in planning and building is not easy. The task of creating an adventurous environment seems impossible if we associate adventure with climbing mountains, but, fortunately, such things are relative. We will have done much toward making adventure possible if only we build near public transportation. If we can provide the aging access to the vitality and excitement of neighbor-

hood shops and parks without exposing them to the confusion and the hazards of traffic, we will have done even more, and if this access can be along pleasant tree-lined walks, we will have come still closer to bringing a sense of adventure into their lives.

Planning should encourage intellectual adventure as well as physical. Sufficient privacy should be built into our projects to make it convenient to withdraw and read or listen or contemplate. It should certainly foster social adventure, for an old person suffers most from loneliness. Loneliness has been described as the state of mind in which one finds himself when he seemingly has forgotten, or been forgotten by, the people in his past life, and there seems to be little hope that there will be a chance to form new friendships in his future life. This can best be overcome by providing access to the life of the community and by providing facilities for communal activities. It is difficult to create adventure through architectural designs, but it is impossible to even think of adventure when you live only in a cell.

Social recognition

Social recognition cannot be accomplished by architectural means alone. Recognition in today's society involves the whole system and process that tries to harmonize the interests of all elements of the population. In pre-industrial societies



the evolution of such patterns and systems was a slow process and harmony was accomplished by making slight adjustments to traditional systems. Under these circumstances, the three-generation household was a feasible solution of most of the problems under discussion. However, in a society that can be best described as worshipping rapid change—whether it is expressed in the desire to make this year's car look different or whether it is modes of travel or making war—when constant change characterizes the world that we find ourselves living in, the aging will inevitably find more and more things that are unfamiliar, and the traditional ways of doing things, that they once found so comforting, will no longer be only slightly modified — they will be upset.

The element of choice

To me, the cause of the problems of the aging can best be summarized in the word "change," for, contrary to what they wish were so, they will increasingly find themselves living in an unfamiliar world. Some of our programs, such as urban renewal and highways, are partly responsible when they demolish the familiar overnight. Change is a function of the unknown. The unknown is frightening to any of us, and the older we get the more frightening the change can be. Every change means a readjustment, and every readjustment means a new tension. Everyone must eventually limit the changes that he can accept or else the world will be in danger of becoming totally unfamiliar. When this occurs, society is inclined to reject those who can't keep up.

The programs we develop can affect society's decision to accept or reject its aging, but only if they result in a world of housing and a freedom of choice. Our programs should aim at encouraging every community to provide a variety of housing by stimulating the subdivision builders to provide approximately 14% of their houses with the aging in mind, or encouraging the churches to build urban apartments, or the service clubs to build garden apartments, or private capital to build motel-type facilities, or anyone to build any combination thereof. Then, we trust, society will find other ways of solving the rest of the problems so that each individual will have a freedom of choice. Working toward programs

that will result in many choices is much more important than working toward programs that result in the planning of perfectly designed one- and two-bedroom units that can be standardized and built many times in many locations as a universal solution.

Only when each individual can say "I had to move from my old house because it was no longer suitable for my kind of living, and I looked at many places and I chose to live here"—then, and only then, may society recognize any specialized housing for the aging as being the answer. It is when one lives where one does because there was no other choice that resignation and rejection enter into the life of the aging, and a stigma is attached to such living by society. Regardless of the beauty of the building and regardless of how many beautiful buildings there are, they will solve only part of the problem as long as either the person or society feels that it is some place for the aging to be "put" or "sent." As long as there is such a feeling, then our nice, clean, new buildings will necessarily fail to provide the important ingredient of social recognition.

Not only should there be a variety of building types and arrangements, our programs should encourage a variety of management. It is very unlikely, at least where smaller projects are concerned, that there will ever be too many enlightened sponsors who will pass up the economies available in standardization in any one project and provide a variety of units with different room sizes and arrangements in any one-size unit. Certainly, unless our programs can eliminate the pressures for minimum accommodations and maximum economies that seem to be inherent in any governmental program, it is more than unlikely that this will ever be the source of housing that we can get. We need all of the housing that the Methodists can build, the Rotarians can build, the Unions can build—as long as they all don't agree to build a universal solution, as long as our aging can have a wide variety of choices. Without this opportunity to choose, social recognition—one of the four essentials of a happy life—will never come.

Emotional security

The third requirement of such a life is emotional security which is

deeply involved with self-respect. To have self-respect, there must be the social recognition we have already mentioned, but there must also be what my friend from the Menninger Clinic, Dr Prescott Thompson, calls "mastery"—one's confidence in his own abilities to overcome the challenges of the day. This can only be built into our planning if we give full emphasis to the common denominator in the design of all of our projects—the individual.

This is difficult primarily because it is all too easy to create the opposite feeling—that which is best described as being "institutional." An institutional feeling has been described as being one of large numbers plus sameness, and its result is to stifle the feeling of self, of personality, of individuality.

There are strong forces that push architects in this direction, and that is why we must not rely on habit or rules to solve our problems. Daily headlines remind us that we must not take chances with human lives, but fire and building codes, zoning regulations and subdivision restrictions do tend to force us toward more or less "standard" solutions.

Selection of interior materials for the convenience of the janitor accelerates our course along this impersonal line. Unless we constantly resist the tendency to consider our tenants as faceless averages, there is no strong force working for individuality. In our world, the rational force of mass-production creates a product that has a uniform degree of quality. This may be desirable in pots, pans and automobiles, but it is deadly where the individual's emotional needs are concerned.

The remedy to the "institutional" feeling is variety. Variety is stimulating.

Unless a person is exposed to differences in his surroundings, we have no right to expect him to be sensitive to other types of differences, and it is such sensitivity, after all, that keeps us from being vegetables. Too often we are content to allow only a different colored door, and still expect the person living there to take an individual pride in his environment.

There is one other source of emotional security that is often sacrificed to our over-riding concern for economy, sanitation and safety, and this is our tendency to build-in much of the furniture. Built-ins are safer, and more sanitary, and they enable us to plan

more efficiently and thereby reduce over-all area and cut cost. However, being fixed, they discourage variety. Even more serious, they are new and hold no memories. Nor do they allow the individual to have a sense of possession. This, in spite of the fact that Simmon's study of all cultures has revealed that the ownership of things is one of the five basic drives that can bring satisfaction to mankind.

When we build cramped spaces that do not permit each individual to surround himself with the things he loves, we are rejecting one of the chief sources of emotional security. Too often we are content to provide a shelf for the display of a few things and maybe we plan a little larger clothes closet even though the space required for hanging clothes gets less and less. What is needed is space within the unit for storage of boxes of letters, boxes of pictures—place to store the many things that have meaning rather than just the most precious few.

If we can allow our tenants to surround themselves with mementos of a life-time of living, and if we can offer variety of environment and if we can allow each individual a freedom of choice within the limits of his health and pocketbook, our new buildings will have made a real contribution to self-respect, and gone a long way toward providing at least some degree of emotional security.

The need for physical security

While architects can only supplement the work of the psychiatrist, sociologist and economist in solving many of the other parts of the problem of growing older, we are experts when it comes to providing the quality shelter that will permit the satisfaction of man's first need. Too often, we are content to stop at keeping the rain out and the heat in and providing some degree of convenience without accepting the much greater challenge of creating an environment that can add substance to the later years of life.

With most builders of single-family housing having long since decided that mere shelters plus some convenience was more than enough and that any one can draw plans, it appears that for the next few years the architect's chances to point the direction in new housing will essentially be in the field of group housing, whether clusters of cottages, garden apartments or multi-story buildings. With the pop-

ulation explosion bearing down on us, the average American's reaction against any form of communal living may soon have to be a thing of the past. There is much to be said for group housing. Some sort of accommodation that would provide beauty, dignity, comfort, convenience and companionship among those of similar interests can provide many satisfactions that are not readily available in independent living. Whether such facilities are grouped physically or only administratively, only group living can permit bringing together the whole team of advisers that can mean so much to the peace of mind of any of us as we grow older.

Pros and cons

In fact, group housing is essential in appropriate circumstances and surveys indicate that older people who live in their own homes are not in as good physical health as those who live in large enough groups to justify dieticians and medical care. However, and this seems to be a very significant indictment of much that has been done in the past, the same surveys indicate that the mental health of those living independently was much better than that of the people living in institutions.

We can take at least some comfort from our relative success in taking care of the physical needs of the people. But we also must admit that we have been content to rest on our laurels after working out a few dimensions and making provision for a wheelchair. Our failure cannot be measured in terms of feet and inches, degrees of temperature or footcandles of light. In areas where scientific reasoning, logic and intelligence can supply the answer, we have succeeded. Our people are healthier, warmer and better fed. We have failed to provide happiness, dignity, self-respect and emotional vigor. Our success has been the provision of shelter. Our failure: a deadening environment.

The future

There is one other thing to consider in our planning—the future. This might seem too obvious to need mentioning, and yet many buildings are obsolete before they are occupied. Usually this is due to an existing problem that is so pressing that both the architect and the owner are inclined to discount the fact that it may be several years before the projects will be occupied and that the buildings will be in

constant use for the next fifty years. This means that it is important that our buildings satisfy the demands of future generations. When our standards are based on the demands of past generations, we are in danger of building only problems for tomorrow's social planners. Only by continuously evaluating every rule, formula and custom can we hope to anticipate the future's needs.

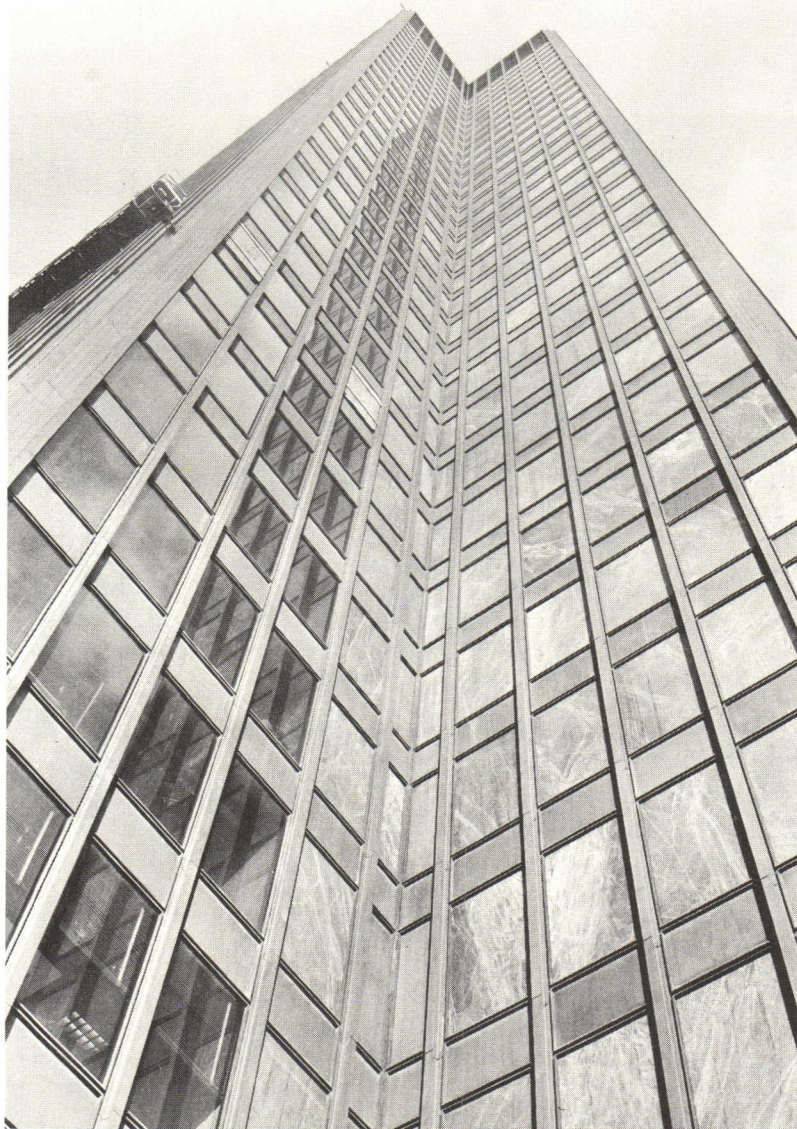
Over the next few years, billions of dollars will be spent under any program we create. Each of us should be concerned about the effect. Only if our cities are more beautiful and if our world is a more pleasant place will all of this money have been spent wisely. The final test of any of our plans will not be found in how much science can be applied to the life of the aging, but rather how much life, joy, peace and creativity can be introduced into their lives by the application of such science. We understand the world today better than any previous generation has ever understood its world. We must make our own decisions. We have today's problems because of yesterday's wrong decisions. These past decisions were not due to any biological necessity, they were solely due to mankind's lack of wisdom in making the choices that he made.

We are not concerned about our choices resulting in bad housing, for we are able to distinguish between good and bad. Our problem is the much more difficult one of getting ourselves to the point of sensitivity to human values where we can distinguish between better and worse. The next years will offer us opportunities to find an answer to our problems. Only if we make our choices based on human values, will our programs result in a more delightful life for our aging.

There is an answer, and while we should not expect immediate solutions, we can at least hope to develop a background by which we can judge whether we are moving toward, or away from, such an answer. Right now, all that we know is that it lies somewhere in between the solution of 16,000,000 houses, which is so individual that it defies planning, and the institution, which requires so much planning that it denies the individual. ◀

Readers of the *Journal* may recall the *AIA Building Type Reference Guide* (BTRG 8-4.5) which appeared in the May and July 1960 issues entitled: *Facilities for the Aging and Infirm*, by Clinton H. Cowgill. FAIA. Copies of the 18-page reprint may be obtained by writing to the Publications Division at the Octagon (50¢).

*"I Dream't
I Dwelt
in Marble Halls"*



NEW MARBLE PALACES

by **John Neff**, *Director*,

Ceramics Research Division, Armour Research Foundation of Illinois Institute of Technology

► In July of 1956, The AIA's Department of Education and Research conducted a Research Advisory Service survey among AIA members to determine architects' views concerning the use of marble in contemporary architecture. The survey, sponsored by the Marble Institute of America, revealed a number of interesting opinions and facts which have had a marked effect on many of the promotional and technical activities of the marble industry during recent years.

One direct result of the survey, *Architect's Use of Marble in Contemporary Architecture*, was recognition of the fact that too little engineering data on marble had been compiled and published for

the benefit of those who were being asked to employ marble in the design of their buildings. Convinced of the need for data of this kind, the National Association of Marble Producers, an organization of marble quarry owners and operators, established in 1957 a research program at Armour Research Foundation of Illinois Institute of Technology with two broad objectives:

- to compile all existing design data concerning marble and, where conflicting values occur or where data is missing, develop more information
- to appraise traditional methods of marble installation and evolve new systems

The article by John Neff which follows describes some of the techniques employed in pursuit of these goals, the accomplishments to date and their probable effect on the future of marble in building construction.

This cooperative effort by the marble industry, the Armour Research Foundation and The American Institute of Architects illustrates simply and effectively how improvement in building materials, building design and building construction depends largely upon closer cooperation among the many factions of the building industry. John E. Shackelford, Managing Director, Marble Institute of America, Inc. ◀

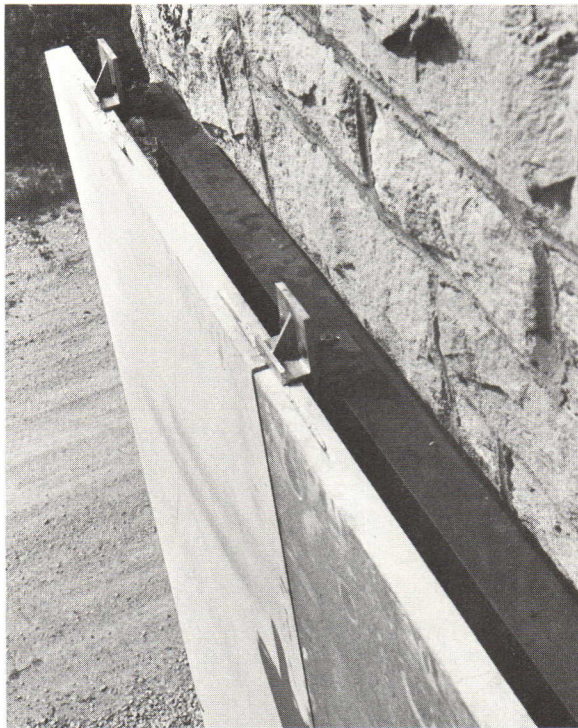
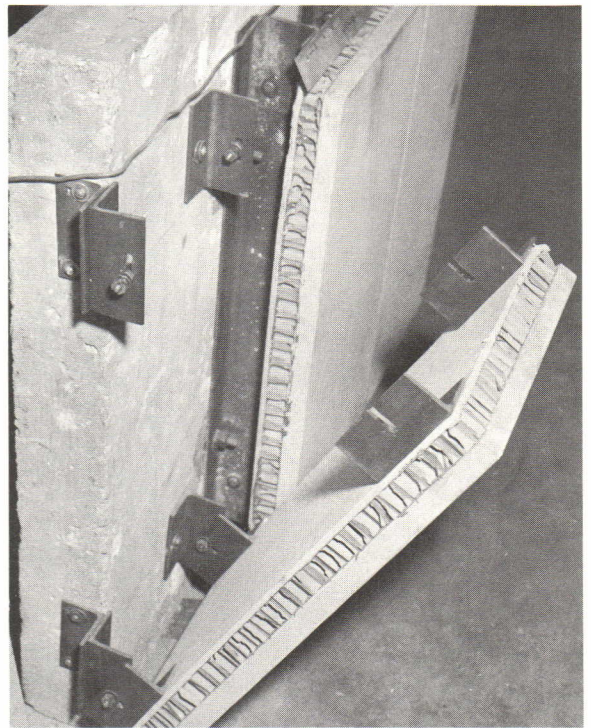


Photo appearing on previous page is of the Seagram Building, New York City. Large panels of marble are glazed into the bronze panel wall system in exactly the same manner as glass. Above photo shows bracket system holding marble veneer by means of grooves. Close-up



of test wall shows anchor clip and relieving angle. Photo at right: A laboratory system for anchoring sandwich panels of marble to reinforced concrete building frame by means of slotted angles for three-way adjustment. Photos courtesy Marble Institute of America, Inc

► All the opulence and security implied in these words from *The Bohemian Girl* (Act II) will become a more common experience in the next few years as one result of a current Armour Research Foundation ceramics research project. This work is aimed at making it possible for architects to use marble with greater skill and confidence and to specify it as a versatile, *lightweight* material for the most modern structures.

While the use of marble in large, spectacular structures may not be as commonplace as it once was, today's property holder, whether home owner or real estate operator, should now be able to see in marble the answer to his needs for both high esthetic appeal and low maintenance costs. One of the results of ARF marble research is a method of using the stone in thin enough sheets so that it can also answer the need for lower initial cost. Ceramists have devised methods for using marble for curtain walls much as glass and sheet metal are now being used in the latest skyscrapers and industrial plants.

What is marble? It may be described scientifically as a recrystallized (metamorphic) limestone composed essentially of interlocked crystalline grains of calcium car-

bonate or magnesium carbonate, or both. Commercially, however, any rock which contains calcium and which can be polished is called "marble." The stone called Serpentine, composed of hydrous magnesium silicate, may be beautifully polished, and is classed as marble even though it contains little calcium or magnesium carbonate.

Travertine, recently enjoying a resurgence in popularity, is calcium carbonate precipitated from hot water. It is characterized by its vesicular or porous structure, and is quite decorative when polished.

States east of the Mississippi produce most of the marble quarried in the United States. It is mined both underground and in open pits. It ranges the color spectrum from white to an almost dead black.

The colors, veinings, clouds, mottlings and shadings of marble are caused by traces of extraneous substances such as iron oxide, which produces pink, yellow, and red, or bituminous substances, which produce greys and black. Marble also varies widely in *texture*, which is determined by size, shape, degree of uniformity, and arrangement of mineral constituents.

The 18th and 19th century architects and builders used marble as

an outward expression of prestige and affluence, but also they were quite aware of its basic durability. Ancient Greek and Roman structures still standing attest to this durability. While some marble was used as a facing in classical buildings, most of it was used as heavy blocks in these massive structures. As architectural styles tended toward lighter, less expensive and space-saving techniques, synthetic materials began to be used in applications for which marble actually was better suited.

Toward the end of the 19th century, architecture turned to column-and-beam construction in preference to the traditional monumental methods. This ended the need for thick walls to carry the load; walls then served only to keep out the elements and divide space. This is the meaning of the term curtain wall. Yet even curtain walls, particularly those for exteriors, became more expensive, as on-site labor costs rose. This situation resulted in the development of sandwich construction, two layers of facing material with an insulating core between them.

The Foundation's work with marble began with a project in 1957 under the sponsorship of the National Association of Marble

Producers. The principal objectives, to assemble pertinent data on the physical properties of marble, and to study existing methods of anchoring marble with a view toward evolving new systems, were suggested originally by the nation's architects through the survey sponsored by the Marble Institute of America and conducted by The American Institute of Architects.

In order to study the mechanical properties for a large variety of marbles supplied by the producers, standard procedures of the American Society for Testing Materials and the National Bureau of Standards were followed, where they existed.

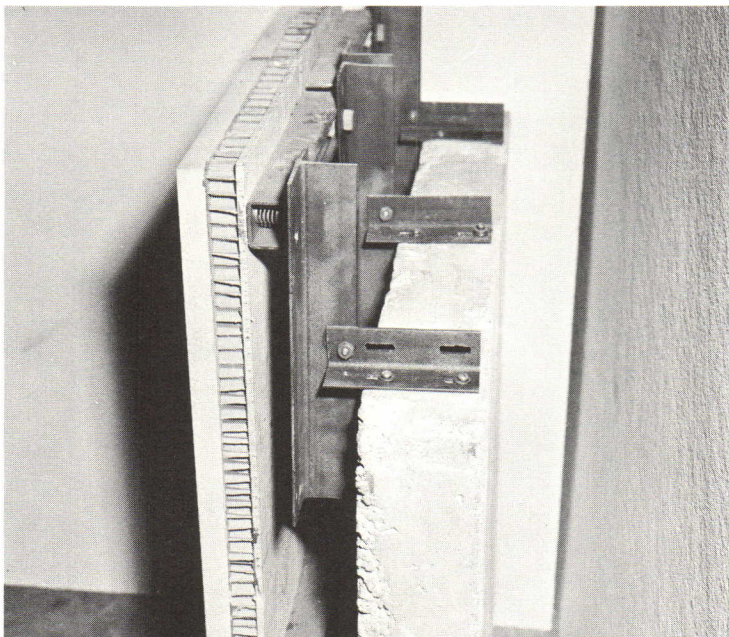
Other methods were especially devised to provide accurate data as rapidly as possible. For example, the coefficient of thermal expansion usually is found by heating samples in an oven or furnace and observing dimensional changes with a microtelescope. This is a slow and rather cumbersome process.

Since service temperatures of marble seldom exceed 200°F, a technique for measuring thermal expansion was devised utilizing SR-4 electric strain gauges. To evaluate the technique, gauges were cemented to materials having established coefficients of thermal expansion, such as copper and carbon steel. These were then heated in a precision oven, and calibration strain/expansion curves were derived. Three strain gauges were used with the cube specimens of marble so that expansions in all three orientations could be determined.

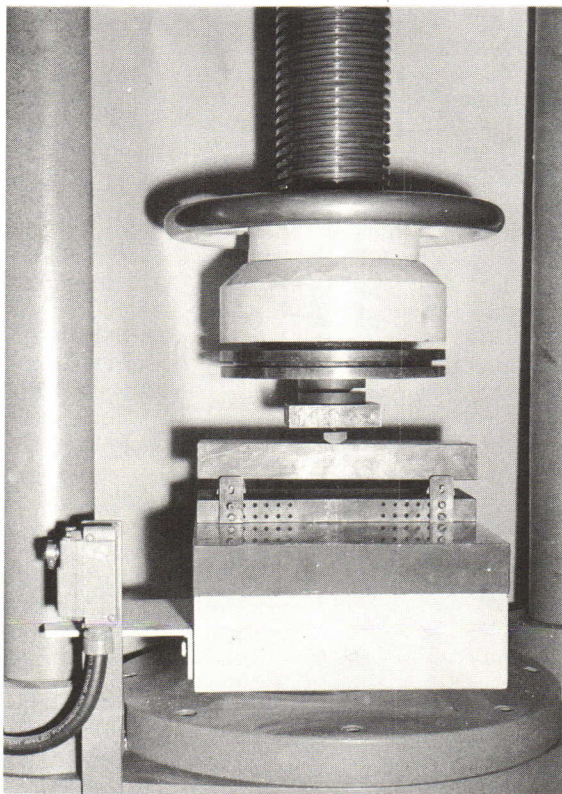
Another property for which a special evaluation procedure was developed is *durability*. Based on suggestions contained in a British Building Research Report published in 1932, a Ferris-wheel-type machine was constructed in which several marble specimens were automatically subjected to water soaking, drying, acid and salt bath immersion, and dust abrasion. The cycle ended with a freeze of 16 hours at -10°F. The various marbles then were compared on the basis of changes in volume, water absorption, dynamic modulus of elasticity, modulus of rupture, and gloss.

The second objective of the project, appraisal of traditional uses of marble and methods of installation, has been equally productive of new concepts.

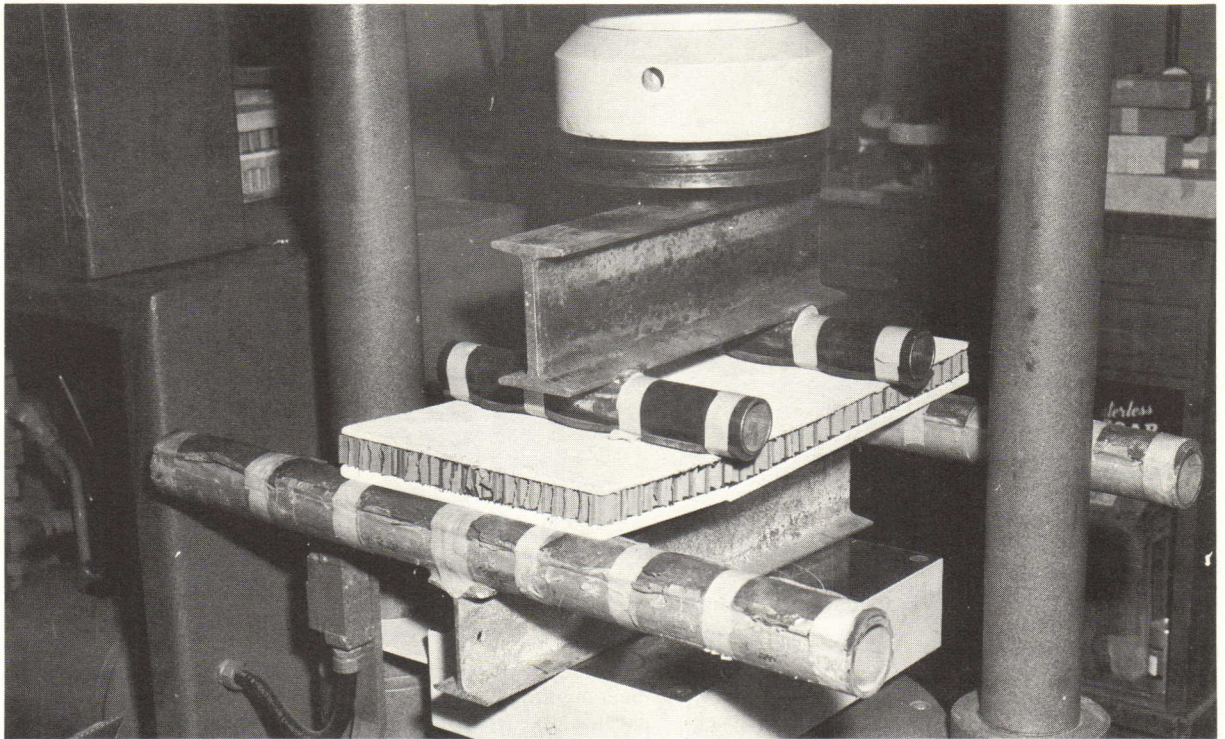
One traditional notion that was attacked was that marble should



One method of anchoring marble-faced sandwich panels to a reinforced concrete building frame. A Unistrut member fastened directly to the back of panel allows lateral adjustment—connection shown is for span construction



Marble sample being tested for modulus of rupture



Marble-faced sandwich panel being tested for flexural strength; paper honeycomb core and asbestos board backing were used in this specimen

always be at least $\frac{7}{8}$ " thick. While $\frac{7}{8}$ " is still generally held by the industry to be the minimum standard thickness for conventional interior work, $\frac{1}{2}$ " was found to be perfectly satisfactory for marble tiles. Through careful attention to the formation of marble with regard to veining and striation, and through more precise cutting and polishing operations, the industry now produces thin marbles which can be used with complete confidence as veneer or tile.

Veneering presented a variety of problems, however, in the method of attaching the marble to the supporting surface. For thin, relatively small tile, adhesive cements were indicated. It was soon found, though, that just any adhesive was not workable. Some cements produced unsightly discolorations under accelerated aging conditions. Others became too rigid and would not permit differential expansion between the substrate and the marble, while still others could not be used on vertical surfaces because they were too slow in developing setting properties.

Mechanical attachment was also given careful consideration. Methods of fastening metal brackets to the marble itself were investigated as was the design of the complete bracket system, which had to be adaptable to irregularities in the

supporting surface. As with adhesives, caulking compounds for use in the joints between panels were evaluated for durability, staining, and other characteristics in a variety of environments.

The information acquired on caulking compounds has already been published and distributed to all members of the Marble Institute of America who are now in a position to pass these recommendations to the architects they serve.

Sandwich construction is two wall surface materials with a suitable filler or core between. They are factory fabricated in relatively large units and quickly installed on the job.

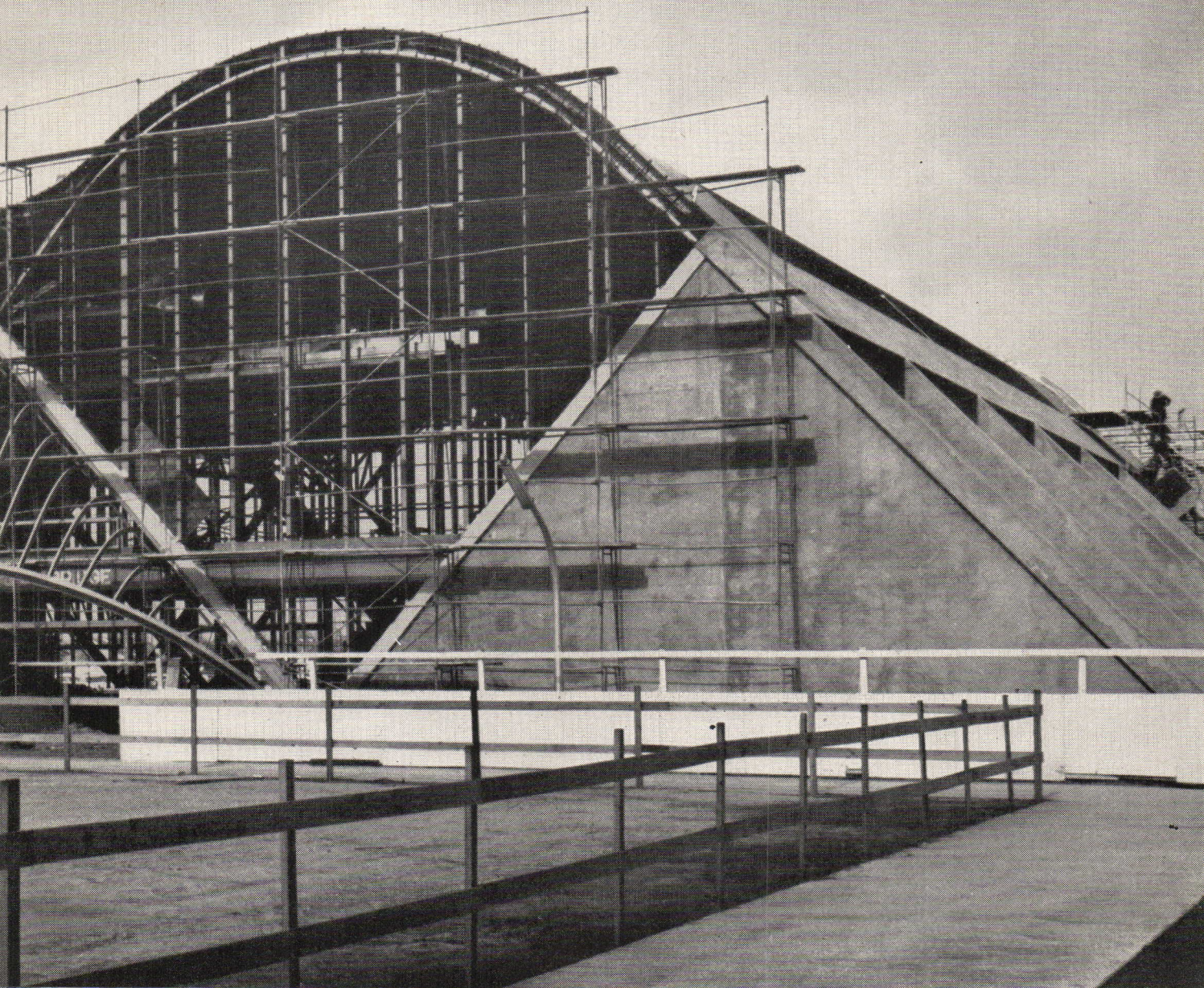
An exterior marble curtain wall consists of a slab of sheet or marble for the exterior surface. This is bonded to an insulative core such as foamed glass, paper honeycomb, wood fiber board, or the like, then bonded in turn to the interior surface which may be sheet metal, cement asbestos board, or plywood. Again, during the course of the research it was necessary to determine the mechanical properties of a great variety of sandwich systems in order to establish their adaptability to various interior as well as exterior applications. In the latter, for example, wind loading forces must be taken into consideration in designing curtain walls.

These forces depend on wind velocity, size, shape, and height of surface, the angle of the wind striking the surface, air temperature, humidity, barometric pressure, and size and location of openings.

Costs necessarily must be taken into consideration as part of a study of this type. For example, at first glance the cost of marble for interior building walls may seem high but when maintenance factors are taken into consideration, a marble faced wall, compared to a painted plaster wall, actually pays for the additional cost in $9\frac{1}{2}$ years. Other materials may be cheaper to install initially, but become very expensive to maintain in the 50 year life span of a building.

Studies show that compared to total cost of commercial buildings, the cost of marble is low. For example, the cost of marble was 2.7% in New York City's Chrysler building, 2% in the RCA building, 3.2% in the Vermont State Office building, 0.9% in the Federal Reserve Bank (Detroit) addition, and 0.8% in the Houston (Texas) Prudential building.

With the modern forms and applications of marble now available to the architect, it should not be surprising to find this beautiful and durable building material used more and more widely in structures of all types. ◀



Designers: Kistner, Wright & Wright, Architects. Fryar Construction Company, Pasadena, was the General Contractor.

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Allied Arts

by Wolf Von Eckardt

► We hold the truth to be self-evident that matters of public concern ought to be subject to public debate. We fervently debate such simple questions as who ought to be President and such complex ones as the propriety of clandestine foreign operations. Such debate is not always comfortable for all, as Messrs. Richard M. Nixon and Allen W. Dulles will readily concede. It is inevitably leavened with criticism which is more often than not exaggerated or ill-informed. But, like bread, debate does not rise without this yeast. Public figures eat this bread, even when bitter, because without it we cannot have democracy.

There is, however, one vital matter of public concern all too seldom publicly debated. It is the matter of the physical aspect of our communities and of the buildings, highways and housing developments that determine their appearance and convenience — the matter of architecture and planning.

Architects and planners are unhappy about this. They want their work to be understood and they know that it must have public support. Most of them want publicity, better public relations, more public information, deeper understanding and public support in city hall, state legislature and Congress. Yet few of them appreciate the need for the yeast of criticism. Some even deplore architectural criticism in the public and architectural press.

Some hold that only architects should be permitted to express themselves publicly on the merits of architecture, although they readily acknowledge that professional ethics do not permit one practitioner to publicly criticize the work of another. Others are afraid, as Burchard and Bush-Brown point out in their superb book, that what, for lack of a better name we call “modern” architecture, is still so tender a plant that critical appraisal might kill it. These people are apt to claim that modern architecture is really no longer an art but a result of mere structural and functional necessity cleverly engineered by economy minded businessmen.

Those, however, who feel that architecture and city design are art and an art to be proud of must also acknowledge that the mother of the arts should be subject to the same art criticism as

her children. It is hard to imagine a writer or a painter who doesn't want his work reviewed, no matter how critically, or an actor or musician who doesn't stay up on opening night until the morning papers tell him how his performance was received.

Grady Clay, the architectural and planning writer who recently became an honorary member of AIA, listed other obstacles to architectural criticism in a recent discussion at Harvard University. “Let me list them by phrases,” he said:

“1 ‘Don't rock the boat.’—This prevents criticism, not only of what's come before, but what's coming next. ‘Better not criticize that new State Office Building; the governor won't approve the next building.’

“2 ‘This is not an appropriate time for criticism,’ or ‘Not now.’—The answer to this is: No time is appropriate, to the person or agency criticized. Which has nothing to do with the case.

“3 ‘Why ask for trouble?’ (variation on ‘Don't rock the boat’).

“4 ‘We need positive thinking.’—I agree. But to think positively about unpleasant matters, such as a failure, unsightliness, uglification is not yet un-American.”

To be sure, not all criticism will be a “reasoned and systematic discussion,” as my encyclopedia defines the word. But we can't worry too much about wounded sensitivities when the public interest is at stake.

And it *is* at stake as we build the much touted “Second United States.” To hide behind Grady again: “In its broadest sense the purpose of criticism is first, to identify and kill off the weeds growing in our cities. Second (and not in order of importance), to encourage good designers and their associates by singling out the unsung and unheralded examples of adventuresome planning and good design. Third, to give the planner and designer a new and broader audience—if not appreciative, at least informed.”

We need that audience. And to get it we need more public discussion not only of *what* we shall build and *how* we shall build, but *how well* we build. We won't get it without accepting and actively encouraging criticism. You don't get public attention with panegyrics.

What has all this to do with “Allied Arts”? Simply this: I believe the time has come for the profession to encourage and stimulate the fine art of critical writing on architecture. It can be its best ally. ◀