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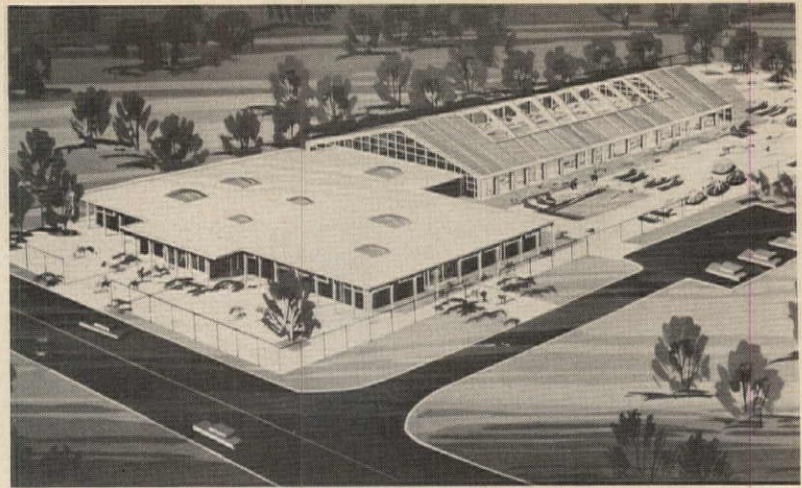
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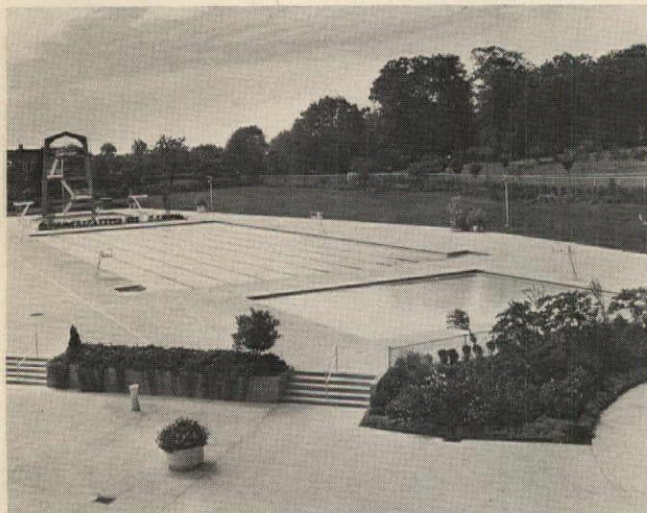
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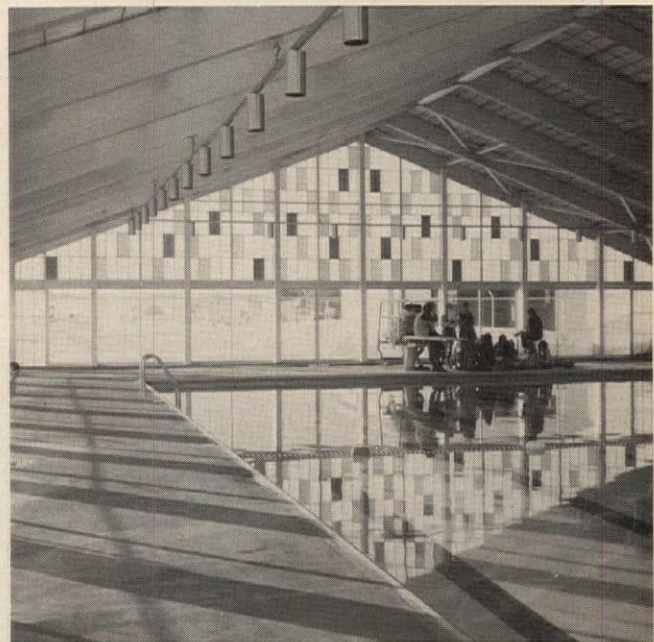
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AIA JOURNAL

OCTOBER 1972

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COVER: The Orange County Courthouse in Goshen, New York, by the office of Paul Rudolph (see leadoff article).

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comment and opinion

OUR NATIONAL PARKS—WHERE DO WE GO FROM HERE? The dedication of the Indiana Dunes National Lakeshore is certainly a milestone in this National Parks Centennial Year. For one thing, it marks the first time that Congress has designated such an area as part of the National Park Service. And for another, it culminates the volunteer work of a citizen group long active in efforts to establish this unit—a group that has had the enthusiastic support of four chapters of The American Institute of Architects, brought together under the Lake Michigan Regional Planning Council (leadoff article, AIA JOURNAL, Dec. '64).

Comprising 8,329 acres of towering sand dunes and beaches, this newcomer to the Park Service lies on the southern shore of Lake Michigan and includes 13½ miles between Michigan City and Gary. Because it serves such a populous region of the nation, the development of the lakeshore will help carry out President Nixon's directive to bring "parks to the people." But this involves a major consideration: How do the visitors literally get "into" the parks? This is especially problematic in the most popular ones such as Yosemite and Yellowstone, the granddaddy of them all, where bumper-to-bumper traffic on certain weekends, smoky air and overcrowded campsites are becoming commonplace.

An important step in attempting to alleviate this situation has been taken with the publication of a far-ranging report by the Conservation Foundation, prepared under contract with the Park Service. Perhaps the most significant recommendation is one that calls for steps to keep automobiles and other incompatible intrusions from destroying America's national park heritage. To achieve this objective, it supports "an immediate moratorium on roadbuilding, parking lots and other auto-oriented improvements" within the national parks and recommends that the Secretary of the Interior appoint a special commission "to study the entire question of private automobiles in the parks and alternative methods of intrapark transportation."

Published in paperback form under the title *National Parks for the Future*—available for \$3.50, prepaid, from the foundation's offices at 1717 Massachusetts Avenue N.W., Washington, D.C. 20009—the report repeatedly says that the public and their political leaders "must reject the notion that the parks can be all things to all people." Particularly, "They must reject any suggestions that the National Park System has a responsibility to engage in programs which cover the entire spectrum of outdoor, historic and cultural needs of the American people."

Not everyone, of course, including some park officials, is going to agree with these recommendations, which speak only for the Conservation Foundation, according to its president, Sydney Howe. For example, Dr. Harold McCracken, director of the Buffalo Bill Historical Center at Yellowstone, was quoted in the *Billings Gazette* in June as saying, "I am positive that people are not going to leave their cars in some vandal-prone area outside the park, get in a crowded bus and be herded in and out of the same entrance. They want to drive through one entrance and out the other, taking their own time and seeing what they want to see. People will go to Disneyland before they'll be herded around."

It will be interesting to watch the developments in the months ahead. Will the public get behind the findings of groups like the Conservation Foundation or will it side with views as expressed by Dr. McCracken? I am willing to place a bet on the former—and even give odds in the process.

ROBERT E. KOEHLER

ACKNOWLEDGMENTS

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- 33—above, Robert Kirwin
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- 44—University of Oregon, Oscar Palmquist
- 45—right, University of Virginia
- 51, 52—design team for youth center
- 54—left, Phil Stitt, *Arizona Architect*
- 56—below right, W. Cox, AIA
- 58—Photo Service of the Union of Soviet Societies for Friendship and Cultural Relations with Foreign Countries

NEXT MONTH

The discipline of architectural concrete is every bit as demanding as brick, says the author of the leadoff article. And the design itself is a key to the constructor's ability to produce that which is shown on the drawings. Addressed to the professional in the office, the piece covers such points as detailing, finishes, samples, concrete mixes, efflorescence and forms. The author, by the way, wrote a well-received article on the same subject in the November 1965 AIA JOURNAL.

Other features provide an insight into a design-oriented, 24-member Connecticut firm which is responding to its organizational problems, another in the continuing Practice Profiles; a look at the mobile home industry as viewed by an architect; a portfolio of the winners in the 1972 awards program for non-profit-sponsored low and moderate income housing; and a description of a new data filing system, also part of an ongoing series, this one Practice Aids.

ASIDES

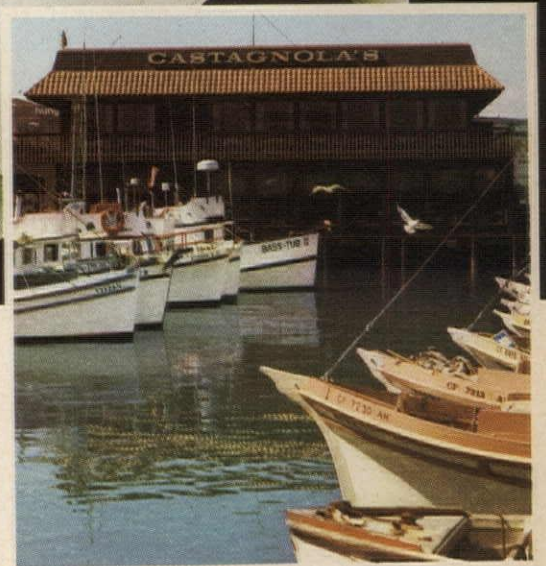
Before 1972 slips by, we want to at least acknowledge that this is International Book Year, so proclaimed by Unesco. The organization is, after all, a good friend of the architectural profession, particularly in the areas of 1) preserving and restoring monuments and historic buildings and 2) the development of museums and traveling exhibitions. A list of its publications can be obtained by writing to Unesco Publications Center, P.O. Box 433, New York, N.Y. 10016.

Getting back to International Book Year, Sally Swing Shelley, Unesco's senior information officer at the United Nations Building in Manhattan, has sent us some interesting notes. We normally don't single out public relations people, but she performs her duties with such efficiency and enthusiasm that a pat on the back is in order.

In outlining this special activity, Mrs. Shelley points out that the extraordinary growth of television sets has not been at the expense of expansion of print media. "Almost simultaneously, we are faced in the industrialized countries with a book revolution," she explains. "In 1972, every second, 250 copies of a book are being printed, and, likewise, 4,500 copies of a newspaper. Every minute a new book is printed. That means more than 500,000 a year, totaling 8 billion copies."

But in describing what Mrs. Shelley calls the "book famine," she adds this admonition: "Despite this unprecedented growth, grave inequities remain. In the book field alone, 33 countries, representing hardly a half of the world's reading public and only half of the children of school age, produce 80 percent of the world's books. The others have the remainder. A half of humanity for a fifth of the books!"

To focus on this situation, Unesco's goals for the year are the advancement of publishing industries in the developing countries; the setting up of international machinery to secure easier access to copyright; the encouragement of authorship and translations; and the development of libraries. □



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Potlatch

Worldwide Interest in Tall Buildings Reflected in International Conference

Tall buildings—how high will they go? From a technical standpoint, Frank Lloyd Wright's idea of a mile-high structure could become reality now, participants at the first International Conference of the Planning and Design of Tall Buildings agreed.

The most problematic areas in such a tall structure would be the mechanical and electrical systems, explained L. E. Robertson, partner in the firm of Skilling, Helle, Christiansen, Robertson. Added T. C. Kavanagh, senior vice president of URS Madigan-Praeger, Inc.: "The holdup is the social and behavioral problems which must be considered, not the structural problems." "What effect a tall building will have on the rest of a city is a question city planners should ask themselves before the building goes up. Architects and engineers should enter the political arena where questions about a building's effect on the ecology and the environment are asked. Too often we get into the picture after it is too late," stated Frank L. Codella, AIA, vice president of Charles Luckman Associates. The three, all with firms in New York City, were panelists during the conference.

Held at Lehigh University, Bethlehem, Pa., the August 21-26 sessions attracted 600 or so engineers, planners, educators and architects from places as far away as Kenya and New Zealand—in all, 44 nations. Would this mean that countries such as Norway and Sweden are thinking in terms of really tall buildings, representatives of the two countries were asked. Not so at all, they explained, adding that people there like to have close contact with the earth, but since a tall building is usually considered one higher

than a firehose can cover, the problems of the highrise are already present. This fact, explained Dr. Lynn S. Beedle, director of Fritz Engineering Laboratory at Lehigh and chairman of the world joint committee responsible for the conference, was exactly the reason for the meeting: so that professionals from all nations could exchange information which would enable them to contribute to the betterment of urban life.

In Paris, the tallest structure is 688 feet; in Johannesburg, 728 feet; in Pretoria, 508 feet. And the small steel town of Bethlehem—which, by the way, is clean enough to put every other US city to shame—has a 23-story tower. Since the tall building, then, is a fact of life, the meetings concentrated on technical subjects: structural standards; elastic analyses—strength of members and connections; structural systems; architectural-structural interaction; wind loading and wind effects; earthquake loading and response, etc.

Of US architects in practice scarcely a half dozen were present. There will be opportunities for the design professions to catch up, however: A series of international conferences on tall buildings is planned by the sponsors, the National Science Foundation, the American Society of Civil Engineers, the American Iron and Steel Institute, and the International Association for Bridge and Structural Engineering. Come November, Poland will be the host, and through 1973 the conferences will be in India, Mexico, France, Czechoslovakia, Scandinavia, Hawaii, Australia, Japan, Spain, Yugoslavia and Brazil. (The AIA JOURNAL will take a closer look at tall buildings in January.)



Located at Ninth and G Streets N.W., the library brings new life to the city's downtown.

Simplicity of Design in New Library, Work of the Late Mies van der Rohe

Washington, D.C.'s new central public library is one of the last structures designed by the AIA Gold Medalist Ludwig Mies van der Rohe. The architect died in 1969, a year after ground was broken for the library. He has been quoted as saying about it, "I was given a 93-page list of requirements, and I translated it into architecture."

Named for the late Martin Luther King, the library is constructed of dark glass and black steel. It is unadorned, its beauty being revealed in its quiet and harmonious proportions. In addition to space for over 1.5 million books, it has spacious reading areas, meeting rooms, an exhibit hall and the most up-to-date equipment, making it one of the most efficient in the country.

Arizona Astronomy Laboratory Sponsors Telescope Designed by an Architect

Max Kaufman, AIA, of Phoenix has constructed a model for a new 70-inch photopolarimetric telescope which will be installed on Mount Lemmon near Tucson, Ariz., for asteroid and planetary research. The project is being conducted under the aegis of the Lunar and Planetary Laboratory of the University of Arizona whose scientists have been identified with recent space probes. Kaufman says that the model continues to serve its study purposes. "We hope," he comments, "to continue on the final engineering drawings of the actual 70-inch instrument in the very near future."

The working model of the telescope—except for a primary and a secondary mirror—was built in Kaufman's machine shop at his home. It was described in and featured on the cover of the September 1971 issue of *Sky and Telescope Magazine*.

Kaufman's basic interest has been Egyptology which he has studied for the past 30 years. In fact, his absorption in astronomy is a spinoff activity, resulting from his trying to figure out how the ancient Egyptians were able to establish star positions so accurately. He first built an 8-inch and then a 12½-inch compound telescope which let him view the moon and the planets without ever leaving home.

Incidentally, his interest has extended in another direction, and he has painted murals in the style of the Egyptians to adorn his

continued on page 54

Ohio Council Concern for Environment Sets Off Fight Against Visual Pollution

It's futile, believes the Ohio Arts Council, to support art indoors and remain indifferent to the outside world. Hence, OAC is waging a fight against visual pollution. It recently appointed Gale Brooks of Cincinnati as environmental preservationist. Brooks, a past contributor to the AIA JOURNAL (see Jan. '71), is co-chairman of the Cincinnati Chapter AIA's Historic Resources Committee and a member of the Environmental Standards Committee.

W. Byron Ireland, FAIA, OAC chairman, stated that the program will aid not only preservationists but the public as well. Brooks' duties will be to coordinate the activities of local arts councils, historical societies and preservation agencies and to work with schools and college architecture departments.

His first assignment will be to conduct research for historical and architectural landmarks in the Miami Purchase Tract which

covers 10 counties in southwestern Ohio.

OAC has previously sponsored surveys of five Ohio areas. Under its aegis the Second Ohio Conference on Landmark Preservation and Esthetic Responsibility was held in 1971. The OAC-funded Boneyfiddle restoration project in Portsmouth is being directed by Brooks.



Brooks studies blueprints at Boneyfiddle.

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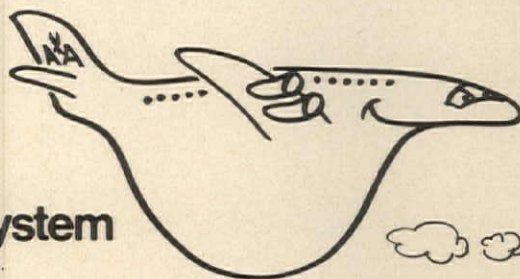
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'Fill the Void'

by LEON BRIDGES, AIA
Vice Chairman, AIA Scholarships Committee

For the past three years the AIA, in a joint program with the Ford Foundation, has awarded scholarships to minority/disadvantaged prospective architectural students who would not otherwise have the opportunity for education beyond high school. Under the terms of the program, the last group of students has been selected, having entered college in September. This year's winners, four of whom are women, include 37 blacks, two Orientals, two Mexican-Americans, a Puerto Rican and an American Indian.

The students will be supported until they obtain their first architectural degrees. It is anticipated that by 1979 there will be 55 to 60 students who will be graduated in architecture because of assistance from the scholarship program. The responsibility to make similar scholarships available to other needy students now falls upon us, the individual members of the architectural profession.

The late Whitney M. Young Jr., then executive director of the National Urban League, told us at the 1968 AIA convention in Portland, Oregon: "You are not a profession that has distinguished itself by your social and civic contributions to the cause of civil rights, and I am sure that this has not come to you as any shock. You are most distinguished by your thunderous silence and your complete irrelevance."

Although these charges are to a certain degree still valid, the AIA did make some response. The Task Force on Professional Responsibility to Society was formed, which has evolved into the Commission and the Department of Community Services. The Human Resources Council was founded, which has developed mechanisms of support for Community Design Centers and for investigations into constraints to building and creative economics. Local AIA chapters have been active in these areas, and, individually, many architects have hired trainees from on-the-job training programs. These are efforts in the right direction, but they are only a beginning. Much more needs to be done if we are to respond honorably to Whitney Young's charges.

The 1970 Bureau of the Census reports that 15 percent of the total population in the United States is composed of minority groups, but even a generous estimate of such categories would reveal that the profession of architecture is only 1 percent minority. There is, however, one sign of potential change: In 1971 approximately 4.2 percent

of the architectural student enrollment was from minority groups. Although that does not bring us anywhere near close to an equitable number, it is a small beginning. We must continue to work to increase that student participation to fill the void.

There are compelling reasons why the architectural profession should expand to reflect and include the diversity that exists in the community. In recent years we have acknowledged a new and important task: to serve the poor, the minorities and the disadvantaged who reside both in our cities and in rural areas. One way to meet this task is to afford those who have personally experienced the problems the opportunity to acquire professional skills in order that they may participate in solving them.

Minority architects and those from disadvantaged backgrounds have a heightened sensitivity to the problems of impoverished areas and inadequacies in the planning process. Inherently aware of the needs of the community, they are better able to communicate with the residents. The profession needs a greater number of such individuals participating at every level of the design/planning decision making process.

A 1972 scholarship applicant from a family of 14 children wrote: "After obtaining an architectural degree . . . I would like to help those who really need help. In other words, I would like to be responsible for eliminating ghettos by constructing homes which will uplift a man's character instead of degrading it." This is the type of architect who would enhance, broaden and better our profession.

In order to meet the continuing need to bring more diverse minority/disadvantaged students into the profession and because of the effective termination of the AIA/Ford scholarship program, a fund drive will be conducted this fall. We are asking over 200 of the largest architectural firms to spearhead our appeal, but the full potential of the program will depend upon contributions from every member of the profession. Once we have done our share, we will approach industries related to architecture. The goal is to raise \$600,000 over the next three years. More details regarding the drive will be forthcoming from the Institute, regional directors and local chapters.

The fund drive will require the full support of the AIA membership. We cannot afford an ordinary commitment nor complacency. Join us—fill the void. □

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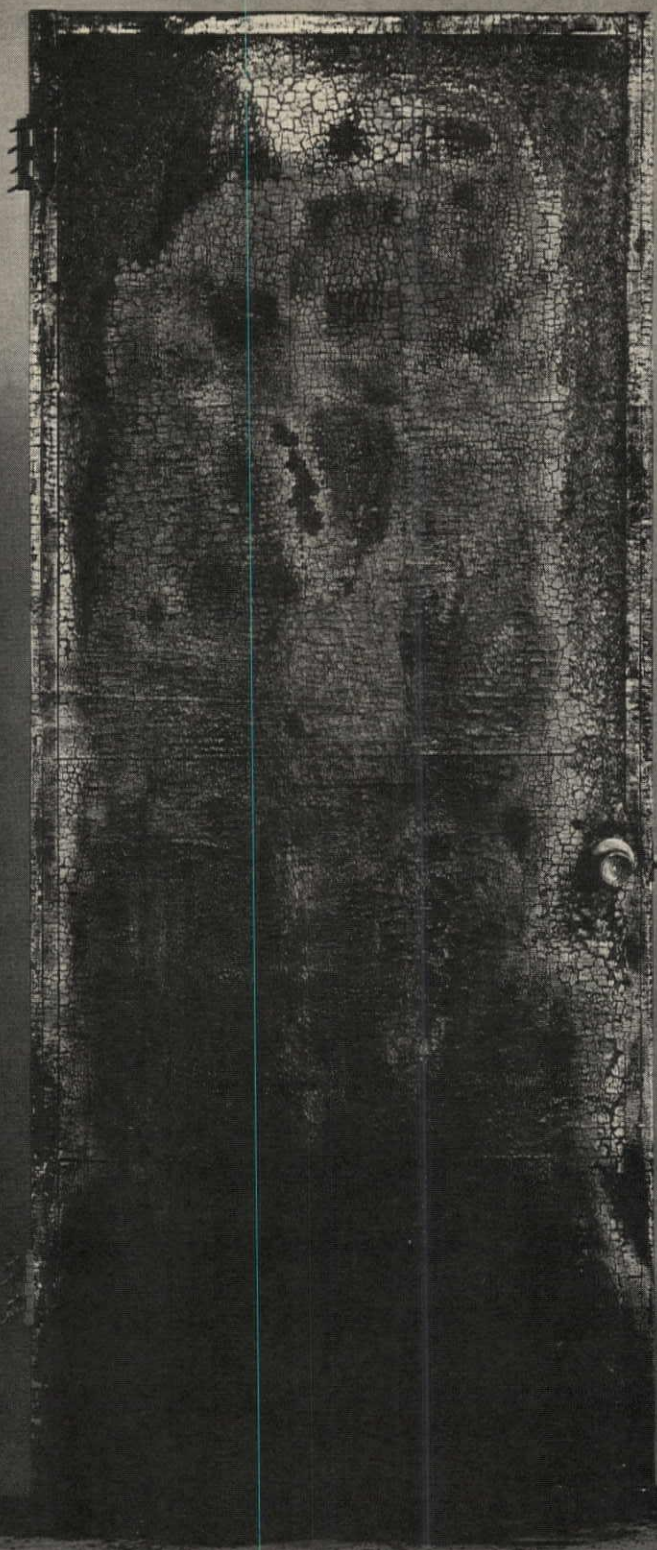
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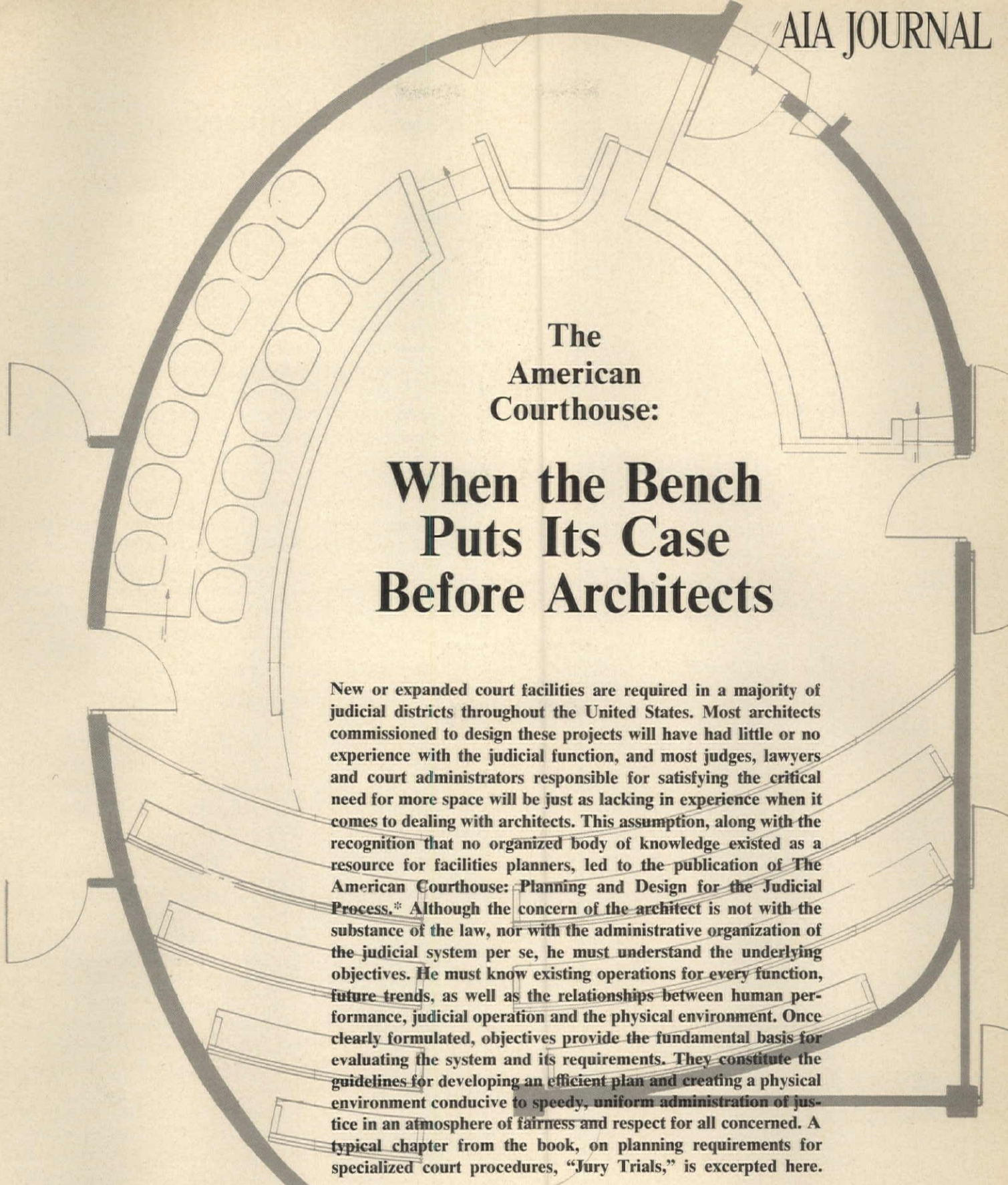
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The
American
Courthouse:

When the Bench Puts Its Case Before Architects

New or expanded court facilities are required in a majority of judicial districts throughout the United States. Most architects commissioned to design these projects will have had little or no experience with the judicial function, and most judges, lawyers and court administrators responsible for satisfying the critical need for more space will be just as lacking in experience when it comes to dealing with architects. This assumption, along with the recognition that no organized body of knowledge existed as a resource for facilities planners, led to the publication of *The American Courthouse: Planning and Design for the Judicial Process*.^{*} Although the concern of the architect is not with the substance of the law, nor with the administrative organization of the judicial system per se, he must understand the underlying objectives. He must know existing operations for every function, future trends, as well as the relationships between human performance, judicial operation and the physical environment. Once clearly formulated, objectives provide the fundamental basis for evaluating the system and its requirements. They constitute the guidelines for developing an efficient plan and creating a physical environment conducive to speedy, uniform administration of justice in an atmosphere of fairness and respect for all concerned. A typical chapter from the book, on planning requirements for specialized court procedures, "Jury Trials," is excerpted here.

^{*}A result of a study executed at the University of Michigan, Ann Arbor, *The American Courthouse: Planning and Design for the Judicial Process*, will be published in late fall by the Institute of Continuing Legal Education. It is sponsored by a joint committee of The American Institute of Architects, chaired by Walter H. Sobel, FAIA, Chicago, and the American Bar Association Section on Judicial Administration, chaired by the Honorable William S. Fort, Judge of the Second District Federal Appeals Court, Eugene, Oregon. Under the direction of Professor A. Benjamin Handler, the university's Department of Architecture and School of Law participated in developing this interdisciplinary guide to the design of courthouses, courtrooms and related facilities. Professor Robert C. Metcalf, AIA, chairman of the Department of Architecture, and Professor C. Theodore Larson, FAIA, of the same department, represented the University Advisory Committee for the project and were instrumental in converting the manuscript into a book. Jacques C. Brownson, AIA, was chairman of the department at the project's initiation. The study was funded by a Ford Foundation grant.

Table 1

ACTIVITIES	PRIMARY PARTICIPANTS	SPACES
Opening and closing rituals	Bailiff Judge Other courtroom participants	Bailiff's station Judge's bench Courtroom
Impaneling of jurors	Attorneys Judge Clerk Selected jurors Impaneled jurors	Attorneys' station Judge's bench Clerk's station Direct observation space of courtroom Jury box
Attorneys addressing court	Attorneys	Attorneys' stations
Argument and discussion	Judge Attorneys	Judge's bench Attorneys' station
Handling and passing of documents and exhibits	Attorneys Judge Clerk Witnesses Jury Parties	Attorneys' stations Judge's bench Exhibits area Witness box Jury box Parties' stations
Display of exhibits	Attorneys Clerk	Display space Clerk's station
Examination of witnesses	Witnesses Attorneys Judge Clerk	Witness box Attorneys' stations Judge's bench Clerk's station
Conference between judge and attorneys	Judge, attorneys, court reporter	Conference room, judge's bench
Conference between attorneys and parties	Attorneys, parties	Conference room, attorneys' and parties stations
Judge addressing jury	Judge Jury	Judge's bench Jury box
Jury deliberation	Jury Bailiff	Jury deliberation room Bailiff's station outside deliberation room
Announcing judgment	Jury Judge	Jury box Judge's bench
Court reporting	Court reporter, all speakers in courtroom	Court reporter's station, judge's bench, conference room
Waiting	Attorneys Parties, attorneys Witnesses	Attorneys' lounge Parties' and attorneys' waiting space Witness isolation space
Provision of security	Bailiff, marshal, police officers	Courtroom, witness isolation space, jury deliberation and sequestering spaces
Detention of prisoners	Prisoners, police officers Social, welfare and health workers	Detention spaces Interview spaces
Public observation	Public	Public observation space
News reporting	Press	Press observation space, press room

Table 2

PEOPLE	FURNITURE AREA PER PERSON (square feet)	MOVEMENT AREA PER PERSON (square feet)	TOTAL AREA PER PERSON (square feet)
Judge	20-25*	25-30	45-55
Clerk	15-18	15-17	30-35
Court reporter	8-9	3-6	11-15
Bailiff	8-9	3-6	11-15
Attorney	15-18**	17-22	32-40
Party	11-13	5-7	16-20
Witness	7-9*	8-11	15-20
Juror	4-5*	4-5	8-10
Press	6-7	4-8	10-15
Public	3-4	3-4	6-8

*Add nonencroachment distance of 5-6 feet

**Add 4-5 square feet for movable podium

When the Bench Puts Its Case Before Architects

by WALTER H. SOBEL, FAIA

Legal actions coming before a general trial court range from settlement of contract disputes to divorce suits, custody fights, small claims, antitrust, felonies, misdemeanors and a host of other types of litigation. The trial function must handle all these with their varying degrees of complexity and intensity or hostility. Decisions rendered have both legal and social implications. The trial or hearing procedure serves to educate the public in the due process of law and in the administration of justice.

A substantial number of people are immediately affected by each trial, all requiring special considerations and, frequently, specific facilities. Included are the parties to the action; persons having a relationship to the parties; witnesses; jurors; attorneys; the judge; judicial and administrative staff; news reporters; the public directly involved; and the larger community.

Operations, Activities, People and Spaces

The general operations of a jury trial, civil or criminal (following the pretrial procedures including arraignment), are opening preliminaries; impaneling of jurors; opening statements; presentation of evidence and closing statements by attorneys representing each side; deliberation and decision. Table 1 outlines these activities along with the participants and spaces involved (described in detail in *The American Courthouse*).

Table 2 shows the unit space requirements for each type of person likely to be present in the courtroom. Furniture area includes working and seating surfaces. Total area per person is the sum of the furniture and movement areas required per person. The nonencroachment distance of 5 to 6 feet for the judge is to insure him a degree of privacy commensurate with his role. A nonencroachment distance surrounding jurors and witnesses helps prevent violation of the jurors' impartial roles by attorneys and lessens the impact of attempts to intimidate witnesses.

Many cases involve more than one attorney and have several parties per side. Space should be provided for four attorneys and four parties. Space must be provided for 12 jurors plus two alternates except in certain trials where the recent Supreme Court decision has upheld the constitutionality of a jury of six. Space should be provided for such spectators as may wish to observe the proceedings, for persons waiting to be called as witnesses or parties and for jurors called for impaneling.

Mr. Sobel, who heads the firm of Walter H. Sobel & Associates in Chicago, is chairman of the AIA Task Force on Courtroom Facilities.

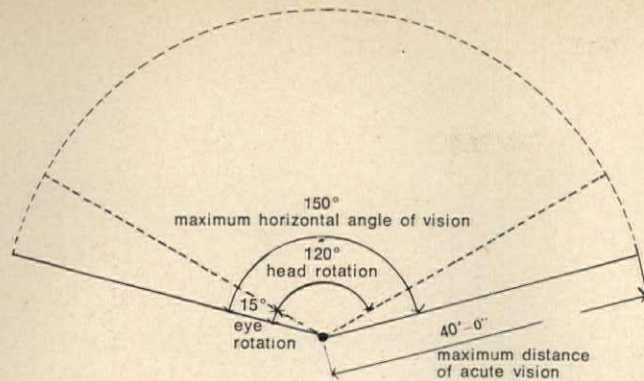
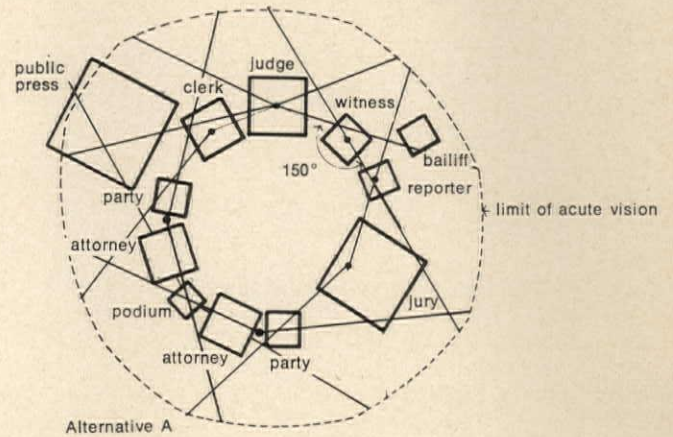


Figure 1

BASIC VISUAL CRITERIA

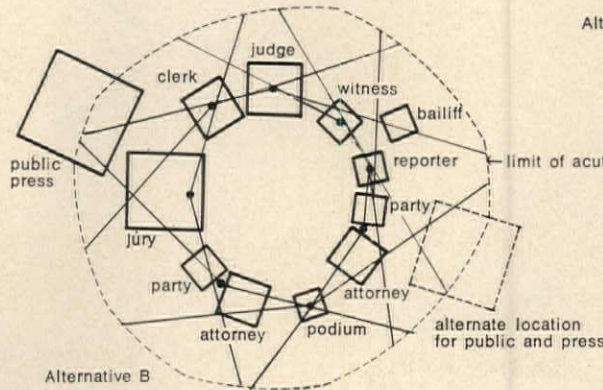
Source: *Layout of Workplaces*, Wright Air Development Command Technical Report 56-17, US Department of Commerce.



Alternative A

Figures 2 and 3

SPATIAL DISPOSITION BASED ON VISUAL REQUIREMENTS



Alternative B

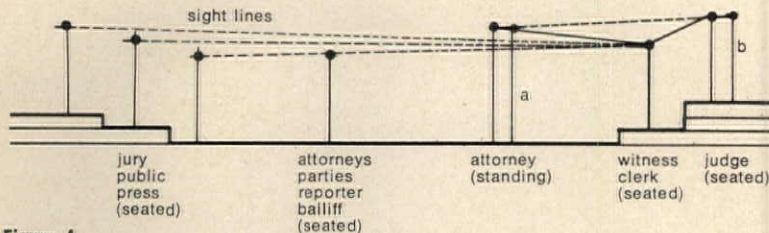


Figure 4

RELATIVE ELEVATIONS AND VERTICAL SIGHT LINES

Source: W. E. Woodson and D. W. Conover, *Human Engineering Guide*, University of California Press.

Communication and Spatial Patterns

There are four types of communication in any courtroom: visual, audio, movement of people and document transfer. The relationships involved, together with unit space requirements, provide the analytical basis for a courtroom plan. (Each of these relationships is discussed separately in *The American Courthouse*, first by showing how people relate to each other in terms of frequency and significance of communication, then by ranking them according to degree of importance in communication.) The resulting patterns are illustrated in Figures 1 through 8; the total communication system

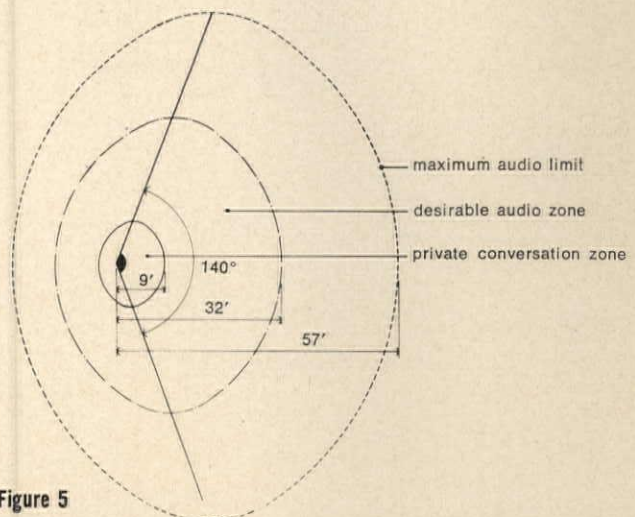


Figure 5

BASIC AUDIO CRITERIA

Sources: V. O. Knudson and C. M. Harris, *Acoustical Designing in Architecture*. John Wiley & Sons, Inc. P. H. Parkin and H. R. Humphrey, *Acoustics, Noise and Building*, Faber & Faber, Ltd.

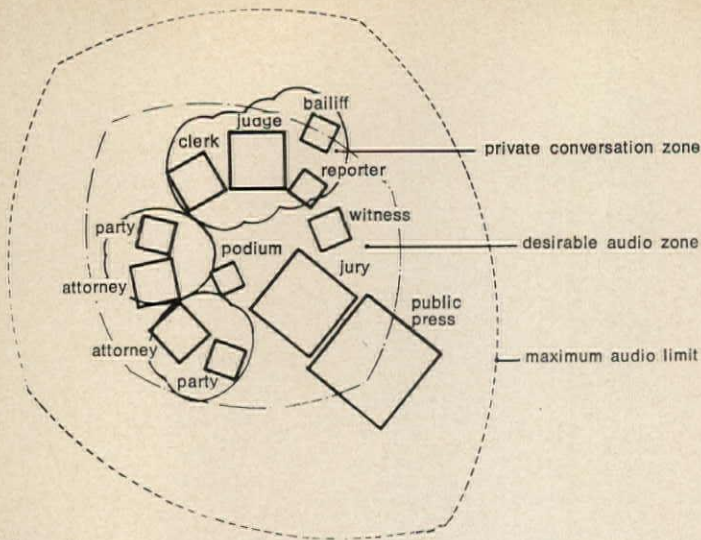


Figure 6
SPATIAL DISPOSITION BASED ON AUDIO REQUIREMENTS

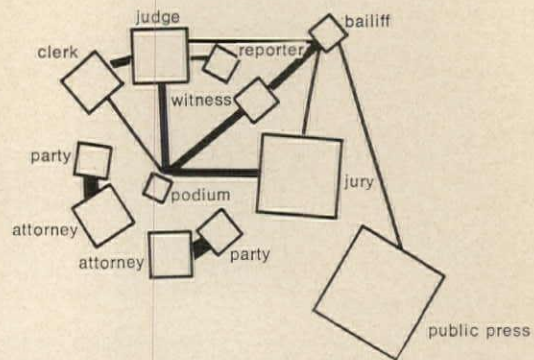


Figure 7
SPATIAL DISPOSITION BASED ON MOVEMENT

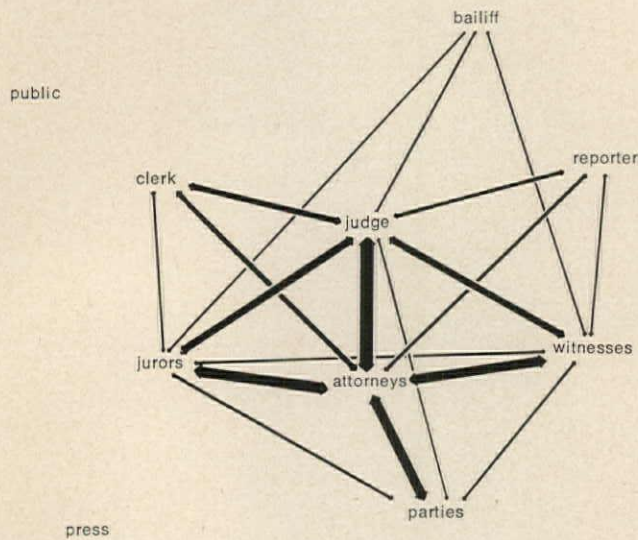


Figure 9
TOTAL COMMUNICATION SYSTEM

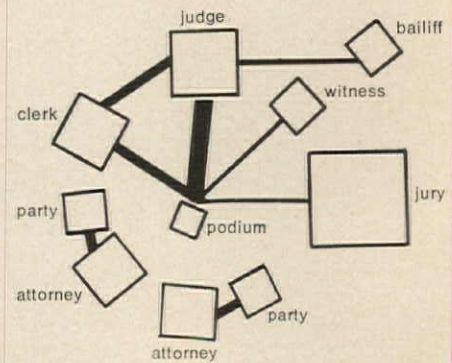
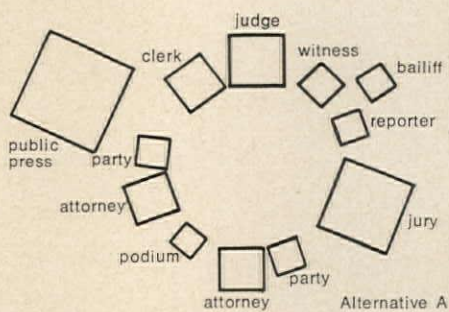


Figure 8
SPATIAL DISPOSITION BASED ON DOCUMENT TRANSFER

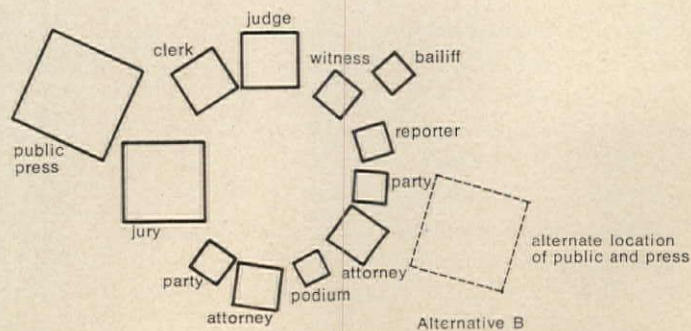
is shown in Figure 9; and final composite spatial dispositions in Figures 10 and 11, where the basic criteria charts for each category of communication have been superimposed. If the visual requirements of the active participants are met, so are most of the other requirements.

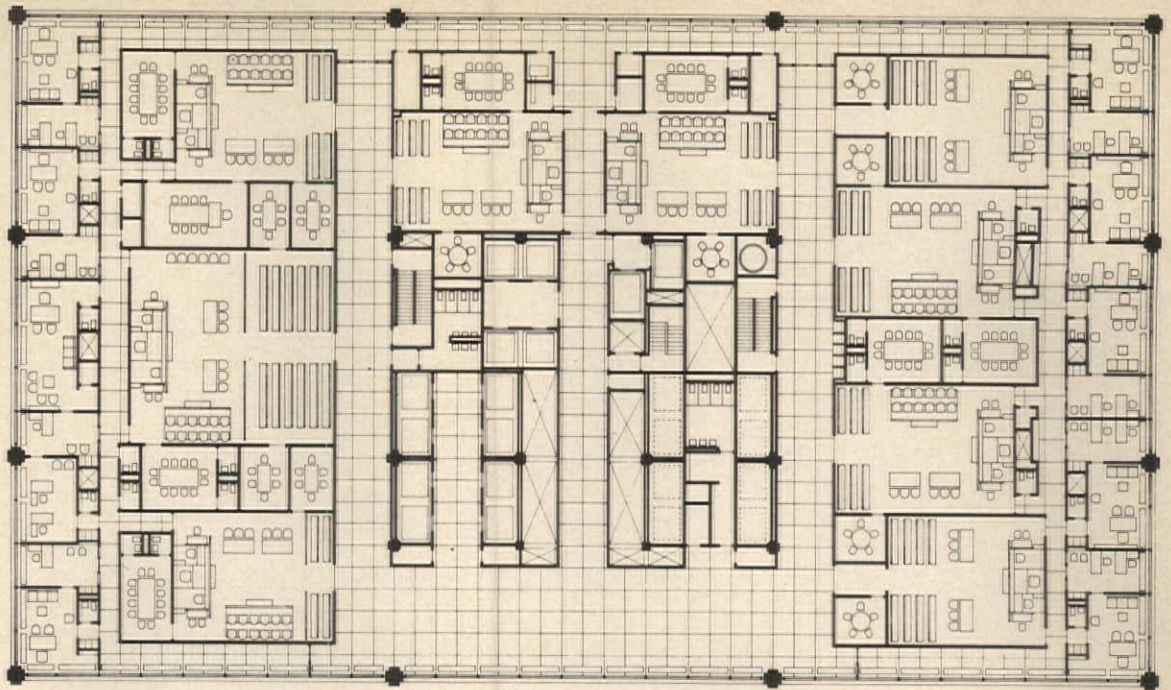
In Figure 10 the bailiff can move readily and unobtrusively to judge, witness and jury; easily supervise and escort witnesses and jurors; run errands for the judge and keep the public and press under constant surveillance. In Figure 11 he has to cross the room to reach the jurors.

In both diagrams the witness is located within the private conversation zone of the judge. To keep him out



Figures 10 and 11
SPATIAL DISPOSITION BASED ON TOTAL COMMUNICATION SYSTEM

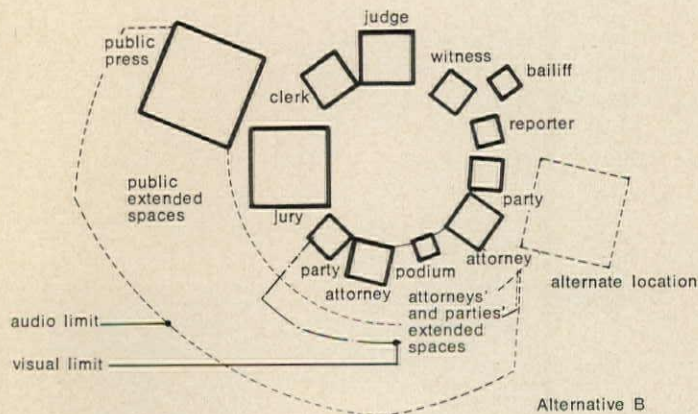
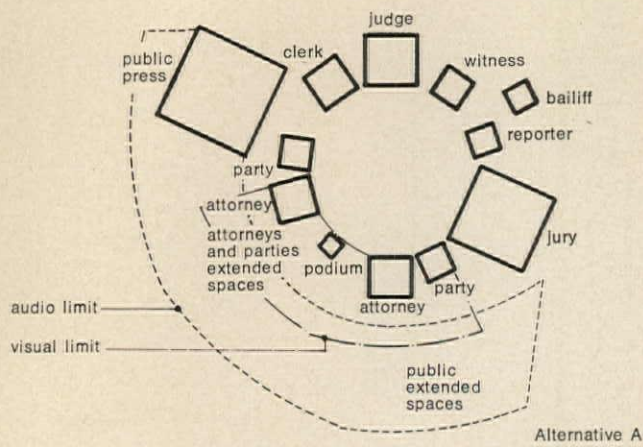




Chicago Civic Center (above).
C. F. Murphy Associates, supervising archi-
tects; Skidmore, Owings & Merrill and
Schlossman, Bennett & Dart,
associate architects.

Frank Murphy Hall of Justice, Detroit
(below). Eberle M. Smith Associates Inc.





Figures 12 and 13
SPATIAL DISPOSITION WITH LARGER AREA REQUIREMENTS

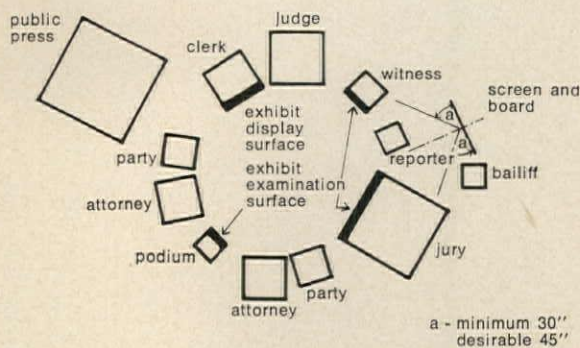


Figure 14
LOCATION OF EXHIBIT DISPLAYS

a - minimum 30"
desirable 45"

of this zone and still meet the visual requirements, the space around which the active participants are grouped must be expanded. Failing this, the judge's bench should be designed so that the end farthest from the witness box can be used for private talks between judge and counsel, with the court reporter present.

Only visual and audio requirements need be considered in the location of the public and press. No satisfactory visual location of the observation area permits it to fall wholly within the desirable audio zone. The plan in Figure 10 is better in this respect than any other disposition.

Larger Area Requirements

The ability to satisfy visual and audio requirements decreases as the observation space expands beyond its optimum position. With an extension sideways, the public and press move behind the primary participants and see less of their facial expressions. If the public and press space is extended around the rear of the jury box, observers would still be able to view all the other participants. If the observation space is extended around the rear of the attorneys' and parties' stations, the public and press would see the attorney only from behind when he addresses the court. Such extension would also conflict with any expansion of the area for attorneys and parties in cases involving several of each. Figure 12 therefore shows a plan which is more satisfactory for courtrooms requiring large observation seating capacities than does Figure 13. As illustrated in Figure 4, varying the levels on which the elements are placed results in improved site lines.

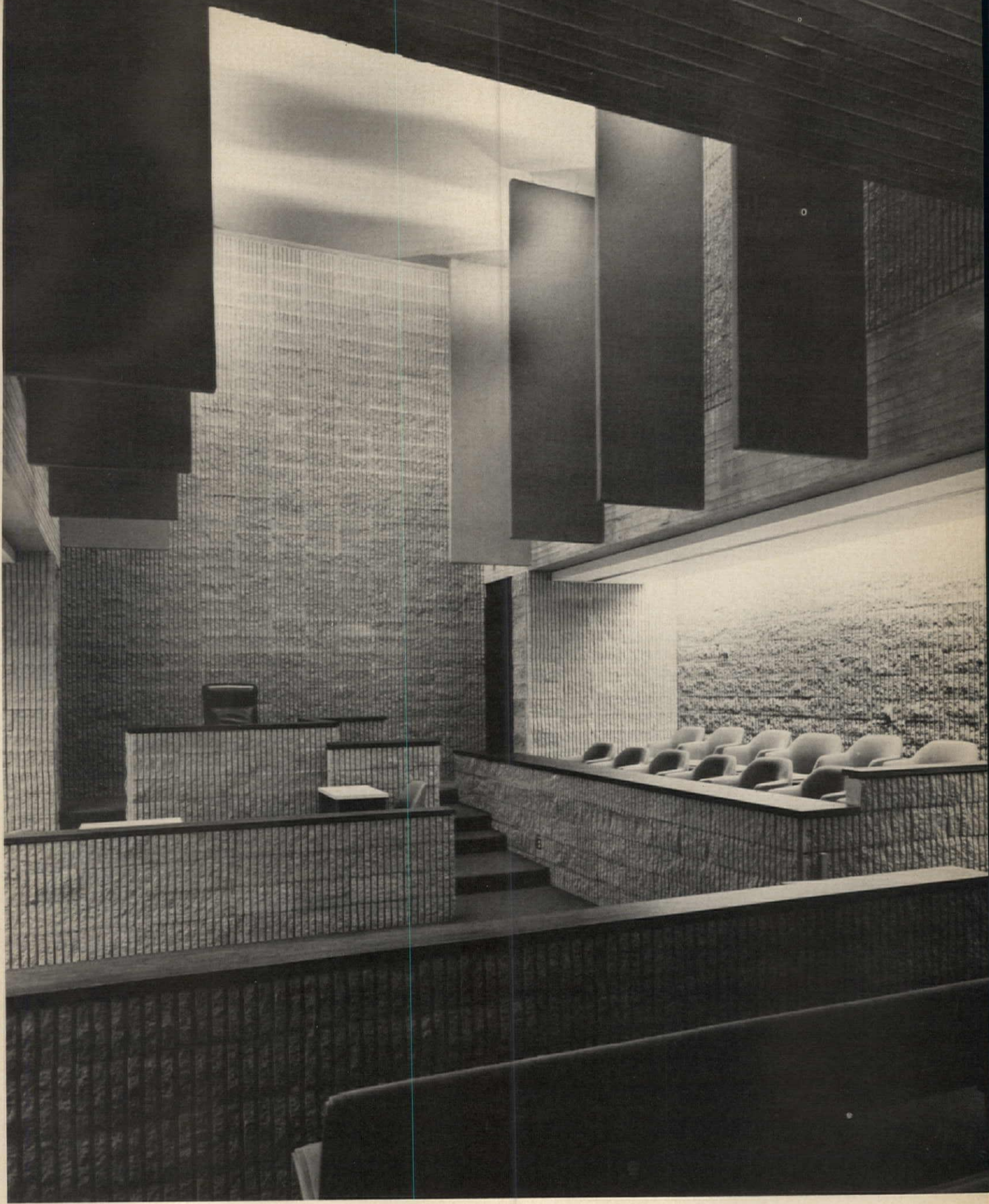
Display of Exhibits

Six types of exhibits are customary: 1) documents such as letters, sketches and photographs that can be passed around by participants; 2) large size plans, maps, photographs and sketches; 3) chalkboard sketches by attorneys and others to illustrate specific arguments; 4) slides and movies; 5) X-ray negatives; and 6) objects introduced into evidence. Figure 14 shows the desirable location for exhibit displays. Necessary facilities would include a display board, screen, shadow box (for showing X-ray negatives), desk surfaces next to clerk and exhibit surfaces at jury box, witness box and attorney's podium. These can be fixed or movable, visible or concealed, and in combination where feasible.

Audio-Visual Devices

One of the most significant developments that will have an impact on the design of courtrooms is the move toward use of electronic equipment for a variety of trial operations, including the taking of depositions. In the recording of court proceedings, four alternative methods are presently available:

- the court reporter taking shorthand or using a stenographic machine.
- audio recording devices such as a voice recorder (used in addition to the first method as a cross-check)
- voice records without a reporter



Orange County Courthouse, Goshen,
New York. Paul Rudolph.

- audio-visual devices for the recording of all court proceedings.

Figure 15 shows a videotape layout similar to a system used in Illinois. The camera which covers the entire courtroom is placed to the right of the judge while the second camera can be mounted on the side or rear wall. Both cameras should be able to rotate 180 degrees to cover all activities within the courtroom. The recording monitor has been placed outside the courtroom; it is preferable to have visual access through a glass wall, enabling images on the TV screens to be checked with the actual proceedings in progress. A third camera can be located either in the judge's chambers or in a private conference room, depending on where private on-the-record conferences between the judge and attorneys take place. Careful attention to lighting placement is essential in the design of a courtroom where TV recording is to take place.

If voice recorders alone are used, they should be located at the clerk's station. Preferably two voice recorders should be installed in each courtroom to insure continuity in the recording of proceedings. Each machine should have a clocking device or footage indicator so that specific information can be pinpointed and easily retrieved.

In multicourtroom buildings, a number of courtrooms could be designed around a station where all monitoring equipment is centralized. This would require less space and equipment than if each courtroom had its own monitoring station. Storage, indexing, retrieval, maintenance and repair of equipment and tapes could also be part of this centralized videotape monitoring complex. (A courtroom being designed for the McGeorge School of Law in Sacramento, California, by Sooky Lee, AIA, will have a room designated for court technicians. Located here are TV monitors, videotape recording equipment and security electronic controls. Behind one-way glass and in a position of total security, the technicians will be a major innovative addition to courtroom activity.) If depositions are taken, space or appropriate equipment would be needed.

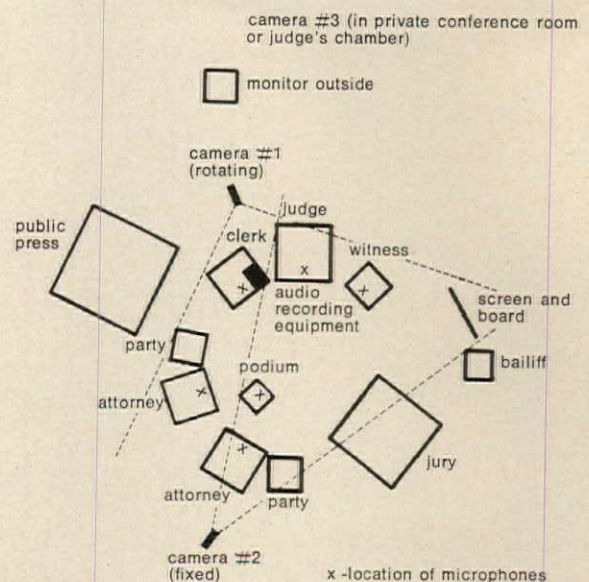


Figure 15
LOCATION OF AUDIO-VISUAL EQUIPMENT

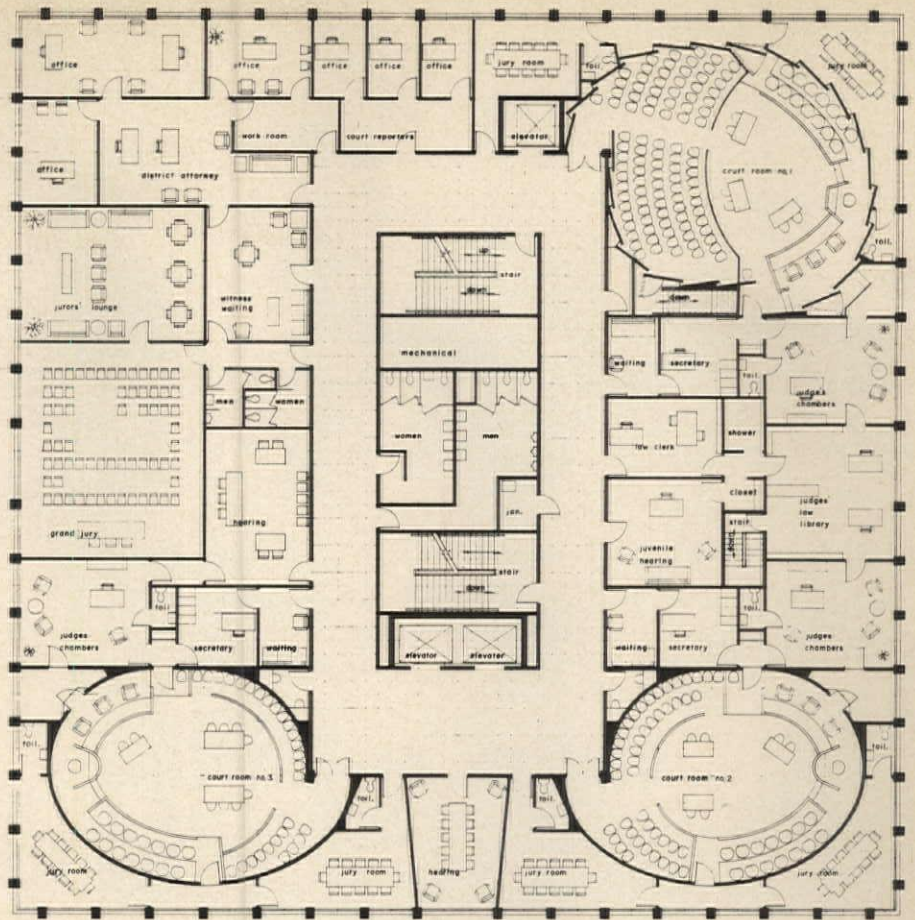
Microphones and Loudspeakers

Control of sound amplification systems as well as voice recorders should be the responsibility of the court clerk or bailiff if the equipment is located in the courtroom. When a monitor station is outside the courtroom, a technician should be responsible for the sound recording system, while the clerk or the judge controls the loudspeaker system.

In large courtrooms where a loudspeaker system is necessary for adequate hearing, microphones should be located at the judge's bench, the witness box, the court clerk and attorneys' stations, the attorneys' podium and possibly near the chair of the foreman of the jury. Directional microphones are used to reduce feedback of certain sound frequencies.

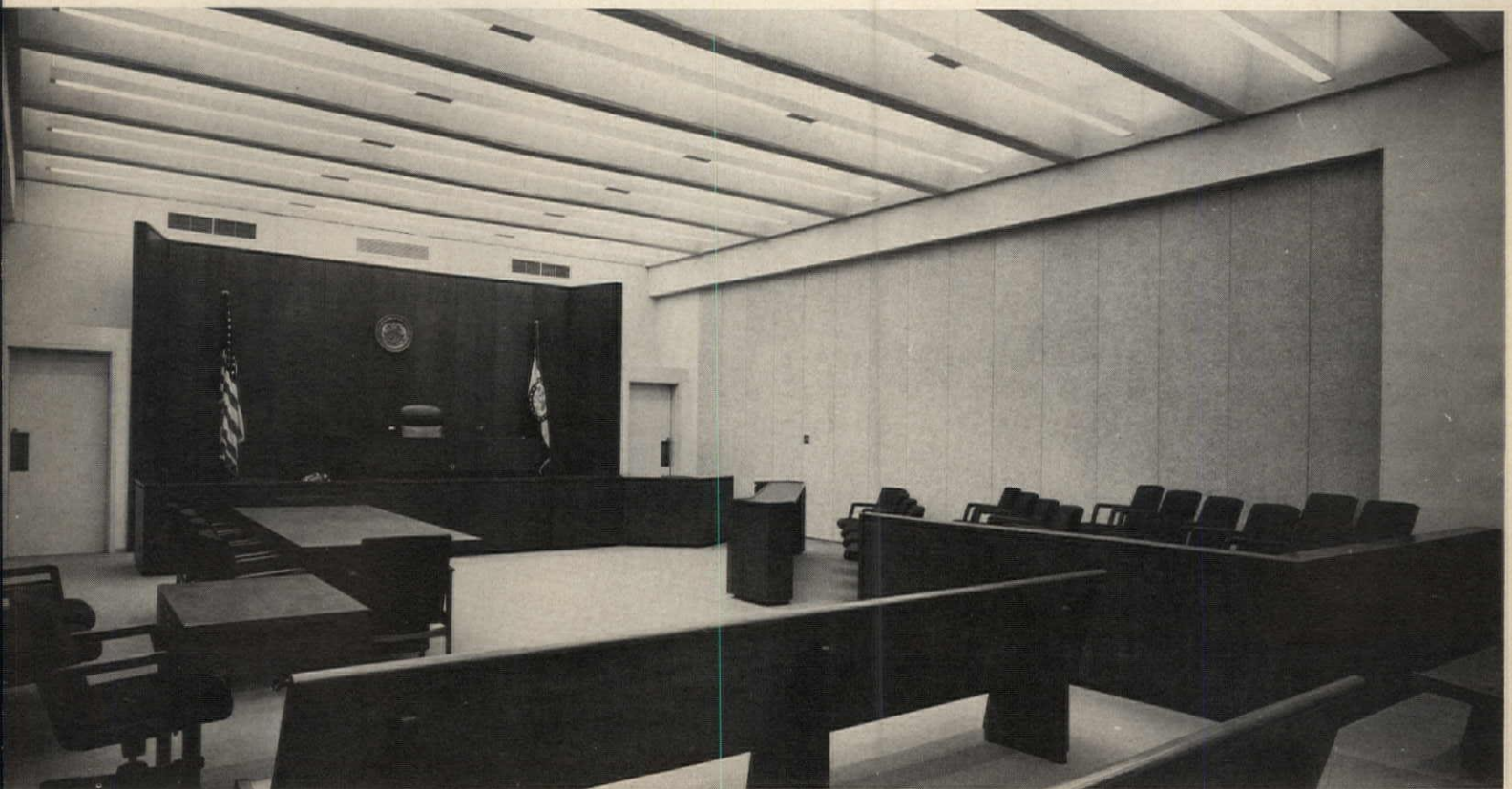
The placement of loudspeakers is often responsible for the poor quality of speech amplification. For good speech rendition, the direct sound should be considerably louder than the reverberate sound, which should reach the listener almost simultaneously.

Microphones can be wired from the floor or from the ceiling. Since the locations of the judge, jury and witness are generally fixed, the floor seems more convenient. They can be incorporated in the design of the bench and desks so they are not visually obstructive. Microphones hung from the ceiling are not as flexible



Lycoming County Court House, Williamsport, Pennsylvania (above and p. 15).
Wagner-Hartman-Associates.

Courts Building, St. Louis County Government Center, Clayton, Missouri (below). Murphy, Downey, Wofford & Richman, architects; Sverdrup & Parcel, associated architects.

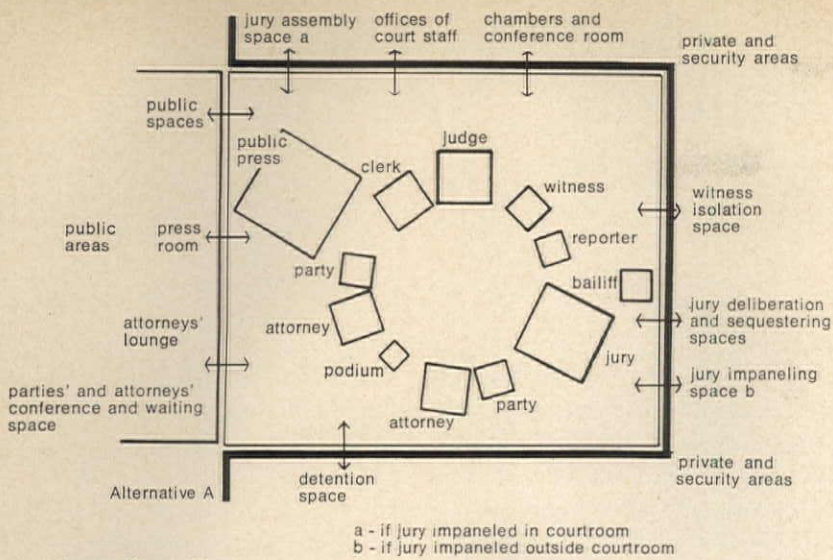




Orange County Courthouse, Goshen, New York (left). Paul Rudolph.

Marin County Hall of Justice, San Rafael, California (below). Frank Lloyd Wright, designer; Taliesin Associated Architects of the Frank Lloyd Wright Foundation, architects; Aaron G. Green, FAIA, associated architect.





Figures 16 and 17
ACCESS TO COURTROOM

as floor-wired ones unless they are on sliding tracks installed in the ceiling. Frequently, lapel microphones are provided for attorneys who move from one area to another. Loudspeakers should be integrated with the treatment of walls and ceiling surfaces, and audio-visual monitoring stations with the courtroom elements.

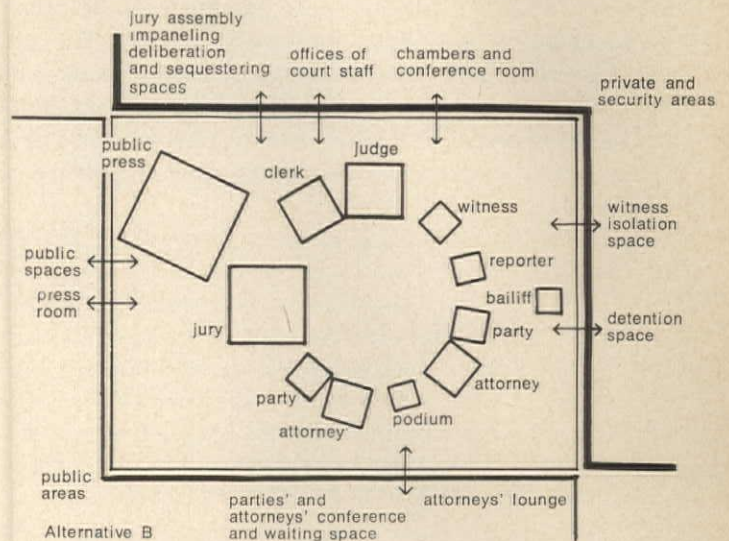
Access to the Courtroom

Separate public, private and security zones must be established in the courthouse, with similar zones of access to the courtroom. Optimum access is shown in Figures 16 and 17. These are not meant to pinpoint the location of each entrance, only its general position. Nor is it implied that each type of participant should have a separate entrance.

The judge, court staff and jurors should be able to come from the outside private zone directly to their places within the courtroom. The public and press should be able to enter their observation areas directly from the public zone. Attorneys, parties and witnesses should be able to reach their waiting areas from the public zone, and from there go directly to their stations in the courtroom. Prisoners should come directly through a separate security zone to a detention space near the bailiff's station. There should be as little crossing of paths as possible, not only as a matter of convenience but to minimize the risk of mistrial due to personal contact between jurors and the public.

The Press

Reporters want a location from which they can clearly see and hear the participants. It should have suitable writing surfaces and be near an exit so that they can leave the court with minimum disturbance. The press should have a clear, closeup view of all exhibits and a location close enough to the witness to hear him completely. Most reporters see little merit in being seated behind a one-way window, fearing that this would set a precedent for excluding the press from the area of proceedings. A one-way window would, however, give reporters maximum freedom to converse, move about, photograph the proceedings where permissible and enable them to have telephone communication with their offices.



Planning Innovations

In most general trial courtrooms today, the space ratio between the action area and the public observation space is approximately 2 to 1. The public is usually placed behind the attorneys and parties as a visually integrated part of the courtroom. If the observation space were separated from the courtroom by a glass wall and the public were able to hear by means of piped sound through a speaker system, there would still be a possibility of visual distraction from the audience unless one-way glass were used.

Depending on the number of people to be accommodated and the configuration of the space, the observation area could be placed in one of several locations. Whatever its size and location, this area requires different spatial and environmental considerations than does the action area. (The British system locates the public in a balcony.) A sloped floor for seating the public affords good sight lines and provides a clearly defined adversary area.

Should closed circuit television become acceptable as fulfilling the requirements for a public trial, the spatial relationship between the public observation space and the courtroom would be revolutionized. Since it would no longer have to adjoin the courtroom, several drastic design and planning changes might occur, resulting in significant reduction in the size of the courtroom, grouping of more courtrooms together on each floor of a multilevel building with easier separation of traffic and centralization of public observation spaces on lower floors. This would reduce the load on the vertical transportation system and minimize unnecessary movement throughout the building. □

The Rising Tide of Housing Allowances

by M. CARTER MCFARLAND

Present housing programs for low and moderate income families have encountered increasing social and financial difficulties. Experimentation is now taking place with a plan which would provide federal monthly cash payment subsidies to families directly for the rental or purchase of decent housing units on the private market. It is expedient that the architect know what's good and bad about the concept which is gaining rapid acceptance.

One of the hottest housing ideas in Washington, D.C., today is a very old proposal which is enjoying a dramatic revival of interest. It is the rent certificate or housing allowance plan for putting the poor into decent housing through government subsidy. Simply stated, the housing allowance would put a subsidy directly into the hands of lower income families who could not otherwise afford decent housing. This contrasts sharply with the present system which attaches the subsidy to a specific new or substantially rehabilitated unit.

The idea of subsidizing people rather than specific housing units gained a good deal of currency in the late '30s and early '40s. One of its principal proponents then was the National Association of Real Estate Boards. But the idea was rather quickly knocked down by the housing sages of the period. The *coup de grace* was probably applied by the late Charles Abrams, a leading thinker and writer on housing matters for a generation, who scoffingly said that a housing allowance or rent certificate would simply increase rents, put more money in the hands of slumlords and lead to no improvement in housing standards. For several decades afterward, the housing allowance idea was dormant. There is no evidence that either the Congress or the executive branch of the government seriously considered such a plan between 1945 and 1968.

But the past several years have seen dramatic and widespread revival of interest in housing allowances or rent certificates as a method for meeting the housing needs of low income families. In 1968 a Presidential committee, headed by industrialist Edgar F. Kaiser, discussed housing allowances in generally favorable terms and concluded that the potential merits of the approach were so great that it should be tried promptly on an experimental basis. In 1971 the National Urban Coalition recommended experiments in housing allowances. In the same year the prestigious Brookings Institution in Washington, D.C., went even further. It recommended a general program of housing allowances as a substitute for the present wide array of housing subsidy programs.

Growing Congressional interest in housing allowances was reflected in the 1970 housing legislation which authorized the Department of Housing and Urban Development to conduct experiments in this approach to housing subsidy. Recently the Housing Subcommittee of the House of Representatives recommended an expansion of the previously authorized housing allowance experiments. In recommending this expansion, the subcommittee said, "Housing allowances combined with effective production incentives may potentially represent the most effective of all approaches to the nation's housing problems."

HUD is launching a series of carefully designed housing allowance experiments in several cities, the first metropolis selected being Pittsburgh. Two such experiments have already been set in motion in Model Cities areas in Kansas City, Missouri, and Wilmington, Delaware. Beyond this, a number of HUD's key officials make no effort to hide their enthusiasm for the housing allowance idea. Indeed, HUD's 1973 budget proposals reflect an intention to use its authority for public housing leasing in ways which make it essentially similar to a housing allowance program.

This shift in sentiment on the old issue of rent certificates can be traced to a growing disenchantment, in and out of HUD, with the present housing subsidy programs. They are complex and difficult to administer. They have produced a spate of investigations and charges of abuse and even fraud. Secretary of HUD George Romney himself has frankly admitted that he is not satisfied with the quality of what is being produced under the present subsidy programs.

It is also widely recognized that the present programs are inequitable in that they serve only a small select minority of those who are eligible for their benefits. As the volume of housing produced under present subsidy programs mounts, the eligible families who are not served are waking up to what is going on and are making their bitterness and resentment known to both Congress and HUD.

The most important factor of all in the growing disenchantment with present programs is their mounting cost. HUD estimates that by 1978 the annual federal subsidy cost under these programs will reach \$7.5 billion. What is more dismaying is the fact that even if no more subsidized housing is built after 1978, a most unlikely assumption, the country will be obligated to pay out billions of dollars each year until the mortgages on those already built have been paid off.

When the cost of administration, federal subsidy, mortgage assistance through the Government National Mortgage Corporation and the heavy tax losses to owners through accelerated depreciation are all added up, the cost to the government of each subsidized unit reaches a frighteningly high figure. Under these circumstances, it is not surprising that responsible people in and out of government are asking if there is not a better way to provide decent housing for lower income families.

The Anatomy of a Housing Allowance

What is a housing allowance? It is a general system of grants to low income households to be spent largely on housing. The housing allowance is not tied to a particular newly constructed or rehabilitated unit. This is the most striking difference between the housing allowance and the present housing assistance programs. At the same time, the housing allowance differs from a general income maintenance program, such as the Fam-

Mr. McFarland, associated with the development and implementation of federal housing programs for 20 years, is the director of Urban and Housing Programs for the AIA.

ily Allowance Program proposed by the President, in that the funds disbursed to low income families are intended to be spent on housing. Present programs, for the most part, link the subsidy to new production and thus subsidize the supply of housing. Housing allowances, on the other hand, subsidize housing demand.

Housing allowances can take a variety of forms. Three approaches are most often discussed:

The rent certificate plan in which the recipient purchases a certificate for less than face value, as in the food stamp plan. The certificates would be used to pay rent and would be redeemable by a certified landlord at face value, with the government making up the difference between some percentage of the recipient's family income and the market rent for the unit.

The minimum condition plan which would pay a cash grant to a low income household on the condition that it occupies a dwelling unit which meets certain standards regarding plumbing, kitchen facilities, space per person and related matters. The government would make up the difference between the rent in standard housing and some percentage of the family's income.

The percentage-of-rent plan which would pay each eligible household a subsidy equal to some fraction of the actual rent expenditures. The fraction would be largest for the poorest household and would decline to zero as income rises to some fixed point.

The various elements of the three plans could be combined in various ways. The variations selected will greatly affect the cost and the complexity of administration. For example, if the housing allowance is based on the cost of adequate housing in each locality, this would require frequent local surveys to establish the cost of decent housing for various family sizes. It would also require the establishment of a clear definition of what standard housing is—not an easy thing to do. If the housing allowance plan requires that each recipient use his allowance to purchase standard housing, this would require periodic inspections to assure that the allowance recipient's housing is actually standard in quality.

Advantages

Proponents of the housing allowance approach see in it a number of advantages over the present system which ties subsidies to a particular housing unit and usually to a newly constructed one. Such an approach would be equitable. Since housing allowances would be available to all eligible recipients, the selectivity and inequity which plague the present programs would be eliminated. The housing allowance approach would also provide low income families with more freedom of choice. Rather than being limited to occupancy in a specified number of assisted projects, they would be free to move into housing wherever they could find it. Thus low income families could make their own decisions on location and housing styles, rather than having these decisions made for them.

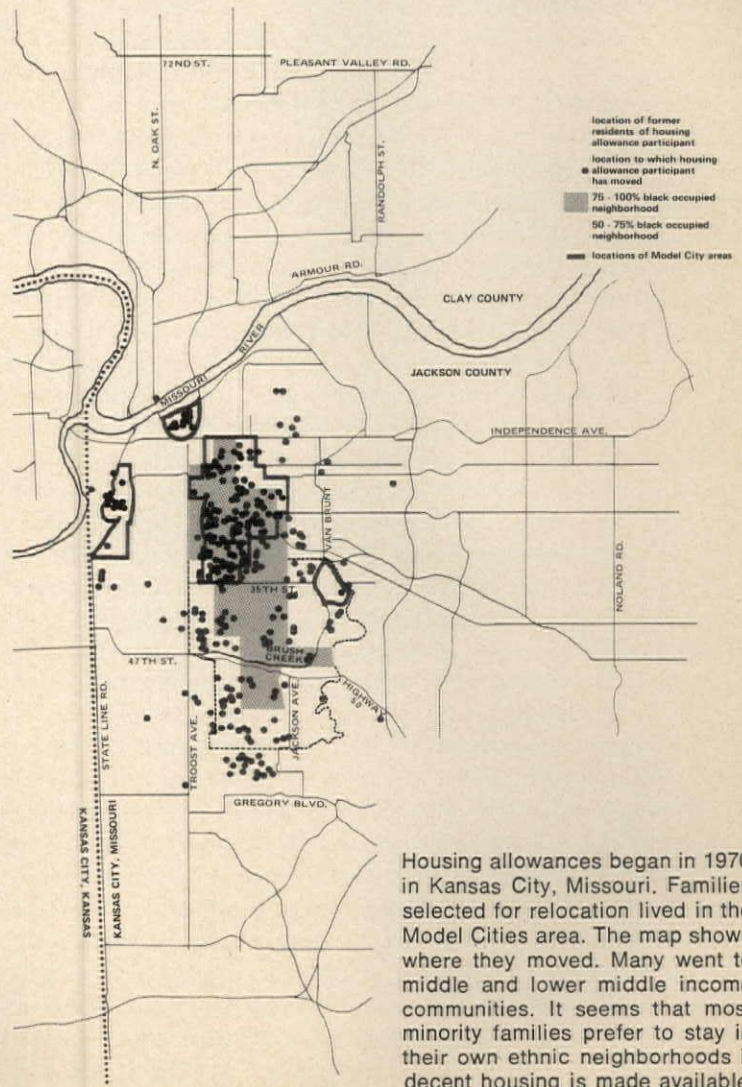
It is believed by its proponents that the housing allowance approach would lead to a geographic dispersal of low income families as recipients move into better units in different neighborhoods. This view holds that suburban neighborhoods, which frequently resist projects for low and moderate income families, would be less resistant to individual low income families who sought to move into the neighborhood.

It is argued that housing allowances would produce improvement in the maintenance of the existing stock of housing by making it profitable for landlords to rehabilitate and adequately maintain housing occupied by low income families. The

ancient belief that landlords of housing occupied by poor people are rich vultures ruthlessly sucking high profits out of poor tenants is no longer accepted by students of the subject. Recent studies have shown that most slum landlords do not receive enough rent to maintain their properties adequately. If the housing allowance were conditioned on occupancy of a unit meeting certain standards, the demand for substandard housing would be diminished and landlords would find property improvement necessary to market their units. They would also be able to charge sufficient rent to make property improvement economic. One of the most appealing arguments made for housing allowances is their affirmative effect on the condition of the existing stock of housing and the general improvement in housing services which it is believed would result.

Dr. Ira S. Lowry of the New York Rand Institute has studied New York City's slum and housing problems for several years. He has concluded that the major inner city housing problem is not a shortage of housing units but too little effective demand to support adequate maintenance of existing buildings. These buildings, he says, "could provide safe and sanitary accommodations for low income families but are now being lost at an unprecedented rate through deterioration." Lowry is convinced that a housing allowance, properly designed, could arrest this deterioration of the existing stock of housing by giving the low income family an incentive to demand decent housing while at the same time providing the housing owner with the incentive as well as the income to provide it.

The argument is also made that housing allowances are a more cost effective method for serving the needs of low income



families than the present subsidy programs. Frank De Leeuw of the Urban Institute has estimated that a housing allowance program would cost about \$500 per household per year. The per unit per year subsidy cost under present programs is \$1,000 or more. The Brookings Institution has estimated that a housing allowance program would cost between 50 and 60 percent of the cost of the current subsidy programs. These projected savings rest primarily on the assumption that families using housing allowances would be occupying existing rather than new housing. Their calculations show that the cost of decent existing housing is considerably less than the cost of new construction.

Problems

A housing allowance program raises some problems which deserve serious consideration:

1. Administration: Some advocates of the housing allowance program express the hope that, because it would eliminate administrative processing of project applications, such a program would be simpler and less expensive to administer. Whether this hope is realized depends largely on how the housing allowance program is designed. If the program requires elaborate income checks, periodic local determination of the cost of adequate housing, post-occupancy inspections, certification of landlords, etc., the complexity of the administration might rival that of the present programs. To the extent that the program is designed to operate simply and relatively automatically, administrative complexity could be avoided. In this connection, the Swedish housing allowance program has much to teach us. That program appears to have been designed to reduce the administrative machinery to a minimum and to have succeeded in doing so. In achieving this simplicity, however, the Swedes have sacrificed something. For example, there is no policing to be sure the recipient spends his allowance on housing and, further, no inspection to assure that he moves into a standard house.

2. Rent inflation: Perhaps the most persistent and persuasive argument against the housing allowance approach is that it would be likely to inflate the cost of existing housing considerably, at least in the short run. A large infusion of new purchasing power would, it is held, result in a bidding up of prices for existing housing. It is, in fact, hard to see how substantial inflation could be avoided if housing allowances were introduced on a large scale in a housing market where vacancy rates were low. At this point it is worth noting that the present production subsidy programs also create substantial inflationary pressures.

But there are several ways which make it hopeful that the rent inflation potential of housing allowances can be dealt with. First, it is important to design the housing allowance in such a way as to assure that most rent increases which occurred would be used to improve the quality of that housing through proper maintenance and repair and that both tenants and landlords were given an incentive to make this happen. As mentioned earlier, Lowry has proposed one way to accomplish this.

We must recognize, second, that housing allowances can be successful only if other means are used to sustain a high level of housing production. This involves principally sustaining a high level of mortgage financing available at low interest rates, a principal determinant of the volume of new housing production. The Brookings Institution has expressed the view that the tools are available for the government to achieve whatever level of overall housing production is desired. These tools include proper use of monetary and fiscal policy, as well as exercise of the powers of specialized mortgage institutions such as the Federal Housing Administration, the Veterans Administration, the

Government National Mortgage Association and particularly the Federal Home Loan Bank Board. Together all of these federal tools can sustain an ample flow of mortgage funds at low interest rates and, therefore, an adequate level of housing production. The capacity is present. What is needed is the federal will and commitment to make it happen.

In short, the introduction of a housing allowance program does not mean that the government would withdraw from all other aspects of housing. It means only that the form of subsidy would change. The government will continue to be just as much involved in and responsible for high levels of housing production as it is now. Indeed, a housing allowance program need not necessarily mean the elimination of all categorical production subsidies. It appears likely that production type subsidies would continue to be needed to stimulate production of certain types of housing, such as housing for the elderly, nursing homes, college dormitories and housing rehabilitation.

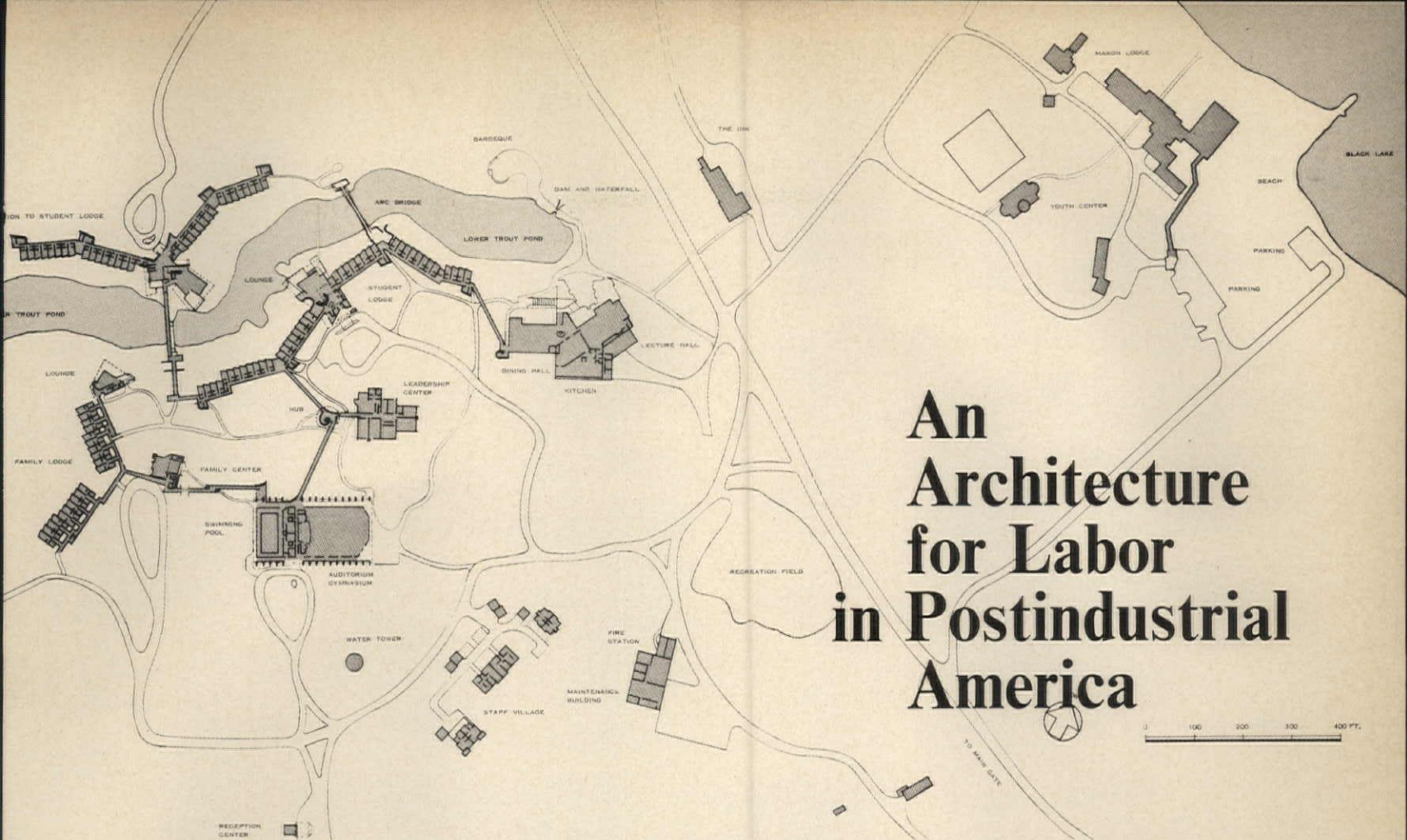
Housing Opportunities for Minorities

The elimination of racial discrimination in housing, the opening up of new housing opportunities for minorities and the reversal of present trends toward racial concentration are national objectives of great importance. It is not entirely clear what effect housing allowances would have on these objectives. Some strongly believe that housing allowances would hasten economic and racial dispersion. Others contend that housing allowances, because they tend to focus on existing housing and because most new housing is built in the suburbs, would work to reinforce present patterns of racial and economic concentration. This view holds that the government, by eliminating production related subsidies, would be giving up its leverage over the location and character of new construction and its most effective tool for achieving racial dispersion.

On this point, the Brookings Institution has observed that the government possesses a variety of instruments, including a wide range of grants-in-aid which can be used to accomplish economic and racial integration. Charles L. Schultze, a senior fellow at Brookings, suggests that success in this matter depends more on overcoming political resistance and not upon the use of any particular tool, such as subsidized new construction.

Great Britain, after employing a wide variety of housing subsidies for many years—most oriented to production—has recently decided to shift to a housing allowance plan, and as its white paper on the subject puts it, “to subsidize people rather than buildings.” The government of Sweden several years ago abandoned its system of interest rate subsidies for housing and replaced it with a housing allowance system. The Swedes, however, did not relinquish their substantial influence over the rate and character of housing production. They maintain an elaborate system of national and local housing production goals. Also about 90 percent of the housing produced in Sweden is assisted with government loans.

In conclusion, it appears that a strong tide is running in this country in the direction of housing allowances as a means of subsidizing low and moderate income families. Indeed, the tide is so strong that it seems quite likely that some kind of housing allowance program will be instituted before the results are in from the housing allowance experiments now being initiated. It would be neat and orderly and highly scientific to spend the time needed to thoroughly test the effects, value and cost benefit aspects of a new housing allowance program before we plunge ahead with it. But, alas, in this great and impulsive nation things rarely work out that way. □



An Architecture for Labor in Postindustrial America

In Michigan's woodlands, far from the world of machines and assembly lines, the UAW has built a center for the education and recreation of its members and their families. Walter Reuther, president of the union, worked hard with the architect to fulfill his dream of such a facility. Had he not died, he would have given the Purves Memorial Lecture at the AIA 1970 Boston convention.

On the night of May 9, 1970, the nation was stunned by the sudden death of Walter Reuther, president of the United Automobile Workers and perhaps the foremost labor statesman of the century. Dying with him in a chartered plane, which crashed in a fog in the woods of northern Michigan, were his wife; Oskar Stonorov, FAIA; an aide; and two crew members.

Reuther and Stonorov, friends of long standing, had collaborated on an endeavor to give expression to Reuther's vision of a school for labor leaders and their families in an architecture worthy of the purpose. Ironically, the travelers were on their way to the site of the educational center when the tragic accident occurred. Perhaps the center, now in use, should be viewed as a unique tribute to these two men whose lives became intertwined in the intention to build a place that would contribute to the process of preparing labor statesmen for the postindustrial period.

Indeed, the center reflects the *re-creational* values which belong to the workers of a society that has moved beyond an industrial age and into a time of constructive leisure. The Walter and Mary Reuther Family Education Center, as it has been named in memoriam, is a place for the productive use of leisure time rather than simply as a refuge for work-weary men and women to refresh their bodies. Stonorov has stated in architecture the

vision which Reuther had of the responsible labor leader in a new America.

Reuther tried to lead this nation into a postindustrial period where educational values are paramount. He understood that the leaders of labor and the rank and file will have herculean tasks in this new age of alienation between man and machine.

In a time when social forces fragment the family, Reuther dreamed of finding a way to keep families together. He saw the family as the essential element of a postindustrial as well as the industrial age of a nation. He hoped that the labor union would be an institution to help keep the family together.

The education center is located on approximately 1,000 acres of the 10,500-acre Black Lake near the tip of Michigan's lower peninsula. There are nearly one mile of sandy beach, several streams and trout ponds in the heavily wooded section.

The center's architect was not unknown to the union, having worked on its headquarters building in Detroit in the mid-1950s. Born in Germany in 1905, Stonorov studied in Italy and Switzerland. He came to the United States in 1929 and was naturalized in 1937. He located in Philadelphia where he was a principal in the firm of Stonorov & Haws and became known throughout the country for his expertise in public housing and urban planning. His versatility is demonstrated by the fact that his activities varied from editing the works of Le Corbusier to raising Guernsey cattle.

Reuther wanted a school for future leaders of the union where members could come for two-week sessions and bring their families with them for educational programs and recreation. Some longer periods of training are now awarded in forms of fellowships for more intensive educational programs. Con-



Uses of the center are varied, going from a seminar, to a family gathering, to a world conference (above). The interior of the Hub building (right) boasts a fireplace designed by Stonorov and sculptor Vivarelli.





The recreation building (left) is sited among the trees, fitting unobtrusively into the landscape. The auditorium/gymnasium (above) is a multi-purpose building for many activities.

ference and union council meetings are also held at the center.

The labor leader predicted that out of the training center would come well-informed future presidents and officers of the union. In the beautiful and natural surroundings and in an architecture fitted to the concept, Reuther wanted to "inspire and develop leadership with vision and idealism, with competence and commitment."

Reuther also wanted an architectural setting which would help bridge the generation gap between older leaders and younger workers through appropriate places for study and discussion and informal conversations over meals and late into the night. He thought that the center he envisioned should be away from the hurly-burly of everyday life and work, in a place where families together could enjoy such pursuits as trout fishing, swimming and tennis as well as the quietness of the lakeside setting. To be sure, the union previously had conducted training sessions in education camps, which one older leader has called "the best thing that Reuther ever did. You would sit around the campfire and actually talk to him or the other officers and feel you were a real friend."

Reuther wanted some university students to come in and mix with union men "as a kind of fertilizer," as Brendan Sexton, then director of UAW educational activities, put it. Reuther hoped as well that the center would "serve as a model of the good life —

lived in a free, open, healthful and beautiful environment."

The idea when Stonorov was commissioned as architect was to make the center "a showplace of creative architecture conveying a sense of solidarity and permanence through high quality craftsmanship and materials." Construction of the center, which was authorized by the UAW at its 1966 constitutional convention, was underway in 1967, the land having been bought from a retired Detroit advertising executive who had already built some lodges and log cabins on the property. In 1970, after the deaths of Reuther and Stonorov, the center was dedicated. Over \$20 million has been spent.

The center can accommodate 300 guests. Among the facilities are a main lodge and lounge (called the Hub), a dining room which can feed 500 persons an hour and an educational building with classrooms and library. In addition, there are a 1,200-seat auditorium/gymnasium, an Olympic size indoor swimming pool, sauna rooms, a lecture hall, family and day care centers, a billiard room, a teen-age center and a tavern. All the facilities, except for the teen-age center and the tavern, are connected by enclosed passageways to protect people from the snow and ice of Michigan winters. There is also a new staff village, a fire station and a maintenance building.

The primary structural component of the new facilities is glue-laminated wood. The materials of wood, stone, glass and bronze blend with the rustic surroundings. The Wisconsin ledge rock, the Canadian granite, the Douglas fir, the red cedar and the colorful Italian ceramic tiles are all in harmony with each other and the environment.

The massive bronze fireplaces, designed by Stonorov and Jorio Vivarelli and cast in Italy, are a particular note of beauty. They complement the great beams, one of which spans 110 feet and weighs 7 tons, and the

soaring ceilings. Stonorov, who was trained as a sculptor and was well known for his integration of sculpture and architecture, also worked with artist Vivarelli on the design of the scuppers in the recreation building, the zodiac symbols in the Hub building and other bronze sculptures which adorn the complex.

Walls and ceilings are constructed of laminated tongue-and-groove red cedar decking. An unusual feature are 150 turned columns which range from 9 to 16 inches in diameter and 2 to 35 feet in length.

Each building in the complex has its own self-contained automatic units for water, heat and power. The utilities are linked to a panel in the maintenance building and are continually monitored for immediate identification of any malfunction. Guest rooms and public areas are airconditioned. There is a 150,000-gallon storage tank to hold a minimum of 100,000 gallons of water in reserve for fire protection.

Reuther, who took such a personal interest in the entire planning and construction process that he himself tagged trees that construction crews were to protect, spent much time with his friend Stonorov as he designed the training center's facilities. Together, and with other collaborators, they have built a place which "in scope and beauty goes beyond the dreams of even the most idealistic members or leaders" of the union.

At the 1957 centennial convention of The American Institute of Architects, Reuther said, "The great challenge before us in the last half of the 20th century is whether we are going to be able to organize a sane and sensible and moral social order so that we can avoid disaster and can bring to fulfillment the bright and unlimited possibilities of human growth." The Walter and May Reuther Family Education Center, which is the product of so much planning by Reuther and Stonorov, is dedicated to those "bright and unlimited possibilities." MARY E. OSMAN

Should You or Shouldn't You Go Out on Your Own?

Do you enjoy competing for position in a large office or would you rather compete for clients? These and other questions came up at a seminar, "Tips for Young Architects Starting in Practice," and were answered by five professionals who are fairly new heads of their firms.

The Office Practice Committee of the Boston Society of Architects sponsored the session. Kenneth Kruger, AIA, was moderator and also edited the comments of the five, which follow.



Edward C. Collins II, AIA, a 1958 Yale graduate, founded his firm, Edward Colwell Collins Associates, in 1962. For six years he worked in Connecticut before moving to the Boston area.

When to do it? We were lucky enough to have two or three small jobs. Hardly enough to constitute a practice but a beginning. When you start out alone early you have fewer family responsibilities. Conversely, if you wait you require a larger backlog of work to meet increased needs. With broader experience the work can be more ambitious. There are also times when the traumas inherent in learning as you go argue for tutelage under the wisdom of a firm.

How to do it? Partnership with a kindred soul; join an older fellow and inherit the practice; or, if you like calling the shots, go on your own. If you can find a wealthy girl, fine. If not, make sure the girl you marry is smart and game. We lived for six years in an unfinished garage with sawdust, exposed pipes and wiring. My wife was my complete staff; most of her day was spent typing, bookkeeping, giving "crits," and at the other end of the tape. An office at home doesn't give either of you much privacy, but we could write off a good percentage of the house. Since architects start earning later than most due to education, apprenticeship, etc., it is hard, for wives in particular, to see all around the disparate success of contemporaries.

Where to go? Go where you can best tap a reservoir of potential clients. After six years in Connecticut where family and school were, we moved to Massachusetts for our first big job. Instead of commuting to it, we followed the work. As it turned out we had built up an inertia in Connecticut and ended up going down the other way, but this time the sun was at our back, both early and late.

A word of caution about registration. I crammed in New York City for exams while living in Connecticut. I thought when I started studying that by taking the exams in New York I would have full reciprocity with almost every state except Florida. Well, the week after I passed them I wrote Connecticut and was told, "No more, get your NCARB certificate." The NCARB form has two sides; one is practice as a principal, the other is practice for a firm. Before going out on my own, I worked for four years for a firm whose principal was not registered. That was another mistake. That hurt, though I did piece together enough experience to take the New York exams. The "practice for a firm" is weak in my particular case, and the "practice as a principal" was almost nonexistent. It was hard to qualify for either state although I was doing a lot of work that was under the minimums required. All of the states vary. You can either do work under a certain cubage or under a certain price. Most of my work was small and fell within these categories, but it was meaningless to



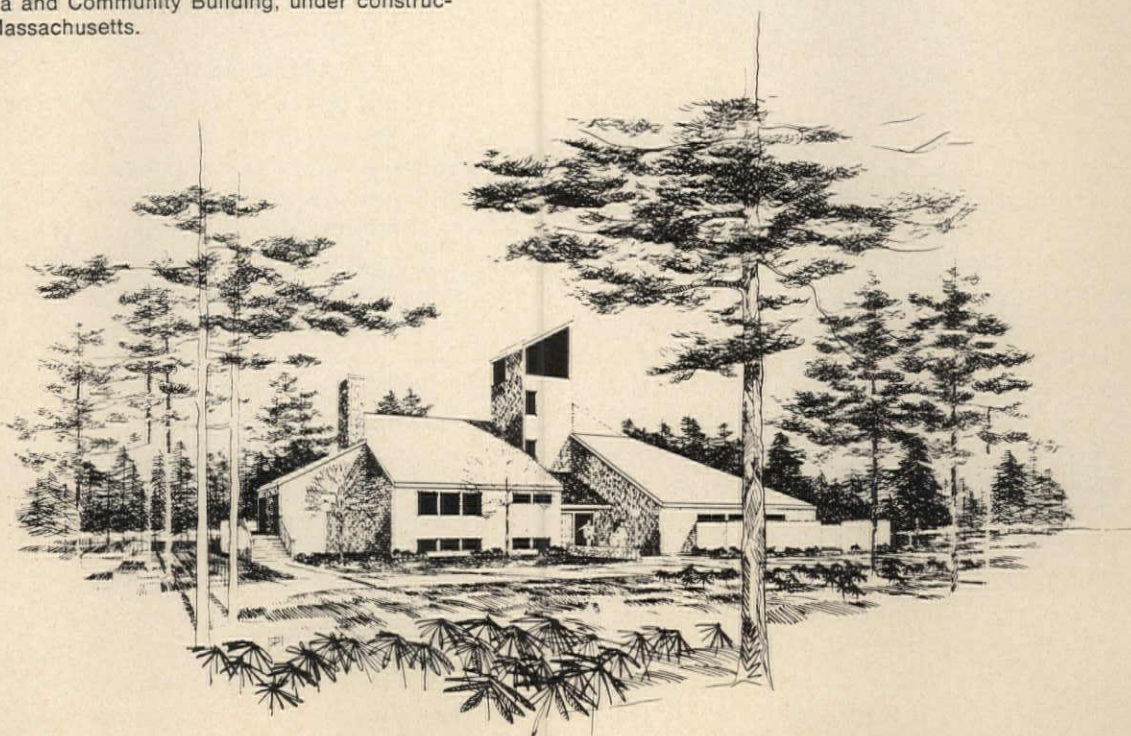
Edward Colwell Collins Associates: the first of six clusters for Hilltop Place, started in 1970 in New London, New Hampshire.

NCARB. Without the NCARB certificate you cannot move from state to state and do work of any consequence.

When it comes to jobs, most would agree, I guess, that houses are the most fun, but it's hard to support an office with them. The fee is high, but the time involved is endless. Fortunately, someone came along who liked our work and asked us to do a 21-unit apartment complex, residential enough to fit in nicely with a single-residence development. It was published and that led to a larger condominium project. Which goes to show that basement renovation, dormers and kitchens can lead to complete houses and to condominiums and to who knows what.

If you have the yen and the nerve, go it on your own. If you don't, you will forever wish you had tried just to see. The time will not be wasted. Your value increases with every bump and grind. If you're patient, hard working and never turn down a job, no matter how small, you might just make it.

Palmiter Associates: Cabana and Community Building, under construction in Seawood Springs, Massachusetts.



Russell C. Palmiter, AIA, a 1959 Cornell graduate, spent two years in the Civil Engineer Corps, worked for a small firm, was registered in New York, moved to Boston where he worked for three years for another firm before, in 1968, he joined a partnership, Wood, Vogel & Palmiter. But one partner left, another went to India for two years, and Palmiter is now alone.

When to go out? I was young enough to take the risk. I thought it would be good experience and stand me in good stead if I later decided to return to a firm. It's rough, especially when things are tight. Unless you have good contacts, clients are marginal because they don't appreciate what you're trying to do, or they don't know what the budget for professional services should be.

Specifications, budgets and fees are best learned by trial and error, preferably by experiencing them in some other office before you're on your own.

Our office is in Belmont where the rent is low. It's close to Boston, and as we don't rely on sidewalk trade, the location makes no difference. A part-time secretary/bookkeeper and two other people work for me—a graduate from architectural school not yet licensed and an MIT student. We primarily practice residential development: condominiums, townhouses and apartment projects ranging from 25 to 250 units. We don't have many requests for single-family houses. Clients have moved, changed their minds or the budget was too high. Consequently, I have yet to complete one.

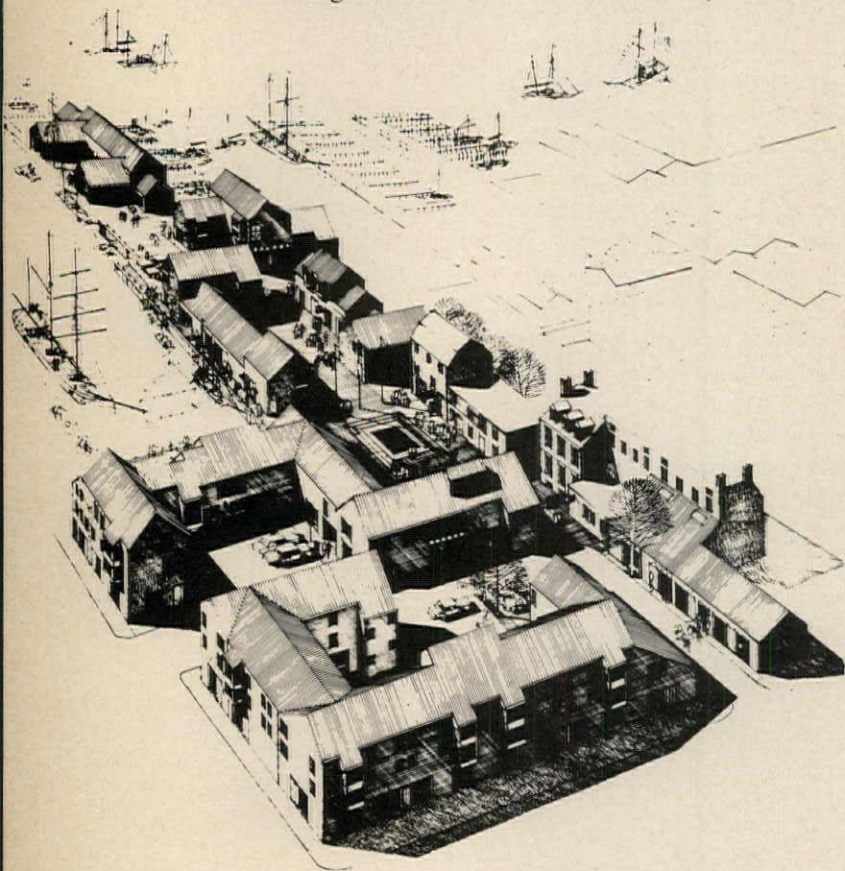
We've also done office renovations. One was a three-block area and another was scheduling renovation of a series of buildings. And we have renovated small existing spaces for colleges and universities hoping it would lead to bigger commissions. But the programs were cut so anticipated work hasn't materialized.

The reward of being on your own is the freedom to do your thing. You can structure your time, have the satisfaction of making decisions and living by them, dealing directly with the client, getting his reactions and justifying your work to him. You're building something that, if successful, will pay off in satisfaction and money. You're putting equity into something rather than contributing to a large firm.

Brett Donham, a 1964 Harvard graduate, founded his firm Brett Donham in Boston, where he also spent his internship years.

One of the first steps in starting a practice is to learn the things you didn't learn in school: probably 80 percent of what is required to build a building. After school the inclination is to go to a design-oriented office, but I deliberately went to a firm that offered me other things such as dealing with clients, specification writing, job supervision, working and shop drawings. I made it clear that exposure was my intent so there would be no misunderstanding. When you go out on your own, you trade on what you did in the office, but because I worked in every department, not just design, I didn't have any picturesque buildings to show to future clients. It's the choice I'd still make.

The next step is to get registered. When I was registered in Massachusetts, I was also designing houses to be built in Vermont. The drawings were labeled "Brett Donham, Architect."



Brett Donham: Bowen's Wharf, a mix of stores, restaurants and apartments, under construction in Newport, Rhode Island.

When I tried to get registered in Vermont, I was refused because I had been practicing architecture in the state without a license. Get registered in every state you practice in, even if it is only a house you design!

I wanted to go off on my own as soon as possible. In fact, I did my first house while I was still in school. But NCARB and most states require a three-year apprenticeship. Meanwhile, I did a lot of moonlighting outside the office. The firm accepted it because it didn't pay a living wage, at least not to people with a family. If you're moonlighting, you're accepting a tremendous amount of responsibility the office cannot afford to give you and you're therefore more valuable to it. The only stipulation was to remember who paid you and to stay awake, alert and useful during the eight working hours. I gradually built up a moonlighting practice of small residential work until I was working 40 hours a week in the office and as many moonlighting. I left after interning

three years, thinking I'd only be working 40 hours but all of a sudden it became 60.

There's another device for getting out on your own. In my case, a real estate broker also wanted to start his own business. He did marketing and I did planning and feasibility. We found land in Vermont suitable for second home development and interested some investors. We were general partners on a "sweat" equity basis, no cash out of pocket. The investors were the limited partners. I became the architect and did the planning, the model home, the clubhouse, the community building and eight other houses. Then sales fell off so I was reduced to head of the architectural review board, a nonpaying position, but I'm still doing about a house a year there.

I stay here in the Boston area because I know a lot of people here. There's high degree of dependency on having contacts and letting people know you're an architect. It would be difficult to graduate from school, move, and three years later start your own practice unless you moved to a boom town.

In my office there are, beside myself, three architects and a secretary/bookkeeper. Our work is mostly referral and mostly in the residential area: housing, single-family houses, renovations, apartments, low income housing, resort planning, condominiums and small commercial work. People have seen something by us or heard about us. That means it stays in the same vein. With a reputation as a residential architect who does site planning, apartments are about as far as you can go. You've got to be aggressive and seek out other kinds of work.

I demur from Ned Collins' statement that you should never turn down a job. I don't think you want to take every job. You've got to be sure that everything people see is the best you can do and indicative of your capability. When you start you've got to build up work, but you want to use it to get more. You cannot afford to apologize for it. Make sure each job is a two-way street. You must be happy and comfortable with your contribution, and your client wants to be sure that you're competent and will produce what he expects. Otherwise, it can be very painful, particularly if your mutual expectations diverge.

If you're doing the design in your office, you must wean the client from dependency on you. After design he must deal with someone else. This requires hiring good people the client can trust. That isn't easy if you cannot pay much. I tend to be fussy and protectionist, as are most architects, so I find it difficult to delegate responsibility while still maintaining control.

Many clients, particularly in development and apartment work, try to get a lot of work for little money. If you're hungry and trying to get bigger projects, it's tempting to lower your fee to compete with other architects. Clients often don't realize that "they get what they pay for." If they choose their architects exclusively on fee, it's just the beginning of your problems. Dealing with that kind of person is not good for your reputation. This also means limiting speculative work.

We've been doing a lot of low income housing for nonprofit community groups. The people who deserve free work get it, but those in a profit-making enterprise don't. The euphemism for speculative work is "contingency," which is heresy in the profession. In working with nonprofit groups we find situations where a lot of expertise is required that only an architect can supply, and lacking this, many projects don't go anywhere. Participation in them is the kind of contribution I think is worthwhile.

We all talk about the problems, but in my view there's nothing else to be in the world but an architect and be on your own. It's fun. It's the only way to go through life. I couldn't recommend anything more.

A. Anthony Tappé, AIA, a 1958 MIT graduate, founded Huygens & Tappé Inc. in Boston in 1962, became its president in '67.

You're often impelled into your own practice by very personal forces: eagerness for responsibility, to see what you can do. Some people cannot be happy otherwise and are anxious to get into practice as soon as possible. Take your time!

If your own practice is your goal, it's important before you start out to assume as much responsibility and diversified experience as possible while working for other offices. When I was working for another firm, I did not know about the "hard knocks" the partners received and the everyday decisions they had to make. Now, I respect them a great deal more.

If you're interested in your own practice, learn job management, budgets, promotion work. In general, the architect will be successful to the extent he is a generalist and able to deal with a variety of people and projects. To start, it is helpful to have work. When we began, my partner and I each had a project of our own: he, a school, I, a motel. We came together because of our similar philosophies of architecture, and it seemed that we would make a successful and interesting combination.

In addition, our attitudes and interests were complementary. Partners' interests should not overlap but complement. Partners should be interchangeable in many respects. Once our firm was hired for a large job because there were two of us. The client insisted on partner responsibility and although the project requires a lot of traveling, one partner is always available.

We began with basic understandings and objectives: the kind of work, the sort of things we wanted to do, the feeling and quality, and our goals as individuals. Neither of us was married, and we had saved enough to live on for a year. We rented an office for \$75 a month because we felt it important to have a formal place to work. One day we had lunch with a contractor friend. He said: "I hope you're ready for a long haul because it will be five years before you know whether your practice will succeed." We were shocked, but he was right.

It is important to realize that it takes a long time to establish an architectural practice. You may have an early success. Then there will be a long period when you will be looking for that next big job. It may not come for years. In an architectural practice, time is important. It takes a year to design a building, a year to construct it and perhaps a year before someone sees it and then hires you.

In order to perfect our working relationship and establish an ongoing business, we accepted everything that came along—assuming a compatible client. For example, we did bathrooms and kitchens for the first three years, but from them we got a house. From it we did two or three houses and from them a 10,000 square foot industrial building. This was a building type neither of us had worked on in our various offices, so we had to learn. During the design period our client became quite concerned with costs, almost canceling the project, but we finally designed an inexpensive building that was successful. Several years later we were asked to do an addition. As a professional you have an obligation to see your jobs through, accept the responsibility and do your darndest for your client. If you don't, that's the end of you as a professional.

You must understand the viewpoints of others. Every two or three months we try something new. Constant improvement is important if your services are to help your client. My job is essentially promotion and management. A tip on getting work: Your analysis of your client's problems and your approach will give him confidence to select you. It is his money and it usually repre-



Huygens & Tappé Inc.: Concert Hall and Library, Longy School of Music, finished in 1970 in Cambridge, Massachusetts.

sents a tremendous investment on his part. He will want to feel confident that you can handle it.

At the end of two years of being on our own we were discouraged and began to consider an alternative. However, after five years and several larger projects we felt we were on our way. The jobs grew in scope and now we have larger work. Today, with 20 people in our office, we are concerned with office organization, management, job budgeting. If you are fortunate and your practice grows, you will have to deal with your own internal organization or lack of it. Therefore, before you start your practice it is important to get into the organization and management of a firm. The more responsibility you assume, the more you will be helped in your own practice.

Many architects dismiss trivia with, "I cannot be bothered, let's get on with the design." But you have to deal with trivia. You must write things down, keep records, confirm meetings and telephone calls. All of us have had some hair-raising moments when we have had to convince the client that we were as conscientious as possible, so you cannot be too careful.

Payment of fees is a problem. You've got to bill each month. You provide a service; insist on payment. Don't be embarrassed. You shouldn't cut your fees. Make an equitable arrangement. Bill it. Get paid for it. If not, have an understanding of why.

In practice you must have procedures and you must be thorough. You will discover that you don't know it all, that you

must rely on your consultants. If your client is competent and intelligent, he will appreciate this. You have to have a professional understanding of his concern for budget and time, as well as your own special concern for quality. You are going to get the work out and the building built only if you are efficient. In his book *Architecture, a Profession and a Business*, Morris Lapidus has many points I have come to appreciate. Examples: Write down your memos; confirm the calls. This is often where a small office succeeds or fails and may determine how well you conduct the work you were trained to do.

I took a degree in city planning and worked for a number of years for planning firms because I was thinking of combining it with architecture. However, I have come to understand the value of concentration. Architects have difficulty being architect/developers, real estate operators or architect/planners. You have to decide what you are and then be it to the best of your ability. Later on if your firm is successful, you can afford to diversify.

I had quite a time with NCARB. When we opened our business we naively put "Huygens & Tappé, Architects and Planners" on our letterhead. But only one of us was registered at the time, and the board objected to the plural of the word architect. After 18 months, a thick file of correspondence and a letter from the state secretary it was straightened out by changing the words to "Architecture and Planning." Lawyers can help!

I would like to stress some points for those considering starting their own practice: It is difficult and it takes time. Organization is important; prior experience is important. The architect has to be a generalist: broad enough to understand how he relates to his client's various concerns; broad enough to design and administer a job. He has to do the work and at the same time get new work in. It is difficult but necessary in order to survive.

Thomas M. Payette, AIA, a 1960 Harvard graduate, is principal and president of the Boston firm of Markus Nocka Payette, which he joined in 1965 as chief executive officer.

I made an attempt at going into practice that was similar to others described here, remodeling some MIT buildings as a one-man firm. I wanted to be my own boss. I was interested in designing buildings, and the only way to do that was by starting my own practice. I was trying to do this in 1964 when I began to be

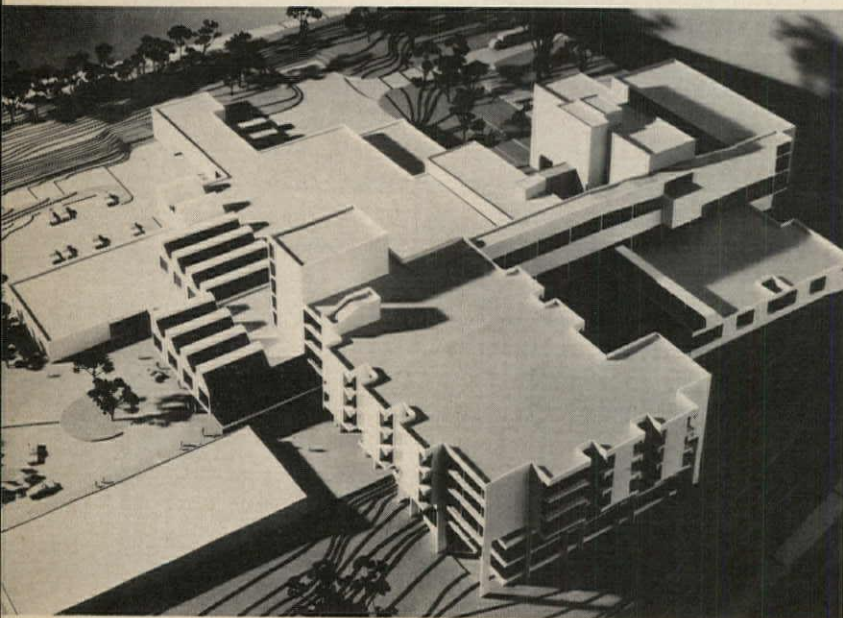
wooded by the Markus Nocka partnership. On leaving Harvard I had worked for this firm which specializes in medical facilities. It was not a big firm and not design oriented, but I could make more money in it. The opportunity to choose a small firm that needs a future partner or associate is quite limited. They think in terms of lesser associate, etc. In the final arrangement I became the chief executive officer of the corporation, with control over all the work because one partner was fully retired and the other was over 80. It was a fluke.

A partnership would not have been acceptable to me on any basis. The family of a partner who is no longer active should not retain ownership. It should be fed back to the other partners for purchase. This is more easily handled in a corporate structure so the firm was incorporated. Guidelines were set up by which the corporation functions to bridge the generation division between me and the primary owners so that my point of control and interests were spelled out. A partnership deals on mutual trust. A corporation deals on a well-organized, legal basis that clearly states responsibilities and where one stands. That was extremely important from my point of view if I were to make a success.

The other aspect of a corporation is liability. You're still liable but you limit your exposure because if someone else in the organization makes an error, you have a certain amount of protection. A partnership does not do this for you. One difficulty in a corporation is the revenue basis. Dividends relate to profits which are taxed and then when you get the dividends you are taxed again. That is a disadvantage especially when your income varies from year to year. The only justification is on the basis of a certain amount of dividend takeout.

I differ with Brett Donham concerning "where." When I came to Harvard it was my intention to go to the place of most recent population growth—at that time Tucson. When I left Harvard, Houston was second. While at Harvard I had to work part time so I had no knowledge of the community, but it was clearly an important issue. I was broke so I remained in Boston a year before I took a traveling fellowship to Europe. I had time there to think and I realized something that made me return to Boston. In a growth area a client would say, "I need 10,000 square feet. Don't question it. Produce it." Whereas my experience here was, "I have a problem, maybe you can help me." That is a greater challenge and has greater vitality than going where there is a population boom. □

Markus Nocka Payette & Associates: Eastern Maine Medical Center, under construction in Bangor, Maine. Thomas A. Payette, AIA, architect in charge; Robert H. DeVries, project architect; Herman Smith Associates, hospital consultants.



3. Reactions of Mind and Emotion

by FABER BIRREN

COLOR AND MAN-MADE ENVIRONMENTS

Color in a man-made environment is far too vital to man's well-being for its choice to be left to personal whim or fancy. Color has the ability to serve man's physiological and psychological needs and to help keep him on an even keel in time of stress. This article, the last in a series of three, indicates what happens to man when he suffers sensory deprivation and underscores color's influence on behavioral patterns.

Innumerable editorials and essays are written these days decrying the sorry state of modern living. Multistory office buildings file people away in cubicles like so many cardboard folders. Large-scale and highrise housing pens them in like rabbits in concrete and glass hutches. If a developer or financier allows a bit of open space for grass and shrubbery, he is extolled as a great humanitarian.

Certainly no one can complain about the ideal of allotting every family its own plot of grass under God's sky. Yet the bare facts of urbanization, the reasons for the dense concentrations of human beings, are too often ignored. There are three population tendencies that affect architecture. First, there is a widespread move to the suburbs by those fortunate souls who have climbed up the economic scale high enough to leave the caves of the cities and slums. Second, there is a trend back into the city and the re-establishment of vast housing facilities, very often in the most blighted and central areas of the metropolis. Third, and most curious of all, is the trend toward highrise apartments out in the country or suburbs where land lies vacant and fallow on all sides.

What the essayists and many sociologists overlook is the fact that many people *like* to be jammed near their fellows. Why does the beach at Coney Island swarm with human beings on a summer day when adjoined stretches of sand and shore are sparsely invaded? Actually there is isolation in crowds, more privacy in a box of an apartment house where one tenant hardly ever sees and never talks to the next door neighbor, more seclusion than can possibly be found in a suburb or out in the country where neighborhood affairs are known to everyone.

Population masses leave little room for grass and bushes. Two-story units, placed at random amid playgrounds and mini-parks, are usually out of the question. Co-Op City, built to house 50,000 residents of the metropolis of New York, will have more inhabitants fitted into one building than all the people who live in suburban towns like Bronxville (7,000) or Scarsdale (18,000). How can myriads of souls be housed if not in honeycombs? There simply isn't sufficient space to devote to nature.

The good citizens who live in Co-Op City are not tried,

condemned and sent there by the state; they go voluntarily. Apparently, they like to be cooped up, squeezed into elevators, lined up at checkout counters in supermarkets, infected with athlete's foot at the pool and have their progeny kicked in the stomach by the progeny of others at the community gym. This is *living* for millions, and good living by their own choice and admission.

The inevitable and not-to-be-avoided crowding of people into giant menages poses tremendous problems, among them the hazards of what is called sensory deprivation. The controlled environments that are destined to come for man have already arrived for numerous animals. While an animal, protected from predators and natural enemies, can live the life of Riley, such bliss is rarely encountered. Confinement and monotony may lead the animal to starve itself, to overeat, to refuse to procreate and to devour and destroy its kind or any other kind. The first article in this series mentioned the use of new light sources emitting a more balanced spectrum, including ultraviolet, for confined animals. Some may not be bothered by visual monotony in their environment, but others, higher up the scale, may experience psychic distress similar to that of man.

Apes have been observed to withdraw within themselves in the manner of schizophrenics if left alone or surrounded by blank walls. Other creatures may lapse into a fatal lethargy. Thus zoos are rapidly building better and more spacious environments with splendid results. Cubs are entering the world from parents who previously refused to breed in more austere captivity. Life spans are being increased. No doubt important lessons are being learned for days in the future when man, too, will be an enclosed mortal who will need not only proper food, light and exercise but also agreeable visual sights and colors to help him maintain a sane normality.

The physical effects of color on the human organism will induce psychological reactions. As John Ott, a leading researcher on the biological effects of light and color, writes, "Behind the psychological responses to color are more basic responses to specific wavelengths of radiant energy." A person is likely to feel cheerful on a sunny day and glum on a rainy one. Conversely, psychological attitudes toward color will affect bodily responses. In other words, the whole of man—his body, mind, emotions and spirit—represents a coordinated unity, a microcosm; and color pervades all aspects of it. "Color perception," comments B. J. Kouwer, a Dutch authority on the emotional significance of color, "is not an art involving only the retina and 'consciousness' but the body as a totality."

There is just as much color within man as there is in the world beyond him. While space age scientists busy themselves with interplanetary travel, other scientists in psychological realms are equally occupied with inner space. Indeed, man's knowledge of himself has been increased vastly within recent years and vies

in magnitude with enlightenment on the physical aspects of the universe.

Mind-expanding drugs, for example, have been taken by peoples throughout the world as a part of religious ritual, but only recently have their effects been given widespread attention. This is due, of course, to the synthetic production of such drugs as LSD. What is pertinent to modern styles of living is that there seems to be a connection between the taking of LSD and the mental and psychological effects that follow the isolation of human beings. Three Canadian scientists at McGill University, Woodburn Heron, B. K. Doane and T. H. Scott, report: "It is unlikely that the effects observed after isolation can be attributed merely to the forgetting of perceptual habits during the isolation period. They seem to resemble somewhat the effects reported after administration of certain drugs (such as mescaline and lysergic acid) and after certain types of brain damage. When we consider as well the disturbances which occurred during isolation (for example, vivid hallucinatory activity), it appears that exposing the subject to a monotonous sensory environment can cause disorganization of brain function similar to, and in some respects as great as, that produced by drugs or lesions."

Reversing the procedure of psychochemical ingestion, psychedelic art and psychedelic discotheques using flashing lights, colors, fluid designs and patterns, roaring sounds and incense attempt with fair success to blank out the real world for one of nightmarish fancy—without the taking of drugs. In clinical studies, flashing red lights have been found to induce seizures of epilepsy, while pulsating stroboscopic lights are hypnotic and able to produce headaches, nausea and minor forms of a "nervous breakdown." Even the flickering of a television set may be hazardous to some persons.

On the other hand, if the sense of sight is *not* stimulated, reactions will take place anyhow. Prisoners in solitary confinement or in concentration camps, ascetic monks in the seclusion of cells, sailors who venture the oceans alone in small boats, men lost in woods or deserts and shipwrecked mortals are often visited by colorful apparitions for no external cause. Likewise, persons confined to "iron lungs" or otherwise immobilized by such disorders as fractures or cardiac complaints are affected in a similar way. Schizophrenia is like this also. Withdrawn from humanity, hunched in a dark corner, the patient may leave his immediate world for a dream one of his own. As the psychologist R. L. Gregory states, "It seems that in the absence of sensory stimulation, the brain can run wild and produce fantasies which may dominate." In the contemporary world, such hallucinations may become an occupational hazard for men who sit at automated machines or who travel into empty space confined to a crowded projectile. Colors and visions from inside them may block vision of their actual environment.

Perhaps space travelers, busy as they are with instruments, radio instructions and the like, will be kept occupied enough not to be affected by the monotony of their crowded capsule. Yet passengers with little or nothing to do might well encounter no end of mental distress. Just about everyone has been cornered somewhere at one time, in a stalled train, a doctor's office or a hotel on a rainy day. Patience will collapse in a few hours. But how about days, if not weeks?

The National Aeronautics and Space Administration in its Tektite program has undertaken a series of experiments in "habitability assessment." Two giant cylinders placed 50 feet under water in the Virgin Islands have been occupied and inhabited by various groups of aquanauts for periods of 14, 20 and 30 days. All were well qualified for the ordeal, tested psychologically and

rated above average as engineers and intelligent human beings. All had duties to perform which left little time for loneliness or boredom. The two things they missed most were lack of news and lack of privacy. Much of their leisure time was spent in conversation and in listening to taped music.

Some quotations from a report prepared by David Nowlis, Harry H. Watters and Edward C. Wertz, who undertook a special assignment on habitability for NASA, are pertinent. "Aquanauts explicitly and spontaneously stated in a number of interviews that they themselves were surprised at how little anxiety they felt during the mission. . . . Most complaints centered around the general area of habitat design. Specifically, the aquanauts were dissatisfied with the design of the habitat affecting the performance of their tasks. . . . Although crewmen reported books as their favorite pastime, they did not spend much of their time reading them." Perhaps this was a matter of first giving answers that are expected! The participants missed spouses and families. They liked music and TV films. They least liked cooking and did not seem to miss fresh air.

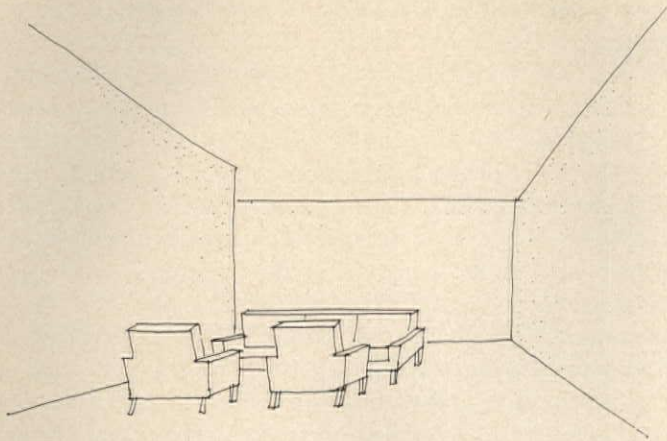
The report continues: "With respect to moods, it is clear that the positive moods of social affection, pleasantness, activation and concentration tend to decline dramatically with increase in mission duration. This suggests that, along with the dramatic decline in positive feeling, there is a tendency for these moods to be replaced by a state of flat and steady unemotionality. Apparently, longer missions encourage aquanauts to be in a routinized, neutral mood where there is less activation, less concentration and less intensity of feeling either in a positive or negative sense."

Isolation, however, can have far more serious consequences than the Tektite experiments suggest. Not all people are young, eager to venture into space or specially trained for technical and scientific missions.

What is known as sensory deprivation has introduced a new era and topic of investigation for psychiatrists and psychologists, as well as for architects and interior designers. In *The Psychology of Perception*, M. D. Vernon, an eminent woman professor of psychology at the University of Reading, England, describes a number of clinical studies on the effects of a monotonous environment. Here is one example: "Under the direction of Hebb, at the University of McGill, experiments were carried out to investigate the effects of keeping people for periods up to five days in a completely homogeneous and unvarying environment. In a small room they lay on a bed; they heard nothing but the monotonous buzz of machinery; they had translucent goggles over their eyes so that they could see only a blur of light; and they wore long cuffs which came down over their hands and prevented their touching anything. Some observers were able to stay in these surroundings continuously for five days; others could not endure them for more than two days."

Professor Vernon comments that at first they slept a great deal, but after about a day they could sleep only in snatches. They became bored and restless, unable to concentrate. "In fact, when their intelligence was tested, it was found to have deteriorated. They frequently suffered from visual and auditory hallucinations. When they emerged from their incarceration, their perceptions of their surroundings were impaired. Objects appeared blurred and unstable; straight edges, such as those of

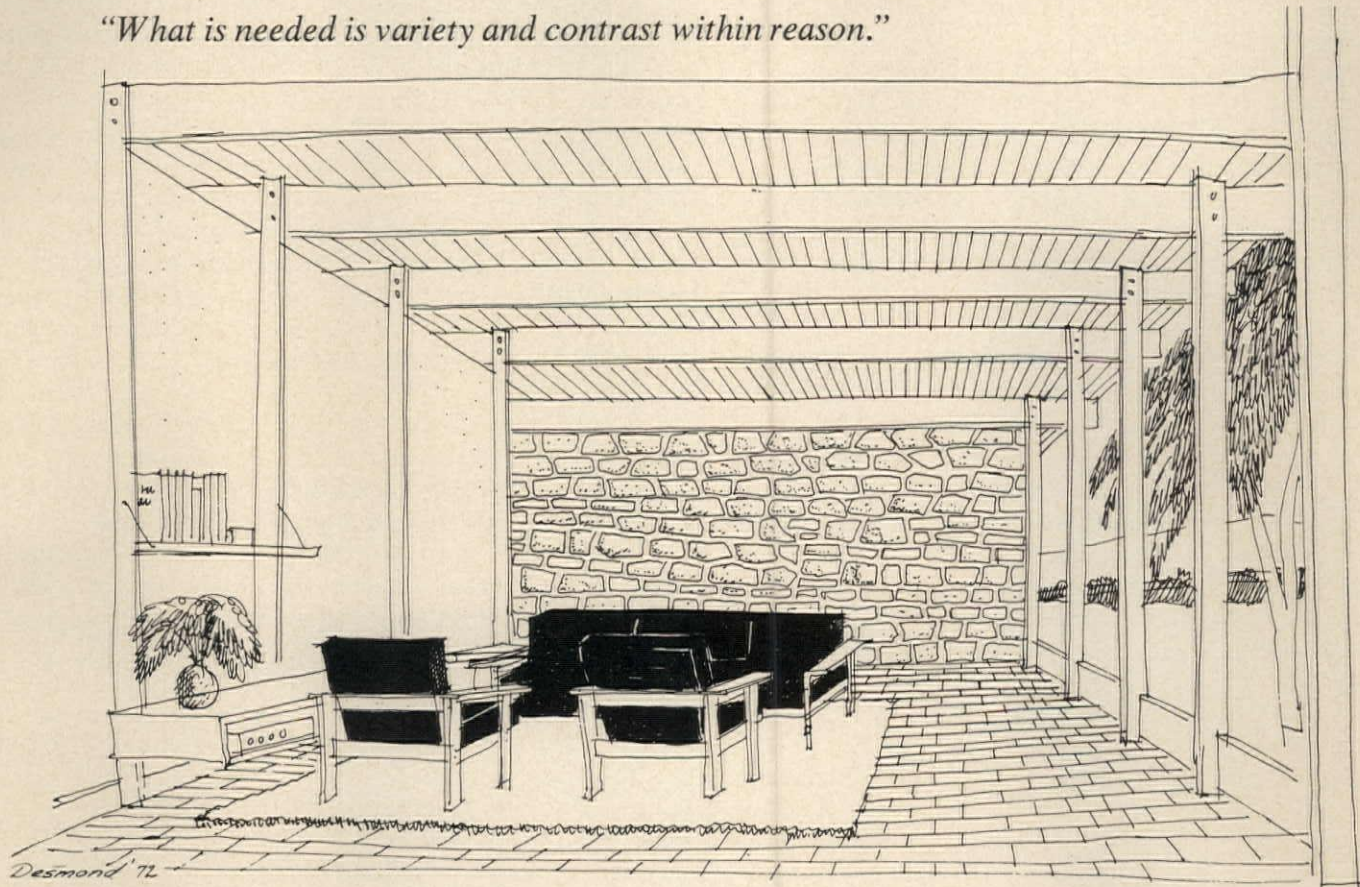
Mr. Birren has spent a considerable part of his career correlating scientific data on the effects of color on all living things and then applying this knowledge to practical problems. His name is synonymous with the word "color" among those who know of his pioneering work.



perception and thought can be maintained only in a constantly changing environment. When there is no change, a state of 'sensory deprivation' occurs; the capacity of adults to concentrate deteriorates, attention fluctuates and lapses, and normal perception fades. In infants who have not developed a full understanding of their environment, the whole personality may be affected, and readjustment to a normal environment may be difficult."

Herbert Leiderman and fellow researchers have written of further hazards of isolation that center around medical care. Hospitals in particular need color as well as other sensory interests such as music, television, visitors, etc. Leiderman and his group had volunteers willingly confine themselves up to 36 hours in a respirator in which they were able to see only a small area of ceiling. Only 5 of 17 could endure the confinement for the full 36 hours. "All reported difficulty in concentration,

"What is needed is variety and contrast within reason."



walls and floors, looked curved; distances were not clear; and sometimes the surroundings moved and swirled round them causing dizziness."

This surely speaks well for color and for reasonable exposure to other sensations in an environment. It also points out the need for variety. Blank surfaces tend to fade out if viewed continuously. Even colors may fade into neutral gray. Vision seems to degenerate unless stimulated, and the mind itself drops into lethargy.

Professor Vernon tells further of a study conducted by H. R. Schaffer on infants under seven months of age who were hospitalized for periods of one to two weeks. Schaffer reports in the *British Journal of Medical Psychology* that the environment of the hospital was monotonous, lacking variation. On being taken home, the infants continued to stare into space with blank expressions on their faces. Such behavior persisted for a few hours or a couple of days. As Professor Vernon summarizes: "Thus we must conclude that normal consciousness,

periodic anxiety feelings and a loss of ability to judge time. Eight . . . reported some distortions of reality, ranging from pseudosomatic delusions to frank visual hallucinations. Four subjects terminated the experiment because of anxiety; two of these in panic tried to release themselves forcibly from the respirator."

What is highly pertinent here is that disturbed or ill people, not to mention sane ones and cooped-up apartment dwellers, are often expected to spend long hours and days in confined and drab quarters. Assume that a surgical operation may correct a man's illness, what then if his confinement leads to other and unexpected maladies? Leiderman and his group write: "If normal persons can develop psychoticlike states . . . how much more likely it is that sick patients, perhaps already perilously near the mental breaking point, can be tipped into psychopathological states by the stress of sensory deprivation. Delirium may be imminent for patients weakened by fever, toxicity, metabolic disturbance, organic brain disease, drug action or

severe emotional strain; sensory deprivation may tip the balance. We have accumulated clinical evidence that sensory deprivation may be one element of importance in the etiology of mental disturbance as a complication of various medical and surgical conditions."

Not only hospitals and sanitariums, but also convalescent homes, nursing homes and retirement homes need to be planned to combat the frightening dangers of isolation. If old people, for example, cannot stand being together, a situation which is usually good for them, and if they prefer solitude, such privacy must of necessity be equipped with colors, sound, motion. Otherwise, they will surely encounter neurotic disturbances. Without undue exaggeration, it can be observed that people with burdensome mental, emotional and economic problems can readily "crack up" when aggravated by a bleak hovel or a dwelling place in squalid surroundings. This is an age of mental stress, and people are becoming impaired mentally with increasing frequency. Remember that suicide more often follows mental agony than physical pain.

Color in architecture these days is too bland, too sweet, too much a pampered luxury. A preponderance of white walls is emotionally sterile and visually dangerous. A haphazard indulgence in bright accents—rugs, furniture, accessories—may be charming and all that, but it is largely meaningless. What may be done in a home is no one's business but the owner's and his decorator's, but where the physiological and psychological needs of masses of people are to be served, colors should not be chosen on whim or impulse.

As modern civilization grows more complex, those responsible for the planning of environments will need to have a better understanding of the psychic makeup of people. Other factors than color need study, but at least the specification of it can avoid mere personal fancy on the part of the architect or interior designer who should profit from sound research. If people are to live in controlled environments, the physical conditions, such as light, heat and food, can be directly and completely engineered and so should the psychological conditions.

A new method has recently been developed and tried with

success in the use of color over large interior areas. Clinical studies and case histories are now being assembled. White walls are banned in places such as offices where people are expected to work and concentrate at visual tasks because of glare and unfavorable eye abuse. Likewise, the flaccid pastel colors of recent years are too bland and lead to psychological and emotional monotony. What is needed is variety and contrast within reason and within the requirements of recognized scientific practice.

To combat sensory deprivation, the new palette is one that uses a sequence color such as light warm gray or beige, and then introduces on end walls the more luminous and dynamic colors such as flamingo red, pumpkin, yellow, parrot green, turquoise, sapphire blue or the rich tones of gold, avocado, terra cotta and aquamarine. These colors will have a reflectance of about 20 or 25 percent to avoid excessive contrast. Well placed in generous amounts on walls and planned on a basis of traffic patterns to treat the eye to an interesting change of pace during the course of a day, these colors will result in improved employee attitude. With the general quickening of autonomic functions associated with the stimulation of color, greater work productivity is to be expected.

In the future, environments will be active, not static. Light and color effects and perhaps even the projection of patterns and scenes will be monitored electronically for morning, noon, evening and night, just as in nature. Some of the light will be programmed for physiological well-being, some for emotional stability. Natural day and night cycles and rhythms will keep man attuned to harmonies with nature which have guided and controlled his existence over eons of time.

The great psychiatrist Carl Jung has written: "The gigantic catastrophes that threaten us are not elemental happenings of a physical or biological kind, but are psychic events. . . . Instead of being exposed to wild beasts, tumbling rocks and inundating waters, man is exposed today to the elementary forces of his own psyche." It may be added that man will be equally exposed to environments of his own creation and such environments will help keep him well adjusted or push him off his rocker. □

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A Modest Proposal: An AIA National School of Architecture

by SANFORD R. GREENFIELD, FAIA

Purpose: to provide an option in addition to ACSA schools for students who wish to become licensed architects and acquire the knowledge and skills necessary to plan and design buildings upon graduation.

1. There is a need as well as a mechanism for the AIA to establish a national school of architecture.
2. The school would model itself along the lines of the open university/external degree concept.
3. There would be no single facility campus.
4. The AIA would establish regional educational centers using existing chapter and school facilities, practitioners and ACSA faculties.
5. The school would have a large and open enrollment.
6. The AIA would have the credentializing power to award professional degrees.
7. The school would be conducted on a self-sustaining basis.

At the Houston convention last May, The American Institute of Architects passed Resolution No. 5 on Architectural Education.¹ Essentially, this resolution indicates that among practicing architects (no one knows who they are or how many) there is a growing concern that fewer students of architecture are developing the basic knowledge and skills necessary to plan and design buildings. Moreover, the resolution implies that this is a result of inadequate academic training. The schools are urged to examine their curriculums and meet the needs of students who wish to "take their place in the profession upon graduation as architects who plan and design buildings." Finally, the resolution urges the Institute and its members to become involved in this process.

Resolution No. 5 comes at the end of a year in which position papers² on internal professional issues had been prepared and discussed by the Five-Presidents Conference (the AIA; National Council of Architectural Registration Boards; National Architectural Accrediting Board, Inc.; Association of Collegiate Schools of Architecture; Association of Student Chapters). At best these statements are the beginning of a dialogue by the components of our profession.

The papers reflect sufficiently serious differences in the goals, attitudes and values

regarding society, professionalism, education and architecture to suggest that the solution to the problem will not be quick or easy. The Five-Presidents Council has recognized this dilemma and has created a representative task force on education to study and make recommendations of an integrated nature to their respective boards for implementation.

Some of the issues confronting the new task force have long ago surfaced and have been recognized by practitioners and educators alike. It is almost a quarter of a century since *The Architect at Mid-Century* was published (Reinhold Publishing Corp., 1954). Our profession and our world have undergone profound changes since the compilation of information made at that time. Different kinds of architectural careers have been forged and new roles are now developing.

A second obvious problem is the so-called gap that exists in the education of the architect between the time he graduates and becomes a practicing architect, the period known as internship. There is no organized or structured method which identifies for young people the kinds of employment or experience opportunities which are available to them as an educational resource. Both the profession and the schools lack a systematic approach to counseling or guidance which would match graduates' needs and abilities with the opportunities available. There are no institutions which include educational objectives parallel with professional services comparable to the teaching hospital, design clinic or accredited office.

Another critical area is that of continuing education: How does the practitioner maintain himself at the cutting edge of professional skills and new knowledge in a dynamically changing society? Our current professional education does not fulfill this function. We need to develop an expanded educational system that extends over the professional life of the practitioner and becomes an integral part of the process of education, advancement and regeneration.

Perhaps the most crucial question of all is: How do we develop practitioner response and constructive involvement in the educational process?

Despite the passing of Resolution No. 5 and the membership's testimony, there is rea-

son to believe that it will not be easy to achieve effective and sufficient collaboration.

It is difficult to expect busy architects, preoccupied with day-to-day crises, to become expert educators and provide the student with all the skills and information he needs for his professional growth. Moreover, the cost of providing this education in-house is not insignificant but represents a substantial monetary contribution both in terms of time, office personnel and use of facilities.

The gap problem is not unique to our times. As far back as the Middle Ages architects have been concerned with the inadequacies of any educational system in meeting the practical needs of their building community. Even the apprenticeship system, while avoiding the gap between training and practice, had other kinds of weaknesses and abuses, very often as a result of inadequate practitioner participation.

The interrelationship of office experience and formal education as a basis for educating professionals threads its way through hundreds of years and a multitude of architectural generations. The apprenticeship system, pupilage and the atelier were experience-based. In England, France and Germany, in the Low Countries and elsewhere in Europe much of the formal education has been to supplement the practical experience which occurs in the office.

In the United States the growth of architectural schools found fertile soil in the university. In fact, our formal system of educating architects has been almost entirely university based—with one exception: the Boston Architectural Center.

During the middle of the 19th century the need for professional education in architecture grew rapidly. Few architects had systematic training; most had a little office experience. Americans returning home from Paris were fired up with a kind of revolutionary zeal to start an Ecole/atelier system in the US. In fact, an organization was formed by American students at a meeting in Paris in 1889 (the year BAC was founded) to promote and foster this idea. Moreover, the newly formed AIA proposed the creation of a National School of Architecture along the lines of the Ecole.

Mr. Greenfield is director of education at the Boston Architectural Center and vice president of the Association of Collegiate Schools of Architecture. He is also a partner in the architectural firm of Carroll & Greenfield, Boston.

(As early as 1831, English architects tried to create a British School of Architecture. Eventually this movement culminated in the formation of the Architectural Association in 1847.)

A great factor in giving impetus to the development of technical education in the US and leading eventually to a university based architectural education system occurred in 1862 with the passing of the Morrill Land Grant Act. This encouragement and aid from Congress led higher education from an exclusive, narrow and classically based tradition to a broader and more liberal one including practical training.

Today most schools see their function as exposing students to broad experiences in architecture and not to the defined scope of "licensed" architect.

There is no consensus in our profession about what an "architect" is and what tasks he performs. Architect is a legal title bestowed by the state boards and defined by their rules and regulations, which include an examination. Some of the confusion about what tasks he performs arises out of the difference between the state examiner's legal definition and what people working in architecture actually do. The future suggests that the role of the architect will become so diversified that not all designers of our environment will hold the legal title of architect exclusively but perhaps hold different credentials which will qualify them to practice in such fields as research, development, management, teaching, etc.

Pressure from a number of social and technological forces indicates a potential for radical transformation of our profession. Large-scale government building indicates a shift from a private to a public delivery of design services. Increasing costs of construction, due to both inflation and high field labor costs, are leading to package solutions which incorporate financing, land acquisition, design, construction and management services by a single team. More often than not the architect is not the leader of this team.

Population growth, increased urban densities, large-scale building clients and the potential for aggregating markets all indicate a growing interest and demand in a more rationalized building process including pre-engineered units, off-site assembly and rapid on-site erection.

All of the above suggests an increased number of tasks, diverse roles and a multitude of career types for the environmental designer of the future. They may be quite different from the traditional role performed by the architect in the past. This diversity in professional tasks may well lead to professional specialization, as well as to the identification of a host of new hybrid professionals.

What does this mean for the student who

is now pursuing a career leading to traditional licensing as an architect?

Some schools are developing curricula which offer several options that relate to the growing number of roles performed by people who work in architecture and which differ from our historic discipline. I believe many schools will continue to provide this diversity.

The establishment of a private national school of architecture, whose guidelines are focused on and lead to licensing, will provide an option for students seeking this latter career. An AIA-directed school will complement the opportunities afforded other schools to pursue their own definitions of architecture. I do not believe this concept would be in competition with ACSA schools for a fixed consumer market but rather offer a clearer option for students selecting a university based school.

Obviously, a number of schools presently provide opportunities for students to pursue licensing as an educational goal, without depending on the AIA or other outside bodies for direction.

A national school would complement the existing schools. It is easy to imagine students engaging in studies in ACSA schools and in the open national network, even simultaneously.

Perhaps four of the most critical problems confronting education today are:

1. The increasing number of students.
2. Society's dependence on the credentializing process.
3. Increasing costs of our education delivery system.
4. Finding an egalitarian solution to the educational process of distributing society's rewards.

Point 4 is especially crucial if our profession is ever to evolve into the kind of mechanism that is responsive to people's needs and adapting society to meet future change.

A national architectural school, easy to enter and requiring a rigorous, self-motivated approach for completion, will attract many different kinds of individuals to our profession.

The US is a complex society using broad and infinite kinds of services and expertise as basic to its existence.

Students and parents need guidance in choosing colleges and universities. The public needs information for the selection of professionals and experts and the roles they perform. Credentials are a necessary part of the functioning of our social system. Although the process may be inadequate it is important

to understand how it works. As a result of technological development and the increasing social complexity, higher education in the US has developed into a social selection process — a key in the system by which society distributes its rewards. An open admissions system in an architectural school would play an important role in determining the kinds of students we attract and for whom professional responsibilities are confirmed.

For all of the above reasons there is a need for new types of institutions, new and innovative enterprises and academic administrations which exhibit entrepreneurship.

The higher education community is beginning to recognize that there are new teaching/learning resources other than the traditional classroom experience. Outside employment, travel and informal, nonstructured events sponsored by both public and private agencies are experiences becoming more frequently identified as valid educational opportunities. The focus of some of this change has been opening admissions requirements, making it easier to drop in and out of schools with more flexibility, expanded work/study programs, not limiting the faculty to those with formal teaching credentials but seeking professionals and practitioners in special fields.

This so-called evolution, or revolution, has already seen marked changes in a number of established universities as well as the development of new institutions and colleges with special missions and innovative systems.

The idea is to enable students to acquire an education, even a degree, without ever setting foot on a college campus. The program uses a variety of learning techniques in addition to traditional modes: independent study, tutorials, internships, field experience and videotape.

In theory there is no set curriculum or uniform schedule for awarding degrees. Students work out their own programs with faculty advisors at participating institutions.

The individual schools establish their own admissions policies, evaluation procedures and criteria for awarding degrees.

In Great Britain the open university experiment started in January 1971. It combines written course material with weekly half-hour radio and television broadcasts. The university is open in the sense that anyone over the age of 21 can enroll.

Students have access to regional study centers, open several evenings a week and

on weekends, to meet with fellow students and counselors. The centers house tape recorders, projectors, libraries of audio-visual materials, and computer terminals. When the university reaches its full operating scale of 40,000 students in 1973, it is estimated that it will cost about \$500 a year per student

In the US there are several developments underway. One, the Open University of North America, will act primarily as a distributor of course material. Credit and degrees will be granted by individual colleges and universities.

Another, the Campus-Free College, is not planning to produce any course materials or provide any instruction but will give students various kinds of "learning opportunities" in their local communities, such as on-the-job training, internships, courses at local colleges and specially arranged programs of study. Students will receive credit for this study from the Campus-Free Center. Degrees will be awarded on the recommendation of a committee of professionals from various fields.

A national school of architecture would have several regional centers. It would use the existing offices and personnel of different practitioners, local chapter meeting rooms, classrooms, jury rooms and facilities of various architectural schools.

It would require a central administrative staff to coordinate activities not unlike the present AIA Department of Education and Research. It would necessitate a single set of national educational objectives which would be pursued as the requirements for completion and for a professional degree. The guidelines would include identification of teaching/learning resources; recommend options or tracks of study; and systems and techniques for evaluation of students. Practicing architects and educators who expressed interest could participate. Some services would be contributed and some compensated.

Ideally, the freedom and flexibility suggested by open admissions and unlimited enrollment would be similarly matched by professional options, and curriculum diversity based on new roles and new knowledge as well as on traditional concepts and skills.

Of critical importance in determining the curriculum content of such a national school of architecture would be those individual practitioners and offices and individual ACSA faculty and school members who participated in the process.

Finally, the adoption of Resolution No. 5 on architectural education at the Houston convention represents an important professional commitment to students, to architecture and to the future of our profession.

The fulfillment of this commitment will demonstrate that architects are at the cutting

edge of change in professional education. It will be a challenge to our profession to put our own thoughts in order about what an architect is and the kind of education he ought to receive. □

¹Resolution No. 5: Architectural Education:

Architectural educators have recognized the great opportunities for expansion of man's knowledge of his physical environment. Many of the institutions they direct have developed new curricula reflecting these opportunities and this new knowledge.

There is, however, a growing concern among practicing architects that fewer and fewer students of architecture have an opportunity during their academic training to develop the basic knowledge and skills necessary to plan and design buildings. There is further concern that those students who wish to become architects will find their academic training inadequate in this respect. Therefore, be it

Resolved, That the schools of architecture be urged to examine their curricula (in terms of this concern) and the needs of their students who wish to take their place in the profession upon graduation as architects who plan and design buildings.

Resolved, That the AIA provide students of architecture with factual information on the skills and knowledge they will need to become such architects.

Resolved, That the AIA devise means of providing prospective students of architecture with information on the type of academic programs available to them in the various schools of architecture.

ASC/AIA Architectural Amendment:

1. The ASC, the students of architecture, wish to state their appreciation for the profession's concern for the present education of the architect.

2. The students would like to offer the following interpretation. The students find Resolution No. 5 to be an expression of the dissatisfaction and sincere concern of the products of the education of the architect.

We agree with this *intent and concern*.

3. Clearly, these are multiple interpretations that have been expressed. Education, in fact, extends well beyond the formal five- or six-year programs. It includes internship. It involves the entry into the practicing profession of school graduates, and it includes continuing education.

Therefore, the problem affects all of the profession. It is not simply a problem of the schools or the students, or the practicing profession. The AIA also has a stake in the broad aspects of education and a big responsibility. We are all in this together.

4. The resolution should reflect the sense of this *joint responsibility* and should be action oriented.

5. **CALL FOR ACTION:** The combined professional interests must align themselves behind an immediate organized effort to study the problems of architectural education, including internship and beyond, prepare recommendations for change, and follow through with required action programs.

6. The mechanism representative task force has been established through the recent formal action of the five presidents (AIA, NAAB, ACSA, NCARB and ASC). All of this requires money. Funding of resulting action programs *must* receive a priority equal to the priority of other major Institute programs.

7. The ASC finds the existing Resolution No. 5 to be acceptable, but *only* in the context of the expanded and clarified review of both the problem and the organizational responsibilities as stated in this ASC statement. *Resolved, Therefore* (ASC) moves that this ASC clarifying statement be included as an amendment to the motion on the floor.

² ACSA: "The School in the Context of Higher Learning"; NCARB: "Registration of Environmental Design Professionals of the Future"; NAAB: "Accreditation in the Education of Environmental Design Professionals of the Future"; AIA: "Education and Training for Environmental Design Professionals of the Future."

The ACSA in Aspen

The Association of Collegiate Schools of Architecture, Inc., held its annual meeting on July 15-17, contiguous to and preceding the International Design Conference at Aspen, Colorado. The yearly meeting is basically an extended family board meeting, featuring the installation of new officers.

This time seven concurrent workshops were held as well, on topics such as public environmental education roles, new examination/accreditation/registration and minority education. Along to help in these workshops were Fay DeAvignon, president, Association of Student Chapters/AIA; Arthur F. Sidells, AIA, president, National Architectural Accrediting Board, Inc.; Thomas J. Sedgewick, AIA, president, National Council of Architectural Registration Boards; and James J. Foley, AIA, chairman, AIA Commission on Education and Research. Over 115 ACSA faculty and administrators took part, representing schools from all over the country.

A special note was the address of guest speaker Arnold A. Arbeit, AIA, chairman of the board of the National Institute for Architectural Education (née the Beaux-Arts Institute). Arbeit's report on the relatively unchanged competition basis of NIAE's activities drew a little good-natured ribbing from the assembly, but it is clear that the

organization is doing the best it can within the airtight specificity of the wills that create its endowment.



Harris

Another highlight was a question and answer session with a Department of Health, Education and Welfare Office of Civil Rights representative, Peter Holmes, on the "affirmative action plan" issue. Schools all over the country are under fire for not having enough female and/or minority faculty. Asked what ACSA could do, Holmes suggested compiling a directory of potential female and minority faculty members. This would dramatize the general unavailability of such people and help place the few who are available.*

Four new officers were installed on the board of directors this year. Assuming the presidency is Robert S. Harris, AIA, dean

*To this end, ACSA is asking all female and minority members interested in faculty positions to send their names, addresses and areas of teaching interest to ACSA, 1785 Massachusetts Ave. N.W., Washington, D.C. 20036.

of the School of Architecture at the University of Oregon. Harris was vice president last year and chairman of the "Learning Packages" program. This program is an interesting item in itself, offering grants to faculty and students for the generation of portable knowledge to be shared with the rest of the schools. With the help of the American Metal Climax Foundation (Kawneer), Harris and his committee gave two grants this year. One was to Professor Huck Rorick at Massachusetts Institute of Technology for a self-teaching system in computer graphics. The other went to Professor Coy Howard at the University of California, Los Angeles, for printing of a poster exhibition on decision making.

Activities like this have forced Harris reluctantly to cut back on such other time-spenders as serving on the Governor of Oregon's Capitol Planning Commission. Harris succeeds Alan Y. Taniguchi, FAIA, who will be busy enough with his new post at Rice University this year, heading up the architectural program.

Replacing Harris as vice president is Sanford Greenfield, FAIA, director of Education at the Boston Architectural Center. His first duty is to serve on the Five Presidents' (ACSA, NAAB, AIA, NCARB, ASC) new Task Force on Architectural Education. Greenfield is well suited for the task, having represented ACSA last year at the International Union of Architects' architectural education commission meeting on the Gaspé Peninsula.

Richard H. Wheeler, FAIA, director of Architecture Graduate Studies at the University of Cincinnati, was elected ACSA secretary. Succeeding Robert Burns Jr., AIA, Wheeler is no stranger to the board, having been East Central regional director in 1970. Like Harris, he has been president of his local AIA chapter, as well as being a partner in a successful architectural firm.

John P. Eberhard, AIA, dean of the School of Architecture and Environmental Design, State University of New York, is the new Northeast regional director, replacing Greenfield. Eberhard, though new to the board, is no newcomer to the field, having been deputy director of the Institute for Applied Technology of the National Bureau of Standards and a visiting lecturer in the MIT School of Industrial Management.

Two student members were appointed to the board: Jaime Gesundheit, graduate student at the University of Southern California, ASC designate; and Bruce Webb, graduate student at Virginia Polytechnic Institute, board designate. Webb was on the board last year as the ASC designate.

Also celebrated was the beginning of ACSA's ambitious Environmental Experience Stipends Program which pays faculty and graduate students to offer evening courses on environmental education to the public—especially to school teachers. This program has the backing of the Rockefeller Family Fund and the National Endowment for the Arts. Thirty grants were given this year, and an orientation meeting was held, prior to the annual meeting, at the Johnson Wax Foundation retreat "Wingspread" in Racine, Wisconsin.

DAVID CLARKE

What's Happening in Architectural Education

Campus Notes. Bertram M. Berenson, AIA, is new dean of the College of Architecture and Art, University of Illinois at Chicago Circle, following the resignation of Leonard J. Currie, FAIA. Currie will be on sabbatical leave during the 1972-73 academic year, having been awarded a senior Fulbright-Hays grant to advise on the establishment of a school of architecture and building sciences at the university of Penang, Malaysia.

Felix Candela, Hon. FAIA, of Spain and Mexico, and according to Currie "the world's foremost authority on thin-shell concrete design and construction," has become professor of architecture at the Chicago Circle campus on a permanent basis.

ae The new School of Architecture, University of Tennessee, Knoxville, has formed a committee to direct the search for a dean.

ae Ralph J. Warburton, AIA, recently special assistant for Urban Design at the Department of Housing and Urban Development, has joined the University of Miami in Coral Gables, Fla., as professor and chairman of the department of architecture and architectural engineering.

ae George Anselevicius, dean of the School of Architecture, Washington University, St. Louis, will be visiting academician at the School of Architecture, the E.T.H., in Zürich, Switzerland this winter to study, evaluate and discuss teaching methods and opportunities in comparison with those in the United States.

ae A two-year analytical study on the potential effectiveness of direct housing assistance is being launched by the Joint Center for Urban Studies of the Massachusetts Institute of Technology and Harvard University. The center has been awarded a \$360,000 contract from the Department of Housing and Urban Development to conduct the study, which will assess the benefits and limitations of direct housing assistance in contrast to present housing subsidy programs. Part of HUD's Housing Assistance Research Program, the study has the ultimate purpose of helping refine an overall national housing policy.

ae A portable disaster housing unit which can be dropped from a plane with a payload of food and medical supplies has been designed by four architecture students at the University of Michigan. The system may revolutionize rescue operations internationally by simplifying the means of supplying vic-

tims of earthquakes, floods or other disasters with instant shelter equipped with the necessary items for survival.

The shelter was originally conceived by Ann Arbor designer C. William Moss, who guided the four students: Terry Bobo, Shaun Jackson, Peter Kuttner and Randy Lasker.

After being dropped from a plane, the shelter pops open like a parachute and is pulled downward by the weight of its payload of supplies. It is fully erected when it touches the ground. As many as six adults can be housed in it, or it can be linked with other domes to provide living facilities for several families.

The exterior of the unit is made of rip-

per week over the 34-week academic year. A student who completes the prescribed credit hours with a cumulative average of 2.0 or better, and who has completed a minimum total of 192 credit hours, will be awarded the Master of Urban Planning degree.

The work experience was provided through the New York City Planning Department as part of a study funded by the US Department of Transportation and administered by the Tri-State Regional Planning Commission. The program was provided with backup money by the J. M. Kaplan Fund; the Fund for the City of New York; and the Rockefeller Brothers Fund. Their assistance turned

⌘ Bright primary colors and cabins which resemble children's building blocks are part of plans for a camp designed by University of Virginia architecture and engineering students for Virginia's handicapped children. More than 30 students worked on the project for Holiday Trails, Inc., a nonprofit group



Terry Bobo, one of four student designers of the portable disaster housing dome, by the entrance of the unit on display at the University of Michigan College of Architecture and Design.

proof nylon with a special aluminized coating to repel heat. It is supported by flexible fiberglass ribs and is equipped with a detachable floor and interior partitions. On top is an umbrella-like nylon hood, raised above the dome to permit entry and exit of air.

When not in use, the shelter can be rolled into a 12-foot-long cylinder for easy storage. It weighs about 25 pounds. Materials for the 16-foot model came to about \$250, but the students expect that a full-size version can be mass produced for under \$100.

⌘ The School of Architecture and Environmental studies of the City College of the City University, New York, splits its graduate program in urban design in two parts: instruction in the subject areas where an urban designer must have some knowledge; and professional experience. The 17½ hours per week of the latter take the place of an in-school design workshop. The student receives four credits a semester for the professional experience course. The work is arranged and supervised by the school, and the student can expect to earn about \$100

out not to be required, but their guarantee made it possible to admit the first students. In addition to the City College, graduates of the following schools of architecture will be in the graduate program this year: Case Western Reserve University; Cooper Union; Cornell University; University of Kansas; University of Michigan; University of Minnesota; University of Nebraska; Rensselaer Polytechnic Institute; Rice University; and St. John's University, Shanghai.

⌘ The New School, Southern California Institute of Architecture, has opened this fall in Santa Monica, California. Among those forming the school is Raymond Kappe, FAIA, former chairman of the Department of Architecture, California State Polytechnic College, Pomona. The New School will concentrate on design, interdisciplinary seminars and community action activities, and technical training. Community leaders and educators in all disciplines will be brought in to discuss the behavioral sciences, ecology, economics, philosophy, history, literature and the arts.



Architecture student Warren E. Andrews shows model of camp for handicapped children.

formed to establish permanent camping facilities for impeded youngsters. The project was started by Dr. Elsa Paulsen, associate professor of pediatrics at the university.

Working in groups, the students designed four preliminary plans. The site, about 80 acres of hilly land southwest of Charlottesville, was donated to Holiday Trails by David Goodwin, an area businessman. It was analyzed by the engineering students, who drew up plans for pond enlargement, the location of roads, and sewage and water facilities.

Camp buildings will be placed along a contour near a hilltop to eliminate stairs and to facilitate movement by wheelchair and asthmatic patients. Recreation, dining and administrative facilities are grouped around a central commons while nearby "villages" each will contain three cabins for 24 campers and two counselors. Henry J. Browne, AIA, of Charlottesville is presently developing an actual plan for the site, taking features from the different plans developed by the students. The Holiday Trails organization hopes to begin construction in the spring.

⌘ Back in 1969, six architecture teachers from the University of Cincinnati started moonlighting. They didn't do it for money but to help provide Lincoln Heights, Ohio (population 8,500) with a new community facilities building. It started this way: Lincoln Heights had obtained a reservation of \$340,000 on a Federal Neighborhood Facilities grant from the US Department of Housing and Urban Development. This supplied two-thirds of the money the new building would cost. With an annual budget of \$200,000, the city couldn't get up the final one-third needed for the structure — except by obtaining help in the form of services.

The University of Cincinnati's Department of Architecture was approached, and six faculty members were glad to give of their after-hours and weekends. The six: Dennis Alan Mann, J. William Rudd, David Lee Smith, Donald E. Stevens, Richard Stevens and William Widdowson. But Lincoln Heights was still shy \$70,000. More than

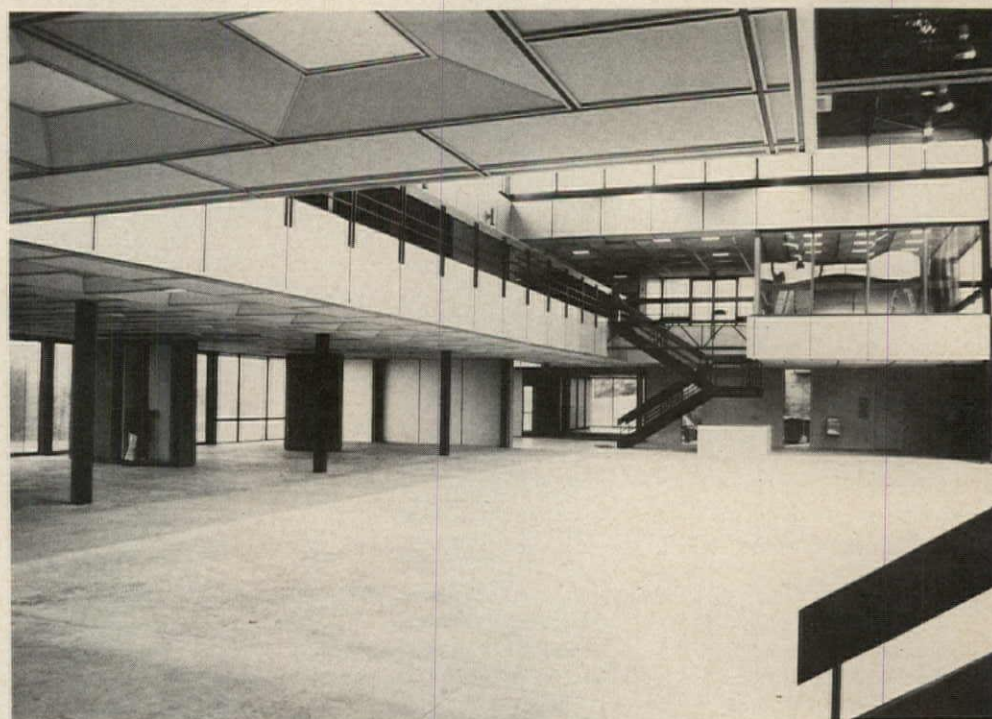
\$13,000 was raised through a door-to-door campaign; the rest through foundations, church groups and help from neighboring communities. The Lincoln Heights Foundation, a nonprofit organization of the industries in the area, picked up the tab for about \$7,500 in direct expenses incurred by the architects.

The design of the building is the result of active and meaningful exchanges between residents and designers, who acted as advocate architects in helping the people translate their needs and aspirations into physical form. It was a rich learning experience for all involved, the architects feel, and they think the project can play an important continuing role in total education. If it produces the effect that they all envision, they see it as an extremely viable model.

æ The University of Southern California School of Engineering has a new Construction Program to educate men and women as professional construction managers. This will cover all phases of getting a structure built, from the pre-drawing board analytical phase to completion and occupancy. For further information, contact Professor Edward F. Shaifer Jr., Director, Construction Program, USC, University Park, Los Angeles 90007.

æ The centennial anniversary of the graduation of Nathan Clifford Ricker from the University of Illinois at Urbana will be celebrated by the university on February 22 and 23, 1973. Ricker was the first graduate of collegiate rank in architecture in the United States. The two-day celebration will include a review of Ricker's life, of our heritage in architectural education and a symposium on the kind of architectural education needed for the future. Exhibitions of 100 years of student drawings and of Ricker material will be shown. For further information contact Alan K. Laing, FAIA, Chairman, Ricker Anniversary Committee, University of Illinois, Urbana, Illinois 61801.

Publications: A document outlining procedures whereby architectural technician training programs at two-year technical schools and junior colleges may be approved by The American Institute of Architects has recently been issued. The publication, "An Approval Procedure for Architectural Technicians' Training Programs," is the outgrowth of a 1968 study by the AIA which established guidelines for the education and training of



The 22,130-square-foot "supermarket of community services," the Lincoln Heights Community Facilities Building, has medical and dental clinics, library, social service centers, consumer education, youth recreation, etc. Sited in center of town near schools and flanked by housing, the structure is designed with people's old footpaths in mind as an integral part of the center. Children can follow the paths and go through the building on their way to and from school.

technicians. This study resulted in the publication of "A Program for Architectural Technicians' Training." Single copies of both documents are available from the Education and Research Department of the AIA, 1785 Massachusetts Ave. N.W., Washington, D.C. 20036.

æ *A Guide to Planning and Conducting Environmental Study Area Workshops* has been produced jointly by the National Park Services and the National Education Association. The five-page guide contains complete instructions on how to plan and conduct such workshops and how to evaluate their effec-

tiveness. Included are examples of workshop designs, schedules, activities, press releases and evaluation forms. Copies are available at \$2.25 each from the National Education Association, 1201 16th St., N.W., Washington, D. C. 20036. NEA stock number is 191-05994.

æ The Foundation for Interior Design Education Research has issued a new document, "Accreditation of Interior Design Education Programs." For further information or for copies of the document, contact FIDER, 1750 Old Meadow Road, McLean, Va. 22101. □



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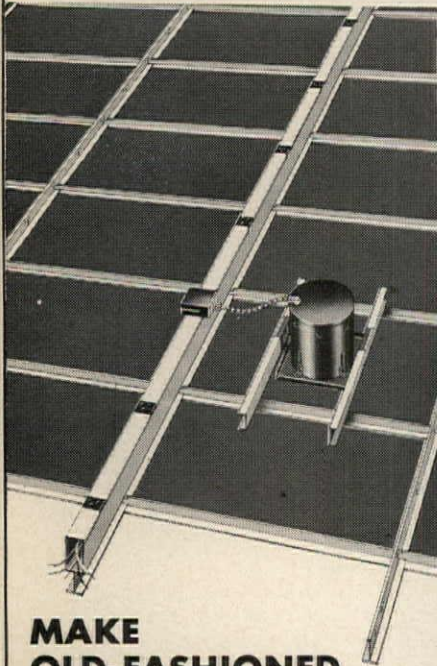
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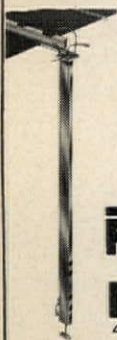
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What's Your Symbol I.Q.?

"The designer of a graphic symbol must use a form that is known and accepted or must have some way in which to teach the symbol to the audience for whom it is intended," stated the article on symbols, "Substitutes for Words," which was published in the August AIA JOURNAL.

The symbols that were selected to illustrate the article and the magazine's cover purposely were not identified. We hoped to test the reactions of our readers. To a degree, our scheme was successful because it has been reported to

us that some of those symbols are not intelligible. What are they anyway?

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Test yourself now, and then look at the answers printed below.

THE EDITORS



1. Bus; 2. Direction; 3. First aid; 4. No smoking (r=red); 5. Luggage lockers; 6. Buffet; 7. Canoeing; 8. Washroom; 9. Access; 25. Eye; 26. Child care; 27. Bus; 28. Restaurant; 29. Post office; 30. Information; 31. Telephone; 32. Luggage lockers; 33. Archery; 34. Cycling; 35. Fencing; 36. Rowing; 37. Wrestling; 38. Equestrian sports; 39. Hockey; 40. Handball; 41. Shooting; 42. Judo.

Keeping a Ferryboat Afloat



The Pawtucket Model Cities Demonstration Agency in Rhode Island thought that local teen-agers should have adequate recreational facilities. Money was not available to buy land, so they took to the water. An abandoned ferryboat was converted into a center for the youngsters. As Zane Anderson, assistant professor of architecture at the Rhode Island School of Design, testifies, it took a lot of hard work and planning by his students and by the city's own youth as well as by those adults who were willing to help in the adventure.

In September 1969 the Rhode Island School of Design in Providence began an adventure in community advocacy design. Operating under Paul Goodman's speculation that students "should engage more directly in the work of society" and "have useful products to show instead of stacks of examination papers," I agreed, as assistant professor of architecture, to have my students help plan the conversion of a passenger/auto ferry into a floating youth center for the teen-agers of Pawtucket, Rhode Island.

The opportunity to get an abandoned ferryboat, the Newport, came about when ferry service was eliminated between the cities of Jamestown and Newport. Based upon an imaginative proposal by the Model Cities agency, the Newport was awarded Pawtucket for \$1. The City Council in turn delegated the responsibility for the development of a youth center to the Model Cities agency, which came to us for planning aid.

The first problem of the design team, which consisted of seven of my students* and me, was to figure out how to establish contact and develop a dialogue with over 4,000 teen-agers in the area from which would result a meaningful program and a useful environment for them. The team decided to prepare a multimedia presentation which combined motion picture, sound and multi-slide images. The effect was an exciting kaleidoscope of sight and sound with reflections of the existing boat, design possibilities and a broad range of potential activities. The aim was to avoid an adult influenced appeal and to use the language of teen-agers to help establish the belief that this project could be the result of their involvement and could become their own special place.

In joint effort with the Model Cities

agency, we arranged interviews with the principals of the local schools and later made presentations at all of them to the students. The sessions proved to be most productive. The design team also formulated a questionnaire for use following the sight and sound show so that the youths could indicate possible uses for the boat and give pertinent opinions for help to the team in the planning process. In all this, we learned to our surprise that little effort is made in the average school assembly to really communicate with teen-agers. We succeeded in reinforcing what we said by the manner in which we said it.

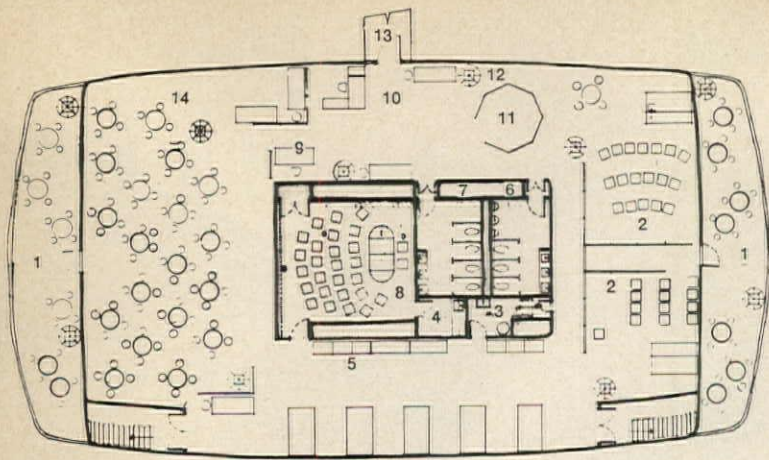
The data collected was collated and used in developing design proposals. At a public meeting, each design team member presented his ideas to the community via slides. They ranged from master site plans to specific proposals for each of the three decks of the boat. Here we learned a real lesson in communications. The presentation dragged on, and it became apparent that the jargon of designers was unintelligible and boring to the audience. We had not considered the possibilities of a dialogue. We had discussions and revised our approach.

A core group of volunteers representing the schools and the community was organized by the Model Cities agency, based in large part on the results from our questionnaire. Open house meetings were scheduled on the boat to encourage a sense of common purpose and to familiarize everyone with the environment. This gave the design team a chance to meet the young people on a social level and to broaden communications.

All winter long the design team huddled around a rented salamander, sipped hot coffee, poured over the original working drawings provided by the Jamestown Historical Society, manipulated models of the ship's interior, talked to teen-agers and began to organize a complete system of teen-age government which would plan the conversion of



*Peter Andruskiewicz, Charles Burnham, Patrick Fitch, Richard Glanzel, Stephen Kile (job captain), John Machinist, Dennis Pratt.



- 1 Deck
- 2 Class
- 3 Janitor
- 4 First aid
- 5 Snack area
- 6 Men
- 7 Women
- 8 Meeting/lounge
- 9 Director
- 10 Reception
- 11 Coats
- 12 Display
- 13 Gangway
- 14 Entertainment/social

DECK TWO: ACTIVITY PLAN

the boat and run the operation of the center in the future.

Committees were organized and charged with responsibilities for program and planning, physical remodeling, structuring rules and bylaws and developing communications with community groups. A board of directors was proposed, and various prominent adults who were respected by the young people were invited to join the board and to provide guidance and help.

Throughout the spring of 1970, the design team met regularly with teen-agers and Model Cities representatives, gradually developing proposals for the passenger deck of the ferryboat, which was considered as phase 1 of the project. The Department of Housing and Urban Development approved a budget of about \$100,000 for the first part of a planned three-phase program with an estimated construction cost of \$500,000.

Site visits and meetings were arranged with engineering and contracting consultants to seek advice on specific practical problems of sewage disposal, water and electricity supply, heating and airconditioning.

During the summer of 1970, two members of the design team, Patrick Fitch and Stephen Kile, prepared working drawings. Bids were requested and received, with disaster striking in the form of overwhelmingly high bids which ranged up to double the estimated construction costs. A careful review and discussion with bidders led to the decision to rebid the project with a fundamental change in the scope of the service of the design team. As a result it became general contractor and supervisor.

During the fall semester, the student members of the design team used this project as the design studio credit, and I continued as adviser. Contracts were rebid within the budget fund, and finally in January 1971 approval was given from the authorities to continue with the complete construction.

Throughout the spring semester, the design team took up residence in a jobsite trailer and assumed duties of complete supervision and general organization. Meetings were held with the teen-age governing body which now had become the Ferry Incorporated. Furniture selection and color schemes were reviewed at these gatherings and teen-age work parties were organized to enlist help in miscellaneous jobs of cleanup and construction. Various individuals and groups contributed help to stretch the limited budget funds. The community participated in painting work.

Construction was completed during May and open house for phase 1 was held on June 3, 1971. The boat has been the scene of many lively activities including acting workshops, a modern dance studio, jam sessions and concerts, ecology group meetings, etc. We have all learned a great deal from the experience which will be expressed practically in further development of the project.

In the beginning, we had a boat but not a building. Our main concern was dealing with the reality of a waterborne facility. The boat is secured to its pier by two large steel dolphins designed as sleeves to allow the boat to rise and fall with the tides. Chains, donated by the Navy, are secured fore and aft to existing cleats on the pier by specially designed collars. The main entrance steel stairway is cantilevered from two central columns which are connected with the boat by an aluminum gangway hooked to the boat and set on a roller at the stair platform, allowing the gangway to flex with the tides and to be removed by the davits above should a hurricane move up the bay. The site is appropriate for the activities that take place now on the boat. It is in a Model Cities development area on the Blackstone River just half a mile from the central business district and across the river from a proposed major city recreation area.

Water and electricity reach the boat by 30-foot flexible cables with connections which can be quickly detached during storm emergencies. An existing 5,000-gallon fuel tank in the hold was cleaned and converted into a holding tank for sewage. An interim solution, the tank will be replaced by an underground connection to the city sewer system in phase 2 of the construction. The second deck is heated and cooled by a four-zone air system powered by oil and electricity. Furnaces are concealed in the stacks on the top of the third deck, and fuel oil is stored in an existing fresh water tank in the hold. Ductwork is exposed and painted in bright colors.

The second deck was selected for phase 1 because it offered the advantage of having an existing core containing toilet facilities and room enclosures. The design was based upon the desire to keep the existing character of the boat and to preserve the open, flowing space for flexible use. The interior core was revised to condense the toilet/janitor facilities, and we added a general purpose meeting room/library/lounge. A new exterior steel stair was designed to provide direct access from the pier to the second deck by passing the main first (auto)

deck which would be renovated in phase 2. New bulkheads and structural work are of welded steel to match the ones we inherited. The ceiling of the main open area is constructed of wood lattice strips set with open spaces which provides an interesting pattern as well as an inexpensive solution to the acoustics. The lounge has an oak paneled ribbed ceiling. All trim and doors (with holes) are of oak. Floors are ceramic tile in the restrooms, carpet in the library and a special mastic in the main open deck space.

Today the boat is enjoyed by all. Major allowances have been made for change when phases 2 and 3 are undertaken. The physical environment is important as an expression of the communication and cooperation of people, particularly the youth of Pawtucket and the students at the Rhode Island School of Design. In an age of increased specialization and stress upon technological development, here was maintained an emphasis upon the humanistic tradition in architectural planning. The architectural students learned the art of listening and of sympathetic response to the needs of people. □



Designed by teen-agers for teen-agers, the ferryboat is used for many activities that young people enjoy in their very own place.



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Kaufman ponders the model of his telescope in his studio, which is adorned with murals.

studio walls. He also found time to make radio-operated model airplanes as a "joint venture" with his sons and to sculpt animals and figures. The sons are now following their own careers, and the airplanes are no longer being constructed. "But," he reports, "Mrs. Kaufman and I do fly them on occasion."

Kaufman hasn't given up architecture for all his many other pursuits. He maintains a private practice and has specialized primarily in the planning and design of industrial buildings and complexes.

National Endowment for the Arts Seeks Proposal for Urban Design Research

Grant applications for a new \$500,000 program entitled "City Edges" are being received by the National Endowment for the Arts until December 11.

This program will sponsor planning and design studies of programs confronting cities in their treatment of freeways, riverfronts, suburban fringes and other natural and man-made edges of cities. The unifying theme was selected to describe these unique urban features around which the endowment will focus a major portion of its funds for physical design research during 1973.

Proposals which provide for a broad interdisciplinary approach to city-edge problems and which possess real possibilities for implementation will be given priority. A panel of design and planning professionals will review applications and selections.

Requests for application forms should be sent to the Director, Architecture & Environmental Arts, City Edges Program, National Endowment for the Arts, Washington, D.C. 20506.

New York Chapter AIA Cites Pollution, Opposes State Use of Electric Heat

The New York Chapter AIA has gone on record as being opposed to the use of electric heat by the New York State Urban Development Corporation in its planned project for Welfare Island in New York City. President Thomas F. Galvin, AIA, stated the

chapter's position in a recent letter to UDC's President and Chief Executive Officer Edward J. Logue. "We believe," said Galvin, "the current power crisis demands that immediate public attention be focused on this issue" (see AIA JOURNAL, June, p. 17).

The chapter is of the opinion that "heating and other mechanical systems should be considered primarily from the point of view of those methods that use least energy and that contribute least to the environmental pollution of the New York area."

Before declaring its position to Logue, the chapter's executive committee received a detailed analysis of a UDC report from Richard G. Stein, FAIA. Stein's research led him to conclude that a conventional heating system "uses half as much fuel as is required by an electrical heating system" and that "based on the present rates of oil delivery and electricity at the differential rate for electric heating, the same quantity of electric heat costs 10 percent more annually than oil heat."

In his letter, Galvin points out that the chapter is sympathetic with public agencies which are faced with limited funds and pressures for performance, but at the same time it deplores the "first cost mentality" that would commit city and state to the continuing expense and pollution factors involved in electric heating. Decisions should be made "based on considerations of energy savings, minimum pollution and resource savings, as well as economy." Although the chapter agrees that there are many sources of pollution, "their existence is no reason to support another source of avoidable pollution: electric heating."

by selling chilled water and steam to 27 state, municipal and privately owned buildings. The plant will save them three-fourths the cost of operating individual systems.

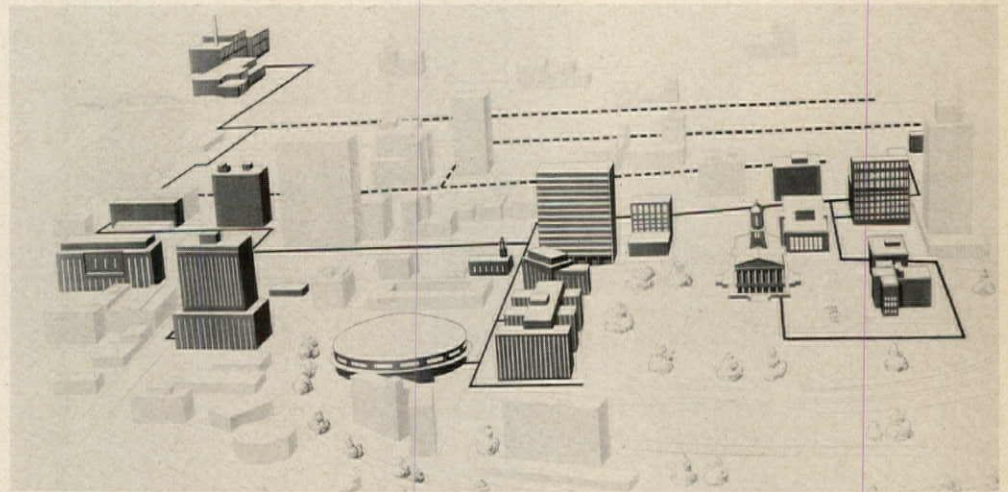
Initially, the Nashville plant will consume 720 tons of solid waste per day in two incinerator/boilers equipped with advanced pollution abatement devices. Recovered heat, produced by steam, will be used to drive the turbines powering two water chillers totaling 13,500 tons of cooling capacity.

Within five years, it is estimated that plant capacity will be 1,300 tons of solid waste per day, or roughly all of the refuse produced by the half million residents of Nashville and Davidson County. This will produce 500,000 pounds of steam per hour in four incinerator/boilers and 31,000 tons of cooling capacity in five water chillers.

Steam and 40-degree chilled water will be piped underground through 15,000 feet of trenching, mostly under city streets, explains Maurice J. Wilson, systems design consultant for I. C. Thomasson & Associates, Inc., the Nashville engineers who have designed the plant. Located in downtown Nashville, the plant will be financed entirely by local revenue bonds.

Wilson says that the plant will produce steam for about 30 percent of the cost of steam from fossil fuel plants and chilled water for about 40 percent. One ton of average composition solid waste provides for about the same amount of energy as one-third of a ton of coal, 65 gallons of No. 2 fuel oil or 8,000 cubic feet of natural gas.

If similar treatment were given to the nation's annual 200 million tons of community refuse, according to Melvin C. Holm, chair-



Nashville's cooling and heating plant (upper left) will supply services to the dark-shaded buildings in the system's first phase; dotted lines show pipelines for the next stages.

Cooling and Heating Plant in Downtown Uses Solid Waste for Airconditioning

Early in 1974 the city of Nashville, Tenn., expects to have in operation a \$17 million cooling and heating plant which will use solid waste as fuel. Similar plants, using gas or electricity as the energy source, are in operation in some 18 cities already, but the Nashville plant represents the first use of solid waste as fuel to produce chilled water and steam for community airconditioning, claims Mayor Beverly Briley, who says that operating costs of the plant will be defrayed

man of Carrier Corporation which is building the steam-driven water chillers for the plant, the rising demand for electricity and fossil fuels would be alleviated, sanitary landfills would be eliminated and air pollution would be lowered.

Holm calls the combination of refuse incineration with the district cooling and heating concept "a major step toward true environmental control and energy conservation." He notes that the Nashville system can be used effectively in hospital complexes, universities, shopping centers or any group of buildings where district service is feasible.

Landscape Designers Honored by ASLA With Winners in Seven Categories

The American Society of Landscape Architects has presented 17 merit awards out of a total of 98 entries in its 1972 Professional Awards program. No honor award was given, reflecting "the critical discerning judgment of the jury," states Richard W. Dickinson, associate director of ASLA. Nor was any award given in the category of highway planning.

The jury included AIA members Ralph J. Warburton, chairman, of Coral Gables, Fla.; Robert J. Nash, AIA, AIA vice president, of Washington, D.C.; and architect/planner Robert L. Hart of New York City. Serving with them were landscape architects M. Paul Friedberg of New York City and Charles W. Harris, an educator at Harvard University; and Charles E. Parks, a Delaware sculptor. This combination, comments Dickinson, "imparted a favorable balance to the jury's deliberations."

Winners in the regional development category are Rahenkamp Sachs Wells & Associates of Philadelphia for the Wissahickon watershed; Myrick-Newman-Dahlberg, Inc., of Dallas for the Dallas/Fort Worth airport; Eckbo, Dean Austin & Williams, Inc., of Los Angeles for the Santa Ana River greenbelt and for the Pacific Gas and Electric Company; Beckett Jackson Raeder, Inc., of Ann Arbor, Mich., for the Michigan State Housing Development Authority townhouse development.

In the housing category, winners are Sasa-

ki, Walker Associates of Sausalito, Calif., for Carmel Manor, a retirement community, and Robert Green & Associates of Memphis for the Walton lakehouse.

Urban design winners are Sasaki, Walker Associates for San Francisco's Crocker Plaza and Barton-Aschman Associates, Inc., of Chicago for Town Clock Plaza in Dubuque, Iowa. The single winner in the commercial and industrial category is Sasaki, Walker Associates for the Weyerhaeuser Company's corporate headquarters. This firm also is a winner in the institutional category for Foothill College. Other winners include Collins, DuTot & Associates of Philadelphia for an entry titled "Campus Fine Arts Study" and Richard Carothers, Associates, of Seattle for the Washington Institution of Women.

The four winners in the park and recreational planning category are Johnson & Dee of Avon, Conn., for Wolcott Park; Bailey & Associates of Chaska, Minn., for the Jonathan greenway system; Oliphant & Kersey, Inc., of Knoxville, Tenn., for the Tyson Park redevelopment; and William A. Behnke, Associates, of Cleveland for the Wade W. Dauch Memorial Park.

Religious Architecture Exhibit Offered

The Guild for Religious Architecture has now made available an architectural exhibit of the 12 projects that were chosen for honor award certificates at the recent Conference on Religious Architecture in Atlanta. The photographic mounts comprising the exhibit

exemplify the conference theme of "New Spaces for the Gathering Community." Included are interfaith, multipurpose structures as well as a shopping center worship center. The exhibit is free, except for transportation charges. Additional information may be obtained from GRA, 1777 Church St. N.W., Washington, D.C. 20036. The guild is now a tenant of the Washington Metropolitan Chapter AIA in the Leisenring House.

Fellowship in Music Won by Architect; Operatic Poem Commended by the Jury

Architects apparently are versatile creatures. They paint, sculpt, build telescopes, win prizes at yachting. Jose Raul Bernardo, AIA, of New York City composes music in addition to teaching at two universities and maintaining an architectural practice.

His musical compositions have been performed in this country and abroad. It was his operatic poem "La Nina" that earned him a 1972/73 Cintas Fellowship in music. The fellowships are awarded to young creative artists of Cuban citizenship or lineage in the fields of painting, sculpture, music, architecture and literature. Established from funds from the estate of the late Oscar B. Cintas, former Cuban Ambassador to the United States, the fellowships are administered by the Institute of International Education.

The fellowships, of \$3,000 each, are awarded no more than once to the same person under ordinary circumstances, but Bernardo is a twice recipient, having previously

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won one in architecture. He earned a doctorate degree in environmental psychology and design from Columbia University, writing his thesis on museums and exhibits.

This year's Cintas Fellowship in architecture was awarded to Jorge L. Estevanez of Miami, Fla.

Hartman-Cox Wins First Sullivan Award, Praised for Preserving Visual Unity

Hartman-Cox, a Washington, D.C., architectural partnership formed in 1965, has won the first Louis Sullivan Award for Architecture. Cited for its "distinctive, functional and beautiful buildings in masonry which enhance the visual unity of their neighborhoods," the partnership was praised by the jury who made the selection for the "consistent quality" of the firm's work.

The award, which memorializes the master architect Louis Sullivan, was created by the Bricklayers, Masons & Plasterers International Union and is administered by the AIA. It recognizes the total work in masonry of individual architects rather than a single project and emphasizes environmental improvement as one of the criteria for receiving the award. Accompanied by a \$5,000 prize, the award will be made biennially.

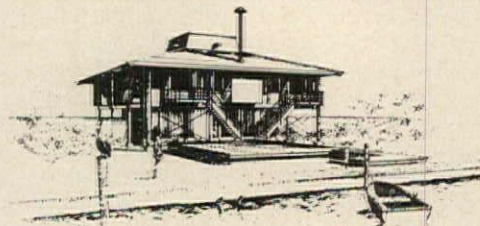
Hartman-Cox has won two AIA Honor Awards: for the chapel for Mount Vernon College in the nation's capital in 1971 and for the Brewer residence in Chevy Chase, Md., in 1970. It also was honored with an Award of Merit in 1970 in the AIA Community and Junior College Design Awards program for its master plan for Mount Vernon College. Among other projects, the firm designed the Euram Building, St. Alban's School Tennis Club and the Leventhal residence, all in Washington.

This year's jury for the Louis Sullivan Award for Architecture included William W.

Caudill, FAIA, chairman; Robert G. Cerny, FAIA; Ulrich Franzen, FAIA; Statler Gilfillen, architectural student from Kent State University; and John T. Joyce, BM&PIU secretary.

Wood Council Will Recognize Architects As Design Awards Program Continues

The American Wood Council at its recent annual meeting voted to continue its program which recognizes outstanding designs of single-family homes, clusters and planned unit developments. During the past year, the



Commissioned by the AWC, this pole frame design is by Kilcrease/Ehlinger/Faulkner, Inc.

council, which is an alliance of 12 trade associations and companies in the wood products industry, commissioned designs for three single-family houses that feature innovative uses of wood and reflect environmental or regional concerns. Since 1969, it has sponsored 40 projects in 29 cities, 15 being for single-family homes and 25 for planned unit developments.

Recently the council has devoted greater attention to higher density projects and clusters where wood gives individuality and makes possible a variety of designs. Emphasizing better land use, it has issued two publications for architects and planners: *Planning for Space*, which is a workbook on clustered developments, and *New Housing Patterns for the '70s*, which stresses factors

involved in higher density zoning. Both are free upon request.

The council also sponsors seminars which offer case histories of several successful planned unit developments. Cooperating in this effort have been local chapters of the AIA and the American Institute of Planners.

Its Design for Better Living Awards recognize excellence in land planning, architectural design and creative use of wood products. To qualify, houses should sell for upward of \$25,000 and be located in metropolitan areas of at least 250,000 population.

For information on its programs, publications and offers for technical assistance, write council headquarters, 1619 Massachusetts Ave. N.W., Washington, D.C. 20036.

New Appointments to Federal Panel

Seven architects have been appointed new members of a 17-person National Advisory Panel for the General Services Administration. The group counsels GSA on the selection of architectural firms to design government buildings and on the development of designs that will reflect the quality of the region where the structure is to be located.

The new members are Kenneth C. Black, FAIA, Lansing, Mich.; William J. Caudill, FAIA, Houston; Grant Curry Jr., AIA, Pittsburgh; Robert L. Durham, FAIA, Seattle; Fred M. Guirey, FAIA, Phoenix, Ariz.; William C. Muchow, FAIA, Denver; and B. Rea Nesmith, AIA, El Paso. Harold T. Spitznagel, FAIA, of Sioux Falls, S.D., was reappointed to the panel.

Chicago Secretary Is New ASA President

New president of the national Architectural Secretaries Association is Mildred Tobias who is employed by Perkins & Will in Chicago. A founding member of the ASA, Miss Tobias has served the organization as recording secretary and newsletter editor.

The organization now has 13 regional chapters which have prepared the *Architectural Secretary's Handbook*. Plans are being made for its publication by the AIA.

Deaths

JOSEPH W. COOPER JR.
Atlanta

JOSEPH A. DiPALMA
Cherry Hill, N.J.

LOUIS E. DRANE JR.
Savannah, Ga.

LOUIS WILLIAM GAMP
Woodmere, N.Y.

THOMAS L. GLEASON
Albany

JAMES SPEAR HATFIELD
Philadelphia

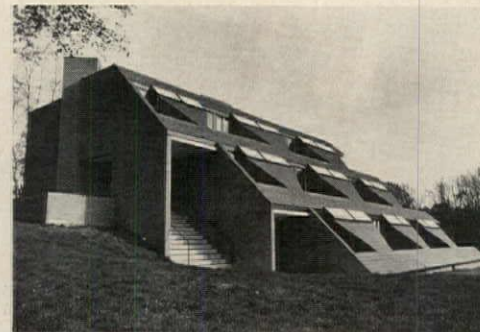
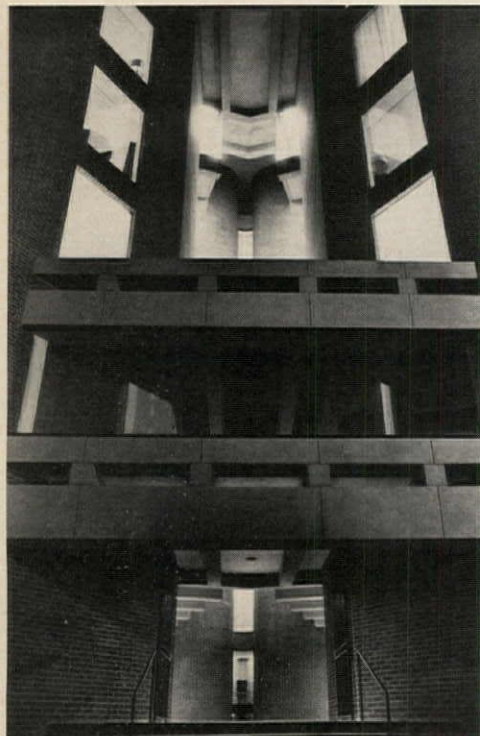
RUSSELL D. HENDERSON
Springfield, Ill.

DANA B. JOHANNES
Clearwater, Fla.

GEORGE A. LYON
Mesa, Ariz.

CHRIS W. RUNGE
Redwood City, Calif.

HARVEY H. WARWICK
Bethesda, Md.



The Euram Building (above), the Mount Vernon College dormitory (top right) and the St. Alban School Tennis Club (bottom right) are designs of Hartman-Cox in the nation's capital.

Newslines

▪ **Soul City**, to be developed on a 5,180-acre site in Warren County, N.C., is the first rural new town to receive a commitment of federal assistance. It is also the first in which the principal sponsor will be a black owned enterprise. HUD recently pledged to guarantee up to \$14 million for the new community which will ultimately have 44,000 residents in 12,906 dwelling units. Ten other HUD-guaranteed new communities under development in six states are featured in the August issue of *HUD Challenge*. They are Riverton and Gananda in New York State; St. Charles in Maryland; Flower Mound, San Antonio Ranch and The Woodlands in Texas; Maumelle in Arkansas; Park Forest South in Illinois; and Cedar-Riverside and Jonathan in Minnesota.

▪ **A pilot issue of a new publication**, *Noise Facts Digest*, has been developed by the Environmental Protection Agency. A sample copy may be obtained by writing the Office of Noise Abatement and Control, US Environmental Protection Agency, Washington, D.C. 20460.

▪ **Beautification of the surroundings** is highlighted in *Landscape Manual*, published by Burger King Corporation. Helpful in planning attractive landscapes around Burger King locations and other stores as well, the booklet has practical information on such topics as accent plants, ground covers, retaining walls, curbing, etc. Write for a copy from Burger King Corporation, P.O. Box 338, Kendall Branch, Miami, Fla. 33156.

▪ **The Building Research Advisory Board** has made a contract with the Public Buildings Service, General Services Administration, which provides \$600,000 for use over a three-year period in support of a study on fire loads in buildings.

▪ **William E. Hartmann**, FAIA, senior partner of Skidmore, Owings & Merrill, has been named chairman of Mayor Richard J. Daley's Committee for the Preservation of Chicago's Historical Architecture.

▪ **Careers in architecture** are discussed in a recent pamphlet published by the AIA. "The New Architect" is written for high school and college students interested in the options available to graduates in architecture. Single copies are available at no charge from AIA Headquarters, 1785 Massachusetts Ave. N.W., Washington, D.C. 20036. Bulk price is \$6 per 100 copies.

▪ **An Office of Housing Technology** established by the National Bureau of Standards is expected to bring an interdisciplinary approach to solutions of housing problems. Dr. E. O. Pfrang has been appointed chief of the office, which will be within the NBS Building Research Division.

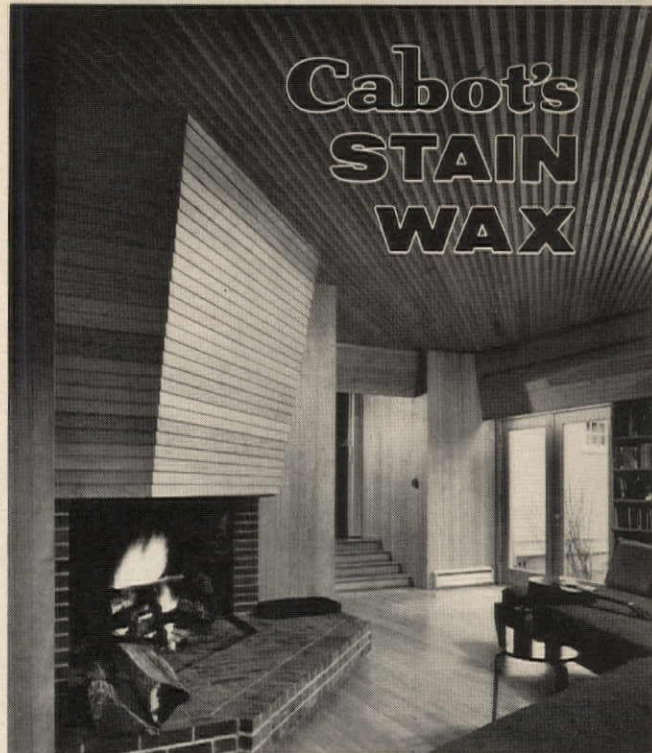
▪ **To save fuel costs** in multistory housing built with government financing assistance, the Federal Housing Administration has upgraded the insulation requirements of its "Minimum Property Standards for Multifamily Housing." The new standard, General Revision No. M-21 to FHA No. 2600, sets requirements for insulating both heated and/or cooled buildings, superseding the previous standard which covered heated structures only. The new ruling is in accordance with President Nixon's instructions to issue new regulations that will cut maximum permissible heat loss by 40 percent.

▪ **George S. Dolim**, AIA, vice president of the San Francisco architectural firm Hertzka & Knowles, has been appointed to the California State Developmental Disabilities Planning and Advisory Council for a three-year period.

▪ **The fifth in a continuing series** of reports from the Architectural Aluminum Manufacturers Association, *Aluminum Curtain Walls*, may be purchased for \$1 from AAMA, 410 N. Michigan Ave., Chicago, Ill. 60611.

▪ **Low cost homes for the rural poor** will be stressed in a major experiment to be conducted by the Office of Economic Opportunity. A \$4.7 million demonstration grant has been made to the Battelle Memorial Institute, Columbus, Ohio, to select on a competitive basis four groups to construct up to 100 homes using three designs. □

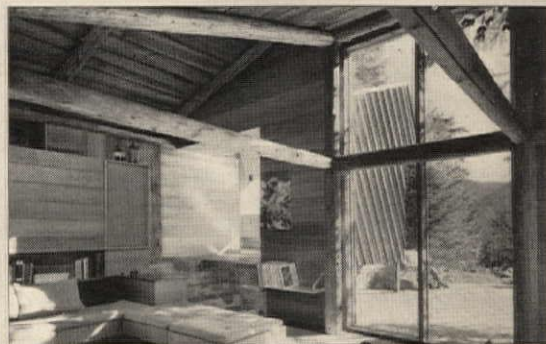
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Home in Tacoma, Wash.; Architect: Liddle & Jones, Tacoma, Wash.; Cabot's Stain Wax throughout.

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books

Building in the USSR, 1917-1932. Edited by O. A. Shvidkovsky. New York: Praeger, 1971. 144 pp. \$15.

This is another volume in the growing literature on that short but exciting period of Soviet architecture which celebrated the victory of the Russian Revolution by proposing to transform completely all artistic activities and by calling for the abolition of all that belonged to the hated old order. Scarcely 15 years later, the movement was derided and vilified by the highest officials of the very "vanguard of the masses," i.e., the Central Committee of the Communist Party of the USSR, with Joseph Stalin at its helm. The decree of April 23, 1932, ordered the "reorganization of all literary and artistic associations" and established "socialist realism" (meaning classicism and eclecticism) as the legitimate expression of socialist art.

This book introduces us to the men who were the main actors of that drama, architects of the new age: Lissitzky, the Vesnin brothers, Melnikov, Ladovsky, Milyutin, Ginsburg, et al. Three comparatively short articles are designed to acquaint the reader with the creative and professional milieu of that period.

Neither the typography nor the format and arrangement of illustrations for this book betrays the fact that the essential idea of the constructivist movement was connected to the complete transformation of all established conventions in art and architecture. Perhaps this point can be driven home better by comparing the book to its predecessor, the February 1970 issue of the British magazine *Architectural Design*, of which the book is a reprint.

Can a series of magazine articles be transposed without major modifications of format, content, style, or all of these together, into book form? The essence of the magazine format is its ability to compress information within the limited space of a single issue. This calls for terse editing, clever manipulation of page layout and the elimination of all superfluous detail.

To give a concrete example: While the small size of the illustrations in a magazine somehow seem acceptable in terms of maximum coverage in a minimum of space, the same small illustrations become inadequate and trivial within the format of a book.

The magazine managed to treat the subject of Russian constructivism in 37 pages; the book does essentially the same in 144, and with the exception of two additional monographs on the Vesnin brothers and on Melnikov, its contents are basically the same as the magazine. Considering the steep cost differential of the two publications (\$1.50 for the magazine versus \$15 for the book), perhaps some effort should have been made to upgrade the illustrations, at least with regard to size. Better illustrative materials do exist,



as evidenced by the superior quality of similar illustrations in No. 18 of *Sovietskaya Arkhitektura* and Anatole Kopp's *Town and Revolution*.

The magazine presentation of revolutionary architecture somehow seems more "natural." The same material without major modification suffers somewhat in the transfer to book form, particularly since no graphic effort was made to accommodate this shift artistically. But looking at it from another vantage point, namely that of history, it is a measure of the swiftness of change in our century that a subject matter scarcely 50 years old is seen fit to be received among other subjects in the timeless "cemetery" of books. Further, it is perhaps only natural not to expect the capitalistic press to be overly concerned with the problem of packaging socialist propaganda, beyond regarding it as just another subject of current interest.

The book has been written in its entirety by Russians living in the Soviet Union. It is to the credit of the American publishers that they have refrained from tampering with the text and that they have avoided diluting it by introductions, footnotes, additions, etc. This gives the Western reader a chance to obtain an undistorted view of current Soviet research in architectural history.

Without attempting to define the term "constructivism" (a matter of some difficulty for all students of the period), the most important point to be made about the Soviet "moderns" is that they considered themselves as a *new* type of architect whose client was to become society as a whole, i.e., the proletariat, and whose main task was to translate the aims of the young Soviet state into new architectural terms. Architecture was to become a "social condenser." They

believed that a transformed society would naturally transform architecture and that architecture, in turn, would by its artistic and scientific insights speed up and redirect this transformation. They thought that the elaboration of new solutions would give formal expression to the dynamics of the new socialist society.

In this sense the Soviet modern movement differs somewhat from that of the West, which tends to deal with social issues mainly within the given context of a bourgeois society. Both movements, however, have ultimately failed to achieve their goals in terms of transforming the societies which they set out to change. The book is clear evidence of this fact. While the failure of the Western so-called "modern movement" has been the subject of innumerable articles, books and lectures, in the USSR the same subject has been taboo until quite recently—1954 to be exact, the same year in which Khrushchev denounced Stalin and the cult of personality. It is a fascinating facet of this book that the two most important actors of the whole drama, Stalin and Khrushchev, are not mentioned once by the Soviet authors. Not once!

Another interesting phenomenon is the fact that the reevaluation of the period is made in terms of writing monographs on individual "masters," as they are called by the authors. The only writer who has so far made an attempt to deal with this period in terms of its ideas and social issues is Kopp, a Westerner, in his book *Town and Revolution*. Kopp considers the individual architects of that period not as "masters" but as active *participants* in a larger social process.

This reviewer believes that this is the correct way to interpret the period. Evidently, the Soviet scholars have taken a different approach. Being academicians and historians, they feel more comfortable with names, dates, projects and their mutual interrelationships in time, rather than looking at the 1917 to 1932 period as the manifestation of a particular dialectic, which by its very nature was most vehemently opposed to the historical interpretation of individual destiny as a separable aspect of social evolution in the Marxist sense. Still it is remarkable that the climate now exists which permits reevaluation. One must also take into account the fact that most of the authors were born after the revolution and were educated in the shifting climate of Stalinist education. Seen from this angle, the text becomes a remarkable document of human tenacity to seek the truth.

Although most of the text is somewhat pedantic in approach and style and although conceptual depth is often sacrificed to a recitation of names, dates, projects, etc., the book must nevertheless be considered as an important document and a valuable contribution to the growing literature on constructivism. In fact, it should help to whet the appetite of the Western reader for more, particularly translations of the original pamphlets, manifestos, tracts, posters, etc., etc., which better than anything else will reveal the true flavor of this stormy period of Russian architecture.

ERIC DLUHOSCH
*School of Environmental Design
University of California, Berkeley*

Joint Ventures for Architects and Engineers. David R. Dibner, AIA. New York: McGraw-Hill, 1972. 205 pp. \$14 members, \$16.50 nonmembers.

Who said, "Joint venture is a dirty word?" Not Dave Dibner. Drawing on his long experience in managing successful joint ventures, he has produced a concise, human, readable and decidedly informative text on everything the reader might want to know on the subject.

While joint ventures cannot be considered one of life's great pleasures, the concept has become a fairly common vehicle for the architect to secure commissions for which he might not have been considered previously. The basic premise behind this book is that small firms can joint venture to become giant killers and can achieve better and larger commissions without excessive strain on staff, organization and future prospects. Joint venturing has also worked for large firms doing government or industry complexes which neither of the parties could have handled independently. It is a tool for the architect, and the book provides instructions for its proper use.

The author begins by trying to bely the fears of some practitioners, explaining the ground rules and criteria to be used to develop successful joint ventures, and why they are necessary. The philosophy is similar to a marriage contract between bigamists. The joint venturer has obligations to the project secured by the joint venture and to his first love, his own firm. How this triangle works determines the success or failure of the joint venture.

Selecting your partner(s)—and joint ventures are partnerships—is a critical decision, and not one to be taken lightly. What are the criteria that should be used to complement your firm's abilities? Opposites may attract, but not for long when it's a question of philosophy, professional skill or personality. Using criteria established in the book to complete the sample form, the practitioner can develop a profile of his prospective joint venture partner.

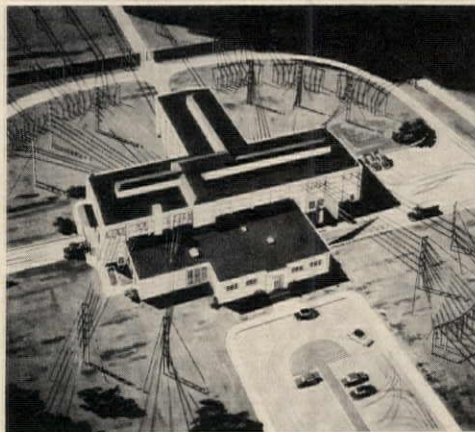
Establishing the joint venture is only the first step in the process. The second step is securing the commission. How you sell a joint venture to a prospective client and secure the commission is tricky business for the uninitiated. Joint ventures have several advantages which are peculiar to smaller offices competing with a larger firm that has no joint venture to handle the commission. For some this can become a means of combating out-of-town firms walking off with all the plum commissions.

Have you ever had a client say, "I'd love to give you the job, but you're just not big enough?" You now can be as big as he wants through joint venture. Being in the position to secure the commission for the joint venture is worth two gold stars when it comes time to divide the profits.

The book illustrates two basic ways to divide those profits—and losses, if this becomes a learning experience—which are standard for joint ventures. When an architect joint ventures with another architect, the most advantageous method is apparently the "split-profit." This is the form currently used

in AIA Document C801, Joint Venture Agreement, and it is a division of profits earned from the completed project. The alternative is the "split-fee" method which is common in joint ventures with engineers and contractors. Both methods have variations and options that must be carefully defined in the agreement. These variations are discussed in detail as are the other items covered in the agreement form.

You may discover that the AIA's Joint Venture Agreement is remarkably similar to



The Naval Communications Center in Norfolk, Virginia, is a joint cooperative venture of Frank Grad & Sons and Marcellus Wright & Son.

Dibner's philosophy. This is because of the major contribution he made to the development of the form. He so impressed the Institute's legal counsel with his understanding of the subject that he was invited to address the AIA's Meeting of Invited Attorneys held prior to the convention in Houston.

Over 200 new joint ventures have been consummated this year. This only counts those between architects, and architects and engineers. Many others between architects and contractors or developers are not recorded. This is the beginning of a new trend in the profession. How you react to this trend depends upon you alone and what you know about being a successful joint venturer. This book can begin your education.

STEVEN H. ROSENFELD

Director

Professional Practice Programs, AIA

An Application of Modular Production Systems to Ambulatory Care Facilities. Roy Vollmer and students. University Park, Pa.: Pennsylvania State University, Department of Architecture, 1971. 52 pp. No price given.

This is a good example of a joint government/university research effort into a medical facility type that is greatly needed in this country at this time, namely, ambulatory care facilities, primary care facilities and group practice clinics. It is also a good theoretical example of modular construction, but not by any stretch of the imagination is it an application.

This is, however, at least the second study, of which the reviewer is aware, of health services research undertaken in modular ambulatory facilities. When can we test and evaluate all the beautifully done graphics and brochures that are being turned out at gov-

ernment expense by the ton? There are hundreds of communities in the US that need modular economic health units of this type and can't get them. There are thousands in the developing nations.

This report fails to make recommendations as to how realistically these units can be achieved. The government together with industry should make more effort toward following through the research projects toward the achievement of construction, operation and evaluation.

There is a discussion on the critical path method, but its objective is the production of the report itself rather than the analysis and understanding of the total process needed to develop modular ambulatory care building systems economically. Financing and aggregation of a volume market is the key to such an endeavor.

Let us encourage more cooperative joint efforts of this kind, but let's also use and plan our valuable and limited resources so that they have the maximum benefits for our society. A university and government research team is too rich a resource to restrain from going all the way. The government should plan its efforts with universities to have a greater impact.

Bravo! A well-done study. But it has not gone far enough. The danger is that this report will go on the shelf with all the others—doomed to dust and obscurity, unless some greater counterthrust results in its realization.

GEORGE J. MANN, AIA

Architecture for Human Behavior: Collected Papers from a Mini-Conference. Philadelphia: Philadelphia Chapter AIA, 1971. 81 pp. \$5.

During the past decade, there has been an increasing concern for the impact of buildings on the lives of people. It has been heightened by instances in which highly praised housing projects and institutional structures have proved to be unlivable. Psychologists, sociologists and a growing number of architects have been galvanized as a consequence to undertake research into this complex relationship between human behavior and the built environment.

Unfortunately, the information and insight which the emerging field of environmental psychology has produced, as well as the values, experiences and attitudes of those working with the less privileged, have not been focused for the design professional. Many practitioners are unaware of the growing body of knowledge and methodology which might be employed to improve the performance of buildings for human use.

It was the recognition of this information gap that prompted the Philadelphia Chapter AIA to hold the conference which produced this excellent collection of papers. They provide a general exposure to the ideas and information emanating from the field of environmental psychology.

Jon Lang begins the book from an architectural point of view, presenting the problems of buildings highly acclaimed in the architectural press which failed to recognize the practical realities of psychological and behavioral needs. He goes on to suggest the manner in which behavioral information

might be integrated into the design process and ends with two existing forms for recording such data for later use in design.

Dean Harold Proshansky, an experienced behavioral psychologist and co-editor of *Environmental Psychology*, introduces the reader to the general range of concerns, concepts and research efforts which presently characterize the field. He suggests the mutual benefits to science and to design which might grow from a cooperative explication of information regarding the influences, whether assumed or verified, which physical settings have on human behavior. Implicit in his presentation is the fundamental requirement of science for clearly defined concepts and methodologies in order to structure and cor-

relate research effort and the knowledge that it produces.

John Zeisel, speaking directly to the changing patterns of professional responsibility, recognizes a building's user as the true client regardless of who pays the bill. He sets out three guiding principles for the new professional: the physical environment should maximize the freedom of its user to choose the way they want to live; the needs of users should be defined in terms of the underlying social meaning of behavior; and behavioral and perceptual opportunities provided by the physical surroundings should accommodate the needs of the users.

Powell Lawton brings to the reader his experience as an institutionally affiliated re-

searcher who is constantly evaluating the response and use patterns within a given facility. His knowledge of how older people actually use the spaces which are provided them offers a testimonial to the value of behavioral observation as a source of information for design.

Michael Brill then suggests that the performance concept offers a format and an effective way to develop evaluating procedures as a natural outgrowth of procurement. He argues that the utility of evaluation is dependent on its utility in an ongoing design process and introduces the principal problems of designing for behavior.

Accepting some of the problems posed by Brill, Walter Moleski reports on a rational system for developing a balanced and comprehensive behaviorally defined program for office buildings. He offers a method combining three techniques of obtaining data which characterizes task-related, social and organizational behavior in terms of descriptors used to guide data collection.

Robert Helmreich presents a "high technology" behavioral study undertaken for NASA on the Tektite II undersea environment. He describes the activities of individuals according to predetermined categories, focusing at a less organizational level than Moleski.

The last paper, by Charles Burnette, addresses the topic of psychological impressions, the environmental images which people develop and sustain in their minds as a result of being in a physical environment. Three roles of the mental image of the environment are described and supported by discussion. The reasoning and design of an actual environment organized to have a deliberate reinforcing effect upon the mental development of children is presented.

Finally, there is an excellent bibliography. Just reading the titles serves as a good "state of the art" study.

DON CONWAY, AIA
Director
AIA Research Programs

Lived-in Architecture: Le Corbusier's Pessac Revisited. Philippe Boudon. Cambridge: MIT Press, 1972. 200 pp. \$10.

It was about 40 years ago that Le Corbusier built a low cost housing settlement called the Quartiers Modernes Frugès at Pessac near Bordeaux, France. After this passage of time, writes French architect Philippe Boudon, "One would have expected the district to look different, but that it could have changed so much appears quite incredible. It seems that everybody has now converted his 'machine to live in' into a 'chez soi.'"

Allowed to adapt and modify the houses to their own desires, the people have made wide windows narrower, blocked off empty spaces, enclosed patios and added sheds. Few have accepted the dwellings as the architect designed them. The general impression today, comments the author, is that there is "a real conflict between what the architect intended and what the occupant wanted." One's initial reaction is that the project is an architectural failure.

Boudon decided to investigate and to find out from the inhabitants just why they had made the changes and what their opinions

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were of the architecture. His book starts with a history of the project and reactions of the contemporary press to it. He then examines what Le Corbusier intended.

The major portion of the book concerns the lengthy, informal interviews that Boudon conducted with inhabitants of the houses. They afford an interesting study of user attitudes.

Boudon's conclusion is that the project is not a failure. Le Corbusier said, "We have tried to produce a machine to live in." However, he added, "But since men have hearts, we have also tried to ensure that men with hearts would be able to live happily in our houses." If the occupants' needs had not been satisfied, the houses would have been a failure. But the dwellings not only allowed them satisfaction, they also "helped them realize what the needs were."

Dwellings designed by the so-called democratic process where there is user participation may not please everybody any more than Le Corbusier's "machines" did. The important thing, as this highly readable book testifies, is to design so that the inhabitant will be able to introduce his own personality.

Visionary Cities: The Arcology of Paolo Soleri. Donald R. Wall. New York: Praeger, 1971. Unpagged. \$25.

Here are Soleri's philosophy and concepts about such things as city design, engineering, esthetics, urban apathy and ecological devastation.

The typography and design of the book

are unusual. The aim is to synthesize graphics and architectural criticism. Printed in white letters on black paper, the typography is pleasing but somehow hard on eyes. Drawings, photographs, fold-outs, typography and handset lettering are all combined, according to the publisher, to reflect Soleri's "revolutionary philosophy in which man progresses from a chaotic level on which solutions are fragmentary, through a more sophisticated state of patterned thought (urban sprawl), to a level where architecture is synthesized with ecology and cities are conceived as single buildings (Soleri's 'arcologies')."

Towards a Non-Oppressive Environment: An Essay. Alexander Tzonis. Boston: i Press, 1972. 124 pp. \$6.95.

A series of lectures on architectural theory by a former member of the faculty of Harvard University's Graduate School of Design who is now teaching at the University of Strasbourg. The non-oppressive environment, he says, "is a man-made environment within which man does not oppress man, within which man is free to be in communion with man." The oppressive environment is the outcome of contradictions within society, not the result of conflict between man and nature.

The British Museum. J. Mordaunt Crook. New York: Praeger, 1972. 251 pp. \$12.50.

As the author comments, the British Museum, the first public and national museum in the world, has taxed the ingenuity of a

score of architects with its burgeoning collections. The largest classical building in the British Isles, it houses some of the world's greatest treasures. This is an essay in the history of the relationship between the museum as an institution and as a piece of architecture. Well illustrated, the book will engage the attention of those who have an interest in museum planning, art collecting or architectural history.

Designers in Britain 7. Designed by Peter Ray. Greenwich, Conn.: New York Graphic Society, 1972. 268 pp. \$22.50.

Compiled by the Society of Industrial Artists and Designers, this book is the seventh in a series aimed at presenting a comprehensive survey of British illustration and design in industry, advertising and publishing. It contains more than 1,000 illustrations that show design solutions in fashion, metalware, book design, symbols, interiors, textiles, posters, packaging, printing, etc., by outstanding designers practicing in Great Britain today.

Houston: An Architectural Guide. Edited by Peter C. Papademetriou. Houston: Houston Chapter AIA, 1972. 168 pp. \$5.

It has become a tradition for the host chapter to the national convention of The American Institute of Architects to develop a guide to the architecture of the city in which the architects convene.

Something of the flavor of the book prepared by the Houston Chapter AIA for the

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1972 convention was given in an article by its editor published in the April issue of the *AIA JOURNAL*. This attractive and commendable book will be of interest to a much broader audience than that of architects, however. Any visitor to Houston will welcome it.

The city of Houston and its metropolitan region have been divided into 15 areas. For



each one there are maps, an illustrated essay and a catalog of the buildings to which attention is called. A particularly trenchant statement is the introductory essay on "Houston, the City Becoming."

The High Victorian Movement in Architecture, 1850-1870. Stefan Muthesius. London and Boston: Routledge & Kegan Paul, 1972. 252 pp. \$19.25.

A scholarly contribution to the history of architecture, this book's emphasis is upon the High Victorian Movement as a development out of and a departure from the Gothic Revival, with its elements coming from 19th century theory as well as medieval models. The architectural writings of the period are studied. The author concentrates upon the master architects of the period, including such figures as William Butterfield, William White, George Edmund Street, William Burges and others.

Contradictions in Living Environment: An Analysis of 22 Spanish Houses. David Mackay. London: Crosby Lockwood & Son, 1971. 118 pp. 3 pounds, 50 shillings.

The environmental problems in domestic architecture are discussed by a British architect who practices in Spain. The major portion of the book is given over to an analysis of 22 houses built in that country in 1960-70. There are plans of each house as well as interior and exterior photographs. For each one, Mackay has a formula of analysis that covers site, plan and his observations.

Supports: An Alternative to Mass Housing. N. J. Habraken. London: Architectural Press, 1972. 97 pp. 2 pounds, 25 shillings.

Habraken, a Dutch planner and architect, contends that modern mass produced housing is a social failure. He believes that the housing shortage or its supposed insolubility is caused by an antithesis between man and method, the "method" being described as mass housing. He condemns the inhuman monotony and lack of choice in mass hous-

ing and finds that it is wasteful as well because it is supposed to be based on mass production technology but is in actuality tied to old craft methods of construction. Present methods of mass housing fail to use the potential of modern industrial techniques.

Habraken wants a flexible, participatory-by-the-user system which will give a variety and individuality to housing. He suggests a "support" structure which allows the provision for dwellings which can be built, altered and taken down, independently of each other. He wants a reconciliation between individuality and the economies of mass production. First published in 1961, the book reports a worldwide interest of the author's ideas and the justification of an English edition. "I do not wish to alter anything I wrote," he comments. "Reader reaction has strengthened my conviction that variation in possible form and technique is apparently limitless and that design proposals can be judged only within a given social, economic and technical situation."

Place for the Arts. Edited by Alexander Schouvaloff. Liverpool, England: Seel House Press, 1970. 245 pp. \$20.

The leaders of the British North West Arts Association found that a number of organizations concerned with the arts wanted an art center. But they were uncertain about the expectations of such a structure and had no reference work for information on the numerous forms a center could take. Nor did they know about the buildings that already existed. Thus this book was compiled to give those interested some ideas about an art center.

There are examples of centers in many parts of the world, including the US, and the first section of the book is given over to a survey of existing structures.

Part two is called "Envirotheatre," an example of one type of building appropriate for a city with a population ranging between 50,000 and 100,000. There are designs and plans and technical reports for such a center for the performing arts. It is not viewed as prototypical but as a "diagram of ideas for either a new building or a conversion." This chapter is primarily the work of J. L. Paterson, who was commissioned to prepare a scheme as an example.

Part 3 of the book contains articles and interviews with people who are concerned with the arts today.

In the preface the statement is made that the book's aim is to crystallize the ideas of those people who want an arts center. It will be most helpful in this respect.

Architecture in a Crowded World: Vision and Reality in Planning. Lionel Brett. New York: Schocken Books, 1971. 181 pp. \$6.50.

Lionel Brett (Viscount Esher) is a past president of the Royal Institute of British Architects and an Honorary Fellow of The American Institute of Architects. He has seen and done many things and has written a number of books as well. This one, I think, is his memoir.

He is most intelligent for someone who has risen so high, and he clarifies his points with sparkles from Niebuhr and Nietzsche. What

makes the book compelling to read is the great warmth this man has about his profession, the environment and, indeed, the world. He talks of many sad things: our failures and our silly fashions. And yet he maintains a sense of humor—as irony—and a compassion for the foolishness we so often exhibit. The book is a personal history of architecture and planning contemporary with the author's life span. The insights and anecdotes that connect it all have the sting of being right.

For example, he writes: "The test is when you visit a strange city and ask a local architect to show you the new modern work. You mention the forests of tower cranes visible from your hotel window, the whole quarters demolished and rebuilt since the war. 'Oh no, not that, not that!' your shocked host cries. And off you go in his car through acres of new townscape from which he hopes you will avert your eyes, through miles of new suburbia, to find the small primary school, or the house, or the branch library, which he thinks sufficiently decent for you to see. Nothing could be more literally eccentric. The place as a whole, as an environment, as an expression of our culture, is clearly in this man's opinion somebody else's affair, or nobody's. As for the overloaded planet, the ravaged resources, the upset balances, the lost images, these night thoughts clearly have nothing to do with architecture."

This book belongs on your night table, not because it will change the course of architecture, but because it is a pleasant and very human document—one well worth reading.

DAVID CLARKE
Executive Secretary
Association of Collegiate Schools of
Architecture

Performance Concept in Buildings, Volume 1: Invited Papers. Edited by Bruce E. Foster. Washington, D.C.: National Bureau of Standards (distributed by US Government Printing Office), 1972. 810 pp. \$6.50.

The papers collected here should be read by anyone engaged in architectural research. In addition to physiological, psychological, sociological and human requirements of architecture, subjects covered include methods of evaluation and techniques and problems of applying the performance concept to design. Topics range from an overview of Operation Breakthrough to the effect of illumination systems upon visual performance. Introductory abstracts of the papers are most helpful.

This is the first volume of the proceedings of a symposium jointly sponsored by the International Union of Testing and Research Laboratories for Materials and Structures, the American Society for Testing and Materials and the International Council for Building Research and Documentation. It consists of invited papers accepted for the symposium. Volume 2 will contain opening addresses and reports. The bibliographical references will aid the serious researcher. The work is an important contribution.

The Garden Earth: The Case for Ecological Morality. Bruce Allsopp. New York: William Morrow & Co., 1972. 117 pp. \$5.

"New ideas, new values and a new moral-

ity commensurate with the unprecedented challenges which confront mankind" are required to save mankind from destruction, declares Allsopp in this provocative book. We must believe truly that all men "belong to a single species" and that class, color and creed divisions are damaging; we must know that earth's resources are finite and must be cultivated rather than exploited. An "ecological morality" is required by which we will "assert quality of living over conventional economic values."

In straightforward language, Allsopp, who is a senior lecturer in the history of architecture at the University of Newcastle-upon-Tyne, England, calls for a "moral imperative." He indicates specifically the courses of action that must be taken to save ourselves. The reader will think about this book long after he has closed it. Perhaps he will even be motivated to act.

Forever Open, Clear and Free: The Historic Struggle for Chicago's Lakefront. Lois Wille. Chicago: Henry Regnery Co., 1972. 175 pp. \$7.50.

"There is a Chicago, one of the great cities of the world, because there is a Lake Michigan," declares Dale O'Brien, president of the Metropolitan Housing and Planning Council of Chicago in the foreword to this story of how Chicago's open green waterfront came about. The author, a *Chicago Daily News* reporter, relates all the battles undertaken generation to generation to preserve the city's 30 miles of shoreline. Not always has the

struggle to preserve the lakefront been won as large tracts have been taken from it for parking lots, filtration plants, a convention hall and other things that have encroached upon the lakefront parkland. And Miss Wille predicts that in the years to come the bitter battles will continue. The book will help people understand something of the fight to save this unparalleled urban environment. It will give an appreciation of the people and forces that have kept the lakefront as "open, clear and free" as it is today.

Sundials: History, Theory and Practice. René R. J. Rohr. Toronto: University of Toronto Press, 1970. 142 pp. \$20.

Here is the story of the amazing ways of telling time from the shadow cast by the sun, and even the moon. All varieties of sundials are described with the inclusion of complex formulas for the mathematically inclined. A separate chapter is devoted to the most popular sundial mottoes.

Industrialized Builders Handbook. R. J. Lytle. Farmington, Mich.: Structures Publishing Company, 1971. 247 pp. \$24.95.

Here are the "nuts and bolts" about techniques, materials and equipment used in factory-produced housing. Basic information is given about floor construction, trusses, plywood components, prefinishing, etc. There are chapters by four experts in the field and an appendix that includes a list of equipment manufacturers with their addresses, plus diagrams, charts and other illustrative materials.

Heating and Air-Conditioning of Buildings. 5th revised ed. J. R. Kell and P. L. Martin. London: Architectural Press, 1971. 562 pp. 6 pounds, 75 shillings.

All data in this revised edition has been converted into SI units (système international d'unités), necessitating drastic revisions in both text and illustrations. The contents are updated as well with the inclusion of current information on the subjects treated. The work, first published in 1936, is regarded by many experts as a classic in its field.

Structural Design of Steel Joist Roofs to Resist Ponding Loads. Arlington, Va.: Steel Joist Institute, 1971. 31 pp. \$1.

The general nature of ponding, roof design to resist the condition, accounting for camber and recommended design procedure are among the topics considered in this booklet. Also discussed is the selection of steel joists to resist loads on flat roofs. A review is made of the structural behavior of steel joists under ponding.

Plastics as a Design Form. Thelma R. Newman. Philadelphia: Chilton Book Co., 1972. 348 pp. \$17.95.

Author of a previous book called *Plastics as an Art Form*, Miss Newman here describes the manner in which the material can have practical application in many useful forms in the design field. She details procedures and techniques, always with the focus on "plastics as plastics and not as imitators." The book is profusely illustrated. □



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This endeavor will be of great interest to the many Scots architects in the United States, and an appeal is made for help from members of The American Institute of Architects who have Scottish connections. I will be glad to supply any inquirer with more detailed information regarding the project.

JAMES DUNBAR-NASMITH
President, RIAS
15 Rutland Square
Edinburgh EH1 2BE, Scotland

Jane Russell, Girl Architect

Another American dream was shattered recently. An 8-point headline leaped off the page of my morning newspaper as the Copley News Service announced under Jeanette Mazurki's byline: "Film Queen Jane Russell, Architect at 50." Startling news—it doesn't make sense. Surely Jane Russell, sex symbol of the '40s, could never come to such a sorry end. It's as wild as Woody Allen being named one of America's "10 Best Dressed Men." It's like Clifford Irving being cited for his integrity and Skidmore, Owings & Merrill co-starring in an adult movie!

On second thought, the movies have done a lot for architecture, you know. After all, they gave us Gary Cooper as Howard Roark in "The Fountainhead," shouting the immortal line: "Come on down to the rock quarry, honey. I'll get a little bolder there." They have given us Kirk Douglas in "Strangers When We Meet," so that now all America believes that architects have cleft chins and a steady diet of sports car seductions. But, nothing, nothing, will ever surpass their giving us Jane Russell, Girl Architect!

But it's happened because Jane Russell has (according to my newspaper) "designed" Taos West, an 80-unit apartment house in Van Nuys, California, built by her brother Tom, complete with "adobe textured stucco with heavy wooden gates and weathered timber steps leading to the entrance." Why not Jane Russell, Girl Architect? If you're a red-blooded American male over 35, surely at some time in your life you have associated Jane with architecture—or at least with structures.

I know a cantilever when I see one. I have personally watched Miss Russell's career, man and boy, from afar for years. You

might say that I remember her in her formative years. If Jane wants to be an architect, I should like to head the receiving line to issue greetings and salutations. Her qualifications need no padding.

It was difficult to assess Miss Russell's considerable talents in Texas in 1946. She was ahead of her time, having starred in Howard Hughes' production "The Outlaw" when our community was still blushing if breast of chicken was on the menu. As a freshman in the School of Architecture at that great "think tank" on the banks of the Colorado River, The University of Texas, I was to find, much to my chagrin, that Miss Russell and "The Outlaw" were banned in Austin—probably because it rhymed with "banned in Boston." The city fathers had nothing against her, understand, it was just that they thought that surely Jane and all that décolletage could do nothing but titillate (could there possibly be a better word?) all those wild young male students.

It mattered little to the city fathers that most of us at that time were 23 years old and had just "won" World War II. If anybody had earned the right to be titillated, Lord knows it was us! I was an old hand in that area already, having discovered the African section of the *National Geographic* at the tender age of 8.

Well, youth will out, and sophistication will seek its level. Us Texas University architectural students weren't about to let the Austin city fathers cool us when it came to seeing Miss Russell. We just drove over to Bastrop, a more mature community with a population of 852, where Jane and "The Outlaw" were playing at the Bijou. Sure enough, friends and neighbors, there she was, up there on the silver screen in all her radiant beauty, thrashing around in the hay in that open-necked yellow peasant blouse!

I was with Moe Middleton and Bill Wilson, currently practicing architecture in Shreveport, La., and it was difficult to tell who was the most titillated. It suffices to say that we went away with a better sense of structure than we had before we got there. We will always be grateful to Miss Russell—none of us had a bit of trouble with that part of the state board exam.

So if Jane has decided that she wants to be an architect, I'm sure Moe and Bill will be among the thousands of architects across the land who will join me in saying hooray for this development. Welcome, Jane Russell, Girl Architect!

We've sent her an AIA membership application with us as her sponsors, listing Howard Hughes as a reference. Should the membership committee have any difficulty in locating Howard, call us. We know right where he is!

DAVID R. BRADEN, FAIA
Dallas

Birthday Tribute to Clarence S. Stein

In its June 25th issue, the *New York Times* took note of the 90th birthday of Clarence S. Stein, FAIA.

To have worked for and known Stein since 1927 has been an extraordinary experience and an education of wide scope for me. Although the *Times'* article concentrated on Stein's contributions in the fields of housing and town planning, while I was in his office we worked on a museum for Wichita, Kan. and the Fieldston School in Riverdale, N.Y., as well as on the new community of Radburn, N.J., for which he is so well known, and on several other projects.

The notable thing about all of this is that each project was treated as a point of departure from what had already been developed. The research that went into each was not simply a matter of "nuts and bolts" but of complex social implications toward making life more fruitful and worthwhile. In other words, everything we did was motivated by humanism.

There were the partners, Henry Wright and Robert D. Kohn, and assistants like Henry Wright Jr., who became editor of *Architectural Forum*, and myself, who became chief architect in the then newly created Department of Public Works of New York City, etc. Also people came to study, to absorb the atmosphere and to talk. Among them were William F. R. Ballard, who became chairman of the New York City Planning Commission; Catherine Bauer, who became a professor of city planning at MIT; and others.

There were frequent office staff conferences during which practical problems had to be resolved. Typical of the difficult ones was Radburn, where the staff's conventional thinking found it unpalatable that the living room of a house should face onto the landscaped commons (the back) and that the groceries should be delivered and the garbage collected on the paved cul-de-sac in front!

An interesting characteristic of Stein's method of office management was that it was practically no management in conventional terms. No one had a title with corresponding specific duties. Dr. Felix Adler, the founder of the Ethical Culture Society, once said that there are two kinds of authorities: those with titles like the police and the military, who have powers corresponding to the titles, and those who are followed out of respect for their knowledge and wisdom. Thus, even when very busy, Stein went over each man's work in the drafting room directly, face to face. He called upon one or another when he wanted something to be investigated or to be followed up.

Much of what we did has been written about and published. Among the studies conducted to make Radburn a livable place was one of the industrial area with its railroad spurs, etc. Another was the school system. This was during a period in this country when the "district school" and the "junior" separated from the "senior" high school were being discussed. In existing towns, the railroad station and many other service facilities take place piecemeal historically, but in new

towns they have to be given thought and created simultaneously.

To illustrate the diversity of subjects of interest which required attention in day to day association, I mention museum planning which came upon the horizon via the Wichita Art Museum. Realizing that light is necessary to see, we were convinced that museums should be planned, among other basics, for the best circumstances under which one sees what is being exhibited. So we studied museum lighting and published an article on the subject in the *Architectural Forum*. Soon thereafter, the International Institute of Intellectual Cooperation of the League of Nations in 1934 decided to hold an international conference on the study of architecture and the planning of art museums. Presumably on the strength of the above mentioned article, Stein was invited to deliver a paper on museum lighting.

Stein is one of the few architects to have received the highest honor of recognition from the AIA—its Gold Medal.

ISADORE ROSENFELD, FAIA
New York, N.Y.

It Happened Only Once

There are really only a few distinctions to which I can lay claim, but there is one which surpasses all the others. I probably am the only living soul who ever actually slammed the door in the face of Frank Lloyd Wright.

As I look back upon the incident, almost 40 years later, I find it highly amusing. But

at the time, since I was a young bride trying to make a good impression on my husband's family, it seemed catastrophic.

My husband's mother, who is now 90 years old, was a woman with a passion for the practical and functional in living. When she decided to build a home and began to consult architects, she decided that Frank Lloyd Wright was the only one who could combine these two characteristics and add the beauty necessary to create the type of home she desired. So together they designed the house in which my husband was raised and into which, shortly after our marriage, we moved.

At the time of the "incident," my mother-in-law was already becoming an arthritic cripple and was finding it quite difficult to cope with the stairs. However, most afternoons she would slowly make her way to take a long rest, leaving me to "hold the fort" below. These were days of the Depression and myriads of people seemed to be selling door-to-door merchandise, and we were constantly annoyed by the ringing doorbell. Mother was a pushover for these unfortunates and seldom turned them down if they had anything salable that she could possibly use. I, being young with much less purchasing power, was inclined to be less charitable.

On the particular afternoon of my great goof, Mother had just painfully made her way upstairs and probably was just settling for a nap. I was in the midst of a sewing storm. I say "storm" because I so thoroughly loathed the sight of a needle.

When the doorbell chimed, I was in no hurry to investigate, but I did get eventually to the glassed reception hall. What I saw did not impress me favorably: a middle-aged, nondescript looking man wearing a sadly battered hat, waiting patiently.

Cautiously I opened the door, and he asked politely if he could see Mrs. Bach. Since he knew the correct name, I hesitated briefly and then said that I would see if she could come. Slamming the door, I left him standing, hat in hand, while I went to confer with Mother.

She decided that since the man had asked for her personally she had better come and investigate. I helped her as much as possible, knowing that a great deal of time was elapsing. Imagine my horror when the minute she glimpsed him she let out a gasp, "Why, it's Mr. Wright! Let him in!" All of a sudden I realized that it was Wright, the famous architect. I made quick steps to admit him.

He was most gracious. He inquired about my mother-in-law's health and proceeded to discuss various features of the house with her. It seems that he had the habit of returning frequently to his houses to review ideas in this manner.

The two of them had a lively discussion and enjoyed their visit. I stayed in the background, needless to say, until the end of his call when he turned to me and said, "So this is your new daughter-in-law!" and that was all. There was nothing more to say.

MRS. RUTH BACH
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events

AIA State and Region

- Oct. 18-21:** Western Mountain Regional Conference, Four Seasons Hotel, Albuquerque, N.M.
Oct. 19-22: New York State Association of Architects Conference, Flagship Hotel, Rochester
Nov. 8-10: Texas Society of Architects Convention, El Paso
Nov. 9-10: Illinois Council Conference, Springfield, Ill.

National

- Oct. 23-25:** Urban Land Institute Meeting, Hotel del Coronado, Coronado, Calif.
Oct. 24-25: Sensory Evaluation of Appearance of Materials Symposium, Sheraton Hotel, Philadelphia
Oct. 26-27: Transportation Systems Within Buildings Institute, University of Wisconsin, Madison, Wis.
Oct. 26-29: National Trust for Historic Preservation Annual Meeting, Washington Hilton Hotel, Washington, D.C.
Oct. 30-Nov. 2: Industrialized Building Exposition and Congress, Kentucky Exposition Center, Louisville, Ky.

International

- Oct. 24-28:** International Public Health Seminar, Prague
Oct. 30-Nov. 1: Design in the Americas Congress, Mexico City

Competitions

- Nov. 15:** Requests for information due, Liberty Dam Treaty Tower Commemorative Sculpture Competition. Contact: Paul Thiry, FAIA, 800 Columbia St., Seattle, Wash. 98104.

Awards Programs

- Jan. 26:** Entries due, Design in Steel Awards Program. Contact: American Iron and Steel Institute, Design in Steel Awards Program, 201 E. 42d St., New York, N.Y. 10017.

Fellowships

- Oct. 15:** Requests for applications due, US Government Full and Travel Grants for graduate study abroad. Contact: Institute of International Education, 809 United Nations Plaza, New York, N.Y. 10017.
Dec. 1: Applications due, Fellowships for Women in the US in the Professions. Contact: American Association of University Women Educational Foundation, 2401 Virginia Ave. N.W., Washington, D.C. 20037.
Dec. 15: Applications due, White House Fellowships. Contact: Chairman, Commission on White House Fellows, Washington, D.C. 20415.
Dec. 31: Applications and submission of work due, Rome Prize Fellowships for 1973/74. Contact: Executive Secretary, American Academy in Rome, 101 Park Ave., New York, N.Y. 10017. □

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