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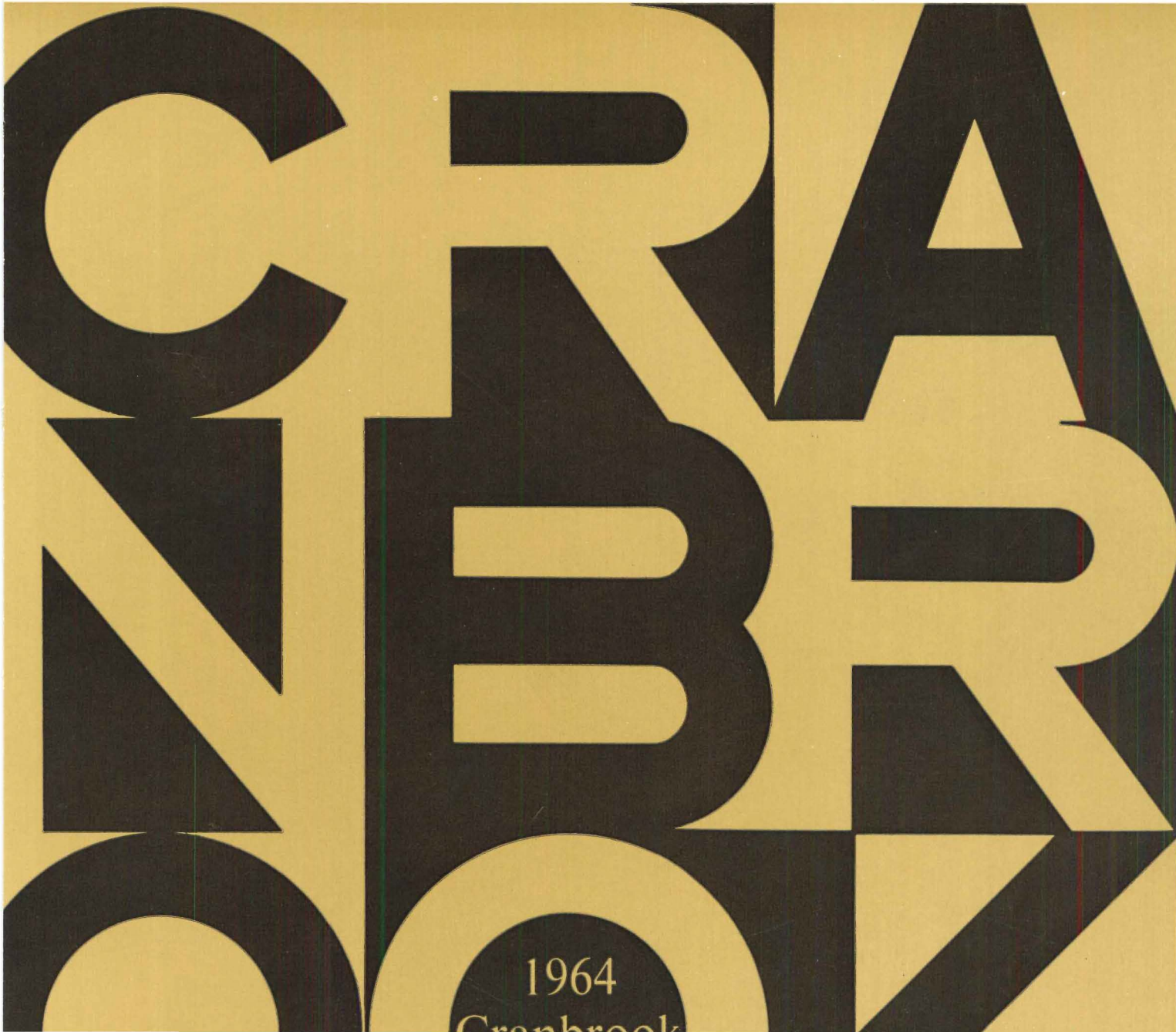
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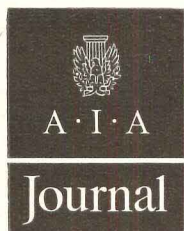
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William Stanley Parker FAIA
1877-1964

WILLIAM Stanley Parker has passed from reality into legend. Thousands of architects and their clients, as well as contractors, building material manufacturers and others have benefited immeasurably from his years of dedicated labors, and untold thousands in years to come will be the beneficiaries of his comprehensive knowledge, his sagacity and his exact articulation. His name is linked inseparably with the meticulous development of the Standard Contract Documents of The American Institute of Architects. These are his monument.

Without these documents in their highly developed form, the practice of architecture in our country would be difficult and hazardous; with them, the young architect and his elders may venture forth with the assurance that they guard themselves and their clients against most of the pitfalls which have beset architects during the last fifty years.

In William Stanley Parker's passing, the profession has lost a keen student of what not to do in the practice of architecture. He spent much of his life in cataloguing the professional misadventures of his fellow architects and in providing effective means to prevent their recurrence. His mastery of concise diction practically eliminated the possibility of erroneous misinterpretation of these documents, and his appreciation of fundamental justice invested them with an authority which gained successive recognition in the courts of the land.

But it was not only within the Institute that he so profusely lavished his unique talents. In his home state and city, as well as at the national level, his services were always available and for many years were accepted. Boston and the Commonwealth of Massachusetts profited by his presence on their planning boards. The Federal government secured his services for a number of years as a consultant to the National Resources Planning Board and as a consultant of Public Works Programming. Other interests of a broad community nature also occupied his attention. He at one time wrote extensively for various publications on subjects akin to planning. His book "The American Institute of Architects Standard Contract Forms and the Law," written in collaboration with Faneuil Adams LL.B, is a necessary adjunct to the Institute documents, and should be in the library of every architectural office.

William Stanley Parker graced an era when being a good architect connoted being a cultured gentleman. He qualified eminently in both categories. To those who knew him intimately he occasionally laid aside his dignity and serious mien and exhibited an engaging, albeit unexpected, sense of humor, and much as this endeared him to them even more and tightened more closely the bonds of friendship, it is as a man of fine intellectual attainments, high moral principles and a great capacity for human understanding that his memory will be cherished.   CLAIR DITCHY FAIA

ernments; for example, the three counties of the Bay Region had voted $800,000,000 of their own money to build a rapid transit system.

In view of this new kind of mass participation and in view of the new scale of the possibilities that presented themselves—he cited the proposal that had been seriously made to the Kennedy administration that the whole of West Virginia should be evacuated —he had turned more and more to mass media, especially the *San Francisco Chronicle,* to carry the issues to the public. "I regard this as a preliminary entry into the general problem of environmental communications involving mass society. Let me make it clear at the outset that my role on the *Chronicle* is different from that of Ada Louise Huxtable on the *New York Times.* I make policies together with the other editors. I sometimes write editorials, I sometimes write some articles and sometimes write nothing at all but merely converse with the other editors including Scott Newhall, the editor of the *Chronicle."* He proceeded to give an account of some of the cases of public amenity, involving structures that ranged from billboards to bridges, in which he and the *Chronicle* had waged successful campaigns. "I believe," he concluded, "that it will be in cities such as San Francisco, precisely because they are not social chambers of horrors, but precisely because of their general over-all wealth, their openness, their willingness to try to achieve a solution, that with the aid of a public increasingly informed, increasingly critical of itself, we shall attain more satisfactory solutions more quickly than any of us are thinking."

Some of those present evidently felt that the seminar had tended to drift away from the more strictly educational aspects of the topics discussed. For example, BERNAN PUNDT: "Students, I felt, were somewhat neglected; we have talked a great deal about abstract ideas. We are working with students, however." Temko was all for the students: "Let me say again, the students are eager to face unflinchingly the facts; it is the faculties at Berkeley and elsewhere who wish to stick by the vested interests of pictorial intuitive design." Possibly as the result of a conscious resolve to remember the students, an important part of the discussion at this last plenary session centered around the crit-giving kind of critic and the place of the historian in the design studio.

On the former topic, Banham: "There is no reason why there should not be within a school someone whose critical opinions are out of step with those of the rest of the school, provided he is always there and his terms of reference are known even to the students. . . . This I think can be useful; I think it is the random, visiting space-man type, which one is constantly invited to be, that is harmful." Rowe: "There is a certain value in the really stupid academy, an extremely stupid, really *retardataire,* academic situation, against which bright students can rebel."

Of the historian in the design studio, Banham said: "You can do two things; you can do a like-dislike or even make like a systematic critic—or you might draw their attention to the way it's been done before, and this may be worth doing. The trouble here is the historian who *always* points out how it's been done before, usually missing the point of the problem they've got in front of them. You know; because it's a church and it's circular you start talking about Templar churches and that kind of thing, possibly missing the point that their church is circular because it's a drive-in church." Moholy-Nagy: "I can see the role of the historian as an architectural critic as one single thing only, and that is that he might have a wider and more objective visual vocabulary because he has seen more." ∎

<div align="center">1964 AIA-ACSA TEACHER SEMINAR</div>

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Bruno Zevi
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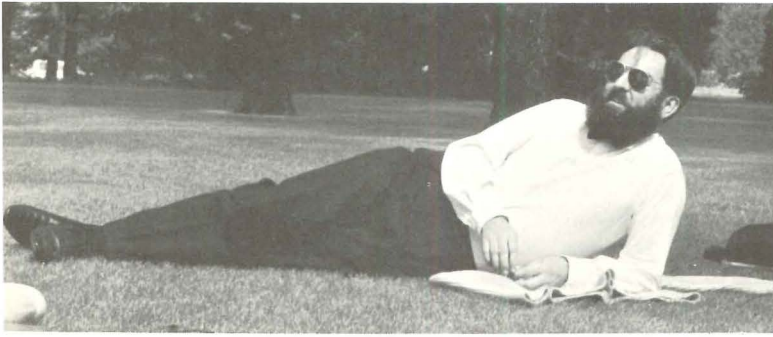*Yale University*

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Joseph D'Amelio
Cooper Union School of Art and Architecture

In the same book Miss Langer had written: ". . . a visual environment, the created space of architecture, is a symbol of functional existence. This does not mean, however, that signs of important activities—hooks for implements, convenient benches, well-planned doors—play any part in its significance. In that false assumption lies the error of functionalism. . . . Symbolic expression is something miles removed from provident planning or good arrangement." To this architects were inclined to say "What false assumption?" and "Hard luck on symbolic expression!"

What we seemed to need, Banham suggested, was what (but for the bad odor of the word) might be called a situationist criticism, in which the critical examination of the building could be expected to reveal the consistent elaboration of a valid personal response to a given functional problem. The placing of those convenient benches and handy hooks should be a vital clue to the final form of the building and whatever it expressed symbolically. The critic's job was to discuss the professional situation of an architect confronted with a function. "If the brief is where architecture starts, then criticism starts with the architect confronted with the client's proposition . . . and proceeds from there to create what may almost be called the professional biography of the man during the time he is engaged on the commission as a designer." This was a tall order, but it had been done at least once recently—by W. H. Jordy in his study of the Philadelphia Savings Fund Building.[4] "That, to me, is not only one of the great historic documents of recent years, but also one of the great critical documents, because it takes you through the creation of the building. . . . It is a profound and radical evaluation of the building."

Two more recent buildings which might be considered in this way were Rudolph's Art and Architecture Building at Yale and Stirling and Gowan's Engineering Building at Leicester University. "In Rudolph's case the brief, to the best of my knowledge, was written by Rudolph. . . . Rudolph was his own client, so to speak; the process of consultation became almost one of introspection. . . . There were seven revisions of the design, partly because there was time, I suspect, to make them—lucky old Rudolph!—and partly because he was not clear in his own mind, possibly because he had insufficient terms of reference against which to test his ideas. He had always to come back to what he felt inside here about how the

building should be; and what you have got is a building whose functionalisms and symbolisms are very difficult to take apart."

At Leicester the architects "were lucky in an almost ideal client-architect relationship. Professor Clark claimed to know nothing about architecture, but he had a very clear idea of what sort of thing should happen in the building. . . . The building exhibits strong industrial characteristics, it has engineering written all over it, so that you recognize at once what sort of thing is supposed to be going on inside; let's say the relationship between the handy hooks, the convenient things in the center and the symbolic expression is very direct. But the symbolic expression was only in a very limited sense at the will of the architects; particularly, the industrial glazing was something practically enforced, as so often, by the economics, by a very tight budget, but something which the architects saw could be exploited to enhance and strengthen the symbolic expression of the building." Of course, one could object to any building if one didn't like the look of it. Not every building that withstood rigorous situationist analysis would convince visually—at first. Valid functional solutions might be ignored because they expressed the wrong thing symbolically, were out of step with visual fashion. Had Suzanne Langer been an architect, she might have said that the real affliction of architecture was not utility but symbolic expression.

ALLEN TEMKO spoke on "Criticism in Evolving Mass Society." He said that although he was a non-academic type he did have a role in an architectural school, which was called, perhaps rather grandiloquently, a College of Environmental Design—a name which indicated the new mood of the school at Berkeley, where they were trying to deal with comprehensive problems, some of them on a very large scale, "not merely in sociological terms but with the prime objective of integrating higher social purpose with tangible three-dimensional results." Most revolutionary movements found themselves unprepared for the exercise of power, and the Modern Movement, if one had to call it that, was no exception. Sometimes it was asked to make decisions of the first magnitude, when the information upon which the decisions should be based was quite insufficient.

There were unprecedented situations such as those presented by the complex of cities of the central valley in California. "How does one deal with Fresno? Well, there are two ways of dealing with it. One way is to be Victor Gruen and be hired by the downtown merchants subsidized by the Federal Urban Renewal Administration and turn downtown into a version of a suburban shopping center. Another way is to see Fresno involved in a dynamic situation, a situation that is involved in an ever-accelerating rate of tremendous population pressure; it is to see it in the context not merely of California but of the West—of water, for example, as another abstraction." In California there was a water program of $1,750,000,000 of capital investment with interest; "that's $3 billion in the next generation voted by the people." The people of California were being called upon to make decisions that in Europe were made by national gov-

4 "PSFS: Its Development and Its Significance in Modern Architecture," in the *Journal of the Society of Architectural Historians,* May 1962.

lating the specimen and displaying it handsomely all by itself in order to develop generalities about style or whatever which links us to the age of exploitation." That history could shape the future was undeniable. "To the extent that the historians' formulations are compelling or timely they become part of the baggage of the architect, serving as data for his design decisions. Affecting both the conscious and the subconscious operations of the designer, historical information is perhaps the most important single source shaping the architecture of the future."

Much of the discussion of these two papers centered around Mrs Moholy-Nagy's six concepts. For example, this exchange between her and Peter Collins. COLLINS: "I would ask Mrs Moholy-Nagy if she considers the five historical concepts to carry on right through from the beginning of time until now, why she spends so much time in her lecture courses dealing with these very early societies when it seems to me that it would be far more instructive to deal with more recent societies, if these particular concepts can be illustrated in buildings more relevant to modern man."

MOHOLY-NAGY: "I read with horror in your paper that you considered architecture to start with Greece; I hold the conviction that the 3,000 years that passed before Greek architecture came into being were the seminal period in which man established the two most important concepts, verticality and horizontal motion, and I must say that for me this really came as a profound shock, because as you know I admire you profoundly and this was really a fantastic shock—because you see I could simply parry with another question and say, 'Why the hell should a student be taught nineteenth-century architecture?' There are ages of architectural impotence and eclipse, just as there are ages of moral eclipse and things like that. For me, this is the greatest waste of time, to teach revivalism or even to speak about it; it's unspeakable. My conviction is that what you call primitive is not at all primitive, but the youthful, virile; the early manhood is the great productive period. Being a native of Dresden before it was bombed, I grew up in a complete admiration for the so-called great styles of architecture, and gradually I simply could not escape the fact that they were all recombinations of concepts which had arisen in the early manhood of mankind."

WEISMAN asked: "Why is it that some of these concepts appear at different times, and why do they suddenly decline or reappear? Have you considered this whole problem?" Moholy-Nagy: "Yes, I have, because I think that the best proof of the vitality of the idea, of the concept, is that human life is a continuously fluctuating thing and that certain emphases are needed for a given period to express itself, and that consequently a concept is something that at one time implements something, at another becomes irrelevant. So this is perhaps the best proof of the complete vitality of architecture. My whole idea is that there is no such thing as a historical past in architecture, once you speak of architecture as a continuous concept; there is no such thing as anything that is dead, because life is a continuous shaping of its image and it is the architectural concept that is the tool with which to shape that image."

Reservations at once practical and philosophical were expressed by Jacobs: "We are delighted that we have stars of the first magnitude in our midst, people like Professor Zevi or Professor Moholy-Nagy, who can give a unique formation to the students in their schools. What I would question is whether these particular functions will really serve in all cases or can in fact be imitated to the advantage of all concerned by others. My point has to do with the assumption that is made by the categorist who has really resolved the issues in his own mind and who knows exactly what should become our times, our culture and our students. I do not share this great assuredness myself. I feel we are in fact only able to give students an idea of how to find out what they need to know; we cannot really determine the future for them either by a system of concepts or a theory. Therefore we give them tools, not answers."

FRIDAY'S first speaker was REYNER BANHAM who entitled his remarks "Convenient Benches and Handy Hooks: Functional Considerations in the Criticism of the Art of Architecture." A crucial problem, he thought, had been touched on by Suzanne Langer when, in "Feeling and Form," she wrote: "Besides the difficulties presented to art theory in general by the good and bad odors of words, which interfere with their strict meanings, and by the variety of even their defined meanings in the literature, each art has its special incubus of natural misconceptions. The affliction of literature is its relation to fact . . . of architecture, the obvious fact of its utility. . . ."

Was it really possible to support a mode of discussing or theorizing about architecture which regarded utility as an affliction? It was almost impossible to discuss individual buildings in this mode, because it prevented discussion of the reason for the commissioning of the building in the first place and of the performance that society expected of it. Much writing about architecture certainly appeared to support such a dichotomy of method. Writers were prepared to suppress particulars to produce a fully generalized theory of the art of architecture, yet were unable to proceed without the particulars of site, climate, client, function and social relevance in discussing any individual building. Hence the feeling that architectural theory had become vacuous or irrelevant. The truth was that architects were a profession of pragmatists, who did not begin to act until someone offered them a function to house. A theory of the type proposed by Suzanne Langer was insupportable because it omitted the mainspring of architectural creativity— the challenge of functional purpose.

A group ponders as Sibyl Moholy-Nagy propounds

eternal present. This is what architectural history offers to me as a teacher of future architects—conceptual evidence of change in permanence. I can see no other meaning in it."

STEPHEN JACOBS addressed himself to questions which had been proposed by the organizers of the seminar in their letter of invitation to the speakers. Was history of architecture different for the architect and for the general public? He believed that it was. "My conclusion is that it should include all the perceptual training, categorical constructs, interpretative information, formal analysis and considerations of trends, personalities, iconography, psychoses and media which normally form a part of such a program, plus more besides. The program to which the architect is subjected should never completely forget the awful fact that this very person is to commit architecture."

A number of responsibilities, peripheral to history but nonetheless important, had fallen by default to the teacher of architectural history. These included, more often than not, "theory" taught as the history of architectural ideas, in some degree perhaps even philosophy in the broader traditional sense, and the development of verbal skills and maintenance of minimal literacy. For the architect history was "not one of a great many useful educational tools he may choose to pick up, but a vital source of knowledge about the achievements and background of the profession and of the world in which it operates. It will not enable him to emulate the styles or attitudes of others, but rather is a source of insight which helps him to understand the nature of his opportunities and his role. If the course is developed with architects in mind, it may also provide useful experience in verbalizing about architecture, in the consideration of significant issues in the field, and an awareness of the assumptions, values and social aspirations which underlay the decisions and dreams of architects."

On the question of the place history of painting and sculpture should have in the curriculum, Jacobs thought it was particularly important to include painting and sculpture in the early phases of the history program so that the student would become aware of the interrelation of the various arts. Later on, it was good to give him some options in his historical studies, such as his own special interests or local resources might recommend. Then was the history of architecture the same discipline as the history of art? His

answer was that they should be regarded as separate specialties rather than distinct disciplines. Was it desirable or necessary that a historian of architecture be an architect? It was taken for granted that the architectural historian had to have special training beyond that provided by the normal architecture curriculum. "We have all been exposed to the well-intentioned traveler among the design critics who presents a history of Renaissance architecture as a travelog, using the splendid color slides he made on summer tours, and relying on Banister Fletcher (plus, perhaps, a little Giedion and Pevsner) for his expertise."

Yet the kind of teaching the trained art historian was prepared to provide was unsuitable too. "The trained art historian as we now know him is a thoroughly academic type, oriented toward the procedures and the now minutely specialized problems of his particular area. He expects systematic work and careful digestion of facts and forms from his students. This individual is unhappy in the professional school. He finds the extraordinary 'boom or bust' pattern of architectural education intolerable. He cannot accept or adjust to the fact that his students perform and perhaps attend irregularly, attempting to catch up in the intervals between design crises. He finds the isolation from his group and their paraphernalia unbearable. He finds that the other members of the professional school staff are terribly busy and seldom around to create a suitable sense of an ongoing academic enterprise." The solution was surely to encourage "the kind of hybrid historian-architect who can and will survive and thrive in the professional school milieu." What was required was "special schooling for the architect or the art historian—preferably a short graduate program for the two together."

In conclusion, Jacobs considered the influence of historians on contemporary architecture and the role of history in shaping the future. Citing a paper read to the Royal Institute of British Architects in which Nikolaus Pevsner had shown reason, as he thought, to put some of the blame for what he called the return of historicism on his *Pioneers of the Modern Movement,* he said that if Pevsner was right, it showed that significant numbers of contemporary architects had the same attitudes and failings as their Victorian forebears. And it was largely the architectural historians' fault; "it is our penchant for iso-

Bruno Zevi expounds . . .

and explodes

PHOTOS BY BUFORD PICKENS

Although the "causal chain of conceptual evolution" in architecture was continuous from pre-history to the present, a drastic change in its relationship to the training and practice of architects had come about when, toward the end of the eighteenth century, art history became an academic discipline concerned with the classification of form phenomena grouped together as *styles,* and "historical knowledge of buildings became iconography." This was "a development that changed profoundly and permanently the meaning of architectural history for architects. Jefferson could still believe in an ulterior purpose for the measured drawings sent home from his studies of Maison Carrée. To him they were ideal public building types suitable for the new republic. And Pugin had no doubt that Gothic, faithfully rendered, would rekindle medieval piety. This expedient approach of the architect-historian was doomed when the appliqué style feature and the iconographically correct frontispiece became the ulterior purpose of teaching architectural history." In reaction, there followed the so-called new architecture, "which, for the first time in Western history, drew exclusively from contemporary resources."

Forty years after this revolution against the misuse of the past it was possible to evaluate the results. In sum total it amounted to "a preponderance of repetitive box shapes of impermanent materials and construction . . . a subtractive purism, incapable of replacing the eliminated historical appeal with a new esthetics . . . a featureless environment of hand-crafted machine products, belonging neither to architecture as art nor to architecture as technology, neither to history nor to the future." Then came "the reanimation of the historical corpse." "Saarinen was perhaps first with his Lombardizing chapel at MIT, followed by Johnson, Rudolph, Kahn, Weese, Johansen, Yamasaki—even by Gropius, the celebrated medicine man of International Functionalism. They all

tried kaleidoscopic combinations of historical and contemporary elements in an attempt to recover architecture from between the teeth of building technology. The results have been rarely successful, and frequently ridiculous. We are beyond recall of past forms, no matter how tastefully updated. . . . Architects today are the product of anti-stylistic revolt, whether they participated in it or not. Whatever readaptation they try is done with a bad conscience."

The time had come, she proposed, to "face the conscious effort of shaping a new link in the chain of architectural continuity that binds the past to the future." Schools of architecture, for their part, "must discard in their history courses 'stylistic attributes' as arbitrary and extraneous." While style attributes were as numerous as the art historians who invented them, the basic concepts of architecture were only six. Five had emerged in the past; in the order of emergence they were *verticality, space progression, modulation and modification, structured planning, art-space symbolism.* The sixth concept, "a potential contribution of our own time to the historical continuity of architecture," was *form-space continuity.* "Le Corbusier's ramp thrown across the defined space of the Cambridge Art Center seems a sort of beacon pointing toward realizations. Saarinen's TWA Terminal indicates the future, and the astounding section through Scharoun's Berlin Symphony Hall. Frei-Otto's tent structures and Soleri's Mesa City are perhaps closest to space continuity as the new link in the history of architecture."

This possible conquest of a fourth dimension did not invalidate any of the five historical concepts; the architectural canon was that much richer and surer of its impact through a new harmony. "I think," Mrs Moholy-Nagy concluded, "of Bergson's sunburst, scattering particles of sidereal substance over the universe to form new stars in different amalgams of the mother substance, each nucleus a concept that is the

be picked up by people with a lot of money." Even in the schools and universities contemporary man was "driven mad by his own noises, run over by his own mobility." "Every time some bright but not bright enough administrator or pundit or professor thinks that it would be awfully good for architectural students to receive within the permissible package another message from another god, it goes into the curriculum. What happens is that schools expect the student in a very small slice of the spectrum of their experience to drink in many more impressions than in fact is humanly possible." To teach technology was useless, because what was taught would be obsolete as soon as the student got out of school; what should be taught was "the real essence of principle, a philosophically based reaction to the set of strict intellectural and moral rules of behavior, and the perfect choice of tools for any specific act as and when the particular and the specific become visible."

The coming of the new era, with its entirely new scale, demanded teachers and programs "designed to turn students into professionals capable of dealing with tomorrow's problems, which will differ very radically from those faced by artist architects skilled at producing exquisite but isolated monuments." The final product of the educational reforms which he would like to see would be "a man capable of being briefed by specialists, without being seduced by them."

The widely different interpretations given to the term theory by Carlhian and Chermayeff evidently left a number of the participants with the feeling that some definition was called for—a feeling expressed bluntly by ABRAHAM ROGATNICK: "No one has really stated what theory is." LEONARD EATON said that he had understood architectural theory to be a body of writing about architecture which had been produced over a very long period of years by writers like Alberti and Ruskin and Geoffrey Scott: "certainly one teaches architectural history with some reference to how people handle doorways and circulation patterns and varieties of structure, etc, but I wouldn't think that the kind of thing Mr Carlhian took up this morning came under the heading of architectural theory." A broader definition of theory was offered by JAMES LAMANTIA: "Theory for me is that recognizable part of those things which contribute in my mental process to making a decision."

Chermayeff's approach also came under fire from Eaton: "My training as a historian has taught me to be rather circumspect about predictions; the study of history ordinarily causes one to be afraid of predictions and rather careful of generalizations."

STANFORD ANDERSON also rejected both the main speakers' theses: "Mr Carlhian, whatever may be the pragmatic usefulness of the data he has presented, has not achieved that universality which is requisite in theory; he has not indicated how we can achieve hypothetical universal statements. Professor Chermayeff, on the other hand, has indicated how we can achieve such hypothetical universal statements; we simply invent them. Never mind if his universal statements did not sound very hypothetical; they were hypotheses nonetheless, and this is to Chermayeff's

great credit. . . . Professor Chermayeff rested most of his presentation on generalizations which I think can be refuted. As the ground against which one recognizes our present state of crisis, he spoke of those historical times, apparently not too long gone, when everyone knew everything about building, a golden age of gradualism and continuity when buildings were distinguished as architecture only after the fact. This romantic notion of an age of innocence has become a rather untenable notion that has existed in Western theory and discussion for already at least a century. Furthermore, it serves Professor Chermayeff rather ambiguously when he both laments that our century has produced nothing so admirable for contemplation and communion as the classic temples and also berates our backward-looking culture with architects intent on imitating the past. Now the other type of generalization that is necessary to support Professor Chermayeff's state of crisis is the sudden overturn of all our affairs. The new era began about ten years ago, we were told; we are now post-historic man, whatever that can possibly mean. Quantitative *unschleter,* the overturn of all we have known, the Decline of the West and all that, are based on historiographical theories that are far from proved. In fact they introduce all kinds of discontinuities and mystic deterministic forces that rely on some kind of fate much more than on any demonstration. This is not to deny that nuclear warfare, automation and urbanization are powerful forces and ones that we should pay attention to. The question is whether we deal with these better by creative reformulation of our present soundest theories or by the preaching of the millennium and of the arrival of totally new conditions."

Late in the afternoon the tape-recorder picked up a *cri-de-coeur* in the voice of Carlhian: "I am dying to go back to my drafting board."

ON WEDNESDAY there was a bus tour of architectural highlights in the Detroit area. The next formal session of the seminar, to hear Sibyl Moholy-Nagy on "The Canon of Architectural History" and Stephen W. Jacobs on "History: An Orientation for the Architect," was on *Thursday* morning.

MRS MOHOLY-NAGY said that only one conclusion could be drawn from the fact that architectural history had suddenly become the subject of intense controversy—namely, that its elimination from the curricula of architectural schools in the near past had left a gap that had not been filled by a workable replacement. "The question is, therefore, not whether architectural history is dead; it is obviously not. The question is what caused its eclipse, and what attitude or re-evaluation might help to prevent its imminent return from being a regressive disaster."

cluding remarks, he returned to the need to study the process. "Therefore, you say, we write—the historians *write* and the architects *do*. Well, maybe; but the important thing is what they write about. Do they write about a process? If they do write about a process, then I think it's very useful. If they write about a process while looking at a building, I think it's very useful."

The historical method, he believed, was the only one that could teach architects how to think. "If we consider what is happening in the world about architecture, we find out that what the majority of the buildings that are coming out lack is just thinking, *thinking*. The things are not thought out; the architects do not know how to think architecturally; the best works of architecture that we are producing are bright ideas with long and deep technology, but thinking does not come in. In other words, the assumptions from which the things start are generally very, very superficial; they are just ideas, as such—ideas that we take for granted. The moment the architect puts down his images, his forms, then the whole process becomes technological, and he is prepared to spend six months, one year, two years in probing technological problems. That is really the tragedy even of the best architects—this terrific amount of technological work that they are doing. Everything is logical except the assumption."

The last word, both criticism and tribute, was had by Kitao: "I think that Professor Zevi proves himself a theorist, critic and historian eminently verbal rather than operatic. He has talked in words about architecture rather than demonstrated in terms of visual forms as he proposed."

TUESDAY was theory day. Jean-Paul Carlhian and Serge Chermayeff were the morning speakers. JEAN-PAUL CARLHIAN, discussing "Teaching Theory in the Architectural School," said that although he dabbled in teaching—"because of what I learn from the students"—he was really speaking as a practicing architect. "With reference to yesterday's discussions, I find it essential to define my points concerning the teaching of history and theory. First, I want to state that, while I believe them to be inseparable, I must recognize that realistically, for the purpose of an organized discussion, they had better be handled separately." One reason for this was the lack of universal men as teachers; "many historians and some of the best are not at all interested in theory—that is according to my terminology—and many theoreticians, some of the most invigorating, lack sufficient knowledge of history to back up their concepts in theory." The history of architecture should be oriented to the history of ideas rather than forms; in that case it still had a place in the curriculum.

Theory, as far as teaching architecture was concerned, was part of day-to-day life. "I realize that in making such a statement, I am laying myself open to accusations of academism, beaux-artism (an English word), formula teaching, etc. Such a criticism, I contend, is easy. It has been going on for so many years." Yet he would suggest that formulas, principles and theories had been taught in architectural schools all the time, even if the teachers were not conscious of what they were doing. "For many years in one of the schools, if not the best school, in this country, it did not matter too much what architectural solution was adopted by the students as long as it was adopted to a simple law. The plumbing was stacked and the bathrooms were installed back to back. This was done in the name of simplicity, economy, function—and these are forms of theory." In illustration of "what an architect is faced with in his office in theoretical matters," Carlhian concluded his presentation with a discussion of the rationale of the arrangement and design of piers and columns, with examples drawn from the works of Sullivan, Carrère and Hastings and contemporary American architects.

SERGE CHERMAYEFF, who called his talk "Some Thoughts on the Architectural Condition," said that his approach to theory was different from Carlhian's: "I am not in the least interested in how things are done; I am interested in why things are done. You can build without columns and make great architecture." He did, however, agree with Zevi that modern architecture, for all its achievements, had not yet produced one single building which was "total in its excellence." "We simply have not built anything which is so admirably designed for contemplation or communion as the great temples and churches and cathedrals. And I think the reason for this is that the program behind the act, the reconsideration of the true purpose, the why of the building, is being totally overlaid by obsolete clichés and by a backward-looking culture, which is so frightened of the future that it finds comfort in imitating the past. We are cowards of the worst kind."

Another reason was the difference in tempo between our age and earlier periods: "If we go back in history to any historical period, everybody knew what buildings were about, because everybody was involved in the act of building, and everybody was absolutely and completely familiar with every use of every building used by the culture in question. Now this meant that you had continuity of a cultural and technical kind which made possible the refining of that which had been found acceptable to a point when it was polished to absolutely superb excellence. Then there was a post-facto accolade given; it was called architecture. Now we have absolutely no possibility of this kind of gradualism and continuity of either the cultural or the technical kind."

What was happening was that mankind was entering an entirely new era, the era of post-historic man. "You historians have to learn to write a new kind of post-history, because that is where we are." Meanwhile the architects, "the second oldest profession," were "standing on street corners like whores waiting to be picked up, and they think it is a good thing to

only after a lengthy period of intellectual search. Moreover, I see no reason to believe that lecturing in accordance with specific and uncompromising principles implies dictatorially thrusting a doctrine upon each student's impressionable young mind."

On c): "It is easy to be priggish and aloof, and to interpret history or assess new buildings without regard for popular opinion. It is easy to make a fetish of modernism, and make sure that everything one writes or says is in harmony with current notions of being avant-garde. The difficulty is to strike an honorable mean between the two, while at the same time retaining the respect of one's students; for the mind of youth is in this domain particularly difficult to fathom."

The first speaker in the discussion that followed, COLIN ROWE, thought it was a pity that both speakers had talked about the relationship of history to theory entirely and specifically within an architectural area; it was desirable "to achieve some distance from the subject matter and consequently a certain degree of abstraction" and he would therefore try to develop "an oblique strategy of criticism." The real problem was historicism. In England recently there had come to his notice three cases in which the question whether to build had been settled by the criterion of whether the design of the proposed building conformed to "the spirit of the age." "I am totally astonished by this sort of thing. I had been led in sporadic readings to believe that the concept of the *zeitgeist* or the will of the age or the will of the epoch or whatever it was, was a creation of German early nineteenth-century historiography." Certainly "the sentiment of modernity" was one of the vital principles in modern architecture ("And it would be interesting to be given some account of the evolution of that sentiment.").

What seemed to him to be "one of the most terrifying crises of the present day" was the fact that, as Carl Becker had pointed out, historical-mindedness is so much a preconception of modern thought that we can identify a particular thing only by pointing to the things which it has previously been before it goes on to occupy all the other different forms which we know it will go on to occupy. "How does one write history without some extra-historical values involved?"

TIMOTHY KITAO also felt that the speakers should have started from more basic assumptions. "In non-Western or pre-Westernized societies buildings are built, but to talk about architecture is not conceivable. This is a particular Western preoccupation. In the Japanese language, for example, one hundred years ago neither theory nor criticism nor history would have been possible. These words were made after Western ideas came into Japan. I think we should first recognize that history, theory and criticism are something that is to do with writing; that is to say, the critic, the historian, the theorist all write about architecture—this is their ultimate aim. I think this is interesting and should be noted precisely because of course what the architect does is not to write. The ultimate thing that the architect does is to give a complete physical entity to his ideas, whereas the theorist, the critic and the historian put their ideas into verbal

formulations. And this may be the cause for the very current and very general idea that creative architects have about the critics and historians and theorists. They say that these people are parasitic creatures feeding on, living on the works of art that the architects produce. And so they are, but by necessity—by necessity because architecture in Western society has to be taught, and taught in verbal images. . . . I would remind you that students do not learn architecture; they only learn *about* architecture. Herein comes the importance of the theorist, of the historian, because he is one of the people whose profession is precisely in making verbal formulations about architecture."

DONLYN LYNDON was one of several participants to take issue with Collins's argument that history could profitably be limited to the Western tradition. Zevi's "passionate plea for a set of tools for research that will be similar or equivalent to the tools for design" seemed to him most important. "Whether this can be nonverbal entirely or even in a major way is something of a question. I myself in some history courses have been trying to give a series of exercises where students would do diagrams and drawings and use tools that they would normally use in the design process to analyze buildings in the history course instead of reading somebody's pronouncements about how spatial they are. As it happens, the students almost inevitably revert to verbalism, which I think suggests that perhaps we are a verbal culture and that this is a problem we ought to attack very directly— the question of what relation words can have to buildings, what kinds of words are usable."

The chronological limitations proposed by Collins were also objected to by several speakers, among them Zevi: "Prehistory can teach us more than many of the periods of what you call history." A lurking semantic ambiguity was exposed by WINSTON WEISMAN: "I think the mistake has been made that when we talk about prehistory we are thinking about history as a verbal form of communication. Now if we think of architectural history having to do with monuments that are present, Stonehenge can be seen, can be examined and measured, and since this is then data, this is no longer prehistory; in the area of architectural history it is true history." MARION ROSS agreed that "as soon as you have a building, you have history of architecture"; on the possibility of teaching history nonchronologically he said: "I believe that history is nothing at all if it is not chronological; in fact it isn't history at all, if it doesn't start and go forward. Especially it seems to me necessary for the beginning student to have this approach; it is possible for all of *us,* I'm sure, to jump around anywhere we like."

Taking up the question of the relationship of architecture to the other visual arts, Zevi said: "In my mind the history of fine arts does not help very much in the history of architecture, because history of painting and sculpture is perhaps even less dynamic than history of architecture." The study of literature was more relevant, in that the process of literary composition could be followed in manuscripts with their corrections and variant readings just as the process of architectural design could be followed in an architect's drawings. Addressing Kitao in his con-

such a way that they become, as it were, vaccinated against epidemics of historicism whilst at the same time obtaining the basic ideas on which to evolve a theory of design."

Other questions were whether the history of architecture, granted that it was a means toward the student obtaining a theory of architecture, must be taught by trained architects, and those raised by the relationship architecture was considered to bear to the other arts. Offering as a tentative definition of the theory of architecture "the principles which relate the form of a building to the sociological, technological, economic and esthetic conditions presiding over its inception," Collins said that he thought most architects nowadays rejected the view, "so innocently adopted twenty-five years ago by those seeking to figure as leaders of the profession," that good buildings could be designed in a historical vacuum. "Not only do they believe in a theory of architecture, but they believe that such a theory should result from the considered analysis of buildings constructed in many different centuries, many different latitudes and different social conditions."

It was important to decide what limitations, if any, the study of architectural history should have; he would suggest that if the history of architecture was to be thought of as primarily the source of a theory of architecture, it could most profitably be considered as beginning with the Greek temples and ending about 1950. When it came to geographical limitations, he would argue that "the expression 'Western Civilization' imposes certain obligations on our teaching here which correspond to a very real quality in our culture;

for as the Japanese Ambassador to Canada once wittily remarked, one soon becomes aware in North America that the East is to the west and the West is to the east."

Turning to the relationship between architectural history and architectural criticism, Collins pointed out that no historian could really avoid what are sometimes disparagingly called "value judgments," even if these were expressed only negatively, through omission of the buildings of which they did not approve. Positive criticism could be exercised in three possible ways—by reference to a) the lecturer's personal emotions, b) formulated principles or c) contemporary fashions. Method a) was "best exemplified by the technique of Vincent Scully, and in case anyone should think that this remark is intended as a sneer, I hasten to say immediately that I consider Scully to be one of the greatest living architectural historians. No one is better qualified to lecture on architecture to the layman; however, we are not concerned in this seminar with lectures given to laymen but with lectures given to architectural students, and in this respect I would suggest that while Scully is one of the finest promoters of architectural sensitivity among the lay intelligentsia, his lectures suffer from the same defect as those of John Ruskin; namely, they are overconcerned with translating poetic emotions into words which will adequately convey their full poetic quality."

On b): "I see nothing ignominious in accepting another person's theory of architecture—however long ago it was formulated—provided one does not accept it blindly and mechanically, but assents to it

Peter Collins and Buford Pickens enjoy Reyner Banham's banter. Right: Stephen Jacobs has something to think about

PHOTOS BY RICHARD S. ALDEN
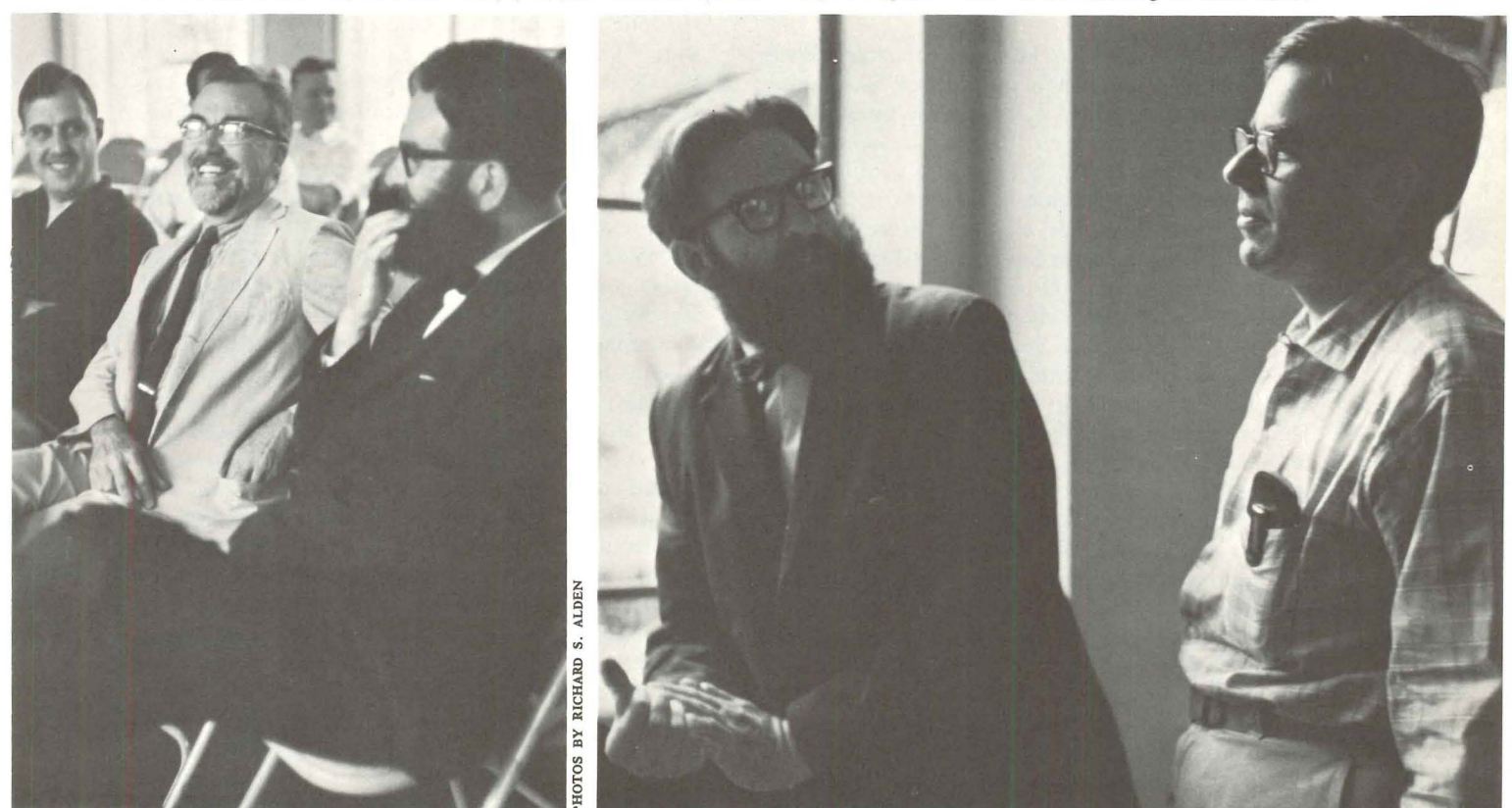
MONDAY was devoted to discussion of history, theory and criticism together, with Bruno Zevi on "History as a Method of Teaching Architecture" and Peter Collins on "The Interrelated Role of History, Theory and Criticism in the Process of Architectural Design" as speakers. If any had doubted the timeliness of the subject of the seminar, their minds should have been set at rest by BRUNO ZEVI'S opening revelation that only the previous Wednesday, as a result of the chain of events which had included a forty-two-day sit-in strike by the students last year, the Faculty of Architecture of the University of Rome had approved his motion that the teaching of architecture should be based on the historical method—*metodo torico-critico.*

"The problem to my mind is not how to teach history of architecture, theory of architecture, or criticism of architecture; the problem for us is how to teach architecture; that is the purpose of schools of architecture, and we have to find out how we can teach architecture with a method which is less empirical, less approximate than those we have used up to now."

Three methods or systems had been employed in the past: The atelier system, the academic system ("which was the Beaux Arts system; it was history of architecture taught as *styles* of architecture"), and the Bauhaus system. "The Bauhaus was a marriage between the modern movement and modern pedagogy. People would have to learn the modern attitude toward art through working. . . . But, as you know, Gropius threw away from the curriculum of the Bauhaus the teaching of history. Why did he do that? . . . The teachers of architectural history were reactionary; they were people who thought that history stopped at the end of the eighteenth century; they were people who were thinking of style and therefore even if they had to include the modern movement in the historical course, they included it as one more style added to the variety of the past. . . . Given the fact that there was nobody around to teach history of architecture in a modern way the Bauhaus decided not to teach it. . . . And that was our tragedy, or our problem—because since then, until this meeting at Cranbrook, nothing has been done." The system of teaching history had not changed even though the content of the courses had changed. "History of architecture doesn't enter into the dynamics of making architecture . . . . Our classes may be crowded, we may do the most fascinating lectures, we can be full of sex appeal, the students may be astonished, they will stand up for hours, but the consequence of the speaking on the drawing paper is very, very little."

Yet Zevi was convinced that architecture could be taught only through a historical method. "There isn't any school to become a poet. If you think you want to be a poet, you go to school and you have courses on history of literature. When you want to become a painter, now they don't teach you any more composition and coloring and all that kind of thing in the old academic way; the only thing you can do is study painting. If you want to become an architect, the only thing you can do is through history."

But it has to be a modern history, and it has to employ modern instruments. "Our instruments are obsolete. . . . The real obstacle in the process of teaching architecture historically is the fact that history is taught with words. This is really the defect. If you were to use the same means that the architect uses for doing new work, then that would be the solution. Because now we have in the schools design courses that, when they're not done by prima donnas, are always critical. In other words, criticism, and historical criticism, is the way. . . . Design has almost reached the history method because really the criticism that a design professor does on something a student is elaborating is really an essay in criticism. He goes into the semantics, the linguistic structure of a certain thing, and generally finds out that he mixes everything together—a little bit of Mies, a little bit of Wright, a little bit of Corb—and he tries to show how certain linguistic structures have the possibility of development. So that really a good design critic is very similar to a historian of architecture. The more scientific he becomes the more he uses the same instruments and thought, the same way of thinking as a historian." So, too, the historian should move toward the position of the design critic in using his tools;[3] the schism between history and design was due to difference of tools rather than difference of philosophy.

PETER COLLINS began by pointing out that neither the history of architecture as an academic professional discipline nor modern architectural criticism can be traced back further than the middle of the eighteenth century. Today, he thought, the most urgent tasks were a) an evaluation of the ideal relationship between architectural theory and architectural history and b) an evaluation of the influence which the study of architectural history should have on architectural criticism, considered as an aspect of design.

The first question was whether the history of architecture should be taught to architectural students at all; Gropius had thought that it should not be taught because, as he put it, "when the innocent beginner is introduced to the great achievements of the past, he may too easily be discouraged from trying to create for himself." Yet it would be impossible, even if it were desirable, to keep an architectural student totally ignorant of the past; so "the task of those who administer schools of architecture should not be to immunize new students against the evils of architectural historicism by prophylactic isolation, but to inoculate them with carefully measured doses, in

[3] For the kind of "visualized criticism" of which Professor Zevi was here speaking, see the models of buildings by Michelangelo made by architectural students of the University of Venice, illustrated in *L'architettura,* January 1964, with a further note in the May issue, p. 2, and the article on the Michelangelo exhibition in Rome, *ibidem,* June 1964.

History, Theory and Criticism

The 1964 AIA-ACSA Teacher Seminar

ABSTRACTS AND EXTRACTS, EDITED BY MARCUS WHIFFEN

THIS year there were two innovations at what many people now refer to simply as Cranbrook, the nine-year-old seminar for architectural educators, sponsored by The American Institute of Architects and the Association of Collegiate Schools of Architecture, which for the last four of its years has been held at the Cranbrook Academy of Art. The conference was shortened from ten days to a week (June 7-13), and with the aid of the Graham Foundation two of the speakers were brought over from Europe. Both innovations were successful; when a vote was taken by moderator Buford Pickens there was only one hand for the ten-day period, and the contributions of Bruno Zevi and Reyner Banham were as seminal—and as different—as their admirers among the participants could have hoped.

The trinitarian nature of the subject under discussion—architectural history, theory and criticism in their relationship to the education of architects—suggested to one of the participants parallels between the seminar and a Christian theological conference.[1] But, of course, architects have their own even older trinitarian tradition, not Christian but Vitruvian. At least one participant paid homage to Vitruvius; it was a sign of the times that Commodity was a condition of well-building more often and more highly spoken of than Delight, while Firmness, perhaps rather too easily taken for granted in our age of technology, hardly figured in the discussions at all. (The balance is to be righted in the 1965 seminar, which will discuss structure in architecture.)

Even with the shortening of the seminar from ten days to seven, the most that an editor of the proceedings can hope to do is communicate some of the points made and convey a little of the flavor of the discussions. To these ends, I have thought it best to employ a composite—some may say bastard—form of reportage, consisting of both indirect speech (with its necessary changes of tense and so on) and direct quotation, transcribed from the tapes. I hope that both the summaries as far as they go and the direct quotations are reasonably accurate; electronic recordings can be difficult to make out even when one actually heard the talk recorded, but in making them out at least I had a certain advantage over the professional tape-transcriber who heard Reyner Banham speak of "Vinegar Jones" and of "the Philadelphia Savings Fund Building by Harmless Scars."

This account of the formal sessions of the seminar is necessarily incomplete. But even if every word that was said in them could be printed, it still would not constitute a full account of the seminar; many words of at least equal consequence were spoken in discussion groups under the garden trees, or in even less formal circumstances. The architectural tour of the Detroit area, which took up the Wednesday, was another essential part of the totality; so was the distinguished evening lecture on Thursday, "Some Dogmas of Scientific Method: A Critical Examination," by William Warren Bartley, III. This last, together with the papers and lectures of the other invited speakers, will be printed in full in a companion volume to that in which the papers from the 1963 seminar have been published.[2]

Cranbrook '64 left many loose ends. I have not attempted to tie them up; I doubt whether anyone could tie them up, and I am not sure that it would not be wrong to try. Is it working the metaphor too hard to suggest that it is the very purpose of a seminar to leave loose ends, the seed putting forth rootlets which one day may sustain a growth whose form cannot be foreseen by those who planted it?

[1] Donlyn Lyndon, "Cranbrook 1964," *Journal of Architectural Education,* September 1964.

[2] "The Teaching of Architecture: Papers from the 1963 AIA-ACSA Teacher Seminar," edited by Marcus Whiffen, with an introduction by Harold Bush-Brown. Washington: American Institute of Architects, 1964. $2.00.

PAN AM '65 / No. 2: Mumford to the Stage
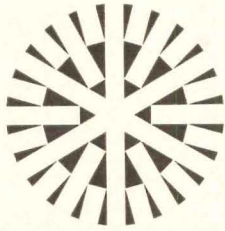
Lewis Mumford HON AIA, recent recipient of the Medal of Freedom, has been asked to deliver the initial Edmund R. Purves Memorial Lecture at the 1965 AIA national convention, which will be held concurrently with the XI Pan American Congress of Architects in Washington, DC, June 13-18. In honor of the late Executive Director of the Institute, the lecture will be given annually at national conventions, with the speakers selected by the Board.

Mumford's award from President Johnson carried this citation: "In the name of sanity, he has constantly worked to rescue and extend the qualities of urban life that will preserve and stimulate the humane spirit of western civilization."

COMPETITIONS / Enriching the Plaza

Registration for an AIA-approved international competition for the enhancement of the San Francisco Civic Center Plaza will close December 31. In addition to three prizes of $3,750, $3,250 and $3,000, the successful finalist will receive a $50,000 fee for the completion of his design. The jurors: Thomas Church, San Francisco landscape architect; Jacques Lipchitz and Constantino Nivola, sculptors, who will act as alternates; Luis Barragán, Mexican architect; Dr Lorenz Eitner, Stanford University art historian; and Moses Lasky, San Francisco Museum of Art, representing the city, which has appropriated $257,-480 for the competition. For details write Henry Schubart Jr, AIA, Professional Adviser, 52 Vallejo St, San Francisco 11, Calif.
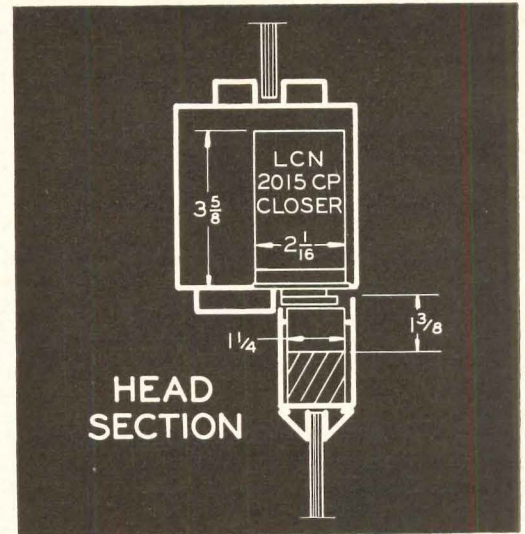
DEATHS / Lois Lilley Howe

Lois Lilley Howe FAIA of Cambridge, Mass, died September 13, only 12 days before reaching her 100th birthday. The first woman to receive an architectural degree from the Massachusetts Institute of Technology, she was associated with the firm of Howe, Manning & Almny when she retired in 1937. Miss Howe won second prize in an architectural competition at the Chicago World's Fair.

EDUCATION / Preservation at Columbia

The first of its kind in the nation, a new course of graduate study in the restoration and preservation of historic buildings has been initiated at Columbia University's School of Architecture this fall. It is designed to give advanced students in architecture, as well as allied fields of archaeology and art history, a general familiarity with a field of growing professional opportunity both here and abroad. Prof James Marston Fitch is directing the new course, and staff members include Charles E. Peterson FAIA, newly appointed adjunct professor, who is founder of the Historic American Buildings Survey and member of AIA's Committee on Preservation of Historic Buildings.
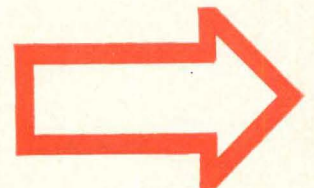
Local Public Agency Award—Project Design: **El Monte Urban Renewal Project,** Rio Piedras, Puerto Rico (see photo p 16). Consultants: Edward L. Barnes AIA; Reed-Basora-Menendez; architect: William V. Reed; urban designer: Osvalod Ruiz, Villarrubia.

Awards of Merit
Residential: Atrium Homes, Chicago. Architect: Y. C. Wong.

Residential: University Gardens Apartments, Chicago. Architects: I. M. Pei & Associates: Loewenberg & Loewenberg.

Commercial and Industrial: Constitution Plaza, Hartford, Conn (1964 AIA Award of Merit). Architect and designer: Charles DuBose FAIA.

Commercial and Industrial: Technology Square, Cambridge, Mass. Architect, redeveloper and designer: Cabot, Cabot & Forbes Co.

Public and Institutional: Temple University Campus Greenways, Philadelphia. Architects: Nolen-Swinburne-Associates.

Local Public Agency Award—Project Design: Charles Center Urban Renewal Project, Baltimore. Architects: Rogers, Taliaferro, Kostrisky, Lamb; urban planner: Planning Council of the Greater Baltimore Committee.

COMMUNITY FACILITIES ADMINISTRATION

"CFA is happy to give impartial public recognition to the quality and functional effectiveness evident among the specialized housing and public works projects assisted under our programs."
—COMMISSIONER
CLARENCE H. OSTHAGEN

College Housing—Residences: Ridgeway Dormitories. Western Washington State College, Bellingham. Architects: Bassetti & Morse.

"Skillful placing of delightful architecture derived from the natural environment of the area has added a welcome illustration of the architects'

practical use of the allied arts and a reminder that this campus is very much a particular place in nature, as suggested by the sculpture—bears, coons and owls."

College Housing—Related Facilities: Student Union, University of California, Berkeley. Architects: Hardison & DeMars.

"Highly varied and hospitable atmosphere for students created in this unified campus student center. Skillful exploitation of natural grade changes. Use of outdoor terraces for dining and relaxing is most impressive."

Public Facilities—Buildings: Southeast Branch Welfare Building, San Diego County, Calif. Architects: William S. Lewis Jr, AIA; Deems-Martin Associates.

"Extraordinarily handsome public structure successfully blending in a contemporary idiom, materials and techniques of the early Spanish colonial architecture indigenous to the area."

College Housing—Residences
Honor Awards
Johnson Hall, Temple University, Philadelphia. Architects: Nolan-Swinburne-Associates.

Oxford Houses, University of Michigan, Ann Arbor. Architects-designers: Frederick Stickel Associates.

Awards of Merit
Cluster No 1, Stanford University, Stanford, Calif. Architect: John C. Warnecke FAIA.

San Diego Residential Apartments, Stage No 1, University of California; Architects: Robert Mosher AIA and Roy Drew AIA

Women's Dormitory, University of Puerto Rico. Architect: Henry Klumb FAIA

Christian College, Columbia, Mo. Architects: Hellmuth, Obata & Kassabaum, Inc.

"Aldea San Miguel" Married Student Housing, University of California; Architects: Hervey Parke Clark FAIA; John F. Beuttler AIA; George T. Rockwise FAIA.

Housing Complex, University of Rhode Island, Kingston. Architects: Pietro Belluschi FAIA; Kent, Cruise & Associates.

Illinois Street Residence Halls, University of Illinois, Urbana. Architects: Mittelbusher & Tourtelot.

College Housing—Related Facilities
Awards of Merit
Student Dining Building, Central Washington College, Ellensburg. Architects: Jones, Lovegren, Helms & Jones.

Student Union, Western Washington State College, Bellingham. Architects: Bassetti & Morse.

Student Union, Stanford University, Stanford. Architects: Spencer, Lee & Busse.

Public Facilities—Buildings
Honor Awards
Washington Corrections Center, Shelton, Wash. Architects: Bassetti & Morse; Walker & McGough; Curtis & Davis.

Memorial Library, Diboll, Tex. Architect-designer: John J. Desmond, associates: Ralph Clampitt; Warren G. White AIA.

Awards of Merit
Warwick (RI) Central Public Library, Architects: Robinson, Green & Beretta.

Turlock (Calif) Justice Court Building. Architects: Delong, Zahm Associates, Inc.

Senior Housing
Honor Award
C. C. Young, Dallas. Architects: J. Herschel Fisher; Donald E. Jarvis.

Awards of Merit
Peninsula Volunteers, Menlo Park, Calif. Architects: Skidmore, Owings & Merrill.

Amherst Wilder, St. Paul. Architect: Ralph Rapson AIA.

Pilgrim Plaza, San Mateo, Calif. Architects: Delong, Zahm Associates.

Octagon Observer Cont'd

parklike site. Their simple materials are handled with a strength and dignity."
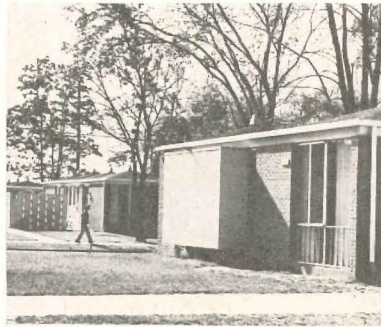
Awards of Merit

Central Apartments, St Paul. Architects: Cavin & Page.

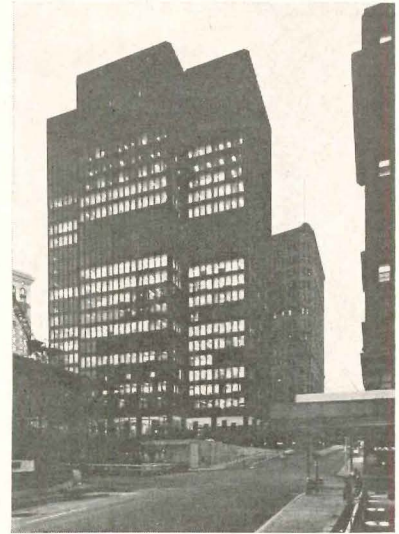Low-Rent Housing, Eureka, Calif. Architect: William M. Van Fleet AIA.

URBAN RENEWAL ADMINISTRATION

"Now that the accomplishments of urban renewal are becoming visible in many cities, it is a fitting time to honor those who have contributed so much to good design."
—COMMISSIONER WILLIAM L. SLAYTON

Residential: Colonnade and Pavilion Apartments, Newark, N.J. Architect: Mies van der Rohe FAIA.

Residential: Washington Square East Townhouses, Philadelphia. Architects: I. M. Pei & Associates.

Residential: Lafayette Park Residential Redevelopment, Detroit. Architect: Mies van der Rohe FAIA.

Residential: Clemens Homes, Mount Clemens, Mich. Architects: Meathe, Kessler & Associates.
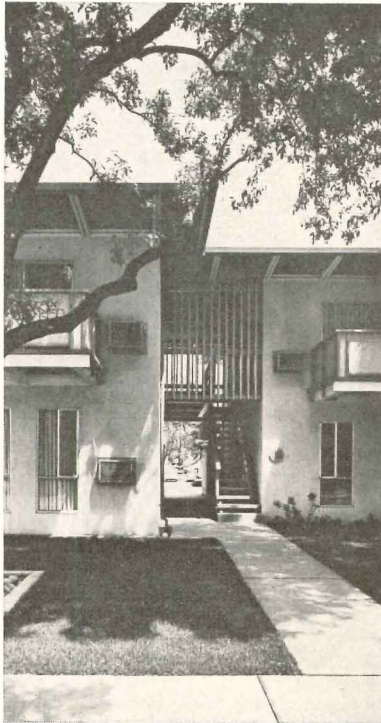
Residential: Capital Towers Garden Apartments, Sacramento. Architects: Wurster, Bernardi & Emmons; Edward L. Barnes AIA. DeMars & Reay.
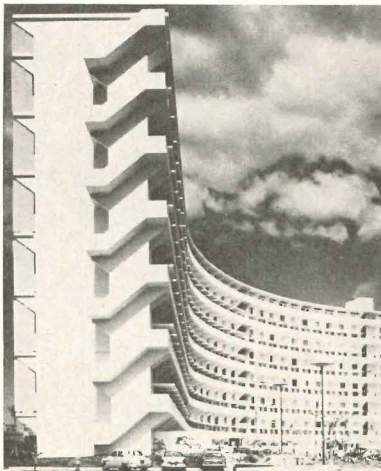
Residential: El Monte Apartments, Rio Piedras, Puerto Rico. Architects: Edward L. Barnes AIA; Reed-Basora-Menendez.

Commercial and Industrial: Charles Center Building, Baltimore. Architect: Mies van der Rohe FAIA.

Public and Institutional: Harry A. Conte Communtiy School, New Haven, Conn. Architects: Skidmore, Owings & Merrill.
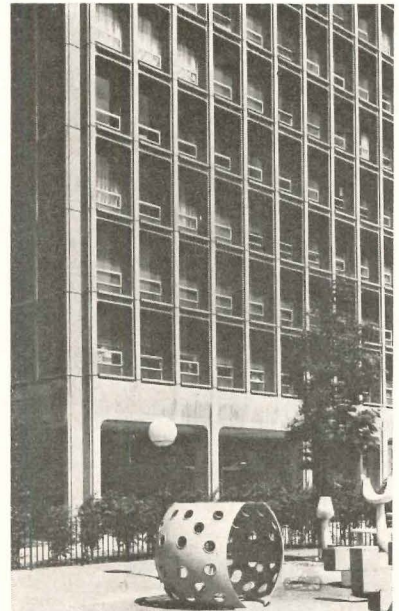
Local Public Agency Award—Project Design: New York University-Bellevue Urban Renewal Project, New York City. Architect: I. M. Pei & Associates; urban planners: Skidmore, Owings & Merrill.
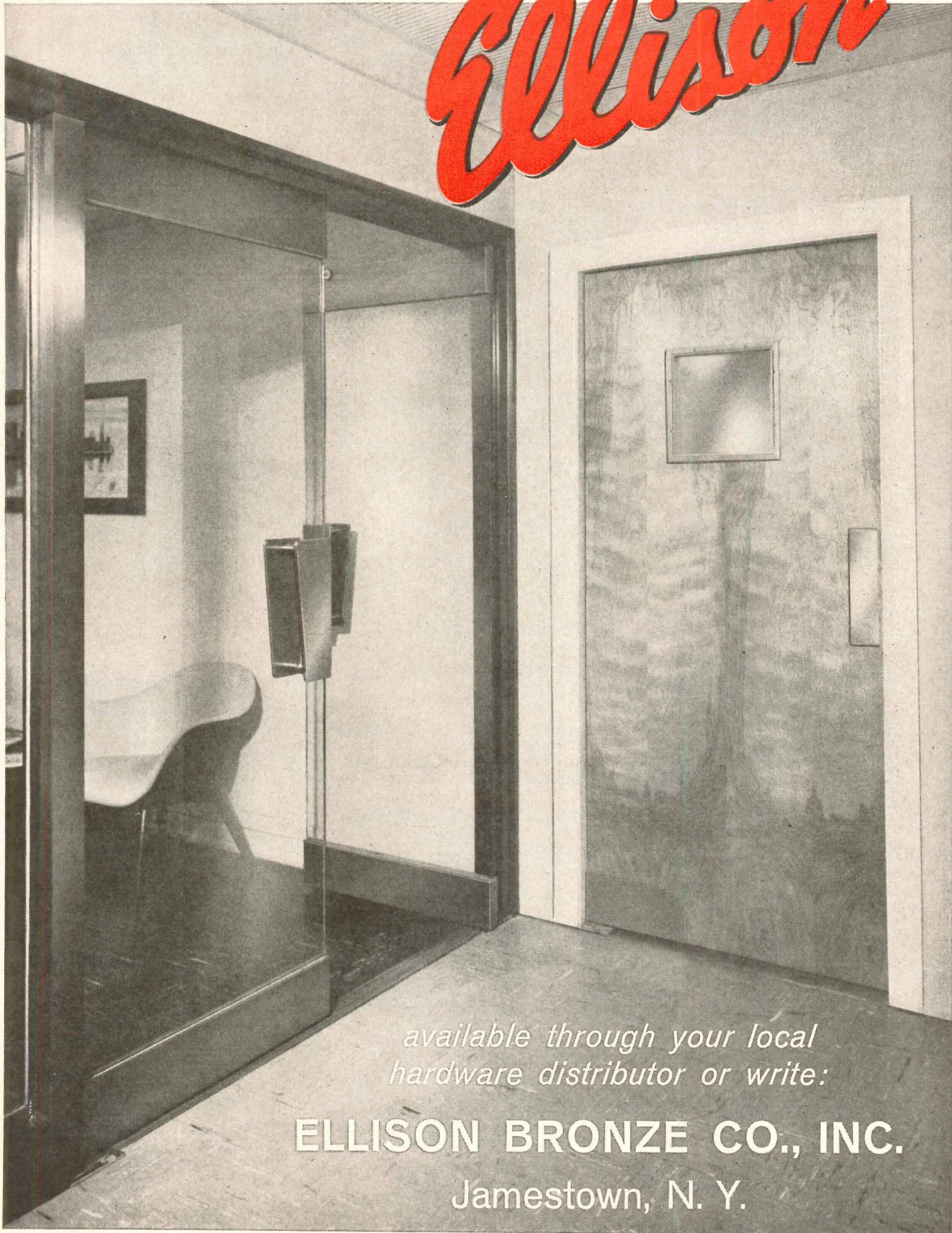
terrannean quality in the architecture. Individual structures, which are dwelling units, are organized around a little courtyard and are handsomely furnished. . . . Landscaping and site development and building orientation are excellent."

Single-Family Housing: Monterrey Homes, Hato Rey, Puerto Rico. Architects: Richard Kaplan, Manuel R. Gutierrez, Daniel Alvarez; engineer: Pablo Simon Felico.

"Landscape and land arrangement are good. Exterior fence is excellent. Front yard with the enclosed drive fenced off for parking is interesting."

Single-Family Housing: Residence, Arcata, Calif. Architect: William M. Van Fleet AIA.

"Good definition of plan use. It has isolation of the family room, kitchen and dining area as one pavilion and the living room as a separate pavilion with privacy between. . . . Deck area develops good privacy in relation to the two major pavilions."

Single-Family Housing. Montclair West, San Jose, Calif. Architect: A. Robert Fisher AIA; associate: Robert J. Geering AIA.
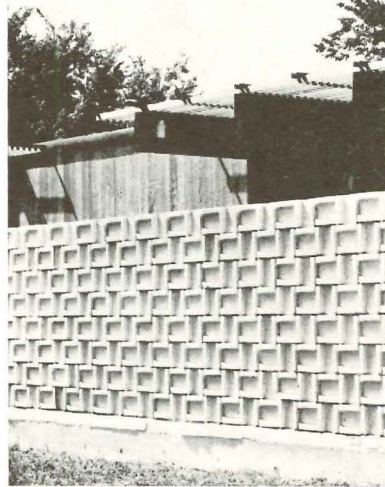
"There is a lot of good material in this house. It is nicely textured. Plan is excellent and works very simply. Landscaping should be given special mention."

Single-Family Housing: Residence, Wichita, Kan. Architect: Charles F. McAfee.

"Privacy from the street is very well handled. . . . It is a very simple and interesting design."

Awards of Merit

Multifamily Housing: Liberty Square Housing Project, New Haven, Conn. Architects: Carl Koch & Associates, Inc.

Cherry Creek Towers, Denver. Architect: Carl Groos Jr; associate: O'Neil Ford FAIA

Dearborn Towers, Dearborn, Mich. Architects: King & Lewis Architects, Inc.

Housing for the Elderly: Crestview, Bryan, Tex. Architects: Merrell & Vrooman; consultant: Thomas B. Thompson.

The Sequoias, Portola Valley, Calif. Architects: Skidmore, Owings & Merril.

Birchwood Manor Nursing Home, Holland, Mich. Architects: Wold & Bowers Architects, Inc.

Single-Family Housing: Two Residences, San Carlos, Calif. Architects: Clement Chen & Associates.

Capehart Family Housing, Oxnard Air Force Base, Calif. Architects: Porter, O'Brien & Armstrong; Victor J. Spotts.

Georgetown South, Manassas, Va. Architect: Marion L. Bagley; designer: Lee G. Rubenstein & D. Jay Hyman.

Military Family Housing, US Naval Training Center, Great Lakes, Ill. Architects: D. Coder Taylor AIA, Yost & Taylor; designer: Donald L. Reinking.

PUBLIC HOUSING ADMINISTRATION

"We are proud of the increasingly important contribution of the low-rent housing program to local communities in improving the living environment of all their citizens."
—COMMISSIONER MARIE C. MCGUIRE
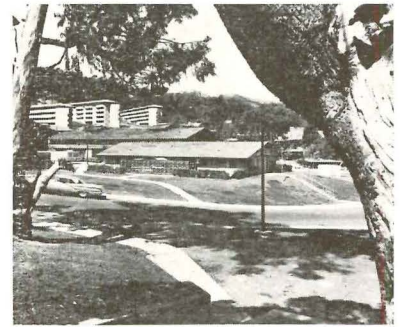
Low-Rent Housing, Marin City, Calif. Architects: Aaron G. Green AIA and John Carl Warnecke AIA.

"This highly original design meets the challenge of the site's topography and dramatic situation. Each floor of the hillside apartment buildings is accessible from grade without ramps or stairs."

Elliot Twin Apartments, Minneapolis. Architects: Thorsen & Thorshov, Inc.

"These straightforward, economical and well-proportioned high-rise apartments gain identity and serenity from their location among single-family detached houses. Their unpretentiousness and the orderly site plan meld them with their surroundings."
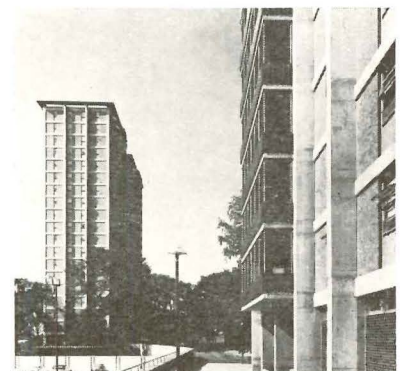
Westpark, Philadelphia. Architects: Harbeson, Hough, Livingston & Larsen.

"These tall tranquil buildings are subtly dispersed over a magnificent

At work in Los Angeles:
THE ARMSTRONG LUMINAIRE CEILING SYSTEM

The industry's first totally integrated ceiling system lights, cools, heats and quiets this large sales and display office building.

Architects and owners are fast discovering how Luminaire fits readily into almost any design situation.

This recently remodeled office building is a good example. In sales areas, the Armstrong Luminaire Ceiling System lights product displays to maximum advantage. Over the drafting areas, it illuminates so well no additional desk lamps are needed. In public areas, the system creates a dynamically beautiful atmosphere for entertaining and client consultation. And while providing more efficient light, the system delivers uniform, draft-free conditioned air to each area, quiets better than conventional flat acoustical ceilings.

The Luminaire System encourages individual ceiling designs. Flat ceiling panels can be placed between rows of lights or perpendicular to them. Specially adapted for ceiling-high partitions, the system allows almost limitless layout flexibility.

Luminaire is a simple system. Each module is its own light- and air-distribution source. You order from one supplier. All components are supported from one grid. Maintenance is virtually nil. Even when shielded, as here, lamps are easily accessible for cleaning and replacement.

These offices use 384 Luminaire 48″ modules and 44 Luminaire 50″ modules; all have two-lamp fixtures. The area shown at left is lighted to 175 footcandles. (With the Luminaire System, lighting levels can range from below 50 footcandles to well over 200.) For complete information on both the A-50 and B-48 Systems, write to Armstrong, 4211 Sage Street, Lancaster, Pa.

Elster's Office Building, Hollywood, California
Engineers & Architects: George J. Fosdyke & Assoc., Los Angeles, Cal.
Consulting Engineer: Elster's Air Conditioning, Hollywood, Cal.
Comfort Conditioning Specialist: V. A. Bradshaw,
Dept. of Water & Power, City of Los Angeles
Interior Designer: Elster's (Contract Furnishings Dept.), Hollywood, Cal.
Ceiling Systems Contractor: Mastate Acoustics, Inc., N. Hollywood, Cal.

Ceiling Systems by (A)rmstrong

OCTAGON OBSERVER

AWARDS PROGRAMS / HHFA's Household Cites Design Excellence

"The Federal record in architecture and design is not a comforting one. It has been identified for a long time with monumental monotony and unyielding standardization. You can usually spot a government structure a mile off. It is frequently remote from our time and resistant to our contemporary culture and the modern world about it."

So spoke Robert C. Weaver, administrator of the Housing and Home Finance Agency, at an urban design conference held at the Harvard Graduate School of Design this past spring. But Dr Weaver added this comment:

"The effect of Federal thinking and attitudes today, however, has become too pervasive in our changing society to permit this other-world attitude to continue. We must change both the philosophy and practice of Federal policy as it effects the shape and design of our urban communities."

Not long after his Harvard speech, Administrator Weaver announced that the government's design awards program, which began last year with the Federal Housing Administration, would be expanded to include the Public Housing Administration, Urban Renewal Administration and Community Facilities Administration. Presentation of the 1964 awards was made in a ceremony in Washington, Oct 22.

In spelling out the role of HHFA in fostering good design, Dr Weaver made this clear: "It should be emphasized that our Agency does not select or maintain contractual relations with architects. Such direct relationships are the province of local public agencies and private and public developers and homebuilders. Yet, we do have a basic role. It is to create an awareness of, and an environment conducive to, good design."

The photographs of the First Honor Awards (with jury comments when available) in each of the four participating agencies indicate that HHFA is headed in the right direction.

FEDERAL HOUSING ADMINISTRATION

"FHA, in its process of evaluation of properties for mortgage insurance, must take complete advantage of the opportunities to stimulate and encourage better design."
—COMMISSIONER P. N. BROWNSTEIN

Multifamily Housing: Kips Bay Plaza, New York City. Architects: I. M. Pei & Associates; associate architects: S. J. Kessler & Sons.

"Use of site and interior control of space and openness on a relatively light site is good. . . . Precasting job is beautiful. . . . Structure is well integrated with its surroundings."
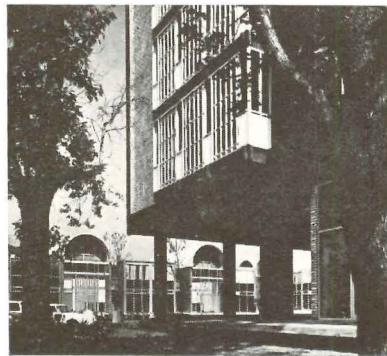
Multifamily Housing: River Park, Washington, DC. Architests: Charles M. Goodman Associates.

"One of the few projects that was carefully thought out all the way through. Vaulted roofs help the elevation. They look a little mannered but if they didn't, this would be very boring. . . . Total solution of high rise and low rise over the site is very commendable."
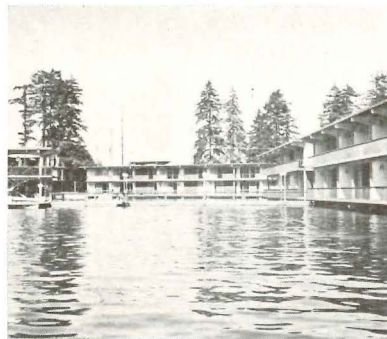
Multifamily Housing: Bay Roc Apartments, Lake Oswego, Ore. Architects: Broome, Selig & Oringdulph.

"Whole project is in good taste;

low units are near the water and the apartments build up to the rear. Way the water is handled is beautiful."

Housing for Elderly: Wesley Manor Retirement Village, St John's County, Fla. Architects: Broward & Warner.

"Interesting thing about the creative quality in the design areas is that it is carried through in every detail. . . . Landscaping is undoubtedly of a higher quality by reason of the existing site and the many trees, grassy slopes and bay."

Housing for the Elderly: Carmel Valley Manor, Carmel Valley, Calif. (1964 AIA Award of Merit). Architects: Skidmore, Owings & Merrill.

"This is a village for retired people with a rather heavily accented Medi-

MONTCLAIR DANBY GOES TO YALE

for the Beinecke Rare Book and Manuscript Library

LETTERS

Mood of St Louis

EDITOR, AIA JOURNAL:

It seems my own deadlines put me about a month behind in thoroughly reading other publications. I have just read your page in the August issue and want to tell you how much I, personally, appreciate your sympathetic handling of St Louis as a city.

I have never lived in St Louis, but in recent years I have gone there quite frequently on business. My own feelings about the place are expressed quite well in what you wrote. In fact, I have frequently described the city to people in very nearly the same terms you used.

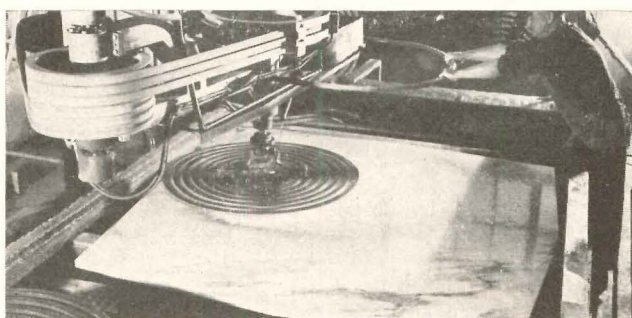There is, as you know, a clutch of really good architects in that area. They seem to have a feeling for their city—and the way of life there—and I think it comes through in the structures (both new and remodeled) that they do. The remodeled townhouses in and around the Forest Park area have as much style as I have seen anywhere.

St Louis has a certain verve—and I think you caught the mood when you were there for the AIA convention.   ROBERT H. DOUGHERTY
Editor, Hudson Publishing Co
Los Altos, Calif

Where's the Jury?

EDITOR, AIA JOURNAL:

If the Library Buildings Award Program (Sept) is worth the effort put into it, it is surely worth the effort to publish the reasons certain libraries receive this honor and why they are outstanding.

The judges should be listed, along with their individual comments and those of the jury as a group. Surely there is something to learn.

THOMAS J. RUSSELL AIA
Long Beach, Calif

ED NOTE: *Generally speaking, we do name the jury and publish its over-all report, but space did not allow us to do so in this particular case.*

October Issue Tops!

EDITOR, AIA JOURNAL:

The October JOURNAL is a document!

This was so apparent in superficial spot reading on its arrival.

As I told Bob Piper on the telephone, the Handbook is our "Constitution" but this JOURNAL issue is a living expression of practice in all its phases, directly and simply stated.

Heartiest congratulations to you and to Dan Schwartzman for concept and pattern, and to Bob for terrific follow-through, not only on the articles he wrote but on the organization of the other material and its editing.

This is a real achievement which will benefit us all.

THEODORE W. DOMINICK AIA
Washington, DC

.at hurricane force
and still weather-tight!

Independent Laboratory Tests Prove Kawneer Sealair Windows* Solve Weathering Problems!

The new Sealair window is weather-tight even when subjected to winds and rains of 70 to 80 miles per hour according to recent tests by an independent laboratory.

In these tests, the Sealair was installed in a weather test chamber. The window was water drenched as inside pressure was lowered to represent severe weather conditions. Sealair did not leak even when the static load reached 25 p.s.f. Many conventional windows leaked at 3 to 7 p.s.f. The superior weathering performance is the result of a Triple Weather Guard including an exclusive Pressure Equalization Slot. This Kawneer innovation is the most important metal window design change in recent years.

In air infiltration tests, the new Sealair was again far superior, at less than .2 c.f.m., well above industry standards. Here is a window so vastly superior that building interiors remain dust and draft free . . . reducing loads on heating and air conditioning systems. *Get all the facts about this remarkable window.* Write for your copy of the Sealair Window File.

Commercial and Monumental—Projected, casement and top hinged Sealair windows are available in commercial or monumental (2″) series. Finish: Alumilite is standard—or, non-fading, abrasive-resistant, Anodic hard colors (light bronze, medium bronze and black) are optional.
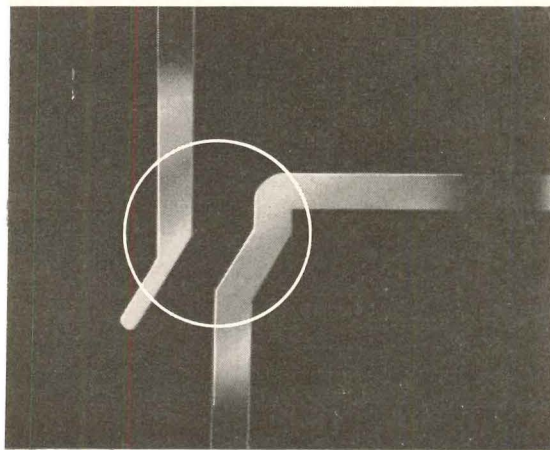
Pressure Equalization Slot—Keeps water out. Pressure within the window sections is equal to pressure outside the building. No pressure difference . . . no partial vacuum . . . no leakage.
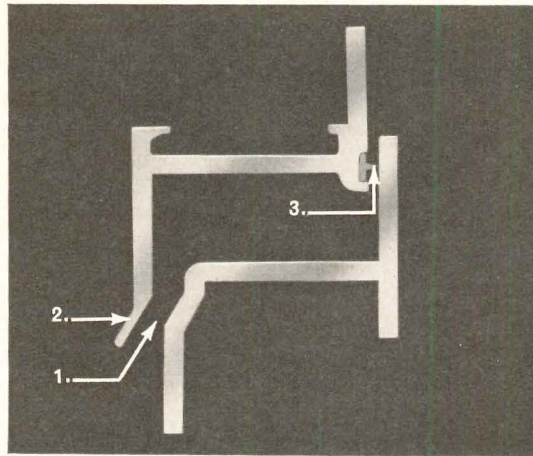
Triple Weather Guard—1) Pressure equalization slot, 2) integral drip, and 3) neoprene weatherstrip. The Sealair window offers triple weather protection. Weathering where needed, scientifically designed.

Kawneer

Kawneer Company, A Division of American Metal Climax, Inc.
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*Patent Applied For

© 1963 Kawneer Company

THE EDITOR'S PAGE

Esthetic Responsibility and the World's Fair

I have just experienced an interesting juxtaposition of events: Last Saturday, October third, I attended the eleventh of the Institute's "Aesthetic Responsibility" seminars, at the New England Regional convention in Manchester, Vermont. (More of that on this page later.) Sunday I read the New York *Times*. The following Tuesday I spent at the New York World's Fair.

So on Saturday I heard five distinguished laymen, three of whom had recently been involved in the selection of architects at the corporate level and all of whom were in a position to know the architect and his responsibilities, lay the blame for the mess that is America primarily on the architects. Sunday, Ada Louise Huxtable wrote eloquently of the sad state of American Pop Architecture and laid it on the line that "It is a pointed, legitimate commentary on our current cultural condition and the general level of architectural practice, even among qualified professionals." Tuesday I saw the result of an almost complete abdication of esthetic responsibility by everybody concerned, architects and laymen alike.

The five laymen—a conservationist, a university executive, a newspaper editor, an insurance executive (son of a distinguished architect) and a banker—emphasized that the architect's failure lay not so much in his responsibility for so much bad design—at least, they did not particularly mention that—but for his failure to assume leadership and to work with others in the design professions to guide the development of their communities. The formation of watchdog committees such as "Fine Arts Commissions," "Municipal Art Societies," or whatever they may be called, can do much to focus the public's attention and interest upon the appearance of the community and its buildings. Even without legal status, they often exert considerable influence—and with a successful record, some sort of legal status can be attained. Much is said of the quiet power of the decision-makers in each community, but "decision-makers" depend upon the votes and/or the good will of the people. The way to influence them is not to lecture them, but to show them organized community strength.

The layman who commissions a building cannot escape blame entirely if it is not a visual asset to the community. In the first place, if he's going to hire an architect, he should put himself in a position to know the difference between the good ones and the poor ones—just as he would if he were about to retain a lawyer. And if he doesn't employ an architect at all, he's wide open to blame. Responsibility for ugliness rests upon many people, so basically it can be combated only by long-term education.

Mrs Huxtable says that Pop Art, although consumed by the "masses" in great quantities, has little or no influence on art itself—perhaps I should say Art. "The real thing continues to be produced by a cultural and creative aristocracy." This is not true

of Pop Architecture, for it is the "true democratization of the art of architecture in that it represents not just mass consumption but mass taste." And, she says, the worst of it is that it represents the great bulk of American building. If the general level of taste in American architecture is that low—and it may well be—then it can only be raised by a long and slow process. I do not believe it is quite that bad. There is, in every environment, a level among people which I call "the intelligent community." They are, of course, the salt of the earth. It is these people upon whom the responsibility rests; they have got to be the missionaries, the do-gooders—and by and large, they are. Most architects fall within this group; they must *lead* it.

I can write no full critique of the World's Fair; I doubt if I saw even from a distance over half of it, and I went into only a fraction of its buildings. But I did get a good dose of its over-all effect, and in that respect it doesn't approach the architectural success of the '39 Fair. That Fair had at least a very grand total concept; I have the recollection of broad avenues of trees and fountains lined with buildings large enough to be called monumental and, individualistic as many were, harmonious enough to create an enclosed ensemble. Today's Fair has only one or two buildings to which the word "monumental" could be applied. Most are either low and gaudy, high and striving or spreading and shrieking. And everywhere in between are little roadside-type phony eye-catchers selling pennants and balloons. *This* is not the "city of tomorrow," it's just the highway of today jazzed up to the scale of a global county fair. As I look back, I understand why I found myself returning time and time again to the Spanish pavilion. It not only had the only intimate little bar I could find, but it was the only simple, monumental building which was truly impressive, and in its deep, rich interior I felt that true sense of elegance which exists in all fine architecture.

The crisis in American architecture is not the quiet crisis of the silent spring, but the screaming crisis of the honky-tonk highway and the gaudy plastic-and-chrome buildings. To start corrective action at the roots of such a cancerous growth requires more than surgery; it requires the planting of new tissue, which can only come from the minds of the young—and a few oldsters who haven't been corrupted. During the past two years, the organized profession of architecture—the AIA—has made a start toward this corrective action with its "Conferences on Aesthetic Responsibility" and its current plans for films for the schools. But these programs must be made much broader, aimed to reach a wider segment of the people—the intelligent community—and *all* the school children. A big order, of course, but only a big plan is worth working for, and only a tremendous plan can succeed. If the architects and their allied design professionals are to be the doctors responsible for the esthetic health of the American environment, they have got to make bigger plans and work harder at them—and be in a strong enough position to see to it that the next World's Fair has a powerful design control board! J.W.
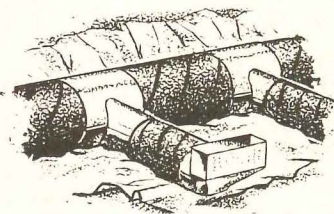
AIA-AIAF Scholarship Awards:
Academic Year 1964-65

THE American Institute of Architects and The American Institute of Architects Foundation, Inc, award a substantial number of scholarship and fellowship awards to undergraduate and graduate students, architects and teachers of architecture. These AIA-AIAF awards are provided by the income from endowments and direct grants administered jointly by the Institute and the AIA Foundation.

The Committee on Academic Training reviewed 164 completed, final scholarship applications for 1964-65; 59 scholarship awards were granted to students, representing 32 ACSA member and associate member schools in 15 AIA regions, bearing a value of $47,800. Of the 59 recipients, there were 48 undergraduates and 11 graduate students. In addition, seven awards were granted to professional candidates, practitioners and architectural educators in five AIA regions in the amount of $9,500, the combined total being $57,300.

Other scholarship funds reviewed by the Committee were $1,200 for 53 AIA school medals and 110 copies of Henry Adams' "Mont Saint Michel and Chartres"; $10,-000 for the ACSA-AIA Teacher Seminar scholarships; $2,500 for the Delano and Aldrich and William Emerson Fellowship; and $3,000 for two AIA-AHA Fellowships in Hospital Architecture.

The scholarship awards recommended by the Committee and approved by the AIA Board are as follows:

Henry Adams Fund

The Henry Adams Fund, a gift consisting of the title and copyrights to the book, "Mont Saint Michel and Chartres," written by Henry Adams, is given on the condition that the Institute shall devote and use the net income of the fund for any one or more of the following studies: ecclesiastical architecture, arts associated with the Christian civilization, use of literature associated with the Middle Ages and preservation or restoration of ecclesiastical buildings.

Edward Langley Fund

The Edward Langley Scholarship is bequeathed to the Institute and established as an endowment fund by Edward Langley for scholarship purposes and particularly in the aid of students, residents of the United States and Canada, in the study of architecture.

The Milton B. Medary Scholarship Fund

The Milton B. Medary Scholarship Fund is given to the Institute and established as an endowment by the Georgia Marble Company as a memorial to Milton B. Medary, on the condition that the Institute shall devote and use the net income of the fund to establish and maintain one or more architectural scholarships for students who have received the Institute's school medal.

The Carl F. and Marie J. Rehmann Fund

The Carl F. Rehmann and Marie J. Rehmann Fund was established to maintain scholarships for advanced study by deserving architects, artists, and/or craftsmen who may be pursuing the study of their art or arts with an architectural point of view or purpose for travel in this country or abroad and/or research with respect to said art.

Dan Everett Waid Fund

The Waid Education Fund was established as an endowment by Dan Everett Waid to serve education in architecture which shall be interpreted broadly so as to include the promoting, knowledge and appreciation of the fine arts.

Blumcraft of Pittsburgh Scholarships

Blumcraft of Pittsburgh, designers and manufacturers of railing and grille systems, by an annual gift of $3,000 to the AIAF, provide ten $300 scholarships to aid undergraduate students in their study of architecture.

Desco International Association Scholarships

The Desco International Association, franchised applicators of Desco coatings, by an annual gift of $1,600 to the AIAF, provide four $400 scholarships to aid undergraduate students in their study of architecture. One award is to be given in each of the four Desco regions in the US.

Pittsburgh Plate Glass Foundation Fellowship in Urban Design

The Pittsburgh Plate Glass Foundation of Pittsburgh, Pennsylvania, provides a fellowship of approximately $5,000 to be awarded through the AIAF to a graduate scholar in studies or research related to urban design. The selection shall be based on recognized academic performance which includes undergraduate courses in both architectural design and planning, and a proposal for graduate study. From the grant, a maximum of $2,400

Henry Adams Fund

RECIPIENT	SCHOOL	DEGREE CANDIDATE
Robert C. Giebner	Miami University	Graduate

Edward Langley Fund

RECIPIENT	SCHOOL	DEGREE CANDIDATE
Lawrence Atkin	Rensselaer Polytechnic Institute	Undergraduate
Paul H. Dudek	University of Arizona	Undergraduate
John M. Eggner	University of Oklahoma	Undergraduate
Walter H. Greissinger	University of Washington	Graduate
Daniel J. Huberty	Iowa State University	Undergraduate
Henry T. Irie	Western Reserve University	Undergraduate
Edward B. Jakmauh Jr.	Rensselaer Polytechnic Institute	Undergraduate
Shun R. Kanda	Western Reserve University	Undergraduate
James I. Lammers	Iowa State University	Undergraduate
Paul E. Lusk	University of Pennsylvania	Undergraduate
William V. Nelson	University of Utah	Undergraduate
Albert S. Pastine	Cooper Union	Undergraduate
William H. Small	Carnegie Institute of Technology	Undergraduate
Dale M. Taylor	University of Texas	Undergraduate
Linda L. Troxel	University of Kansas	Undergraduate

RECIPIENT	PROPOSED BY	CANDIDATE
Peter Batchelor	Henry Elder	Professional
Carl H. Pfister	John A. Russell	Professional

Milton B. Medary Scholarship Fund

RECIPIENT	PROPOSED BY	CANDIDATE
Ronald F. Katz	John W. Lawrence FAIA	Professional

Carl F. and Marie J. Rehmann Fund

RECIPIENT	SCHOOL	DEGREE CANDIDATE
Charles D. Hosford	Yale University	Travel—Finland
Mark W. Spitzer	Cornell University	Travel—Scandinavian Seminar

Dan Everett Waid Fund

RECIPIENT	SCHOOL	DEGREE CANDIDATE
James D. Altenstadter	Arizona State University	Undergraduate
Peter C. Anderson	University of Virginia	Graduate
Alan C. Balhorn	Iowa State University	Undergraduate
Robert N. Bradley	University of Virginia	Graduate
Eugene D. Cizek	Louisiana State University	Graduate
Richard A. Crandall	Syracuse University	Undergraduate
James R. Diaz	Harvard University	Undergraduate
Kenneth F. DiNisco	Harvard University	Undergraduate
Robinson Fredenthal	University of Pennsylvania	Undergraduate
Michael A. Futterman	Carnegie Institute of Technology	Undergraduate
Oliver R. Jones Jr	University of Southern California	Undergraduate
Richard B. Oliver	University of California	Undergraduate
Robert L. Pillsbury	Harvard University	Undergraduate
Harold L. Sanders	Howard University	Undergraduate
Clark J. Shaughnessy	Syracuse University	Undergraduate
Michael F. Southworth	University of Minnesota	Graduate
Wayne F. Tjaden	University of Utah	Undergraduate
James P. Warfield	University of Illinois	Undergraduate
Suzanne H. Wertz	Pratt Institute	Undergraduate

RECIPIENT	PROPOSED BY	CANDIDATE
John P. Grady	William Shellman	Professional
Mrs. Lois W. Langhorst	John L. Reid, FAIA	Professional
Buford L. Pickens	G. Scott Smitherman	Professional
Robert L. Vickery Jr.	Joseph L. Passonneau FAIA	Professional

Blumcraft of Pittsburgh Scholarships

RECIPIENT	SCHOOL	DEGREE CANDIDATE
Gilbert E. Balog	Cornell University	Undergraduate
John M. Eggner	University of Oklahoma	Undergraduate
Michael H. Finch	Clemson College	Undergraduate
Jaan Holt	Virginia Polytechnic Institute	Undergraduate
Oliver R. Jones Jr	University of Southern California	Undergraduate
Robert A. Melting	University of Minnesota	Undergraduate
Larry B. Morrison	University of Arizona	Undergraduate
James D. Reese	Pennsylvania State University	Undergraduate
William H. Small	Carnegie Institute of Technology	Undergraduate
Charles J. Van Slambrook	University of Detroit	Undergraduate

Desco International Association Scholarships

RECIPIENT	SCHOOL	DEGREE CANDIDATE
Thomas B. Daly	University of Texas	Undergraduate
Allen C. Hill	University of Pennsylvania	Undergraduate
Anthony D. Mielke	University of Detroit	Undergraduate
Richard L. Wilson	University of Washington	Undergraduate

Pittsburgh Plate Glass Foundation Fellowship in Urban Design

RECIPIENT	SCHOOL	DEGREE CANDIDATE
Francis L. Ferguson	Harvard University	Graduate
Michael L. Severin	Pratt Institute	Graduate

The Ruberoid Company Scholarships

RECIPIENT	SCHOOL	DEGREE CANDIDATE
James D. Altenstadter	Arizona State University	Undergraduate
Lawrence Atkin	Rensselaer Polytechnic Institute	Undergraduate
Kenneth F. DiNisco	Harvard University	Undergraduate
Paul H. Dudek	University of Arizona	Undergraduate
Richard A. Eribes	University of Southern California	Undergraduate
Michael A. Futterman	Carnegie Institute of Technology	Undergraduate
Howard M. Landers	Virginia Polytechnic Institute	Undergraduate
Lorrin L. Lee	University of Michigan	Undergraduate
Paul E. Lusk	University of Pennsylvania	Undergraduate
William V. Nelson	University of Utah	Undergraduate
Richard B. Oliver	University of California	Undergraduate
Albert S. Pastine	Cooper Union	Undergraduate
John J. Rakauskas	Western Reserve University	Undergraduate
Harold L. Sanders	Howard University	Undergraduate
Clark J. Shaughnessy	Syracuse University	Undergraduate
William J. Smith	University of Minnesota	Undergraduate
Clyde D. Swain	Washington State University	Undergraduate
James P. Warfield	University of Illinois	Undergraduate
Suzanne H. Wertz	Pratt Institute	Undergraduate
Frederick W. Wood	Clemson College	Undergraduate

Adolph G. Syska Scholarships

RECIPIENT	SCHOOL	DEGREE CANDIDATE
David S. Haviland	Rensselaer Polytechnic Institute	Undergraduate
James I. Lammers	Iowa State University	Undergraduate

AIA-AHA Fellowship in Hospital Architecture

RECIPIENT	SCHOOL	DEGREE CANDIDATE
Harry R. Douglass	University of Minnesota	Graduate
George W. Phipps	Columbia University	Graduate

shall be established for living expenses, tuition and fees not to exceed $1,850, and $500 shall be awarded to the host university for unrestricted use by the head of the department of architecture.

The Ruberoid Company Scholarships

The Ruberoid Company (Mastic Tile Division), by an annual gift of $10,000 to the AIAF provides twenty $500 scholarships to aid undergraduate students in their study of architecture.

Adolph G. Syska Scholarships

The Adolph G. Syska Scholarships, created by the firm of Syska and Hennessy, Inc, New York, NY, in memory of Adolph G. Syska, by an annual gift of $2,000 to the AIAF provide two $1,000 scholarships to aid undergraduate students in architecture who have an engineering aptitude and would continue studies which emphasize the mechanical, electrical and audial concerns in architecture. In establishing this annual fund, the donor recommends that preference shall be given to students displaying the above aptitudes.

AIA-AHA Fellowship in Hospital Architecture

The AIA and the American Hospital Association sponsors jointly a fellowship program (two fellowships at $3,000 each), available annually to residents of the United States and Canada and who have a first degree in architecture, for advanced study at universities that have schools of architecture and hospital administration.

A Guide for Planning the United Church of Christ

BY MILTON L. GRIGG FAIA

The sixteenth in a series of reports prepared by the AIA Committee on Religious Buildings intended to serve as guides for the architect faced with planning a building for a religious faith other than his own.

THE United Church of Christ was formed in 1957 by the union of the Evangelical and Reformed Church and the General Council of the Congregational Christian Churches of the United States. This union brought together fragments of originally more homogeneous denominations, all of which stemmed from the Protestant reformed tradition. The union was effected to express more fully the oneness in Christ of the churches composing it, to make effective their common witness and service in the world.

The uniting fellowships were the results of former unions, for in 1934 the Evangelical and Reformed Church was formed by the joining together of the Evangelical Synod of North America and the Reformed Church in the United States. The Evangelical Synod had its beginnings in Missouri in 1840, and the Reformed Church in the United States began in Pennsylvania in 1725. These groups traced their lineage to Calvin, Luther, Melanchthon and Zwingli as the definers of their faith, and their Protestant heritage was affirmed in the Heidelberg Catechism, Luther's Catechism and the Augsburg Confession.

The Congregational and Christian Churches united through the General Council of Congregational Christian Churches in 1931 and again these groups had been enriched through several previous unions. Congregationalism in America stems from the founding in the 1620's of the Plymouth Colony in Massachusetts by the Pilgrims and the Massachusetts Bay Colony by the Puritans. The Congregationalists were joined by the Congregational Methodists in 1892,

Evangelical Protestants joined them in 1923, as did the German Congregationalists in 1925. In 1820 the Christian Church united Methodists from North Carolina, Baptists from Vermont, Presbyterians from Kentucky. The Congregational Christian Churches can be said to trace their creedal tradition to the Reformation movements in England and Europe.

The United Church of Christ has been formed without breaking the historic continuity of the two uniting fellowships and aims toward the fulfillment of those things which were characteristic and which were most highly prized in both the Evangelical and Reformed Church and the Congregational Christian Churches.

The denomination is rapidly growing, it being composed now of approximately 7,000 local congregations with a membership in excess of 2,000,000.

Basic Beliefs

The basic faith of the Church is that of the Reformed tradition of Protestant Christianity. It is more precisely expressed by the 1959 testimony of the United Church of Christ given below:

We believe in God, the Eternal Spirit, Father of our Lord
Jesus Christ and our Father, and to his deeds we testify:

He calls the worlds into being,
creates man in his own image
and sets before him the ways of life and death.

He seeks in holy love to save all people from aimlessness and sin.

He judges men and nations by his righteous will
declared through prophets and apostles.

In Jesus Christ, the man of Nazareth, our crucified and risen Lord,
he has come to us and shared our common lot,
conquering sin and death
and reconciling the world to himself.

He bestows upon us his Holy Spirit,
creating and renewing the Church of Jesus Christ,
binding in covenant faithful people of all ages,
tongues and races.

He calls us into his Church
to accept the cost and joy of discipleship,
to be his servants in the service of men,
to proclaim the gospel to all the world
and resist the powers of evil,
to share in Christ's baptism and eat at his table,
to join him in his passion and victory.

He promises to all who trust him
forgiveness of sins and fullness of grace,
courage in the struggle for justice and peace,
his presence in trial and rejoicing,
and eternal life in his kingdom which has no end.

Service forms are not precisely prescribed by any central authority and there is considerable freedom and wide variety in liturgical expression. It is not possible to list with accuracy the service situations, actions, or usages which are so important to the architect. The comparatively nascent character of the united denomination at this time does not present a firm pattern of usage or requirements. More than usual inquiry into the specific requirements in any particular congregation should be one of the first considerations of the architect. It is fairly characteristic of the service to have a strong musical emphasis; in various congregations the relative importance of the choir is variously expressed; there is detectable a growing emphasis on the sacraments and the architectural expression of these. Provision for the communion and baptism, as well as the traditional strong emphasis on preaching, most frequently share relative symbolic expression. The preceding generalization on this point should be carefully checked by the architect with specific program requirements. Indeed, this denomination is in the forefront of activities reflecting its social concerns.

The Evangelical and Reformed Church always had a concern for such near-at-hand responsibilities as hospitals, children's homes, agencies for the aging and homes serving mental retardates.

On the Congregational Christian side, the American Missionary Association made history as it served the newly emancipated Negroes after the Civil War with an educational outreach that included schools from the primary level up on through college. The lower schools have since become part of the state educational systems, but there is still a special mission and financial interest in such institutions as Dillard University at New Orleans, Louisiana; Talladega at Talladega, Alabama; and Tougaloo Southern Christian College at Tougaloo, Mississippi.

There are forty-eight related colleges and seminars which claim some relationship to the United Church of Christ through the Council for Higher Education. Through this same Division of Higher Education in the Board for Homeland Ministries there is participation in Campus Ministries in forty-nine states and Puerto Rico.

The histories of the component churches have included what formerly was thought of as "foreign missions," then "overseas service," and are now referred to as World Ministries. Whatever the wording,

the United Church of Christ inherits and carries on a strong ministry of Christian world mission and world service.

In the area of Christian education relative emphasis and program specifics vary in different congregations, and the architect will be wise to require very precise program notes and localized information. In general, however, the United Church curriculum is a vision of what Christian education is thought to be. It is considered to be a fundamental statement of faith and educational theory and expresses the *faith* that God the Holy Spirit is the Educator while the educational *theory* is that persons learn within a community of faith; teaching and learning are dynamic experiences in interaction with each other; and learning involves the whole person. It is affirmed that the end product of all Christian education should be the development of Christian disciples. The concept that the educational ministry and the worship of the church proceed from a common understanding of the relationship between God and man may be said to have architectural implications. Too often there has seemed to be a quality of structural expression of worship versus Christian education; to the contrary, there is an essential unity of these two—Christian education and worship.

Church Government and Sequence of Authority

The basic unit of the life and organization of the United Church of Christ is the *local church*. The local church is composed of persons who ". . . believing in God as Heavenly Father and accepting Jesus Christ as Lord and Savior, and depending on the guidance of the Holy Spirit, are organized for ongoing work of Christian Witness." Members are admitted to the fellowship of the local church by, a) baptism and either confirmation or profession of faith; b) reaffirmation or profession of faith; or c) a letter of transfer or certificates from other Christian churches. The autonomy of the local church in the management of its own affairs is basic, including the right to adopt its own method of organization, worship and education, its own charter and name, its constitution, covenant and confession of faith, the procedure for the acceptance and dismissal of members, the choice of a pastor, the ownership and control of its property and funds, and, indeed, the right of withdrawal from the United Church of Christ without forfeiture of ownership or control of any real or personal property owned by the local congregation.

The next unit of membership is an *Association* which is composed of all local churches in a geographical area and of all ministers who have standing in that Association. The chief functions of an Association are to license and ordain ministers and to determine and certify the standing of local churches and ministers in the United Church of Christ. The Association is concerned with the welfare of all of its component local congregations and correlates their work with the Conference and the General Synod.

The next unit of membership is a *Conference* which is composed of all local churches and ministers in a larger geographic area, usually according to state lines. The Conference fulfills a distinctive role in the

life of a free church since it provides a matrix uniting the churches in fellowship and common concern with the other Christian groups.

The *General Synod* is the national representative body of this denomination and is composed of lay and ministerial delegates elected by the various Conferences. Representation from each Conference is determined by total membership of the local churches. The membership of the General Synod may vary from a minimum of 675 to a maximum of 725 representatives, and ministers may constitute no more than one-half of the delegates. This Synod meets regularly every two years. The General Synod operates between sessions through an Executive council composed of twenty-one persons elected by the General Synod.

The Executive council correlates the various instrumentalities which are the administrative or functional arms of the General Synod: Board for World Ministries, Board for Homeland Ministries, Council for Christian Social Action, Council for Church and Ministry, Council for Lay Life and Work, Stewardship Council, Office of Communication and the Pension Boards. The Council also maintains liaison with the National Council of Churches, the World Council of Churches, the World Alliance of Reformed Churches and the International Congregational Council. Of these instrumentalities the one of most concern to the architect designing for this denomination would be the Board for Homeland Ministries in whose administrative jurisdiction fall research, church building counsel, Christian education and the financing of church extension. The offices of this board are at 287 Park Avenue S, New York, New York 10010.

Buildings

While, as previously stated, program requirements may vary from congregation to congregation, the areas of activity most often fall into the four categories of worship, Christian education, fellowship and administration.

1) *Worship*—Facilities for worship should comply with usual Protestant concepts in that the church room should be of an "auditory shape" approaching a square rather than a long rectangle, since it is essential that the spoken word be heard and the entire congregation have a sense of participation. There is no mandatory choir location or stereotyped arrangement of pulpit or chancel areas. Physical provision in the form of a pulpit must be made for preaching. A lectern from which the lessons are read may or may not be required. There is a growing emphasis on the importance of the sacraments; therefore, a communion table may be required and the font at which the baptismal sacrament is conferred should be prominently located. No communion rail as such is usually required since the communion elements generally are served to the congregation in pews.

Aisling is quite flexible, a trend being noted toward the omission of the center aisle in an effort to express unity and a less broken pattern in the seating of the congregation. Acoustical considerations are important, and a reverberation time should be provided which will not inhibit articulation in the delivery of a sermon, yet not be too dampening on the music.

In addition to the usual formal worship services, the church room may be used for weddings, funerals and religious drama or pageants, and physical requirements for these activities should not be overlooked.

2) *Christian education*—Educational requirements vary among congregations. However, normally accepted occupancy figures and area requirements provide the basis for preliminary design assumptions. These should not be considered to replace the specific individually written program prepared by the local congregation.

A growing trend is toward weekday nurseries and kindergartens.

General information on Christian education requirements may be secured from the Division of Christian Education, 1505 Race Street, Philadelphia, Pennsylvania 19102.

The basic interpretative book, "The Educational Mission of Our Church" by Roger L. Shinn (United Church Press, 1962) and other resources on audio-visual and similar requirements should be checked.

3) *Fellowship*—In the area of fellowship activities, not only the traditional suppers, lectures, plays and similar expected activities must be provided for but in some instances the broader concerns of this denomination may be reflected in facilities for neighborhood social work, senior citizens as well as juvenile programs, craft activities, day nurseries, and similar activities peripheral to accustomed religious activities. Here again the architect should require a precise and detailed statement of program.

4) *Administration*—Under this heading would be grouped, along with the usual administrative spaces, a number of weekday activities resulting from the denomination's concern with community life, international affairs, racial and cultural relations, and social welfare.

5) *Other planning considerations*—The architect should check program requirements for recreation and outdoor activities, parking and any other site requirements. Since hours of services vary widely, the architect should secure an authoritative schedule of occupancy of various portions of the building before determining disposition of building elements.

Bibliography

"The United Church of Christ," Douglas Horton, Thomas Nelson & Sons (1962), $4.00; "The Constitution and By-laws of the United Church of Christ" (1963), EC-962, 10 cents, available through Central Distribution Service, 1505 Race St, Philadelphia, Pa

The following are published by United Church Press, Philadelphia:

"The Educational Mission of Our Church," Roger L. Shinn (1962) $1.50

"Nursery Manual," Louise Drew (1960) $1.00

"Kindergarten Manual," Hazel Schoonmaker (1961) $1.00

"Primary Manual," Carolyn Goddard (1963) $1.00

"Lower Junior Manual," Louise Drew (1963) $1.00

"Junior Manual," Ruth Sprague (1963) $1.00

"Youth Ministry Manual," Robert D. Deway (1963) $1.00

"Adult Manual," Walter E. Dobler (1963) $1.00 ∎

SIXTH ANNUAL BOOK SUPPLEMENT

OUR REVIEWERS

Dr Kenneth J. Conant, Myron E. Schoen and Carl Feiss are special reviewers in this issue. Others are identified by their initials at the close of the review. They are:

E.P.—Eric Pawley AIA, formerly Research Secretary of the Institute, now Professor of Architecture at the University of Southern California.

R.J.P.—Robert J. Piper AIA, Director of the Institute's Professional Practice Programs and Urban Design Programs.

P.D.S.—Paul D. Spreiregen AIA, Head of the Urban Design Project of the Institute and author, for the Urban Design Committee, of the Urban Design series, "The Architecture of Towns and Cities," which has been appearing in the AIA JOURNAL.

J.W.—Editor of the AIA JOURNAL.

Jewish Art—An Illustrated History
EDITED BY CECIL ROTH

McGraw-Hill 971 pp illus $14.95. Reviewed for the AIA JOURNAL *by Myron E. Schoen, Director, Synagogue Administration, Union of American Hebrew Congregations*

ALONG with the establishment of the state of Israel and the creation of a stable, prosperous and influential Jewish community in the United States, interest in the religious and cultural life of the Jews has quickened. The curiosity of his Christian neighbors has also stimulated the Jew to become more familiar with his background, not only to enlighten himself but the world. It is therefore an exciting contemporary phenomenon that famed British-born historian, Cecil Roth, should prepare this huge, profusely illustrated history of Jewish involvement in the many facets of art from the second millennium before the Christian era to the present.

Dr Roth cites an interesting conundrum in Jewish history—the prohibition against graven images based upon the Ten Commandments and the condemnation in Deuteronomy IV, 17-8. Orthodox Jewry still accepts this uncompromising ban. In addition, there is the more basic question of what is "Jewish art" and does it apply to the subject matter, the author or both?

Scientific explorations have begun to demolish the basis of the belief that the Jewish prohibition against representational art has its roots in antiquity. Roth's many distinguished collaborators in this book develop the story of Jewish art from the period of the monarchy to the Talmudic era with an excellent chapter on "Synagogue Architecture in the Classical Period" by Michael Avi-Yonah, director of archives in the Department of Antiquities for the government of Israel.

Jewish art from the Middle

Ages to the Emancipation, Part II of this volume, should be of interest to the architectural profession, for it is in this section that one learns the antecedents of the problem that faces contemporary synagogue designers. As Aharon Kashtan, senior lecturer of the faculty of architecture at the Israeli Institute of Technology in Haifa, states, "The architectural history of any normal ethnic or cultural group is determined by its geography, its specific climate and other local conditions. This, however, does not apply to the Jewish people, whose history extends over most continents and countries." A beautifully illustrated section by the editor himself on the ritual art of the Jews is followed by an exotic description of how the Jews interacted upon the Moslem world and its art. In the Middle Ages, the creative talents of the Jews, excluded as they were from Gentile society, were limited to the "art of the

book"—the illumination of manuscripts and books of prayer.

As religious prejudice dwindled in Europe under the influence of Protestanism, such centers as London, Amsterdam and Rome became the focal point for the work of Jewish artists. However, it was not until the period between the French Revolution and the Crimea War that the names of Jewish artists appear on the pages of history as winners of awards in painting and sculpture, and their works acquired by collectors and placed on exhibition in galleries and museums. As the Jew and his family emerged from the ghettos of Europe, they adopted the practices of their Gentile neighbors and we begin to see the emergence of Jewish portrait painters. However, the subject of much Jewish painting of this period remains scenes from the life cycle of Jewish religious observance.

"If we look for a 'Jewish architecture,' as we might look for a 'Jewish literature' with characteristic theme, spirit and function, we shall not find it; it is not there to be found." Thus, Percival Goodman FAIA begins his chapter on "The Jews in Architecture." Excluded from the learned professions for so many centuries, Jewish architecture was an art of masons, carpenters, smiths, plumbers and glaziers—all of architecture, except the plan. Yet by the middle of the nineteenth century, architects of the Jewish faith emerged. Such men as Leopold Eidlitz in New York, David Mocatta in England and George Itzig and Alfred Messel in Germany were noteworthy. More universally known was Eric Mendelsohn (1887-1953), who spent his last years in the United States and designed several significant synagogue buildings.

To British architect Jamilly Edward falls the task of describing "The Architecture of the Contemporary Synagogue." He gives us a fascinating tour of the many lands that Jews have called their home. In the nineteenth century there arose a reform movement in Jewish religious life that was to have far-reaching effects on synagogue design. Since form follows function, the effect was revolutionary and it went beyond the limits of those congregations that had reformed their liturgy. It upset a form which had been in the tradition for more than sixteen centuries. The close of World War II signaled the beginning of a new era in synagogue design—an era of larger buildings in semirural areas taking full advantage of natural prominence and beauty. Affluence also made possible a return to the ancient concept of the threefold synagogue function as a house of prayer, house of study and a place to assemble.

The closing chapters of Dr Roth's work deal with "The Jewish Artist in the Modern World." It makes it quite clear by mere numbers alone that the Jew has had an impact on the world of art since his emancipation from the ghetto. In turn it brings to the fore that most troubling of questions—is there Jewish art? "There is little or no superficial relationship in the majority of cases between the production of the numerous artists of Jewish birth or extraction, with whom this work is concerned. . . . To what extent can their production, nevertheless, be characterized as Jewish? And to what extent is it proper to speak of them as Jewish artists?" The answer to Dr Roth's question is not yet at hand, but with such scholarship as exhibited in this volume, we may well have made a beginning.

Fair Gods and Stone Faces

CONSTANCE IRWIN

St Martin's Press 346 pp illus $7.50

HERE are several enthusiastic cuts through the deck of cards and several new deals in support of a pre-pre-Columbian theory of transatlantic influence on Mexican and South American civilizations—the Phoenicians. While the style is a bit breathless, the search and documentation have been thorough, by an alert and resourceful, chair-type archeologist. The result is a kind of Enigma Variations in prose.

We do not know why the magical material of archeology has to be popularized. Perhaps there is a value in an occasional summary treatment of this kind, but it must be well written. This one loses a lot of starch in a careless statement such as, *"Cire perdue* is frequently called the 'lost wax' method. . . ."* What else!

The Phoenicians have always been a favorite people with this reviewer because they dared to set their courses out of sight of land. The theory advanced in this present book may also be so considered by the old-line shovel-type archeologists—sure to be a bunch of phoenician-blinds clattering in this fresh breeze.

The book blows south of Mexico and Central America into Peru, Kon-Tiki and all that, and one comment on Incan political technique seems worth quoting because of current application: "In order to mold the scattered peoples whom they had conquered into one vast cohesive empire, the Incan government deliberately undertook an empirewide sponging of memory. All earlier cultures must be forgotten, along with the fact that from these cultures the Incas had inherited or appropriated almost everything they possessed—except organization. . . ." They would do very well as management consultants today.   E.P.
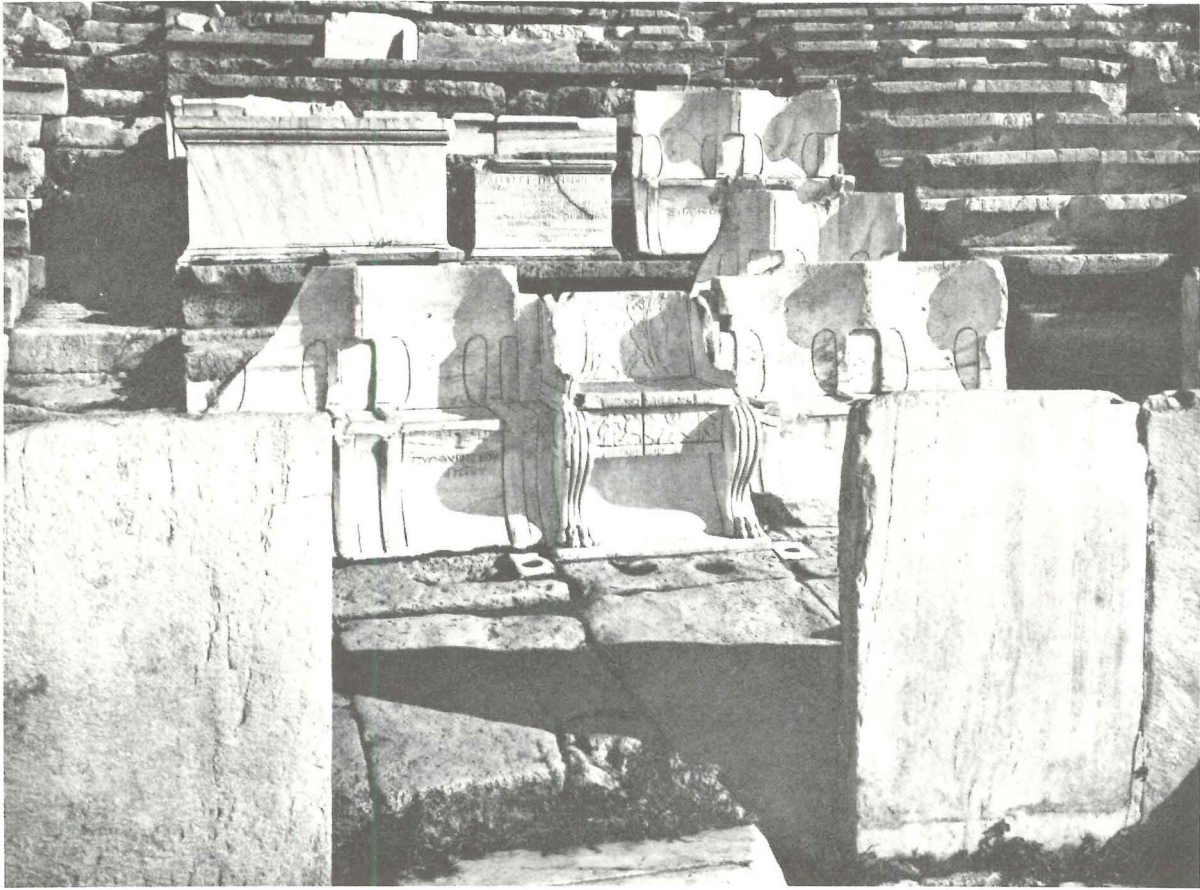
Greek Temples, Theatres and Shrines
HELMUT BERNE AND GOTTFRIED GRUBEN

Photographs by Max Hirmer. Harry N. Abrams, Inc 508 pp $30

THE CULT of ancient Greece possibly reached its peak during the past tourist season—yet it has been nearly 150 years since Byron romanticized its rocky shores. As a summer tourists' fad, its prosperous popularity may soon wane, as the fancy of the holiday trippers passes on—but to what? Who knows?—Spitzbergen maybe, or Bombay or the Congo.

But the deep hold that Greece has upon us will never wane for it is, of course, our fountainhead. No architect worthy of the title (Greek in origin) can fail to feel a deep emotional response as he turns the pages of this beautiful book. Here are 36 beautifully reproduced color photographs, 175 fine black-and-white plates, and over 150 line drawings, plans and details, as well as a scholarly text—by no means a book for the scholar but rather for the informed and appreciative amateur. It is no guidebook —nor even a lap book, for it weighs eight pounds—but it is a book to be studied on those long winter evenings *before* making that long-planned trip to the Greek islands.

The first part of the book, by Helmut Berne, who has taught at Leipzig and Munich, tells of the Greek mysteries and cults which gave meaning to the shrines and temple sites which we know so well now in their ruin. In the second part, Gottfried Gruben, of the German Archeological Institute in Athens, deals more specifically with the different building types, tracing their gradual development from archaic origins to the perfected types.

It is perhaps one of the most complete and comprehensive surveys available today, for it includes all the major Greek monuments of mainland Greece, the islands, southern Italy and Sicily, and Asia Minor. And it does all this in a beautiful format such as only "coffee-table" books usually display. This reviewer has seen no book of color photographs of Greece—and there are scores of them today—which has pictures which capture better that incredible clarity and quality of light which is the light of Greece. Perhaps if ancient Greece had been clouded by smog there never would have been the great clarity of Greek thought. But come now, that's nonsense, for nearly two thousand years later, under the gray skies of northern France, Greek thought was given a rebirth and a new great art was born. How fortunate we are today to be able to look back over centuries of the history of our art, to see it all spread out before us, as in this beautiful book. Yet we see no growth, no "improvement"; only change, and change is the eternal life of art.   J.W.

The Construction of Gothic Cathedrals
A STUDY OF MEDIEVAL VAULT ERECTION

JOHN FITCHEN

APPROPRIATELY enough, this remarkable study is benefited by a generous subsidy from the Henry Adams Fund of The American Institute of Architects. President John Noble Richards, in the foreword, remarks on the systematic and reasonable manner in which it "deals comprehensively and expansively with a subject that is certainly of interest not only to the professional architect and engineer but also to the intelligent traveler, to the art historian and to the student of Europe's cultural heritage." This praise is fully merited, and we are all in the debt of the person to whom the book is dedicated—"Leigh, who wanted to know, from the start."

The reason why we have had to wait a hundred years for a book like this is curious. Eugene-Emmanuel Viollet-le-Duc as a young architect ventured to undertake the restoration of the abbey church of Vézelay, which had been declined by the established government architect—all fearing professional disaster because the long-neglected building obviously threatened collapse. Viollet-le-Duc most brilliantly achieved its rescue. This and other work on medieval buildings attracted the interest then and brought the friendship of Emperor Napoleon III, who desired to have him present a course on medieval architecture at "the Ecole." The school administration was hostile, for Viollet-le-Duc's ideas on Gothic functionalism would certainly disturb the school's pat method of instruction. So a student demonstration was organized which filled the room at the first lecture with continuing uproar, and the police intervened.

Henry Hobson Richardson, then a youngster in Paris, was among the students who were arrested. They were not detained very long, but Viollet-le-Duc decided to resign, and he published his impressive body of prepared materials in the Dictionnaire Raisoné de l'Architecture Française du XIᵉ au XVIᵉ Siècle (10 volumes, Paris, 1854-69). Aside from a penchant which may be understood, and quite forgivable small errors, this work—amazingly—is as authoritative now as it was a century ago. But it has the defect of its quality: the dictionary arrangement is not convenient for narrative synthesis.

Mr Fitchen gives us all that is correct and relevant in the Dictionnaire, enriched by the results of studies made during the intervening generations by serious scholars everywhere, and he has produced a book whose blessed readability cannot be lauded too much. The reader soon begins to feel himself a companion to the little men who people the scaffolds and parapets of Mr Fitchen's excellent drawings, which appear throughout the text.

Even an accomplished art historian may fail when writing on architecture for architects. Mr Fitchen speaks to architects as one of their own. The main part of the book is developed simply, somewhat as a narrative, with excellent notes and a well-arranged series of appendices.

The appendices—little essays really—have great interest for specialists. Among the subjects treated is the perennial question of how the stonework was actually put into position in Gothic vaulting panels. The author rightly says the practice was not uniform, and tended always by skillful expedients in the setting to reduce the amount and complexity of the centering—indeed to avoid the use of it if possible.

This subject interests me, and I was once allowed to observe the rebuilding of the Gothic vaults of the Cathedral of Nevers, damaged by American bombers whose target was a bridge nearby. The superintendent at the Cathedral works had been interested in Viollet-le-Duc's *cerce*, an extensible supporting template intended to be hung on the ribs as a kind of bridge under each successive course. It is an attractive gadget, and Viollet-le-Duc used it in his own work, only to find his men abandoning it for humbler expedients which were more practical on the job. Doubt had been expressed since Choisy's time that the *cerce* could be used in the construction of high vaults. The superintendent at Nevers made a sincere attempt to use it, but found it unworkable. Mr Fitchen ably brings forward the reasons for this failure. Viollet-le-Duc believed that the *cerce* was used in medieval work, but he never proved it, and Mr Fitchen does not believe it. At Nevers a complete form was built, which would have served perfectly well for a fine concrete vault, and this appears to be modern French practice.

Mr Fitchen found interesting evidence in very late Gothic work for an ingenious scheme which entirely obviates centering in the vaulting severies. Since the individual courses of a severy are slightly crowned, it is possible to count on arch action even during construction. Cords tied to the roof trusses are carried to and out over the front or leading stones of an incomplete course as they advance toward one another from the abutments during erection. A weight hanging at the end of the cord is sufficient to maintain the front stone in position. When the adjoining stone has been placed, the weighted cord is transferred to it and so on until the course is complete.

By good fortune I was permitted to watch the repair of a

terra-cotta vault in Munich, at the Feldherrenhalle, where Adolf Hitler's "Beer Hall Putsch" came to an ignominious end. The deliberate young German mason working on the job, obviously with an magnificent sense of his craft, would butter the joint on two sides of a reentrant angle and on two adjacent sides of a thin brick, with mortar of exactly the proper composition and consistency. Then with a firm, decided movement he would place the brick and hold it for a moment. The brick would then remain incredibly suspended over nothing, and in a few minutes would be supporting a new neighbor placed in the same way. This process must have been quite possible with stone when the courses were thin; and indeed the structural shells were frequently little if any more than four inches thick in Gothic work. An upper integument was often added for stability and weatherproofing.

Mr Fitchen inevitably comes to grips with the problem of the origin of the Gothic flying buttress, which is still not quite satisfactorily settled. It is now clear that the first consistent monumental use of Gothic flying buttresses was at the nave of Notre Dame in Paris, about 1175. These buttresses have been replaced, leaving those at Chartres, first designed about 1194, as the oldest in this category. The first great and imposing range of dramatic and fully expressive flying buttresses was designed for the cathedral of Reims about 1211. We cannot be really satisfied until we know when and where this indispensable and characteristic organ of Gothic architecture made its début. Mr Fitchen does well to reopen the case for the abbey church of St Denis (1135-44), planned to be a novel building— and actually, because of its design, it is recognized as the first important building to be constructed in the style which we now call Gothic.

Suger, the builder abbot, has left a famous (but unfortunately a too literary and ambiguous) description of how the "principal

arches" of the incomplete apse resisted a tempest about 1143. The "principal arches" which Suger mentions have been taken heretofore to be the rib work. Mr Fitchen shows, by a very penetrating anaylsis, that this was not the case. He postulates flying buttresses and here (with one reservation) I believe that he is positively correct.

The excavations of Professor Crosby show that Suger's St Denis was planned as a five-aisled columnar basilica. Except at the crossing, which had four piers, all interior support was to be provided by four files of cylindrical columns only a foot-and-a-half in diameter. The aisle bays were to have been square and only fourteen feet on centers, with spur buttresses and (almost certainly) rib vaulting. The excavated foundations do not indicate that flying buttresses were contemplated for the nave, though by this time there was precedent for them (probably) in the great nave at Cluny as rebuilt after a fall of vaulting in 1125. However, the latter were heavy buttress walls pierced by semicircular arches, and were installed as an expedient—before 1130, presumably.

A further comparison with Cluny will help us to understand the apse at St Denis. It is important to observe that the way in which thin rib-vault construction focalizes the stresses was as yet unrealized. Therefore, if a stable apse could be achieved at Cluny without flying buttresses, they might well have been omitted at St Denis. At Cluny, as at St Denis, the apse was supported on cylindrical columns only a foot-and-a-half in diameter and it was astonishingly light and open. Under the semidome there were eleven windows, each over three feet wide, in only seventy-five running feet of curving wall. In spite of its apparent fragility, this apse, with only narrow spur buttresses, remained secure from the time of its completion (before 1100) until its demolition (about 1811). While St Denis, with its ribbed vault, may have needed flying buttresses out on its curv-

ing wall, there is now nothing to prove *definitely* that this need was understood or fulfilled.

The root of the apse was a different matter. For extra solidity the wall on the chord of the apse at Cluny had a four-foot thickness, with strong spur buttresses and a heavy parapet. Great stresses were obviously expected there. Moreover, it is not generally known that at the Cathedral of Santiago de Compostela, where the upper works of the sanctuary were put in order after a fire 1117, there are small segmental flying buttresses on the chord of the apse which may be accepted as contemporary. I examined them attentively when I measured the building and subsequently.

Mr Fitchen has clearly established the fact that Suger's "principal arches" were indeed flying buttresses. But, on the basis of the foregoing, I would limit them to the chord of the apse and perhaps the adjoining choir bays, where they are obviously prepared for in the St Denis plan. These flying buttresses would satisfy the description, for they could be seen through the windows of the then still existing Carolingian apse.

My own preference would be for a pair of extended walls at the root of the apse, pierced with arches, which would stand up handsomely beside the apse at the east end of the rectangular choir. Though a case may be made for segmental arches, I would incline toward walls pierced by semicircular arches, like those on the nave at Cluny which Suger may have observed during his visit there in 1130.

In any event, once built and thus tested in Abbot Suger's famous church, the flying buttress became an indispensable part of Gothic architecture. The fact that Mr Fitchen establishes St Denis as the locale of the first truly coordinated flying buttresses makes his book a milestone in the study of Gothic architecture. It is rare indeed to find a book of such importance which is so accessible—and so pleasantly accessible—to so wide a circle of readers.

Two Volumes on Oriental Architecture
CHINESE AND INDIAN ARCHITECTURE

NELSON I. WU

JAPANESE ARCHITECTURE

WILLIAM ALEX

Braziller 128 pp each illus $4.95

HERE are two volumes of the new Great Ages of World Architecture series to accompany the same publisher's other groups: Masters of World Architecture and Makers of Contemporary Architecture. This pair on the major currents of oriental architecture, continues with, if anything, a higher standard of scholarship than some of the "Masters" authors. The printing by letterpress and photogravure (Holland) is excellent, although some of the illustrations are small and violate scale relationships.

Dr Wu, in an exemplary concise summary of some forty pages, followed by seventy pages of well-chosen illustrations and sixteen pages of useful notes, indexes, etc, draws the essential parallels and distinctions between Chinese and Indian architecture in the symbols of the square and the circle—the Chinese walled city and courtyard house of Man's Society and the Indian *Stupa* or Mountain of God. His descriptions and inductions come from experience and study at the sites and indicate a lively awareness of contemporary architectural and psychological values. He is constantly and properly concerned with the "position and movement of man" in these special environments and thus finds their lesson for us today. Typical of his felicitous phrasing is his characterization of the Chinese house—"graduated privacy." Dr Wu's final three pages, on the Chinese garden, are a masterpiece in interpretation and communication between cultures.

William Alex, the author of "Japanese Architecture," with a background of exhibition design, study in Japan, and general editorship of Braziller's Masters series, handles this text with a balanced description of cultural assimilations and evolving national architectural character.

Again we have the ancient polytheistic pairing off of Apollo and Dionysus—here in the quieter Oriental guise of systematic Zen and intuitive Shinto. The myths and cults and arts of ages of man seem polarized in the way as even today we find the C. P. Snows fumbling rather impotently with "two cultures" of rational elder citizens deploring juvenile rebels of rock-and-roll or worse. Is there a new light in the suggestion of current science that the thirty-old particles of matter are all merely different aspects of one basic phenomenon? It sounds dangerously like monotheism. These reflections are perhaps an echo of Alex's last perceptive statement, "If Shinto and Zen Buddhism are to be called religions, then a man's house in Japan was not his castle; it resembled rather his church."

It is too bad that both books were marred by several figure-number foul-ups and typographical errors, and by divorces of illustrations from the texts. Perhaps this is inevitable in split-country publications of this sort —for which, however, we can thank the price. The books form, notwithstanding, an excellent pair of preceptive introductions, with sampling illustrations, for the more elaborate pictorial works now appearing. Good buy.

E.P.

Architecture

TEXT BY MARIO VALMARANA

Illustrations by Peter Spier. Odyssey Library, NY 95 cents

FOURTEEN pocket-size books on such miscellaneous subjects as "Arms and Armor" to "Butterflies and Moths" introduce a most refreshing publishing enterprise. All are beautifully illustrated. The one on architecture is superb. You can read it in about fifteen minutes and you will thoroughly enjoy the pictures. Chances are that you will try your own hand at a sketch or two in the same style—line and watercolor.

It is hard to think of a better capsule history of architecture. The author has succeeded in putting the essence and scope of architecture into a nutshell.

You will want several copies of this book to give to friends and will very likely want to buy several others in the series for yourself.

P.D.S.

The New Towns—The Answer to Megalopolis

SIR FREDERICK OSBORN AND ARNOLD WHITTICK

SEVENTEEN "New Towns" were in booming operation in England, Scotland and in Wales by December 1963. As of that date they totaled a population of 417,248, with 127,899 new dwellings, 251 new schools, 2,272 new shops, 580 new factories, and a wide variety of new public and cultural buildings, offices, churches, clinics and hospitals.*

The prototype of contemporary New Towns, Letchworth (not in the above figures), was begun in 1903 with private finance; followed in 1919 by Welwyn Garden City, also with private finance; later absorbed into the national, publicly assisted, New Towns program (incorporated in the above figures). Beginning almost immediately after the war in 1946, the other sixteen have been under construction and several are to all intents and purposes completed. At least three contain already a population of 60,000 or a little over. Recently the national program has been stepped up, aimed at nearly duplicating the present number of New Towns. Almost all well-known British architects and city planners have been involved in their design and construction.

In this two-part book, Sir Frederick J. Osborn provides the philosophy and history of the British New Towns movement. Arnold Whittick describes, one by one, sixteen existing Towns and two in the making. Both authors use maps and photographs. In Whittick's compendium, the American architect may be surprised at the variety and freedom of design in both site plans and architecture. The illustrations are factual and tell an exciting story in sober and convincing British understatement.

* All figures from January 1964 issue of *Town and Country Planning*, pp 36-37

On two recent trips to England and Scotland, I have had the opportunity of visiting a number of the New Towns, several in the company of Sir Frederick and several with the Towns' architects and planners. Some have been revisited at least once. I have not been to all. My first visits to Letchworth and Welwyn Garden City were in 1937 with Sir Raymond Unwin, the co-designer of Letchworth. Therefore, while I cannot speak with authority, I can speak with an interested American's familiarity with this extraordinary British experiment that is no longer an experiment but a tried and proven course of action. Having also familiarity with the literature on the subject, I do not hesitate to comment on the book reviewed here.

Sir Frederick has been the foremost promoter of New Towns since he was appointed estate manager and secretary of the Welwyn Garden City Company by Ebenezer Howard in 1919. Howard was the inventor of the whole idea in 1898. Osborn has been, since Howard's death in 1928, the worthy torch bearer of the cause. Through his Town and Country Planning Association, founded by Howard in 1899, in the company of many of the great political names of Britain's last sixty-five years, Osborn has increasingly argued, promoted and convincingly demonstrated the essentiality of a planned dispersal of Britain's overburdened cities into New Towns. His Association through all this time has been a powerful, efficient, highly skilled and well-ordered "lobby." Nothing like it exists in the United States but then we have no one like F. J. either.

F. J. writes with brilliance, enthusiasm, candor and wit. Few books on so weighty a subject, filled with names, facts and financial detail, read like an adventure story. This one does. One is astounded by the endurance, conviction and sheer capacity of the man and his associates who, despite two devastating wars, several depressions, political crisis and plain bad luck, fought for an idea and won hands down. Few men who dreamed this kind of dream have lived to see the dream a proud reality. F. J. writes the story as no one else could. With Whittick's descriptions of each New Town and the accompanying illustrations, we have a well-rounded statement of philosophy and fact growing out of sequences of events that, while unique to Britain, have direct bearing on other urbanizing countries; in reality, the whole world.

Without reservation I recommend the book to all architects and planners and as a textbook in the professional schools. F.J., who knows the US well, is not parochial in his British approach. It is very British and written primarily for that audience. However, there are references to the conservatism, our ineptness in organizing to meet our own national urban problems and our fundamental lack of leadership at all levels of private and public enterprise. The first New Towns, both successful, Letchworth and Welwyn, were built with private capital. The New Towns Act of 1946 designated nineteen government-sponsored New Towns. In all our political history, we built only one at the TVA, three for the Atomic Energy Commission and three for the Suburban Resettlement Administration. Only two of these are truly self-sufficient in the British sense. Private enterprise built a successful one, Kingsport, Tennessee, in 1916. There have been a few private stabs since then, but hopefully several now underway on the East and West Coasts and at least one in Texas will turn the tide of interest and generate genuine thinking and action.

There is no reason to consider that an American program of whatever name would or could

be directly derivative of the British. The Scandinavian program is not. Nor are those in France or the Netherlands. Each country has its own governmental structure, its planning and architectural vernacular, its living and working habits, its own transportation problems and its methods of play.

Architecturally, the British New Towns derive from Cotswold domestic architecture with influence of the rational romanticism of Sir Raymond Unwin's urban design and site layout. This is changing as newer treatments are tried. Cumbernauld New Town, near Glasgow in Scotland, is a complete break away from the Garden City plans, densities and styles and if completed as now planned (it already is occupied by about 15,000 people), will be an exciting test of new designs. Whittick, an experienced architectural editor and writer, gives running commentary on design. His selection of material on schools and shopping centers is good and warrants close scrutiny.

Every American architect and planner should familiarize himself with the persuasive arguments for New Towns used by Osborn. These arguments are summed up in Chapters 8-11.

A draft of Federal legislation related to planned new communities was submitted to the Congress as part of the Administration's recommendations for the Housing Act of 1964. While the proposal was not adopted, the matter is very current and will come up soon again in some other form. It behooves every American architect and the AIA itself to take an active interest in the subject. The Osborn and Whittick book is bedrock on which to build ideas and programs and is timely indeed.

Constantinos Doxiadis
MASTER BUILDER FOR FREE MEN
PHILIP DEANE
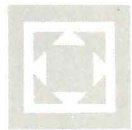
PERHAPS a biography of Constantinos Doxiadis is a little premature, but in any case, here it is—and one must admit, it makes good reading. The author is apparently an old friend and admirer, who recently resigned as director of the UN Information Center for the US and Canada in Washington to become secretary to King Constantine of Greece.

Author Deane (né Gigantes) presents the architect-planner frankly as a controversial figure. Unfortunately, the first third of the book is marred by the author's rapt and gushing style as he recounts Mr Doxiadis' wartime exploits and his early ups and downs. Many readers may be tempted to put the book aside at this point, fed up. Mr Deane does his hero a disservice in this respect. It is in no way a disparagement of Mr Doxiadis' great services to his country to wish their story had been told with greater detachment and restraint. So, reader, be forewarned and persevere, for the rest is excellent reading.

Having built up his subject, Mr Deane proceeds to tear him down with a few critical comments of his own and some by former associates and other architects. One unnamed practitioner says: "I have no quarrel with the avenues that Doxiadis explores; I just feel he does far too many things at once, spreads himself so thin that the quality of the work, especially the detailed execution of the work, suffers. . . . His newsletter is written like a courtier's adulatory chronicle of the absolute monarch's achievements. This sort of thing gives our profession, especially in America, the uneasy feeling that Doxiadis is too much of a showman. . . ." Chloethiel Woodward Smith FAIA is quoted at length, and she accuses him of "using the old snake oil technique." She says, "Architecture is for people. We all agree. But Doxiadis has to present this simple truth as if it were his own, as if he alone knew it and the rest were dopes. And the uninitiated assume that there is something terribly important that only Doxiadis has, and others do not have. All he has is the guts to commit this sort of talk to print."

On the other hand, Charles Blessing FAIA, AIP is quoted as saying that Doxiadis has perhaps exerted as an individual "a more marked and beneficial influence for the betterment of developing nations than any other planner. . . ." And Edmund N. Bacon AIA, AIP says Doxiadis "fills a gap, a very important gap, which no one else has previously entered. This gap is the great no-man's-land between architecture as it is currently practiced and city and regional planning in their customary abstract and dematerialized form. . . . Both architects and planners criticize Doxiadis for other than top-level performance in their respective fields, a criticism that is sometimes borne out by the facts. However, the usual intent of the criticism is to try to break down his scale of operations altogether. This is extremely foolish because the kind of services which he renders are profoundly needed, and those who are dissatisfied with what Doxiadis does would be better advised to move into his field themselves and provide the level of services which they think proper."

This reviewer received a postcard a few days ago from Martin Beck FAIA of Princeton. It was postmarked Athens, and he

said he had just paid a visit to the Doxiadis' office; Mr D. wasn't there, but one of his associates took him on a tour of the offices. Martin said it was a marvel of efficiency—"comprehensive services on the broadest scale long before the AIA ever started talking about it."

One chapter tells the story of the first Delos Symposium, held last year on a cruise ship in the Aegean. Some of the discussions between such figures as Ed Bacon, Bucky Fuller, Sir Robert Watson Watt, Charles Abrams, and Margaret Mead, are quoted at some length—all very absorbing stuff. As for the symposium itself, showmanship or genuine contribution to society?—the author presents both views. Possibly results from the second and third, and probably subsequent, symposiums will tell.

So there it is—you pays your money and you takes your choice. Showman perhaps, but no charlatan. And if the man can sell the need for planning to the public and to governments—and this he is accomplishing—perhaps the profession should listen to him.

The best part of the book is the six or eight pages in which some of Doxiadis' ideas are set forth, and as this reviewer has said before in these pages in writing about this same man, ideas are the salt of this life. Doxiadis is possessed with a feeling of crisis. Listen to him: "If we are called to give major answers to major problems, we act on intuition. It may take scholars the next twenty to forty years to know for sure what must be done. But in this period humanity will put up its greatest number of buildings; that is the crisis. . . . Buckminister Fuller has computed that it takes twenty-two-and-a-half years for an idea to be accepted—and remember that Spain will double the size of her cities in fifteen.

"We cannot wait for absolute certainty. We will act, and in the process we will bury values that are worthwhile. We will bury the diversities of localities and of regions. . . . But the charm of diversity . . . cannot stand against the urban tide. There is less and less space or time for diversity now. . . . The luxury of time is denied to us today."

And to quote the author: "Is all this nonsense, cleverly phrased appeals to the public's natural love for grandiloquent generalities . . .? Or is there something in Doxiadis, in his background, his experience, that has enabled him to take ideas—many of them quite old—and string them together into a new synthesis that makes sense for our station in history?"

First, this is really a fascinating book. Secondly, despite its overly romanticized approach in the beginning, it is on the whole a fair appraisal of a complex and brilliant personality and there is sufficient factual information furnished, and enough pro and con comment, to enable the reader to draw his own conclusions about the value of Constantinos Doxiadis to the profession and to the world. Anyhow, the next few years will tell. J.W.

New York—People and Places

PHOTOGRAPHS BY VICTOR LAREDO, TEXT BY PERCY SEITLIN

Reinhold 192 pp illus $12.50

YOU don't have to be an expatriate New Yorker to enjoy this book, but such unfortunates will get a great nostalgic lift out of it. It is good, too, for those many visitors to the mother city of the USA who come away saying "Well, it's a good place to visit, but I sure wouldn't want to live there." Alas, the poor benighted souls saw only the gloss and glamour, the tourist sights and hot spots. This book will show them New York as a great big neighborhood full of *people,* all kinds of people—businessmen and sleek secretaries, children and fish peddlers, artists and booksellers, garment workers and students; old folks sitting on benches on upper Broadway, kids playing ring-around-a-rosy on the Staten Island ferry, a festa in the Italian district, a medicine man giving his pitch in Harlem, and all the swarming street-life of the magical city.

But hold, the above sounds like Jane Jacobs. For the readers of the AIA JOURNAL, there is another interest to the Laredo-Seitlin book: It was started by Victor Laredo as a collection of photographs of the fanciful building sculpture of New York —caryatids and consoles, key-

stones and newel posts, high-relief figures reclining precariously on arched window heads, cast-iron gryphon fence posts, the angels high in the spandrels of New York's only Louis Sullivan builing, fine doorways, the richly modeled terra-cotta ornament of fifty years ago, and more and more and more, all beautiful photography and beautifully reproduced (printed in Holland—that's probably the secret).

But not to overlook Mr Seitlin's fifteen essays: During his working hours Mr S. is a blurb-writer for architectural products; on his days off he writes poetry and short stories and such delightful and observant essays as these New York pieces full of history, nostalgia and very acute observation.

Get it; it's a swell book. With all their faults, we love our cities, dirty face and all! J.W.

Shaping Tomorrow's Landscape

EDITED BY SYLVIA CROWE AND ZVI MILLER

Vol I, The Landscape Architect's Role in Conservation; Vol II, The Landscape Architect's Role in the Changing Landscape. Djambatan n.v., Amsterdam illus, Hf. 65.00 (Dutch florins)

ABOUT thirty papers read at the eighth biennial congress of the International Federation of Landscape Architects in Israel last year form a very handsome and provocative pair of books. At long last man is becoming aware of the shocking devastation his kind is increasingly wreaking on nature wherever his civilizing influence spreads. Man is himself a part of nature, but only late in his development has it occurred to him that he is, or can and should be, a thinking and guiding member of the earth's natural ecology, rather than a destructive one.

Volume I deals primarily with landscape conservation, opening with papers by G. A. Jellicoe, Bruno Zevi and Sydney N. Shurcliff. Hubert B. Owens of the University of Georgia speaks of preservation in urban and rural areas, and Akira Sato tells of the struggle to retain parks and green spaces in population-exploding Japan. Britain's National Trust was founded in 1895 as a nonprofit, philanthropic organization. It now owns over 1,-000 properties, comprising 300,-000 acres of land—which include many of the finest of the great houses of England. As related by Brenda Calvin, Trust properties include everything from Hadrian's Wall in Northumberland and the complete village of West Wycombe in Buckinghamshire to the home of Bernard Shaw and thousands of acres of productive farmland. This is truly preservation on a gigantic scale.

The stories are told of the national parks of the USA, the rural and forest lands of Spain, the recreation areas of Norway and the old city quarters of France. Georg Boyl of Denmark, closes Volume I with a paper on the education of the public, discussing the three educational levels, with wise words on how to reach and instruct each.

In speaking on "The Manifold Landscape Design," in Volume II, Francisco C. Cabral of Portugal says, "It [urban development] is one of the very delicate points in connection with the preservation of older parts of the towns and also of ancient villages and rural scenery. I think we must approach this aspect with loving care for the old, though making place for the new." And later on he says, "We are not only concerned with conservation, but trying to achieve a new balance of nature that integrates the modern activities of man and his way of living."

Much of the Netherlands is already under planned landscape development, and the article by Roelof Jan Benthem, with its illustrations, shows the verdant landscape achieved in eight years in the planting of farmlands reclaimed from the Zuderzee.

Jean-Bernard Perrin, in speaking about suburban landscape and the haphazard location of subdivisions, destroying the very natural beauty which attracted them in the first place, says, "One notes a serious deterioration of the natural landscape at the very time when the increasing density of the urban population requires a greater effort to preserve existing amenities and to create additional green spaces."

There is a particularly good illustrated paper on "Traffic and the Landscape" by the Swiss landscape architect, Walter Leder, and several papers on the problems peculiar to the barren country of Israel. Tropical countries, the St Lawrence Seaway and TVA are also discussed before Arthur Glikson sums up, "The regional landscape planning demands from the architect a dual approach to his problem, the approach of preserving landscape values and the approach of creating new landscape values. Creative designers should be equipped to achieve this balance."

Although these books may seem to be directed primarily to the professional landscape architect, there is much information, guidance and wisdom in them for the architect concerned with planning and conservation. J.W.

Cluster Development

WILLIAM H. WHYTE

American Conservation Association 130 pp illus $3.00 (paperback), $6.00 (hard cover)

THE CLUSTERED arrangement of houses is one of those new-old ideas for community planning that can reduce road and utility outlays, provide common green space, help maintain value—in general, improve the form of the residential neighborhood.

William H. Whyte, who co-edited the "Exploding Metropolis" a few years back, has studied cluster development in depth.

His findings take the form of recommendations on background, economics, esthetics, community attitude, mistakes, market, public response and legal considerations. Specific examples are analyzed, homeowners' associations discussed, and a brief is filed for more imaginative open-space handling. There is no question that the cluster idea is a good one. Anyone who embarks on their production should read this very well-illustrated book. P.D.S.

Contemporary Architecture in Germany

ULRICH CONRADS AND WERNER MARSCHALL

THIS IS a dandy cross-section of 1955-1961. The introductory text consists of two evaluative essays with concise comment on recent historical background and post-war socio-economic influences. These miniature essays (nine pages) are perceptive and objective to a degree not found in their counterparts in American publications and set the stage for understanding the work illustrated.

An important distinction is made between Federally controlled housing under strict regulation and simultaneous private work in a boom. Article 14 of the German Federal Constitution includes the statement, "Property implies responsibilities. It should be used to served the community. . . ." Conrads reports this with the comment that ten years of practice have not given "concrete substance" to this ideal, and elsewhere (in a sentence rather garbled in a too literal translation) implies that independent design, a natural reaction to a decade of violent centralization, is being practiced to excess.

The question here is a central problem of town design everywhere: How much control vs how much self-discipline and responsibility for total effects—client and architect both?

Marschall, author of the companion essay, sees the town still formless, the potential quality lacking, but without being sentimental about it finds some reassurance in new church architecture. His comment that "Poetry has never done architecture any harm. . ." seems not wistful but aware of potentials of expression.

The examples: Some 500 photographs on slick paper, clear plans each with a meter/foot graphic scale, have exemplary German and English captions and keys, credits and dates— good consistent reporting in detail. This is a far better job of editing and proofreading than previous publications of this sort. Architecturally, some of these examples are quite dull, some hard-edged examples of "less," many well-studied in plan and proportions, several bold and exciting.   E.P.

Candela—The Shell Builder

COLIN FABER

APPARENTLY Felix Candela is the kind of man who would eventually succeed at any very difficult task, given the opportunity to perform. Trained as an architect in Spain, an avid rock-climber, skier, rugby player, track star and then soldier, Candela left his native Spain to arrive in Mexico in 1939, an expatriate Spanish Royalist. His story from that time through his development of shells reads like a movie script.

"Candela: The Shell Builder" is a first attempt at putting together in one volume the work of this master of shells. On the bookshelf it belongs alongside similar volumes on Maillart, Torroja and Nervi. (Somebody missed a great chance not doing a book on Eiffel.)

This book has a foreword by Ove Arup and an introduction by the author, Colin Faber; both are excellent. Following that we are taken on a chronological tour of Candela's work. This amounts to the development of five major shell-types:

1) Fairly flat umbrella-like shells with various kinds of edge beams

2) Shells with very steep sides where the shell itself curves down to the ground

3) Shells without edge beams where the intersections or groins act as stiffeners

4) Shells with complex axes, which complicate the analysis

5) Shells with very thin edges and without secondary ribs or supporting groin elements. These are really pure shells and, at this point, represent the ultimate refinement of Candela's work.

Candela did not neatly advance step by step through these five types. Rather, he worked on all these types on a variety of buildings, learning lessons from one which could apply to another. In fact, his development was a combination of advancing practice with theory, never letting one get away from the other.

Probably no one has as much grasp of the theory of shells as Candela. He sought out every document ever written on the subject and scrutinized his collection laboriously. Aided by his sharp sense of reasonableness, he discarded what he realized was theory aside from fact. The elastic theory of concrete, that was so elaborately garnished with lengthy formulas, was to Candela meaningless, because concrete just does not act the way the elastic theory assumes. And, if it did, it would not matter anyway, since there is a much more workable and appropriate system of analysis: the statical approach.

The literature which analyzes the statics of concrete—the behavior of forces in different shell concrete shapes—is a matter-of-fact description in the language of mathematics of what forces are doing inside a concrete shape. With his knowledge of the

considerable documentation of these analyses, Candela could select the analyses which were most appropriate to the work.

When he started to achieve recognition Candela was believed to have disdained all mathematical analysis. This was not so. What he had done was to reject many entrenched systems of design which he knew were unsuitable. He has always used mathematical analysis—and usually a rather sophisticated type—but it was indeed always a mathematical analysis which made real sense.

The reader gets this information as he reads through Faber's book. A synthesis of descriptive text, remarks by Candela, mathematical analyses, criticisms and points of emphasis, drawings and photos—from this the soundness of Candela's thinking and accomplishments are absolutely convincing.

There are a few shortcomings in the book. This reviewer does not have enough mathematical knowledge to judge how well the mathematics are presented, and there is much of mathematics in the book. Some terminology is puzzling. Perhaps one looks for an easy way to design a shell by himself, but apparently it is not that simple. Maybe that simplification remains to be made in the future for ordinary mortals.

Architects have much to learn from the well-chosen bits of Candela wisdom. For example, Candela feels that Mediterranean architecture is really the most functional since it does not make any abstract impositions on design. This man who feels himself to be less and less an architect in the common sense may be a prototype architect of modern times. He synthesizes reason, science, art, construction and know-how.

Special kudos should go to Francisco Fuentes and Fernando Mata who made the drawings. They are nothing less than exquisite. The bibliography is well-stocked with references to Candela's analytical sources.　P.D.S.

Shell Architecture

JÜRGEN JOEDICKE

ESSENTIALLY we all need a Kidder-Parker handbook for thin-shell concrete architecture. Still we may never get one because this field simply may be impossible to treat this way. In its place we may have to content ourselves with comprehensive works which attempt to put all aspects of thin shells into an orderly package. That is what Jürgen Joedicke attempts in "Shell Architecture."

This book is too large a work to judge by a simple "thumbs-up" or "thumbs-down" response. It has its good points and its bad ones and we hope the following comments will serve to point out what is useful in the book and to avoid in some future work the shortcomings of Joedicke's opus. First, let's examine the positive and commendable features.

It is the most comprehensive work on thin shells to date. It is well illustrated with fine photographs, detail drawings and diagrams. Every possible type of thin shell is illustrated by one or more examples. Every example is described briefly and references for further reading are presented in readily available sources. The book starts with a good capsule history of shell construction—mostly in Germany.

A simple working definition of a thin shell is given: a rigid structural system which is very thin and carries both compression and tension. A vault, in contrast, carries only compression and a web, only tension. Thus, a true shell does the most by way of carrying load.

As an advance in structural technology the thin shell is appropriately compared to airplane construction. Early airplanes, like the Wright brothers' bone-and-skin structure, are very primitive in comparison with a
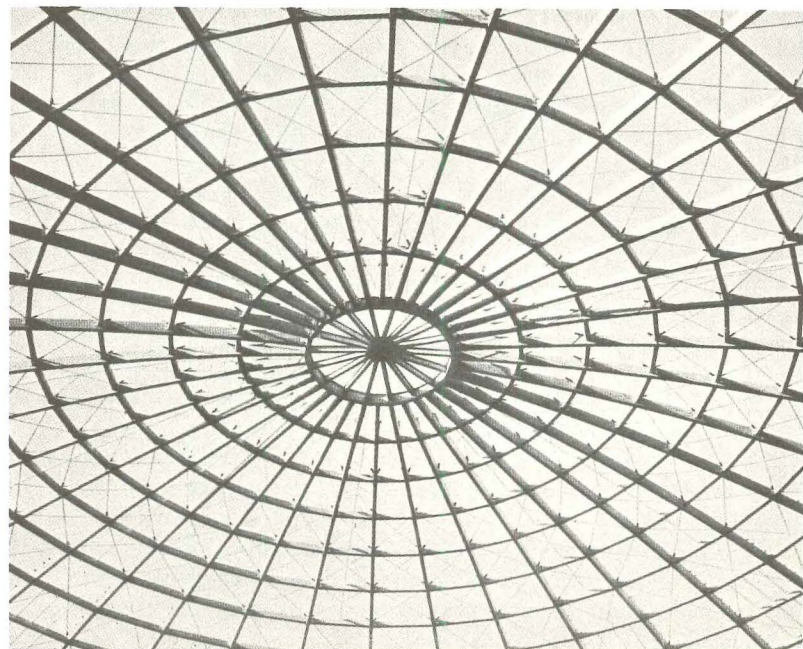
modern jetliner, whose structural strength comes largely from its warped skin surfaces. Joedicke calls the Wright brother's type a linear structure and the jet type a shell.

Continuing with the book's commendable points, we are given a simple classification of shell types: 1) shells with a single direction of curvature—such as a tube; 2) shells with two directions of curvature, both in the same direction—an eggshell; 3) shells with two directions of curvature in opposite directions—a potato chip. Further, these curved surfaces can be formed by: 1) rotating a curve about an axis—such as an eggshell; 2) advancing a curve along a curved path—an arched rib; 3) ruling a series of straight lines which form a curved plan—the hyperbolic paraboloid.

At the beginning of the book, when these points are well made and easily understood through text and pictures, we feel sure that we are being well informed. But as we continue reading we feel less sure that we are getting all the facts, or indeed that we understand the reasons for a bend in a shell's edge here, a steel rod there, or a particular problem of a particular shape. These uncertain feelings are due to the shortcomings of the book.

The basic shortcoming is that the book fails to be either a generalized simplification of the forces at work in shells or, on the other hand, a precise analytical treatise such as in a Kidder-Parker. At the begininng of the book some generalized force diagrams, almost cartoon-like, give a vivid impression of the forces operating in a particular type of shell. The author should have played this aspect to the hilt, for it is this which the average architect can best understand. A suggestion of the other extreme —detailed mathematical analysis —is barely hinted. The reader is left up in the air. He feels that he has been given a look through a crack, but the whole view is reserved for experts of another breed.

Early in the book the author offers a very sound discussion of shells in the urban scene and shows a responsible sense of urban design. He apologizes for omitting his chapter on shell esthetics, which is most unfortunate since shells are a major type of structural expressionism.

A real danger with shell development is that it may become either structural technology alone or, as often, visual nonsense. No one would ever think of discussing structure in classical architecture without discussing it as a system of visual design—design for the eye of the beholder. Neither would we consider Gothic architecture without thinking of an architecture of stone craftsmanship and technology. In one case, then, should we be left with the impression that the esthetics of shell architecture is only subjective? It is, without question, a matter of consideration along with cost, placement, details and everything else involved.

Over-all, Joedicke has given a fine catalogue of work, but the great work on this subject is, we are afraid, yet to be written. The book is, nevertheless, a useful addition on structure.   P.D.S.

PAPERBACKS

PAPERBACKS come drifting to the AIA JOURNAL's book review desk throughout the year. We list a few below, but will not attempt to review them, for most of them are standard or well-known recent works—and some have already been reviewed on these pages. However, readers may be pleased to know they are obtainable in inexpensive form:

W. W. NORTON

Heavenly Mansions—and Other Essays on Architecture. John Summerson. 253 pp illus $1.35

Arts and the Man—A Short Introduction to Aesthetics. Irwin Edman. 154 pp. $1.85

The City Is the People. Henry S. Churchill. 205 pp illus $1.85

Louis Sullivan—Prophet of Modern Architecture. Hugh Morrison. 317 pp illus $1.95

Christian Art. C. R. Morey. 120 pp illus $1.25

PENGUIN BOOKS

Three books by Nikolaus Pevsner: *The Englishness of English Art,* 229 pp illus $1.85; *Pioneers of Modern Design—From William Morris to Walter Gropius,* 254 pp illus $1.45; *An Outline of European Architecture,* 496 pp illus $2.25

A trilogy by Peter Blake: Le Corbusier — Architecture and Form, 159 pp; *Mies van der Rohe—Architecture and Structure,* 124 pp; *Frank Lloyd Wright—Architecture and Space,* 138 pp illus $1.25 each

The Gothic Revival. Kenneth Clark. 218 pp illus $1.45.

DOVER PUBLICATIONS

Two histories by Arthur M. Hind: *A History of Engraving and Etching—From the 15th Century to the Year 1914,* 487 pp illus $2.75; *An Introduction to a History of Woodcut,* two volumes 838 pp illus $2.50 each

OTHERS

When Cathedrals Were White. Le Corbusier. McGraw-Hill 217 pp $2.25

The Cathedral Builders. Jean Gimpel. Evergreen Profile 192 pp illus $1.35

The Art Criticism of John Ruskin. Edited by Robert L. Herbert. Anchor Original 430 pp $1.45

A Pictorial History of Western Art. Erwin O. Christensen. Mentor Original 479 pp 95 cents

The Attitude and the Team

A GREAT deal of thought is being given to the subjects of architectural education and registration. The resulting talk is shaping a long-range concept of a single design profession, educated in a single educational process and subject to a single registration.

The concept of education is essentially that recommended by the Special Committee on Education (April 1963 AIA JOURNAL). In a nutshell, this report says that the schools must offer a basic course for all would-be creators of buildings and cities, supplemented with advanced specialization in design, engineering and technology, or the business aspects of architecture.

For many architectural schools, this will mean amplification of their courses beyond their present strong emphasis upon design. It will mean the combination of courses now often taught in engineering schools with curricula in architecture. Business courses will be relatively new.

The discussions of this most important idea are, of course, including architectural educators (ACSA) and the accreditors of architectural schools (NAAB). Last July a meeting took place at the Octagon to explore these new educational ideas in depth and to develop an understanding for their implementation.

The educators were heads of schools interested in modern approaches to education. In general they endorse the proposals of the Special Committee on Education, though they can point out many problems to be solved in curricula, faculties and teaching before the new schools attain the character and quality recommended by the Committee.

Nothing seemed amiss in this dialogue until one of the deans made a (to me) startling statement. He put it this way: "Suppose we could offer these new specializations this September. Suppose some of our students could elect to specialize extensively in technology or business. Few would have the courage to do so because **the attitude** of today's students and faculties is so strongly oriented toward design that the students in the other specializations would feel like second-class citizens in architecture!"

Zowie! I am perfectly convinced that the dean zeroed in upon the greatest obstacle to significant changes in architectural education. Just to make it clear that he didn't consider **the attitude** peculiar to education, the dean alluded humorously to the time when varicolored ribbons for fellowship could have seemed to make fellowship for design "the first prize."

Attitudes can be demonstrations of powerful forces for a status quo as in the attitudes of large blocks of population toward liberal acts of national legislation.

So **the attitude** in architecture, most openly expressed in the schools, is that the designer is the only first-class citizen of the profession!

Is this really true? Isn't there something wrong here? Is the designer on a pedestal? I maintain that we have *good design* on a pedestal—and it belongs there as the ultimate achievement of our profession.

Among the Institute's highest honors are the Honor Awards which recognize brilliance in design by *firms* of architects. Today's firm is a **team.** An award-winning firm comprises men who know how to sell the client on good design, men who create good design, men who create sound buildings and men who make them economically feasible. On rare occasions all of these talents exist in one man, but usually the total creative talent is that of a **team.**

The new concept of education is to bring more men out of the schools educated to win varsity positions on the team.

If **the attitude** is to be overcome, we must recognize the full professional citizenship of every member of the team. If we can foster this recognition in the schools, the rest should take care of itself.
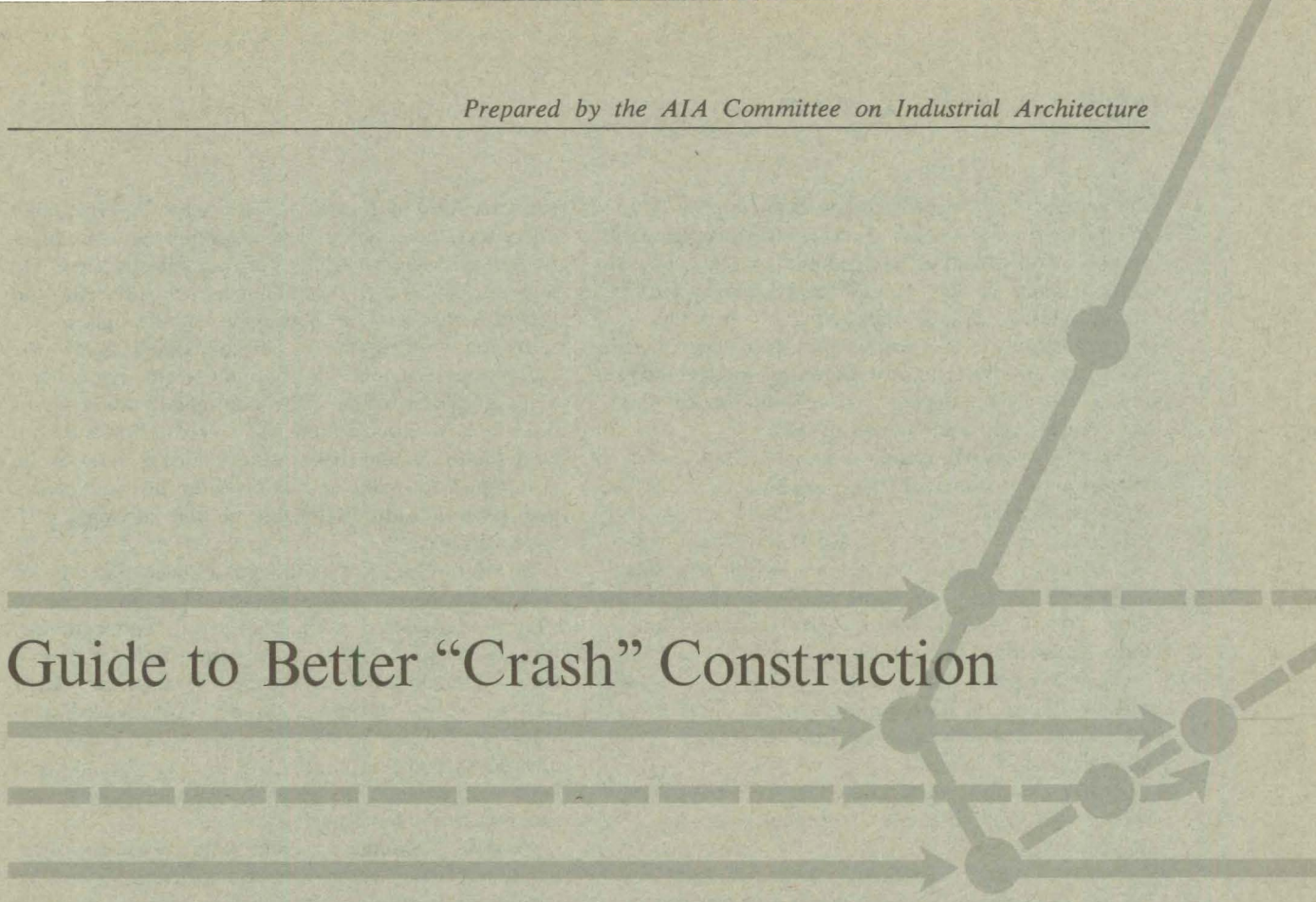
This new concept of education is grand in every dimension, visualizing architecture as the art, science and business of providing mankind's total physical environment.

It would mold into one design team the talents now scattered among several design professions. Unquestionably it would draw closer together students of architecture and those phases of engineering that deal specifically with building.

Our fellow professionals in engineering express alarm over the attraction that the glamor of space-age engineering has for freshmen in engineering. Some young men who would make good team material for environmental design go down a path that removes them permanently from building science.

We can and must show the college freshman the inspiration and the glamor to be found in being one of the **team** that creates man's new environment through architecture. w.h.s.

Guide to Better "Crash" Construction

How companies can

expedite construction of their buildings

and ensure earlier occupancy

BUSINESS is constantly faced with the need for building construction whether for additions, remodeling, new buildings or complex plants. It is increasingly apparent that, more often than not, once a decision is made to build, company management wants the construction completed as quickly as possible.

This demand may be the result of several factors: perhaps the company in question needs to get a new process in operation before its competitor; it may be opening a market in a new area; a lease may be expiring in a present facility; it may be a case of desiring a minimum tie-up of capital. Whatever the reasons, the demand for speed must be met.

You and your staff can best anticipate, from sales through production, your growth pattern and can project your growth size in terms of existing facilities. These things you must do, and thoroughly. You, as the owner, have a tremendous stake in planning and programming your new facilities for expansion. You must make sales forecasts, purchase equipment, program manpower, design process equipment and gear hundreds of items to the new production for increased volume. At the same time, if your plant or warehouse, research or office facility is not efficiently planned and if it is not in production on schedule, your money loss can be severe and sometimes ruinous.

Because of the overpowering demand for speed, many corporations launch into construction programs without proper planning, sometimes without firm knowledge of the ultimate project cost. Quite often, when this happens, many stumbling blocks arise which, in the final analysis, delay the completion of the project beyond the normal time of completion had the project been properly planned at

the outset. After a project has been approved and the premature go-ahead given by top management, troubles often start. A hitch in the zoning approval, complications in the site utilities, problems resulting from building code requirements or insurance requirements, items of incomplete process design which effect the structure or cost exceeding budget—these are a few of the types of stumbling blocks which can cause delay and mounting costs.

Many industrial corporations planning to build recognize that some of these problems may arise. Even though their staffs are up to their ears in other problems, they attempt to solve them themselves at the outset of the project. Others, without preplanning, attempt to solve some of these problems as they arise. Few realize that their architect, through long experience, has intimate knowledge in these areas and is ready and willing to accept these responsibilities. Even if they commission an architect at the outset, few clients take full advantage of his know-how and abilities.

A few examples illustrating the type of problems which arise and methods of solving these may be helpful:

Zoning: Before scheduling a project—certainly before submission of the project to top management for approval—be certain that all zoning matters have been cleared. In one instance recently a national manufacturer had given his architect a release to proceed when the architect found that the rezoning which the manufacturer had thought was routine would involve several months' processing. The result: a three-week delay searching for an alternate site.

Building Codes: Before getting deeply involved in preliminary layouts and selection of materials, know the impact on the project of all local and state governing codes. One corporation turned over to its architect preliminary drawings prepared by its own engineering staff. The company assumed that it had saved valuable time by completing its own preliminary study. However, in the first meeting with the company's representative, the architect, familiar with local building requirements, pointed out that for the occupancy and type of construction planned, the desired open floor area was not permitted. The company could not tolerate dividing firewalls, and time-consuming appeals were necessary to solve the problem.

Site Analysis: Before finalizing the plant layout, consider carefully the contour of the site. This sounds like a basic, obvious rule, but it is too often violated. Drawings were issued for contractors' bids by one company which had not fully studied the site. Not until the inflated construction bids were received did the company realize that excessive cut and fill on the site made the project on that site unfeasible.

A distributing company on the East Coast about to start construction of a new warehouse discovered that the state highway department had unannounced plans to reconstruct the main road in front of the property into a limited-access highway. A lengthy delay was encountered in working out with the highway department suitable access to the property. On any site the future development of adjacent and access roads must be investigated at the outset.

If you contemplate a railroad siding, know the requirements of the railroad involved. Preliminary plans prepared hurriedly by one manufacturer's staff did not take into account such requirements. Before construction could begin, the building had to be redesigned to make it narrower to provide grades and turnout radii acceptable to the servicing railroad company.

Site Utilities: Not long ago a nationally known electronics manufacturer purchased a large site at what it considered a bargain price. The company was in a rush to start construction only to find a required extension of water service and the extension of a new sewer system not only caused considerable delay but at the same time greatly increased the cost of the site. Had these site utilities been thoroughly investigated before purchase of the site this could have been avoided.

Flexible Planning: In their haste to get a project under way many companies do not properly consider sufficiently flexibility and future growth in their layout. One manufacturer "crashed" ahead with a large plant which is bound to cause future headaches. Future expansion was designated on the side of the building where the property line will limit expansion. This proposed expansion is on the side of the building where the railroad siding is located. Operation will be most difficult as the siding is being relocated during future construction.

Critical Deliveries: In any crash construction program, consider the possibility of placing advanced orders for structural steel, transformers, elevators and other critical long-delivery items. If a project is well planned there is no reason why this cannot be done. Several months can be saved by ordering such material and having it assigned to the contractor to be selected later.

Advanced Contracts: Consult your architect about the possibility of letting advanced contracts in order to expedite the project. In this way construction can often start well in advance of the completion of final process, mechanical, electrical and even building design. On a recent project for a large manufacturer it was obvious from the scheduling, because of decisions required in the manufacturing layout, that final design drawings for the building could not be completed until late fall. This would mean that construction would begin in bad weather. Since the size of the building had at least been determined and considerable grading was required, the architect recommended an advance contract. A special drawing for this purpose was prepared by the architect so that grading could be done during the summer months and at least two months were saved in the total construction schedule.

All of these suggestions have to do with specific

problems which arise during a crash construction program. The real answer, however, to a smoothly operating project, completed satisfactorily as quickly as possible, is not to omit the process of planning but to condense it to an acceptable minimum.

Several different design and construction procedures are being used today by companies involved in crash construction programs. These procedures vary from the company which uses its own construction division to build the building to the company which commissions an architect for conventional design services and preparation of contract bidding documents.

Recognizing the demands of speed and the inherent problems of these demands, there are at least five methods of procedure available to you in working with your architect.

1) Preliminary Design for Competitive Bids

Under this method your architect can make the investigations required and outline the project with preliminary architectural drawings, mechanical and electrical schematic plans and performance specifications. From these documents can be obtained cost-plus maximum proposals from general contractors which will establish quickly the total project cost. Once the contractor has been selected on this basis, the architect can issue final drawings for grading, foundations and steel so that field work can start immediately. With construction under way the architect can continue his work, completing all phases of final design so that the contractor may receive final bids on the various trades. In some cases, particularly in electrical and mechanical work, it may be advisable to ask the contractor to include in his bid the actual design for these portions of the work.

To insure the lowest possible cost below the maximum guaranteed by the contractor, a system of sharing the savings below that figure can be established which would give the contractor an added incentive to bring the final project in at the lowest possible cost.

As an example, a large paint manufacturer recently used this method in the construction of a 200,000-sq ft plant on the East Coast. An architectural-engineering firm experienced in the development of crash programs was commissioned for the project at the outset. At the time the architect started, no layout for the plant or process had been established and the site had not been selected.

In spite of this, the architect in the space of six weeks had assisted the company in selecting the site, had obtained full information on site utilities, soil conditions and code requirements and, what is more important, had produced sufficient preliminary architectural, structural, mechanical and electrical plans and specifications that construction proposals could be obtained from contractors. The proposals received from the contractors were a guaranteed maximum price with the provision that the work be executed on a cost-plus basis.

Thus in eight weeks after initiation of the project, the total cost was firmly established and a contractor had been selected on a competitive basis. One week later the architect released a special rough grading plan which enabled field work to start. In succeeding weeks structural steel plans and foundation plans and details were released. Each time a new piece of work was released, the contractor obtained competitive subcontract proposals which were reviewed and approved by the architect and the owner.

As a result of this "crash" procedure, the building was half constructed in the period normally taken to complete design. The company occupied the 100,000-sq ft warehouse portion of the building five months after selection of the architect and began moving process equipment into the manufacturing section of the plant three months later.

2) Preliminary Design and Negotiated Construction Contract

This method is basically the same as the first with the exception that, instead of getting competitive bids, the owner, with the architect, can negotiate a similar contract with a single contractor. Although this method would appear to have the disadvantage of eliminating competition, time may be saved, since the drawings and specifications might be somewhat simplified with only one contractor in the picture.

3) Preliminary Design and Letting of Advance Contracts

In this method, the architect completes a preliminary package similar to that in method No 1, together with a cost estimate of the project. Instead of getting general construction bids on the total project as in method No 1, drawings are prepared for advanced contracts on specific items. With authorization of the company management to proceed, the architect quickly issues drawings and specifications for advanced grading, foundations, steel and other long-delivery items. The special items are bid competitively with the provision that the contractor involved will become a subcontractor of the general, who will be selected later. As ground is being broken and construction is under way, the architect can proceed with the final development of other drawings and specifications, which would then be used in conventional general contractor competitive bidding.

As an example of this method, a major national building products manufacturer employed this procedure for a new West Coast plant to be in production within ten months to fit into a new sales and distribution program.

The company's plant engineering department was developing new process equipment and needed time for its own planning to ensure the best production methods available. The general form of the structure was determined by the architect. Surveys, soil tests, codes and restrictions were resolved by the architect, and a grading and site-fill program was available for bidding within two weeks.

The owner's hopper and feedline details were an obvious bottleneck and so the decision was made to make them independent of the building structure. This permitted design of the foundations and wall and roof structures. It was therefore possible to bid and order the steel from detail plans for ninety-day delivery and assignment to the general contractor who was still to be selected—either by bidding or negotiation.

Similarly, power requirements were determined and transformers and switchgear were ordered; and the size and capacity of the hydraulic elevator to service the multistory hoppers determined and ordered.

A few weeks later, since some production problems had still not been resolved, the project was put out to bids with sections of the floor omitted but with unit prices requested for completion of these items when their final determination was made by plant engineering.

The owner received all of the advantages of planning and competitive bidding plus supervision of construction—and was under full construction on an organized and realistic schedule. There would have been no advantages and to this owner to have waited for full plant engineering and plant design. Nothing in design—the basic need of all industry—was sacrificed. But by scheduling and programming, at least three to four months were saved.

4) Architect-Contractor Team

A fourth method, often successfully used, is to hire the architect and the contractor at the same time. As in the other methods outlined, the architect in the architect-contractor team schedules his production to "feed" the contractor phases of the work as they are needed under an agreed schedule. The contractor does the estimating, controls the construction scheduling and takes subbids in cooperation with the architect. If phases of the work exceed agreed estimates, then the architect and the contractor must redesign, reschedule and still meet the final cost budget and time schedule.

Under this method, if the scope of the project is sufficiently defined, the architect and the contractor can furnish maximum cost proposals at the onset. If, on the other hand, the scope is undetermined, the architect must first establish that scope with preliminary drawings so that the contractor can fix the project cost. In either case, however, total cost can

be quickly determined and construction can proceed along with the design process.

In one recent industrial project, the owner selected both his contractor and architect in the same week. The contractor and the architect in question had worked together before and had submitted a mutually agreeable proposal to the owner. Three weeks after authorization was received to proceed the contractor estimated the project from the architect's preliminary drawings and submitted to the owner a guaranteed maximum construction cost proposal. Two weeks later ground was broken; and the entire project, a 50,000-sq ft electronic assembly plant, was completed, including design and construction, in ten months.

5) Architect-Construction Administrator

Many companies about to build a new facility feel that it is advantageous to them to have a single responsibility in the construction procedure. Many competent architectural firms, recognizing this need, are prepared and experienced in offering this type of service.

Where the architect is in sole charge he must select the methods and amounts of segregated bidding and must schedule and budget the total project. He can, for example, place early orders for equipment on long delivery and proceed with the awarding of advanced contracts, with the eventual assignment of these items to a general contractor to be selected later by bidding or negotiation.

In any event whether he is serving as architect-construction administrator or as a member of an architect-contractor team, the architect is, and should remain, directly responsible to his client. It is his obligation to see to it that the building is designed—or if necessary redesigned—to meet the budgets and schedules which have been mutually agreed upon.

It is important for industry to remember when a building must be constructed on a crash program basis, the step of planning can not be eliminated any more than a trade of the building construction. The answer is to plan properly and quickly, to make decisions on critical items and to expedite the construction process. Methods such as these outlined briefly above are being utilized by many architects to meet the demand for speed in construction. Architects experienced in industrial work—and there are plenty of them—know that when you decide to go ahead you want your new plan "yesterday." ∎

What is the comprehensive community mental health center, and what is the architect's role in its development? This article will offer the beginning of the answers to these questions. Clyde Dorsett AIA, is architectural consultant to the Community Mental Health Facilities Branch of the National Institute of Mental Health, NIH, Department of Health, Education and Welfare, in Bethesda, Maryland

NEW DIRECTIONS IN
Mental Health Facilities

BY
CLYDE DORSETT AIA

"THE TIME has come for a bold new approach." These words, spoken by the late President John F. Kennedy in his February 1963 message to Congress on mental health and mental retardation, have stimulated a new era in the care and treatment of the mentally ill. The movement is away from custodial care in large state institutions, to community-based services which provide care for patients without removing them from their families and community. Programs offering diversified services within the community have suggested that traditional inpatient care can be replaced in almost half of the cases and drastically shortened in others.

Following passage of the Community Mental Health Centers Act last year, a broad program has been launched. The aims of the community mental health program are: 1) to locate the facilities reasonably near the patients' homes; 2) to provide a comprehensive range of services; 3) to make services both immediately available and easily accessible; and 4) to provide continuity of care until restoration or rehabilitation is completed.

It is the idea of comprehensive treatment, provided in the community for all who need it, which becomes a new concept and a new challenge. "*Comprehensive* mental health services" refers to the complete range of mental health services, available in sufficient quantity to meet the needs of persons residing within the community served by a mental health facility, taking into consideration factors such as the age group served, diagnostic categories treated and the availability of short- medium- and long-term care. The *complete range* of services includes inpatient, outpatient, partial hospitalization, emergency, consultation and education, diagnostic, re-

habilitation, precare, aftercare, training, research and evaluation services. Each of these items is referred to as an "element" of service. The *essential elements* of comprehensive services are the first five in the above list; they must be provided by a community mental health center if the center program is to be eligible for Federal matching funds. Treatment for patients at these centers will be individually tailored to their needs as they progress from early diagnosis through a continuity of treatment and back to a productive life in the community.

Construction of these facilities will be partially financed by funds authorized by the Act. Appropriations of $150 million were authorized to cover between one-third and two-thirds of the cost of construction (the Federal percentage bears an inverse relationship to the per-capita income of the states) for fiscal years 1965 through 1967. These funds can be used for construction of new buildings, expansion, remodeling and alteration of existing buildings, initial equipment of any such buildings, including medical transportation, and architect's fees. The centers are expected to be supported through a variety of local and state organizational arrangements; no Federal money has been made available for operating expenses. Construction will follow the successful Hill-Burton pattern under which the Federal government matches public or voluntary nonprofit funds.

The act requires the designation of a single state agency to draw up and administer a state plan. This plan must provide "adequate community mental health centers" for the state. In developing plans for a center, planners must look at their proposal in its relation to other planning programs in the state. Their plan must be related to the extent of mental illness and the availability of mental health resources.

The various services of a center program need not be under one roof; the program may encompass the services located in separate facilities throughout the community. The charts following represent the many situations which may emerge.

Regulations governing the establishment of mental health centers under the new legislation have been issued by the Secretary of Health, Education and Welfare. These regulations are devised to allow flexibility in the design of the centers. It is hoped that architects will recognize their important role in the design of the centers, for the environment will in turn play a most important role in the treatment program for the patients.

Flexibility is a key word in the construction of community centers. The centers should be planned in such a way that change is easily possible. The design should be based on the assumption that the treatment patterns of tomorrow will be different and for the most part unpredictable. Convertibility and expansion must be built into all new facilities. The construction requirements of the mental health facility must be adjustable to the requirements of the mental health program and to the needs of the patient.

The regulations require submission of schematic drawings in the initial application. This requirement, besides emphasizing the integral part these drawings hold in the over-all program, also engages the architect at the earliest stages in the planning of the centers. It is important that the architect and mental health personnel work together from the beginning in planning the centers. Instead of the standard detail-filled schematic drawings, it is preferred that designs illustrate exciting new concepts in the construction of the facilities.
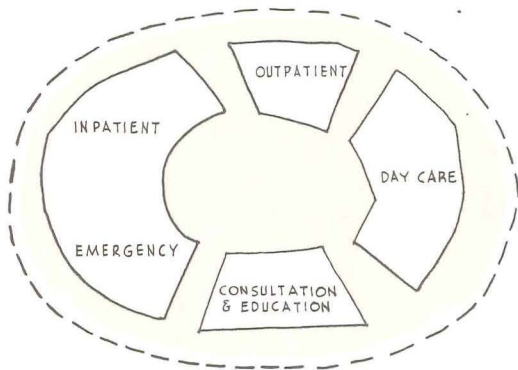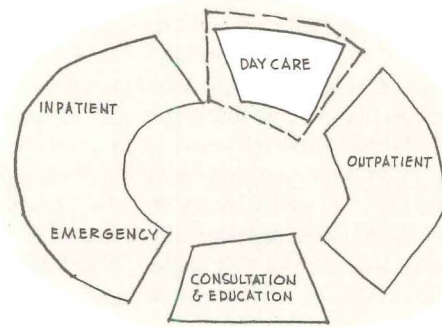
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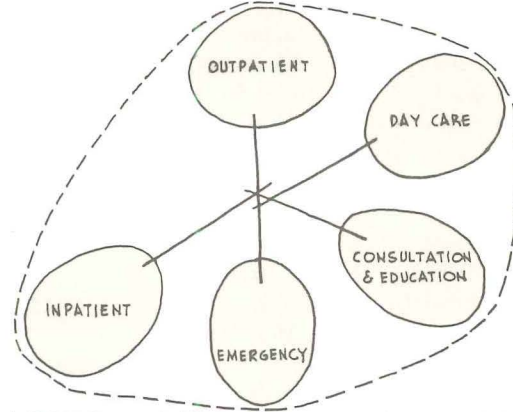
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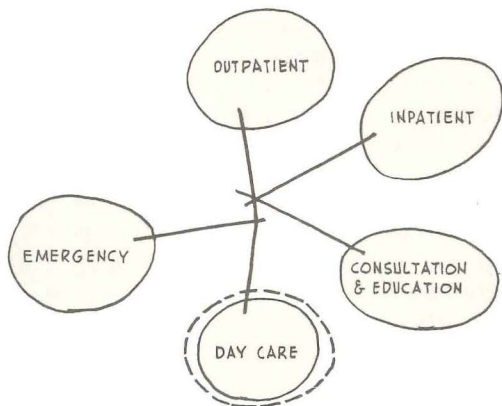
A PROJECT COULD INVOLVE CONSTRUCTION OF A SINGLE
ELEMENT WITHIN A SCATTERED NETWORK OF SERVICES

A PROJECT COULD INVOLVE CONSTRUCTION OF AN ELEMENT
OF SERVICE TO AN EXISTING FACILITY OF SERVICE

There should not be a standard design, but designs which are adapted to the specific community by the understanding of local customs, local materials, local topography and climate. With these considerations, the centers will be all different in their appearance and will provide a familiar environment for the patients and staff.

A major objective in the choice of location, arrangement and design of the community mental health center is to encourage people to use it. Whether under one roof physically, or sharing other community facilities, the center should be centrally located and conveniently arranged so that its services can join the mainstream of community life, along with the church, the school, the general hospital and the civic auditorium.

The structure of the center need not necessarily be one, all-encompassing building. Rather, it should be regarded as a functional coordination of services. This concept permits the great flexibility both necessary and appropriate to the successful operation of comprehensive mental health services in our diverse American communities. It enables the provision of these services with efficient and economic use of available resources.

Accessibility is the first important consideration in determining the location of the center's services. The facilities must be easily accessible from all sections of the community, by public transportation, for patients and their families, staff, volunteers and the many welfare, clergy, medical, law-enforcement and educational representatives of the community who are concerned with the patients. The more easily the facility can be reached, the greater will be the flow of activity through it and

consequently the greater the acceptance of the center into the community. Patients are encouraged to retain their community ties by using community facilities such as stores, libraries, theaters, churches and recreational areas.

The comprehensiveness of these centers can be illustrated by describing the wide range of services that will ideally be offered.* Inpatient services provide treatment for those needing 24-hour care. Outpatient services offer various kinds of individual and group treatment programs for adults, children and families, without a waiting period. Both inpatient and outpatient services should include a 24-hour emergency service; psychiatrists and other mental health per-

* These services have been described in Community Mental Health Centers Act of 1963, Title II, Public Law 88-164, Regulations; US Dept of Health, Education and Welfare, Public Health Service, reprinted from the Federal Register, May 6, 1964.

sonnel respond to local calls by physicians or by families when an emergency arises and an individual needs immediate attention. Preadmission services including "intake screening" are carried out in the patient's home or at the center to determine the patient's needs and to what element of the program he should be admitted. Prompt attention and early diagnosis and treatment often eliminate the need for extended care and hospitalization.

Partial hospitalization is available to those who do not need 24-hour care. Of all the services offered, the day hospital is emerging as the heart of the community mental health center. There the patient receives treatment during the day but is able to return home in the evening. Night hospitals operate on a similar basis, offering treatment and rehabilitation to those who can hold a job during the day.

There is a definite movement away from "bed care," a movement which has far-reaching implications for the architect in designing centers. "Locking-up" facilities are becoming a thing of the past; the new emphasis is on the center as a therapeutic community. The social structure and the activities of the program can be fashioned in a way which fosters group interaction. The design must incorporate a way of enhancing the therapeutic community. The staff, as part of the community, provides support, help and encouragement for the patients. The patients, also, must have every opportunity to help each other by means of group activities. The architecture of the center can contribute greatly to this new concept.

To give the patients experience in independent community living, transitional facilities are developed. Ex-patients' social clubs are established to help tide the patient over the initial period after hospitalization. Foster homes accept patients as members of the family. Halfway houses permit more independent living and allow a group of patients to live in a supervised boarding-house arrangement in a residence in
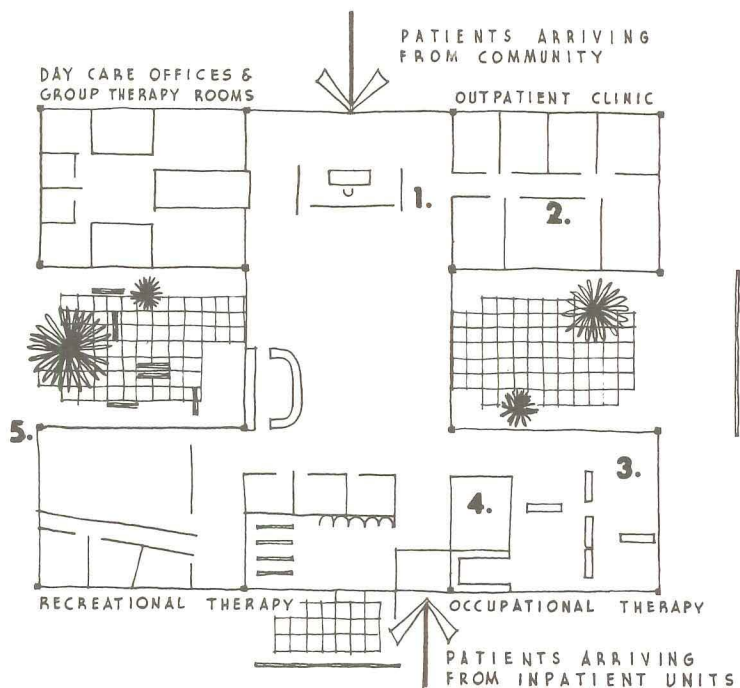
the community. Sheltered workshops have been established for rehabilitative services.

Community services provided by the centers consist of consultation to community agencies and professionals, either in reference to specific cases or in relation to their programs. Public education is carried out by the centers through the media of community newspapers, radio, television and speeches before local groups. Public educational programs may also be presented in the form of seminars, lectures and training institutes. These programs may be carried on within the center or in the community.

Accredited professional training will be part of the program also. Inservice training will be carried on

in all the centers. Centers will also provide extensive and organized in-service training for general practitioners, Public Health nurses, nursing home staff members, police and social agency staff members.

Research, both basic and clinical, will be carried on in larger and medical school-affiliated centers. All centers will carry out operational research in the study of their own programs and their effectiveness in the community.

There are several special areas of need. These include mental health services for the aged, children, alcoholics and individuals who are under court or police jurisdiction.

It is estimated that in the next ten years 500 centers will be built, and by the year 1980, 2,000 more centers will be in operation. This

Centers should stress human element in design
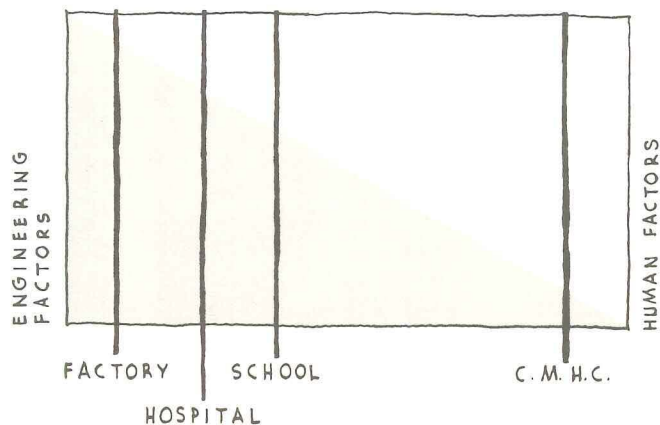
is not a program to keep up with the increasing population growth, but to build a new system of care.

The architect assumes a major role in the construction of these centers. It is most important that the architect question mental health personnel about the care of the patients so that their needs can be understood and reflected in the design of the centers. The architect has much to offer in his own profession. He must not be entirely swayed by the medical adviser to a point where the design is not a work of architecture. This program suggests a different architectural form from the traditional hospital, or even from the rehabilitative center. A plan evolved from a dramatic concept of human association can result in an architectural form quite different from the normal plan.

Traditionally, the planning and construction of public buildings have placed emphasis on engineering factors and little concern for the human element (see graph on preceding page). Community mental health facilities, however, should follow the pattern at the opposite end, with primary concern for the comfort and welfare of the patient and secondary attention to engineering efficiency.

The atmosphere is no longer one of bed care and physical ailments. Instead, the centers are operated in homelike surroundings, where the patients share the facilities and live, work and play together in a congenial environment. And, as in a home, the different rooms may be used for many different activities. The center must be designed to include these diverse activities in a simple space, a space that is clearly-defined yet flexible and capable, with minimal adjustments, of being used for a wide variety of things. The hub of the mental health center is not the operating room, as in a general hospital, but it might be said to be the coffeepot.

Centers must provide emergency service around the clock. Here, admitting clerk interviews patient brought to the center at night. Emergency service must also care for patients during diagnostic procedures

Inpatients are frequently frightened and disoriented; rooms should provide as much privacy and homelike atmosphere as possible consistent with adequate supervision. (St Mary's Hospital, San Francisco)

Facilities are needed for individual therapy and counseling of patients and their families

Occupational therapy helps; workrooms for this activity, and conference rooms for group therapy are necessary

The aim of this paper has been to present the image of the community mental health center and to encourage a close collaboration between the mental health and architectural professions to create an ideal environment for the treatment of those who use mental health facilities.

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JERRY HECHT

Patients cooperate to handle household chores during convalescence

JERRY HECHT

Convalescent patients often complete their recovery in the family atmosphere of foster homes or halfway houses

MOULIN STUDIOS

Children's treatment should be separate from adult patient areas

Centers should be planned to take advantage of community facilities. In addition to this rooftop terrace, St Mary's patients can stroll in Golden Gate Park across the way. (St Mary's Hospital, San Francisco)

MOULIN STUDIOS

A bibliography compiled by Louis E. Gelwicks AIA, *Chairman, Hospital and Health Committee, Northern California Chapter AIA*

Design for Persons with Limited Mobility

THIS bibliography has been developed as an initial attempt to bring together a background of information on the many-faceted problem of designing spaces for a person or persons of limited mobility. The publications listed have been reviewed and edited on the premise that a person with limited mobility requires special design features in order to negotiate his or her environment most effectively, and the importance of the sociological and psychological effects created by the architectural environment increases as the mobility of the individual decreases.

Basic texts on such subjects as the psychology of color or general planning standards have not been included, because it is believed that most architects are cognizant of these works.

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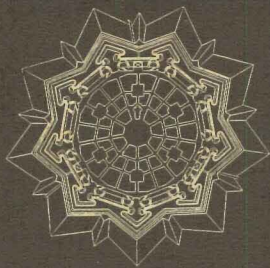
TWELFTH AND LAST IN A SERIES OF ARTICLES

THE PRACTICE OF URBAN DESIGN

A Comprehensive Role for Urban Design

Every society in history has faced the problem of shaping the environment it inhabited. Some rose magnificently to the occasion and produced works which rank among the fine arts. Very many more produced less sophisticated but completely livable and enjoyable countrysides, villages, towns and cities. The more sophisticated efforts in time gained such descriptive names as architecture, landscape architecture and town planning.

So clearly did some societies recognize this social task that they developed terms for it in their languages. The French, for example, speak of *urbanisme* and *paysage*. The Germans refer to *Stadtbaukunst* and the Italians to *urbanistica*. In some ways it is a pity that we have had to devise so many separate categories for the ways we now try to design our environment and that we had to add urban design to our vocabulary. This occurred because of a fractionalization of approach which too often has led us to divisions of thought and action. Because of these divisions, the concept of urban design had to be established—not to create a new or separate field but to prevent this essential environmental concern from being ignored and lost.

In this final article we shall present a comprehensive role for urban design in the United States. As we present this role, let us remember that many great social ideas in history were embodied in urban design concepts, just as they have been in architectural concepts. Thomas Jefferson, for example, saw an image of a future America that was as much a physical as a social vision. His abilities as architect and town planner were not incidental, nor were his visions ethereal. They were the design ideas consequent to his social precepts. At present we lack a consensus or even an adequate discussion of what our future might be at its best. We sorely need vision of the quality that Jefferson gave us.

This series of articles was made possible by the Institute's supplementary dues. Edited by Joseph Watterson FAIA, the articles were written and illustrated by Paul D. Spreiregen AIA.

CHARLES A. BLESSING FAIA, AIP, *Chairman, Urban Design Committee*

A Comprehensive Role for Urban Design

The Job We Face

Every twelve seconds there is a net population gain of one person in the United States. Over a period of a year this amounts to an increase of 2,620,800 people. At this writing our present population stands at well over 190,000,000, and it is not difficult to find frequent comment on our "population explosion" on the editorial page of a daily newspaper or in a special article in a popular magazine. The implications of this growth affect every aspect of our daily life. It creates problems in education, medical care, recreation, resources, government and jobs. It also presents opportunities for industry, commerce, distribution, building and artistic creation.

Accompanying this explosion of population is an ever improving standard of living. Indeed, for many of us it is not so much a standard of living which we measure as a standard of affluence. If the population were not growing but remained fixed in number we would have a considerable job merely improving our present physical environment—a task involving the upkeep of a healthy building and urban inventory, new building for the replacement of the worn stock, and the removal of obsolete areas. But our multiplying population compounds these problems and adds a further burden—the creation of totally new urban areas to house our increasing numbers.

We find great difficulty in designing for this growth because it is taking place around existing urban centers whose long-standing problems we have scarcely begun to solve. Although we Americans have built splendid communities in the past we are now unable to put a sufficient number of our ideas to work. How unfortunate for a nation that has been among the foremost in history as an innovator of rural, of urban and of architectural form.

We cannot blame our shortcomings on a lack of technical knowledge. The United States has more people developing more ideas and advancing more theories than any other country. Most of these ideas are understandable to the lay public. The relationship between land use and transportation routes is quite obvious. The effects of property and building taxes on real estate development are comprehended by the average businessman. Most people are quite aware of urban redevelopment and its problems, as well as some of the alternatives to urban sprawl. Popularized visions of the future city draw crowds at fairs and readers' attention in magazines. Increasingly, "letters to the editor" on these subjects appear in the daily newspapers. More and more, foreign colleagues come to the United States to observe our methods firsthand. The growing number of books and articles by experts has long passed the point where even professionals can keep abreast of them. Computers are being used to assimilate statistics, draw maps and even make perspective drawings.
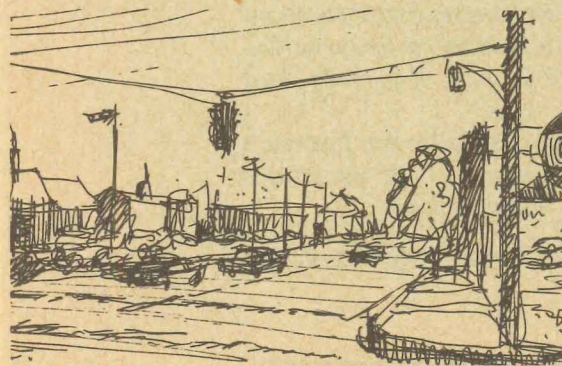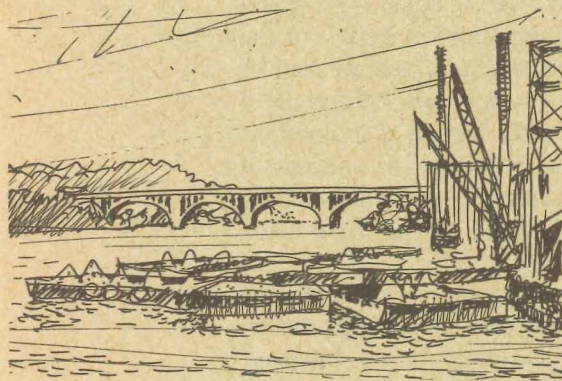
The practicability of the current store of ideas for improving cities is seen in but a handful of our own cities, and then only in isolated places. Altogether these concepts have been more broadly realized and are more evident in the cities across our northern border. Toronto and Montreal have in operation many of the ideas long espoused here. Toronto has a modern subway and a sensible system of off-street parking just behind Younge Street, its main shopping spine. Montreal has a large "greenbelt" along its southern edge. Across the ocean the reconstructed cities of Europe are living encyclopedias of the modern concepts of urbanism, many of which were developed by us. To anyone observing these differences of accomplishment comes the insistent question: "Why have we not done as much if not more?" One of the first answers likely to be given is that our individual units of government (some 90,000 of them at present in the United States) are ill-equipped, if not obsolete, in the face of this difficult job.

Urban problems do not respect city, county or state lines. They traverse them. But governments must respect those lines. In many cases local governments zealously enforce their significance. This difficulty will not easily be resolved, although it is clearly recognized as an obstacle to city improvement and is becoming more and more a main subject of political deliberations. However, it would be inaccurate to lay the blame on our governments, which, after all, represent the will of the people—or at least the most forceful among us. And certainly we must. acknowledge a great amount of ingenuity on the part of our governments. The urban renewal programs have been an important step forward. Our special authorities to deal with particularly pressing problems have been quite imaginative and helpful.

Fundamentally, the major fault may lie in our total outlook toward rural and urban life, as well as rural and urban land use, and, subsequently, in the many ways this outlook finds outlet. Our objectives have largely been the betterment of life through the profits of commerce, industry and the quick use of natural resources. This is not to say that we are insensitive as a people. Our finer products include the New England village, the Southern plantation, the Spanish-Mexican village, the clipper ship, the jet passenger plane and many poetic bridges. The growing concern over the preservation of the finer environmental works of the past is further testimony of an underlying passion we are somewhat reluctant to acknowledge fully and fairly. Too often we relegate our sensitivity to a second- or third-rate slot in our scale of values. The Americana of Disneyland or the numerous "Freedomlands" around the country symbolize the popular appreciation of the better values of our past.

Our emphasis on the immediate and tangible, coupled with our relegation of higher values, has gotten us into no small difficulties. In too many city plan reports, the mention of design, if it exists at all, is treated as a cosmetic added to two-dimensional function diagrams. Too many leisure pursuits—the opera, the symphony and the theater—are regarded as quasi-commercial and have to bear the burden of business taxes. And now it appears that buildings in New York City will have to carry a tax increase based on their beauty, as a result of the Seagram case. But one of the most unfortunate and revealing errors of all is the program for road building, which has upset cities as much as it has served them.

Frederick Gutheim evaluated our urban highway programs in his review of "Traffic in Towns" (*Architectural Record,* June 1964), the British study of automobile transportation and its effects by Colin Buchanan, published by Her Majesty's Stationery Office.
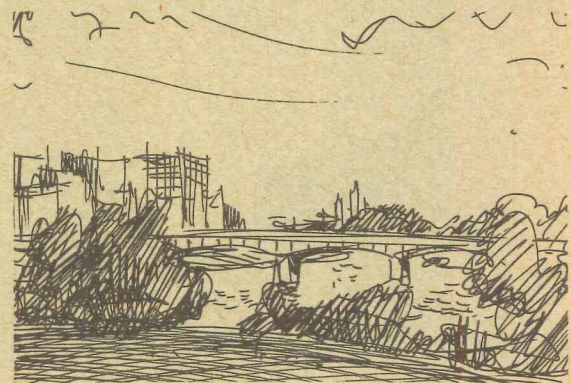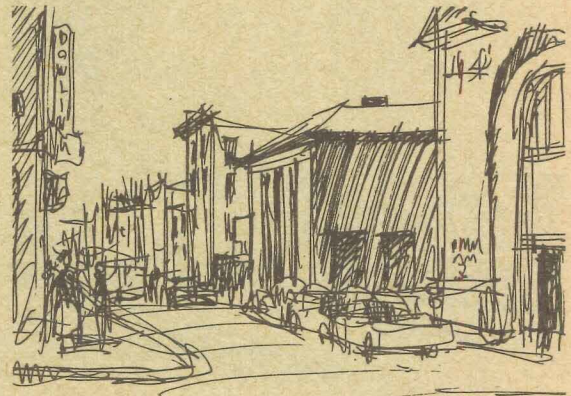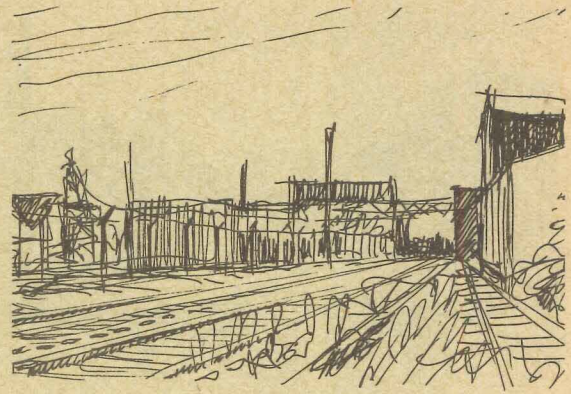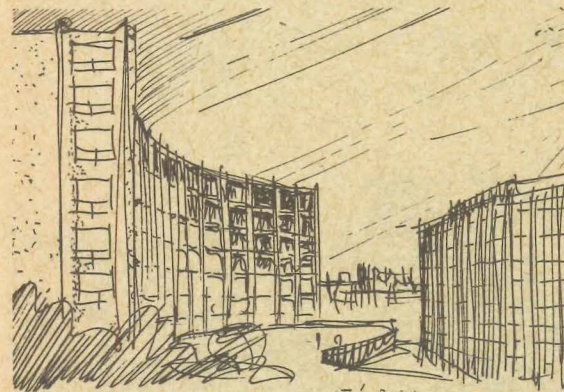
Mr Gutheim points out that our urban highway program was put into the hands of a retired army general to expedite. Expedited it was, to the neglect of mass transportation, which could have solved many urban transportation problems more cheaply and effectively. Moreover, mass transit in many instances would not have cut away large swaths of city as do the urban highways.

Buchanan and his group started their study by acknowledging the increasing role and popularity of the automobile and recognizing its superiority for many types of trips. But, in contrast to the American approach, they saw that the values of the city as an institution and servant of society are paramount to the benefits brought by the automobile. Thriving cities have a limited capacity for automobile traffic. Any attempts to overburden the capacity of streets in a tightly woven cityscape come at the cost of destruction of the shops, schools, houses, offices, nurseries and hospitals along those streets—the delicate fabric of city life woven over the years. Traffic capacities are limited by the existing abilities of a street, and the traffic volume of a whole city must be restricted to the capacity of all its streets together.

This comparison illustrates that the approaches to urban problems which are so widely considered practical may not be practical at all. Our urban programs cannot ultimately succeed if they are founded on anything but the best interests of a city as a social institution. Our attempt to solve circulation problems is the best example to take because it has so far been the greatest single urban effort upon which we have embarked—with all other projects far, far behind. If we have made mistakes in our urban traffic efforts, we can learn from them as we enlarge other endeavors. We can learn that the most practical goals of all in the short run and the long run are programs whose foremost objective is the improvement of the *quality* of the life we lead, both in the city and the country—those two areas which must be considered as one in the face of our mobility and daily pursuits.

Could it not be that the most comprehensive role of urban design is the specific articulation of social objectives in specific programs of action in specific areas of city building which we have in hand?

It has been argued that the great examples of building in other places and other times were quite often the results of happy accidents. This attitude we can with kindness dismiss by ascribing it to frustration with our own limited approach. Who can seriously conclude that a Gothic stonemason or a Cape Cod carpenter could fail to notice every effect and aspect of appearance of his handiwork as he trod toward it each morning and gazed at it over his shoulder each evening? Similarly, it has been argued that only absolutist societies could produce fine cities. Those critics have failed to ponder seventeenth century Amsterdam, eighteenth century London, nineteenth century Vienna—let alone the accomplishments in our own country around the turn of the century. Further, they fail to see that past societies, no matter how centralized they may appear to us now, were in fact controlled by numerous competing interests. True, the great works of the past were the results of powerful individuals and groups, but a large portion of the credit is due to the men of art and intellect who furnished the ideas and models. If the number of individuals of power was small in past times there is without question a modern parallel. For our public undertakings are results of the urgings of articulate groups of businessmen, of the spokesmen of industry, of real estate people, of the representatives of commerce and trade. What models are being held up for them?

We have in these few lines lapsed into a recitation of difficulties. Whether dry or spiced, a recitation of difficulties is tolerable to the creative person only when it is a preface to proposals for resolute action. By way of resolution, let us list and describe every area of community design which can become action now. Let us propose a full-fledged program of urban design for cities and towns throughout the United States. Then let this list be the architect's statement of the comprehensive role of urban design.
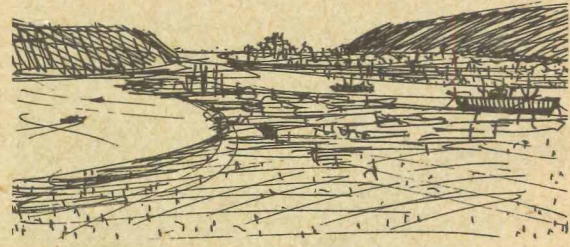
Urban Design on a National and Regional Scale

In 1956 a collection of essays was published under the title "Man's Role in Changing the Face of the Earth." Covering such topics as the deforestation of Europe, the great grasslands of the world and the climate of towns, this book stands as the largest single work on man's endeavors and the alterations he has made on the world's geography. It has had four editions. In discussing these changes, the authors have laid the groundwork for what could well be a natural sequel—a visionary book which might be called "Man's Role in *Designing* the Face of the Earth."

No matter how powerful his tools, man's choices of action have been shaped largely by the character of the land he attempted to transform. Some lands were totally unfit for any cultivation or habitation. Others could support only marginal cultivation and hence scant population. Others produced so abundantly that they posed questions as to their best use. Today, however, we can base our choice of action on an extremely wide range of possibilities. We can now transform deserts, level mountains, carve harbors and convert salt bays to fresh-water lakes. Within broad limits we can redesign the earth.

The United States has a geography of great variety and hence abundant design possibility. We have already established the major uses of land according to the natural resources of various regions. Iowa and portions of its neighboring states comprise one of the richest farmland areas in the world. Our grasslands are among the world's finest cattle grounds. The various regions of the nation, distinguished by their climate, topography and verdure, have developed their appropriate uses and subsequent physical characteristics.
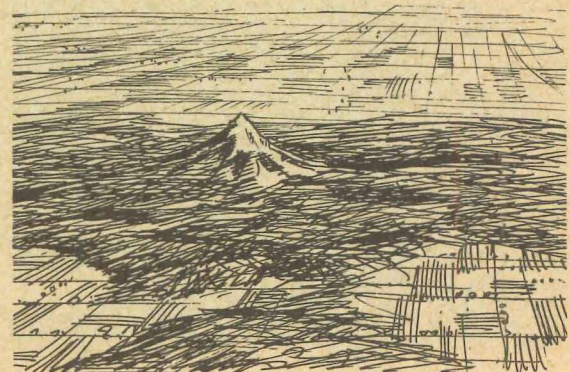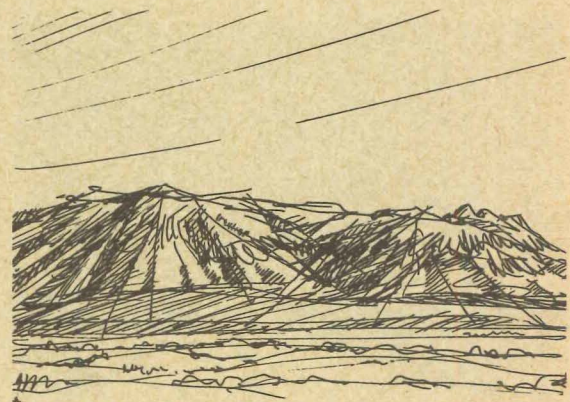
These regions and their characterizing differences are one of the chief design assets of our country and must be regarded as the major design subdivisions of the United States. We have already begun to tend to some of them, usually because of engineering necessity. Many rivers and river basins traversing several state lines are cases in point—the Mississippi River, the St Lawrence Seaway and the Tennessee Valley.

Program: Regional Design

The entire United States should be studied to determine its significant and integral physical sections. These should be delineated according to their characteristic topography, climate and culture. Many of the regions will traverse our northern and southern national boundaries.

We propose the formation of groups of persons, representing all walks of life and all professions, to study and lay forth a future vision of what these areas could become at their best. We propose that architects of broad vision be foremost in these groups. Most appropriately these groups would be supported by a large foundation. Not only would the participants prepare design plans showing the overall region and its land use, but numerous studies of the appropriate appearance of all man-made objects in this landscape—from telephone poles to cities—would also be made. The character of the land would be the basis for the design of cities and towns. A road and its overpass and cloverleaf appurtenances would be designed for its appearance *in* the landscape as well as for the appearance of the landscape *from* it.

These studies would maximize diversity of choice in the various regions, while at the same time assuring the protection of land character. Our new mobility and increase of leisure time is fast leading to a very intense use of land in, around and beyond the city. That land will either be desecrated or enhanced, depending on what we envision now for the land's future use.

Program: Recreational Area Design

Discussion of land use beyond the city immediately suggests recreational activities. As a rule it should not take more than an hour to reach areas of natural terrain from the center of a city. Many cities now enjoy this relationship, but unless it is protected it will soon be lost.

We propose a study of the potential recreation areas around all cities as a basis for conceiving a complete panorama of many types and sizes of recreation places. Of particular concern should be the entire shore line area of the United States. Thoughtless and insensitive development is too quickly ruining some of our finest shorelines, which is neither necessary nor good practice.

Each state should formulate a plan for the use of its main recreational resources, along with private land development. The quality of recreation areas is bound to occupy an increasingly important role in a state's well-being. Our people now choose their place of residence on the basis of their attractions and offerings toward the good life as much as they choose places with economic and job opportunities. Programs on a state level could designate recreational areas—lakes, beaches, mountains—and plan the most desirable resort towns and resort homesites. This would maintain a proper and sensitive balance between untouched wilderness and developed land. Indeed, the wilderness areas could have lodges, trails and other appropriate facilities at certain places. The towns

would have a main street, a variety of shops to form a spine for the evening promenade and perhaps a bit of carnival, like the boardwalk resorts of the nineteenth century.

Several prototype studies and accomplishments now exist. The state of Wisconsin recently completed a comprehensive report called "Recreation in Wisconsin" with a supplement of sketches and design principles. Recreation is a main source of income in Wisconsin. In Europe, the entire coast of Yugoslavia is being carefully designed for recreational use. Ernesto Rogers, editor of Italy's *Casa Bella* magazine, recently devoted two special issues to the problems of Italy's coastal areas. Rogers urgently proposes a landscape plan for Italy at national scale. Our American national parks and the concession facilities developed in them generations ago are still good models, and so are the many resort towns built near large cities in the last century. Connecticut has completed a study of its natural characteristics as a basis for statewide development and resource planning. It is urgent for us to apply these and other new techniques not only to recreation areas but to all areas in our country ripe for rapid expansion.

Program: Developing Regions

In many regions development is only a matter of time— indeed, is fast proceeding. Among these are subareas within the east-west "megalopolis" described by geographer Jean Gottman, large portions of the St Lawrence Seaway, the San Francisco Bay area, the interrelated complexes of the Pacific Northwest and shore areas along the Great Lakes.

We propose as a start that rapidly growing regions be designed as exemplary physical developments coupling private initiative with public regulating control. This practice would encourage the flow of investment capital, maintain development interest and, above all, create fine places to live. Dominant in this program would be the role of creative design.

A large triangular portion of Florida is one of the most interesting areas now being studied—the section roughly defined by Orlando, Cape Kennedy and Daytona Beach. A group of officials and private citizens recently commissioned a design and planning study for this area. Seemingly, it was one of the most featureless terrains in the entire country—flat and often swampy coast. Because the physical and hence visual development is of prime concern, a survey of the visual impact of the land on its inhabitants was made. Personal interviews revealed a surprising number of subtleties in land character and development—far more intricate and differentiated than suspected. Although many of the inhabitants were not sophisticated in their tastes because of their largely rural and limited experience, there is no question that well-designed improvements of a fairly sophisticated nature would become meaningful to them.

If this seemingly featureless landscape has such visual appeal, how much have those areas whose physical distinctions are more obvious?

As our country expands, many regions become obsolete, just like old buildings and roads. The poverty-stricken Appalachian region around West Virginia is the most obvious case in point. In recent studies of these depressed areas under the Area Redevelopment Act, proposals for new recreational activities are being given very serious consideration. Sheer imagination of the kind the architect can exercise may furnish some of the most helpful ideas.
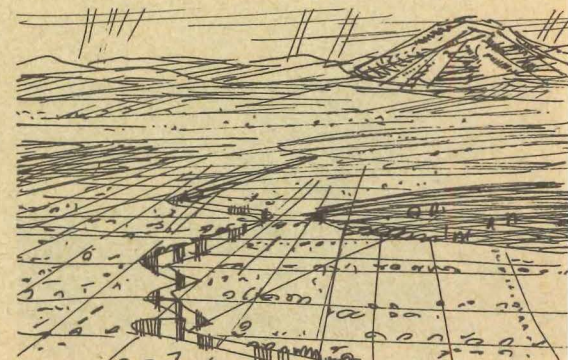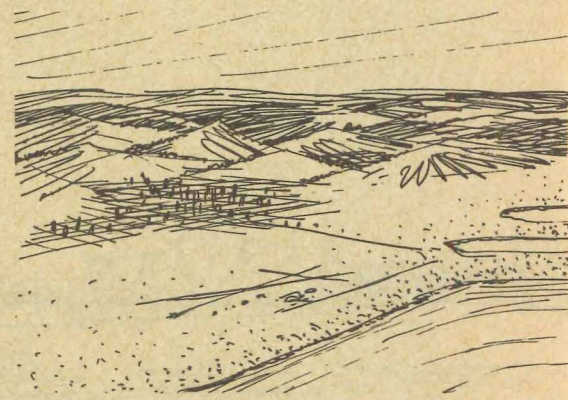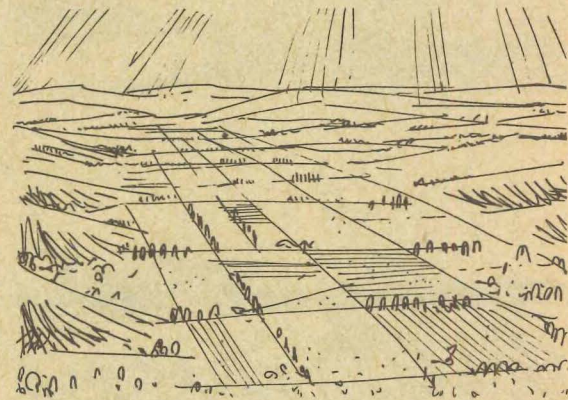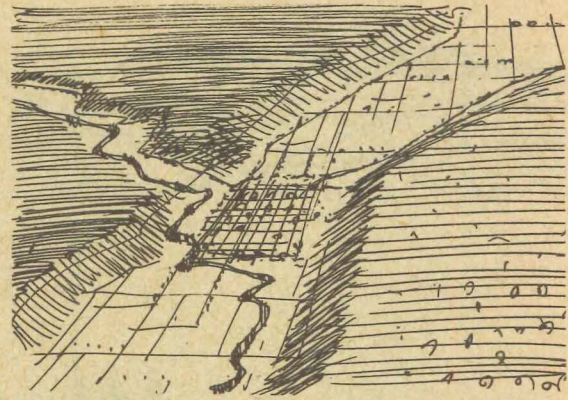
As our urban centers enlarge and as more land is consumed, the value of untouched sections becomes even more important. So does the value of the older rural areas which have acquired a character we look back upon with deep pride and admiration.

We propose that these two kinds of areas—wilderness and the "old preserve"—become the objects of special attention in every region of the country. The selection standards to follow could be the degree to which the area in question expresses its regional character. Both the wilderness and the old preserves could readily be judged on this basis. For example, the valleys of the Rocky Mountains contain old mining towns strung along the valley stream. Many of the towns have fine old Victorian buildings which make some of the towns worthy of preservation in their entirety. Certainly they deserve protection from the intrusion of garish roadhouses as close neighbors to the older houses.

The older towns of Vermont and New Hampshire with their farms and farm buildings constitute a landscape so dear to us that we often depict it on calendars. These areas are examples of our old preserves in building and in cultivated land, the wilderness areas being those parts that were beyond the reach of cultivation. Let us organize programs to anchor the prevalence of this way of life, for it brings beauty to the land and is living evidence of our continuing traditions and values.

We must present our proposals with these broad brush suggestions for design at the over-all scale of America because we live and use our country as a whole. As a whole we shall improve or ruin its beauties. If it is necessary to begin on a large scale, it is equally necessary to progress to the domain with the most problems and therefore with the preponderance of opportunities. We shall now turn to proposals for urban design at the metropolitan scale.
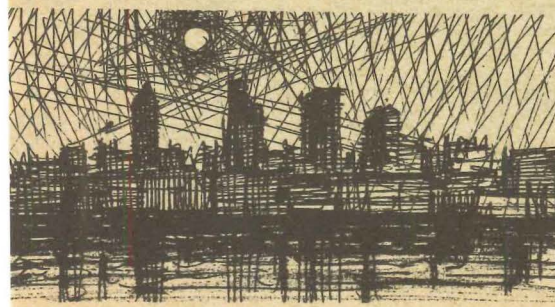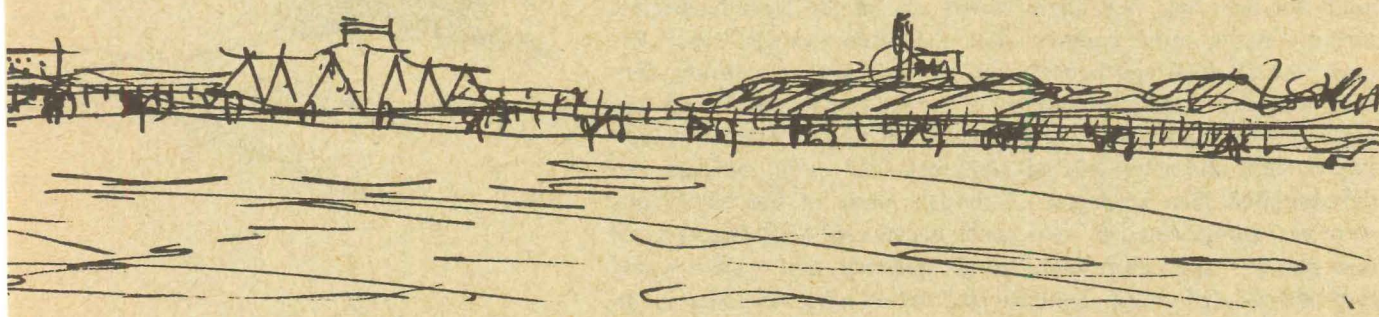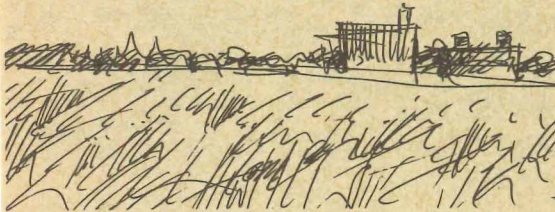
Urban Design at the Metropolitan Scale

Little need be added to the list of problems encumbering the metropolis, where our greatest population growth is occurring. The emerging metropolis of the United States is a new urban form —or at least an urban form more extended than anything previously seen.

Much must be added to the store of ideas pertaining to the design of metropolitan areas. While problems of government, economics, taxing and transportation receive due consideration, there is no surplus of thought on the city as a design and on the quality

and variety of life in it. Some assert that the physical appearance of the metropolis is of no consequence. This attitude can only be met with shock by the architect. It would deny the value of the advances made in architecture in the last thirty years. Others have suggested that our society is too mobile and too much in transition to be nailed down to any fixed design ideas. This is to deny our obligation to provide continuity and quality in the course of urban expansion.

We are definitely able to control many areas of design, if we recognize the forces now at work in our cities. These forces can be redirected by the following programs.

Program: Design for Metropolitan Structure

Design plans of entire metropolitan areas should be undertaken at once. According to the Bureau of the Census, there are now about 219 metropolitan areas, of which only a quarter to a third are conducting any kind of planning. The 1962 Highway Act will increase this activity considerably but only for land-use and transportation planning—transportation usually being interpreted as automobile transportation. Many of these metropolitan areas have established commissions to discuss the common problems of their governments. Numerous *ad hoc* commissions have proven effective in dealing with specific problems. These commissions are concerned with land use, transportation, administration, development, schools, utilities, air pollution, water supply, stream pollution and recreational green space. Rarely do official planning studies seriously commit themselves as primarily artful design efforts. At the metropolitan scale we are *building* but not *designing* the urban landscape—the new-forming environment where so many spend the major portion of their time.

We propose a program of design studies of the total form and appearance of all our metropolitan areas. The basis for perceived urban form at the metropolitan scale is the relation between natural and man-made shapes. These together proclaim to the eye of the moving observer the hierarchy of urban parts, their relative importance to each other and their relative sizes. A prominence here is an important element to be balanced with a flat area there. Various accents disposed about the skyline give orientation and are clues to functions. Highways demarked by identifying lamps or accompanying greenery trace paths through the complex metropolis, acting as visual guides within, around and about. Open spaces surrounded by cityscape give relief and vista to urban clusters. All of this is arranged in a vastly complex series of patterns and relationships. All of it is seen and perceived and must be designed as a total design structure—which is just as important to the city as planning the capacity of expressways.

In Philadelphia Edmund Bacon has woven a design structure, first for the central city and then for the entire metropolis. It consists of major functional and visual axes connecting various hubs of activity, some of special purposes, some of highly diverse purposes—all of them related to the entire metropolitan complex. These hubs are the sites of the many new urban developments in Philadelphia.

In Detroit Charles A. Blessing FAIA is in the process of devising a metropolitan design structure as a clear statement of direction for all planning. Detroit's city form is flat, bounded on one side by the Detroit River. Its street pattern is the gridiron, with radial and circumferential routes. Its "flats" are the large stretches of subdivision houses. Its "peaks" are one dominant cluster of

STRUCTURE FOR CIRCULATION & OPEN SPACE

STRUCTURE WITH SPECIAL DESIGN SITES

STRUCTURE FOR PUBLIC IMPROVEMENTS
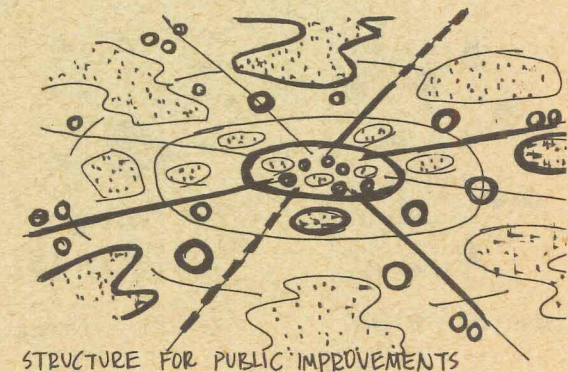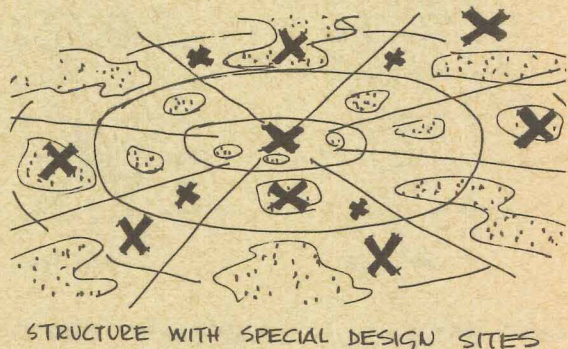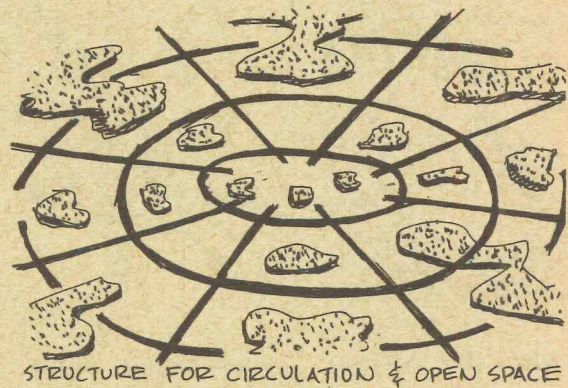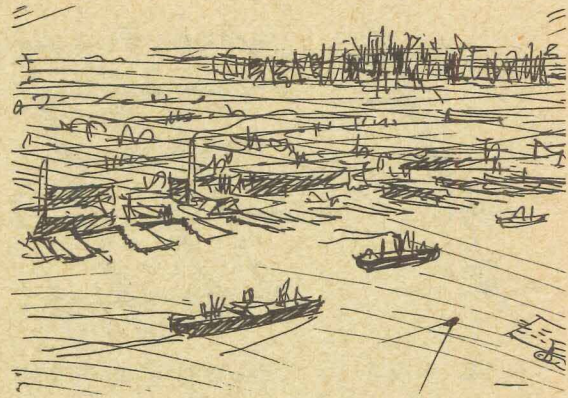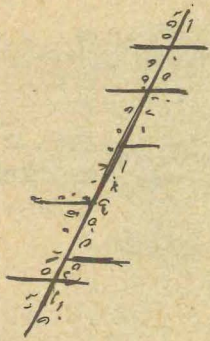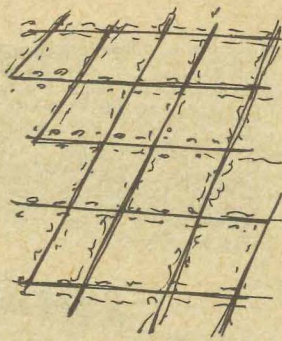
LINEAR FORM

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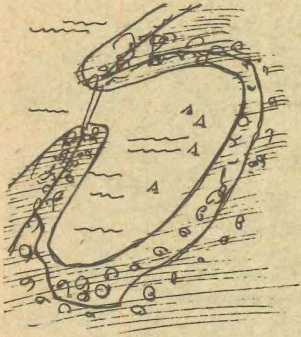
CIRCULAR FORM
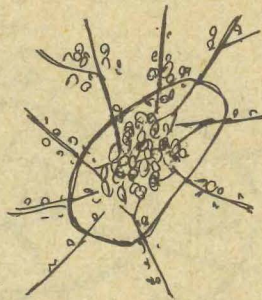
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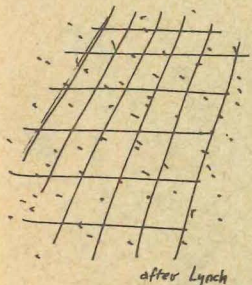
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SHEET PATTERN
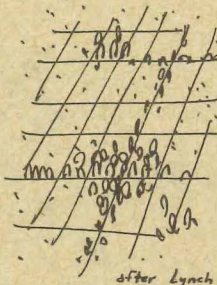
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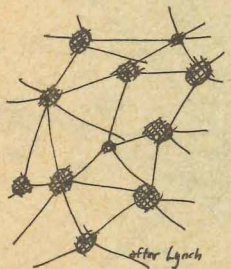
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CONSTELLATION PATTERN
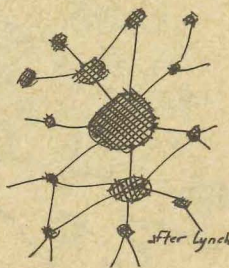
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SATELLITE PATTERN

office towers in the center and numerous outlying vertical clusters at great distances. This cityscape-in-the-making can best be compared to Monument Valley—a great flat desert characterized by large rock mesas. Detroit's extensive urban flats are the counterpart to the desert of Monument Valley, and its skyscraper clusters are the counterpart to Monument Valley's mesas.

So powerful is the connection between these "landscapes" that Blessing is able to show slides of both simultaneously without a word of explanation. An application of this design approach is seen in Detroit's Lafayette Park redevelopment area, which is a short distance from central Detroit. The towers of central Detroit are readily seen from within Lafayette Park because the slots of space between its towers were intentionally designed to frame the views of the center. Here is the Renaissance principle of "reciprocity of view" restored in modern context.

Detroit will become increasingly important to watch as its design structure evolves. It is surpassed only by Los Angeles as a city shaped by the automobile. But unlike Los Angeles, Detroit may pave the way in showing how the forces of automobile transportation can properly reshape a city—this through the conscientious location of freeways and building clusters for their physical and visual effects. (Incidentally, design studies of the central city, prepared by Detroit architects through their AIA chapter, were published in the September 1959 AIA JOURNAL.)

A metropolitan design structure is essential to every architect working at the scale of a building group or a single building. Since it reveals the situation of his building functionally and visually, it furnishes important clues to the way each building is approached, seen and used. It gives the city an essential skeleton within which special buildings and clusters are the vital organs and in which the lesser buildings are the flesh. A design structure is the framework for foreground and background architecture working together architecturally.

Program: Metropolitan Form and Pattern

Urban design at metropolitan scale involves study of total metropolitan form. Our metropolitan areas are fast becoming undifferentiated and haphazard, whereas they could become works of art. At the metropolitan scale planning is now inadequately limited to land use and transportation relations. It is therefore necessary to combine all the elements of metropolitan form into a total approach in order to state the case for design on a metropolitan scale.

We propose that all our metropolitan areas be studied to discern their evolving form and that, subsequently, designs be made exploring the likely alternative forms which could be perfected through present techniques—transportation planning, land-use designation, open space, new satellite towns and new urban corridors.

Form and pattern constitute an armature for urban organization. Both derive from topography, function and transportation. Particular forms have particular implications. Dependent on form and pattern are proximity to green space, mixture of parts, choice, opportunity, accessibility of various facilities, obsolescence and stability. Form is fundamental to climatic orientation as well as each person's sense of where he is in the city.

The Year 2000 Plan for Washington, DC, deals with alternate forms for growth and has become a focus of planning discussion in Washington's metropolitan area. The San Francisco Bay

metropolitan area is a large circle geographically. Recent studies of its future possibilities strongly connote variations of pattern. The finger and open-space plans of Copenhagen involved considerable study of metropolitan forms. Metropolitan planning studies for the Minneapolis-St Paul area likewise required a study of alternate possible forms. A metropolitan form and pattern plan proposes in broad terms the physical design possibilities of a city and their implications. In so doing, it consolidates all elements of urban design at a very large scale into one easily understood concept.

Program: A Metropolitan Open-Space System

A corollary to a metropolitan design structure and form is a metropolitan open-space plan. Although it is inherently part of a large-scale urban design structure, it is so important a design element that it must be considered independently.

We propose that every metropolitan area prepare a master plan for open spaces, that the open-space plan be envisioned as a total structure complementary to the built-up areas of the city and that all possible means be brought to bear on the establishment of open-space reserves. There is nothing new about this concept. It was developed and proven right here in the United States.

About ninety years ago a father suggested to his energetic son that an interesting day's excursion would be to take a commuter train out of the city, get off at an outlying town, walk circumferentially along wooded trails to a neighboring town and then return at day's end via another commuter train. The young man took his father's advice and recorded perhaps fifteen or twenty such excursions in his diary.

The father was Charles W. Eliot, President of Harvard University; the son was Charles Eliot, later to become one of America's great landscape architects. From his early excursions he conceived a metropolitan park system for Boston. He envisioned a ring of outlying park reserves connected by a series of green routes penetrating the city. This concept is not unique for American cities. Kansas City and Minneapolis developed such park systems, and the smaller parks of many other cities were based upon Eliot's system.

Although Eliot concentrated on the landscaped treatment of open spaces, his designs reveal almost the entire category of types of green space. Open spaces range in size from the vast reserves of natural land, to the urban park, to the urban plaza and down to the street. Indeed, it is the sidewalk that is the elementary open space of a city. In use, open spaces range from completely passive, almost unused spaces, to highly active urban spaces—the city's outdoor salons and playrooms. All these are found in Eliot's model green space system for Boston.

We must now regard open space as an essential land use equally as significant as the complex designations of land use found in zoning. Architect-planner S. B. Zisman has proposed that an open-space framework in a city can serve as a lone land-use control. A good open-space system will act as a complement to a variety of land uses. Poorly built city areas can always be rebuilt later but are more tolerable in the interim because of open space. It is crucial to set aside land for open space before it is needed, since it is difficult if not impossible to create it by razing built-up areas, whether in or far beyond the reaches of the metropolis. Today the basic urban distance is the area the average person is likely to traverse during a typical week. That covers considerable
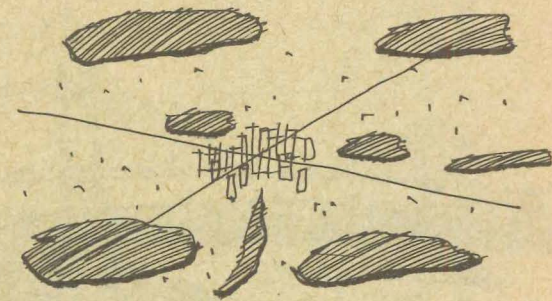
"ISLANDS" OF OPEN SPACE
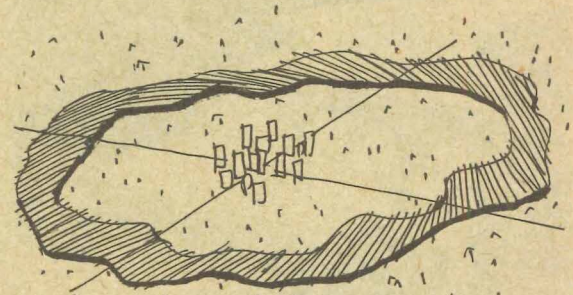
A "RING" OR "GREENBELT" OF OPEN SPACE
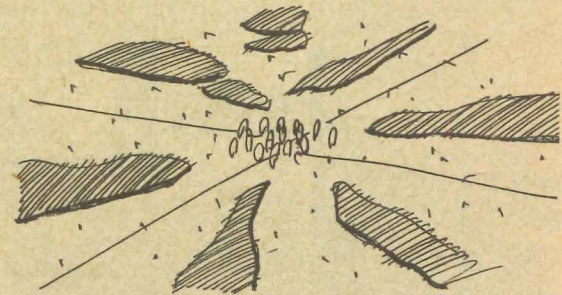
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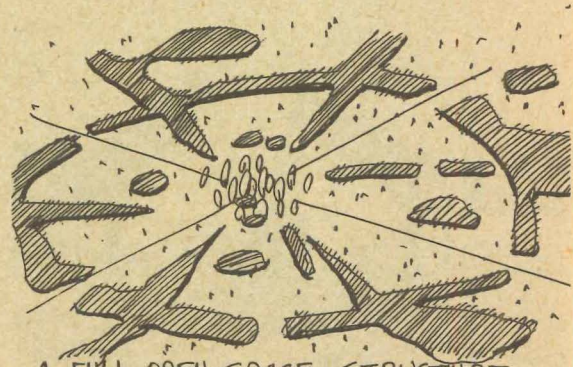
A FULL OPEN-SPACE STRUCTURE

territory and should determine the upper limits of the open-space systems we must now create—the modern counterparts to Eliot's concept of nearly a century ago.

## Program: Design for Metropolitan Transportation

Road building for the automobile is the largest single urban reconstruction program today. It has forced planning in every metropolitan area, but the type of planning it is fostering is limited. Often it is misapplied. Seeking to increase mobility it has often destroyed vital urban tissue, its uncertainties placing many urban areas in a state of limbo while route and construction schedules are debated. Urban expressways made their debut as landscaped parkways a half century ago. The roads, often the product of the landscape architects' skill, were aligned for artful sequences of vista—urban and rural. The green axis of the landscaped parkway wove a path through the city, its landscaping accompanying the driver from the green countryside into the heart of a city. Its bridges accented the progress of the route. If the roads were prose, the bridges were poetry. These elements of roadway design have not only been relegated and forsaken but, worse, the emphasis on roads themselves has been exaggerated beyond proportion.

We propose a program of urban design for transportation which puts the city first as an institution to be served. We propose that all means of transportation be examined as a prelude to any transportation improvement programs. The design of the roadway and its appurtenances is but one aspect of proper road design: the consideration and design of every means of urban transportation must be made basic to all transportation design. The current preoccupation with automobile travel is an adolescent stage in circulation planning.

Rail rapid transit has been unfairly neglected in our automobile era. For over fifty years rail rapid transit has received almost no share of the kind of design attention given to the auto, the airplane, even the elevator or the truck.

Proponents of rail rapid transit can give only hesitating estimates of the expected patronage of a proposed subway system because the design of the subway is so meanly inadequate. Architect Don Emmons is now at work developing designs for the San Francisco Bay area subway that will make it as attractive as, if not more attractive than, the automobile for the trip to work. His studies included on site inspection of the newer subways of the world. Recently he saw a prototype car in Hamburg, Germany, which matches a Mercedes for comfort and appeal. In Paris one train runs on rubber tires to prevent the deafening roar and clack so familiar in the old subway. In Stockholm each station has murals, color, benches and is light and airy. The Toronto subway stops are connected under shelter to bus terminals. Again, in Paris each station has its own stationmaster—one on each platform —to control operations and discourage, if not prevent, the crime so feared in New York City.

If we exercised the design ingenuity lavished on airplane travel we would introduce advances making these examples seem minor in comparison. Imagine, for example, a subway train in which a light breakfast is served, where the morning newspapers could be read in comfort, where the morning news is presented on TV, where the frequency of trains assures adequate seating for all. A short while after the workers' journey, school children could use the same trains, giving them a place for homework comparisons on their way to school, or even televised lessons for the more
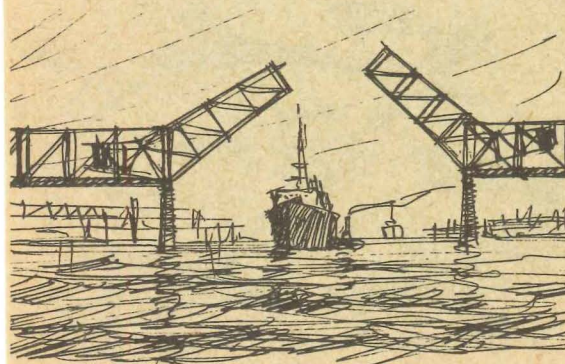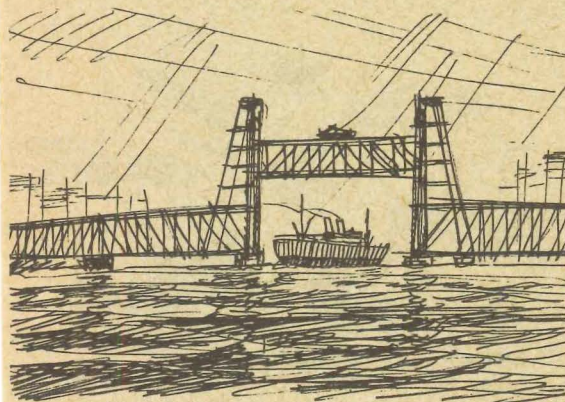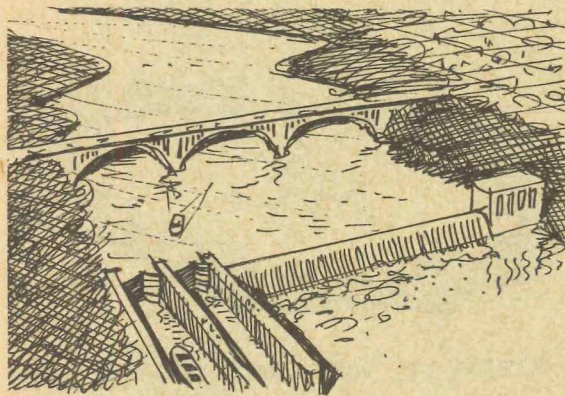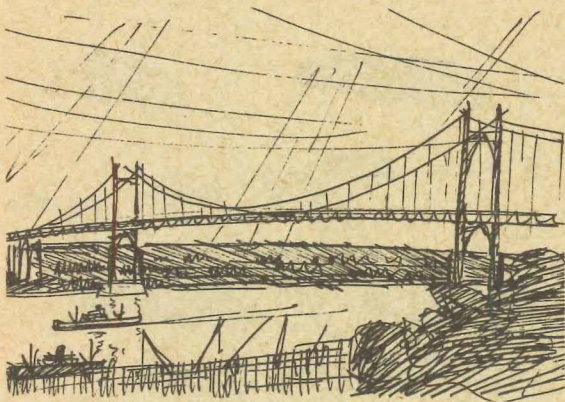
studious. A metropolitan school system could be devised to give children a city-wide choice of schools, perhaps encouraging again the specialized high schools once prevalent in older cities. During the day the housewife could conveniently travel to shopping centers. The train could post advertising pages of the daily newspapers, as well as shoppers' guides. Packages could be delivered to subway stations via a special service, as they are on intercity bus systems. Architect Louis Justement FAIA is currently conjecturing on the possibilities of preplanned high density developments at outlying subway stations in the Washington, DC, area. These could be new nuclei for office and business clusters and could help balance the subways' outbound and inbound loads.

Critics of subway systems decry their fixed location and hence their purported inflexibility. Subway routes are no less permanent than the automobile expressway and certainly take up less space. Further, they do not elbow existing urban areas out of existence. But before the subway can be expected to present its credentials to the public, it must be given a fair chance to compete for attention. The time has long passed when road construction was approved through public referendum. We pay for our roads every time we purchase gasoline. We pay for a proposed public transit system only when we agree to pass on a bond issue. To the surprise of many, San Franciscans did just that in recent years. They agreed to tax themselves for this subway. Yet the capital outlay for their entire system is surpassed by California's total budget for roads in the coming year alone.

Program: Approaching the City

The first sight of cities leaves lasting impressions. When cities were smaller their entrances were clearly marked by a gate, statue, bridge or some other design feature. The entrances to most cities are now generally obscure. They are more a progression of undifferentiated views rather than distinct movements of revelation. The need for clarity in entrance is as strong as it ever was —even more so, since the city is more complex.

We propose a program for designing the entrance sequence to each city. We now approach cities over land, through air and across water. The various parts of the city must be articulated as one enters them. So, too, must be the sights of places one sees and passes when departing.

Many existing approaches are quite good and serve as illustrations. For example, the air approach to Salt Lake City from the east takes its passengers on a thrilling ride over the Rocky Mountains, then swoops over Salt Lake City to the airport. Arriving passengers never lose sight of the mountains and the city together, even when driving in the airport limousine to the city's central hotels. Kansas City's municipal airport places arriving passengers at the foot of the central city. The location of Boston's airport gives its arriving passengers a fine view of the central city towers across Boston Harbor. San Francisco's Golden Gate Bridge is the portal to the United States from the Pacific—a poetic counterpart to the Tori gates of Japan. The Statue of Liberty in New York Harbor is one of the most meaningful symbols of all at the entrance to a city. The approach to Dallas from the west across a branch of the Trinity River was carefully designed a half century ago. So was the approach to Manhattan on West Side Drive and the approach to Boston down the Charles River embankment.

A well-designed entrance to the city heightens anticipation, alerts acute powers of sight, aids orientation and over-all sharpens
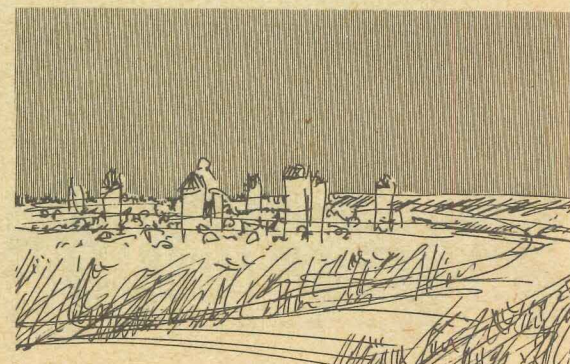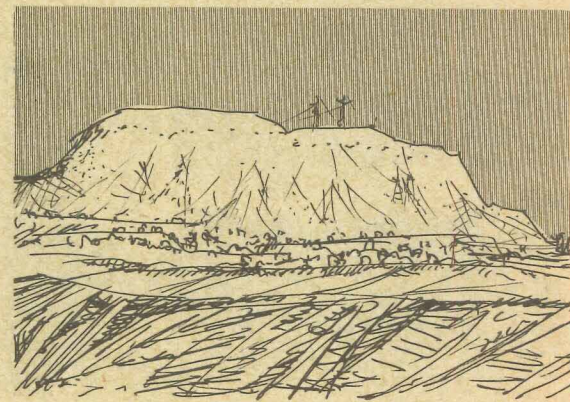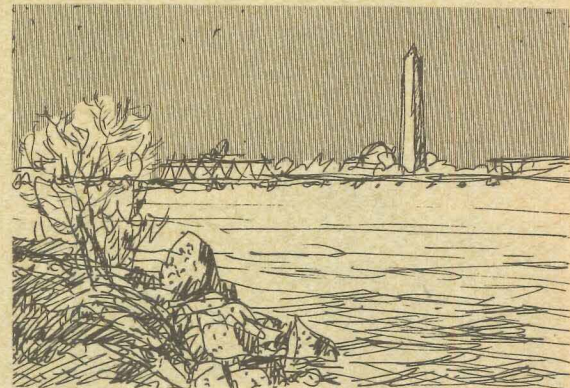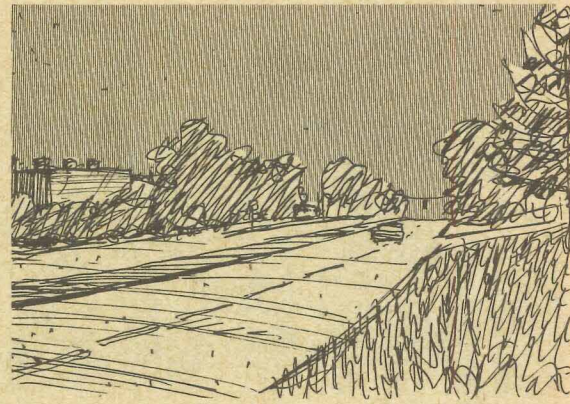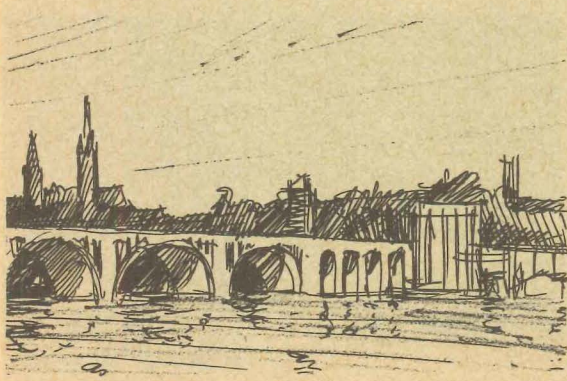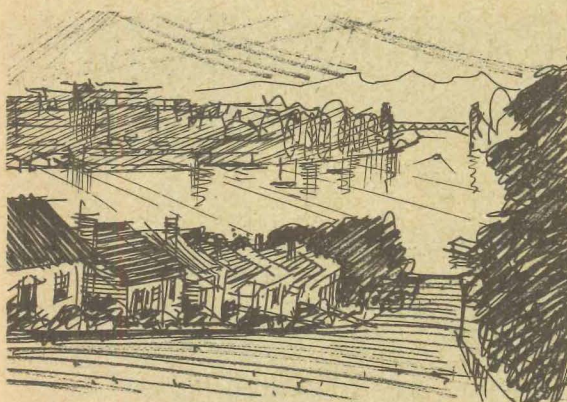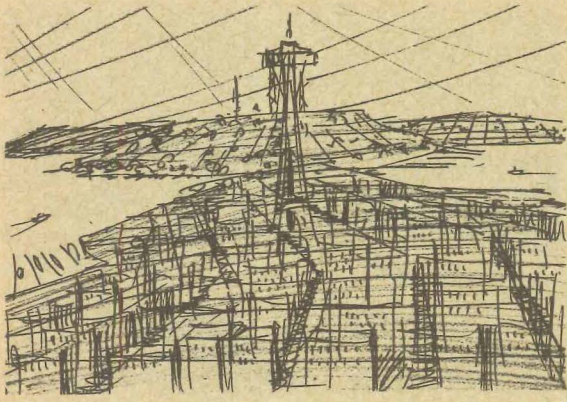
the eye for the full observation of the things ahead—which brings us to the consideration of views and vistas.

Program: Metropolitan Views and Vistas

Every city is characterized by certain key vistas. Some of these vistas embrace either the entire city or a substantial part of it, while other major views cover only a small but nevertheless telling portion of the city. These views need the formal recognition, protection and enhancement of a design plan.

We propose that every city survey and evaluate its important vistas and draw up a map with the objects and angles of view, to serve as a basic document against which related construction can be checked. On the vista map necessary corrections of elements marring the view, as well as unsightly parts which need screening, would be indicated. Also, the many dormant views in the city can be noted—views which, if opened up, could play a major visual role.

A basic category of views would include such differentiation as the extent of the panorama, its symbolic importance, the distance from which it is perceived, the degree to which it is seen and its correspondence to the city's hierarchy of values. Too often today, a minor view is overplayed and major objects lack sufficient prominence.

The sequence of views would have to be given special attention. The approach experience is essentially a sequence of views. So, too, is the movement through and around a city. Special studies could single out particularly important movement-vista sequences in order to yield definite design suggestions. An example will illustrate these points:

The entrance approach to Washington, DC, from the north passes over New York Avenue. This avenue is the extension of a rather pleasant landscaped highway. When that highway ends to enter the city, becoming New York Avenue, it reveals a chaotic disarray of urban miscellany—hardly an appropriate first impression of the nation's capital. Further along, the road rises to offer a long vista of the Capitol dome at the center of the city, about a mile and a half away. That distance is just about correct for a first long-distance view of the Capitol dome, but it is badly marred by a haphazard foreground of truckyards and wholesale warehouses. With careful land shaping, however, the immediate foreground could be blocked from sight. The middle distances of the panorama would then be far enough away to mute its discordances, and the Capitol dome could stand out in unimpaired dignity.

No less important than the views *of* the city are the views *from* it. Steen Eiler Rasmussen has commented on the characteristic American grid layout which gives an almost infinite view of the sky to every street, for each street frames a piece of sky at normal eye level. For a European this is a treat. For us it is perhaps too frequent to be desirable. The eye needs points of reference in the city and they are often well placed as distinct objects seen in silhouette against the sky. But Rasmussen's observation suggests an important role for vista design.

Just as nature is the best setting for a city when seen from afar, the city itself can act as a picture frame for viewing nature. Photographers know this very well. Often the most modest of architectural elements exploit this possibility. The old bay window in a series of row houses on a grid street allows people to get a long axial vista of the street. On Boston's Beacon Hill this design provides a fine sweeping view of the Charles River or the Boston

Common. In San Francisco it affords long views of the bay. The bay window serves an effective role in relieving the closeness of a street of row houses. It can be credited with helping to make the high-density row house areas livable.

Other designs for the out-looking vista include the skyscraper rooftop observatory, the shoreline promenade, the hilltop park, the bridge into the city and the parkway as it passes over high ground. A day's study of your own city would certainly reveal many more.

Program: The Metropolitan Skyline

Closely allied to views and vistas is the urban skyline—indeed, it is a chief component of vista. The late Henry Churchill FAIA noted that we do not see three-dimensional objects in plan but by vertical definition. Albert Mayer FAIA spoke in some detail on the current anarchy of our contemporary skylines in his address before the 1964 AIA convention.

In colonial days the accents of skylines proclaimed a hierarchy of values. Characteristically, the skyline consisted of church steeples at high point with a domed building, usually a seat of government, as the focus. Fire watch towers, shot towers or signal towers had distinct profiles and did not add confusion—neither did a cluster of ships' masts in the harbor, for they were thin, almost lacelike. All of these secondary skyline features had secondary visual roles which complemented the one or two prime skyline accents.

Our contemporary skylines cannot be read in such a simple way, for theirs is an order proclaiming multiplicity of values and goals. Almost any American city serves as an indication of a raw skyline order we have fast been developing. The center is a cluster of many shafts. Few, if any, correspond with each other. They are distinguished primarily by apparent age or newness when seen in comparative juxtaposition. Almost never is there an intentional balance or design correspondence between facades and masses. Visually they act as a group because they are a group and because the eye does not choose to see fine details of difference when too many details are offered simultaneously.

As the city grows, tower buildings are built at prominent peripheral junctions. Sometimes they are minor clusters, as in Detroit. Sometimes they are handsome single shafts like the John Hancock Building, designed by Skidmore, Owings & Merrill, in Kansas City. In any case, here are certainly the major new elements of skyline design. Since the central cluster of the city is the outstanding profile of the metropolis, expressways should be artfully aligned to give drivers views of it as they approach the city. Likewise, the outlying clusters or single shafts act as peripheral skyline verticals for the outgoing driver. Thus the various verticals of the city form a new reciprocity of view.

Preserving fine old skylines, particularly low ones with historic and symbolic accents, is especially vital. In some cities laws have been passed to restrict building height as a means to protect the skyline. This must be done with caution, for a continuous stretch of squat low buildings can be dull. Unless it is effected through a vista plan, some major features of the skylines are likely to be blocked off inadvertently. In addition, unavoidable urban appurtenances such as smoke stacks, TV masts, mechanical penthouses, billboards and telephone relays begin to get more important visually than they deserve to be. Simple rules just do not work in complex situations.
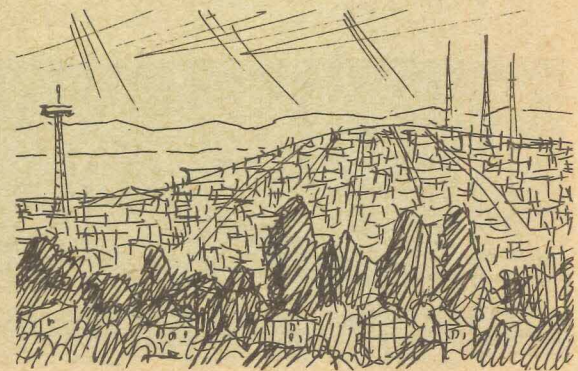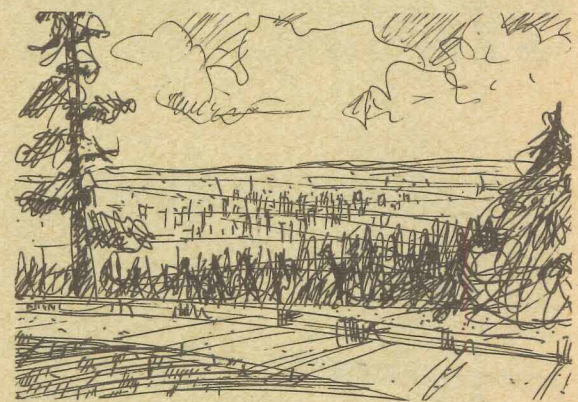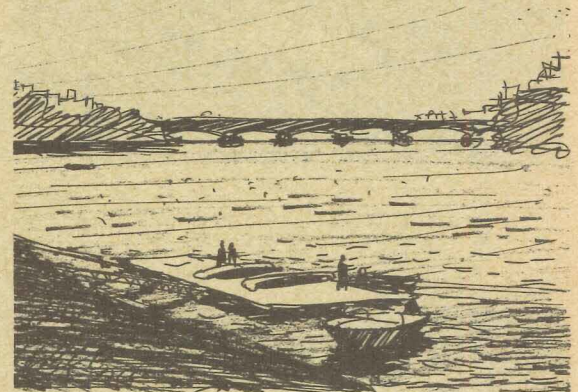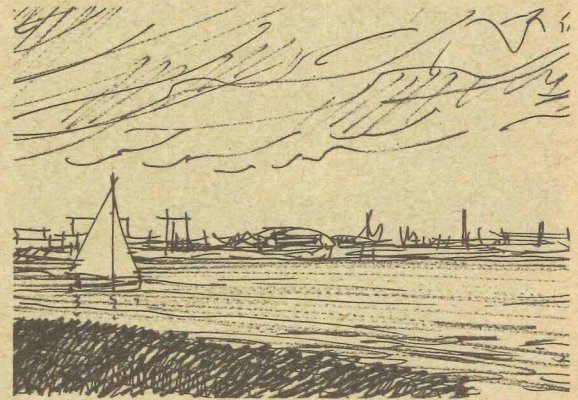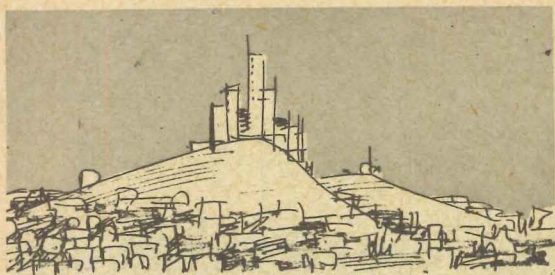
We have underlined the need for a careful skyline plan for each city, commensurate with its particular physical condition. This plan must, of course, be made in conjunction with the groups of people who can control the skyline—private builders and developers together with city officials who can exercise control through zoning. Guiding these decisions must be a sound and realistic design plan, whose major emphasis is the development of a handsome urban skyline.

Program: Special Sites

A skyline plan would quickly begin to specify sites of special vertical prominence, but not all the special sites of a city are high. Some low-lying sites also have fine vistas from them. There are others with an historical connotation, others containing particularly fine old buildings and still others which contain important public buildings. These make up the special sites of the city.

We propose that every city designate its outstanding sites, selected by a number of criteria which measure their value to the city and the public at large. The special sites plan could also outline programs for improvement where necessary. In addition, the plan would be influential in planning the metropolitan design structure, for these sites could be significant hubs and nodes, distinguished by character as well as use.

Society Hill in Philadelphia, an old historic quarter of the city, has been improved by rehabilitation and the addition of carefully placed towers and new row houses. La Villita in San Antonio represents an historic area which is carefully protected and actively used. The Los Angeles Chapter AIA recently made a study showing how hillsides could be beautifully developed for a variety of house types—in effect treating the whole design of hillside and buildings as a work of art. This they proposed as an alternative to the too frequent and too wanton bulldozer terracing.

The approaches and settings of major public buildings should be designated as special sites. Many river banks and urban shorelines, no longer used for industrial operation, can become interesting in-town enclaves for mixed residential-commercial-recreational use. Old market areas, once chief provisioning centers, can still function as suppliers to in-town hotels, hospitals, restaurants and institutions. In addition, they can thrive as specialty restaurant and gourmet centers. They need designation as special places to prevail in the face of uncaring developers.

Countless opportunities for private developers will thus be supplied. Indeed, there are many projects private developers cannot undertake without the provisions which designation as a special area gives. This official designation should also facilitate lending for unusual types of buildings and development. The HHFA experimental housing programs and numerous air-rights designs in cities around the country hint at the need for greater innovation.
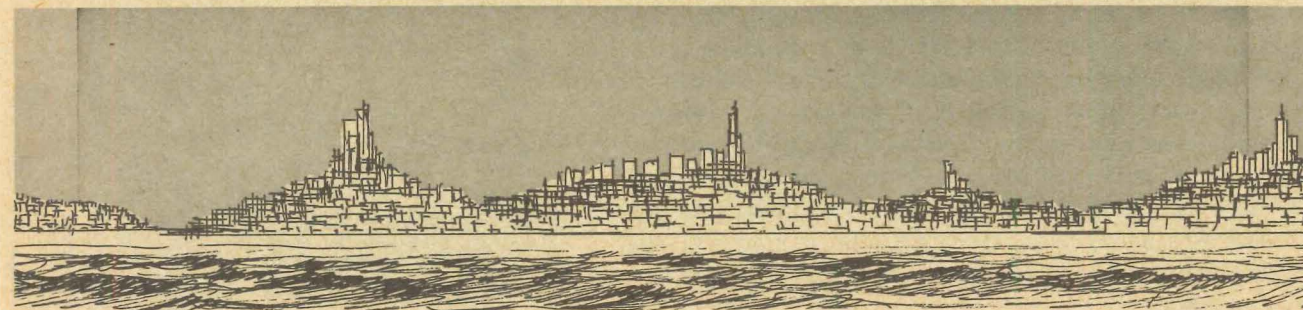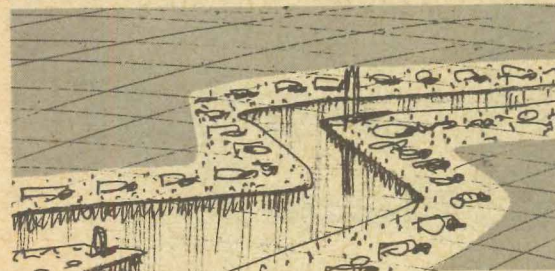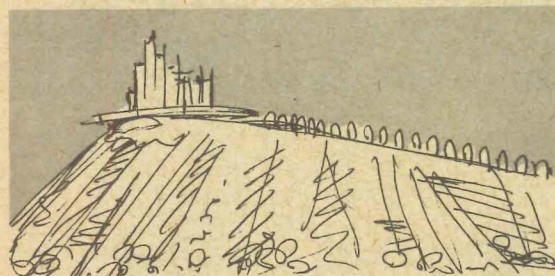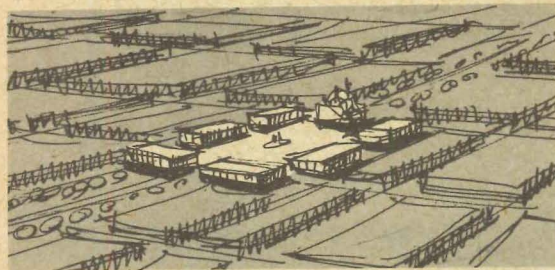
Urban Design at the Scale of the City

The program we suggest for metropolitan areas are, of course, equally applicable to the smaller and more familiar urban entities, the city, the town and the village. We address our proposals to the metropolis because that is the critical urban entity of our day. Discussions of the city versus the country or the city versus the suburb miss the real issue entirely. The principles of urban design at the metropolitan scale hold for smaller types of cities because the problems of design are essentially the same; of course, differences of scale introduce vast differences of emphasis and treatment. However, we can now proceed to some individual elements of design. In these programs, working at a more familiar scale, we are likely to achieve the first steps toward our larger objectives.

Program: Plan for Urban Open Space

In current city plans open spaces are designated for use as parks, playgrounds, schoolyards, beaches and athletic stadiums. There are many more types and sizes of open spaces, however.

We propose a design plan for urban open spaces containing a category of open spaces with more intricate classifications of size and type. A proper classification would begin with the sidewalk, the basic but most neglected of all open spaces. The classification would continue with small plazas, malls, large plazas, boulevards and avenues, small and large parks, bodies of water and their shorelines. It would merge with the urban open-space system of the metropolis. An urban open-space system must be considered along with the metropolitan system. Individual counties and cities in a metropolis each have a role to play in creating the larger open-space system.

Classification of size and use alone, however, is inadequate. Open spaces must not be designed as isolated islands of space but as a connected network of spaces, in relation to the areas they serve. The public open spaces serving a neighborhood of row houses are quite different from the small plazas of a busy city center or around a school, or indeed in an area of detached houses. In addition, the uses of open spaces differ from season to season. So, also, do the kinds of landscape treatment appropriate to various types of parks.

Program: Pedestrian Circulation

Automobile and bus traffic planning has reached a nearly scientific stage of engineering. Streets are classified according to the types and volumes of traffic they carry. This engineering technique should be extended to the pedestrian. Pedestrian counts have been made in busy urban areas and pedestrian malls have succeeded where they are tied into a total traffic plan. However, plans principally for pedestrian circulation do not exist.

We propose that plans for pedestrian movement be drafted in each city and that every city establish a Department of Pedestrian Circulation. The techniques of capacity and flow applied to autos would be helpful in doing this, but they should be extended to include the artistic approach to designed movement which the
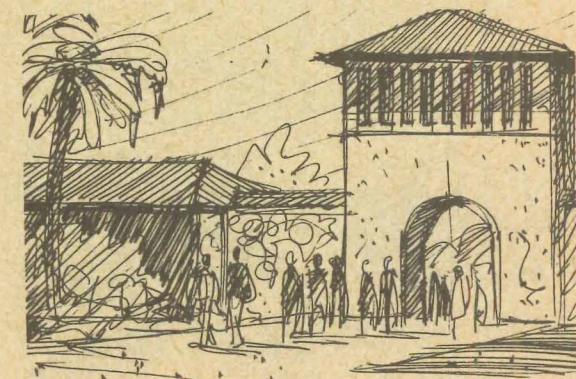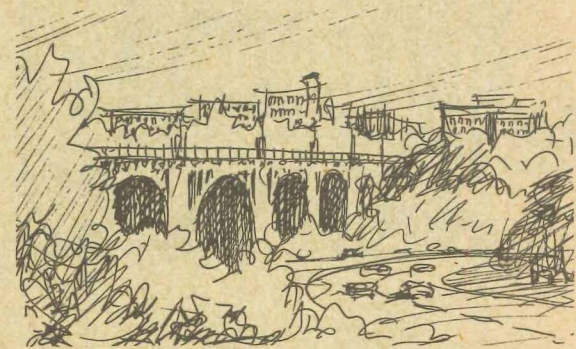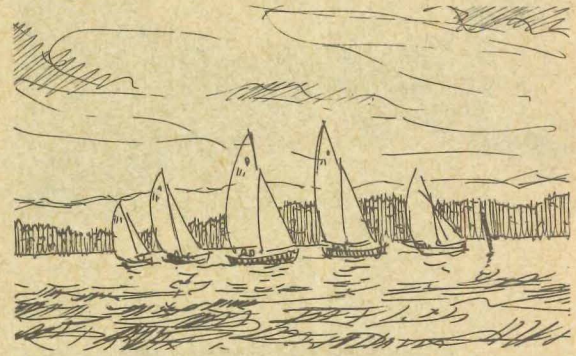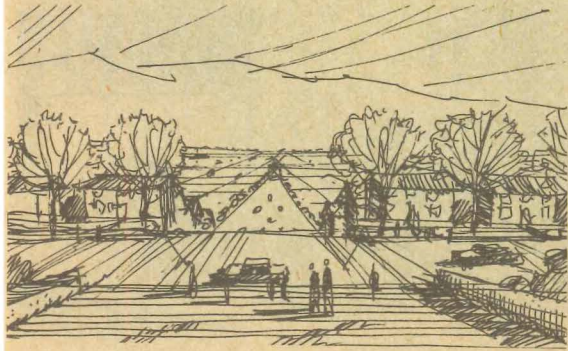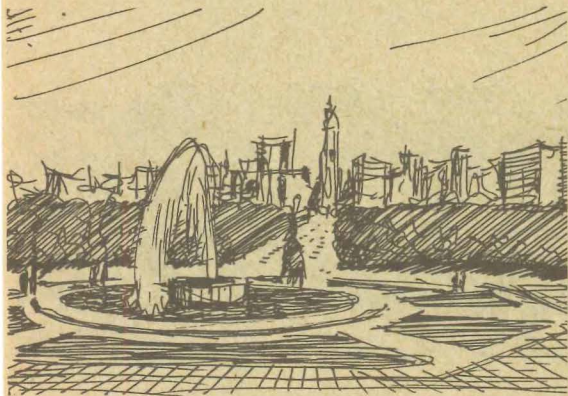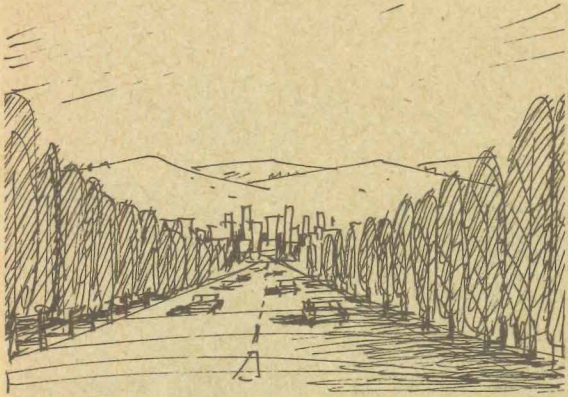
architect can bring. Architect Phillip Thiel has done significant work in this direction, and landscape architect Lawrence Halprin has been developing thoughts on what he calls "urban choreography."

A proper pedestrian circulation plan would knit the movement of the pedestrian into a city-wide network. It would tie into the major generators of pedestrian traffic—parking garages, bus and subway stations. This plan would also be based on the principles of artful processional movement as was done in Renaissance buildings and Baroque towns. It could as well be based on the more casual movement sequences found in medieval towns. Designed as formal or informal walks, city streets could be furnished with artful accents, events, pauses, transitions, intersections and points of arrival. A pedestrian circulation plan would guide developers in locating certain types of shops, garages and subway stations, as well as the functional and symbolic hubs.

Program: Municipal Trees

It is a sad commentary that a nation which once led the world in planting and caring for street trees now neglects this most welcome urban feature. A few generations ago a municipal street-tree program was a prerequisite of civic pride. We seldom attend to our street trees now except when it is too late or else to remove dangerous branches. We seldom shape them to proper form to keep them healthy. Many new street trees are too small and are planted in places where their size makes them easy prey to the normal abuses of city life.

We propose that every city reestablish a dedicated street-tree planting program. Trees can do more to beautify and humanize a street than any single element alone. Street trees must be chosen on the basis of beauty and practicality and be supervised under an ample care program.

Studies show that it is less expensive for a city to take care of its trees than to allow them to deteriorate. City trees must be trimmed to diminish water loss by evaporation. Their roots must be generously fed by water. The typical dirt pockets found at the base of city trees are mean to view and hardly ample for nourishment. Beyond its practical aspects a municipal tree program is a rich field for imaginative design.

Program: Electric Lighting

One of the most breathtaking sights in the world is that of an American city at night. From the air the patterns and colors of the lights read like an X-ray. The illumination of cities is one of the great untapped reservoirs of modern urban design possibility. Unfortunately our interest in street lighting is restricted merely to the output of candlepower, when it could strive for selective and beautifying illumination.

We propose urban design plans for city illumination, starting with the most practical areas of improvement. First of all, we could clarify the pathways of urban expressways by distinct types of light. We could then illuminate special junctions and then treat the lesser arteries and slow-speed streets with appropriate lighting that would read like a code.

We could develop special types of lights for pedestrian streets. In our zeal to get the maximum candlepower per square foot we have first installed overly bright lights, then reduced the number of lights to a minimum and finally resorted to huge poles completely out of scale. We have also overused mercury-vapor lamps on pedestrian streets. Pedestrian streets require a more deli-

cate lighting. In shopping streets the light from shop windows often provides adequate illumination by itself. On such streets lighting has an esthetic role—to unify the street by receding dotlike lights. Having completely neglected pedestrian lighting for forty years, we must remember that it is not only a matter of a fine pole and lamp —it is a matter of the total appearance of the street or road and its lights seen together.

Program: Street Furniture

Street lighting is one element of a whole category of objects which we have come to call street furniture. While there has been much thought given to this subject there have been few results.

We propose a program of street furniture design and an arrangement among manufacturers to make better designed products available. These include street benches, advertising kiosks, lamps, pavilions, bus and cab shelters, canopies, planting boxes, etc.

Shopping center malls have given much attention to these details, and other urban developments show promise. Charles Center in Baltimore, Constitution Plaza in Hartford and Zeckendorf Plaza in Denver display the kinds of things our streets should abound in.

Program: Street Hardware

While street furniture serves people directly, street hardware pertains to the outfittings of utility and mechanical systems, including parking meters, utility poles, traffic signals, transformers, overhead wires, traffic signs, direction signs, curbs, manhole covers, sewer covers, police and fire call boxes, etc.

We propose a program to improve the design of all street hardware. As with street furniture, it is the manufacturer who can effect the biggest changes—if the cities throughout the country request them. Cities will want better designed street fixtures— furniture as well as hardware—if the superiority of better design can be shown. This is a job for architects in general through their local AIA chapters.

Our current ways of accommodating urban hardware are pathetically reminiscent of the typical house of fifty or so years ago. Then, with the advent of electric wiring and plumbing it was common to see electric wires and pipes tacked onto walls as obvious afterthoughts. True, exposed utilities can be handsome— but only if they are designed.

Advertising signs would be emphasized particularly in this program. The street advertising or billboard industry is one of the biggest and best organized in the country, exercising considerable political power in many communities. It should launch a research program to improve this striking component of modern city life, for in some areas advertising signs constitute 50 per cent of the visual scene, or even more. The recent contributions to visual theory by modern art should be incorporated in the design of street signs. Let some of the creative energy devoted to the galleries be diverted to the art of the street! The billboard industry is certainly more than able to sponsor such a movement.

Program: Urban Sculpture and Art

The outfittings of the street need not all be utilitarian. In the world of design there surely is room for objects that lift the spirit on the one hand and delight the sense of humor on the other. Nothing does this better than art and sculpture in the streets.
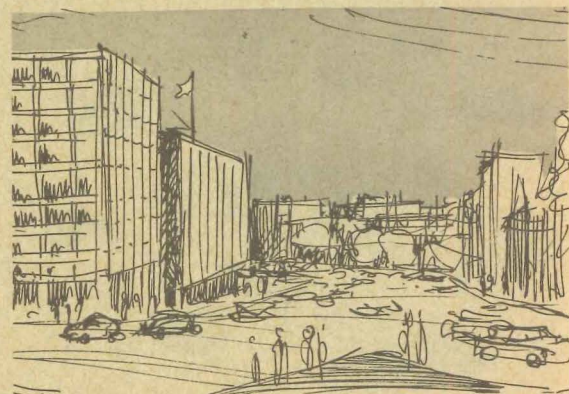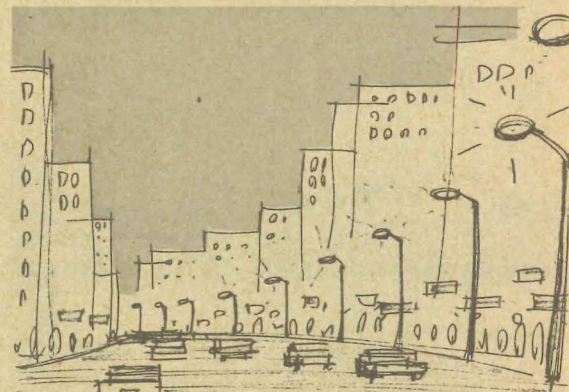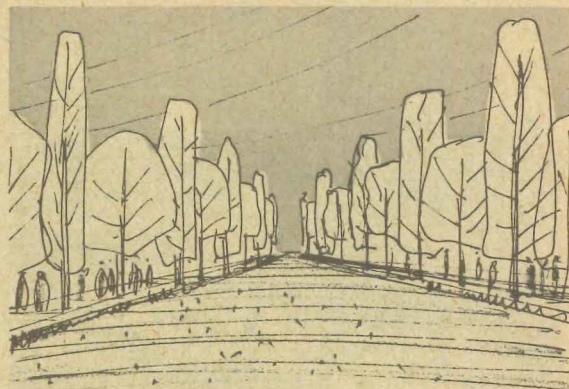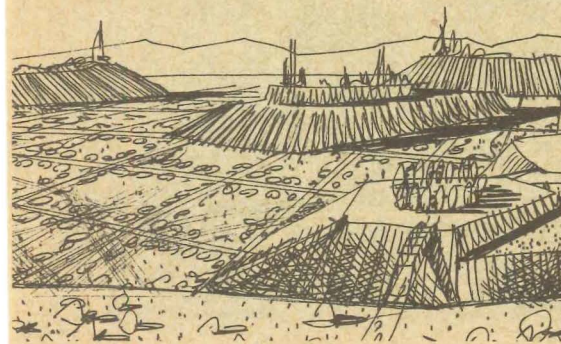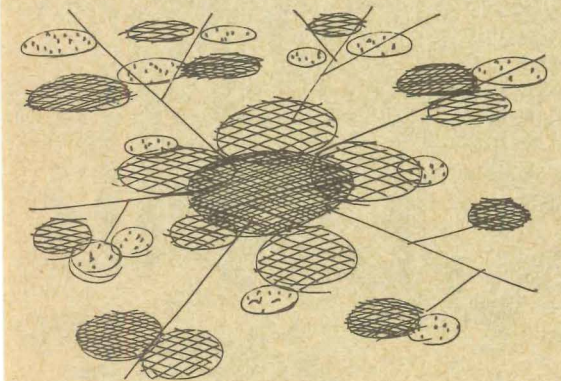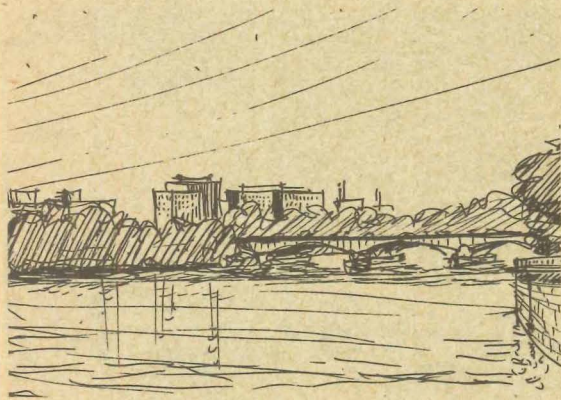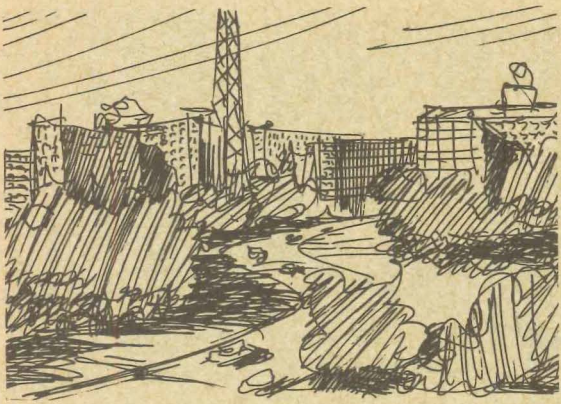
We propose that every city resume the time-honored traditions of civic art; that budgets be set aside for sculpture, outdoor murals, pavement designs, fountains, bells, commemorative plaques, etc. In fact, well-designed street hardware is a kind of sculpture.

But there must be room in our cities and provisions in our civic budgets for art for art's sake. Statues placed at key points of the city proclaim the sense of place. They also indicate an important direction, commemorate a citizen or a noteworthy event and offer the eye a point of reference. The city needs reminders of human values for its hurrying throngs and those values must surely include humor. We do little to provide for this and so it is no surprise that people will often furnish their own. A southern visitor to Washington said that he had no trouble finding his way around. He simply referred to the frequent equestrian statues, all of whose behinds, he observed, faced north. On Commonwealth Avenue in Boston there is a statue of a viking, arm upraised to shade his eyes as he scans new lands. The recess formed by his arm, shoulder and head perfectly accommodates a cardboard beer carton. An irresistible tradition has thus taken root among the nearby college fraternities. Every Monday morning a beer carton rests on the viking's shoulder.

In our terribly serious world these bits of merriment constitute a case for urban decorations that make us laugh. For those city councils not yet prepared to stick their necks out so far we suggest a look at the many works of Carl Milles in this country. For those with smaller budgets we recommend some thinking about the ubiquitous blank walls exposed so frequently when buildings are razed. These walls are usually stuccoed. They offer superb opportunities for temporary large scale murals. On a more sober note we might erect modest glass cases for display of paintings in the street, as is done in many small Danish towns.

Program: Sculpturing the Landscape and Cityscape

Speaking of art in the street, it is fitting to speak of art on the ground. Many cities have flat areas which would welcome relief in topography. Low hills at certain strategic points of view can block out irrelevant and distracting objects.

We propose programs, where appropriate, for the artificial sculpturing of the urban landscape to enhance views, complement land form and correct visual errors. Land sculpturing offers many possibilities.

First of all, earth from highway or building excavation furnishes ample material for little hills in otherwise flat playgrounds. This has been tried successfully in Detroit. The many marina developments along coastal areas are superb opportunities for creative land-and-water sculpture. Unusable hill sites can be reshaped as sites for buildings or for vista-promontories. Berms can block unsightly views from the highway and be effective shields against glare from oncoming headlights. Carefully sculptured earth banks along a highway can help to divert sound waves from residential areas. The work of Thomas Jefferson reminds us of artful earth excavation. He dug a shallow ditch or "ha-ha" around his house at Monticello to keep cattle from wandering into the gardens —the "ha-ha" avoiding obstruction of his scenic vistas.

Program: The Visual Survey and the Parts of the City

Assessing the visual qualities of a site is a familiar aspect of architecture, whether the site be urban or rural. In the third article of this series we outlined an elementary approach to making a visual survey on an urban scale. Perhaps it would be better to

think of such a survey as an urban design survey, for not all the conditions of a site are visual.

We propose that every city be surveyed and assessed for its quality and amenity as environment. Assets and liabilities will be discerned and evaluated, the resulting data serving as a basic reference for formulating urban design action plans.

The visual or urban design survey will detect sections of the city distinguished by use, character, quality, mixture, form, pattern, mood, etc. Among the more commonly recognized *urban parts* which should receive attention are those discussed below.

Program: The Downtown

Downtown areas have received the most attention because they are the vital hubs of our cities and have the most articulate spokesmen. So far, successful designs for downtown rejuvenation have been those tied to sound traffic, business and financing studies.

We propose an expanded program of downtown rejuvenation, stressing urban design. Downtowns will continue to be the nuclei of our cities. The objectives of these programs are to 1) make downtowns easy to reach through all transportation media, 2) make them worth frequenting because of their facilities, diversity and attractions and 3) develop a resident population to keep them alive at all times.

AIA chapters have contributed many successful downtown rejuvenation programs. Little Rock and Salt Lake City are outstanding examples of their advantageous application.

Program: Rehabilitating Old Neighborhoods

Urban renewal is now emphasizing rehabilitation of old areas, using a method that seeks to prevent and reverse the effects of blight in old neighborhoods. In the short and long run, this scheme will be less costly and more successful in producing better neighborhoods than even the most ambitious redevelopment programs.

We propose special programs for examining and planning the improvement of old neighborhoods, along with action to assure the soundness of existing neighborhoods. Such efforts call for careful survey and analysis work to disclose the elements stabilizing and those blighting a neighborhood. They also require design plans for the removal of blighting influences and the introduction of stabilizing elements.

Good shopping, schools, parks, accessibility to roads and public transit; good churches and neighborhood institutions; good houses and streets; good jobs and municipal services—these are the stabilizing elements in a neighborhood. Deteriorating houses, poor schools, traffic congestion, poor access, poor shopping, poor public services, noxious air, nuisance uses, unemployment, ghetto character—these are elements of destruction.

Every city must assess its neighborhoods and embark upon action programs to correct their problems. The scheduling and budgeting of these corrections requires ingenuity in order to stimulate the greatest amount of individual initiative. Official labeling of areas destined for rehabilitation and explicit plans will encourage property owners and investors, once the rehabilitation idea has proved itself.

Program: Historic Preservation

The preservation of historic buildings is by now firmly established and accepted. Accompanying preservation efforts is the
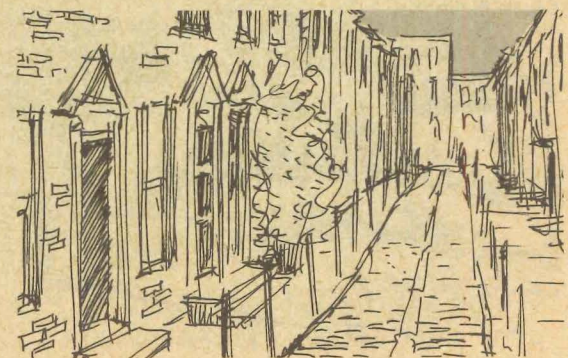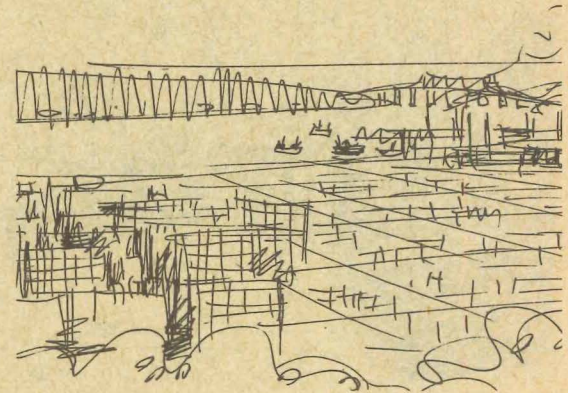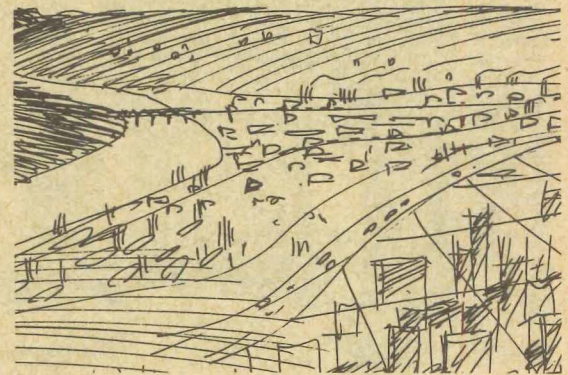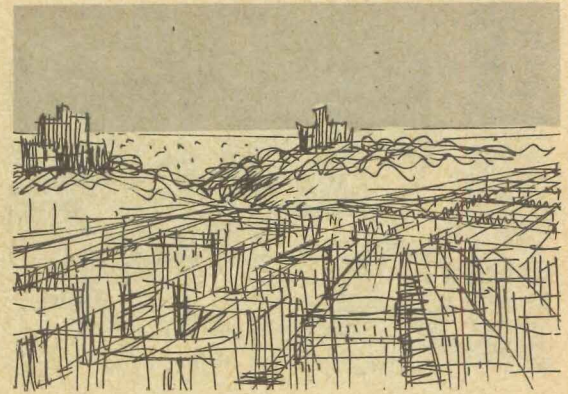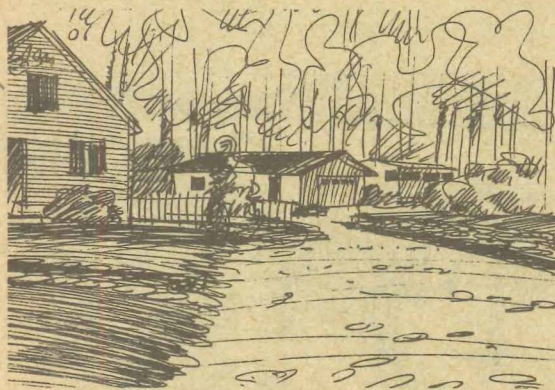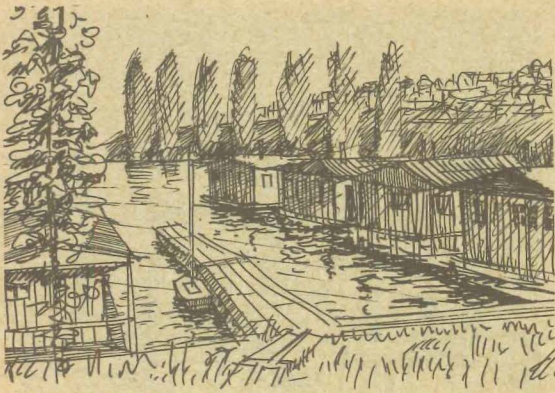
art of restoration—using the sound parts of an old building and restoring the unsound. Restoration and remodeling of an urban area is equally important.

We propose programs for the restoration and remodeling of historic areas of the city. The objective is to develop interesting and unique enclaves of the city as well as to add to the sum of useful city parts.

It is not enough to recreate the scale, atmosphere and character of the older areas—they should also be carefully blended with neighboring areas and extended in sympathetic modern terms. In some cases it may be wise to relocate old buildings to more appropriate settings. A group of them can be collected to recreate an old type of village, like Mystic, Connecticut. In other cases a group of historic buildings on historic sites can undergo a careful restoration program which *adds* harmonious new buildings to fill the voids between the old.

Program: Suburban Centers

As our road networks grow the number of suburban centers increases, which embody, almost without exception, the most haphazard growth possible. It is a pity that they cannot learn from the well-planned industrial park the benefits of good design. But the new centers are usually at highly accessible crossroad intersections and the land is in many hands. The townships and counties in which they lie have little experience in planning and administration.

We propose programs for the careful and practical design of suburban centers. Plans for these developments should include circulation of vehicles and pedestrians, parking, landscaping, functional grouping of shops, careful placement of pedestrian traffic generation, ample entrances and location for office towers and medical groups, interspersal of recreation buildings, location of public buildings, etc.

Planning in these areas should be required by law. The interests of the public are to be protected. Indeed, the interests of the developers themselves surely are at stake. In many cases responsible developers are willing to plan soundly but are unable to do so in the face of unscrupulous competitors. AIA chapters can and have taken leading positions toward these ends, because they can best show the benefits to be gained from carefully designed suburban centers—which are, after all, a new form of town center. Too often the roads straddled by the suburban centers are main auto routes. Expressways should not cut through but bypass them and convenient connector roads branch off to the centers. A ring of reserve land should surround the center as buffer between commercial buildings and houses. Through careful planning of the pedestrian ways the center can connect to nearby schools, old-age homes, public buildings, etc, thus being tied to a variety of functions.

Program: New Suburbs and New Towns

The many new suburbs springing up around our cities present the finest opportunities to build new residential communities. But too often they are simply dull subdivision layouts—one class, one type, undifferentiated housing. Experience has shown that diversity of house type and essential community facilities are basic guarantees for stabilizing neighborhoods.

We propose programs for the shaping of suburban residential developments into viable new communities, utilizing all the
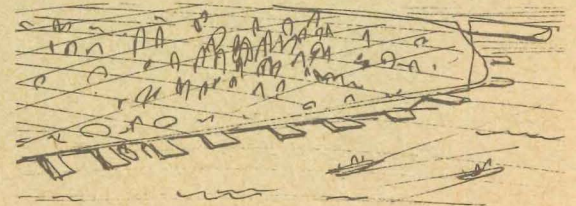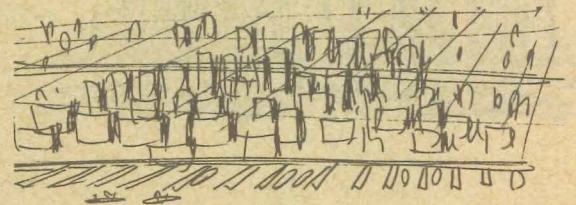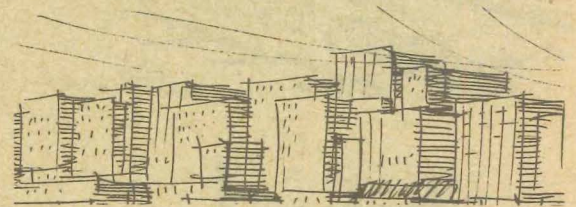
94

techniques that can be brought to bear. Among the programs are the creation of open-space reserves; preplanning of major utility lines to direct growth; zoning provisions which allow developers to submit their own plans for new towns in accordance with a county master plan; the requirement that subdivisions be well designed as communities; and the cooperation of individual developers in joint enterprises. Most desirable would be the creation of design plans for entire suburban areas of new communities with a variety of building types. Certain key open spaces, facilities, vistas and features could be specified while the balance of the design could be designated as density alone—thus paving the way for flexibility in development.
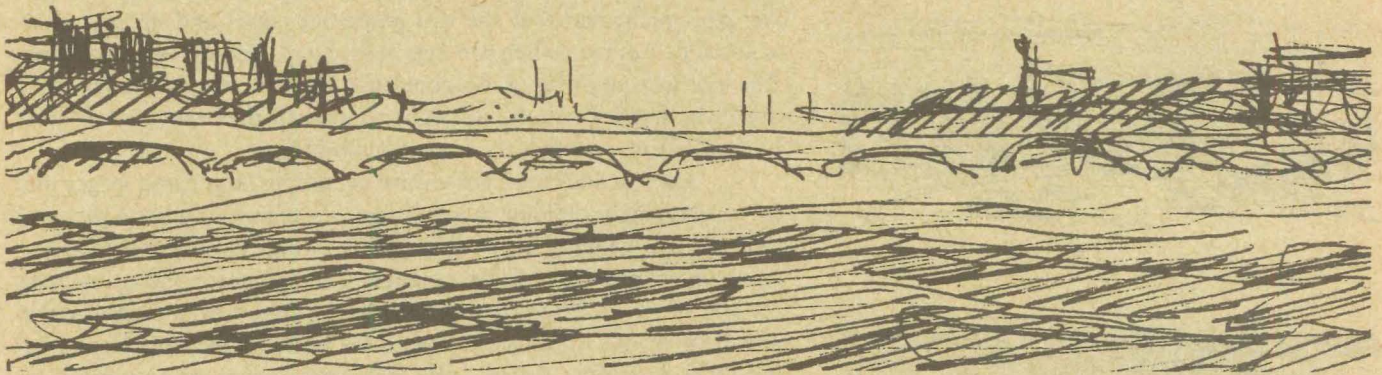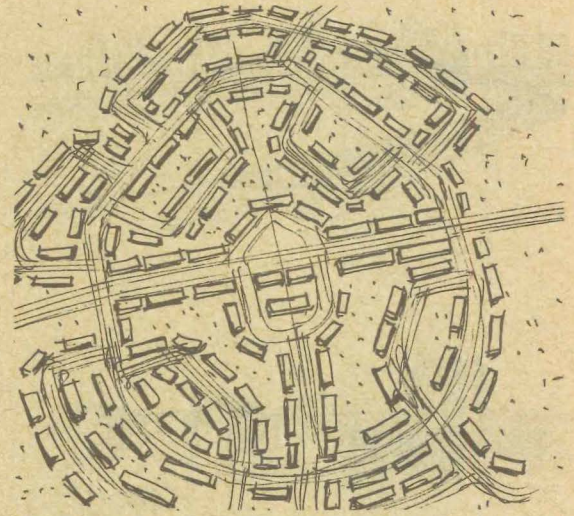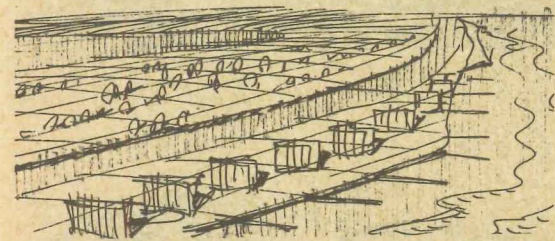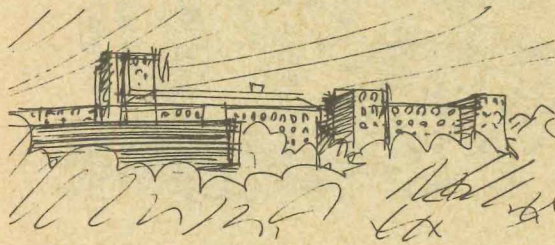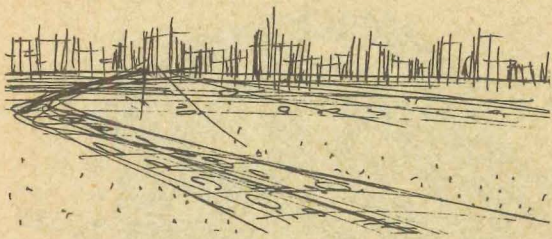
Some Not-So-Incidental Incidentals

Our comprehensive list of urban design programs is, of course, incomplete. It always will be. As long as we put our minds to it we shall uncover new problems needing urban design attention. A moment's thought readily suggests even further programs than those discussed—the restoration of despoiled town sites; the improvement of focal buildings like churches and schools by reshaping their settings; the design of special enclaves like hospital areas, high schools and college campuses woven into the community; the creation of places of fun in the city; and innovations in housing, particularly low cost housing.

This task emphasizes the role of our AIA chapters throughout the country as it has never been emphasized before. Leadership will, of course, always come from individuals but even the best of individuals work more effectively when reinforced by strong organizations. Our AIA is a ready-made organization at city, state and regional level. Its immediate obligations at these levels include the arousing of interest and contact with the public and private groups which build our cities. We should establish a Mayor's Urban Design Advisory Committee in every city and a Governor's Urban and Regional Design Advisory Committee in every state. These committees could explain the importance of urban design at all levels of public undertakings. They could make suggestions to improve public policies of action. They could be a vehicle for transmitting ideas. They could be ambassadors between the planning commissions of the cities, counties and states and private de-

velopers. Our local AIA publications could serve as major publications for presenting urban design. The Utah Chapter AIA did this very well in publicizing Salt Lake City's downtown plan.
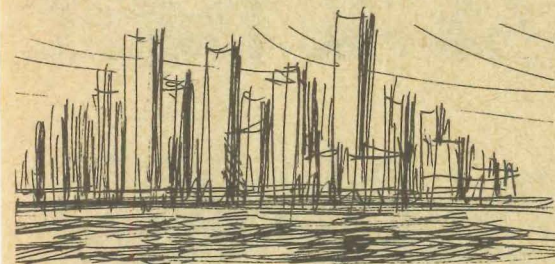
There are a number of special urban design problems which can best be tackled by our AIA chapters: the question of design controls; sign designs; urban design education in nearby universities; urban design consideration in all public works; preservation of historic buildings and areas; contact with the local press (the Sunday art and local news sections are woefully lacking in articles on urban design); examination of local codes and building ordinances; parking plans for downtown areas—the list is indeed long.

These professional obligations in no way transfer the duties of architecture from the individual practitioner to his AIA chapter. The obligations of both are increased together. The basic unit of urban design will always be the individual building of the city. We have been adding to the vocabulary of architecture in these last years at a rate more rapid than anything history has ever seen. But our advances have focused on the individual building alone. We must broaden our design vocabulary to the urban scene, to better relate buildings to their neighbors. In our facade designs we must recognize that the eye pauses at edges and accents. This is true, of course, when we see clothing, a garden or a building. The eye is wearied by a too continuous run of features unless they are fashioned by a master designer and even then they should only be applied to particularly important buildings.

Our facades and masses are becoming larger and larger and it is increasingly difficult to keep them in scale. We must remember that the eye delights in probing objects which do not reveal themselves in their entirety at first glance. The eye needs the enticement to look more, to discover more, to be surprised by the unexpected and held by the sublime. It would be well to get a bit of tasteful décolleté into our designs. We also have more opportunities to create enclosed urban spaces between buildings as we design groups of buildings together. A handsome enclosed space can give more distinction to buildings than the best possible mass or facade design alone. That is one of the many old lessons of urban design we are beginning to relearn. In short, our urban design outlook will add as much to the improvement of individual works of architecture as to the city as a whole.

Concluding this series of articles on urban design marks the end of our initial statements but also the beginning of a commitment to action. At national level the AIA will continue to disseminate information, propose programs and report on accomplishments. Our job is just beginning. Its problems are vast but the possibilities are inspiring. No generation of architects at any time in history had as promising and inspiring an opportunity as we do now. ∎

tribution, are: University of California, (Berkeley), Georgia Institute of Technology, Harvard University, University of Illinois (Urbana), Massachusetts Institute of Technology, University of North Carolina, University of Pennsylvania, University of Pittsburgh, Syracuse University and University of Wisconsin.

ENVIRONMENTAL PROJECTS: The New York Chapter AIA has awarded $5,000 through its Arnold W. Brunner Scholarship program for the development of a book, a motion picture and a research study, all pertaining to man and his environment. Henry Bowditch van Loon, former executive director of the Pennsylvania State Planning Board, received $2,000 to complete a book which will contain the experience of his more than 20 years' work in community, regional and state planning. Donald Craig Freeman, a lecturer in design at Harvard University, was granted $2,-000 for the production of a film that will focus on architecture and urban design in selected areas of the US. Henry D. Whitney, chairman of the Chapter's housing committee and a member of the architectural firm of Tippetts-Abbett-McCarthy-Stratton, received $1,000 for continuation of his study of city residential neighborhoods.

NIAE AWARDS: The $5,000 Lloyd Warren Fellowship (52nd Paris Prize in Architecture) for one year's travel and study abroad tops the program of prizes, scholarships and fellowships being offered by the

National Institute for Architectural Education for the school year 1965-66. For further details on this and a number of other awards, write to NIAE, 115 E 40th St, New York, NY 10016.

WHEN IN ROME: The American Academy in Rome is again offering a limited number of $3,000 fellowships for mature students and artists capable of independent work in architecture and the related arts. Applications and submission of work are due in the Academy's Office, 101 Park Ave, New York, NY, by December 31.

CONFERENCE / Architecture and the Computer

The Boston Architectural Center is looking to the future by scheduling a conference on "Architecture and the Computer," at the Sheraton-Plaza Hotel on December 5. The purpose is "to bring together architects working with the computer, architects not working with the computer and non-architects working with the computer in fields related to architecture, to explore the use of the computer as a tool to help architects make functional and visual decisions, and to discuss the limitations as well as the potentials of this approach to design.

Dr Walter Gropius FAIA will make an introductory statement; others on the program include Serge Chermayeff and Kenneth Sargent FAIA. For information, write the Center at 320 Newbury St, Boston.

Octagon Observer Cont'd

PC OFFICERS: Producers' Council has selected this slate of officers: Charles S. Stock, American Air Filter Co, Inc, president; Roy E. Hayes Sr, Carthage Marble Corp, first vice president; Earl F. Bennett, Koppers Co, Inc, second vice president; M. P. Komar, Inland Steel Products Co, treasurer; and D. A. Rothrock, Rohm & Hass Co, treasurer. The election took place at PC's annual meeting and chapter presidents' conference in the Royal Orleans Hotel, New Orleans, September 22-25.

PC also announced the general release of Phase B of its Distribution Study, consisting of five volumes. The study was conducted by three professors of the Wharton School of Finance, University of Pennsylvania. Details on its availability and cost can be obtained from Council headquarters, 2029 K St NW, Washington, DC 20006.

FOOTNOTES / Regarding a Well-Read Reprint

An article by Wayne F. Koppes AIA, "What Do Walls Cost?" which appeared in the AIA JOURNAL a year ago November, has been included in the latest revision of the "Metal Curtain Wall Manual" issued by the National Association of Architectural Metal Manufacturers. The author, NAAMM's technical director, provides an analysis of the costs of various types of wall construction.

ERRATUM: Roger Montgomery AIA, a faculty member of Washington University, St Louis, and a practicing architect, inadvertently was identified as a member of the American Institute of Planners in the introduction to the Urban Design Series in the September AIA JOURNAL. The editors regret any embarrassment this error may have created among his colleagues and professional associates.

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