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Paul Philippe Cret

Atomic Bombs and City Planning

News of the Chapters

French Protection of Their Monuments

Freedom From Fractions

Architecture of Today and Tomorrow

Housing, a Responsibility and Opportunity

35c

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Architecture of Today and Tomorrow—II
By Edwin Bateman Morris

The second in a series of articles reflecting widely gathered opinions of architects and architectural educators as to the trend of design and its acceptance by the public.

In connection with the matter of the future of architectural design, I persuaded the Editor to send out for me a questionnaire, to a number of architects who would certainly not have the leisure, but who would probably have the kindly impulse, to fill it out. A very large number of them did and the harvest of opinions and ideas is very important and valuable.

In a matter of this sort I am impressed with the very human qualities of architects. The questions were of a nature to evoke controversy, and the replies were in true architectural sense, at once belligerent and gentle. The firm grasp in the velvet glove! I often wonder whether it is the high purpose of our profession that makes architects outstanding, or whether it is the breadth and fine sensitivity of architects that makes the profession outstanding.

John Harbeson wrote for Paul Cret who was in the hospital, stating that Cret had said he was “too sunk to have lofty thoughts; an oxygen tent is no place to clear one's views on architecture.” And even while I was transcribing these words his beloved soul was leaving this world.

After having communed with the fine men of the profession, I approach my task of writing about the profession and its aims with humility. If I were to talk about architectural design solely, I should probably not speak, but since I am set to talk about the thinking about architectural design, perhaps I may be permitted to raise my voice. Though I make no converts, I may promote discussion and rebuttal, which will be interesting and valuable.

We are entering into the Periclean age of architecture. We have successfully polished off the greatest war in history. Though we possess a national debt of astronomical

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proportions, yet we are financially and industrially the most powerful nation. Whether advisedly or unadvisedly, we are going to plunge ourselves into an era of prosperity. The arts will flourish. The architectural ball is in the possession of the American architects. Architecture for a long while will be what America makes it. Our thinking therefore should be right.

I think it is not right. We don't have any artillery observation. We aim the gun with meticulous care. We take into consideration all the factors as we see them, and let her go. We assume, with all that preparation and care and thought, we must hit the target. But we don't know.

And what target?

Architecture is an art. It is probably because of its permanence and interweaving with the processes of life, the most important of arts. And the definition of art is, and must be and always has been, the process of sending messages to an audience to whom the messages bring pleasure. If the art does not bring pleasure to the audience, it isn’t an art.

In the early stages of all art, the audiences were paramount. Homer, smiting his bloomin’ lyre, paid respectful attention to the re-

action of those at the ringside. If they slept, he revised his routine. If his stuff fell flat, he didn’t question the mentality of the seat holders but went immediately into deletion and substitution.

And now today, in most of the arts, the paramount position of the audience is an accepted fact; but not in architecture. The writer pens his book, which his publishers consider intellectually sound, but if the public is bored with it, it soon disappears from view and the writer, having made the muff, may never have another book printed. Thousands of dollars are spent on a drama, but if the public does not sit in the folding seats, it is no drama, but fades into the ghostland of obscurity. The same for music and painting. Except for architecture, it is the jury of the dollar bill which reports the verdict.

I say except for architecture because the architect has an esthetic function, and a practical function. If he comes through successfully in this practical function he is generally felt by those investing in the construction to have fulfilled his responsibilities.

As Douglas Orr very clearly expresses it: "To me architectural
design involves the adequate solution of all problems arising in the project, and this would include solving a plan, the proper adequate selection of materials, the method of heating, lighting and related items, the fitting of the building to the site, and a multitude of other factors which come ahead of any consideration of so-called 'style.'

That is a very concise résumé of the practical things the architect is employed for as the protector of the investment. If, as a result of his efforts, maintenance cost is reduced, comfort and usability is increased, rental is constant and the like, the investment syndicate does not comment upon the exterior.

As a matter of fact, it often transpires that architectural design of the building which is unpleasant or nauseating to the public is an asset. It publicizes the building.

Architecture is thus apt to get its verdict on workability. The architect's ear is not finely enough attuned to hear, or at least to attend, the public reaction to his art as an art. He takes appreciation for granted, either now or in the future. Victorine Homsey says that the prejudice of the public against modern will soon disappear. Alfred Shaw speaks of "the inclination of the public to avoid the good and to accept the customary." In almost identical words, Roy Childs Jones of Minnesota says: "The general public inevitably likes what it is already familiar with in the way of external appearances and temporarily resists the unfamiliar."

Do you see the difference there? The arts generally have to take the immediate verdict of the audience. Architects hope for a future change of mind. Dean Dillenback of Syracuse indeed goes further and says: "I would feel elated if the public does not understand modern." You see? Completely rejecting the idea of verdict, isolating architecture as being the only art where the artists are not concerned as to whether or not the audience receives their outpourings of soul with pleasure and interest.

A while ago someone told me a story, in the humor of the day which loves to deal with the impossible and outrageous, concerning a woman who, having just bought a dress, said: "I should like to have it altered to fit." "No, madam, that is no longer done. Nowadays we alter you to fit the dress."

The question as to whether the public should change to fit architecture, or architecture should be made to appeal to the public, is a large one and is susceptible to de-
bate. But I am firmly convinced, and I believe all architects will in the main go along with me (though application of the principle may be difficult), that there is a certain lack of dignity in doing architecture that the man on the street finds dull and messageless. It may not actually be dull and messageless. But if it is to him, what's the use? Playing to empty seats!

Of course, the pearls-before-swine theory has been advanced, but it is a poor theory, for the reason that persons of great intellectual attainment and with active experience in life join with the unspeculative mass of others in inattentive disregard of architecture they fail to understand. Just as they look with unseeing eyes at headlines of the foreign-language newspapers. Persons who do not understand a message because of the language in which it is couched are not necessarily lacking in mentality.

The education of the public to the finely attuned thinking of architects is therefore difficult. The public cannot read the messages of the architect to them, because architecture is suddenly being expressed in forms different from the forms to which the public and its grandfathers and its great-great-great-grandfathers had previously been accustomed.

We are therefore not educating the public. The purpose of this particular paper is to ask you to think about that. If you believe we have, in the last two decades, educated the public, that's that. But I think no one honestly does believe it.

Our esthetic thinking is definitely sound, in that it rejects the stuffed-shirt over-ornamentation of the past. But how do we explain it to the onlookers, when we purposely do not use the forms and architectural syntax of the past, even when good, which they understand?

Ernest Grunsfeld, Jr., brings up a point. He says: "I think your question is wrong when you speak of inherited instincts." That is a pretty general viewpoint. Architects do not believe in inherited instincts as a factor in their audience evaluation.

And yet it is all-important. The pleasure that the public has in architecture, and it is great, is not mental but is involuntary. They do not reason why, and do not wish to reason why. The reason lies within them, and is therefore the more real and compelling.

As Darwin has observed in the
course of his writings on evolution, our fundamental emotions of fear, pleasure, shame, disgust, come ready-made to us and are born in us. Even our external reactions to them—frowning, blushing, smiling, laughing—are involuntary. Our pleasurable reactions—to music, to the printed word, to acting, to architecture—do not come after a period for reflection but come at once.

Therefore it is apt to be futilely optimistic to think that because a building is continually before the public the building will eventually have an educational influence. Failing, after its first unveiling, to obtain attention, the building seldom thereafter obtains attention. If the message is not there on the first day, it usually never is there. I do not pass architectural judgment on the Longfellow Building in Washington, but it is in a language definitely incomprehensible to the public. Nor will they ever understand, for they noticeably pass by without looking, just as they close their ears for a radio commercial. The public protects itself from things that fail to hold its interest and attention by involuntarily closing ears and eyes to them.

I shall quote William F. Lamb’s fine phraseology in describing the architects’ earnest endeavor to be true to the architectural Hippocratic oath: “It comes down to the fact that the modern approach to the solution of our architectural problems which denies that the expression of modern life can be contained within the forms of old vessels will, I am sure, develop into a definitive expression when we as architects can be sure of where our present civilization is going. Today we are living in a confused and kaleidoscopic world, and, as true architects, we are expressing that world rightly as we see it.” That covers our high esthetic intent.

He says further: “It takes time, of course, to educate the public, likewise the architect.” There is a golden text in that, which is not a criticism of any architect but does point to one of the facets of this present situation. Expressing the same general idea, Harry B. Tour, architect in TVA, says: “Modern probably lacks popular acceptance because of the lack of understanding by the public as well as by some of the designers.”

I will stand on that phraseology as my text. In other words the public certainly is to be blamed for its sales resistance to a movement of artistic advancement. But the
public, a huge unwieldy congregation, is the same old public which is always there with the sales resistance; and the architects have failed to an extent because they have not chosen the proper persuasive and understandable architectural forms to win the public over. No product, however excellent, can be sold unless there is the proper subtlety in the sales talk. A form of architectural expression which is emotionally appealing only to architects is no good. For progress it must be emotionally appealing to the public which looks at it.

Just what do I mean by that? Do I mean that an architect should stultify himself, fetter the free sweep of his inspiration? No. I mean that if an architect’s idea is of tremendous importance (as is the fundamental concept of Modern Architecture, or whatever label you prefer for it), he should pause to find the most understandable expression for it.

As an analogy, may I pause in an aside to say that when our most persuasive writers set down their thoughts, they strive to use words and expressions which by centuries of usage have become laden with meaning and appeal. They do not use new words to set forth new ideas. Old ideas can be expressed in new phrases, but new ideas, to be clear, have to be phrased in the simplest and most readily understood vocabulary.

The pertinence of the above paragraph is this: Many architects might well have used in their designs, and obtained the same aesthetic result, architectural forms which, in common with the words mentioned above, have by centuries of usage become laden with meaning and appeal. These forms, by acting as link between old and new, might have aided materially in putting the idea across. Genius can always accomplish clarity if it desires.

Instead, architects have often deliberately rejected the forms of clarity and used up their genius to evolve new and experimental forms whose expression quotient, because of newness, is low. If an architect cannot use historically meaningful forms, I bow to him. If, however, he consciously and perhaps contemptuously discards them simply because of their historic implications, he delays the consummation of our great architectural effort. Architecture, consequently, is now wading painfully upstream, not generally understood.
by the public, approved of in each instance by a minority of architects.

Sherley W. Morgan said of one of the questions in my questionnaire, it "involved a self-conscious attitude which is fatal to the designer." This is one of the difficulties of our present architecture, in that the designers have self-consciously avoided the use of certain forms, not because of their essence but because of their labels. It is as if a person tried to write an appealing and beautiful piece of prose while avoiding the use of all words of Latin derivation. A stifling self-consciousness would result, with no possibility for good. I am certain that in architecture perhaps the stubborn avoidance of certain forms, which in themselves are architecturally beautiful, has stifled architecture and injured clarity.

This seems to be bitterly critical. I do not mean to be. But many architects have firmly said, as a paramount tenet, that they would use no architectural motive which suggested a motive of the past, but would design a new one. That is, there is this tendency to evolve an unfamiliar and therefore non-understandable vocabulary instead of an understandable one.

Many architects cringe at the term Modern, and justifiably, since many curious architectural tries have been made under that banner. Miles Colean says: "What is the essence of Modern? I'd like to see a good definition." The style is too alive and virile. It goes too fast for its riders to see themselves in a mirror. Nor will there be an appropriate name for it in these times.

The right name should have the letters "Grec" in it. The style is so freely and unconsciously Greek in its intent and in its fundamentals. Greek architecture was the outward glorification of column and lintel. Modern architecture is the inward glorification of column and lintel. Think of the Empire State Building—column and lintel repeated and repeated in astronomical figures. One of the most beautiful buildings in the world! It seems to me to speak its vertical and horizontal framework. Radio City has the same feeling, because of window pattern, of inner column and lintel, the same Greek feeling of simplicity.

Curiously enough, only the Greek fret, of all traditional architecture, has an annual pass permitting it to be used as ornament in latter-day architecture. Some of
the most interesting of the Modern examples—Goodhue’s Science Building, and Cret’s Federal Reserve Building in Washington—are Greek in expression. Also the Folger Library, with its metope-like sculpture.

Does that mean anything? Well, it could mean that it would not be harmful—in fact it would be consistent—to use design forms which were definitely reminiscent of the column and lintel idea, even if traditional. They could be more appropriate than the column-concealing strip-window, which has no memory-arousing facility to assure onlookers of brotherhood to architecture as the onlookers know it.

Perhaps I have plucked this string too long, wasted too many words on it. But there is an inner feeling of agreement with me among architects. No one answering the questionnaire dared venture the opinion that the present-day architecture has any appeal to the public. The reasons therefor were ignorance, prejudice and other terms laying the blame on the public. That could be true enough. But, wherever lies the blame, the unhappy fact remains that architects are doing architecture, pouring their souls into it, and they are like a man addressing a throng of deaf people all of whom have left their acousticons at home.

Sooner or later we are going to have to make the public understand.

I suggest that we begin now. It isn’t necessary to go back to the stuffed-shirt architecture of the ’nineties. But strip-windows, naked concrete slabs and wider-than-high entrance motives should be slipped into the diet gently. We should use inspirationally designed modern motives which have the feel of columned portico, of grilled opening, of pleasant balustrade—vocabulary understandable to the standard observer. Not that the latter forms are better, but they have clarity. They are readable—and they are honest. A building supported by thousands of columns and beams could, with complete frankness, be given a column-and-beam focal motive modernized to be in harmony with advanced design but in form understandable to the onlookers.

Architects will probably make a very wry face over swallowing that idea. At first, anyway. But we have had twenty-five years of trying to educate the public; now shall we take a few years to edu-
cate the architect—not in the possibilities of architecture, which he knows, but in convincing expression. So that architecture may not be merely an academic theory passed around among architects, but may be a thing of beauty and a joy forever to everyone.

I can hardly hope that many will wholeheartedly agree with me. I can only hope that many will think of this matter—not in the way of controveting me unless I be far off the target, but in the way of forming a union between architects and audience, now that America and the spirit of architecture are synonymous.

French Protection of Their Historical Monuments

By Marvin C. Ross

CAPTAIN, USMCR

One of the great surprises awaiting the officers with the Allied armies of invasion in Northwest Europe was the fact that the French everywhere had been restoring their historical buildings all during the German occupation, and that they were often, in many places, ready to take up temporary repair work on damaged buildings shortly after the battle passed. In my travels in France in connection with my work at SHAEF I often saw evidence of this activity in France. In fact, I saw this pretty much in all parts of France. On September 12, 1944, at Chartres, for example, the workmen were already putting up a scaffolding to strengthen the gable on the upper part of the south tower, hit by the Germans in shooting at members of the resistance movement who had stationed themselves there. At the same time work on the columns and stonework of the face of the buildings in the Place de la Concorde in Paris, injured in a tank battle in the taking of Paris, was already undergoing repair. At St. Lo, in October of the same year, workmen were busily repairing the cathedral in the very badly damaged and burned portion of the old town, and the same was true in other portions of Brittany. At Strassbourg, in December, the architects in charge of the historical monuments were repairing damages to the cathedral and the Cha-
teau de Rohan while the town was still being shelled by the Germans. It was obvious that this eagerness to undertake restorations at once on the part of the French officials would result in conserving many damaged monuments of historical and artistic importance for future enjoyment.

This work, as well as the other activities in connection with historical monuments, was due in large part to the energy of the officials in charge of the Monuments Historiques. However, they were greatly aided by a new law of August 16, 1941, which changed the assistance which the State gave to the owners, whether collectivities or individuals, of historical buildings damaged by the act of war. This present account is based upon a copy of the law, in an article by Paul Verdier, Inspector General of Historical Monuments, published in the *Revue des Beaux-Arts de France* (No. VIII, Dec.-Jan., 1943-44), and the lists of classified buildings issued by the Minister of Education, and my own observations.

The whole French policy of assistance in this war for war damages was changed. At the end of the last war the State gave the right to owners of property damaged by act of war to claim the integral reparation of the loss that they had suffered. In World War II it was recognized that the inhabitants of a country at war ran risks, not only of life, but of loss of property, and those risks they themselves must assume although the State is ready to cooperate financially. The one exception is in the matter of the national patrimony of art and history, and here the State plans to reestablish the buildings insofar as possible to their former condition.

This includes all buildings classified as historical monuments or merely inscribed on the lists, provided the damage is by act of war (other damages will be cared for in accordance with previous legislation). The work of reparation must, however, be undertaken within a limited time after the building has been damaged, in order to receive the assistance of the State.

Materially there are certain limitations to this general statement. Buildings destroyed by bombing, for instance, may be declassified and, unless they are not part of an ensemble, need not be restored. The restoration also is limited generally to the parts of buildings classified, although the administra-
tion in charge of historical monuments has the supervision over such details as the electrical work in order to see that it is properly done. The exceptions might be churches, which as a rule give character to villages, and, in many instances, the work as a whole, both of the owner and the State, must be harmonious. But as a rule the non-classified portions of buildings which are not devoted to cultural purposes are the responsibility of the owners—such as the interior arrangements, installations, etc.

The officials in charge of historical monuments in France have expressed themselves as firmly resolved to restore the national historical and artistic patrimony of their country. The temporary measures spoken of earlier, at Chartres, Strasbourg and elsewhere, is evidence of their good faith in this matter as well as their industry. They are to be congratulated greatly, both upon their high resolve and upon the work that they have already accomplished. Both the law and the carrying out of the new policy have shown great intelligence.

The classification of historical monuments proceeded also during the war, and the new law affected these as well as previously classified buildings. For example, from January, 1940 to July, 1942, two hundred and twenty new buildings were classified and one hundred sixteen were inscribed. From July to December, 1942 one hundred and sixteen were classified. In 1944 the number rose to a total of over four hundred classified and inscribed monuments. This is further evidence of the concern felt by the officials for their national artistic treasures, and is a further tribute to their industry during the difficult years of the German occupation.

“If the farmer can secure the benefits of the type of design and architectural skill which go into countless urban houses, many would now undertake the remodeling of their homes. They would incorporate modern kitchens, new roofs, porches and closets, and utilize many household appliances which take much of the drudgery out of a housewife’s duties.”—Chris L. Christensen, Chairman of the Farm Buildings Committee, Producers’ Council.

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Housing, A Post-War Responsibility and Opportunity

By Antonin Raymond

Excerpts from an address before the New York Institute of Finance, October 8, 1945.

Today I am going to talk about the tremendous responsibility and opportunity which I see for the profession and the building industry in meeting the vast post-War housing problem facing this country.

Like every architect, I want buildings not only to provide shelter for something but to contain another plus which we call beauty. This is not an applied thing that can be put on or left off on the basis of ideas. It is inherent in the whole conception from the beginning. It is no excuse for an architect to say a building is hideous because it could not afford to be beautiful. In fact, it is often just because of the economy of means required to achieve an end, that a building has attained a memorable quality. Thus, I have often found greater beauty in the simple marginal house, whether it be in the Pennsylvania countryside or in far-off Japan, than in the expensive monstrosity on Long Island that has everything the architect could pile on it and into it. Traditionally, the architect's field was mainly the monumental, the exceptional, the public building, the residence, the custom-made masterpiece; this was his road to immortality. It was essentially a luxury service for the individual client, and hardly touched upon the real problem of sheltering a nation.

I think the architect today is shirking his responsibility if he directs his efforts solely to the luxury category of building. Housing America adequately will mean major adjustments in the architect's point of view, in his way of operating, and maybe in his independence. But at the same time, it is the biggest and most creative job he has ever been called upon to do. Similarly, I see a tremendous opportunity for the building industry to pull itself out of the dead level of pre-industrial traditionalism and to apply the same genius to the housing of Americans that has led to the mass-produced, low-priced car, the refrigerator, and thousands of other consumer goods. In this I feel that
tionally, better financing and marketing techniques and a modernization of codes will play their roles, as will a full utilization of large-scale planning.

The angle I want to dwell on especially today is that of revising our methods of producing houses, and applying to them the same industrial techniques that have given America world leadership in almost every aspect of industry and science. I want to recall how we reduced the cost of the average car from $2,112 in 1908 to $653 in 1940, with a corresponding shift in sales from 64,000 to 4,000,000. Now, granted the house is a more complicated proposition; the average house has some 30,000 parts (exclusive of nails, screws and separate pieces of assembled parts), as against the 5,000 parts of a car. It is big in bulk with a complexity of materials, equipment, functions, and a wide range of types. In spite of this, there is no reason why it cannot be tackled on a mass-production basis, rather than with the dead weight of handicraft tradition that dominates home construction today. Already in pre-War years, isolated parts of the house, especially its equipment, were mass-produced with resultant economies in cost, but the shell of the house

Even in a sound economy such a vast housing program cannot succeed without a radical reorganization of the building industry. For a reduction of housing costs must come in large part from rationalization of the production techniques and lowering of the cost of the component parts of the house. Addi-
was still a custom-made job reminiscent of the horse-and-buggy age.

Rationalization of housing production involves a number of aspects, some already in various stages of development. As in other production fields, the basis for such a program of rationalization must be comprehensive industrial and Government research. There has, of course, for many years been extensive research by isolated firms in equipment and in the development of new building materials, but to make real use of this we need correlation and expansion of the sort that has not been attempted in this field in the past. Furthermore, most research has failed to emphasize the actual building shell—the parts that go to make the walls, floors, partitions and other structural elements, although it forms sixty per cent of the cost of the house and lot. What research in materials can begin to achieve is already indicated by some of the new products that have appeared on the market in the last few years. For example: fluorescent lighting; radiant heating; Thermopane; the plastics; Foamglass insulation blocks; many new and versatile light metals; advances in the development of plywood and its uses, like plywood in combination with a stainless-steel skin; the beginning of multi-purpose materials of the Homosote variety; Stran-Steel's structural systems; a floor-and-wall system like Fenestra's new metal building panels; and hundreds of other equally promising products.

However, the multiplicity of new and better materials and techniques are also leading to a growing chaos in building, in which it becomes virtually impossible for the architect or builder to make use of these advances. One hundred years ago his choices in building a house were pretty straightforward and based on established procedures. Today he is faced with thousands of possibilities, all involving different materials, sizes, properties, and specific usages. The architect has neither the time nor means to make analytic evaluations, and therefore tends to pick things up somewhat by trial and error, on the basis of incomplete or biased information. We need a continual simplification of parts and procedures, for relating all products and processes to each other and to the specific requirements that they are intended to fulfill. We must improve overall design in relation to these developments and to changing patterns of life. This comes under the general heading of standardiza-
means an endless repetition of identical units by the mile, as we saw them in many of our early American factory towns, or that it is synonymous with the so-called functionalism that produced the rows of uninspired boxes for minimum shelter in the '20s in Germany.

To my way of thinking, standardization is a tool to free the architect for a more economical use of his capacities. Instead of having to spend 90 per cent of his energy on wading through undigested material, the groundwork will have been organized, products and processes will have been simplified on the basis of the accumulated experience of thousands of professional men. Instead of each architect and each builder having to start, so to speak, from scratch, a pre-tested range of products and methods could be drawn upon, classified by standards of performance and the satisfaction of pre-determined needs. This range is continually active and would be revised on the basis of research and experience. Standardization in design elements and in products and processes leads to a simplification in basic concepts. This simplification should enable the architect to concentrate on
greater perfection and flexibility in the final buildings. Far from having a deadening effect, discipline creates unity essential to all good architecture. If the architect makes such limitations an excuse for monotonity, then his trouble is that he just is not an architect, and the sooner he stops hiding his lack of inspiration behind a facade of trimmings and exaggerated individualism, the better.

One difficulty in achieving greater standardization in house design is that, although manufacturers have tended increasingly to standardize their line of products, little coordination has been attempted between similar products by different manufacturers or the working out of overall modules for an economical assembly of all parts of the building. A pioneer effort has been started by the American Standards Association together with the Producers Council to introduce a system of overall modular design. It leads to the use of set increments or modules in the dimensioning of a house or its parts, a discipline which a number of forward-looking manufacturers have adopted, especially in connection with wall and ceiling elements, windows and doors. There is no reason why this cannot become the accepted practice in the manufacture of building materials. Parallel with this, a considerable standardization of the dwelling unit as a whole or of its main parts may develop, especially under the pressure of certain types of prefabrication. Thus, entire kitchens and bathrooms can be designed as standard units usable in houses of diverse design.

Up to now, I have spoken about the house as a unit by itself and of the means of producing it at a cost closer to American needs. But the house, of course, does not exist in isolation; it is located somewhere; it stands on some land; it is in a relation to the house next door; and those houses and the streets and the open spaces and shops and schools form a neighborhood, and these neighborhoods are the things that make up a city. The isolated house with its lot is too small a unit and is helpless in protecting itself in an unplanned and unstable environment. Although this is evident everywhere we turn, we persist in a “do nothing” policy that costs us much of the real enjoyment and security of our homes. The object is to provide decent homes within the reach of
the average American. So whatever we may do or not do about our own neighborhood, low-cost housing requires from us a stabilization of the environment for such houses in order to secure the investment and to insure economy in its use.

Planning is not just a Utopian conception or an interference. It is a matter of sound business policy. I want therefore to make a strong plea for the sort of blue-printing or master-planning of future needs which many foresighted communities are beginning to undertake. Furthermore, I want to urge upon you the vast economies and security of investment achieved through large-scale integrated projects as against the building and marketing of isolated speculative houses on unassembled land. All experience in recent years has shown the hardiness of large-scale projects, their resistance to blight, and the relative continuity of occupancy whether on rental or ownership basis. Confirmation of this trend we see in the actions of some of our insurance companies in entering the housing field with huge low-cost developments, such as Parkchester in the Bronx and the projected Stuyvesant town in the New York gas-house district. While I deplore some aspects of these urban redevelopment projects, such as their perpetuation of unhealthy, high-density living in congested urban areas, they are none the less a big advance over the usual piecemeal approach. If this can be done to advantage in the adverse environment of a large city, how much more could be achieved by transposing such developments out into the country on cheap land. Add to this, carefully planned industrial buildings, stores and community facilities, and you get the nucleus of an ideal American community.

Query

The Octagon mail is plentiful and various. Usually the answers are not too difficult for the staff, but we must admit that the following gives us pause:

"Dear sir:
It maybe a silly problem But it is not when you look at it right
My girl friend want me to Bill her a little shack on her own property"

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Freedom from Fractions
A DISCUSSION OF DIMENSIONAL COORDINATION
By Frederick Heath, Jr.
CHAIRMAN, SUBCOMMITTEE ON MODULAR PRODUCTS, THE PRODUCERS' COUNCIL

Perhaps this "broadcast" may be interrupted for an important announcement from the A.S.A.—Editor.

"The American Standards Association has approved an American Standard on the basis of which building material and equipment of coordinated sizes and dimensions will be made available to construction operations, and building plans and details will be correlated with such dimensions. This represents a most fundamental development in building design and construction, opening the way to improvements in quality and to reduction of cost. Briefly, it will eliminate much cutting and fitting on the job, reduce perceptibly the number of sizes and building products to be manufactured and carried in inventory, and simplify design and detailing of buildings.

"The new American Standard is the following: A62.1—1945; American Standard Basis for the Coordination of Dimensions of Building Materials and Equipment—the Basic Standard.

"And also approved as an American Standard is: A62.2—1945; American Standard Basis for the Coordination of Masonry—supplementary to Standard A62.1—1945."

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The nominal product dimensions based on modular coordination are not only in even inches but in nearly all cases in even modules of 4". This method permits a simplified drafting technique whereby the architect is really emancipated from the slavery of juggling fractions which have caused him great agony if not complete frustration in the past. It greatly facilitates the layout, which provides for an accurate interfitting of various building products and with a minimum of effort. The result is a high efficiency that will lower the cost of drafting and of building.

To what extent is the fractional problem transferred to the products, and what are the consequences in respect to production of these products?

The fractional problem should be explained. With existing products and building methods, any effort to accomplish a harmonious interfitting of products by carefully studied layout drawings involves a great complexity of fractions. Sometimes increments of measure, such as a brick length plus a joint, can be utilized by multiplication to determine wall dimensions, overall, and in parts, such as from corner to openings, piers, and sill and lintel heights. Of course, such an

FRACTIONS cause friction. In the past, manufacturers have picked the even-inch dimensions, such as 8" brick, 12" tile, 16" blocks, 12" x 18" glass sizes. This leaves the problem of fractional-inch dimensions first with the sash manufacturer for bar centers and window-frame sizes; then with the architect, who must juggle various masonry-joint fractions with even-inch unit sizes and try to correlate them to fractional-inch window frame sizes.

Is it any wonder that the architect looks at modular coordination as his freedom from fractions? And can you blame the materials producer for resisting any attempt to shift the fractions to his product?

Assuming complete mutuality of interest and a desire to analyze and solve this problem to produce the least effort in the total task of designing buildings, producing materials, and assembling them into buildings, what are the facts?

They cannot be well analyzed without a comprehensive understanding of the technique of modular coordination. Adams and Bradley have explained that these fractions are not eliminated, but their use has been made quite painless. The fractions become standardized in relation to each building product.

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increment is itself a fraction like 8\(\frac{3}{4}\)" or 8\(\frac{3}{8}\)" for brick spacing, or 2\(\frac{5}{8}\)" or 2\(\frac{3}{4}\)" for coursing, depending on joint thickness. As such, it is not easy to multiply or to check. Many arithmetical errors are made at this stage.

The problem, however, is seldom one of simple multiplication of this fractional increment. Even where windows and doors may be custom-made to fit exactly into an opening that results from leaving out a rectangle of masonry units, an architect must understand that the actual masonry-opening dimensions are not exact multiples of the design increment but are increased at the opening by the thickness of one mortar joint. The over-all dimensions of the wall or building are also decreased by one joint thickness. Other similar dimensioning rules must first be understood and then used consistently to arrive at the accuracy desired. Attempts to simplify this problem are evident in the brick scales and coursing and spacing tables that have been supplied to architects. Frequently an architect will devise his own scales or tables for a particular job.

Consistent use of a masonry increment is possible only where windows and doors are custom-made to fit the increment or natural masonry openings. To the gain from efficient assembly of masonry units, the premium cost of custom-made windows and doors must be deducted.

After subtracting the frame, sash, and muntin-bar thicknesses, the resulting glass sizes are not likely to be in even inches, as desired by window-glass manufacturers. Neither are there apt to be any simple variety of sizes. In fact, almost infinite variety is necessary to fulfill all the different conditions to be met. These arise from a large assortment of masonry increments, opening sizes, different frame and sash materials, and fenestration design. Without any pattern to control this endless variety of fractional-inch sizes, lights cannot be mass-produced and stocked by the glass manufacturers.

For obvious reasons, the glass manufacturer must have continuity of production based on some pattern of standard sizes. Tradition has dictated that these sizes be in even inches or in two-inch multiples. The endless variety of fractional-inch sizes is then cut as required from available stock sizes. It is understandable that this involves
adjusted costs which must be reflected in the price of any custom-made product.

It is not surprising that stock windows have been designed to accommodate stock glass sizes. No other pattern for dimensioning has been apparent to window producers. So steel sash for factories have been based on 12” x 18” or 14” x 20” glass sizes, and wood windows for houses have been based on 28” x 32” glass sizes. The resulting window dimensions are a complex summation of simple glass sizes, fractional muntins, sash and frame thicknesses, with no dimensional increment resulting that can apply to over-all window dimensions.

The problems of the architect who prefers to utilize stock windows and doors should also be considered. With no dimensional increment governing variations in sizes of the windows, and even less chance of coincidence with any increment governing variations in masonry-wall dimensions, he really faces a dilemma of fractions in trying to correlate the use of these two products into harmonious interfitting relationships. In fact, it is nothing short of a miracle where this is done, and in all cases it represents tedious hours of labor through trial and error methods of adjusting increments in different portions of the building.

In practical building, the miracle of thorough coordination of dimensionally unrelated parts is rare indeed. The contractor does the best he can. Sometimes he can fudge a widow an inch or two from the indicated dimensions, so that it will align with the normal masonry-jamb or framing stud, at least at one edge, but almost invariably his only recourse is to cut and fit, wasting materials and labor until the job is done. These adjustments must necessarily be made on the material that can be cut and re-dimensioned to fit. There is no waste of steel windows, but there frequently is excessive waste of masonry units or of the lumber which surrounds the steel windows. The sum total waste is a tremendously burdensome tax on building.

Does modular coordination transfer this headache of fractions to the materials producer? If the manufacturer suspected that he were to be put to such torture, there is little doubt that he would voice strong opposition. Fortunately this is not the case. The manufacturer does inherit some fractions, but they are standardized fractions,
used in such a consistent and uniform manner that the headache does not go with them.

The problem then becomes one not of fractions but of inconsistent and variable use of unrelated elements in a multiplicity of ways. There is no order, no logical basis for organization of the unrelated elements into a harmonious whole. Most architects, in despair, ignore any semblance of relationship that may exist, particularly for masonry units, and fix their dimensions either in foot increments or simple fractions of a foot, such as 4” or 6”, or permit abstract design factors such as symmetry to govern. By so doing, they add still another unrelated factor to complicate the assembly of building materials and increase the waste that must result from cutting and fitting.

In general, there is no reason why stock building products cannot be produced just as efficiently in fractional-inch dimensions as even-inch dimensions. This may not be true in a line of products if the variety of sizes were increased over those formerly offered in even-inch dimensions. As a matter of fact, however, the module usually affords an opportunity for decreasing the variety of sizes that needs to be offered. The modular standardization program of the Metal Window Institute, for instance, reduces some 30,000 window sizes to approximately 300 standard modular openings.

Thus, the headache associated with fractions, as heretofore known to architects, vanishes into thin air. The true benefits of modular coordination can be shared by both the architect and the producer. The end result is the elimination of the needless tax of waste in building.

“It is nothing short of the fantastic that our basic research in building technology is so diffused and obsolete and that we do not bring to this potentially tremendous industry the advances we have made in engineering, physics, chemistry, architecture and industrial methods. From the point of view of what we know in science and technology which can be applied directly to housing, we are living in the wigwam era. We can get out of that era only by the coordination of our scientific and technological capacities.”—LEWIS ALAN BERNE.

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Paul Philippe Cret  
October 23, 1876—September 8, 1945

Paul Cret was a masterful designer of public buildings; imbued with the best traditions of old, he brought new beauty to our complex today. To architecture he gave a distinction equalled by few of his contemporaries, a rare talent, a sensitiveness to beauty in form and color, an unerring sense of proportion.

Born in France, in Lyons, when he was fourteen he had made his choice of profession, and worked after school and in the summers in the office of his uncle, Joannès Bernard, an architect of high ideals and small practice. Ever after, design was a consuming passion with him. He studied first at the Ecole des Beaux-Arts of Lyons, winning there the Paris Prize which took him to the Ecole at Paris and the Atelier of Pascal. There he won a number of prizes, and the esteem of his fellow students. When in 1903 the University of Pennsylvania sought a critic in design, the Americans among the students recommended Paul Cret, and he accepted.

He was an ideal teacher in those early years; patient, inspiring, guiding each student to the development of his own powers of expression, enforcing it all by a marvellous enthusiasm and rare humor that carried every point home and gave it its own personal importance. No man who had come under his influence failed to carry away some of his extraordinary breadth, poise, clarity and taste. He placed particular emphasis on the necessity of training in taste for the pursuit of that beauty which distinguishes architecture from building or engineering.

From this teaching developed other phases of his life work because of his ability as a critic—his practice in architecture, his collaboration with engineers on engineering constructions and his service on art commissions.

The practice began with the winning of the competition for the design of the International Bureau of American Republics in 1907. A competition is much like a school problem, and his students from the
University and from the atelier of the T-Square Club formed the team that worked on this one. The building that resulted was a great success, and has become part of the picture of the nation's capital. As his first child, it always had a special place in his thoughts.

The practice so begun lasted for the rest of his life, except for the years of the first World War. During all this time there was much of the school spirit in the office. Almost all of the assistants had been his students; they still wanted to please the Master—most of them considered it a sort of postgraduate course with the incidental advantage of being paid. It was not a large office, as such things are judged today, for Paul Cret was never interested in an organization so large as to result in his losing contact with all details. But there was an astonishing variety of problems in its forty years, even including streamlined trains, and the zest of research in new fields. The school critic is well fitted to attempt the solution of very varied programs; school programs have this variety of necessity, to prepare the student for the infinite problems inherent in practice. His constructed work all shows the study that was put into it, into the last detail—the study that he believed as essential to design as experimentation is to science. Although typically French in his upbringing, in his logic and his wit, he absorbed so well the American spirit and our ideals of citizenship that he became one of us. And his architecture became American as he did, typically American in his return to a simplicity of forms, searching for "a new classicism," achieving beauty principally through good proportions—an architecture that is ours and of our time. It was well thought of by his peers: he was given the medal of his own Philadelphia Chapter in 1927, of the Architectural League of New York in 1928, and the medal of the Institute in 1938. Honorary degrees were conferred upon him by the University of Pennsylvania, Brown, and Harvard.

The one break in the continuity of his endeavor was his war service. He had returned to France in 1914 for the summer; when the Germans invaded that country he simply reported for mobilization—for what was to prove five years of war. At first a private in the Chasseurs à pied, he saw service in the front lines at Ypres and Ar-
HARTFORD COUNTY BUILDING, HARTFORD, CONN.
DETAIL OF FRONT ELEVATION
PAUL P. CRET AND SMITH & BASSETTE, ASSOCIATED ARCHITECTS
GARDEN AND ADDITION (1940)

FEDERAL, RESERVE BANK, PHILADELPHIA, PA.

PAUL P. CRET, ARCHITECT

Photograph by Jennings Studio
WHITEMARSH MEMORIAL, PARK CEMETERY (1936)
ENVIRONS OF PHILADELPHIA
PAUL P. CRET, ARCHITECT
Do you know this building?

MAXIMILIAN COOPER, ARCHITECT
Baltimore, Md.
THE FIRST UNITARIAN CHURCH (1817)
ras and from there all along to the Vosges mountains. He was later put to doing work for which his talents were more useful—reconnoitering no-man's land in order to make topographical panoramas of the terrain for the use of the combat troops in the next day's fighting. He did this so well that he was put to teaching a class in this work, until America's entry into the war, when he became officer interpreter, attached to the First Division, A.E.F. He remained with that division until the end of the war, entering Germany with the army of occupation. He was given the Croix de Guerre and made an Officer of the Legion of Honor.

In later years he designed memorials built at a number of the places he had come to know in action—at Varennes, Fismes, and Chateau-Thierry. And while he was still in uniform, Mrs. Theodore Roosevelt asked him to design a useful memorial to her son Quentin, whose plane had been shot down at Chamery—a wayside watering-place for men and animals. These memorials were among his best works.

In 1911 Paul Cret was made one of the charter members of Philadelphia's Art Jury, on which he served until his death, the later years as its President. Later he was appointed to the Pennsylvania State Art Commission, and finally was made a member of the National Fine Arts Commission by President Roosevelt. Many have the belief that art commissions are at best only negative in value—they "prevent public places from becoming ugly or meaningless but create nothing." But an able critic can and does do much of lasting worth: many submissions are accompanied by a request for criticism—such a criticism as an advanced student would seek at an architectural school, furnished as a civic responsibility, but none the less appreciated and followed. Paul Cret was constantly helpful in this way, placing before any selfish consideration a devotion to what he felt was the best interest of his art, and gaining the inward satisfaction of accomplishing something toward the creation of a better looking world.

He frequently collaborated with structural engineers on the design of bridges, forming with them a sort of duet in which each contributed his share of special knowledge in the creation of a construction which must satisfy both structurally and esthetically. They agreed that
"logic and clarity and strength, although they are elements of the beautiful, remain mute until emphasized by subtle modifications of lines and structural proportions—until a sense of harmony, of rhythm and accent" fuses them into an esthetic unit.

He was a student, in every sense of the word, constantly seeking to better the solution of the problem he was working on. He was particularly interested in architectural form: he considered form as something that grows from the past, with reactions from the sub-conscious mind, evolving slowly, each generation adding the mark of its time. In an age when heavy thinkers scoff at beauty, unsocial and irrelevant as a part of architecture, he still sought for beauty, constantly, unashamed. "The architect," he said, "by establishing a relationship of forms, gives us a sense of order which one feels to be in accord with the order of the universe, and which we perceive as beauty. Architecture is an art, serving an intense and ineradicable human craving, which art alone can satisfy."

He felt he had received rich rewards in the friendship of the young architects he had taught, the encouragement of those with whom his professional work brought him in contact, and above all by the satisfaction of doing the work for which he was best fitted.

Those who worked with him felt he had one of the best minds with which they had ever come in contact; his thought and effort would have been invaluable in the problems of reconstruction which lie just ahead.

JOHN HARBESEN.

Wanted: Kodachrome Slides

The Association of Collegiate Schools of Architecture desires to obtain as complete a collection as possible of Kodachrome slides on architectural and art subjects. It is assumed that many who read these pages have in their collections Kodachrome transparencies of these subjects.

It is possible to send the original to Eastman Kodak Company who will, for a nominal charge, prepare a copy of the original. The original is not damaged in this process.

Will all those who have such slides send a list of these to Professor Joe E. Smay, School of Archi-
Architecture, University of Oklahoma, Norman, Oklahoma. He will then send these lists to the interested schools who will, in turn, make their selections.

It is to be hoped that the owner of the slide will lend it for purposes of duplication and thus aid the schools to present to the embryonic architect examples of architecture in the form of an illustrated presentation, using slides in color.

Joe E. Smay
Chairman, Committee on Visual Education, Association of Collegiate Schools of Architecture.

News of the Chapters and State Associations

Saint Paul Chapter

"The American Foundation" was a subject of discussion at the October meeting, and touched off a message to all chapters and affiliates of The A.I.A., expressing the Saint Paul Chapter members' concern over the possibilities.

It is not surprising that the subject seems to be somewhat shrouded in fog, partly because of a confusion of titles and also because of the abbreviated Convention of last spring. As to the matter of titles: "The American Foundation for the Advancement of the Science and Art of Building" was a tentative name given by the then Vice-President, Walter MacCornack, to an organization visualized by him as a possible future development of The Institute itself. This was the subject of his address to the Convention—a plea to raise our sights and attempt new and greater achievements.

At a meeting of the new Board of Directors, immediately following the Convention, the MacCornack recommendation, somewhat modified but supported in principle by Walter Rolfe as Chairman of the Committee on Education, was felt to be something deserving careful and detailed study.

To whatever extent The Institute may expand its size and functions, the Board ruled that its name should most certainly continue without change. Moreover, there already exists The American Architectural Foundation, established by The Institute in 1942 to receive the $10,000 gift from the late Albert Kahn and other gifts that might follow. And it is through
this Foundation that The Institute's powers for greater achievement were thought by the Board to be possible of expansion. However, the MacCormack proposal was certainly not the sort of thing one could vote yes or no upon in Board meeting. A special committee was appointed to study the proposal, with such mundane matters as Institute income kept clearly in mind. Given the title, Committee on the Structure of The Institute, this body is now at work and will report to the Board at its December meeting. It should not be necessary to add that the Board is not likely to enter upon any program involving material changes in the present Institute framework without laying such proposals before the membership.

**New York Chapter**

Here, as in other communities, Chapter officers are puzzling over proper procedure in answering requests from the public for help in selecting an architect.

The Chapter's Executive Committee believes that a professional society should offer such assistance; at the same time it realizes the grave consequences of selected lists. After extended discussion of the whole question of prequalification, the Executive Committee decided that a reasonable solution of the problem would be the compilation of a "Who's Who" of members, prefaced by some general advice to the public on the scope of architectural service, how to select an architect, etc.

The following resolutions were accordingly submitted by the Executive Committee to the members of the Chapter at the meeting in October for discussion and approval:

**Resolved:** That the New York Chapter, through its Executive Committee, proceed immediately to set up the means for compiling a list of all its members, together with the significant facts concerning their practice, such information to be brought up to date thereafter at least once a year; and also to prepare a pamphlet of instructions to the laymen in the selection of an architect; the form of such lists and the context of such pamphlet to be submitted to the Chapter for approval.

**Resolved:** That if and when the Chapter has set up a "Who's Who" of its members, it will not issue se-
lected lists of prequalified architects for any purpose.

Resolved: That the principle adopted by the Chapter at this meeting be transmitted to The Institute as information on the Chapter's attitude towards selection of architects, whether for public or private work.

Further Resolved: That the above resolutions shall not be construed as precluding the award of work by competition.

Declaring that city planning is of critical importance to the welfare of New York City, the Executive Committee of the New York Chapter, acting upon the recommendation of its Committee on Civic Design and Development, wrote to Mayoralty candidates in the recent election campaign urging them to clarify their position with regard to the functions and composition of the City Planning Commission and to the major problems of zoning and planning, now confronting the City.

Making it clear that as an organization the Chapter is not sponsoring any candidate, but is actuated by a sense of responsibility in the field of sound physical planning, the Committee pointed out that, to date, the City Planning Commission had failed to produce the unified comprehensive Master Plan mandated by the Charter, and was continuing to issue piece-meal portions on a so-called Master Plan, which bear no noticeable relationship to each other, much less to an over-all scheme. Conceding that interim provisions must be made to meet urgent current needs, the Committee recommends that such interim provisions be publicly designated as such, pending adoption of the Master Plan.

The Committee also strongly recommends that new members of the City Planning Commission be technically qualified and independent of other municipal bureaus. It urges adoption of an amendment to the Charter which will make it impossible for members, other than the Chief Engineer of the Board of Estimate, to hold, at the same time, other elective or appointive offices in the City Government. The Chapter believes that the independence of the Commission appears to be impaired by the present policy whereby the Mayor may designate heads of other City departments to serve as members of the Planning Commission. This has the unfortunate effect of tending to give the Mayor control of the Planning Commission, as well
as enabling a department head to vote for his own proposals when they come before the Planning Commission for consideration.

The Chapter also advocates the creation of a City-wide Citizens' Advisory Planning Board to the City Planning Commission, which should be consulted on all matters of City-wide planning, similar to the representative advisory boards which have been set up in other cities.

Other matters of prime importance called to the attention of Mayoralty candidates were the need for over-all revision of zoning ordinances in the form of the drafting of an an entirely new law; the scientific revision of zoning district maps throughout the City, and detailed neighborhood planning of the City based on the principle of encouraging the development of communities within the City.

### Northern California Chapter

According to Mark Daniels, the Chapter office has a continuous flow of requests from the public seeking information and advice on architectural problems. These requests cover a wide field, in small homes, stores, schools, sub-divisions, and even included a request for an architect to do a dining-hall for a Government agency. Under past policy, the Office Secretary was unable to supply this information. In order to overcome this difficulty the Board of Directors of both the Northern California Chapter and the Northern California Association are asking for a self-classification of all architects in Northern California.

A file will be maintained in the office for each of the types of work indicated below:

- Hotels
- Apartments
- Churches
- Theaters and Auditoriums
- Commercial Buildings
- Public Buildings
- Institutional Buildings
- Hospitals
- Clubs and Fraternity Houses
- Mausoleums
- Residences

All architects in Northern California are being asked to indicate on this list the classifications in which they would welcome commissions—any or all the branches. The Office Secretary will be instructed to respond to each call.

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Southern California Chapter

The projected resumption of the Honor Awards Exhibition, as told in the Journal some months ago, has not had an encouraging response.

In a recent report to the Executive Committee, the Honor Awards Committee stated that, to date, approximately fifty projects have been submitted for the competition by the members of the Chapter. At the rate of $15 each, a total of $750 in entry fees would be available. This is inadequate. The Committee also stated that the variety of work to be exhibited is not great, and the interest in the show would thus be diminished. It is felt that out-of-town judges are necessary, and that to so arrange things would require a larger fund to finance the show. It is, therefore, the Committee's recommendation that the show be postponed for at least six months or until such time as the interest is greater and when the variety of the projects to be shown will more nearly represent the work of the men in this vicinity.

Virginia Chapter

Joining the chorus of protests over the proposed form of the Navy's Annapolis expansion, the Chapter adopted the following resolutions:

Whereas it appears that the aforementioned proposal is not founded on real necessity or the results of competent establishment of design requirements;

Now, therefore, be it resolved: That we, the Virginia Chapter of The American Institute of Architects, being sensible of the

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obligation inherent in such a professional group, do hereby protest to the Congress of the United States to the end that such proposed abuse of the Government's power of eminent domain may be prevented; and

That copies of this resolution be forwarded to the President of the United States, to other appropriate officers of Federal and State governmental administration, to all representatives in both houses of Congress, to the President and Board of Directors of The American Institute of Architects and to all Chapters of same American Institute of Architects.

Baltimore and Washington Chapters

In a return engagement following the visit of Baltimore architects to Washington last spring, Washington turned out in force in October for a visit to Baltimore. Questions of territorial jurisdiction were to have been discussed in this meeting of the two chapters, also the now famous Wisconsin Questions. In accordance with Baltimore's solidly established reputation for matchless hospitality, the spirit pervading the dinner and evening gathering was such that either chapter seemed more than willing to give all of its territory to the other. The discussion of what and when is an architect soon gave promise of extending far beyond the early-morning trains back to the Capital, so was postponed for more leisurely action in the respective chapter meetings. Of even more compelling interest was the question of how soon Baltimore and Washington could have another joint meeting.

Competition

American Stove Company has delegated The Architectural Forum to conduct a competition for the design of a "Gas Range of Tomorrow," open to architects, engineers, designers, draftsmen, students and others who may be interested, and who are residents of the continental United States. Closing date, March 4, 1946. Jury: Dr. Elaine Knowles, Teachers College, New York; Peter Schladermundt, industrial designer, New York; Samuel A. Marx, architect, Chicago; Edward D. Stone, architect, New York; Gardner A.
A.I.A., c/o The Architectural Forum, 350 Fifth Ave., New York 1, N. Y. The competition has been approved by The A.I.A.

Highlights of the Technical Press


An Unsolved Problem

By J. Charles Rathbun

Professor of Civil Engineering, College of the City of New York

Excerpts by permission from an article in Civil Engineering for September, 1945

To engineers, the contemplation of ancient ruins is usually as dry as the ruins themselves. But at Baalbek the contrary has proved true to more than one of the Society when on a tour of the Near East.

Actually the construction problems that arise in one's mind, as one views these old temples, are
quite intriguing; for here the builders decided, for reasons best known to themselves, to use stones of gigantic size. The stones were quarried, moved some distance to the site, and placed in correct position, fitting tightly on side, bottom, and ends. Some of these stones weigh between eleven and twelve hundred tons. One of them, the largest, measures 70' long, while its cross-section is between 17'8"x13'10" (as measured by one authority) and 13'x14' (as measured by another). Even the latter measurement makes it still a big stone.

While visiting the site, another American tourist, who spotted the writer’s Society pin, asked how this engineering feat had been accomplished. He was told that it was quite simple for an engineer, but the method was too hard to explain in non-technical language.

In the days of temple building, machinery was either non-existent or crude. Manpower was the prime mover. It is interesting to speculate as to how many men were required to place such a stone, and where they stood when they moved it. Even Galileo couldn’t solve that sort of problem when he tried his lever against the world. Not only did these ancients move the stone, but they slid it into place where it fitted perfectly on four faces. How did they do it? In comparison, the building of the Great Wall of China and the Pyramids was simple, if enough labor was available.

The principle of the sand pile, whereby a building is buried in sand as the work progresses, thus allowing the stones to be dragged or lowered into position, has been suggested as a method of construction for some of the works of Upper Egypt. At Baalbek (the name the Mohammedans gave to ancient Heliopolis) this method would have presented difficulties. Not only were the weights much greater, but also it would have been an unsolvable problem to get the sand from under one of these large stones so that it could rest flat on the others. Of course these stones could have been slid into place if enough force was used, but did they have hydraulic jacks in Julius Caesar’s day? Shallow holes in the stones indicate that they may have been lifted by grappling hooks—the sky hooks of a Syrian Paul Bunyan perhaps. It has been suggested that cakes of ice were used to support the stones until the sand could be removed. Maybe so—but there was no ice in Baalbek the day the
writer was there, and no prospect of getting any.

In short, the writer believes these are the largest stones ever placed in any construction, and he is much puzzled as to how they were handled, or in fact how they would be handled today.

Architects Read and Write
Letters from readers—discussion, argumentative, corrective, even vituperative.

REMINISCENCES OF THE CHICAGO '93 FAIR
BY EMIL LORCH, F.A.I.A., ANN ARBOR, MICH.

YOUR September JOURNAL moves me to write you about some of the 1893 Chicago Fair buildings. Like you I saw this, but as a draftsman and student. When the Fair was being planned, The Institute held a convention in Boston, and conducted an exhibition in the unfinished Boston Library. Making way for three distinguished-looking gentlemen, I heard one say, as they looked at a swell rendering of a corner pavilion of one of the large Court of Honor buildings, "Damn fine, Bob; damn fine!"; he proved to be Richard M. Hunt, while "Bob" was Robert S. Peabody, of Peabody & Stearns, architects of Machinery Hall, the only one of the colossal structures having something of the character of the country which made possible the voyage of discovery represented by the Spanish caravels in a nearby basin.

As to the Fine Arts Building, at least some of those familiar with the Intime Club publication of Ecole projets in Paris, have always believed that Atwood's design owed much to one of the published projets. Bénard, who had won the international competition for the new development of the University of California campus, about forty-five years ago, made a trip to this country to inspect the existing buildings and the terrain. Stopping over in Chicago to visit his old friend, Louis Millet, the latter suggested visiting the site of the 1893 exposition. As they walked to Jackson Park from the Illinois Central Railroad, and came suddenly within view of the old Fine Arts Building, M. Bénard halted, and putting his hand on Millet's shoulder, cried, "Mon Dieu, c'est mon grand prix projet!"

Louis Millet was at the time head of the department of decorative design of the Art Institute of Chicago, and himself of French origin and a co-student with Bénard; he had become a leading Chi-

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Surely the single bomb on Hiroshima has shaken the foundations of every city in the world. The secret of the atomic bomb will not long remain a secret, and, inevitably, in the next war both sides will use it. But atomic bombs and concentrated cities cannot both exist in the same world. Something terrible and new has been added, and cities must be changed. From today on, our city, and every large city, can be completely destroyed in a moment.

Perhaps we may like our city just as it is. We may even like the slums. We may talk bravely about rebuilding the blighted area—and of course there are some very interesting arguments to show that all this could be done on a “sound basis.” Unfortunately, however, you cannot argue with an atomic bomb. One day it just drops out of the sky. Maybe it leaves a big hole in the earth where the city used to be. Or maybe it simply burns everything up, and melts the street car tracks. Or maybe it only knocks down the buildings. But, most important: it kills all the people for miles around. Indeed, there is nothing more incongruous than atomic bombs and babies. It would be a city without people, however much rubble and real estate.

Throughout history—even as now—cities have always been the chief military objectives in war, for cities have always been the seats of government and the centers of manufacture, trade and storage. In olden times, cities were surrounded by fortification walls for defense. Cannon, developed in the fourteenth century, could easily batter down the old walls, and so finally—by necessity—these closed and independent cities became open cities, mere parts of a large nation dependent for defense on a standing army.

Just so, aerial warfare (like the cannon) makes the existing city no longer feasible. A few brief months ago Berlin was demolished by means we must soon consider needlessly laborious and primitive. Plainly, the city, once a place of refuge in time of war, has now become the very place of greatest danger. Naturally, we must do something. To be sure, we can do our best to keep the peace. Still, if war comes there is one defense, and probably one only. During the years of peace we could disperse our cities and decentralize our industries. Then the city would be agrarian, and the countryside would be industrial. The city would be
everywhere and yet nowhere. The enemy would have practically nothing to attack. In our time, weapons of offense have developed far beyond those of defense. Consequently an aggressor is always encouraged by the prospect of quick and easy success.

Wholly aside from the military need, to disperse and ruralize our city would be truly no loss, but in reality a positive gain. Through the years, our city has become unlivable. The smoke and fume-poisoned air, the dangerous streets, the helplessly congested traffic morning and evening, the crowded and sunless tenements, and the infinite and monotonous extension of pavements and buildings—these things are surely no boon. In a sense, we have really repudiated the city. One-third of our population has already moved to suburbs. Obviously, we would want to change our city even if airplanes and bombs had never been heard of. People move to the suburbs—if they can afford it—in order to live in a country community, away from the city. So unlivable has the city become, they are willing to travel an hour or two a day just to get away from it. However, in the new rural city, thoughtfully and properly planned of course, everyone could live in the country. Slum clearance, then, would mean not perpetuating the slums by building new buildings on top of the old, in the dirtiest and smokiest section of the city; but rather it would mean that every family would have the chance to live in an adequate house, with gardens and parks adjoining. This would be a city of incredible fresh air and sunlight.

We may object that there are many problems, and it wouldn’t be easy. But of course there are problems. Still, it would be very strange if a civilization, cunning enough to split the atom and release the primal energy of the universe, must somehow confess itself unable to provide the simplest need of mankind; a simple house in a safe place. If we lack the wisdom to provide for our own safety in the immediate tomorrow, by performing the relatively easy task of replanning our cities, how little likely it is that we can cope with the much more difficult planning problems of world security. Then perhaps, after all, we are men on a doomed planet, and destruction is our domicile at last.

SELECTING HOSPITAL ARCHITECTS

BY E. TODD WHEELER, Wilmette, Ill.

There seems to be lacking in the discussion on qualifying hospital architects recognition of the way in which architects are usually chosen. I do not mean the officially approved methods, but the
willy nilly we would become party to selection. So it is a case of either we do or we don't, and if we don't (as we haven't thus far), clients will go on asking the A.H.A. for names of "hospital architects."

If the A.I.A. had a reference list of professional records and included on it all architects (not just A.I.A. members) desiring listing, and gave the client whatever information he sought, it would be helping the client in a way he has repeatedly asked for. As a matter of fact, such information has already been requested by some chapters, and the use of it seems perfectly justifiable to me. Why need we fear that the client will be misled by us and our representations? Do we mistrust ourselves? What makes us think a list will fool our client into making a poorer selection than he would have made without a list? Seems to me we are guilty of underestimating our clients' good judgment.

Thomas Farr Ellerbe appraises the A.H.A. proposal intelligently when he places emphasis on serving the client, and attacks the cumbersome methods set up for qualification. He concludes from reports received that the majority of architects feel the proposal is bad for the profession, and, while I do not share the majority opinion, I agree with him that the important question is, as he puts it: "Will the program produce the desired results for prospective hospital builders?" His analysis shows so many faults
in the scheme that he concludes it is unworkable, and suggests as a substitute a brief treatise on employing architects, a constructive but not very adequate solution. Surely some positive cooperation with the A.H.A. should be possible to give service where needed. It may be feared that giving out in-
formation on members’ accomplishments will violate a principle of ethics. Far better that the ethics of our profession be based on the best possible service to our clients (which includes enabling them to judge in advance what kind of job we can do) than upon devices to retain our own favorable position.

Specialists

BY R. CLIPSTON STURGIS, F.A.I.A., Portsmouth, N. H.

I have always been prejudiced against the architect who specializes, feeling that wide experience in all kinds of buildings is the only sound foundation for the best service. This was confirmed later in many ways, both negative and positive. For eight years I had charge of Boston Schools, and employed some twenty of the most experienced Boston architects. Most of them had never built a public school, but all, without exception, did excellent work. My position was responsible for my being asked for advice on school building programs in other cities. In many of them the recent buildings had been done by architects who specialized on schools. These men nearly always, with some knowledge of elementary things like left-hand lighting, planned with no regard for economies of plan—rooms needlessly large, corridors too wide, etc. All this contributed to low cost per cubic foot, but with a cost per pupil higher than the first-class buildings the Boston architects were designing. These school architects had sufficient knowledge to impress a committee who knew nothing, and, once they had the job, were interested chiefly in their commission.

Another experience concerned hospital specialists: Dr. Minot came to me as a public servant for advice in the selection of an architect for a tuberculosis hospital, or sanitorium. I mentioned a firm who had done a good number of hospitals. Dr. Minot said, “I have talked with this firm and find they know more about tubercular patients than I do. I don’t want that kind of service.” I suggested a firm with wide experience but mostly in Catholic churches. Dr. Minot talked with them, liked them, gave them the job and later told me they did a splendid piece of work.

Another experience of my own also concerned hospitals, in a way.
I was asked by the State to investigate and report on the recent buildings in some ten or fifteen State Institutions for the Insane. The State felt that the doctors in charge, in addition to their medical duties, had taken over complete control of new buildings and major repairs. This, they felt was not only outside their professional practice, but resulted in the employment of architects with no hospital practice and therefore, poor planning and wasteful expenditures. The State, I am convinced, expected me to support this contention.

I spent months in very careful study of the buildings and consultation with doctors and nurses, and in some cases, patients. I found nothing to support the State's case. The buildings had been located with due regard to aspect, to the water, sewage, and power plants; had been carefully and economically planned and well executed. The doctors, though working outside their own profession, had done excellent work, and none of the architects employed were specialists.

Although I had unusual experience in schools, I did not consider myself a specialist, but found each new school a problem which could be solved only by close cooperation with the principal and the teachers. I had had less experience with hospitals, but when I was planning a school infirmary, and asked to be allowed to talk with the resident doctor and the head nurse, the Head-master said, "You can ask me what you want to know and I will instruct you." To which I replied, "I don't know what to ask until I have talked with those who will run the hospital."

In my judgment it all boils down to the fact, undisputed I should say, that firms with the widest experience and the best organized offices, will give the best service in any field. This is one reason why I have always opposed competition, except for matters of pure design such as a memorial, where an architect should be selected on the basis of his past performance. Excellent service in any field is the best evidence that the owner will get the best service in a special field, even if it is one in which the architect has had no experience.

ARCHITECTS AND SPECIALISTS

BY GEORGE WALLACE CARR, Chicago

I have been reading the pros and cons of this hospital discussion, and unless the A.I.A. is prepared to go the whole distance and relegate all of us into the realm of the specialist, I can see no possibility of any action at all. If the A.I.A. is preparing to put the membership into labeled pockets, I can imagine the roar of dissent. It would be sufficient were the Institute to furnish a list of members known to be
able in the hospital, or any other particular field, to any inquirer, and that would be that. The whole Hospital Specialist Program might be an attempt on the part of an interested group to channel the projects into the hands of a closed corporation.

The Editor's Asides

The closing of the Journal's second year in its present reincarnation suggests a stock-taking of aims and achievements. In Volume I, No. 1 there was expressed the hope that the publication might become a medium of discussion regarding broad problems of the profession. That hope has been realized, if we may judge from the quantity and variety of opinions offered, for instance, as to the making of prequalified lists. Such matters of policy, hitherto brought to a focus only in occasional chapter meetings and annual convention debates, are now being brought to more rapid conclusion through the free-for-all expression of opinions in the Journal's pages. Herein the pulse of the widely distributed membership can the more rapidly and positively be felt by The Institute's Board of Directors. And it seems likely that this function of the Journal will be even more marked as time goes on. Thus the chief editorial difficulty has rather suddenly veered from that of persuading members to talk to that of persuading members to talk about something else. Argument over a matter of policy brought into the limelight by a Board statement, or by a message from one of the chapters, no longer needs artificial stimulation; it is the pioneer reconnoitering along new paths that is harder to capture and turn into type.

All of which, it is fondly hoped, will be construed as a hearty invitation.

After several years of drought, the competition seems to be entering upon a new period of fruitfulness. And at the moment it is the so-called "Secondary" type that is issuing programs, selecting professional advisers and judges, and holding out tempting money prizes. The Primary type may also be just around the corner in quantity and appeal, but the Secondary type is out in front of the footlights. And considering the extent of participation and the grow-
ing size of prizes, there is some dissatisfaction with the name of the newer type. “Secondary” has a connotation that seems not strictly descriptive and not commensurate with its growing importance. As is well known in the profession, though possibly not widely understood outside its ranks, until a few years ago The Institute recognized only those competitions in which the winner was to be employed as an architect to build an actual structure, and A.I.A. Document No. 213—Architectural Competitions, a Circular of Information—mentions the types as either “limited” or “open.” A later Document, No. 320, deals with Architectural Competitions, Secondary Type, or Non-constructional Competitions approved by The Institute. This Document is the result of more than a year’s hard work by a sub-committee of The Institute’s Committee on Architectural Competitions. Its chairman is Cameron Clark of New York. Recognition of this sub-committee’s contribution to the profession is overdue. It has insured to the architects—and particularly to the younger men who constitute the large majority of competitors—the maintenance of fair rules, direction and unbiased judgments. But the name “Secondary” is inept. Suggestions for a better one would, I feel sure, be heartily welcomed by the Committee on Competitions, of which Eric Gugler, F.A.I.A., is chairman. If some title could be found which would indicate that the objective of this type of competition is in the nature of research and education, rather than a specific design for a structure to be immediately erected, clarity and fitness would be better served.

C. Herrick Hammond, State Architect of Illinois, is leading a crusade against the monumental approach of outside steps. The late John A. Holabird carried a lance in the same cause, aided and abetted by the Illinois Association for the Crippled. Long flights of steps, high curbeds, revolving doors and lack of handrails are bad hurdles for the cripple. Proposals to obviate such hurdles are: eliminate outside steps; provide grade entrances, with elevators closely adjacent; eliminate unnecessary steps inside of buildings; provide light exterior doors rather than heavy ones, and supplement revolving-door entrances with these; where steps are essential, provide handrails on both sides; supplement existing stair approaches with
ramps. Among Chicago's public buildings, the Field Museum entrance has 38 steps; the Adler Planetarium, 23; the Shedd Aquarium, 36; the Museum of Science and Industry, 20. Architects of today are almost unanimous in avoiding the time-hallowed monumental staircase approach to buildings, and this reminder of the fact that such things are a real hazard to an appreciable part of the public will reinforce the progress towards better architecture.

Who's Who In This Issue

Marvin C. Ross, Captain USMCR, of Baltimore. Graduated from Harvard, A. B. (1928); A. M. (1930). Also studied one year at New York University; worked at the University of Berlin and the Centro de Estudios Historicos in Madrid. Traveled extensively in Europe, in part on Carnegie and Guggenheim Fellowship. Since 1934, curator at the Walters' Art Gallery in Baltimore. During the War, served in U. S. Marine Corps Reserve, at first as the Assistant Wing Communication Officer at the First Marine Aircraft Wing in the South Pacific; then to London to serve on General Eisenhower's administrative staff. At SHAEF, served as Deputy Adviser on Monuments, Fine Arts and Archives, and participated in the policy-making and planning for the protection of cultural monuments in all the operations in Northwest Europe.


Two books: "Antonin Raymond, His Practice in Japan, 1920-1935", and "Antonin Raymond's Architectural Details".

In Japan, designed St. Luke's International Medical Center in Tokyo; Women's Christian College in Tokyo; Convent and Schools of Notre Dame and Sacre Coeur in Tokyo and Osaka; Socony Office Building and housing; Shell Office Building and housing; Tokyo Golf Club; U. S. Embassy in Tokyo in association with H. Van Buren Magonigle; French Embassy, Soviet Embassy, Belgium Embassy, etc.

Returned to U. S. in 1938 and resumed his practice both on his farm in New Hope and in New York City. Housing project in Bethlehem, Pa., and then War work as architect and site planner of Tuttle, Seelye, Place & Raymond; Architect-Engineer on Camp Shanks, Camp Kilmer, Fort Dix, Belle Mead Quartermaster Depot.
Along with architecture, very active in painting and industrial design. Partner in Antonin Raymond Associates, Architect-Engineer; and in Raymond, Varker & Rado, Industrial Designers. Chairman, Educational Committee, Cooper Union, New York City.


He started out to be an architect as the blueprint kid in his father's office, Heath, Gove & Bell, Tacoma. At the University of Washington he studied architecture prior to service in World War I, but completed his course in business administration and ceramic engineering. His studies in the field of dimensional coordination have continued since 1920 as a major interest.

Represents the American Ceramic Society on ASA Committee A62 and on its Executive Committee, also as chairman of its Committee on Manufacturers. Chairman of the Subcommittee on Modular Products of the Technical Committee of The Producers' Council, joint sponsor of ASA Project A62 along with The A.I.A. Secretary-Engineer of the Brick Manufacturers Association of New England, 1935-42. Now with General Product Engineering Department of Owens-Corning Fiberglas Corporation at Toledo.

JOHN FREDERICK HARBESON, F.A. I.A. Born in Philadelphia, 1888. University of Pennsylvania: M.S. in Arch., 1911. Training in offices of John T. Windrim and Kelsey and Cret. On the staff of the Department of Architecture, University of Pennsylvania since 1915; now Associate Professor of Architectural Design; several times Chairman of the Department; acting Dean, School of Fine Arts, Instructor in Perspective to painters and sculptors, Pennsylvania Academy of Fine Arts since 1916. Past President, T-Square Club. Some early independent practice; partner in the firm Paul P. Cret, Architect, since 1919; since Mr. Cret's death the firm has become Harbeson, Hough, Livingston & Larson. Author of "The Study of Architectural Design", and "Philadelphia's Victorian Architecture".

ALFRED CALDWELL, of Chicago, served as an assistant to Jens Jensen, landscape architect, later became Superintendent of Parks at Dubuque, Iowa, and thereafter landscape designer for the Chicago Park District. He studied architecture and city planning under Mies van der Rohe and L. Hilberseimer. He is at present a member of the faculty, Illinois Institute of Technology, in the Department of Architecture.

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