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Housing and Street Planning

A Plan to Revive, Re-zone and Rebuild Chicago Areas

The question of the development of an adequate system of boulevards, highways and streets for Chicago is one that creates as lively a discussion in newspapers and among civic groups as any of the questions on Chicago today. As a matter of fact, this question has been live since the completion of the Burnham Plan for a Chicago Beautiful in 1909. Unfortunately, like all questions which have suffered from too much talk and no action, thinking on this subject has become befogged and encumbered by extraneous considerations.

The attitude of the general public on the question of street and highway plans is full of false ideas and arguments. Let me list a few of them.

There is an idea that streets and highways are valuable, *per se*, and that a city can boast of mere *extent*, mileage and square footage of streets and boulevards. Quantity is by no means a matter to be proud of. Both property owners and city officials have come to recognize the fact that certain sections have lost value because of excessive quantity of streets.

There is an idea that the widening of a street increases the value of the property on either side of it to such an extent that owners can well afford to carry the entire cost of the improvement. In the original Burnham Plan it was argued that the entire burden of developing the streets and boulevards designed by the plan would not be an expense to the city because the costs would be entirely covered by the property owners, who would rejoice to pay these special assessments because of the increased value. This idea has far fewer advocates than formerly, and I believe that the day of financing street improvements by special assessments is practically over.

One still finds many advocates of the idea that frontage on a broad street or highway is inherently valuable for commercial uses. As a result the majority of streets in the City of Chicago that are designated as highways, have been zoned for commercial uses. One has only to observe the hundreds of empty store fronts on streets like Ogden avenue and Roosevelt road to recognize that somehow or other the widening of these streets did not automatically bring more customers to the shops which used to do business on the street.

Least changed of all the false ideas held by advocates of street widening is the idea that beautiful highways passing through slums will cure these slums. It may very well be that this idea originated in the "Plan of Chicago," published in 1909. Let me quote from this volume:

"The remedy (for slum conditions) is the same as has been resorted to the world over; first, the cutting of broad thoroughfares through the unwholesome district; . . ."

Advocates of the widening of Congress street, as set forth in the old Chicago Plan, to this day still argue for its development on the basis that it will cure the slums and blighted areas which lie across its path. This is the subject which must concern me in this article.

Perhaps first it would be well to quote one of the very realistic comments on the effect of street development on housing from Miss Edith Abbot's book, "Tenements of Chicago." In commenting with considerable bitterness on the fact that Chicago has been talking about curing its slums for many years, and doing nothing, Miss Abbot states that the only benefits which have been brought about during this period have been those resulting from the paving of streets, and evidencing themselves in the fact that even in our worst slums there is no longer such tracking of mud into the buildings. Cleanliness within the houses is better due to the fact that there is less mud outside the houses. But Miss Abbot makes very clear the point that there is no improvement in the buildings themselves, nor in the facilities offered to their tenants. This, therefore, is the most that can be claimed for street improvement.

It seems to me that any thinking on the subject of street planning must begin with a simple recognition of what a street is for. According to my way of thinking, it is merely the pathway from one point to another. Obviously streets, therefore, should be planned with a clear understanding of why there should be a flow of persons and vehicles from that one point to the other point.

Groups argue for an elaborate system of highways running from the heart of the city to its perimeter on the basis that they will provide easy exit from the heart of the city to the suburbs, or easy access for suburbanites to the heart of the city. This flow of traffic is, generally speaking, the flow between place of residence and the center of shopping and employment.

We have already indicated that street widening does not of itself raise the value of properties on either side. We have pointed out examples of a destructive effect on the properties on either side. If this be true, it must be true that the increase in number and extent of highways converging on the center of the city increases the amount of property devalued by their presence. To increase the number of highways indefinitely, increases the need for highways, because in due course of time the extent of devalued property leaves little that is desirable for residential purposes. Obviously this process cannot keep up indefinitely.

Thinking on the development of a city plan for streets and highways, therefore, must begin with thinking out a housing plan for the city. This housing plan begins with a rough determination as to what near-in areas can be used permanently for a residential development.

A glance at the zoning map of any city shows a vast amount of property zoned for commercial and industrial uses. Modern city planners, clear visioned realtors and property owners are beginning to face this situation with some degree of realism, and are beginning to recognize the fact that commerce and industry will not and cannot absorb nearly the amount of land that has been zoned for their uses. In Chicago we have thirteen years of experience to

guide our judgment since the passage of the city zoning ordinance. These thirteen years include some of the years with the heaviest volume of construction of any in the history of Chicago. A recent report by Hugh E. Young, Chief Engineer of the Chicago Plan Commission states as follows:

"When we compare the present use of property in Chicago with the zoned use, and find that after 13 years practically none of the increased use anticipated in 1923 has occurred, we cannot escape the conclusion that present zoning is badly distorted and that Chicago must be re-zoned.

"Zoning in Chicago is not only distorted with respect to an illogical allocation of usage, but also with respect to the distribution of various uses. Little consideration has been given to tapering off from highly restricted uses to unrestricted uses. There is a lack of buffer property between manufacturing use and residential use.

"Chicago, and perhaps other cities as well, arbitrarily zoned major and minor streets in checkerboard fashion for commercial use and zoned areas for residential use contiguous to manufacturing. It will be necessary to delete miles of such commercial zoning and to replace it with residential use; also to rezone areas contiguous to manufacturing property from residential to commercial use."

A zoning ordinance is not synonymous with a housing plan, but it is the outline within which a housing plan can be drawn, and a housing plan cannot be devised under the pattern of an unsound and unrealistic zoning ordinance.

Practically speaking, therefore, an adequate and proper street plan for a city cannot be devised until there is a sound and adequate zoning ordinance. The purpose of this zoning ordinance, is, as I have said before, to define the in-lying districts which may be preserved permanently for residential use.

One of the weaknesses of city planners, zoners, and advocates of the "City Beautiful" has been their desire to build a wall around industrial areas and to regard as permanent blemishes the isolated factory, permitted under zoning ordinances in an area which should remain residential. These so-called "non-conforming uses" are regarded as something which must be eradicated before there can be developed a residential plan for that neighborhood. The point of view, it seems to me, that realistic city planners must face, is that there is a city—incoherent, chaotic, and, in the case of Chicago, not old. The city planner and the zoner must begin with an accurate evaluation of the actual and potential life and use of every building in the city, and make a determination of its place in neighborhood planning, on the basis of these characteristics, not on the basis of a dream of desirables. Again, public thinking must be purged of misconceptions. A builder of penetrative and realistic perceptions, Oscar W. Rosenthal, of Chicago, has repeatedly insisted in public addresses that a factory building, as long as it does not exude noxious odors, noises and smoke, is not, *per se*, a blight or a menace to its surroundings. There can be beauty, flowers, trees, cleanliness—all of the desirable characteristics of a home environment—surrounding a factory building. In the second place, proximity to a railroad track is, in the City of Chicago, going to be the fate of a great many people. Not everybody can be removed permanently from the neighborhood of railroad tracks in a city where railroad tracks sprawl in every direction. Railroad tracks can be beautified with narrow parkways, which would diminish their noxious effects. In truth, this has been done in certain parts of Chicago. In other words, there is a possibility of developing the interior of the city into desirable, clean, and beautiful home neighborhoods. These matters must be considered

before we enter upon a policy of building so many highways that we bleed the entire center of the city of its population.

This is an economical procedure that no one can question. The interior of the city is completely supplied with the public utilities. It is not sound municipal economy to indefinitely extend these utilities to the outskirts, and to charge to all consumers the cost of maintaining the vast unused services that lie in the interior of the city. It seems, therefore, the better part of wisdom to devise ways and means for preserving and restoring the center of the city. The program is obvious. First, a scientific re-zoning; second, the definition of permanent residential districts; third, the protection of these districts by the introduction of some of the amenities for which families move to the edge of town, i. e., areas of grass and trees, etc.; fourth, the establishment of permanent protection against the incursions of commerce, industry, high speed traffic ways and other destructive influences.

Only when and if these interior residential areas have been defined can—or should—a major highway plan be developed. Not until then will the street engineers and planners have any idea of how many people should be moved daily from the interior of the city to the exterior. Only then can the street system of the city take its proper role of being a utility intelligently related to the basic two institutions which it is designed to serve—the place of residence, and the place of business, shopping and recreation.

—Elizabeth Wood, Secretary
Chicago Housing Authority

There is a distinction between the architecture which accepts and the architecture which creates. The architecture which accepts may produce splendid skyscrapers, free of the gewgaws of dead styles, using materials and techniques for their intrinsic values—but such a building's "beauty and isolation must be rooted in the jungle below"; it may shut off sunlight from windows where it is needed, add to the burden of human life by creating congestion, really ignore basic human values altogether. Louis Sullivan said that "form follows function," but what if the function is wrong?

The truth is (Professor Brownell speaking now) that "organic structure" is lacking in the society we have. "Flow and power" are the features of our world of today—and these are "the words best suited to interpret what is to come." These forces have "destroyed the old absolutes such as the atom and time and space and the fixed orders of creation and social institutions," and at the same time "plastic expression has broken down old orders and absolutes in the arts and values. We face, then, a new and relativistic world." So far this world isn't doing so well. We are too far removed from the earth—that is to say, from reality.

—Duffus.

A 12-foot wall that surrounded the very first city of Troy has been discovered by a University of Cincinnati expedition, proving that Trojans—even 2000 years before the Helen episode—never did trust the neighbors.

Troy was rebuilt no less than nine times, as one Troy after another met with some disaster. The seventh city is now believed the one conquered by the ruse of the Trojan Horse, after Greeks vainly besieged its walls for twenty years in order to reclaim stolen Queen Helen in the twelfth century B. C.

An ancient Chinese walled city is to be reproduced at a cost of over a million dollars for San Francisco's 1939 world's fair.

One of our streets, made up of buildings of diverse styles and shapes and sizes—like a jaw with some teeth whole, some broken, some rotten and some gone—is a symbol of our unkempt and irresponsible individualism.

—Claude Bragdon

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Editor Monthly Bulletin

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Where Do the Nickels Go?

The Illinois Society of Architects, accepting as a challenge the statement that "prosperity depends on the action of the architects," has determined to analyze the problem of cost of construction in an effort to find a way to help the building industry to break its present deadlock.

Three committees have been appointed, as listed in another column, whose duty it is to discover where every nickel goes in the cost of building. The University of Chicago, through its School of Business with Dean W. H. Spencer, Professor W. N. Mitchell and Professor R. W. Stone, will cooperate in this important work.

One committee will break down the total cost into the trades involved and separate material and equipment from "site" labor. Another will determine the actual average earnings of members of each trade and also attempt to appraise the cost due to rules and regulations of trade organizations which are claimed to restrict output and add to costs. This committee will also analyze and break down the costs from the site to the raw material and costs of processing and manufacturing. The third committee will review the market and literature appearing since the beginning of the depression and will secure reports of results of laboratory tests and experience of architects in the use of new methods and materials.

Under consideration by the officers of the Society is still another committee whose work would be to assemble existing data on cost of financing and taxes as well as cost of maintenance and operation so that the picture may be complete.

Transportation, our analysis already shows, takes a large part of the total cost. The necessity of reducing costs has already almost eliminated some trades and made serious inroads on others.

Labor and material and equipment interests may some day wake up to find themselves replaced by new methods because of unwillingness or inability to solve the cost problem. To the observing, this process is already under way.

Buildings of the future will undoubtedly use less labor, fewer parts assembled at the site, will serve their purpose better and will cost less. Necessity is still the mother of invention.

The Bulletin commends "Pencil Points" for presenting to its readers in its January number Professor Talbot Hamlin's analysis and critique of certain projected pieces of architecture. It is such analytic criticism that architects in their projects and executed structures should be constantly subjected to. Such criticism interests not only the architect, it interests the public in the community that is to see and live with the structures.

In their meetings architects talk much of how to interest the public in their work to the end that the architect may be generally employed. It would seem that Professor Hamlin's critique of the three proposed New York court buildings might well be reprinted in the daily press of New York City, let us say, on the Sunday real estate page, with illustrations. Weekly articles of this character would build up a class of interested readers who would get respect for the practitioner of architecture when he achieves the critic's applause, and such readers would often be the architect's clients. This procedure should be more effective in redounding to the profit of the deserving architect than all the efforts of publicity through paid advertisements.

Music and the drama submit themselves regularly to the opinions of critics and newspapers find it possible—yea, profitable to employ critics regularly for this purpose. Architecture is of slower growth and remains longer in the public eye. This is all the more reason why much thought and consideration should be bestowed on architecture, as an achievement or perpetration. It will be a long time before newspaper editors will employ critics of architecture regularly but they will, it is believed, gladly reprint able criticism of architecture found in responsible sources, giving proper credit to author and publication.

Transport yourself mentally to the days when I. K. Pond was a young practicing architect. For stimulating recreation and pleasure, men attended such shows as Kirafty Brothers and Hanlon's Superba. Here were offered color, acrobatics, sensation. As an antidote there were nerve soothing comedies by others, "Peaceful Valley" with Sol Smith Russell being an outstanding example.

This comes to mind in perusing the pages of "The Architect's World," a monthly digest edited and published by Henry H. Saylor, A. I. A., New York. Vol. 1. No. 1 is dated February 1938. The format is that of Readers Digest, small enough to fit into one's coat pocket; the paper is unglazed, typography artistic and unsensational, conducive to concentration and absorption in the text. There are no advertising pages. The few illustrations, carefully selected, on calendered paper are bound in among the unglazed sheets.

"The Architect's World" appears beside our regular monthly publications as does a concert of fine chamber music beside a Ziegfeld Follies show with its noisy display of pulchritude, its song hits, its wisecracks.

Long time editor of "Architecture," later associate editor of "American Architect and Architecture," Mr. Saylor should be the best judge of the possible numerical paying clientele to assure life to so civilized and refined an effort as the "The Architect's World."

The Bulletin extends best wishes for a long, prosperous and influential existence to the new publication.

February and March Illinois Society Meetings

The February meeting of the Illinois Society of Architects fell on the 22nd, Washington's birthday. It was held at the usual place, the Architects' Club of Chicago. The dinner was very good and included spring lamb with mint sauce. There were highballs and had General Washington been present, he might have wanted to substitute mint-julips for highballs. The dessert was cherry pie, but the diners were assured that the cherry tree was not cut down. There were thirty-two members present, less than the usual number but what they lacked in numbers they made up in good fellowship. They sang to the accompaniment of Stanley Fairclough's banjo and L. B. Jackson's piano playing. Their repertoire was drawn from old-time songs though Sweet Adeline was omitted.

Vice-President Ralph C. Harris had come from Springfield to attend the meeting. President Jensen called on Mr. Harris for news from the state's capital. Mr. Harris stated that the Archives Building flanking the Capitol was practically finished under the guidance of State Architect Hammond, and that it harmonizes well with its neighbor, the Centennial Building, designed some fifteen or twenty years ago by Schmidt, Garden & Martin, Architects. He announced that to the engineering staff of the Department of Bridges and Grade Separations of Illinois an architect had been added, in the hope that aesthetic subtlety and views of landscape over bridge parapets and the like might be more assiduously wooed than under the hardboiled engineer sans architect. President Jensen announced that the architect chosen for this job was none other than Ralph C. Harris himself.

Carl H. Sheldon, member from Madison, Wisconsin, was present and spoke briefly. Major T. F. Quilty, a guest, was introduced, followed by the minutes of the January meeting by Secretary Fairclough. An acknowledgment is due Mr. Fairclough for producing the most thorough and comprehensive minutes of Society meetings that the Bulletin has had occasion to record. Fairclough's military training, possibly the writing of military reports, must have influenced in writing his minutes.

Thomas A. O'Shaughnessy, artist in glass, President, De Paul Art League and member of the Municipal Art Commission, was the speaker of the evening, and the subject announced was "Glass and Its Place in Modern Architecture." The invitation stated, "Mr. O'Shaughnessy will tell of his rediscovery of pot metal glass as made by the Phoenicians, for which the sands of Illinois are peculiarly adaptable."

The speaker prophesied that ahead of us is the glass age. In sketching the history of Western civilization with the broadest strokes, he referred to St. Patrick and the Irish monks who traveled to Germany in the early Middle Age and founded there schools and universities in the days of Queen Kunigunde. Again coming to our day, he spoke of the possibilities in walls of glass, not as used today with colorless blocks, but of glass of color to suit the climate and temperature, to carry ultra-violet rays, and to eliminate the heat of the sun's rays as is attempted with actinic glass. He referred to the mountains of obsidian—a volcanic glass—in Colorado and in Yellowstone Park. Church glass, he stated, is made in this country of imported sand, which is all the more amazing since Illinois possesses countless tons of finest white sand suitable for glass making of every sort. The Libby-Owens Glass Company has in recent years built a huge plant near Ottawa, Illinois where much of this white sand comes to the surface. Czechoslovakia, famous for its Bohemian glass, imports all its glass sand. He thought our civilization as backward as the dinosaur (possessing one brain in the front and another in the rear, which disappeared countless ages ago) for not making proper use of nature's bountiful gift to Illinois. He recommended the appointment of a committee of architects to work with government for scientific experimentation in the development of products from this natural deposit.

Major Quilty reported that St. Peter sandstone when ground makes this white sand and that this sandstone quarried in the neighborhood of Starved Rock on the Illinois River is extensively used for moulder's sand. After such use the sand is thrown away, a wasteful use of an exceptionally fine material. Ralph C. Harris promised to lay before the State Conservation Board the ideas advanced by Mr. O'Shaughnessy.

Before closing the meeting, President Jensen touched on the

subject of housing, a subject that begins to appear overworked even though solutions for low-cost housing still seem far away. He pointed to the architects' responsibilities in this matter and pleaded for their still more intensive study of new materials and methods which science has developed but which have not yet been put to intensive practical use.

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The slender attendance at the March 22 meeting of the Illinois Society of Architects partook of dinner, listened to Leo Weissenborn's reading of Secretary Fairclough's February minutes (the Secretary is surf riding at Waikiki), President Jensen's announcement of the accident which befell I. K. Pond, followed by his introduction of Frank Sohn, Toledo, Ohio, architect and U. S. delegate to the International Conference at Paris. What this International Conference was, was not made clear. Anyway, Mr. Sohn was to talk on the latest trends in construction and design in buildings of the Paris exposition and other European buildings.

He is known in Chicago, having lived here years ago. The subject given in the invitation was, however, a misnomer, for the speaker confined himself almost exclusively to one phase of construction, namely, the use of glass. He may perhaps be excused for never mentioning the plan of the exposition or showing it, since architects' meetings in Chicago for more than half a year and American architectural journals have dwelt on this phase of the show. One would imagine that the speaker's mind and training are confined very largely to the subject of decoration.

With his pictures he wandered over Europe to show glass constructions since the closing of the World War, including the Stahl Kirche in Germany. He thought these buildings could not be classed as a style, but rather as a design tendency. Delegates to his International Conference from Egypt and Mexico he found most modern, while those from the U. S. A. had still not freed themselves from the shell of conservatism. Japan's building at the fair he thought most logical, while the De Gobain glass pavilion was the most daring. Fountains whose structure was of glass were illustrated and surprised the audience by their number and variety.

President Jensen now took the floor to explain the work three committees are about to undertake in association with the University of Chicago's School of Commerce in the interest of economy in building and the more intensive use of new materials for the purpose of saving money. He introduced successively the chairmen of these committees, Messrs. Nicol, Stromquist, and Fuhrer. Their speeches, if not absorbing, were at least long. But the subject was not ended with them. Henry K. Holsman rose to suggest additional work for the committees to investigate and report upon. He thought they should include financing, the cost of management, insurance, and sociological features. He has not yet suggested a study of the economics of baby farming.

Committees on Building Cost Research

Three committees are digging in for a penetrating study of building costs in an effort to break down and see where waste may be eliminated in the interest of economy. Facilities of the School of Business, University of Chicago, are put at the disposal of these committees by the dean and professors of that school.

Materials and Methods Committee: Victor H. Stromquist, Chairman; Sidney C. Finck, Albert C. Fehlow, H. L. Newhouse.

Committee on Labor Costs and Raw Materials: Charles W. Nicol, Chairman; Emery Stanford Hall, Mason G. Rapp, Robert Franklin.

Building Valuation Committee: Eugene Fuhrer, Chairman; Melville C. Chatten, Samuel S. Oman, Henry L. Newhouse, Joseph Nadherny, Joseph T. Fortin, Carl Hauber, Benard Klekamp.

A "glass train" exhibited in London has two passenger coaches with walls, ceilings, floors, and fittings made of glass, and 100,000 tiny mirrors covering the exterior.

A chemist points out that the human nose contains the most perfect air-conditioner known—in the space of less than a cubic inch.

February and March Chapter Meetings

With about thirty members in attendance, the Chicago Chapter A. I. A. held its February meeting on the 8th at the Architects' Club of Chicago. Following the Secretary's reading of the January minutes and Earl Reed's verbal report of the Membership Committee, E. Stanford Hall made an interesting report of his visit in the South-east and Southwest to architectural schools and to state boards of registration for architects. He traveled as a representative of the A. I. A. Educational Committee and as Secretary of the N.C.A.R.B. The institutions and committees visited were at Jacksonville and Gainesville, Fla.; Montgomery and Auburn, Ala.; New Orleans, La.; Toulaine, Austin and Dallas, Tex.; Oklahoma City and Lincoln, Neb.; and finally Ames, Iowa. Mr. Hall seemed particularly impressed with the spirit of instructors at the Architectural School of the University of Nebraska at Lincoln.

Ballots with names of candidates for delegates to the A. I. A. Convention in New Orleans in April were distributed and turned over to the tellers for counting when President Merrill introduced the program of the evening. The program was a study of the making of stainless steel by the Republic Steel Corporation and addresses by W. H. Gibbons and H. B. Stahl of that corporation. The corporation's ambassadors talked knowingly and well, answering pertinent questions apropos the life and behavior of Enduro steel under acid and weather tests.

The balloting for delegates showed the following men elected: John O. Merrill, Carl E. Heimbrodt, John Bollenbacher, Earl Reed, Arthur Woltersdorf, Howard Raftery, Elmer Roberts, Leo Weissenborn, Robert De Golyer, E. Stanford Hall and William J. Smith.



Through wind and rain swept streets, twenty-five faithful members made their way on March 15 to the Architects' Club of Chicago to attend the monthly meeting of the Chicago Chapter, A. I. A. The meeting began at an hour, 5 P. M., earlier than usual in order that the business of revising Chapter by-laws as required by the Institute for adjustment to new member classification be consummated. These requirements were partly mandatory and partly optional and I. K. Pond and Elmer Roberts labored assiduously to clarify the Chapter's by-laws to be in complete accord with the Institute.

The dinner was set for 7 P. M. with Robert La Montagne St. Hubert as the honored guest who was to speak to the Chapter on the subject "Evolution of French Architecture as illustrated by the Paris Expositions of 1900, 1925 and 1937."

The business meeting did not end promptly at 7 and the dinner was delayed. The Consul of France, M. Weiller, was late in arriving so it was nearer 7:30 before dinner was prosecuted. The dinner over, President Merrill introduced M. Weiller who said a few graceful words about his countryman, M. St. Hubert. The President added that the guest was no stranger to Chicago architects since he had talked before them a year ago and before that had been an annual visitor for the purpose of instructing classes in the Art Institute in fresco painting.

With a few outstanding pictures of each of the three Paris Expositions thrown on the screen, M. St. Hubert read his thoughtful and penetrating paper. He quoted Taine as saying that an exposition is an expression of a period and with that approached the 1900 Exposition with its Grand Palais, its Alexander Bridge, its exuberant traditional ornament. The speaker felt that there was a drift backwards from the 1889 Exposition to the more traditional stylistic 1900 show. He pointed out in the pictures that the elaborate sculptured surface decoration had no reference to the time, place or objects shown within the structure and that to our eyes today this ornament seemed peculiarly passé.

Turning to the 1925 show, he said that industrial buildings influenced strongly the simplicity of masses and group blocking and pointed out on the screen the entrance building with its huge bare-faced pylons, effectively lighted by night. Interiors were shown that bore out the same argument and where decoration was applied the aim was to associate it with the objects displayed.

The development from 1925 to 1937 was marked by exposition buildings telling frankly that they are temporary structures; that glass is used in unrestricted surfaces to bring the outdoors indoors;

that water as fountains and sprays, composed and illuminated, is made to play a vital part in the general effect.

The pictures of the 1937 show were confined to the new Trocadero, the Museum of Modern Art, mirror pools and fountains. The two buildings last mentioned are the permanent residue of the show and both are founded on classical architecture with projections reduced or removed, ornament erased or revised for modern effect, and proportions modified to achieve a quietude and repose that is striven for in much modern design but too seldom achieved.

He spoke critically of nationalism in architecture, charging it with being a retarding element in the advance and application of modern materials, synthetic and other. He closed on the note that political upheavals were discouraging and halting elements in the advancement of the arts.

Parabola

Reinforced concrete design within the last ten years has seized upon the parabola as an economical and beautiful form spanning public halls or exhibition rooms. Even zoological park Brookfield on Chicago's western limits has an elephant house whose nave is spanned with parabolic arches in concrete.

Architects may make further studies in the use of this curve in viewing Rutherford Boyd's new film "Parabola," recently shown in New York and available elsewhere in both 16 mm and 35 mm sizes for rental. The screening time is ten minutes. The film is synchronized to music by Darius Milhaud. It links together art and science in mobile sequences of light and form, all derived from the single curve, parabola.

Mr. Boyd had a presentation in pictures in the January 1938 "American Architect and Architecture." He is an artist, scientist and designer who has given ten years to the study of geometric forms of spiral and conic sections. By means of the parabola moving in space, obeying certain mathematical formulae, he has evolved forms never seen before, mysteriously beautiful in themselves. It is a kind of visual music with spatial harmonies.

The Bulletin suggests that program committees of architectural societies and chapters procure this film for presentation at their monthly meetings. Address Rutherford Boyd, 112 Prospect Street, Leonia, N. J.

Unearth Six Centuries of Painting

A complete history of painting from the first to the sixth centuries after Christ has been discovered through excavation of a unique series of mosaic floors in houses in Antioch, Syria, it was announced at the annual meeting of the Archaeological Institute of America at Philadelphia, by Dr. F. O. Waage of the Department of Classics of Cornell University.

Dr. Waage exhibited for the first time photographs of the remarkable mosaics which were copies of long since destroyed paintings of early masters. Executed with remarkable craftsmanship, the mosaics retain the original color effects of the variegated bits of limestone, terra cotta and glass which were used in their design.

Found by natives during the fall and winter and cleared and lifted by the expedition, several mosaic floors in the suburb of Antioch called Daphne are unusually important. One is a well-preserved panel of Narcissus, probably third century, and a striking panel of a striding lion set in an immense field of patterned flowerets of the fifth century.

Another mosaic realistically shows the courses of a Roman banquet. One panel contains artichokes, pig's feet, eggs in egg cups and bottles of wine.

Supported by the Worcester, Fogg, Baltimore and Louvre, Paris, Museums and Princeton University, excavations have been carried on at Antioch during the past spring and summer and will be continued next year.

—Science News Letter

Windows, outside cellar doors, and other warmth-wasting openings can be effectually insulated against the cold with cellulose film.

Whither the Building Industry?

The Editor: Architects cannot be accused of being pessimists. The nature of their profession is such that in the struggle with creative problems it is necessary that their visionary future be on the brighter side of life. Nevertheless, their academic training has given them the ability to recognize factual conditions as they are.

Recently there was held at one of the Illinois Society meetings, a symposium on the well advertised subject "What is Wrong with the Building Industry?" The inference was that there was more wrong with the industry than usual and that it was up to the industry and its allied interests to offer a solution of the problem. Accordingly, affiliates were called in—much as various specialists are brought into a medical consultation to save a half-dead patient. There was a representative of organized contractors, one of organized labor—invited though not present, an official of a material supply house, and a banker. They were all interested in our ailment, for were they not among the recipients of the benefits accrued during our prosperity, in the days when we were going great guns and were in the money.

We heard several fine addresses by these "specialists" who offered their own solution to a problem, mostly from the viewpoint of their own business. However, there was little or nothing said about the real reasons for the condition of the building industry. Nor were we informed as to type of structures we were to design and build.

All of which led to the conclusion that their hypotheses were wrong, that there really was nothing radically wrong with the building industry as such, and that the ailment lay rather in our disarranged economy. The fact is that there is no great need for any kind of building with the possible exception of low-priced housing to supplant slum areas.

An old time builder told me in 1929 that we had built enough buildings in the preceding ten years to take care of requirements for the next twenty years. At the time, I thought the man was daffy and I frankly told him so. I was like everyone else, all keyed up, over-organized, the result of an inflationary orgy of post-War days. In the light of the present outlook, I am wondering if I was not the unbalanced one?

I see:

Much unused factory and loft space. Consumption of these many square feet of space at a profit to their owners dependent upon an improvement in industrial production over the next few years.

Residential space in much better condition from the standpoint of occupancy, but not in terms of net return to capital. We may be approaching that point in this field when, because of the law of supply and demand, a more equitable return to an investor may be foreseen, but what about the ability of our great middle class to pay the increase? Certainly the investor with funds on hand will not back new ventures when existing buildings fail to bring an adequate return.

Office space with an average occupancy of approximately 70% and this at pathetically low prices.

Hotel buildings still laboring under the load of funded debts, contracted in the whoopee days. This is especially true in large urban centers. We can surely check this type off our list for some time to come.

Theaters—not only over-seated, but rapidly changing in character. The legitimate show house is almost a thing of the past. The picture house exhibitors resort to double features, gambling, premium nights, and the like in order to produce a profit.

Churches and other ecclesiastical structures with debts forcing their spiritual heads to act as financiers instead of confining their efforts to the gospel.

Public buildings, with the federal government more than doing its share, although the amount involved has been proportionally very small compared to the total volume in a normal period.

Other types, less important, though adding to the volume of non-production.

Now, my dear Editor, this does not mean that all there is left for us to do is to walk straight east and on into Lake Michigan. And I fully realize that that would be no solution of the building industry's problem. We have a rough and uncertain road before us.

We can, for the near future, continue to "trim our sails to meet the business weather" of the next few years, meanwhile planning for

the future on a sound stable basis. We can promote saner ways of financing construction. We can experiment with new materials and new methods of construction. We can revamp our antiquated building codes and laws. We can study the rebuilding of our vast slum areas in terms of socialized planning. We can promote the welfare of our urban centers by introducing new methods of city planning, larger areas of fresh air and sunlight, and in general a more practical and beautiful relation of units. And, last but not least, we can campaign to arouse and create public interest in architecture and in the social and economic value of the architect.

We can take a keener interest in our architectural education and requirements, eliminating from the field those not fully qualified to practice or those who are not temperamentally fit to assume their professional duty to the public. In place of six hundred architectural graduates yearly, many forced to accept underpaid positions, it would be better to graduate half as many qualified to make their proper contribution to society.

Idealistic, Mr. Editor? Perhaps so, but not entirely academic. Let us put our house in order, in the meantime giving the building industry a breathing spell, in order to catch up with our rapidly changing economic order.

—B. Leo Steif

On Economic Science

Economics began as a kind of social engineering. It attempted to formulate the conditions for promoting a high degree of national wealth. It dealt not with the technology of production, to be sure—for this was left in the main to the other engineering sciences—but with institutional arrangements, especially those having to do with organization, ownership, and control.

It would be worth while for intelligent people to examine economic theory thoroughly and to decide whether or not it is relevant to the central problems of economic policy. If it is, then we should do well to turn over policy-making to those who understand the theoretical possibilities. And if it is not, we have little reason to continue supporting the priests of economics.

When physical wealth and general welfare seem to be increasing, people do not feel obliged to worry over its causes. Under less favorable conditions they might long ago have noticed and resented the activity of economic theorists who were working out the necessary and sufficient conditions for attaining a wholly undemocratic economic goal.

In any case it appears that two hundred years of orthodox theorizing have brought us no closer to our original goal—the understanding of what it is that will make us rich or poor. Instead of working on this problem our theorists have been redefining the goal.

When bankers and business men speak, they speak in the name of economic law. Economists are still the priests, though business men are the princes; and those of us who are merely subjects incline rather toward the princely interpretation of economic doctrine than toward its more refined and difficult priestly form.

—Edith Ayres, New York University

American opinion seems unanimous that the chief hope for a lasting solution of our major social difficulties lies in the vigorous expansion of industry into new fields. All sides are looking to industry and to industrial science to create millions of new jobs and end unemployment for all who can and will work. It is not surprising in this industrial age, in this industrially built nation, that the bulk of responsibility for future social betterment should be placed on industry's shoulders. It belongs there, and industry accepts that responsibility. Even more, we welcome this responsibility with full confidence in our own and our nation's capacity to discharge it successfully. All we ask is the same fair opportunity to work that we believe should be given the humblest citizen.

—Lamot du Pont

In the Merchandise Mart, Chicago, will be opened a permanent home building exhibit beginning April 11. The exhibit is housed on the seventh floor.

Merging Architects' Organizations

The Editor: In the January number of the "Octagon" will be found a timely contribution from Mr. Bergstrom, Treasurer of the American Institute of Architects, in which he gives a clear analysis of the prospects for business for architects during the coming year and beyond. The picture is not very encouraging but I believe it to be accurate. Among other things, he points out the fact that architects have permitted without protest the setting up of bureaus within both local and Federal governments to perform architectural service, and have permitted banks, chain stores and other large establishments to set up bureaus to perform similar service. It might be added that many producers of building accessories are doing much the same thing. There is not much left for the architect.

Mr. Bergstrom thinks that much of this work can be recovered for private practice if architects will unite, work with their fellows to that end, and "stay united." This is a clear argument for the organization of a single national representative architectural organization.

The A. I. A. is the natural and logical nucleus around which such a single national organization, representative of all architects worthy the name in the country, can be organized if the A. I. A. earnestly desires such unification. In the past it has not. The present arrangement with state societies will not accomplish the result and is not enthusiastically endorsed by the state societies. Something more homogeneous must be adopted. It is to be hoped that the "State Organization Committee" headed by Mr. Fugard will accomplish something along the right lines.

The Board of Directors of the Illinois Society have passed a resolution favoring the merging of the state associations and the A. I. A. under suitable conditions. If the A. I. A. will co-operate broadly, possibly Mr. Bergstrom's idea to "unite and stay united" may have some chance to be brought about. It will be some job however, for no two architects were ever known to agree!

—Victor A. Matteson

Resolution

It is the opinion of the Board of Directors of the Illinois Society of Architects, without committing the membership as a whole, and solely for the purpose of instructing our representative on the Fugard State Organization Committee that:

1. It is desirable to have only one national representative architectural organization with the A. I. A. as the nucleus.
2. It is desirable in order to accomplish this result that the present chapters and present state organizations amalgamate or merge into one state society of the national organization.
3. Requirements for membership shall not be less rigid than the requirements now in vogue in the present A. I. A.
4. The state organizations shall have the same representation in the national body as now is true in the case of chapters, i.e. in proportion to the membership in good standing.
5. Each state organization shall have full jurisdiction in local state affairs.
6. Each state organization may be privileged to establish, or be divided into, branch or subordinate units.

Drafts

A draft is any one, or all, of three conditions: excess movement of normal air, contact with cooler air, or radiation of a part of the body to a cold surface. A draft, while literally a movement of air, has come to mean a local coolness in the body and it is this mixed use of a single word which causes confusion.

An air velocity increase of 15 feet per minute usually is equivalent to a drop in temperature of one degree. Ankles stand a much lower temperature before a feeling of coolness is noted. In a room where the temperature is 70 degrees at the waistline, the floor—and the feet and ankles—may be subjected to a temperature of 65 degrees.

Radiant Heating

Preliminary findings on the control of loss of body heat by the use of heated (or cooled) areas in walls of rooms are given by Drs. C. A. Mills and Cordelia Ogle of the University of Cincinnati laboratories of experimental medicine. Panels which can radiate heat to the clothing in cold weather or absorb heat from the clothing in hot weather, permit human comfort without the necessity of cooling or heating great masses of air and the walls of the room, as is now done in air conditioning.

The general principle underlying the thermal panel system is not new; it was in use even in antiquity, and modern use, based on careful engineering research, has been made of it in Great Britain.

"Air conditioning would seem to be highly inefficient as a method of controlling body heat loss," say the scientists. Present methods, they point out, require that great masses of air and whole walls of rooms be cooled or heated in order that the body may be comfortable.

In winter a person leaves a room at 75 degrees to go to low outdoor temperatures. And in summer one leaves the outdoors with temperatures up to 100 degrees and enters a room air conditioned to 80 or 85 degrees. These sharp contrasts, state the physicians, can be suspected of increasing infections of a respiratory nature.

Four experimental rooms were built for the investigation. The significant finding of the research, said the scientists, is that the control of the liberation of heat by the body appears to be the deciding factor in human comfort. That explained the equal comfort in the two rooms, one very cold but with radiant heating and the other very warm but with radiant cooling.

"Clothing materials rapidly radiate their heat to cold surfaces," report the scientists, and fall to temperature levels below those of surrounding hot air, thus encasing the body in a cooled capsule to which it can readily lose its internal heat. And in cold air, clothing readily absorbs radiant heat and forms a warm envelope around the body to slow the process of heat loss from the skin."

It is the temperature of the air surrounding the body (inside the clothing) which determines the body's comfort. One can achieve such comfort by heating all the air in rooms and the walls but the new report shows that the same comfort can be obtained without using this rather inefficient process.

—Science News Letter

Modern Defense Towers Like Ancient Refuges

Newest device for the protection of civilian populations against air raids is a strong, windowless tower of concrete nine stories high, in which 400 persons can find shelter for the duration of any raid. This air defense tower has been developed by the Draegerwerk, Luebeck, Germany, manufacturers of gas masks and respirators for industrial as well as military use.

The tower is bombproof as well as gasproof. Small in area as seen from the air, it presents an almost impossible target under even the most favorable bombing conditions. Moreover, its conical top is sheathed in stout steel to deflect any accidental direct hit. Its concrete walls are calculated to withstand a blast pressure equivalent to 100 tons per square yard from any explosives falling alongside. Its round shape and wide base give it great stability.

The top floor is intended to house the ventilating machinery, and the remaining eight floors are for the people. Entrances are by two outside staircases, to the second and third floors respectively, and a series of stairs at the center connects the floors.

It is planned to set up one of these towers for each 400 persons in an industrial plant or in closely built up urban residence areas. The people could take shelter in them when the raid warning is sounded, remaining until after the hostile planes have flown away. The towers may be incorporated into other building units, or even sunk into the earth.

New though the Draegerwerk tower is, it nevertheless re-emphasizes the old, old aphorism of Ecclesiastes that there is no new thing under the sun. For nearly a thousand years ago in Ireland, when raiding Vikings harried the coasts and even made incursions inland, towers that look strangely like the new German structures were built alongside the churches.

These round towers of stone, of which examples still stand in

perfect condition, were used as refuges during raids, by both clergy and people, who also brought their more portable valuables. The Vikings were never equipped for siege warfare so that these simple "keeps" were safe enough until the marauders went back to their ships.

—*Science News Letter*

Frank Lloyd Wright

The "Forum" has become so invaluable and judicious that one must look at the January issue with pain rather than indignation. There can be no quarrel with you for publishing Mr. Wright's work. Mr. Wright's work is very interesting. What is astonishing, and painful, is your taking sides in the forty-year old controversy over who is out of step, Mr. Wright or the rest of the architectural world—and most painful of all, taking Mr. Wright's side. Because, make no mistake, Mr. Wright himself admits no compromise. He had a master, Mr. Sullivan, but Mr. Sullivan is dead and cannot give testimony. Then there was Himself. And after him are his disciples. Mr. Wright never admitted to any contemporaries. Maybe a nod to some European or Asiatic but his colleagues were never and aren't now in the same league.

And so I wish to take issue with you in your "Forum" presentation of Mr. Wright as the Messiah; in "Time's" statement that Mr. Wright is the "greatest architect of the twentieth century"; and in your advertisement in "Life" that "this is the most important architectural document ever published in America. First and only record of what we have come to call the Modern Movement" and so on ad nauseam. That is taking in a lot of territory even for so powerful an organization as Time Inc.

In the first place I have the honor to defend the architectural profession as opposed to Mr. Wright. I believe it is filled with men of intelligence, imagination, integrity and capacity. I believe that an examination of a bound "Forum" for '37 with a "Forum" of fifteen or twenty years ago will show tremendous heart-warming progress toward a better machine for living, with the accent on living. But this has been a community progress, it has been a meeting of minds. A few strong men, like Goodhue and Hood have come along, but the good die young, and looking back at that progress it is hard to put a finger on the milestones. This progress is not a theoretical one. We can simply see how we have progressed and are progressing. For progress towards the ideal is never finished. No one is satisfied with what is being done but we do the best we can. Costs, prejudices, and our own limitations hold us back but we have done, we are doing, and we will do a better job than Frank Lloyd Wright.

In the second place, Mr. Wright's influence on American architecture deserves some further proof. Is it not strange, for one thing, that if he is responsible for the "Modern Movement" he doesn't even recognize us? We don't ask love but even erring children deserve something besides contempt. And then there is the extraordinary fact that Mr. Wright has had very little of that sincerest form of flattery—imitation. Mr. Wright's work has for forty years been clearly distinguishable. But are these distinguishing features familiar in the modern scene? The deep overhang, the high inaccessible windows, the tortured outline, long corridors, the 60-30 triangle, these are details to be sure but take them away and you might have something almost resembling the work of one of the despised "modernists." One is forced to the conclusion that Mr. Wright's influence has been philosophical and literary. These influences may be impressive to your large lay audience but I feel sure that among the architectural profession the feeling is that "by their works ye shall know them."

And even philosophically, I feel sure there is something wrong with one who invariably brings forth his work as tablets from Mt. Sinai. Work is not made great by saying so, and genius is best recognized by posterity. It really would be a pity if the editors of "Architectural Forum" were suddenly found somewhere in that touching photograph "The Taliesin Fellowship at Play."

—Donald M. Douglass in "The Architectural Forum"

Pennsylvania has started a springtime attraction to rival Washington's Japanese cherry blossoms—a flowering dogwood trail planted along the 50-mile road from Valley Forge to the Washington Crossing of the Delaware River.

I. K. Pond Injured

On March 15 Irving K. Pond attended the Chicago Chapter, A. I. A. meeting at the Architects' Club, leaving about 7:15 to attend a dinner at the Union League Club. He did not reach his destination, for while crossing Indiana avenue at 18th street, one of Chicago's unprotected and suicidal street crossings, he was struck by a passing truck, resulting in a fractured hip bone.

Mr. Pond is in St. Luke's Hospital resting after an operation. Over his bed is a trapeze that he uses to raise himself from a reclining position from the waist up. No somersaults or vaulting at this time.

Mr. Pond is in his eighty-third year. All architects and his host of other friends hope and pray for his rapid recovery.

Tung Oil Substitute in Paints

Twenty-five years and more ago, every architect's specification on painting and finishing contained the words "lead and linseed oil," linseed oil being considered the best vehicle and protective coating obtainable. After that the furniture trade used for finishing much China wood oil, as it was then called. This was about the period when mill construction for industrial buildings was very extensively used and the southern forests of yellow pine were ruthlessly cut down without thought of posterity.

Today every American paint and varnish manufacturer uses great quantities of tung oil in his product because of the elastic quality inherent in this oil—a feature redounding to the near-elimination of cracks and checks on a painted and varnished surface.

The waste areas of stumps in southern states gave the U. S. Department of Commerce much food for thought. The Department's scientists experimented in planting trees of various types that were thought might prove of commercial use which would grow in these sections.

Tung oil, formerly called China wood oil, was imported from China in ever increasing quantities for use principally by paint and varnish manufacturers. In 1930 the importation of this oil into the U. S. amounted to more than \$14,000,000. The Department found that the climate and soil in Southern Mississippi and Alabama was well suited to the growth of the tung tree and accordingly large areas today have a stand of tung trees. The domestic production of tung oil extracted from the seeds found in the nut of this tree is, however, still very small compared with the quantity of the product used in the U. S.

The economic consequences of Japan's war on China today are felt in the world's markets mainly as a stopping of China's exports like tung oil. Realistic business sees conditions becoming worse before becoming better and is enlisting the aid of scientific research to find some substitute for the fast-drying vegetable oil produced from the tung seeds.

Oiticica oil is a new product holding out encouraging prospects as a substitute. It comes from pecan-like nuts from Brazil's oiticica tree. The oil is the only vegetable oil available in commercial quantities which rivals tung oil in its properties. Brazil's exports of oiticica oil prior to 1934 were negligible; in 1936 the export of this oil approached 10,000,000 pounds of which the U. S. took 3,000,000, and in 1937, 4,000,000.

This new oil seems especially adapted for use with phenolic resin lacquers of which bakelite is typical.

The need of architectural supervision in providing proper protection for mortgage loans is indicated by a survey completed by the Westchester Chapter of the A. I. A. It was brought out that twice as many builders and contractors as architects are acting in a supervisory capacity for the banks.

At Greenbelt resettlement project outside of Washington, D. C., members of Congress and Department of Agriculture officials attended the informal dedication of an all-steel low-cost farm building unit.

The unit comprises five structures—a five room house, a barn, a smokehouse, a poultry house and a sanitary outhouse. It can be delivered unassembled for \$2000 when manufactured on a mass production basis according to the engineers for the builders. The buildings are assembled from prefabricated steel panels each four feet wide. The prefabricators are Decatur Iron and Steel Company of Decatur, Ala., and Tennessee Coal, Iron and Railroad Company supply the material.