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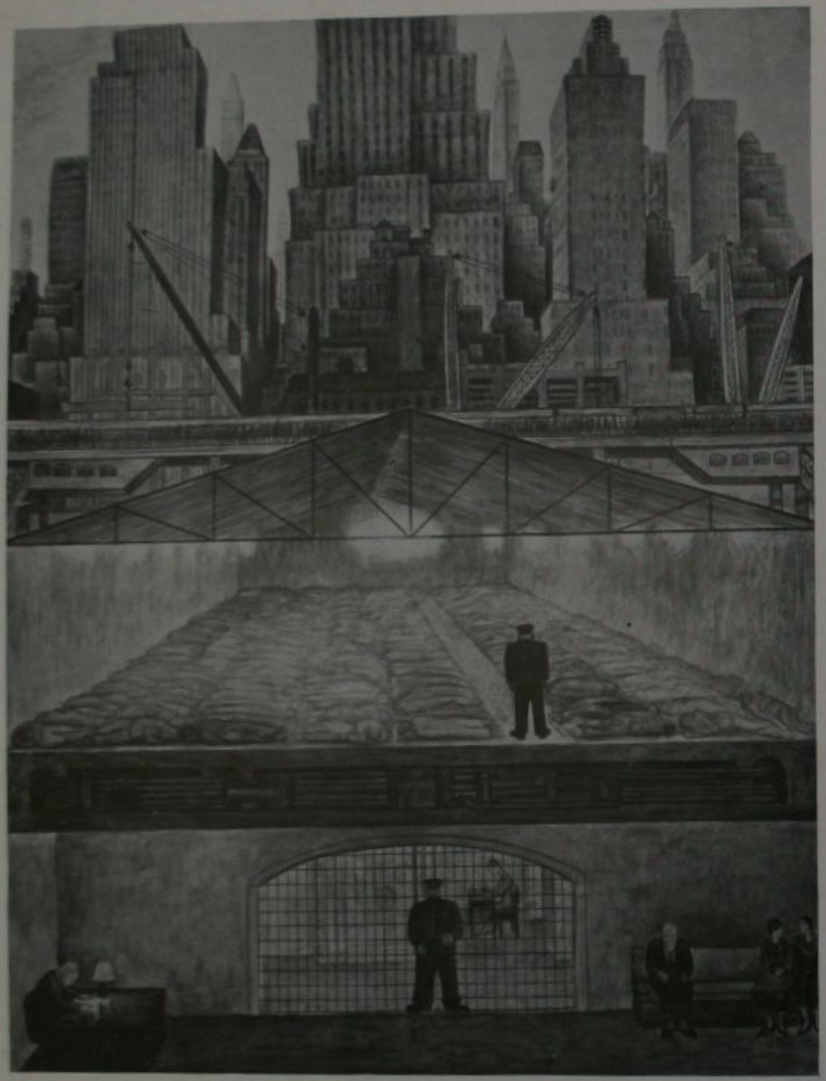
KINGSROAD pg. 21

T-SQUARE



"FROZEN ASSETS"—Fresco for Museum of Modern Art by DIEGO RIVERA

A LETTER FROM THE PRESIDENT OF THE T-SQUARE CLUB

TO WHOM IT MAY CONCERN:

In view of the rapid development of the "T-Square Club Journal" from a local organ devoted solely to the club's interests, and expressing the opinions of its members, into "T-Square", a review whose contributors are beginning to write from every part of the United States, and even from Europe, the Executive Committee feels that the Club should no longer claim the publication as its own. The following resolution passed by the committee on January 13th, 1932, places the seal of official approval on the separation of the journal from its parent body:

> Resolved that the publication be released from its connection with the T-Square Club, and that a vote of appreciation be given to Mr. Howe, Mr. Levinson and to the various members of the Club who have contributed material.

I wish to add to that of the committee the expression of my own appreciation of the devoted efforts of the editors in making "T-Square" a magazine of which we are all justly proud, and offer my personal thanks to those who have contributed to it. At the same time I must disclaim any great part of the credit for making it a success and venture to suggest that the only fault to be found with its editorial policy is that it has given me as president of the club more space in its columns than I deserve as a private citizen.

It is inevitable that I should speak at this parting of the ways in a dual capacity as titular head both of the T-Square Club and of its magazine. On behalf of the editors I therefore tender to the Executive Committee and members of the club sincere thanks for their constant support and encouragement and assure them that the part played by the old and honored name of the club in making the success of the magazine possible will not be forgotten. In spite of the present separation "T-Square" will remain always in fact the child of its father, and I dare say without fear of future disappointment that it will continue to be worthy of its heritage.

GEORGE HOWE

T-SQUARE

PUBLISHED MONTHLY

THE "T-SQUARE" IS AN OPEN FORUM FOR CONTEMPORARY ARCHITECTURAL DISCUSSION

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Managing Editor

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NEXT MONTH

Architectural Exhibit Museum of Modern Art.

Education Of An Architect, Percival Goodman.

FEBRUARY **1932**

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FOR ALL MAY RAISE THE FLOWERS NOW FOR ALL HAVE GOT THE SEED

FRANK LLOYD WRIGHT

IT IS a weakness of our American system that any energetic, unscrupulous individual with something of the instinct of the salesman, may get a fortune in a few years.

With no culture, but much will and desire, power comes with money. He gets himself "fixed" with "makings" as no one of his quality could do in any other country.

His ability to sell lands him in an incongruous self-made shell. His ability to use his power is all out of drawing with his ability to administer it as his money systematically comes alive and goes on, itself working, to multiply itself.

He knows nothing of the real meaning of what he now gathers. He does not know what art is, but he knows what he likes. It is ready-made. The country is free.

So here is the cultural weed.

He goes to seed. And more weeds by way of "ready-made."

Exaggerated power is aggravated by such ready-made culture as he can (or will) provide.

The salesman is . . . "Success."

Now, salesman cuts salesman. In architecture—and it is the culture most important to him—it is his counterpart that sells it to him by way of similar success.

It is only ready-made culture that he will buy.

And, to him, that is European. Europeans themselves come and find this out and soon become expert salesmen in the American scene by the American method.

This salesmanship we call propaganda.

The propagandist at the present moment is the "internationalist."

. . .

Is architecture "modern" because alter-ego need some formula to follow any individual initiative and overtaking it, as they imagine, may thus manage soon to ride the initiative to death? How much is being written and how little built and how little sense in cause or contra shows clearly why the straight-line and flat-plane (both abstractions), and the single curved-surface added to make of the whole another abstraction, have come to be expedient "modern" architecture.

Why is the formula expedient? Is it in order that the original impotence—eclecticism—may be now "improved" as modernistic—or modernism—and function as the inevitable ism, ist, or ite, to make a "*movement*"? A movement of this sort depends upon the obvious and easy for the nearsighted near-great, the smaller and small men to play up for selfish purposes in small ways to again kill such initiative as lives, or might live, in our architecture.

A "movement" is usually exploitation, not initiative. Taking all this together, it becomes personal to me because the cause of an organic-architecture runs well beyond the yard-stick and plain-plaster by which busybodies, in their extremity, obscure a simple issue as "modern."

A bee in their bonnets!

They are doing some harm, I believe, and unless there is enough vitality in the great cause of architecture itself to rebuke and shake them off, they intend doing not only more but all the harm there is in them. It may not be so much in the long run, but it discourages all true creative initiative meantime.

But trust the reactionary alter-ego—anyone's alter-ego—to make the great small, the little big and both of not much consequence so far as his own ability goes.

. . .

I said doing harm.

Let's be specific.

Poor Japan, who eagerly copies the latest in Western haberdashery or art—impartially—not knowing what either is all about, and . . . gets kicked out!

I loved Japan and reverently took off my hat to its nativity when asked there to build a building. The Japanese are Oriental, not Occidental, hard as they may try to be Occidental. They are trying pitifully hard, but there is a chasm between the races where art is concerned wholly in favor of the Oriental.

Yet, see all the internationalists busy over there encouraging that ambitious, industrious nation to belie and stultify itself by an aggravated architectural version of the Derby hat, kimono and Boston gaiters. Tokio is becoming a profane sight in consequence. To anyone who loves these sensitive, ambitious people who call Tokio capital, here is deplorable butchery.

The East still thinks the West knows what it is about and promptly gets after whatever is after the West, too quick to grab and fall in line. Japan's national weakness.

Some day the East will learn that the West itself is a formula-chaser or an imitator, instead of a culture builder. Any formula derived from its experimental civilization can only be a brand, or a fraud, upon the East.

The Japanese will some day wake to curse the abuse they were encouraged to practice upon themselves.

The Japanese house—a perfect expression of organic architecture—is being made over into a Western garage, instead of being organically developed into a suitable place for the same life rising from its knees to its feet.

. . .

On the verge—another instance.

Rio de Janeiro—the capital of a romantic people in love with loveliness.

There I found some seven hundred art students of the Bellas Artes on "strike"—as they built our word into their Portuguese language. These students wanted to go forward instead of backward, and the Beaux-Arts arm-chairs couldn't allow that, so they couldn't get the students back to work. These high-spirited young people were regarding "the formula" as it had found its way there over-seas by way of a Russian working for a German on the tropical mountain-side, at Copacabana. A good "internationalist" example. As good as any.

These young people were regarding it proudly but uneasily. Something was out of "drawing."

In tropical sunshine, the flat-faced hard-head was glaring shamelessly at a high-spirited romantic people regardless of climate or environment, and they were trying to see it, whole, as the right thing. Not quite so gullible as the poor Japanese where the West is concerned, they were suspicious.

The students had gathered there and invited me to tell them if that was "modern architecture."

I said the equivocal term might mean that it was, probably did. But it wasn't architecture at all where they were concerned, because it ignored their natures, their climate, and the character of their environment.

A cheer went up, and smiles broke out. They were relieved. As I told them why, in more detail, the sky cleared for a moment.

But propaganda is at work on them, too. They have no models otherwise. They have no one directly to stimulate their imaginations along lines natural to them, unless Lucio Costa or Araujo.

What are they to do?

. . .

Here is our own nation.

Eclecticism, a form of self-abuse too long practiced, has rendered us impotent. Such architecture as we have, we got that way. We are prostitute to any

ENTRANCE TO COURTYARD, TALIESEN, SPRING GREEN, WISCONSIN—FRANK LLOYD WRIGHT, ARCHITECT

CHRYSTIE-FORSYTH AREA UNDER THE BUILDING REGULATION PROPOSED BY THE REGIONAL PLAN OF NEW YORK

THE EFFECT OF THE REGIONAL PLAN ON URBAN ARCHITECTURE

ARTHUR KALLET

THE architect seldom plans the setting for his structure. As a rule, neither site nor neighboring buildings are subject to control, and frequently the limitations imposed on him are such that he must leave one or two of the four faces of his building blank, so that some day his design, modern perhaps, can be joined on one side by a Gothic office building, and on the other by a Greek bank. Far too many buildings have all of their claims to exterior beauty concentrated in one face.

After the passage of New York's "set-back" law, considered by many an unjustifiable curb on the freedom of architectural expression, low buildings on interior lots still had to be boxes with one side decorated, but the designers of tall buildings had gained a degree of freedom, at least for the towers, which the law had permanently exposed to the light.

While it cannot be said that the zoning laws requiring set-backs do not impose artificial limitations on the architect, in general such limitations are of a lesser order than those imposed by the requirement that almost every private building must return the largest possible profit to the builder. Greater individual variations are possible within a prism of unlimited height than within a prism of limited height surmounted by a pyramid, the form imposed by the zoning laws. This ceases to be true, however, when the maximum profit mandate alters the prism only, by adding ornamental window designs and decorative cornices. Under the restrictions of the zoning laws in New York City, greater freedom has been shown in the treatment of structural masses in the city's business buildings than ever before.

It was not for aesthetic reasons, however, that set-back requirements were invoked. Against the natural desire of builders to transform steel and stone into the greatest possible amount of leasable space, it was necessary to set the public welfare. This meant no more building and hence no more workers and no more ancillary traffic and transportation than the existing street system and present and prospective transit lines could support. It also meant more adequate light and air both in the streets and in the buildings.

Insofar as the congested areas of large cities are concerned, the Regional Plan of New York has now proposed zoning regulations which go far beyond present limitations. Since these proposals would bring about vast changes in urban architecture and make the metropolis of tomorrow far different architecturally from that of today, it is necessary to point out the basis of the proposals. The Regional Planners found, after careful study, that those who had set the terms of the compromise between the profit rights of land owners and the public welfare in the original set-back law, had evaluated too conservatively the needs of the public, and the hazards of over-building.

It should, perhaps, be explained here that to the makers of the Regional Plan the term "public welfare" included the welfare of the whole group of property owners and builders. When the value of a building declines, either because it is deprived of adequate light by a new skyscraper erected close by, or because over-building in the area has lowerd its accessibility while glutting the market for rentable space, the owner of that building is one of those injured by too lax restrictions.

The problem of controlling building in New York is not complicated by any lack of available space. In the city alone, and in the metropolitan region as a whole, there is enough space to take care of all of the needs of the population for hundreds of years to come. Furthermore, from the point of view of the burdens which buildings place upon streets and transit lines, it was not necessary for the planners to consider limitations upon height, since only floor space, and hence approximate total bulk, affects the stream of human beings and goods pouring into and out of a building.

On the basis of careful studies, the Regional Plan staff decided that the maximum bulk of a building in the most densely built-up areas should not exceed more than the equivalent of about 12 stories on the total area of the plot. Building would be limited, however, to 80 per cent of the plot, 20 per cent being reserved as open space in inner and outer courts. Set-backs also would be required. This would result not in endless rows of solid 12-story buildings, but in many slender towers on broad, low bases. There might be towers 100 stories or more in height, but they would not be a detriment to neighboring buildings since the bases of the towers would cover two, or even more blocks.

Nothing could be less desirable than to have a large area built up solidly to a height of 12 stories. It would make little difference in its effect on traffic whether a building's cubage were concentrated in 12 stories straight up from the ground or almost entirely in a tall tower on a small percentage of the plot; so long as the bulk is the same, the effect on traffic is the same. Rows of 12-story buildings would, however, mean dark streets with little access of sunlight except in a few upper stories, while tower buildings would have adequate light in all stories and direct access to the open air in most of the stories on all four sides.

The limitations on business buildings which would be

MODELS DESIGNED BY THE REGIONAL PLAN OF NEW YORK, SHOWING MAXIMUM BULK SUGGESTED FOR BUSINESS BUILDINGS IN THE NEW YORK REGION IN CENTRAL, SUB-CENTRAL, INTERMEDIATE AND SUBURBAN AREAS

PERSPECTIVE OF A FIVE-BLOCK APARTMENT HOUSE PLAN PROPOSED BY THE REGIONAL PLAN OF NEW YORK. THE PLAN PROVIDES SUNLIGHT, RECREATION SPACES, LOCAL SHOPS, SCHOOL, GYMNASIUM AND ENTERTAINMENT FACILITIES FOR 1,000 FAMILIES—AND NO EXPOSURE TO TRAFFIC DANGERS

imposed under the zoning ordinances advocated by the Regional Plan, summarized briefly, are as follows:

1. A definite ratio between the maximum permissible bulk of a building and the size of the plot, this ratio varying from 50 cubic feet per square foot of plot in the open suburban areas to 144 cubic feet of building per square foot of plot in the central areas. There is no limitation on bulk under the present New York City zoning resolution.

2. No limitation on height of towers covering 20 per cent of the plot area, provided the maximum bulk is not exceeded. This compares with towers on 25 per cent of lot area without limitation of bulk as the maximum permitted in New York City at the present time. A builder wishing to construct a building of great height would have the choice of assembling a large area and putting most of the bulk of the building into a tower, or of purchasing the air rights over neighboring low buildings.

3. Twenty per cent of interior lots and 10 per cent of corner lots in the central areas to be left entirely free of building. This open space may be in either exterior or interior courts.

4. A height before the first set-back not greater than 60 feet on interior lots or 80 feet on corner lots. Present zoning permits a height before the first set-back which may be as much as 20 stories in some districts. The first set-back in the Empire State Building is at the sixth floor (73 feet).

5. Towers set back on all sides to assure adequate air and light to themselves and their neighbors alike.

6. Open space provided at the rear of buildings, except where they run through from street to street.

Height before first set-back, 60 feet; towers limited to 20 per cent of the area and set back on all sides: these are drastic limitations. But, just as the laws prohibiting robbery and assault give the normal individual greater freedom to carry on his normal pursuits, so these restrictive zoning proposals would give the architect a freedom far exceeding what he has had before. In effect, the proposed regulations would permit him to design a structure complete on all four sides, except perhaps for a five-story base. This is indeed freedom. Even with buildings of moderate height, we could begin to think of whole structures and cease thinking of fronts.

Although the proposals of the Regional Plan are based on economic and social, rather than aesthetic considerations, there is reason to believe that building restrictions formulated by an architect thinking chiefly in terms of architecture, would not be greatly different. In the October, 1931, issue of the T-Square Club Journal, Lee Laurie, writing of the genesis of the design by Bertram Goodhue for the Nebraska State Capitol, says of Goodhue, that while working on the design he was "happy and excited, as he had been . . . whenever the bounds of his design were those imposed by his own imagination, rather than by the needs and desires of owners and donors."

What type of building resulted when the bounds of his design were imposed only by his own imagination? The Nebraska State Capitol is essentially a broad, low base, surmounted by a tower covering only a small part of the base. The Regional Plan proposals lie in this same direction, though they do not limit the towers to so small a part of the base.

The Empire State Building provides another example of the trend of architectural design when certain limitations are removed. The zoning regulations for the section of Fifth Avenue on which the building is located would permit a base 125 feet high before the first set-back. Since the building fronts on three streets, with other buildings in the same block on only one side, the problem of adjoining buildings was relatively unimportant. Yet, the architects chose to have the base only five stories high before the first set-back—about half the permissible height.

To achieve proper scale for his building as well as pleasing form is a task which the architect can seldom accomplish under ordinary conditions in large cities, where he must contend with both the builder and the neighboring buildings. Under the proposed zoning regulations, however, the right of proper scale would in large measure be restored to him. He could be sure, too, that whatever builders might do on neighboring plots, so long as they were bound by the same regulations, his building would be seen. Too many fine structures in New York City are about as accessible to view as a fine painting sandwiched between other paintings in a closet.

To bring about a realization among both the general public and builders of the tremendous long-time importance of accessibility and the availability of light and air as factors affecting the value of buildings and their rate of obsolescence has, for many years, been one of the aims of the Regional Plan of New York. While the proposed regulations represent the culmination of this effort, much will have been accomplished even if the proposals are not immediately translated into statute. As an unofficial body, the Regional Plan Committee has always believed that the creation of a better public understanding of the factors involved is the best available means of improving the planning and building of cities. This public, such a large part of which travels on overcrowded transit lines, and works in offices with windows permanently in the shadow of neighboring buildings, will be quick to understand the need for greater limitations on building bulk.

A word should be said concerning the incidence of the Regional Plan studies on types of residential building. Here, the factor of congestion of traffic and transit facilities becomes less important, but congestion in terms of space available for recreation becomes vastly more important, as does the availability of sunlight and daylight in all rooms. These factors present to the architect, again, both new limitations and new opportunities.

(Continued on page 41)

WE ARE ENTERING UPON A NEW ERA

LE CORBUSIER

IT IS the definite promise in what we have already achieved in architecture which compels me to discuss its future—though not after the manner of H. G. Wells and Jules Verne! A bird in the hand is worth two in the bush. The time is ripe. The elements of which we have to take stock are present facts. The old order is changing; we are entering upon a new era. An irresistible social upheaval proclaims that certain things are dead, and others are born in their place. The change is so tremendous that we can only regard it as the beginning of a new cycle in the history of the human race.

So far as architecture is concerned, we must consider it as bound up with the intimate life of the individual and his attitude toward the rest of the world. Architecture is the expression of the functions of innumerable individuals, classed, or classifiable, with their traditions. It stands for the individual and also for society as a whole, for man as a unit and for mankind, for the inner consciousness both of the individual and of the community. In a word, the home and the town, architecture and town planning, all are one.

* * *

Architecture has literally lost sight of the fact that it has yet to solve the problem of the modern home—and we shall see why. Town planning simply does not exist, because we have not yet learned to consider that man today is the product of the mechanical age. We cannot plan our towns because the value of the human being in the new scheme of things has not yet been defined; far less has his destiny been realized or appreciated. We are completely bewildered by the new era, and the wastage of human effort goes on unchecked. Harrowed as we are by the results of our own folly, we are wretched and unhappy. We have sacrificed conscience for wealth, and wealth is the one brutal aim pursued by everybody. Yet we need only look around us to realize that wealth and happiness are not synonymous. The machine has given us comfort—yes. We have invented the machine, and it should be liberating our minds and our leisure hours. Instead it has harnessed us to itself and plunged us into slavery.

I am dragging architecture into this discussion of human happiness because I assign to it a definite rôle: the liberation of the individual. I say that there is no such thing as modern architecture, because real modern architecture can have nothing to do with tradition—the teachings are false, mendacious and mischievous. Traditional architecture has become the enemy of mankind.

What has happened is that a hundred years of mechanical industrialism, which have laid everything waste, bruised everything, destroyed everything, are coming with full hands to bring us the matured fruits of the process—modern technique, powerful tools, precision, teamwork. Architecture, which is the supreme achievement of organization, can today harmonize the results of experience.

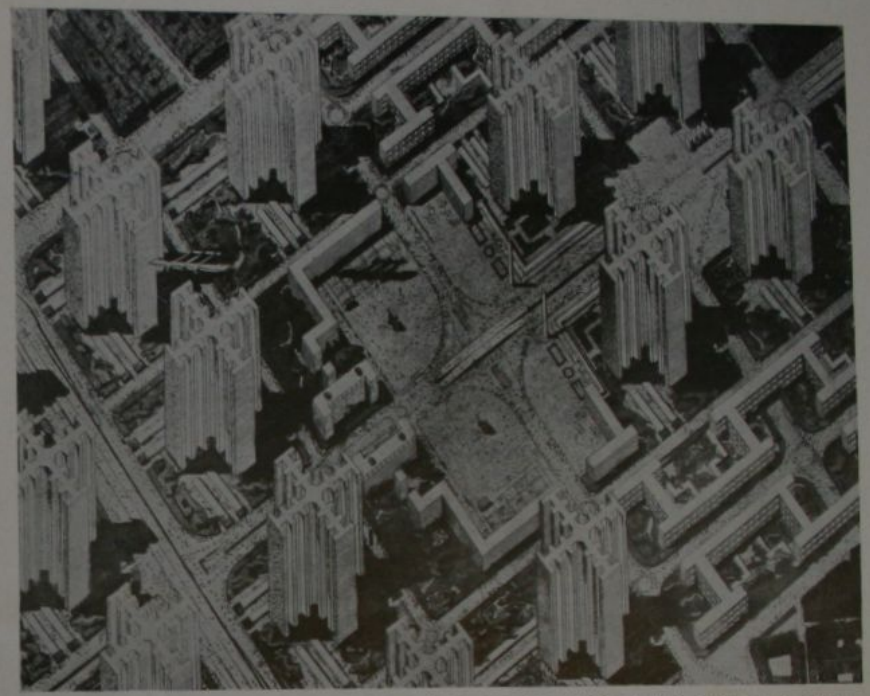
These, then, are the essentials: (1) Architecture is concerned with the problem of housing; (2) architecture should bring a sane judgment to bear upon the erroneous conception of modern comfort; (3) architecture of today cannot lean upon that of tradition, and the teachings of the schools are dangerous; (4) architecture must make use of modern technical processes, with all their possibilities and in all their consequences, and with all their efficiency. Nothing of tradition will remain. Everything will be new. There will be a new organization of the human race and a brand-new stage-set. In this newly won harmony relationships will be new, the dimensions, the processes, the daily routine. Knowledge, ethics, and esthetics, all are one, expressed in architecture; a new unity.

You may tell me, "There is nothing new in all this, and presently it will all come about, little by little, quietly. We shall get around to everything in time." I do not agree. I fear that the opportunity will pass. The hour of destiny strikes but once for men, cities, races.

Ever since 1870 Germany has been experimenting, drawing the east of Europe into active adventure after her. Cities have been built and organized. A whole population has been spiritually energized by the one word, "Build".

France since 1870 has remained stolidly immovable. Only her chosen few work prodigiously. The entire country has succumbed to old age on every side, in her farms, her villages, her cities, her capital. The post-war period of reconstruction found her unprepared for the task. True, her factories are models of their kind, but the devastation of the invaded regions has led to nothing but architectural defeat. Why? In the people there is lack of that spiritual urge to build; among the officials, national and municipal, red tape, sterility. If, however, that spiritual urge for building is presently to begin it will be because a great decision has been taken—to act.

It is at this point that America appears at once so disturbing and yet so admirable. About 1900, when I was a young man, America was regarded as a far-off country suitable only for emigration, a place where people were intent on making money, with no time to waste on the intellectual discussions for which Paris was the magnet and centre of the world. American



". . . I WILL ADMIT NOTHING BUT A MAJESTIC ARRAY OF PRISMS, PERFECT IN FORM AND ASPECT, RISING INTO SPACE, AND HAVING AN INDISPUTABLE REASON FOR THEIR EXISTENCE . . ." LE CORBUSIER, ARCHITECT

architecture! Nobody knew anything about it. One thought vaguely of rude shanties, and towns awaiting the future, of cities laid out like a chess-board, with streets stretching out into the unknown.

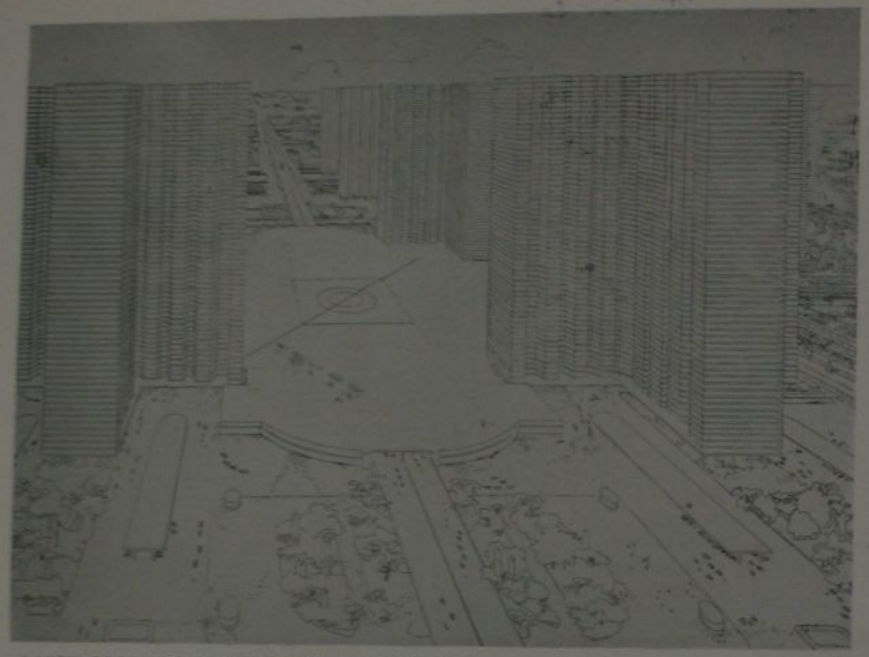
Thirty years later the United States is dominant, ready to lead the world. Manhattan and Chicago are great exemplars of the new era, and French artists tell of their deep emotion at the sight of American skyscrapers. Such is the reward of decision and energy. I attach to the decision to act a primary importance. Act or submit.

* * *

I absolutely refuse to admit, nevertheless, as many so lightly do, that Manhattan and Chicago possess the architecture and town planning of modern times. No, and again no! I recognize the sublime virtue which is "to do", but I think doing is only the beginning, the first and crudest stage—the shoving-off. Everything still remains to be done to achieve dignity, which results from balance, proportion and, at last, from a quality of high disinterestedness born of consummate skill.

New York and Chicago are rather mighty storms, tornadoes, cataclysms. They are so utterly devoid of harmony. When a motor revolves it is harmonious, but if New York were a motor, that motor would not turn and as a machine would astonish even the man who invented it.

Skyscrapers are imposing in their pride. But as architecture they do not exist, and that for a reason which is no fault of the architect. Their dimensions are arbitrary dimensions. I mean that only the plot of ground available determines their proportions. This is not the way to calculate. We should only fix the normal dimensions of a building after we have decided upon the ideal vertical circulation. Then the architect should consider what form will give the most light and the maximum stability. We must also admit that there is no reason why a skyscraper should terminate in a point, a mitre, a tiara or even in a decorative stopper. Logically we would conclude that a skyscraper is a building which rises vertically on an ideal foundation, to such a height as building and operating costs may justify.



A VIEW OF FOUR SKYSCRAPERS, LOOKING TOWARD THE CENTRAL STATION. THE AUTOSTRADE PASSES UNDER THE AIRPORT. NOTE THE OPEN GROUND FLOOR PLAN OF SKYSCRAPERS ON COLUMNS. —LE CORBUSIER, ARCHITECT

Contrary alike to common sense and the dignity of architecture, a ruling into which has crept a romantic esthetic of the Middle Ages has imposed pyramidal forms upon these structures.

I now come to a serious problem. Instead of the bristling erection of towers of Manhattan and Chicago, I will admit nothing but a majestic array of prisms, perfect in form and aspect, rising into space, and having an indisputable reason for their existence—truly biological organs that law, order and proportion will eventually bring to architecture. I feel that the American skyscrapers have not attained the rank of architecture; rather they are merely small objects such as statuettes or knick-knacks, magnified to titanic proportions.

This verdict may be severe, but I am not blaming the architects, only the trend of events. I admit that my cherished ideas mean radical alteration in our theories of town planning, and seizing opportunities to open up vistas, which can only come by urgently needed reforms. I believe that there already exists a theory of town planning which we must develop, step by step, if we are to attain the desired result.

Paris, an ancient city, has been little changed since it was last remodeled in the age of horse traffic by Haussmann and Napoleon III, and we are still using today what these men built, although we are now in the era of the automobile. We are living in a city which is out of date. It is atrocious.

New York never took into consideration either the horse or the automobile, but was influenced chiefly by the fantastic urge of modern times. The United States is the adolescent of the contemporary world, and New York is her expression of ardor, juvenility, rashness, enterprise, pride and vanity. So New York stands on the edge of the world like an epic hero.

She may cease to be young, even cease to be useful. She may suddenly be supplanted by some other city, standing for the sovereign order of logic and efficiency, of strength and peace, and not for tumult and brutality. Paris is too old, and New York may also be attacked by the paralysis of senility.

I have said somewhere that we have ceased to know who we are, what we serve, and why we are here. The modern city is simply the material expression of our knowledge—or lack of knowledge, of our order—or disorder. Our ignorance has a devastating effect on the fundamental organization of the town, which we must revise.

The foundation of life is the home, in which we should live. This means devoting the same care to one's body as to one's work, and providing adequate nourishment for both mind and spirit. The correct way to live is to arrange the twenty-four hours of the day harmoniously. This involves drawing up a definite time-table for our activities and, in order to give them full scope, they must have a suitable setting. It is only by entirely new architecture and town planning that we can hope to create such a setting.

Our day should not be divided simply between sleep and work. We must conquer the machine, subject it to our will, and make it work for us. We must limit our activities until we are creating that which is sufficient only for our immediate needs; working shorter hours, and manufacturing less. In this way we will create more leisure for ourselves. If we had any free time on our hands under present conditions, we should become malefactors, every one of us, for our towns are not planned for leisure, and obviously must be reorganized.

Both factory and office entail sedentary work, standardization, physical and nervous strain. This must be overcome by a daily period devoted to physical culture for the recuperation of both mind and body—not physical culture in playing fields on the outskirts of the town, but sports enjoyed on lawns surrounding the houses; that is to say, when we have provided space for our lawns.

I propose to consider the dwelling as the primary and fundamental element of the town, and build houses on only 12 per cent of the available land, reserving 88 per cent for parks and playing fields. This will be the green city, and in it the density of population would be 1,000 souls per hectare (a hectare is 2.47 acres). This new city will be the reverse of the garden city, fundamentally opposed to it in principle. Since the garden city is situated in the suburbs and so extends the area of the town, it creates a transport problem, but as the green city will reduce the town area this problem will be done away with entirely. The time spent in traveling from home to factory will be saved, and spent in the recuperation of physical and nervous energy.

The density of 1,000 people to the hectare is based on an allotment of 152.8 square feet of dwelling space per person. This is a generous allowance and will give wonderful scope alike to bachelors and large families. The many different kinds of dwellings needed in the heart of the town will be provided by allowing complete liberty in house planning, but always making full use of the progress in modern technique.

. . .

We must immediately discard the traditional type of house and allot to each inhabitant a soundproof living room, with plenty of light. For lighting, modern technique suggests that the entire façade of the building be made up of double sheets of glass, lightly held together by metal frames. This double wall forms the front of the building, which contains at least twelve undivided floors suitable for habitation. The walls are airtight and have no windows to open. Between these double walls circulates a continuous current of air, controlled both as to speed and temperature. This air-jacket neutralizes the effect of the outside temperature, which varies from −40 to +40 degrees Centigrade, according to the season, making these airtight apartments completely weatherproof.

Indoors we have what I shall call "exact respiration"; that is, air circulated by a central plant throughout all the blocks of flats in the town. This pure air, of a given temperature and humidity, would be supplied at the rate of 80 liters per minute per person (or about 5,000 cubic inches). Even when the sun blazes through the glass walls in Summer the air indoors remains as fresh as a sea breeze.

The "exact respiration", which could be applied equally well to blocks of flats in Moscow, Suez, Rio de Janiero, New York or Paris, is constant, day and night. Nor would it be unduly expensive; in fact, it would be no dearer in the end than our present methods of heating and ventilation. By this simple means we can solve the problem of bringing pure air of the right temperature into the heart of our cities. As we should sleep and work under ideal conditions, we should enjoy a maximum of energy.

Another important feature of the new town planning is the sound-proof character of the modern city. The types of noise recently introduced by wireless, phonographs and jazz, which have become a veritable nightmare, will be stopped and absorbed by the hermetically sealed double panes of glass.

Let us now consider our reforms from another angle. The era of horse traffic has been superseded by that of the motor, which has brought with it automobiles, trucks, street cars and underground railways. I contend that it is impossible to use the same roads for fast and slow moving traffic. As this problem has still to be solved, the twenty-horsepower vehicles are obliged to slow down to the speed of the slowest unit and run at only about ten miles an hour in the towns. Even at this pace the pedestrian is run over. While technology and industry are crowding the city with machines of marvelous speed, capable of sixty miles an hour, by an absurd paradox we are denying ourselves the full advantages of these wonderful acquisitions.

We are forced to classify our speeds, therefore, and make a definite distinction between the pedestrian and the vehicle, which should never be allowed to meet. The only solution is to restore to the pedestrian the surface of the city, all the surface, the earth. Put the pedestrian on the ground, giving him a network of avenues running in all directions in the midst

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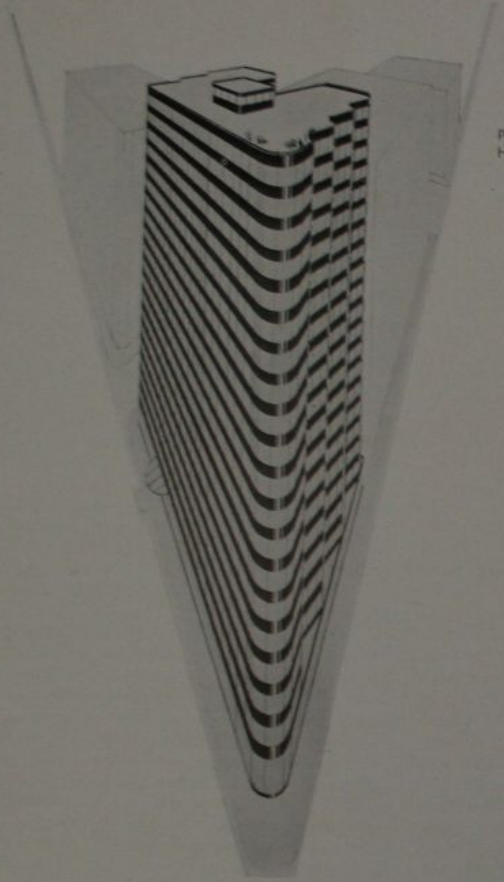
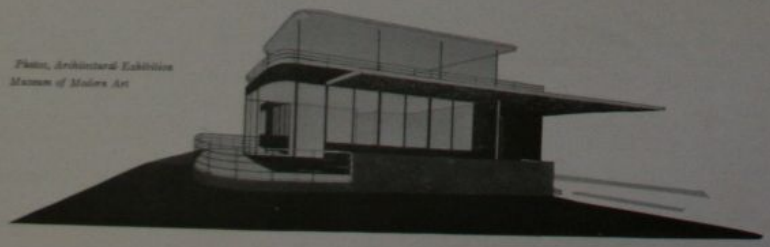


PROJECT FOR RUSH STREET APARTMENT HOUSE, CHICAGO—BOWMAN BROTHERS, ARCHITECTS

PROJECT FOR SMALL HOUSE—BOWMAN BROTHERS, ARCHITECTS



Photos, Architectural Exhibition Museum of Modern Art

THE MYTH OF BUILDING LAWS

IRVING H. BOWMAN

ONE of the chief reasons why buildings cost more today than they should is that most cities are emburdened with antiquated building laws. This is not the fault of the legislators, aldermen or building commissioners, they shouldn't be expected to be scientific; it is the fault of the architects who have been technically trained and who have or should have at their finger tips the latest fire and strength test data of the U. S. Bureau of Standards who have been doing such commendable work with new materials. These architects turn a deaf ear and a blind eye to the work of the technical research workers and accept their respective building codes without question just as they accepted the surname of their fathers.

This non-feasance of architects in such an important phase of their service results in a waste of two billion dollars per year in the United States (Bureau of Standard's estimate). This is inexcusable and concerted action by architects can remedy the unfortunate condition. We cannot understand why they refuse to take advantage of the veritable wealth of information which the U. S. Bureau of Standards has collected and placed at the disposal of any one who is interested.

The work of educating building departments in their respective communities and keeping their codes up to date might well be one of the most important functions of the various chapters of the American Institute of Architects.

The first glaring fault in the various building codes now existing is their work of uniformity of requirements. It is obvious that building codes cannot be exactly uniform in requirements throughout the U. S. because of varying local conditions, but they can be uniform in essentials. If a wall of a given material is safe in one city it certainly should be safe in another.

The next item that could be remedied easily is the lack of uniformity of arrangement. It is possible to make the arrangement identical in all codes. The resulting saving in time required to search for various provisions would be worth the trouble of re-writing the building codes of all cities. There are hundreds upon hundreds of architects and contractors who have contracts for work in other cities and this lack of uniformity in arrangement requires them to almost memorize the code in question in order to understand the requirements.

The purpose of building codes is often lost sight of by many architects and contractors in their daily race to finish "the job" on time. They should remember that "*building codes are remedial statutes under the police power, whose object is public safety.*" Their provisions should be broad enough to permit the use of materials or methods of construction not as yet known or in practice which would attain the purpose of the code. "It is not the province of building codes to specify best materials or methods of construction." This would not, as is commonly done, entail expenditures unnecessary to attain the purpose of the code.

Authors of building codes should remember that unless they allow the greatest possible freedom in design within the natural limits of safety, they will stand in the way of progress and hinder rather than help the hundreds of scientists working on building materials who are trying to increase building economies and reduce costs of maintenance and operation of buildings.

Above all building codes should prescribe the purposes to be attained in the various phases of construction rather than the specific methods of attaining them. They should not be specifications, for that is the work of the architects and not the work of legislators or police executives. The last but far from the least point to be kept in mind is that the administration of building codes should be entrusted *only* to technically qualified persons with years of experience and good judgment. They should be given complete authority and should be as disassociated from political machinery as possible. School teachers do not lose their jobs when a new administration comes into power and neither should executors and authors of building codes. By this suggestion we do not mean that a commissioner should stay in office until he dies because obviously every man has a peak of activity and interest in life usually reached before middle age has settled too far on his shoulders and then he begins to drop off, somewhat, taking a somewhat retrospective rather than progressive viewpoint.

Today, the progressive architect attempting to build with new materials or with old materials used in new ways, is confronted with a code which says that he shall present his case to a jury of city councilmen supposedly led by the commissioner of buildings. The jury of councilmen may be composed of lawyers, insurance brokers, stock brokers, lumber dealers, coal dealers, butchers or bakers, all interested in the welfare of their communities truly enough but not interested enough to realize that they should not judge that which they lack experience with which experience is necessary to qualify them as jurists. While it may have taken the progressive architect four years in research to develop the proposed construction the butchers, bakers, and candlestick makers, will not hesitate to qualify themselves as jurists and veto or

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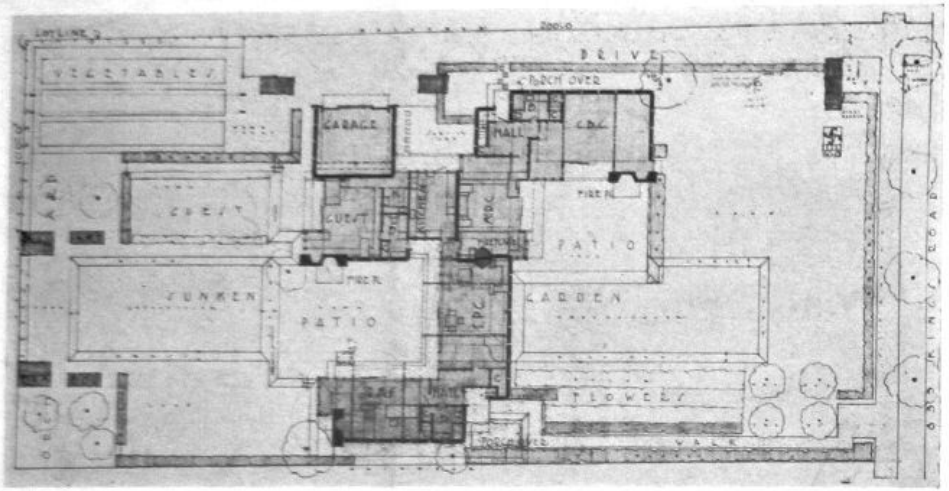


PLAN, COOPERATIVE DWELLING, RESIDENCE OF R. M. SCHINDLER, ARCHITECT

A COOPERATIVE DWELLING

R. M. SCHINDLER

PROGRAM: A cooperative dwelling for two young couples.

LOCATION: Lot facing east with slight slope towards the southwest, eight miles from the center of Los Angeles.

LAYOUT: The ordinary residential arrangement providing rooms for specialized purposes has been abandoned.

Instead each person receives a large private studio; each couple, a common entrance hall and bath. Open porches on the roof are used for sleeping. An enclosed patio for each couple, with an out-of-door fireplace, serves the purposes of an ordinary living room. The form of the house divides the garden into several such private rooms. A separate guest apartment, with its own garden, is also provided for. One kitchen is planned for both couples. The wives take alternate weekly responsibility for dinner menus, and so gain periods of respite from the incessant household rhythm.

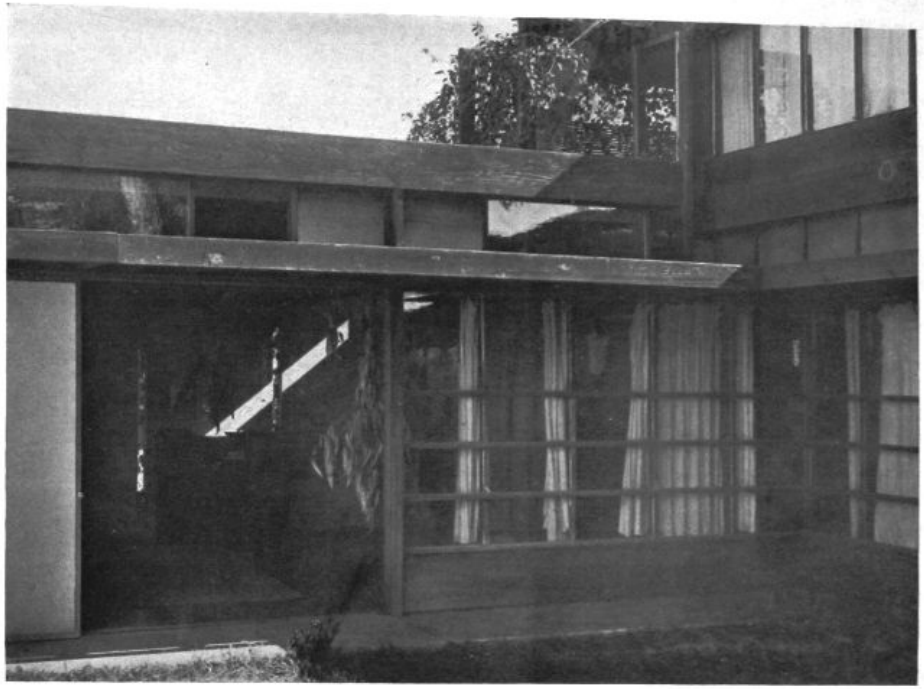
STRUCTURAL SCHEME: The house is constructed by the architect's "SLABTILT" system.

A reinforced concrete floor is placed on the ground. Low wooden frames and reinforcing rods are placed on it. The concrete wall units are poured between them in a horizontal position and finished on the top surface. After the concrete has set they are tilted up by means of a tripod with a block and tackle easily handled by two men. Adhesion between wall and floor is prevented by a coating of soft soap on the floor before pouring the wall slabs. The wall slabs are graduated in thickness toward the top in order to save material. The form work requires a three-inch space between the wall units. This is either filled up with concrete or left partly open for glazing. The system provides a reinforced concrete wall, finished on both sides with a minimum of form work. A layer of insulating material could easily be introduced for colder climates.

The resulting wall has all the repose of the old type masonry wall, without its heavy, confining qualities. It permits air and light to filter through the joints, wherever they are kept open.

In this particular instance the ceilings are all made of exposed redwood timbers and shiplap covered with composition roofing. They are supported on one side of each room by the concrete walls, and on the other side by two wooden posts. All partitions are non-supporting screens composed of a wooden skeleton filled in with glass or with removable "INSULITE" panels. Clerestory windows between the two ceiling levels maintained throughout the house provide a cooling air current right under the roof and permit the sunlight to enter from all sides. All doors are double-acting with pivots fastened to floor and lower ceiling.

ARCHITECTURAL SCHEME: Each room in the house represents a variation on one structural and architectural theme. This theme fulfils the basic requirements for a campers' shelter: a protected back, an open front, a fireplace and a roof.

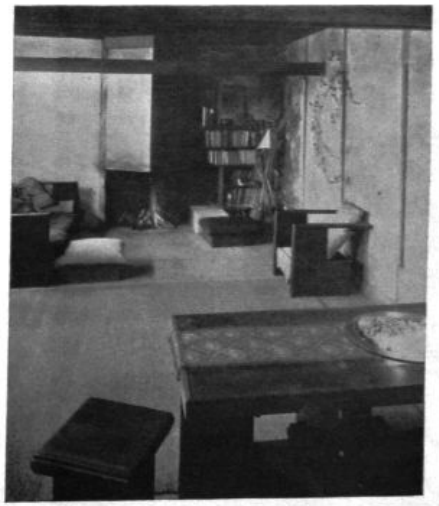


PATIO, COOPERATIVE DWELLING, RESIDENCE OF R. M. SCHINDLER, ARCHITECT

Each room has a concrete wall for back, and in front a large opening fitted with sliding doors. This opening is protected by an overhanging eave, carried by two cantilever beams crossing the rooms. These beams serve at the same time as supports for sliding light fixtures, and for movable partitions.

The shape of the rooms, their relation to the patios and the alternating roof levels, create an entirely new spatial interlock between the interior and the garden.

MATERIALS: The traditional building scheme, by which the structural members of the house are covered onion-like with layers of finishing materials,—lath, plaster, paint, paper, hangings, etc., is abandoned. The house is a simple weave of a few structural materials which retain their natural color and texture throughout. It is the beginning of a building system which a highly developed technical science will permit in the future. Each material will take its place openly in the structure fulfilling all architectural and structural requirements of its place in the organic fabric of the building.



INTERIOR, COOPERATIVE DWELLING, RESIDENCE OF R. M. SCHINDLER, ARCHITECT

UNIVERSAL ARCHITECTURE

BUCKMINSTER FULLER

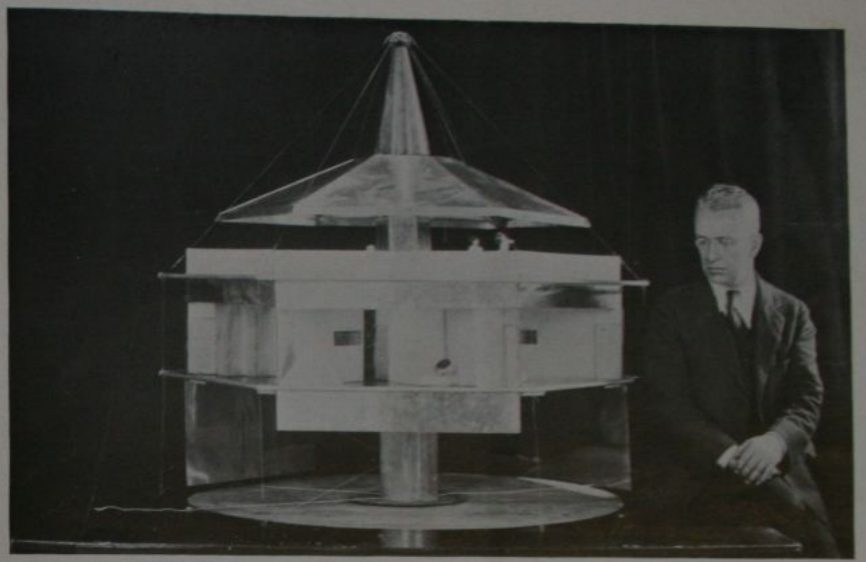
INTRODUCTION: Behind closed doors in all parts of the world,—but especially in U. S. A.'s industrial controlcenters, such as Chicago, Detroit, N. Y. C., Boston, Cleveland, etc.—clever and acquisitive "shelter minded" promoters foregather with capitalists, industrial leaders, and technologists. Each group jealously fosters its supposedly unique envisionment of the extraordinarily fruitful potentialities of the inevitable high-industrialism of shelter reproduction. Each group (of the rapidly increasing number of its kind) arbitrarily, carelessly, or ignorantly, regardless of the source of its dawn-like awareness of the coming sunburst of universal shelter industry—selfishly reenacts the would-be-usurpation tactics attendant upon, and syphilitic to, the birth of industry's first children—weaving, transportation, utilities—etc.;—and ever less imposing upon its latter children—radio, television, etc.; and, at last, impotent of lesion to the structure of its newborn, and greatest, child, life-enshrining UNIVERSAL ARCHITECTURE—the quackish practices of Dr. Business and his divided-fee-consultationalists, the corruptible "Experts," were adequately anticipated, as indicated in the following discourse—(thanks to the uncompromising progressiveness of the T-SQUARE Management,) of exquisite and encouraging import to the growing host of radiantly dominant, universally minded, pioneering designers.

There have been so many partial representations of the ideas involved in the following article by various scribes, as the many unit ideas contained therein have by editors been deemed progressively "timely", that when asked to provide an article for T-SQUARE (in my mind probably the most constructive potential on the currently-apparent architectural-publication-horizon) it seemed that it might be worth while to submit this essay, which most interestingly was first written five years ago. (the same year as Lindbergh's Paris Flight; long before earth was broken for such landmarks as the Chrysler Building, Empire State, Bank of Manhattan, Palmolive Building, [while in fact the Woolworth Building was still the largest in the world]; before the *Bremen*, *Europa*, took the seas; or the great stock market rise occurred, with its subsequent panic two years later; before Hoover had been elected President; and last, but not least, before the introduction of the model A Ford.) The article was added to in 1928, and has italicized clarifications recently appended, but, in the main, seems still quite adequate, and in no wise merits changes. Though its writer has subsequently been asked to deliver over 300 lectures on this subject at such universities as Yale, Harvard, Princeton, Dartmouth, Columbia, Carnegie Tech., etc., and before many art institutes, clubs, scientific bodies, etc., the subject matter having also been amplified by widespread and all manner of publications, (a partial anthological index of which may be obtained from T-SQUARE editor, being too voluminous to include in this article,) it is interesting that he could find no editor who was willing to recognize this article, when first written, or for two years subsequent to that time. The first article on the subject was published by Mr. C. J. Bulliet in the *Chicago Evening Post Art World*, November, 1928.

Following the essay are certain notations representing a partial list of what are termed "Universal Conditions" of the industrially reproducable architecture, as postulated by the writer from out his philosophy, and unanimously accepted by a volunteer designing association, approximately fifty in number, now active in New York City under the title of STRUCTURAL STUDY ASSOCIATES, within whose "universal conditions" all their group concern must center and whose every implication becomes a constant test of their development. Problems such as a five-year longevity shelter unit, suitable for immediate scientific industrial reproduction in Russia, in due consideration of their elemental and organization limits, for supplementation of their first five-year, heavy-industries, development plan are being worked by the STRUCTURAL STUDY ASSOCIATES with present indications of practical results, representing an extraordinary advancement of the ideas embodied herein. The essay of 1927 follows.

ARCHEOLOGY ABANDONED IN RECREATIVE ART OF HOUSING DESIGN

In 1929 there will be exhibited models and drawings by European and domestic architects of note, at Marshall Field's and Mandel's in Chicago in their respective Modern Decorative Arts Expositions then opening. [*This exhibition never matured, but was composed of the first models of Gropius, Corbusier, Behrens, Mies Van Der Rohe, Mendelsohn, etc., christened three years later (1931) as International School, an aesthetic mode developed by European designers in appreciation of American Industrial Building, through the advantage of a 4,000 mile perspective. This "Quasi Functional Style" has been codified in European Schools, such as the Bauhaus, and is reinfiltrating itself into this country, from which it sprung, as an aesthetic, static, dogma—of its original economic science. Instead of this exhibition, Marshall Field's, in spring of 1929, exhibited the first model of the writer's suggestion for a minimum house, for industrial reproduction—named by Marshall Field's advertising counsel the "DYMAXION HOUSE," as generic for new scientific architecture.*] These models will be indicative of local progressive trends of functional revelation of materials in this art, as developed, to date, in various



SCALE MODEL, DYMAXION HOUSE—BUCKMINSTER FULLER, DESIGNER

geographical centers. They seek only to reveal the materials in a more honest way than in the past. *As they represent surface simplification of established architectural, cubistic form (Euclid's fallacial cubistic geometry having been completely abandoned in contempo.-physics, for radionic spheroidal relative grouth concept, it is typically paradoxical of a feudal aping society, that man still evolves his dominant physical activity, "building", from ignorant tradition).* They do not invoke basic functional change consistent with the broadest and clearest concepts of structural and mechanical truth.

There will also be exhibited what might be termed a Universal Design as it bears no geographical material stamp. (Referring to the Dymaxion Model.) This is the premier exposition of the newly evolved philosophy of "Externalization", in recreative art, applied for the first time to industrially to be fashioned housing. Its plan is developed progressively, from the inside out, as opposed to the destructive and limited present-day methods of designing from the outside inwards. It is a synthesis, in appearance, of the American skyscraper, the oriental hexagonal pagoda, with the structural strength of a superdreadnought, and the lightness and delicacy of the finest of the oriental domestic design. Its doctrinal tenets follow herewith:

Music, literature, drama, and the graphic arts are now created on a reproducable basis of a vast and invisible scale, world encompassing, for the great new patron of the arts, the public, the human family of individuals, as opposed to the singly produced selfish works of art for the precious and vain self-aggrandizement of the feudal baron, or his modern counterpart of political, business, or gang demigog, grabbing, hording, or exploiting properties of the commonwealth.

Architecture, because so large a problem, devolving about the spending of vast amounts of money, with all the jealousies and suspicions thereto attendant, and because the hotbed of revelation of unreasoned habit, subject to a thousand tailors' compromises, is the sole surviving slavy of the historic tyrants' boastful baubleism.

The industrial, quantity reproduction, principle is indeed the simplest exposition of the real meaning of the Christian era of human progress; unselfish creations as opposed to selfish, with the original of the first named unconfined in its satisfaction of the needs and desires of humanity by the eccentric infinite picayunity of any one crass vanity. The art of human housing design is at last to be freed of the tailoring stigma by a reproducable design.

That the entirely new start involves discard of practically all the old materials used in archaic housing (not mechanical accessories) was inevitable. The very efforts of the old, material and property, owners to impose the all brick, all wood, or all concrete house represent an influence which has greatly retarded progress in housing, as would be attempts to make all

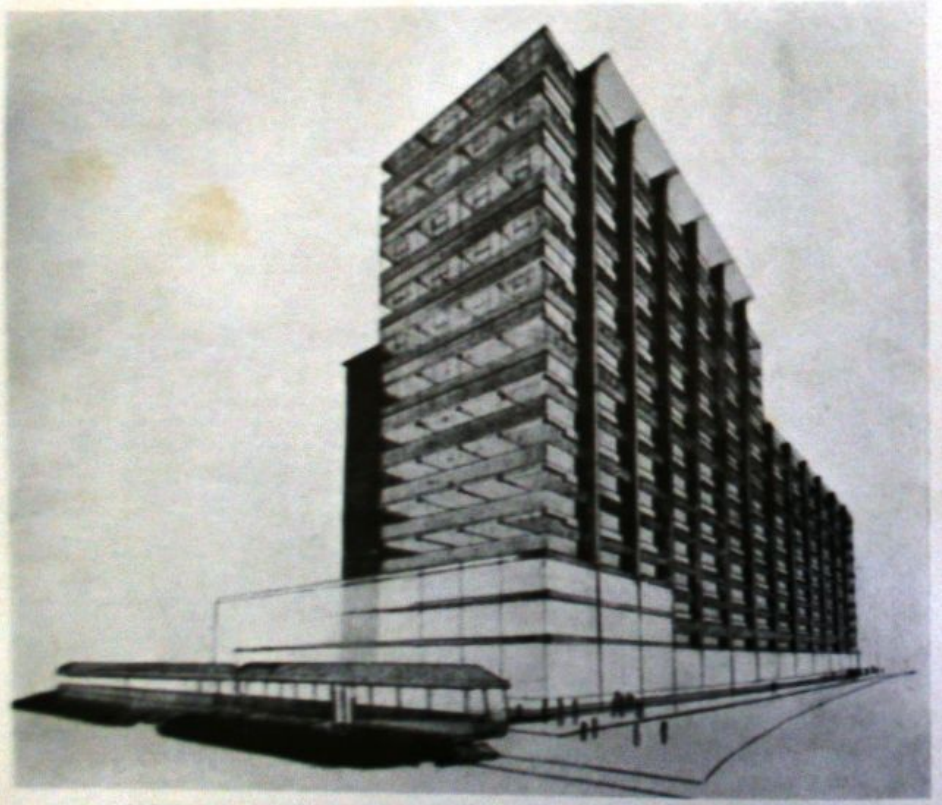
BIOGRAPHICAL SKETCH: RICHARD J. NEUTRA

B. E. McLONEY

RICHARD J. NEUTRA was born in Vienna in 1892, a year or so before the first great manifestations of a dawning new architecture—the Columbian exposition of Chicago, with Louis H. Sullivan's experimental Transportation building, and the manifesto of modern architecture which Otto Wagner publicly announced in Vienna. His father had spent his life casting and turning machinery parts; his older brother was studying to become a mechanical engineer; so that at the age of five the small Neutra had decided likewise to become an engineer, and was drawing books full of graphically proposed schemes for perpetual motion, or correct longitudinal and transverse sections of steam-engines. He had even conceived, in considerable detail, the idea of a flying-machine, not an aeroplane, which should traverse the ether between earth and moon, and his engineer brother enjoyed exhibiting him to friends from the Polytechnic College of Vienna.

When he learned to read he slid with Jules Verne through the sea in a submarine, or penetrated to the center of the earth, or traveled upward among the stars; and when the book was laid aside and his feet discovered themselves back on Vienna soil, he would try to improve the design of bicycles. Every thought he freely expressed in drawing, rather than in writing.

In due time he graduated with distinction from high school, as later from the Polytechnic College. The thorough Austrian training of a "humanistic" high school enables him still to read a Latin author, and occasionally to enjoy a piece of Greek prose. Otherwise, he was interested in physiology, in physics, and in mathematical chemistry.



PROJECT, STORE AND LOFT BUILDING—RICHARD J. NEUTRA, ARCHITECT

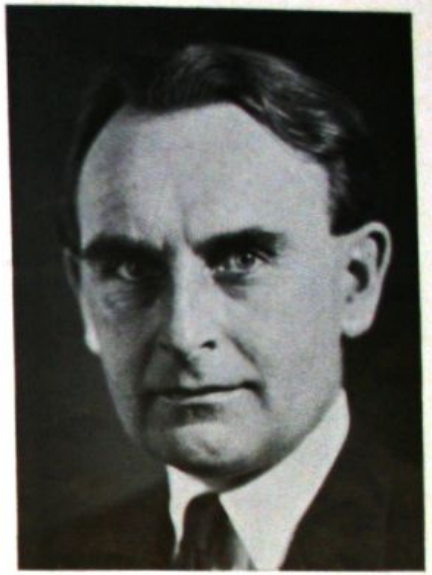
Having now laid aside the problem of flying to the moon, he turned in the Polytechnic College to civil engineering and architecture, in which the curriculum was completely classical, and to philosophy in a seminar of the University of Vienna. He made several journeys to Italy and Dalmatia, coming back north always laden with ideas about open-air architecture, and measured drawings of such layouts. He still esteems the achievements of the hellenistic and the Constantinian periods, since these embody a world outlook not entirely foreign to the modern.

But in architecture his ideal had come to be Otto Wagner, who pierced the spirit of l'art nouveau, found the way to clear-cut design, and spent his life fighting reaction and conventional eclecticism. At that time he designed a steel-frame house, an assembling job of the new sort. He had small belief in ornamentation. He was happy to meet Adolph Loos, and became his friend and first student.

Then war intervened. As an officer of field artillery Neutra was manoeuvering guns on the battlefields of Montenegro and Albania. Through more than two years of this his contempt for the unreason of warlike measures grew. At last he fell ill of tropical malaria, and for eighteen months was handed from hospital to hospital at the front and in the hinterland. Nevertheless he found time and energy to design buildings for a steam laundry of the fortress Trebinje, for a soldiers' recreational center, and for the naval administration of the Albanian seaport Shingjin.

The breakdown of the Empire caught him in a Slovakian hospital, now fought for by Hungarians and Czechs. Hindered and tormented by both armies he escaped to Switzerland, where the Austrian officer and architect became an odd-job boy in a great Zurich nursery garden. But here were plants, trees, landscaping, to arouse his deep interest, and after nine months of work with these he had developed into an able landscape gardener and a friend of Gustav Ammann, gifted landscape director for the firm. Then followed graduate study with Professor Karl Moser at the Zurich Polytechnical Institute, and a trip with Moser into French Switzerland. Meanwhile he had found work with a firm of architects, and designed a colony of workers' dwellings which won a competitive prize.

He returned to ruined Vienna, where there was no building, where life was largely an effort to keep from starving, and here with the Quaker mission he helped distribute food and clothing. A telegram from Berlin stopped this interlude; he went there for work with different architects, and then was summoned to the old industrial city of Luckenwalde to design a municipal forest-cemetery—a considerable project involving manipulation of the forest-clearing, harmonious replanting and the construction of a crematory, attendants' dwellings, etc. In Lukenwalde he attended



also to the execution of small dwelling colonies, served as municipal officer for architectural control of private building, and was then invited by Eric Mendelsohn to join him and R. P. Henning in the planning and construction of the Berliner Tageblatt building, which houses the largest continental newspaper. This was an important addition to a huge edifice, covering a city block; though only ten stories high, at the time of its completion in 1921 it was the tallest structure in the German capital, and the first steel construction of its kind.

Certain Levantine bankers desired a proper business center for the Mediterranean port of Haifa, and announced an international competition for its design. To Mendelsohn and Neutra, although their general ideas frequently diverged, went the first award (1922). For ten years Neutra had wished to study building in that most completely industrialized country, the United States, and this he was now able to do. Working efficiently and systematically in offices small and large for four years, he studied at the same time their organization and methods, and then set down what he had learned in "How America Builds" (1926). This book, expounding the resources and the needs of an industrial order which by necessity lead to a new international architecture, became something like a textbook in its field. It was not an artist's manifesto, but a moral evaluation of this new way of building, which the author believed predestined to the height of achievement in America.

A second volume (1929) on American Architecture,

ASTROPHYSICAL MUSEUM AND PLANETARIUM FOR GRIFFITH PARK, LOS ANGELES—RICHARD J. NEUTRA, ARCHITECT, HARWELL H. HARRISS, ADDISON HEHR, COLLABORATING

its background, resources and future, includes an appreciation of such men as John Root, Louis Sullivan and Frank Lloyd Wright, with the last two of whom Neutra had the privilege of personal contact. Interwoven with his developmental survey went a psychological as well as a technical discussion of new materials and applications in building work.

Contributions of Neutra appear in a symposium, "Problems of Building" (1928) and in "Rational Subdivisions", which also contains reports by Le Corbusier, Kaufmann-Boehm and Gropius, recently brought out by Les Congres Internationaux d'Architecture Moderne.

In 1926 he had come to Los Angeles, and with R. M. Schindler had submitted in the international competition for the League of Nations palace in Geneva an entry especially noteworthy for its progressive solution of the problem of exterior and interior traffic handling, and of acoustics in the gigantic auditorium. This and two others (Le Corbusier-Jeanneret and Meyer Witwer) were selected from 470 designs to be shown in a traveling exhibit of the German Werkbund. (The Werkbund is an association of industrialists, architects, economists, financiers, formed to promote an interest in the quality of all industrial products, whether tableware, furniture for the small house, or a shell in which a League of Nations could function.)

Neutra has remained a notable figure as a creative worker in the new architecture, through such achievements as his garden apartments, a physical culture center, or the much-discussed "health house" built in various periods from 1927 to 1929, for Dr. P. M. Lovell. This dwelling, designed for a good deal of out-of-door living, with specialized sanitary treatment of interior equipment and surface materials, and combining only steel, plate-glass and shot-concrete in its construction, became the first domestic structure of its kind to demonstrate the rational assembling of typical American building elements—and the economy of such a procedure. An exact replica of this structure was ordered and is being exhibited by the Museum of Art and Industry in New York.

Of his numerous projects "Rush City Reformed," studied over a period of a decade, is perhaps the most comprehensive. It concerns the practical logic of an entire city's construction, with domestic, commercial and recreational sections, and with airports, railroad terminals, reformatories, multi-story garages, hospitals and industrially-produced schools. Various phases of this plan have frequently appeared in European publications.

(Continued on page 34)

LET US KNOW WHAT IS BEING DONE

ELY JACQUES KAHN

IT HAS been particularly entertaining to read, during the last year or so, the analyses of the so-called modern style and to find repeated time and again the theory that functionalism is the alpha and omega—the purpose and climax—of effort. One amusing story was told a few days ago, in which Ray Hood was the hero. It appeared that in the coming exhibition of modern architecture to be presented in the Modern Galleries in New York, Hood had been particularly honored by an invitation. One of the gentlemen in charge protested at a model which had been prepared and suggested that, horror of horrors, it indicated decoration. He proposed politely that before it was too late Mr. Hood might eliminate the absurdity. The distinguished confreres from Europe showed no ornament, of course, and Hood, it is said, indicated his feeling that possibly if he had a little more time at his disposal he might add some more.

Just why Hood should be dictated to by reason of a theoretical study of someone in Europe leaves one gasping. Fundamentally, Hood's final result will be of exactly that value that his intelligence, ingenuity and artistic skill will make possible. He is an American, lives in New York and is doing important work here, and the result will be valuable in direct proportion to his abilities. The fact that he is sympathetic with contemporary work of other men, be it European or American, is merely part of his mental equipment.

What develops in these countless discussions, diatribes, learned articles, is that the so-called functional elements—cantilever slabs, lines of windows, bare walls, are merely more rigid conventions. So often, one discovers in careful study of the new designs that, apart from a few thoroughly clear solutions, many of the men who have scrambled onto the latest band wagon are merely thumbing their noses at the men working along the road and are repeating words and more words that are more insulting than illuminating.

There is surely one basis on which men of reasonable intelligence may meet and that is, honesty. There is no question but that the light of discussion has made the stodgy work of a generation before more difficult to repeat. There is ample opportunity to attack the present status of domestic architecture, the insistence on precedent, the false glories of fake antiques, the whole claptrap of surface architecture. The purists who assail those men who do not subscribe to a complete acceptance of the so-called international style ignore the fact that a pitifully small fraction of the country has even heard of them, and a still smaller group is inclined to be patient with their pretentions.

There are two possibilities of the approach to a new consideration of architecture. One is by provocation. The radicals assume that by being voluble they will be influential and, in direct proportion to the extent they irritate people, they will drive them to fine solutions, noble buildings, in the new manner. The second is a clear exposition of the basic principles of design. Too many of us are accustomed to work in the manner that our training and experiences make agreeable. When we see fine examples of recent work, in which someone has done the job which we are trying to do better than we can do it, we are impressed and stimulated. The photographs of the Berlin Exposition of 1931, in this very magazine, are fascinating: one looks ahead to Chicago in 1933, hoping and praying that someone will profit by the example. It is equally true that we are not sympathetic to the thought that Chicago should or could follow in full measure, these principles. In the first instance, our designers are not trained to think as abstractly as some of our gifted confreres abroad. The public is not ripe, either, though to be sure a really fine piece of work needs little background to insure its intelligent consideration.

One comes to hope that instead of bickering over the fine distinctions between various groups those men who are earnest in the development of the arts will try to be more modest in their conception of their particular interests. There is too much talk of the peculiarities of this or that man—too much loose talk as to how certain work is done. I am thinking of one statement in a recent number of this same journal in which the remark is calmly projected that today the man designing commercial buildings is a couturier, decorating the shell of a structure determined by the builder. Any accurate knowledge of the facts would quickly prove the fallacy of such an assertion. Anyone who has followed the planning of the Radio City, as one outstanding example, would realize the most keen consideration of the practical factors which will make these buildings a success, purely as functioning buildings; the spacing of the steel, arrangement of the windows, the placing of the elevators, the handling of infinite matters of detail, have been worked so thoroughly by the architects in charge that the assumption that they are being told what to do is completely at variance with the truth. This is merely one case, and many more might be cited.

Buildings designed by the maligned commercial architects may, or may not, be worthy, architecturally, but to be glib in assuming that all architects are merely hired decorators is nonsense.

One danger is the fixation of the idea that the forms characteristic of so-called modern work are in themselves purely decorative. One begins to recognize such

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EXHIBITION OF MODERN ARCHITECTURE

THE Museum of Modern Art announces an Exhibition of Modern Architecture which will open on February 10, 1932. The Exhibition will continue at the Museum's galleries, 730 Fifth Avenue, through March 23rd.

The Exhibition will show by means of American and European models and by enlarged photographs of executed works, which have been prepared specially for the Exhibition, the latest world developments in modern architecture.

The following architects will represent America: Raymond Hood, New York, Suburban Skyscraper Apartment House; Howe & Lescaze, New York, Urban Multiple Dwelling for Chrystie-Forsyth property; Frank Lloyd Wright, Spring Green, Wis., Private House; Bowman Brothers, Chicago, Apartment House; Richard Neutra, Los Angeles, School.

European architects represented include: Le Corbusier, Paris, Private House; J. J. P. Oud, Rotterdam, Private House; Otto Haesler, Cassel, Germany, Housing Development for Minimum Wage Earners at Cassel; Walter Gropius, Berlin, "Bauhaus" School at Dessau; Mies van der Rohe, Dessau, Germany, Private House at Brünn, Czechoslovakia.

The Exhibition, which is under the direction of Philip Johnson of Cleveland, has been in preparation since December, 1930. After its closing in New York the Exhibition will make a three years' tour of the United States. Included at present in the definite itinerary are the following cities: Philadelphia (Pennsylvania Museum of Art, March 30 to April 22, 1932), Hartford, Los Angeles, Buffalo, Cleveland, Milwaukee, Cincinnati, Toledo, Rochester, Worcester, and Cambridge.

BIOGRAPHY: RICHARD J. NEUTRA

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In 1930, following the Brussels assembly of Les Congres Internationaux d'Architecture Moderne, to which he was American delegate, Neutra was interested to accept invitations to lecture in Tokio and other Japanese cities, and made a housing research journey through parts of China, southern Asia and northern Africa. Returning again through Latin, Nordic and Slavic Europe he spoke to audiences of leaders in the new architectural activity in the principal cities. Back in the United States he lectured in the New School for Social Research at the time of the opening of its new building, and addressed diverse metropolitan and university audiences.

For a number of years it has been Neutra's happiness to arouse and interest promising ones of the new generation. During his last period in Europe he was summoned by Mies Van der Rohe to the Bauhaus in Dessau, there to exert for a short term his kind of American influence. To the young men of that school he was a helpful and stimulating teacher, as he is in Los Angeles to the group which has gravitated to him. These are serious students whose hearts, like his, are set less upon their personal careers than upon the co-operative creation of an architecture which shall function honestly and accurately in its socio-economic frame.

UNIVERSAL ARCHITECTURE

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(This indicates housing production requirement of approximately 20 billion shelters by two thousand A.D., approximately 280 million per year, which is 140 times Ford's auto production, who says we are over-produced? Our dilemma, if there is any, is not one of a static generality of over-production, but of selfish over-imposition of specifically inadequate, below standard, or obsolete forms and organizations. Patent monopolies having selfishly diverted progressive force for sake of static harvest. Paternalism, or political overemphasis, having come its inevitable cropper. Nothing is more important than another, but nothing is comparable to thought, which envisions, composes, and articulates all apparent, relative-longevity, "things" or "thinkings". Patent law, a political gesture of the landowner controlled legislature, though designed to give temporary advantage and encouragement to inventive and scientific beings, has paradoxically developed Gargantuan, patent interalignment, monopoly, and legal evasion, of the "Bully" type, annihilative of pioneering initiative, and clumsily and preciously operative, only in professional manner, within paternal limits of "Big Business.")

The whole picture is so large that none need be jealous of their present business or properties. There is room to spare for all hands in this last but most important to be considered of reproductive arts. It has promise not only of housing but of providing the dividend competence of all humanity, when business in general realizes that its greatest stock in trade is its tactical serviceability, and not a material inventory.

At the high points of each era of the great progression, has it been realized that materials in themselves signify nothing and can be nothing without the will and the creative urge, and that character, happiness, love, harmony, and all the eternal qualities of truth are abstract and of the soul, and have but the freer play for the lack of any material impediment. This is the great overlying principle of the age of industrial subjugation of materialism to the eventual complete emancipation of humanity, to the universe of free individualism of the intellect or soul. Is not the public intuitively aware (not by education or by conscious admission, but nevertheless aware in searching analysis) that the very beauty of a child lies in the clearly revealed, harmonious loveliness of the spirit shining through the most regular of material features, unharassed into unbecoming self-consciousness by the least unstandard deformity? Has humanity a general affection for dead bodies, bereft of the life force, or will it honestly admit that its essential interest is "life", not its material vehicle? Is it not the truth of standardization that ever pours more individual freedom and happiness into life? Is it not the very secret of nature that it must be recreative after its own image in direct proportion to its adequacy and satisfaction of the universal ideal?

Provided the functional truths are clearly revealed, and executed in evidently correct materials, will such housing become very beautiful to the eye, when the eye has become adjusted to it. Every new shape of sea sled or new model of mechanical unit is shocking to, and resented by, the sensibilities when they replace an old friend of habit, until reason has weighed its functional perfection, when the newer and more able mechanical servant attains far greater beauty in our sensibilities. (*For this reason the International Mode must perish, being eclectic rather than scientific, science being the life blood of function.*)

No rehashing of heavy stone archaic styles or their concrete substitutes which is the limit of the purely aesthetic side of architecture in the time-worn "art for art's sake" formula, injecting steel frame into the flesh of overgrown gothic or classic mausoleum-like bodies would ever have been accepted by the public as a standard for industrially produced housing. "Standard" infers truth, and the measure of truth is tested by humanity through its appeal to the intellect on the basis of the best use of tools, materials and circumstance, before the public will concede the character stamp of "standard" upon it.

No possible omelete of the antiquities of archaeology could stand such test. The cold storage eggs have all gone bad. Humanity is progressive, not reactionary. Archi-tecture by virtue of its "art for art's sake" tradition is confined to the monumental order of job, fabricated upon its ultimate site of land, to which it is firmly rooted by weight of stylism and reality, as well as intellectually unchallenged habit; as opposed to the art of design of the industrial, centrally produced, Mobile Tower housing which must embody the highest perfection of synthetic materials, automatically superfluous-weight eliminating, and as light as the function will allow.

No architect, except by virtue of experience quite foreign to the academy and dogma of his profession, is equipped to design the 20th century, industrially to be produced housing, any more than the 19th century harness maker or tailor is equipped to organize for the design fabrication and distribution of the new Ford, whose author, on the basis of art being the recreative value of unselfish exposition of the soul, will historically, with his disdain of the Philistine, and his untiring love of creation, be considered one of humanity's greatest artists, having conceived and executed the largest "canvas" ever painted, world-wide in actual size, and involving a constantly mobile inventory worth 800,000,000, synchronized with life activities of ten million people and 2 billions' worth of mechanical tools, heedless of nationalistic boundaries and bankers' gold. The harness maker would undoubtedly be fascinated by and favor the Ford, but he would have to stand aside and leave its evolution to those whose minds had been developed in the environment of suitable experience. So do our present architects react to this new industrial housing (technically known as fourth dimentional housing design, for reasons too long for elucidation in this article, other than to say that the method compasses the time dimension 4D). They stand impotent while enthusiastically conceding its truth. The senior architect of today thinks only in the terms of materials which may be wrought on the job after the arts and crafts fashion, with hammer, saw, trowel and other hand tools, not in the terms of the "million dollar" tools employable only on the "best for all basis", the giant presses, forges, dies, blast furnaces, chemical laboratories, hydraulics, mile-square plants, and above all Transportation, Distribution and Service.

Such a product is the eleven-deck house, one of a multi-divergence of models, (the "Dymaxion House," a minimum rural dwelling, being later chosen for exhibition purposes) even as in the variety of yacht design to be seen at a Harvard-Yale boat race. No limit to the cost of the original, as a single unit of fabrication, need be considered. Though it cost 100 million dollars if but one unit were to be constructed, the machinery, thereto attendant, having been set up and its distribution ordered, replicas may be had for close to the material cost. Just as the new Ford cost 43 million for its first single unit, its reproductions cost but five hundred dollars, or approximately 22 cents per pound for completely harnessed, synthetic, and mechanically compassed materialism. In this way is ocean shipping thought of; so much per ton. So is machinery sold, by weight. Price varying with the size, homes will cost approximately five hundred dollars per ton delivered, there being no unsegregated materials therein. What price stylistic archaic glory in material pandering to selfishness in tailor-made housing, for which marble is transported from India or Italy to America to make ridiculous the formula-engulfed tailoring designs of building? Ask any architect what any building weighs. He doesn't know. Ask him the weight of the *Leviathan;* "54 thousand tons," he replies with facility. Yet, we pretentiously speak of having reached a "scientific age".

These new houses are structured after the natural system of humans and trees, with a central stem or backbone, from which are depended all pumping, supply, filtering units, arterial systems, nerves or reception units, with appropriate covering for temperature retention. This results in a construction similar to an airplane, light, taut and profoundly strong. The central tower is composed of high pressure inflated duralumin tubes in flexible-jointed triangulation with piano steel guys, similar, except in its superior weight

FORMERLY T-SQUARE

The following peregraphs indicate the evolution of SHELTER from "T-Square Club Journal" to "T-Square" to present.

In view of the rapid development of the "T-Square Club Journal" into "T-Square", a review whose contributors were writing from every part of the United States, and from Europe, the Executive Committee of the T-Square Club felt that the Club should no longer claim the publication as its own. In January of this year a resolution was passed by the committee, placing the seal of official approval on the seperation of the Journal from its parent body.

Conditions which would undoubtedly have militated against the success of a purely commercial publication contributed to the growth of "T Square". There has never been a time when necessity has not stimulated interest in the formulation of architectural ideas. Architecture no longer gilds only the tips of a prosperity but touches the depths of our social and economic existence. An examination of its place and meaning in life is inevitable. "T-Square" had only followed its destiny in extending its original local purpose of free architectural discussion to the national and international fields.

Following the publication of the January and February, 1932, issues of "T-Square", it was discovered that there was previous ownership of the title "T-Square" and our use of the name was prohibited. This condition led to the omission of a March issue and the appearance of the April issue (publication date April 11th) under the new name of SHELTER.

The articles and contents of SHELTER are written largely by architects and for architects, but are of such a general nature that they cannot fail to interest the public at large.

MONEY - SAVING SUBSCRIPTION OFFER ON BACK PAGE

SHELTER

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