

THE CHANGING CONCEPT OF ARCHITECTURE

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## THE CHANGING CONCEPT OF ARCHITECTURE

### THE PREMISE

The premise of this thesis is that man is the great variable and that nature is an ever evolving and slowly changing constant. Man is more likely to change his opinion of nature and any interpretation he may present concerning nature, than is nature likely to change its basic and fundamental laws.

In the light of this established fact the changing concept of Architecture pertains to what man has thought and is thinking about Architecture. This then, is an observation of such thinking and the author's attempt at evaluation of his observations in the hope of further clarification of the real mission Architecture may perform toward mankind.

## WHAT IS ARCHITECTURE?

Architecture is first of all a state of mind. It is first spirit and then flesh. It is thought, imagination, a dream, and then an act. The first act of architecture is not brick and mortar or bolts and rivets. It is a quality of character and personality, that we feel unconsciously. Consider its freedom of residence. Do we find it penned within the rigid walls of a museum? No, it stands in an open street. The sky is its roof, the pavement of the street its floor. It charges no admission to be seen and has few guides to describe it. It is there for all to see, to admire, to despise, or ignore. It is a page from an open book standing wide for all to see. This museum has no doors. Those who thief it in the night, do most of it in the day time and leave the structure as a mute witness of its being stolen or plagiarized. Then again it cannot be taken and sometimes this too great permanence is unfortunate.



Architecture is a vital art and not a luxury. It is a luxury in the same sense that life itself is a luxury, in the same sense that a street is a luxury. It is a structural art and, because we cannot dispense with it, an important one. The others but adorn or describe it. It is a bold and dangerous art. Doctors bury their mistakes but architects build theirs to mock them. It is an experimental one. The actual structure is now built but once although done a thousand times on paper and with model. There is no eraser large enough to rub out the finished structure, except time or expediency.

Architecture then is not simply an interesting diversion. It is not a side line. It is the result of man's vanity -- his desire to tell a story of what he has done, and the necessity to shelter his own. It is a record of the pathways of civilization, faint here and firm there, but fairly traceable through the centuries. It is told us that no great movement of mankind has ever been performed but that it has been set to music or stone. Architecture is a fundamental as is language. It is first of all imagination, then drawing, then construction; and we are not sure that man first drew that he might make himself

understood. Possibly he drew the likeness of the bird or animal he wished to describe and from the drawing came the word we use today, modified as it has been through the ages of use and abuse. Unless we see architecture in this large sense we are not architects.

What is the object of any great competition? Is it to find a new material or a better way of shingling or a more permanent down-spout? Rarely, if ever. The committee of which the world is acting chairman desires a great conception, a fitting exemplification, a truly splendid thing.

Then does this not put the emphasis of architecture in a slightly different place? For those who study it, we offer this finer conception, this more enobled interpretation. Better by far to begin architecture in the light of the greater view than to study it merely to be close, too close, to a friend for four years or seven.

It is refreshing to see an appreciation for all the contributions of architecture, rather than for the classic few. In the past the student could not quite see why, perhaps, the Cambodian, the Moorish, or the Chinese did not have something of value to offer to architectural progress. This fairer and broader point of view is a definite part

of our changing concept.

In fact, the so-called International Style is not a matter of a few forms that have been developed from the spirit of Frank Lloyd Wright and others, but it is a rationalism of intelligence of construction and design, of serviceability, of aesthetics, workability of scheme, practicability of function and internationality of appreciation.

The danger lies in the possibility that those who have caused its existence may tend toward a too regimented style. A part of the new concept should certainly be an approach that is free from bias, one that is natural, logical and fresh.

In the training of the student, therefore, it seems imperative that regimentation ought not be stressed, but rather the constructively creative. The emphasis ought to be put on what is good with a minor on what is bad, rather than the reverse. The student will take encouragement from this point of view and will strive toward a natural temperament that is not based upon ritual, but upon clear thinking and logic. The student will think that it is fun, because it gives him courage to believe he is growing and improving. If he has an idealism it will stimulate and help, and if he has not, perhaps he may be lead to discover

this strange thing that he has needed. Certainly it seems a more healthy approach.

The development of intellect springs from definite education. To tell what to do is not enough therefore: it is necessary to show why. Education is a development of the natural processes. The finished drawing means little if it does not represent an improved mind on its account. Many believe that architectural design cannot be taught. By this nice point, doubtlessly, is intended the "telling what" end of the equation. To "show why" surely expands the imagination and stimulates it to further use. The imagination is largely the creative faculty; it cannot be neglected intelligently. The use of any instrument of mentality develops it. It must be disappointing to intellect to find its efforts unrewarded frequently by its owner. Is it too much to expect that a heartening word now and then would stimulate it to further research? Possibly we should encourage our "thinker" and by example induce others to the practice.

The young, beginning architect must become accustomed to the plan of thinking when alone. From this position of thinking comes at first vague opinion - then opinion - then judgment. Imagination and judgment should be the

property and asset of the young and the old. It is not too much to expect them in one person. However, the artist or architect of the past was rarely, if ever, given credit for having both. It is difficult to say if they are present in the beginner. He may think so only to discover somewhat later, his error. This error well illustrates the danger of sometimes faulty knowledge, that is called opinion. True judgment rarely needs revision except for the additions of research. These additions, the intelligent absorbs freely and naturally.

Everything is not revealed at first. It comes slowly through exploration, adventure and discovery. This makes the world much more interesting than is first believed. A new idea is generally opposed upon first introduction. Later the new heresy becomes too orthodox. A fair mind is essential to the architect. Ethics, so necessary to his profession, require judgment, fairness, and the open mind.

There is some teaching and much learning to the end of the development of the architect and not a system of pedagogy. It then seems more important to know what caused the systems of architecture and what is important in them, rather than to memorize all of them.

A person of creative ability takes pride in the fact that he has no plagiaristic tendencies. It seems logical, therefore, that aesthetics and ethics come together at this point and in the hope for the more ethical profession we must create a more esthetic one.

Our profession needs a good substitute for drawing. Perhaps that is impossible, but some definite part of the changing concept is that architecture must be studied much more in the solid. Some schools of architecture have very much encouraged this practice in the form of sketch models. Of course the idea is not new. The architecture of the past was constructed in this manner.

In fact, many times we find that the many ideas of today arise from the simple successes of the past. Our present knowledge has been carved through centuries of trials and errors and because of our general mental attitude, it is sometimes difficult to know when we are succeeding or failing. We like to think that we are original and what we are creating is entirely new. But in most cases it is merely the putting together of lines and curves in a new relationship. It is composing notes of music into new motifs and creations. Perhaps we do not need new lines or new notes, but rather a genius at composition who will



continue to use existing standard motives. This applies to construction as well as aesthetics.

The education of the architect is not simple and certainly is not static. After all, he is supposedly trained to go into the office, to do allied work, or to teach. All these and others have very definite technicalities and it seems there are two approaches; perhaps more. One is to approach architecture as an art where the principal function is to develop the feel for aesthetics in design, pattern, color, and their relationships. The other is the relationship of all these elements into the composed whole where not only aesthetics are important, but also its proper integration with the fundamentals of everyday living. Time will help us judge if there are others but the latter at present seems the most desirable.

Finally, and in a few words, architecture contributes much to man, but man first must contribute to it. It reflects his efforts to do something and his sincere desire to tell of his efforts. Architecture demands a man big enough to analyze these reactions, trials and experiences. It appeals to the ideal in him. It stimulates the knowledge of worth of character. It is bold, daring, and

dangerous. It is to mankind what the symphony is to few; elusive, intriguing, fascinating. The layman is entranced at its prospect; the architect by its deep significance.



## THE DEVELOPMENT OF THE SYSTEMS OF ARCHITECTURE

Architecture reduced to systems is very simple. A child, given a set of different shaped blocks, will find and construct these systems in a very short time. Perhaps this is how mankind discovered these two fundamental methods of construction, arcuated and trabeated, and gradually put them to his use for the purposes of shelter and the reduction of his experiences to memory.

These two systems are determined largely by two methods of basic construction. In the post and lintel or trabeated system, the geometry of thrusts is rectilinear and in the arcuated system they are as indicated by the name. A child will not understand this because his interest does not go this far. Mankind also has been a bit slow in comprehending this structural development. The trial and error method was used for centuries for want of a better or more scientific one. Our constructors

today have saved many a well-meaning architect from his own doom because of the common sense derived from such trials and errors.....and successes.

Of course the simple system came first. Just as the child will build horizontally and vertically first, so man developed this angular system. His materials and fundamental construction determined it for him. His need for aesthetically curved basic structural forms had not yet arrived, nor was it to arrive for centuries from his primitive beginnings except in naturalistic ornament. Necessity prompted him first; beauty later. His vanity or his desire to convey his experiences to others strongly influenced him to modify the simple rectilinear forms into more complex ones and eventually into the arcuated, but... it took time.

Any careful study of man's progress through his architecture will reveal the gloriously complicated architecture that has come out of these simple systems. Eight musical notes have been composed into a Symphony in D Minor and the Crusaders Hymn. Likewise these architectural systems allow an unlimited development -- up to structural limitations. Man discovered as he experimented

that natural materials would permit of just so much freedom and beyond that, they invited critical danger. His desires urged him to span greater distances than wood or stone, in simple post and lintel fashion, would permit so bolsters were added to column caps to increase the safe span. Vaults were created and then domes and finally reinforcing to permit man to create and enjoy this new found freedom -- with safety. After they were created, formulas had to be discovered so as to permit a repetition at will and with definite promise of success. They had to know more than that these new found interpretations of old systems would work; they had to find out how and why they worked and if they would continue to do so under the same given conditions. Thus man's eternal search for freedom and his groping upward led him to build better and greater structures. It led him to find the systems, to elaborate upon them and to find the reasons why. This involved thinking, logic, and even judgment; but these facts and opinions were constantly being added to by experience -- hence his changing concept of them.

## MAN'S CHANGING CONCEPT OF THESE SYSTEMS

Primitive man quite likely thought little of why he did his construction in the manner he employed. His freedom had been limited by nature and he discovered it experimentally, many times to his sorrow as he blundered from one generation to another. His progress however allowed for accumulative knowledge until we now can view this contribution with a certain scientific impartiality with a hope of intelligent interpretation.

Basic architecture does not change; man does. The same cubes, spheres, cones, cylinders and other forms are ever with us. Man may change the handling and relations, but the forms are constant. It is therefore necessary to go behind the outward ornament and the materials of construction to determine if architecture is a fresh contribution. It is very easy to confuse the outward dress with the more consistently vital life-flow within.

Of course man lives in a world of eternal change, so why should his architecture be expected to do anything

else? His calendar days are still without the exactitude he may have expected. Unless leap year is added it is an everchanging approximation. Man's watch and calendar are still adjusted to nature's sun.

This changing nature of things is a great revelation to man when he learns about color for the first time. Shadows are usually grey or black until then, but afterwards they may be myriad colors, depending on their environment. They reflect the color about them as Chameleons are supposed to do. Nature presents, for all to enjoy, this everchanging color everywhere for the sake of a variety to relieve an otherwise drab monotony. There are rare moments in the history of a landscape, a structure, or a man when they look exactly as they did the hour before.

All things are constantly undergoing changes that will make them actually appear different. Observation is a process of sight as well as one of mind. Thought processes tell us that a thing is so and therefore we know it is so. However, we fail many times to verify with our eyes what we see so well with our minds.

To the beginner in architecture the process of simple drawing will serve as an illustration of this thought. Nearly all beginners make the mistake of drawing too much. They have not learned yet that the prayer of the draftsman is, "teach me to omit". After all, drawing is a convention used to convey an idea. It is not the final building and, although all the structural elements are numbered on the working sheet, the real purpose of the sheet is to convey the idea of the finished structure and not the structure itself. If the same thought can be properly conveyed in half as many lines, why use more?

One of the most astonishing truths we know, is that no two human beings have faces exactly alike. When we consider the many millions of people over the face of the earth and the variety present, although many may look enough alike to avoid detection, this is a startling instance of nature's endless variety. Why then, should we permit our efforts toward created beauty to be so reduced to formula?

Our most difficult task is to follow this infinite variety of natural change and properly interpret it. We need a constantly changing concept which parallels this

changing growth of nature. One's lifetime experiences reflect this liberalized need. What one believed at fifteen is no longer sufficient at twenty-one. When thirty-five has been reached, the meanderings of twenty-one look foolish. At sixty-five the youth of thirty-five looks callow indeed, and at ninety-five the immature thoughts of sixty-five seem so lacking in real fibre. What has happened during these interludes is that accumulated knowledge and experience have changed the viewpoint. It may not be true that we know more at sixty-five than at twenty-one, but we ought to be able better to interpret what we know, and what is probably more important is that nature has changed little during this period.

This interpretative power of man gives us pause when we consider his architecture. The basic structural limitations of over two thousand years ago should not impede us of today, but they do. Our forefathers interpreted their problem and we should think of our own, but it is only within the past few years we have been asking these pointed questions. If these systems are so basically simple, we should do something to contribute to them



rather than use them as they were given to us. Much has been done recently. The changing concept is that we can go forward toward lighter, more flexible construction, the spanning of greater distances economically and the elimination of waste when old structures make way for new. Our ancestors built for eternity; we build for twenty years or less.

The next question which naturally arises is, "Are there other systems?" If so, where may they be found or at least where may we find the suggestion that will help us find the form they might take? Since nature seems to have imposed the limitations, it is possible that it is there we may find our future answers. Nature's design and construction is still the marvel of the appreciative. Perhaps a microscope will do as much for architecture as a radio has done for internationalizing music and language.



## INFLUENCES AFFECTING MAN'S CONCEPT OF ARCHITECTURE

### A. In General

Architecture is not an impersonal thing that comes about of its own volition. It is the result of environment. It is the projection of man's imaginative powers, his materials of construction and his affluence. It is as much a result of man's limitations as his abilities. But whatever of climate, social history or of geographic location that may appear as direct influences, architecture is the result of something as well as the inspiring cause for beginnings. It is also the consequence of an effort or the lack of it; it is the spirit of the court of a king, the madness of a monk, or the ravages of pestilence. It is the record of society.

Under all these trials, errors and successes, the systems still continue. They continue to exist and to remain very few in number. Their cloak has been remodeled and restyled but underneath the new dress the same graphic standards exist. The thinking of the ages has persisted

in confusing the material with the immaterial and we have been doing something of the same thing. In that length of time perhaps nature would have evolved a few new species, who knows.

Perhaps the most important purpose that should inspire or produce architecture is the solving of the problem and the inspiring of a race. Any resultant new forms will be resented at first but will soon be too readily accepted. Perhaps there are no new forms but is it not a challenge to us to determine ourselves if this is true? This is a part of the changing concept of it. At least it furnishes a most fascinating avenue of travel.

A great influence is at work in our generation, synthetic materials. The natural ones are being augmented by these new ones. Who would have dreamed that cornstocks, wheat straw, or even corn cobs could ever be made a building material? Many of them at the same time are sound absorbent and of insulating value. They are made in flexible units so as to reduce cost. Perhaps we should refer to these materials not as an influence but rather as a result. It is the consequence of our experimenting race to find new ways and new methods and to use the

materials of which there is an abundance and, at present, little use.

A world wide social security vision will redouble our efforts to house mankind more independently, economically and intelligently. May we hope that it will bring about an increased home ownership with a much better standard of residence construction, greater freedom of finance and a placing of these units within the range of any responsible person desiring them. Gunpowder freed the feudal system; and gave us the small unit system of housing. We now need to make it vermin and fireproof, lovely to look at, and free from excessive tax.

## B. History

From the past comes a rich inheritance. It is within the reach of all and yet rare is he who profits by the experience of others. From this vast past we have learned that life is but a day in school. There is much to know and the acquirement of knowledge is never finished. A generation ago we were eager to learn while very young because after youth we believed the process became difficult, if not impossible. Today, we know that learning and knowledge have no age. By experience we have learned differently. Many have suspected it for a long time, we are sure.

Man cannot escape his past however much he might prefer it. Through heredity he is deeply rooted in earlier beginnings. Nearly everyone at times resents the lack of freedom which surrounds him, but usually finds that little can be done about it. Freedom is usually conformation to the just laws of accumulative wisdom.

Architecture is a stream of many confluences, gathering together the efforts of man to shelter or

glorify himself vigorously or gloriously down through the centuries. The stream is never the same after any one particular experience. A river here, a brooklet there, an estuary someplace else, and that is the background of architecture. The stream may lose itself in the quiet of adversity only to escape someplace else with clarity and purity. At other times the confluence may be subtle and slight with an ancestry almost forgotten, but it is there inescapably.

One race may borrow freely from its predecessors and in the borrowing recreate the style. Another race may conquer one of lesser strength and in turn be conquered by this stream of ever-changing influence. Thus, briefly are caught up in its moving forces, the mysticisms of the Orient, the future problems of the Egyptians, the rationalism of the Greek, or the aestheticism of the Renaissance -- these and countless others. To escape this powerful influence would be to attempt the impossible. It would be an effort to refute the laws of gravitation, of heredity, of environment and genetics; and, it is not being done.

In fact one of the most changing concepts of life is the one that we are chosen to play a scene in the drama of all life. Here we are actors in a pageant millions of years old and which will continue until the dawn of doom. Certainly it is much more powerful in its concept than the belief that we are here but for a span to do what little we can that is original or different and at any cost.

We are the makers of history.

### C. Tradition and Prejudice

Man is an animal of tradition, and habit, for habits and traditions are of close kin. What was good enough for our ancestry is too frequently good for us, and in the general course of busy lives we are inclined to do too little about it.

The line of least resistance to the stream of history we have just described, is perhaps the most natural course. Those who dare to stand alone and think for themselves are caught as the boulder that dares to resist the stream and are ruthlessly cast into the maelstrom. However, if the rock refuses, the stream parts and bows before its master.

We accept what we have been used to without question. A new idea, a new invention or anything out of this routine is first repulsed with vigor, then accepted grudgingly, and at last worshipped as a tradition. Thus architecture has a tendency to be a vigorous physical reality, then a fetish and then a symbol or tradition. It is true that there must be a beginning. The fact we fail to consider

many times is that man is inclined to copy rather than create, because of his aforementioned habits and traditions.

Man's prejudices are more prominent usually than his open-mindedness. Psychologists say that men are known by the prejudices they keep. The imagination and capacity of an architect is revealed by the prejudices that govern the structures he builds.

It would be difficult for the architect to become a stylist if he is trained in this broad sense, certainly. No teacher of design should feel or yield to the temptation of any one traditional style. All styles should serve as the stream along which civilized man has passed. And as all society interests us in that same ratio do we appreciate the broad implication of internationality of architecture.

Certainly, a man's prejudice and his love for tradition are of great value when used to proper advantage. The surviving and accumulative good that has been contributed by races to all of us likely would not have been preserved had it not been for vanity, tradition and prejudice. By this broad approach we hope the people of our time will contribute an architecture which is as



expressive of us, as the Egyptian and the Roman have been of their civilizations. The difference between these two discussed approaches is largely the difference between the thinking, creative person and the one who at best, can make an uninspired copy.

#### D. Industrial Design

With the usual American resourcefulness, our currently used machines have been rather carefully studied, and where this study has been serious, definite changes have occurred. Motor cars and airplanes develop high speeds. This velocity involves the laws of physics, of codified nature to a high degree. Appreciation of these facts has created the 'streamline' form. Static forms would not suffice for a dynamic demand. The lines of these vehicles were changed to conform to this demand -- at least as much and as rapidly as manufacturers thought the public would follow. The rest is history. Today bottles, stoves, boxes, and all such homely objects as these once were, have caught the spirit of this changing idea. Commercial designers are paid tremendous salaries to create new forms for commercial articles all the way from refrigerators to cigarette lighters. The public has become form-conscious in what they buy. Cellophane and color are used to heighten this psychology upon the public.

Naturally architecture witnessed this change with interest, and was definitely influenced by it. Streamlined

ships of the air had to land and take off where structures were either static or dynamic. They were static and seemed incongruous with the thing they housed. Now they are catching the spirit and are much more dynamic -- some argue that they are too dynamic considering the fact that they do not move.

At any rate the change of pace of our civilization in the past fifty years or less has made it essential for us to recognize such fundamental laws of nature as relate to physics, chemistry and the other sciences. As our pace continues, it becomes more necessary for us to parallel our design with these forces in an approach towards nature, the birds, the fishes, and many others which we find entirely enjoyable. By these natural standards our architectural structures may look static, unnatural and very much posed.

Our industrial designers are making rapid steps in stage design, movie sets and commercial articles because tradition here is not fixed. The public is conscious that there is an attractiveness to a well-designed bottle or box, the tooth brush or a compact, just as there apparently is in the streamlined motor car, airplane, or railroad

train. Naturally these objects begin to influence architecture, or at least architecture is being approached from the standpoint of this new freedom of form. After all, nature enjoys a tremendous variety. Why should structures be too rigid in their character? Architects all over the world are asking themselves these questions. The evaluation of the results is still to be completed.

International expositions offer a very definite fertility in the direction of this new organic design which had its origin a long time back, at least in theory, but only recently has been made entirely flexible by the creation of improved materials and methods of construction.

Now that the idea is afloat, quite likely the art stream of world civilization will be greatly influenced; excepting, of course, where tradition is most powerful and where that race is retrospective rather than introspective. It is natural that America should be interested in such a movement. Any creative imagination hesitates to use copyrighted material. In fact the same spirit that pervades our American society presents a vigorous intolerance to the too traditional approach.

Throughout the length and breadth of America, thanks to radio, movies and travel, this influence may be noted. The accumulative experience of centuries is being summed up in something freshly contemporary--as much our own as Gothic architecture was to the Middle Ages or Greek to the Pericles' Age. We should be proud to contribute to our generation and to its art. Of course we must learn to differentiate and to select. Many experiments will be tried and much rejected as unworthy. It will take time to evaluate it. Many false 'isms' will need proper anaesthesia, which will be undoubtedly administered in due time by the process of forgetting. At least it is the way we are travelling. It is a part of the new concept whether it is the influence of the 'scientific approach' in rational thinking or of a highly developed influence in mechanized manufacturing.

It is probably here that Americans are nationalized rather than along the unusually varied and distinct European type standards. Certainly Americans do not look alike nor act alike, but their resourcefulness is known the world over. This spirit of resourcefulness and independence brought the original colonists to America.

It is now bringing forward a new architecture from varied sources that no longer adheres to classic or Gothic standards. It will be despised, legislated against, and condemned by many, but it will probably survive because it cannot very well do anything else.

Unless a better one is brought forward these examples will continue and likely they will eventually be adjudged beautiful by the standards that are a part of their own creation. Industrial design at any rate has had a very profound influence upon contemporary architecture because of its propinquity and apparently more fitting solution to its own problems from which arises the natural question: "Why must architecture reflect an entirely foreign age.....an age we cannot live in, no matter how hard we try?" The answer is that it does not do so and the reason is comparatively obvious.

## THE EDUCATION OF THE ARCHITECT

The changing concept of the architect should be clearly understood by schools of architecture, for it is in these schools the new generation is now being developed. It is interesting to see the rapid improvement generally in the training of the young architect in America. A short time ago it seemed to be necessary, and perhaps was, that the young architect must go to Paris and to Rome for finishing; today the Romans and the French are beginning to look toward America. We hope that America is coming of age, or at least moving into a period of her architectural life, when education and practice are becoming vital enough to be important to the rest of the world.

The first decade of the twentieth century found American schools teaching architecture in the traditional manner.

There came the world war. Thousands traveled to and saw places and things some had never dreamed existed. Returning home, they felt the old order was cramped and



uninteresting -- they felt traditions had been upset in many ways. Methods that had sufficed before were being discarded for those brought to a common battlefield by an admixture of human races and experiences.

Naturally architecture and its long line of traditions came under this fresh impetus. Practice felt the changing viewpoint. The progressive practitioner was searching for a new way -- a 20th century expression. A few of the more imaginative ones began to succeed at it. Publications of a professional nature carried the reproductions of these early efforts. Students saw them, admired them, and tried to do them. The manner of the 20th century had passed into the schools - there to receive fresh and original emphasis, and to come forth a more definite influence. Practitioners and students enjoyed it. They were in the presence of a creative art although at times a poor one. They felt they were doing, creating -- not copying. They had the opportunity of using their creative ability, sometimes, genius. Of course many could not see this changing view. The moderns in any age (and surely all ages have them) have their difficulty with the ultra conservative



who, in reality, is unable to weigh the evidence and form a fair judgment. The past suits him but he doesn't know why.

With this changing view, found among the more progressive of the practicing architects and students, came an increasing demand for new methods of education.

In the traditional manner classic architecture was the rule, and the orders a necessity. Youth rebelled at orders or studied discipline; they longed for, and even demanded, freedom. They wanted an even opportunity with their practicing friends who were outgrowing, or had outgrown, the "traditional way to education". Then came much heated discussion from both circles. Some schools would admit no quarter to the 'modernistic' as it was called; others welcomed it. To the former it was a passing whim, a fancy, a fad; to the latter, a pleasant breath in a new atmosphere of modern license. It is at times amusing to note former radicals against the new idea who are now radicals for it.

But is it a new idea? Is modernity ever new, essentially? Should we not try to ascribe to it a set of values that are in keeping with it? Modernity belongs to

no age in particular. It is present in every age and probably always will be. Modernism and traditionalism are ever present.

A certain mysterious ritual sometimes grows up rather traditionally around the study of architecture. Some teachers may tend toward the enacting of this ritual to impress the student with the difficulty of the subject and their own importance. Architecture is difficult, no one can deny that, but its difficulty lies in its simplicity and not its complexity. How many times have students failed because they have tried to make something difficult of something simple?

Students enjoy the freshness of originality and creative imagination. While it is true that we cannot expect from them a higher sense of judgment, discretion, and experience, we cannot doubt their sincerity, enthusiasm and enjoyment of the creative arts if they like architecture well enough to do it at all. They are generally willing to go without sleep and many times without food to do it. Perhaps it is still a hold-over from our tradition, one that will likely remain. It is the urge of the creative, which like the law of gravitation, has been with men from the beginning.

The schools have been making tremendous efforts to keep abreast of the changing concept of architecture, sometimes to the detriment of a particular continuity of growth. Certainly there is a definite demand for the open mind. Some particular changing points of view have come about through the approach to design and the much more integrated collaboration between design and construction. The tendency is toward eliminating the idea of courses and substituting that of a broad education, where each unit is a part of another and thoroughly correlated into a well-understood whole.

## THE ARCHITECT'S DUAL NATURE

To better understand architecture it seems wise to study the architect who creates it. The history of the architect is fascinating. In the history of the world he has been builder, priest, king, and diplomat. He has enjoyed a variety of experience and today he is undergoing still others. He now must be able to conduct himself with favor in the midst of cultured, educated and travelled people. At one instant he must be the esthete and in another, the experienced business man. The ancient definition of Vitruvius still holds and we realize and appreciate how wise some of our race were so long ago. He says of architecture and of the instruction of architects: "Architecture is an art comprehending many sciences and various other kinds of erudition: by the rules of which all other arts are examined. It consists of practice and theory. Practice is the constant and accustomed attention to the manual operations, and to the several kinds of materials of which a work may be constructed. Theory is the

ability to explain and demonstrate the rules and reasons of the proportions of buildings.

"Architects who have practiced without theory, and who have been only experienced in the manual arts, have not been able to acquire reputation by their works; and those who have trusted to theory and speculation only have followed the shadow and not the substance; but those who perfectly acquaint themselves with both, like men completely armed, speedily and with reputation, succeed in their endeavors; for as in all things, so especially in architecture, there are two parts, the signified and the signifier; the former is that which is here proposed to be treated of; the latter is the demonstration of the principles of the sciences explained; and he who professes architecture ought to be well exercised in both.

"He should be ingenious and docile of instruction; for neither ingenuity without education, nor education without ingenuity can render him a complete artist. He ought to have a knowledge of letters, be expert in drawing, learned in geometry, not ignorant of optics, instructed in arithmetic, well read in history, to have diligently attended to philosophy, to have a knowledge of music, not

a stranger to physics, understanding in law, and be conversant in astronomy and the aspects of the heavens."

This was the concept of architecture in the thinking of one man some two thousand years ago. Today we find the question still being raised as a right of each generation. What then is an architect and how shall we know when we see one? Is he like a gown that we put on and off, that affords greater protection, warmth, and wisdom? Quite unlikely, we believe.

We have just reviewed a point of view of two thousand years ago: let us contemplate a twentieth century definition of the architect. Permit us to quote from the proceedings of the Convention of 1906, the "Definition of an Architect" made by the Committee at that year of which Mr. Crain was Chairman, and Messrs. J. M. Carrew, Wm. H. Kendall, R. Clipston Sturgis and S. P. B. Trowbridge were members. An architect they defined as "one ranking in the class of men of culture, learning and refinement, differentiated from the others of his class solely by his functions as a creator of pure beauty, as an exponent, through motival forms of the best secular, intellectual and religious civilization of his time, and as an organ-

izer and director of manifold and varied industries and activities." This conception of the architect comes from The Committee on Education of the Collegiate Schools of Architecture only a third of a century ago.

Largely the function of the architect involves two essentials; the discovery of the new and the study of the old. Both lead toward improvement and a constant effort should be made on his part to keep an intelligent relationship between these two ingredients. I do not refer to his copying or using the physical properties of our past architecture as such, but rather the embodying of its esthetics, its atmosphere, the good of the society that produced it, and of those fundamentals which change very little. Also he can learn much from the errors of the past. If architecture can inspire a race or an individual to long for, or to do beautiful things, its fundamentals are as existent as the law of gravitation if not as violent to its violators. We have accepted the law of gravitation; we should at least understand this aesthetic principle. Physical properties may change, but things of the imagination and of the spirit know no boundary of race, of country, nor of time. The forms through which these



expressions come may vary so greatly that only with the greatest of effort can they be recognized, but the agency of transmission is plain. The stream of art continues.

The criticism has been made of the profession of architecture that the architect has become too much a business man. It seems likely that a part of the charge is justified. It is the natural swing of the pendulum back from the time, or forward as the case may be, when the architect was generally considered exotic and impractical. It seems rational therefore, that we should now temper our point of view with this natural swing to extremes. The architect is perhaps the strangest of all professional people in that he must be at the same time the astute business man and the artist. He must have a definite knowledge of current business methods, prices of material, estimation of quantities, property values and budgets. In the same conversation he probably will have need for good taste in literature, in society, and in art. His knowledge of humanity will make his purpose more clear in creating devices for happy life. The ultimate aim of society apparently is this successful search for happiness. All things lead to it, even the search for gold or adventure

and wise is that architect who has brought together these two strange abilities into a happy relationship that not only reflects this character in his own life, but which also is easily reflected in the lives of others whom he serves.

An educated man will have loyalties and affinities to at least some of the socially and ethically worthwhile institutions of society. Obviously the architect must be a well-educated person and we may logically inquire the way of the educated man and although we may not agree on all the points thereof we can feel the surge of understanding in these simple statements.

The educated man should, and frequently will, ask himself: Am I furthering my education? Certainly we all should ask ourselves this question once in a while.

George A. Coe, educator of Northwestern University Union Theological Seminary, and later of Teacher's College, Columbia offers us his conception of a good education. "What an absurdity", he says, "it would be to certify as well-educated, a youth who has never been socially awakened. Being well-educated is negligible until social well being and social progress are concerned." Dr. Coe gives us a

group of suggested points by which he believes a truly educated man can be detected. Perhaps they would also serve in our search for an identification of the architect. These points are:

1. An educated man is one who is trained to use the tools of human intercourse with readiness, precision, and accuracy. We mean, especially, language and the rudiments of numbers.
2. An educated man must be able to study and to think without guidance from others. He must be, to some extent, a thinker, not a mere imitator.
3. An educated man must have sufficient knowledge of nature to understand the main processes upon which human life and happiness depend.
4. An educated man knows enough of history to enable him to understand the main achievements of man.
5. An educated man is acquainted with the major resources for intellectual and esthetic enjoyment. He knows nature, literature, music, and the other arts sufficiently to choose superior to inferior enjoyments.
6. An educated man is marked by his interests as well as by his trained abilities. His attention is habitually

attracted by significant rather than trivial objects, events, pursuits, and enjoyments.

7. An educated man must have not only this general culture, but also training for a specific occupation. Focalized activity that is directed toward some sort of efficiency has to be included.
8. An educated man must have toward his fellows the habitual attitudes that are commonly called ethical--such attitudes as honor and honesty, helpfulness and good-will and cooperation.
9. An educated man must have loyalties to at least some of the important organizations and institutions of society, such as one's family, one's country, one's church.
10. If there is an inclusive meaning in life, the sort of education that I have been outlining should include some apprehension of, and feeling for, the divine; the ideally educated man will reverence God, and know how to worship.

It seems this concept is so broad and all inclusive that it will suffice as a fitting code for the thinking

person who attempts to evaluate this changing concept,  
be he architect or otherwise.

## THE CLOSER RELATION OF ALL THE ARTS

From the previous discussion it is noticeable that industrial design of commercial objects may have been a definitely contributing factor in the recent trend in architecture. Recent times have seen evidences of further collaboration between the arts through large scale developments which reach beyond the limits of any one of them. The Century of Progress saw the bringing together of every conceivable art or craft to work toward a harmonious whole. Again the prevailing idea was the significant one of a display of ideas rather than objects. Perhaps this is the basis on which the modern designer prefers to make his progress. Too much in the past there has been the tendency to do a type of structure rather than solve the problem as such.

The critics of any contemporary effort will assail it with any 'ism' that happens to be handy. Rather than offer a better in its place, they prefer to speak against what is being offered. They allude to 'form following function' which to the true modern is as obnoxious as it

is to any one else because it is another of the 'isms' that has hindered more than it has helped.

The Latin Quarter of Paris smarted under the hamper of tradition at the beginning of this century as it did a century before and from it came many of the unexplained 'movements in art'. Many do not ask the question if art is good or if it is a definite contribution. They hesitate to say what they think because they fear being found wanting in true appreciation of what is supposed to be good. It seems just possible that the Latin Quarter has smiled many times at the general gullibility of the public.

In many cases architecture is under the same onus. It passes for being good because no one dares to say what he thinks about it for fear of being thought biased. Thus our broadened point of view that came into existence after the travel of world war days has its dangers likewise.

However, all the arts are coming to the aid of each other. Radio is now bringing the audible arts to every family in the land and is revolutionizing taste. The opera, the symphony and variations of both are commonly known by those who have radios -- a sizeable number of people in America. It is whimsical that architecture of



a high sort cannot be broadcast as easily as the baser varieties already sown. However, the improvement in taste in any one art is helpful in the direction of the others.

The former student of architecture was trained rather narrowly in the field of the structural art, but today his training is broadening until six to ten years will be necessary for his basic training. We as a nation are beginning to pay attention to phases of training that previously were not considered essential. Business has professionalized to the extent that architecture has its own business methods and ethics. Schools of architecture will broaden their attentions to meet this changing condition or else leadership will pass elsewhere.

When an art seems to be necessary, it is well on the road to everyday usage. Fortunately the government has brought many of them to public attention, to somewhat everyday usage. Mural painters, architects, landscape architects and others have felt this improving public recognition if only for a short time.

Also, there is a much more real relation between all the arts than some have believed. It matters little whether the stimulus comes to the eye or the ear or through

the other senses, for that matter, if it causes one to rise above his normal pursuit of life. For happiness apparently is the goal of all even if each may attempt to employ quite varied physical means of attaining this ultimate end.

It is interesting to note that world travelers, searching for relaxation, happiness, and education, spend much of their time with the arts. The arts are universal, free from country or social boundaries and with improved methods of travel and more leisure, they will tend toward a much closer unity than ever before.

The architect, therefore, should be master of his own and wise in the ways of many, if not all the other arts. His client is becoming more educated and he must lead or follow him.

## ARCHITECTURE AS THE REFLECTOR OF SOCIETY

From ages past has come the observation that the arts are the unbiased reflector of the civilizations that produced them. Thus is recorded for all time, or at least until some other people decide to substitute something better, the perfectly natural life of the time. It may not seem natural to us now, but it was when it was done. However important may be the influences of politicians, of governments and other of such temporal nature, the arts do not know them except as they influence the acts of man. The arts may be justly proud of their impersonal internationality. Men may go to war, indulge in intrigue or engage in nefarious practices in business, but the arts are friendly and know no racial or social barriers. Of course they flourish amidst good taste and indulgent patrons. Against this background, what of the architecture of today? Does it reflect society and if so, how?

Naturally, since architecture is variable and since society varies as the race, let us consider America. Here

we have found a certain imaginative, energetic, independent, and rather idealistic people who came to America for the purpose of finding the happiness their native countries could not afford them. Of course the object of their search may have been a cabin, a gold pan, a farm, or hope of youth regained, but again this was only their physical vehicle by which they hoped to attain their ideal. If any of us are prone to resent this so-called invasion of our land, we might remember that only a few generations ago we too were invaders in the same sense. With this cosmopolitan background, how can we find any continuous spirit by which can be measured the influence society of today has upon architecture?

Can anyone deny the mark of realism and logic that some of our architecture of today so clearly shows? In it is the imprint of the independence and idealism with which our race is endowed. We have been guilty of copying other styles but not without an effort to give the result the touch of originality these characteristics inspire. Our better things will go on being the better ones done in the world and the poorer ones no worse than the bad of the past, either here or abroad.

Perhaps it is impossible to draw satisfactory conclusions for short periods of time, but this much seems certain. With the advent of the 20th century, America was facing a new era -- one of telephones, radio, motor cars, airplanes and others too numerous to list here. Also there was a growing desire, perhaps subconscious, to keep pace with this scientific progress. One has but to trace the evolution of student problems for the past seventy-five years to see this growth. Practice reflects it as well. Only approximately a quarter of a century ago American office buildings were still being thought of as one temple upon another. Then came Cass Gilbert's definite effort to build on Gothic experience. It was a departure but it opened the doors to American idealism. What has since happened is common knowledge. Each contribution was a new step forward in our thinking until we can now think of an office structure as a device completely conditioned for present needs with no prejudice of tradition. However, not all who use the structure are as progressive as the structure itself. It is likely also that economic limits will run and that we may be foolish to build ninety-story structures in a country of billions of acres of land.

However, we are here interested in this freedom of thinking rather than in economics.

There is a trimness about refined Americans that can be readily paralleled in good contemporary architecture. It is the desire for no excess embellishment or loudness of language. Naturally what one selects for his dress or conduct is selected by the same powers of judgment that make him prefer certain simple architecture. The well-dressed, refined business man will hesitate to drive home in a gaudy car or live in a too showy house. This is obvious. Therefore, our architecture can do but little else than represent the combined good and bad tastes of our people.

Of course special influences frequently alter normal trends. After the world war was noticed the taste of an agitated, nervous people. Many had seen more of the world and its affairs than they had previously believed existed. This plus the exigencies of war, completely upset their previous routines. They could not settle back easily if they were fortunate enough to return. Architecture during this period was very similar to the popular music of the time -- blatant and irritable.

After people's memories faded a bit, tastes changed, but not until a world depression served to remind the intelligent of war's futility and of our headlong pace toward financial and other chaos. Naturally architecture felt these influences. The style of 1929 can be rather clearly defined by those who have watched these influences at work.

Since then has come a sobering and restraining influence. American frontiers are now largely a matter of fiction and with this realization comes the desire for refining what we have, rather than attempting to acquire more.

In this connection it is interesting to see the changing viewpoint toward color as architecture and the arts developed through the ages.

Primitives like color; barbarians invariably use it lavishly. In general the more civilized or refined man becomes, the more he tends toward refinement in color taste. This does not mean, necessarily, that he does not use color. So far as we know, there is nothing sinful about color, although some have believed this true in the past.



In general, architecture has been more colorfully handled than we are led to believe. This is doubly true because examples have faded through time and also our illustrations are frequently uncolored reproductions. Color is more naturally used in those countries where colorful nature abounds. Man strives to make his architectural creations fit their environment so far as color is concerned, or else his creations suffer by consequent contrast.

Primitive or early man preferred color applied to an object or decorative area to bring forward a motif or form or a whole composition. Taste varied and the technique changed, but in the main this principle was followed. Of course the overall color of the object or structure was determined by the native color of the finished material. Color was then used to heighten this natural effect and in some objects to change the entire color scheme. Rarely, if ever, was color applied to a whole structure except as color used here and there affected the whole. With the advent of the 20th century inventiveness came new synthetic building materials. These, like those of the

past, were largely an imitation of stone or something else, but architects and others were asking the question: "Why not make these materials so their own color, texture, and finish will be straightforward and an imitation of nothing at all, but rather an opportunity for an all-over surface in practically any color?"

As an added stimulus at this time came the Century of Progress during an era of depression. It had to have an attractive wrapper or the public could not be induced to look at just another World's Fair. Color was a part of the answer and for the first time a stage designer employed color on such a grand set -- three miles long and into the sky to Arcturus.

The theme was that color should be the unifying element rather than the fifty foot column of 1893. With plenty of courage the 1933 Fair saw color done on a lavish scale but with the definite use of white as a recurring note in all color schemes. It is generally believed that the second year color-scheme was better largely because more white was used. Thus some thirty flat colors were brought into use and fortunately eliminated some of our

black and white complex that had been a part of our early modern work. Also architects discovered that color was natural -- even the Century of Progress things were no more colorful than the sky above it or the lake near it. All that was needed was some original thinking -- in the presence of a depression -- in the face of plenty of prejudice and hostility to the idea.

Whether the Chicago Fair had to do with it or the advance of colored materials available, or both, we now have structures that are done all in one color or several. Thus, probably for the first time, man is conceiving his architecture as a colorful unit against a colorful background. This idea is gaining favor in the climates that possess year-round colorful backgrounds. Possibly it will gain favor in countries where winter covers nature with white, leaving a refined color, harmonious with the sky, but livelier and more colorfully interesting. This remains to be seen.

Obviously we are making a contribution to a changing concept with respect to color. Even the layman is beginning to look at nature in his effort to see through the

ever-changing miracle of nature's color creation. He looks, he sees slowly, but with American persistence he will begin to learn that color does not mean necessarily the primaries, but also the myriad, subtle combinations that are available to the skillful and which are generally felt and appreciated by others.

As in anything else, man must use color before he develops his good taste. Any architect can testify to an improving taste as he experiments with and uses color, and never before has he had such colorful materials at his disposal. Let us hope those manufacturers who still imitate something or other can find more profit in ceasing imitation, and will devote their energies to creating ones of better color that do not pretend anything they are not. Perhaps we are beginning to think of color with a changed point of view. The San Diego Fair suggests it. What will the New York and Paris Expositions contribute? We know that World Fairs have marked influences on general taste. Will the time come when whole cities and regions are color designed as a harmonious unit? Then billboards and obnoxious, blatant color will have disappeared into advancing appreciation for the rights of others and good color

for all -- we hope.

Contemporary efforts to improve residential architecture are healthy, if inexcusably late. One has but to see the better residential architecture of America to be impressed with this modern tendency. Public buildings are becoming simple and straightforward and perhaps this is the highest compliment they can accept. The average man's home is due for much improvement in design, construction, and financing.

But, whatever may be said of any homely architecture we have had, or are doing, it may serve to astonish our better tastes that we have done so little toward improving our public taste as to what is good. Architects create but the layman chooses -- often by his likes or prejudices or his traditions. Of all the arts that need the rational, logical, discerning good taste of the new concept, architecture is number one. Its universal daily use by everyone makes it imperative that we do something about it.

American architects are doing just that. The practitioner is fully aware of the need for being awake. The eager youth in schools of architecture feels he should

search for new answers to his problems so he can keep apace after graduation. Practice must be alert to stay ahead. At least conditions are no different than elsewhere because architecture, after all, has no other alternative than to be largely what the men are who create it and pass judgment upon it. It must be liked to survive and survival is essential if it is to reflect anything at all.