A PHILOSOPHICAL APPROACH TO THE ARCHITECTURE OF FRANK LLOYD WRIGHT

SHENG-PAO SHENG
MANUSCRIPT THESSES

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OF FRANK LLOYD WRIGHT

SHENG-PAO SHENG

Submitted in partial fulfillment of the requirements for the degree of Master of Arts in the Graduate School of Florida Southern College

1949
ACKNOWLEDGMENTS

It is a pleasure for me to mention here my debt of gratitude to Mr. Frank Lloyd Wright. Through his teaching, I feel that a new life has been reborn within me. Dr. Ludd M. Spivey has given me the opportunity to cherish this new life growing up at Florida Southern College. Dr. Robert MacGowan has helped and encouraged me to finish this thesis which, I thought, is almost beyond my ability. Professor Donald A. Thompson, who actually originated for me the idea of writing this thesis, helped me complete this work from beginning to end when for many times I had decided to discontinue the work because of many difficulties. I am greatly indebted to them all.

The writer did not mean at the beginning to present this subject in a form of thesis. Nevertheless, when he came to Florida Southern College, many criticisms from those who like or dislike Mr. Wright's buildings at Florida Southern College stimulated some ideas in the mind of the writer. This is a reaction to those criticisms, a reaction which forced the writer to say something. It is, therefore, written to please the writer himself rather than anyone else, but with the hope that it can be used by others who are interested in this problem.
APPROVAL

Doctor Robert MacGowan, Advisor

August 10, 1949

Date submitted to the Chairman
of the Graduate Committee
# TABLE OF CONTENTS

## Chapter

<table>
<thead>
<tr>
<th>I. AN UNDERSTANDING OF THE PROBLEM</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The Problem</td>
<td>1</td>
</tr>
<tr>
<td>a. General Statement</td>
<td>1</td>
</tr>
<tr>
<td>b. Specific Problems</td>
<td>1</td>
</tr>
<tr>
<td>c. Definition of Terms</td>
<td>3</td>
</tr>
<tr>
<td>d. Limitations</td>
<td>5</td>
</tr>
<tr>
<td>2. Basic Assumptions</td>
<td>6</td>
</tr>
<tr>
<td>3. Basic Hypotheses</td>
<td>6</td>
</tr>
<tr>
<td>4. The Need for the Study</td>
<td>7</td>
</tr>
<tr>
<td>5. Incidence of the Problem</td>
<td>17</td>
</tr>
<tr>
<td>6. Related Literature</td>
<td>17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II. THE HISTORY OF ARCHITECTURE</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A General Survey</td>
<td>19</td>
</tr>
<tr>
<td>2. Ancient Architecture</td>
<td>23</td>
</tr>
<tr>
<td>3. Medieval Architecture</td>
<td>29</td>
</tr>
<tr>
<td>4. Renaissance Architecture</td>
<td>31</td>
</tr>
<tr>
<td>5. Modern Architecture</td>
<td>32</td>
</tr>
<tr>
<td>6. Oriental Architecture</td>
<td>34</td>
</tr>
<tr>
<td>7. Organic Architecture</td>
<td>42</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>III. A PORTRAIT OF MR. FRANK LLOYD WRIGHT</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Architect and Architecture</td>
<td>45</td>
</tr>
<tr>
<td>2. The Architect and His Environment</td>
<td>47</td>
</tr>
<tr>
<td>3. The Fountain of Energy</td>
<td>48</td>
</tr>
<tr>
<td>4. The Genius</td>
<td>50</td>
</tr>
<tr>
<td>5. Temperament</td>
<td>51</td>
</tr>
<tr>
<td>6. The Creation</td>
<td>52</td>
</tr>
<tr>
<td>7. Emotion and Heightened Emotion</td>
<td>54</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IV. THE FAITH THAT ORIGINATES ORGANIC ARCHITECTURE</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The Religion of Unitarianism</td>
<td>56</td>
</tr>
<tr>
<td>2. The Religious Attitude of Organic Architecture</td>
<td>57</td>
</tr>
<tr>
<td>3. Love and Hatred</td>
<td>61</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>V. THE PRINCIPLES OF ORGANIC ARCHITECTURE</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The Nature of Material</td>
<td>64</td>
</tr>
<tr>
<td>2. The Concept of Space</td>
<td>63</td>
</tr>
<tr>
<td>3. Organic Structure</td>
<td>71</td>
</tr>
<tr>
<td>4. Interior and Exterior Space</td>
<td>73</td>
</tr>
<tr>
<td>5. Terrain—Wind and Water</td>
<td>77</td>
</tr>
</tbody>
</table>
Chapter

VI. ORGANIC ARCHITECTURE AS FINE ART .... 81
   1. The Meaning of Art and Fine Arts ... 81
   2. Decoration and Ornamentation .... 83

VII. CONCLUSION ............... 86

BIBLIOGRAPHY ................. 99

PERSONAL QUALIFICATIONS ....... 102
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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. AN UNDERSTANDING OF THE PROBLEM</td>
<td>1</td>
</tr>
<tr>
<td>1. The Problem</td>
<td>1</td>
</tr>
<tr>
<td>a. General Statement</td>
<td>1</td>
</tr>
<tr>
<td>b. Specific Problems</td>
<td>1</td>
</tr>
<tr>
<td>c. Definition of Terms</td>
<td>1</td>
</tr>
<tr>
<td>d. Delimitations</td>
<td>1</td>
</tr>
<tr>
<td>2. Basic Assumptions</td>
<td>6</td>
</tr>
<tr>
<td>3. Basic Hypotheses</td>
<td>7</td>
</tr>
<tr>
<td>4. The Need for the Study</td>
<td>7</td>
</tr>
<tr>
<td>5. Incidence of the Problem</td>
<td>7</td>
</tr>
<tr>
<td>6. Related Literature</td>
<td>7</td>
</tr>
<tr>
<td>II. THE HISTORY OF ARCHITECTURE</td>
<td>8</td>
</tr>
<tr>
<td>1. A general Survey</td>
<td>8</td>
</tr>
<tr>
<td>2. Ancient Architecture</td>
<td>8</td>
</tr>
<tr>
<td>3. Medieval Architecture</td>
<td>8</td>
</tr>
<tr>
<td>4. Renaissance Architecture</td>
<td>8</td>
</tr>
<tr>
<td>5. Modern Architecture</td>
<td>8</td>
</tr>
<tr>
<td>6. Oriental Architecture</td>
<td>8</td>
</tr>
<tr>
<td>7. Organic Architecture</td>
<td>8</td>
</tr>
<tr>
<td>III. A PORTRAIT OF MR. FRANK LLOYD WRIGHT</td>
<td>45</td>
</tr>
<tr>
<td>1. Architect and Architecture</td>
<td>45</td>
</tr>
<tr>
<td>2. The Architect and His Environment</td>
<td>47</td>
</tr>
<tr>
<td>3. The Fountain of Energy</td>
<td>48</td>
</tr>
<tr>
<td>4. The Genius</td>
<td>50</td>
</tr>
<tr>
<td>5. Temperament</td>
<td>51</td>
</tr>
<tr>
<td>6. The Creation</td>
<td>52</td>
</tr>
<tr>
<td>7. Emotion and Heightened Emotion</td>
<td>54</td>
</tr>
<tr>
<td>IV. THE FAITH THAT ORIGINATES ORGANIC ARCHITECTURE</td>
<td>56</td>
</tr>
<tr>
<td>1. The Religion of Unitarianism</td>
<td>56</td>
</tr>
<tr>
<td>2. The Religious Attitude of Organic Architecture</td>
<td>57</td>
</tr>
<tr>
<td>3. Love and Hatred</td>
<td>61</td>
</tr>
<tr>
<td>V. THE PRINCIPLES OF ORGANIC ARCHITECTURE</td>
<td>64</td>
</tr>
<tr>
<td>1. The Nature of Material</td>
<td>64</td>
</tr>
<tr>
<td>2. The Concept of Space</td>
<td>68</td>
</tr>
<tr>
<td>3. Organic Structure</td>
<td>71</td>
</tr>
<tr>
<td>4. Interior and Exterior Space</td>
<td>73</td>
</tr>
<tr>
<td>5. Terrain—Wind and Water</td>
<td>77</td>
</tr>
<tr>
<td>Chapter</td>
<td>Page</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>VI. ORGANIC ARCHITECTURE AS FINE ART</td>
<td>81</td>
</tr>
<tr>
<td>1. The Meaning of Art and Fine Arts</td>
<td>81</td>
</tr>
<tr>
<td>2. Decoration and Ornamentation</td>
<td>83</td>
</tr>
<tr>
<td>VII. CONCLUSION</td>
<td>86</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>100</td>
</tr>
</tbody>
</table>
MANUSCRIPT THESSES

Unpublished theses submitted for the master's degree are deposited in the Florida Southern College Library and are available for inspection. Use of any thesis is limited by rights of the author. Bibliographical references may be noted, but passages may not be copied unless the author has given permission. Credit must be given in subsequent written or published work.

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A similar approach was taken in the

A similar approach was taken in the

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CHAPTER I
AN UNDERSTANDING OF THE PROBLEM

The Problem

General Statement

The purpose of this thesis is to determine the area of possible identification between a subjective appreciation and an objective investigation of Frank Lloyd Wright's architecture.

Specific Problems

This thesis attempts to build a bridge between the subjective appreciation—understood from within\(^1\)—and the objective investigation of Wright's architecture.

This bridge, however, will not be of concrete, upon which one might stand still peacefully, statically, and watch the opposite bank, but rather it will be in the form of an abstraction, invisible, like a geometrical line without time or space. It will be a bridge from which one might fall off to one side or the other into the trap of personal concept (subjectivity) or the pit of superficial observation (objectivity).

The specific problem is to eliminate that gulf with its pitfalls on either side, and to arrive at a unity of approach to Mr. Wright's architecture, one which will relate the elements of objectivity to the essence of subjectivity—a unity which will furnish a real philosophical approach.

\(^1\) Wright, *When Democracy Builds*, Foreword, p. vi.
Moreover, the problem is also to interpret the extent of writer's understanding about Mr. Wright's architecture by using common words and terminology so that it will imply a framework to one who could organize, out of his own life experiences, an esthetic experience and use it as a tool to open the treasury of the art of organic architecture. Everyone, as we may recognize, has, to a certain extent, some sense of beauty consciously or unconsciously, as well as everyone having life experiences. Those who might not have esthetic experience systematically must have fragments of experience in their daily life. All that we need is to reconstruct those fragments into a unity which will be ready to serve as the instrument of observing, detecting, appreciating, and creating beauty.

This interpretation will be brought out in such a way that it could be useful for architects as well as laymen, because organic architecture is built out of human experiences and brought back to human life. The connection between them is now so close that architecture is no longer a privilege of architects but the common property of men of practical affairs. Architecture is the kind of fine art which cannot be hidden in museums but is the one which will exist as long as living and a place to live are needed by human beings.

Considering architecture as an act of expression, we will notice that it has its own language. To put architecture

language into words is merely an act of translation. As we know, the beauty in a particular language will partly disappear or even sometimes be entirely lost in translation. Especially for architecture or any other fine arts we have no exact substitute. "Philosophical approach" in the title of this thesis means again a bridge or ferry from one language to another.

Nevertheless, the word "approach" will probably answer the question, "How to get there?" and help those who wish to build up within themselves, using their own previous experiences as raw materials, a bridge or ferry which furnishes an approach to the realm of Wright's architecture.

**Definition of Terms**

"Architecture"—Art or science of the design of buildings, bridges, walks, gardens, fountains, and other man-made features of the landscape in harmony with the natural setting and the potentialities of the terrain.

"Organic architecture"—A term used by Frank Lloyd Wright to differentiate his architecture from that of others. It is the architecture with a characteristic concept of building as space for human occupancy—-to design building is to design space instead of designing walls and roof which are merely the boundaries of space—-designed in such way that it grows from within, out of a certain philosophical idea, like the growing process in the organic body of human beings. The achievement of beauty
lies in the functioning of structure for its own sake without considering the restriction of materials available or any other outside requirements; and the nature of the materials will be fulfilled at the same time to perform their own beauty out of the continuity of the functioning of structure. The meaning of the word "organic" has been extensively and intensively widened and deepened by Mr. Wright as he has used it to express his idea of potentiality, vitality, and harmony of growing things.

"Structure"--The skeleton or frame of a certain organism. As far as organic architecture is concerned, buildings are compared with living organisms. No distinct line will be drawn between the skeleton of a building and its parts. The term, therefore, is used rather in an abstract sense.

"Function"--The mode of action by which a basic principle grows freely to fulfill its purpose. It is the energy in the state of potentiality.

"Form"--A particular end-in-view which we visualize at a particular time out of an infinite number of ends-in-view in a continual growing process of a certain function. It is a static point on a line of motion; a crystallization in a changing operation. "There is the fluid, elastic period of becoming, as in the plan, when possibilities are infinite." Mr. Wright says, "Now effects may then originate from idea or principle that conceives. Once
form is achieved, however, that possibility is dead so far as it is a positive creative flux."³

"Democracy"--A nonpolitical form of buildable ideal world in which there is a greater possibility for the growth of individuality and more freedom. That is to say, an individual is to be considered as an independent unit which can express itself in its own way into the highest possible form and yet will not be inconsistent with a harmonious whole.⁴ Hence, it is called the gospel of individuality⁵ (not individualism) and the new religion of the modern era.

"Taliesin"--The name of a Welsh poet. Literally the Welsh word means "shining brow."⁶ Mr. Frank Lloyd Wright uses it as a name for his house in Spring Green, Wisconsin; he describes his own building as a shining brow of the hill, in Spring Green, on which the building is located.

**Delimitations**

The philosophical interpretation of Mr. Wright's architecture will be limited to concepts explicit or implied in Mr. Wright's own statements or to the understanding of that

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4. Ibid., p. 23.
architecture derived by the investigator during his study as an apprentice of Mr. Wright. The terminology and phraseology are also confined, because of the limit of time, to identifying the meaning of words used by Wright in his expression with those in common usage or used by other philosophers and writers.

**Basic Assumptions**

It is assumed:

1. That the architecture created or envisioned by an architect expresses his philosophy.

2. That such a philosophy may be discovered both through the written and spoken words of the architect and through a functional approach to his architecture.

**Basic Hypothesis**

Organic architecture is like a seed of a plant, which may be planted in good soil or in bad, in shallow soil or in deep, in dry soil or in moist, in that of a cold climate or that of the tropics. It will germinate and produce to its utmost, only if the factors of climate, soil depth, available minerals, and organic materials are favorable. The investigator proposes the hypothesis that Frank Lloyd Wright's architecture is basically suited to the conditions for which it is designed and organic in itself even though that suitability may be somewhat less than self-evident and not always apparent to the observer; and it can be discovered and made evident when its philosophical principle is properly related to the response of observer's own experience.
It is also proposed that organic architecture is not a kind of new knowledge, which seems so foreign to us that many might think it had to be learned from the very beginning before being added to the sum total of our knowledge or becoming an unrelated part of experience; but it is rather, again, like a seed which can be planted in the soil of one's life experience. It will germinate in its own way through an inner discipline and through practice. Life will be enriched by assimilating this potential energy, which will originate the growth of experience.

The Needs for the Study

"Beauty is truth, truth beauty— that is all
Ye know on earth, and all ye need to know,"

These are the famous lines of Keats. Yet disputes often arise because of the fact that one may see the truth in life but yet be ignorant in the field of creative arts or have no sense of beauty. There may be another fact: an artist can create beauty or see beauty but not see the truth in life or see the truth which is different in meaning from that of scientific explanation.

Here is what Mr. John Dewey points out about what Keats meant by truth: "It denotes the wisdom by which men live, especially 'the lore of good and evil.' And in Keats' mind it was particularly connected with the question of justifying

good and trusting to it in spite of the evil and destruction that abound." And Mr. Dewey adds: "As soon as truth is influenced by science, it signifies the correctness of intellectual statements." These two meanings of truth represent two different attitudes in dealing with it. The conflict seems clear and inevitable. Is there any possibility to reconcile them? When the two statements are properly examined and correctly understood, we will find a reconciliation which lies in the deep understanding of both meanings. We may be led astray in thinking that for these two meanings a unified meaning could be substituted, but there is a better way out which will fulfill both aspects.

The points of view represent, as we may recognize, the two facets of the same thing instead of two different things. A proper relationship between the two facets is to be found in the thing itself. Suppose we quote a line where Wright argues about this point that ". . . true religion is a valid prophecy of everything science may discover." From this proposition if we keep our mind free from superficial detective and filter out the point of argumentation, we will see his concept of relating the two facets of truth—justifying both good and the correctness of intellectual statement.

8. Dewey, Art as Experience, p. 34.
9. Ibid., P. 34.
In the same way a similar proposition could be derived and set up as the hypothesis in this study: Art, the creation of beauty, shows the direction of everything science may follow. It is true that the kind of truth in which art is interested is something eternal in which accuracy or correctness of statement has not yet been achieved. Science would say that truth is factual; science being interested in facts.

Argument often occurs when the word "eternal" is used. Science denies it because there is to the scientist no such thing as eternity and he cannot conceive of its existence. A notorious title, "idealist," is usually bestowed upon those who talk about eternal truth. Here again the meaning of the word needs to be re-established to prevent basic conflict; even the idealist will acknowledge the non-existence of eternal truth as such. Eternal truth is the direction or goal of a motion or growth which implies and includes the field of all arts. When the meaning is clarified in our minds, we shall not hesitate to use the term as a signal of direction.

Now let us go back to the point of factual truth with which science has been dealing. There is no doubt in trusting facts, because facts are accurate and indicative; but we must not confuse facts with truth. Fact is not truth! A collection or accumulation of facts is not truth either. The relation between truth and fact, we may say, is that truth is the integration of facts; the function of fact. Function here means something either biological or mathematical. When facts grow
quantitatively, truth grows qualitatively. Neither can ever be fixed. Truth will move on while there will always be more facts for science to discover. Shall we say factual truth is one of the ends-in-view of truth which is inseparably related to its direction?

This can be explained and made clearer by the following example: A sign is on the road. An arrow painted on it points east and the sign reads, "To New York." It immediately gives us a sense of direction. But if the sign is not on the road but in a store room, it is the same sign but the arrow and words have no meaning to us as they do not make sense. On the other hand, that sign may make us see in the thing itself, the material used; the work done; the size; the color of paint. Different people may look at the same thing but refer to different aspects of that thing. When one says: "It is a good sign," he may mean that it is good to know the direction, while another may mean it is of good workmanship.

Parables cannot prove a theory because they are partly true, or even contradictory to the fact when the point is misunderstood. Yet we may fine one useful as an explanation or qualification of the point. Discussion, if such there will be, should be brought to the original point instead of dwelling further on the parable, which may lead the discussion astray.

So far, we have been discussing unifying truth and beauty. One might doubt about the importance of the problem. To answer this question the crux lies in the basic problem of human life.
An argument may carry through a long way around a circle and without conclusion or finally questions may come out like: "Fine arts or daily meals, which are more important? What will happen if human beings miss fine arts?" It is not enough to answer that it depends upon the human needs, the consequences or value. As soon as value is considered, fine arts always emerge from the combat, no matter whether immediate value, end-in-view, or the long process be taken into consideration. A meal will show its effect in a few hours but hundreds and thousands of years may be needed to prove the effect of fine arts. Even now, after thousands of years history in the fine arts, there is still no exact criterion to tell us this importance, if we do not see with our mind its meaning behind the material world.

The answer should be self-explanatory in the nature of human beings. As long as human beings exist, fine arts will exist. One cannot miss them as he cannot get rid of them. They are a part in human nature and of that nature. Laymen will have a sense of beauty more or less consciously or unconsciously. By following natural law to build up that sense of beauty through the education in art, especially in the fine arts, is to find a proper balance or way in human life or a properly distributed development of human nature. In other words, human beings are always on the way to live more humanly in order to identify themselves with human beings. We see the beauty in plants, trees, flowers, mountains, rivers,
seas, oceans, and landscapes. There is no standard for mankind to judge the beautifulness of things, but nature leads us to become familiar, to get acquainted with things in the universe in order to recognize the process of change, its verification, those phenomena or expressions which we call beauty or the nature of nature. If we can see beauty in nature, in the universe, why could not we discover the beauty in ourselves as human beings who are a part of nature?

When we come to the modern era, human contact becomes more and more frequent; people can no longer escape from gregarious living; a new way in dealing with the problems of human relationships is desperately needed; human nature needs to be reconsidered, re-examined, and re-established to meet the problem. Science has been applied to mechanical equipment, to needs of daily living, and to discoveries of the material world, but only inadequately in the field of human relations. It may never arrive at a satisfactory stage in that area, but the development of fine arts will point the way toward putting science to work. There is such interrelation that beauty, goodness, and truth are not simply beautiful words, but phrases of a higher accuracy which when brought down to a practical level are guiding human activities. A new explanation of this cooperation will be needed, not only in new words but in expressing the underlying concept in actions. This is our urgent task in our modern time.
Before the "modern society" came into the world during the past century and a half, nations in most parts of the world were in the stage of monarchy, not only in their political aspects but also in their fine arts. An impression or even a fixed idea has been left in peoples' mind through the centuries that fine arts are luxuries exhibited in museums or kept in big families as their private collections. They are far beyond the needs of the rest of the society, not having a close connection with the peoples' daily life.

It is a tragedy that only science was born democratically since the coming of modern society and of modern philosophy, but a democratic fine art is still in the pangs of birth. Unfortunately, many men who have been considered as normal and natural are really freakishly developed and subnormal. One who has his right arm twice as big as his left can easily be seen and will be recognized as subnormal or freakish. Why should we consider one as normal when he has an intelligent mind but is ignorant of a sense of beauty? It is true that men are not alike, that their talents are not uniform in every field. But a proper distribution in development is still indispensable. It does not mean that everybody has to get broad knowledge quantitatively distributed in every field, but it does mean human beings must grow organic, inasmuch as the human body and human nature are organic.

In the realm of the arts, architecture has been considered to be lowest in rank.\textsuperscript{12} This concept has been carried through the long period of history and even still prevails at the present time. This is because of the meaning of architecture was developed from that of housing or building construction. It was designed, built, used, and treated, in a certain sense, as the shell in which human beings could stay and be protected; and upon which, after a long period of improvement, sculptures could be installed, workers in ornamentation and decoration would have a chance to perform so to fit their works to the frame, and pictures, paintings would have enough blank wall space for proper hanging. With such a tradition, many still think in this way and keep up the idea of designing building to meet human practical needs which may not be really practical but habitual and customary. Architecture under the influence of the concept of shelter and shadow-of-wall\textsuperscript{13} will not work for creative art but will struggle for a certain limited beauty under restrictions imposed by outside requirements and by the materials available, and finally compromise to the habitual usage and serve as a slave of sculpture, painting, or decoration. Architecture is devaluated in this way.

So-called modern architecture is being evolved from the old style architecture in different aspects. Organic architecture challenges the old concept of art and architecture in

\textsuperscript{12} Dewey, \textit{Art as Experience}, p. 296.

\textsuperscript{13} Wright, \textit{When Democracy Builds}, p. 4.
its characteristic principle. Maybe it is, on the contrary, to the advantage of architecture to be a lower-ranking fine art so that it will achieve a better and greater result as a practical art in close connection with human daily life. The art comes from human daily life and goes back to life. The organic growth of human beings and their thinking is reflected in the growth of organic architecture. It is a translation of human life or experience in terms of brick, concrete, stone, or wood. It represents an expression of the structure of society, human relationships—a new relation between man and man in a democratic world—human thought and human nature, and translates into a structure of the relationship between material and material, material and ground, building and its environment. An understanding of the structure of the latter will lead to see the structure of the former, and will itself reflect into the life of the one who practices it.

As soon as the concept of translation from one structure to another, as stated in previous paragraph, is reached, the architecture will really become a creative art free from any restriction, and it will be organic. The concept of "lower ranking" will then be clarified in our mind; and a unification of beauty and truth will be in sight.

"Architecture is . . . frozen music," said Schilliz. As we know, the composer translates his emotion in terms of sounds; a symphony is nothing else than
a well developed expression of a complete thought. So in architecture, shall we say that the central idea in an architect's life is expressed in the structure of his architecture.

So far we have been relating the creation of beauty to the aim of organic architecture. Questions often arise as to its practicality. First of all when we talk about practicality we should be clear about its difference from human habits which may not necessarily be correct, and also free ourselves from confusing it with the minor faults in either technic, workmanship, or craftsmanship. The problem of practicality is emerged, as organic architecture functions, into the category of the form of building. Form and function are one, as Mr. Wright says. Form is accomplished by the continuity of function. There could be no separation between form and function, nor between practicality and function. Our human body is also a form of our organic functioning or the continuity of organic growth. To discuss the practicality of human body would produce some strange questions, such as: "Shall we have two more arms, or shall we have more brain?"

We do not ask about the practicality of human body, but science tells us that the human being gradually changes his function and that his physical parts are changing by evolution. Our

brains do increase, many physical parts become useless, and
the shape of bones changes, but we are used to letting nature
take its course. Nevertheless, we do have an approach to
the problem of practicality of our body which is an abstract
thinking, as the continuity of our functioning does not really
stop with the surface of our skin. When we use a hammer
to do some work, the tool is inseparable from us in dealing
with the work, and becomes a prolongation of the continuity
of functioning except for the addition of a time factor—a
particular tool is used at a particular time. Organic archi-
tecture can be compared with this. As far as continuity of
function is concerned there is no final form for a building
and no ultimate practicality either.

Organic architecture has no finality and sets no style
or standard which can be imitated and used everywhere. It
needs to be developed, cherished, interpreted, practiced so
that it can be a light thrown into human life, be the conduct
of life and an approach to reintegration of the human mind
toward discovering human nature.

Incidence of the Problem

The writer, as an engineer in China, dissatisfied with
the transplanting of scientific effects from Western civiliza-
tion, came to America to learn something of her culture,
civilization, religion, and philosophy. He hoped to under-
stand the cause of the scientific effect, the function that
originates the scientific era, and structure of her society. While studying under Mr. Wright, he began to sense the possible philosophical implication of architecture as well as engineering. The presence of Wright's buildings and landscape at Florida Southern College suggested to the writer the local value of such a study.

Related Literature


Newspaper and periodical comment on Mr. Wright's recent receipt of the highest award of the American Institute of Architecture supplements the architect's own statements.
CHAPTER II

THE HISTORY OF ARCHITECTURE

A General Survey

Architecture has a share in culture. When we see it in passive form, it is the reflection of civilization. Positively speaking, architecture is the prophecy of civilization, or, shall we say, it tells the tendency of its time. In any case architecture is so closely connected with human thinking and human activities that its study needs to be related to the history of mankind.

No matter whether the architectural development is evolutionary or revolutionary in sequence, or whether it is imitative, eclectic, or creative in its expression, we can always formulate the law of its change in history. From that law of change, we see the exact meaning, the original purpose, and the ultimate goal at which a certain type of architecture aims. If we can lay our finger on the right point, our question will be simplified, our concept will be clarified, and our problem is half solved.

But what is history, and what does it look like? History is the recorded phenomena of the organic growth of the world. It is not like a stairway with so many steps, but more like an inclined plane on which everything moves an smoothly and everything grows and decays naturally. In formulating the tendency of the inclined plane, we do it simply by measuring its angle. In the case of history, abstract concept and systematic thinking have to take the place of measurement.
We see from history that the ages are divided into eras to mark a sudden change. It seems to us there are certain steps in the process of change. As a matter of fact, these periods represent the general agreement among the concepts of historians. The distinction between eras depends upon the analysis of those who see it. Actually the demarcation is flexible, invisible, and abstract. Especially in our study of architecture, we can distinguish steps, but we must be aware of the smooth flowing and organic nature of the growing architectural history. Then a deep and transitional meaning of architecture will be displayed before us.

The history of architecture, which the writer is trying to relate in this chapter, will be the historical development of the meaning of the word architecture, rather than an attempt to collect the facts or discuss the famous works of architects through the centuries. When we see, however, one aspect of a certain subject, it gives us an idea of the whole. The growth of language, particularly, will adequately show us the structure of culture. As culture is a unity like an organic body, it goes on with accumulated interactions of human activities. Communication among peoples creates changes in the whole process which again produce new tools to meet the need of more frequent communication. All changes are reflected in language.

Language being not at all static, the meaning of words expands extensively and intensively when men use them. When
it grows to a certain limit, a word may split into two or more words which will represent different aspects of the original from which some old meaning may drop off and become obsolete, and a new meaning may grow out of the new pattern. Sometimes the same word needs to be qualified and modified by another word to differ from the original meaning. In the case of organic architecture, it is an expansion of meaning.

The word, "architecture," has had quite a difference in its meaning through the ages, as it changed its boundaries and limited its field all the way through history. For instance, we may pick up any general definition for architecture, such as:

Architecture is the science and art of building structures that, while in most cases they serve a useful purpose, are in all cases designed and built with a view to beauty. Their motive is beauty as well as utility.¹

Very few will think of monumental construction in ancient Egypt, or Gothic cathedrals of Middle Ages, but many will refer to their own houses or any public buildings located in their native town. When, therefore, we study a certain type or style of architecture, a question like: "What kind of architecture are we talking about?" will limit the extent of our concept so as to concentrate the discussion at the right point.

Architecture is but a particular language used by a particular architect to express his ideal or ideas intending

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¹ Caffin, How to Study Architecture, p. 5.
to achieve his own purpose and to meet the human needs in his time. This particular language will be our point. Unnecessary troubles will be eliminated if we lay our inquiry by leading our questions to: "What does the architect mean by architecture? What is the architect trying to achieve? What is the central idea and philosophical principle which his architecture imply?"

Organic architecture has its own field, but all architecture, if we consider it through the long stretches of history, must be organic to a certain extent. We have said previously that architecture, culture, and civilization are generally in harmony. Culture, civilization, and the history of the universe grow by following natural law, or, shall we say, organically. Then architecture must also have followed the law of nature and be organic.

Ancient, and primitive man used local materials or whatever others they could possibly get to build tombs for their leaders and heroes. Those materials must have been fitted to the local conditions. Modern civilization comes along; people use pre-fabricated, machine-made bathrooms to meet their new requirements. All fitness in harmony with the time and condition may be called organic. The plan of the building and the facade of the building are usually required to be harmonious in designing architecture. Moreover, the beauty expressed by the architect generally has been appropriate to the taste of his time; it must be also a common language that he is using. Can all these phenomena in architecture be considered as organic?
Organic architecture, in fact, such as that which Mr. Wright uses to stand for his work has its special and profound meaning which should be distinguished from the others. The subtle difference between them lies at the point of whether it is passive or active in mood and action. Organic architecture is not brought up in a process of unconscious and passive growth, but it passes through an intellectual phase and goes ahead of its time with an active potentiality in harmony, not only with the organic self and life of the architect himself but also with the life of the future or the conduct of life.

**Ancient Architecture**

If we trace far enough back in the history of architecture, we will find that architecture was originally developed from the study of archaeology.

Primitive men put up stones to mark the burial place of dead heroes. This art, as we may note, is to express their idea of respect for the hero. It is also to recall to memory the hero's brave deeds so as to encourage the living to stand up against outside attack. The stone then became a symbol and was used as an object to ward off evil spirits, which actually meant the fear of invasion beyond their defensive ability and control. The symbol has its broader meaning when it was used as a sign of education to tell their successors the heroic story. The rudimentary and earliest form of architecture then was simply a huge stone or a pile of rocks, attached to which there were actually many significant ideas.
From history we will see some facts as following:

More important, however, archaeologically, as well as in relation to the subsequent story of buildings, as it gradually developed into the art of architecture are: the huge stone, known as a Menhir; the Calgal or Cairn of stones piled in a heap, the Tumulus or Barrow composed of a mound of earth, and the Cromlech. 2

Architecture, therefore, was primarily ideational, symbolic, showing rudimentary ideas of religion, significant as a representation of faith rather than practical for utilitarian purposes. As far as art is concerned, primitive architecture was not considered to be in its realm.

We may realize, however, that putting up stones or piling up rocks is already a preparatory step, ready to become art. It is obvious that ancient history tells us how ideas originated the creation of art. Ideas are the energy of human evolution, and religion and art are their twins.

This principle in the art of architecture has been preserved through thousands of years. Even in modern times it is still new. The form of the ideas, of course, has been refined, changed, and developed into a more complicated expression, but the principle remains.

In order to see the further improvement out of the primitive architecture, a transition of the single stone or stone pile period to the next stage, we have to look at the other aspects of human activities at that time. Primitive men were cave and cliff-dwellers like the apes, or residents of leafy bower in the forests like the monkeys. Instinct and

sense of survival made them figure out the way of living. The earliest example of dwelling, the cave and bower building, shows us their way of protecting themselves from dangers of enemies' attack, the enormous heat of the sun, wet swamp in the jungle, torrential thunderstorms, and floods. All these natural forces—social forces produced out of their society of beasts, other animals, and fellow men—put them into action. They were forced to deal with substances used as tools and with other materials besides their own physical bodies. Stone, earth, and trees were the most common materials they could find. A relationship, therefore, between these substances and man was established. This relation caused the growth of skill and technique in treating stone, earth, and trees. A primitive form of craftsmanship then came into maturity and served the world.

All sorts of human activities are by virtue of their very natures interwoven together to form an organic living. Craftsmanship, produced out of human activities, could not escape from this natural law. Primitive craft, as we have previously mentioned, was influenced greatly by the idea and work of putting up stones and piling up rocks. The work of monumental construction was then the product of the application of primitive men's skills and of his training in treating materials, which was, in turn, the meeting of ideas and action, sensation, and craftsmanship; a communication of two different aspects of experiences; the product of enrichment of life. It was the first marriage of faith and action in history. The
art of architecture was then born as one of their sons, while religion was the other.

This primitive architecture arrived at its completion and maturity, and expressed its consequence in Egyptian civilization at the period of 1600-1000 B.C. The construction of pyramids a millenium and a half earlier had shown a remarkable step forward in the history of architecture. We may consider a line of demarcation which can be drawn up to this period, because a separated architectural period will show its further development of ideas from now on. The idea of pyramid as set forth by Caffin will give us a natural conclusion for primitive architecture:

The single stone seems to have been regarded as an object of veneration and a fetish to ward off evil spirits. It may have been the primitive origin of the Egyptian Obelisk, the Greek stele, and the modern tombstone. From the Galgal and barrow may have developed the pyramid of Egypt.3

All those works of construction in ancient times produced interactions and inter-reactions among themselves. The domestic buildings and public buildings in different towns and cities influenced the work of pyramids. The construction of pyramids influenced the architecture of the temples and palaces. Until construction became more and more complicated and refined, it formed a special field we call architecture, and special workers were charged with this task. Skills and crafts were then specialized and out of those works there came the concept of post and beam for the magnificent construction of temples which rooted as an original idea in the succeeding architectural period.

New civilization is always born after the meeting of two or several different cultures. So is architecture. It will change its style, refine its form, widen its meaning when different groups of people communicate. They will have conflicts in the way of living and thinking, but later they will absorb, assimilate, and naturalize one by another and in another.

Ancient Egypt was called the "gift of the Nile" and had arrived at its highest peak of civilization at tenth century B.C. At the same time, a new civilization had been spread along Mesopotamiam valley, that of the Babylonians, Assyrians, and, later, the Chaldeans. Their architecture expressed itself in brick construction but was insignificant compared with that of Egyptians. Later, the Persians took over the flourishing age; produced a change in the style of architecture.

At about the same period as that of Egypt's zenith, another culture called the "Minaen" or "Aegean" civilization grew up in the Mediterranean. Later these cultures fused. All these interweaving processes in history foreshadowed the birth of Hellenic civilization and laid the foundation for the famous classical architecture.

Out of the intercommunication of those crude civilizations in the earliest of ancient times, Hellenic civilization came to a stage of more complete form, delicacy, and refinement. In architecture, the Greeks took the ideas and the concept of post and beam, and refined them by combining with this new ideal of beauty, which is:
Perfection of physical development, joined to higher intellectual development and the finest development of the sense. It was an ideal that involved the possible perfection of the whole man, a harmony of body, senses, and intellect. 4

And because of the coming of great philosophers, the whole process was strengthened by a philosophical background. Plato taught that "the Good is the Beautiful, the Beautiful the Good." The sense of art began to be guided by the intellect; religious ideas became more and more clear; art was then purposely invited into action to express the ideas.

Doric, Ionic, and Corinthian Orders in classic architecture represent some of the products of Hellenic civilization. The proportion of the height and diameter of the columns shows their sense of rhythmical relation. Sculpture as ornament on columns entableture shows their sense of beauty recognized by them in the perfection of human physical body. Undeveloped forms of the temples present the superior dignity of design. The meaning of architecture was then developed by Hellenes in the sense of design.

It was the Romans who took over the ideas of Hellenes and derived into another aspiration. As Romans were invaders, the establishment of Roman Empire functioned to produce their strong constructive organization. Their individualism produced practical builders, constructors, and engineers. This enormous influence enlarged the field of architecture to an

art of engineering. A new concept of architecture was thus created to carry out the Romans' practical sense and energy and the faculties of reasoning and of taste from the Hellenes.

The Roman Empire advanced eastward with its superior military power at a time when Christianity grew aggressively spreading westward. When Christian civilization arrived at Rome, the classic period came to its maturity and, after an interludes of Mohammedan civilization, to an end. Christianity provoked an influence in the Roman world that was enormous. A vast amount of manpower had been concentrated by the religious movement to contribute in the construction of churches and cathedrals. It is an expression of religious belief, energy produced out of worship of God. Art of architecture was applied in that expression and was developed and refined out of their impressions. This meaning in late Roman and Byzantine architecture has been carried through centuries and preserved even to the present.

Medieval Architecture

The period of the early Middle Ages covers the period from the fifth to the twelfth century, which is known as the Romanesque, Gothic period. It was the age of scholastics. The clergy were the authority of society, and civilization was in their hands. Architecture was a kind of sacred science controlled by them and practised by them.

Due to the social conditions in different parts of the world and local conditions where materials were in shortage
and skillful workmen were near the way of construction was thus simplified. Columns were turned into piers, but style as well as structure followed the Roman method.

Later in this period the Gothic order was produced through the medieval civilization. Gothic originally meant barbarian. As compared to the classic and Roman civilization, the rest of the world was considered as barbarian. Actually the countries outside of Roman Empire absorbed its civilization as well as the art of construction and ideas of architecture and developed according to their own way. Therefore the Gothic style represents a number of different styles to express different individualities of different places, besides classic and Roman style, rather than to follow a certain pattern or standard. The effect was expressed in many aspects as in variable forms of columns and piers, different conventionalizations used as ornaments in columns, wide use of vaultings, development of pointed arches—a characteristic feature of Gothic architecture (called "Ogival" in French)—and new designs in window openings.

If we sum up all these features in the period of the later Middle Ages, we will see that the meaning of architecture was expanding extensively rather than intensively. It was an age of development, the ideas, techniques, way of construction were widely applied in different places and in different constructional work.
Renaissance Architecture

Medieval art was considered as the degeneration of ancient art by the men of the Renaissance and that before the consolidation and outside the Italian world there was nothing but barbarism and confusion. Actually, however, the Medieval ideas, imagination, belief, knowledge, and the intercommunication between the peoples of the Occidental world fertilized the birth of new spirit which is expressed later in art. The spirit of the north during the Middle Ages with her individuality has flowed back and formed a kind of energy used for the coming of the new age.

Following the movement of Reformation, everything was under the situation of seeking liberation. It influenced in the field of art. Renaissance originally means rebirth. The new spirit spread all over the places and stimulated the ideas of "Revival of Learning." It brought about the invention of printing; the sudden and irresistible rise of sculpture, painting, music, and literature which closed the scene of Middle Ages, and decomposed the Gothic architecture, the architectural unity. The art of architecture was then split into a number of arts to perform their own character, and architecture itself had come out with its own new aspect.

It is worthwhile to look at the nature of the Renaissance civilization. Since that time, people changed their attitude toward life. The people began to inquire intensively

about what had happened to the world and laid their faith less and less upon the imagination of future existence. Their ideas became more concrete and practical, and free from the restraint out of the schools of the Middle Ages. This way of thinking and life expressed in every direction of the new civilization as well as in the art of architecture. It can be distinctly recognized from the history that the form of architecture has become less generalized, imaginative, abstract, and symbolic, but more individualized, practical, concrete, and naturalistic. It has been known by the historians that the Renaissance period is the period of "Humanistic spirit." Architecture is also said to be more "humanized."

Modern Architecture

As we have been saying that culture is organic, every different aspect of the culture are interrelated together and influenced by each other. So does architecture, the style of architecture, the way of construction, technique in engineering have been widely applied in all kinds of constructional work. Although architecture, since the beginning of the modern age, has not been regarded as the religious art. When we say architecture, we cannot get away from the idea of big churches, magnificent cathedrals so to represent a universal idea or the meaning of architecture. This idea was carried through the centuries until the close of the Renaissance period.

We do not say that there is a sharp break in the whole process of history which separates the last day of Renaissance
period from the opening of modern age. The art of architecture was applied in the public buildings, public works, civil construction far before Renaissance, even in the ancient times, but it has become a distinct feature through social consciousness only since the rise of modern society.

This feature, however, does not create a special style to represent a certain period, as in the early history the different Orders represent the different ages. But, on the contrary, it produces a certain situation conditioning a greater development of individualism and becoming more cosmopolitan. This situation came from the fact that the art of architecture, arriving at this era, has completely escaped from the hands of craftsmen and come into those of the architect in the role of designer. Architecture is no more the art which imitates the past, follows a pattern or style, and grows unconsciously through craft. But the style and form will change according to the different characteristics of the designers.

This situation does not start, as we understand, from the modern age. Far before Renaissance period this idea has been rooted and practiced. Especially during the latter part of Renaissance, the architects were less concerned with problems of construction than with general beauty of design. Because of different conditions in different countries, the increase of human needs, and the nature of the material available—in the case of American colonial architecture, the use
of brick and wood becomes so popular that a distinct style is distinguished—different designs were coming out from different architects.

Hence, to study modern architecture, we must have an attitude different from that of the student of the historic styles of architecture. The problem may be much more complicated, but it will give us a deeper understanding of the meaning of architecture. At the beginning of the modern era, the art of architecture comes closer and closer to daily living. To study architecture is no longer an affair of appreciation of ornaments and decorations but rather a test of its consequences as a product of an expression and contribution to the living. Social conditions, the background of the architect, his personality and individuality, his philosophy and future influence are the elements of the problem of modern architecture.

**Oriental Architecture**

So far we have been dealing with occidental architecture, Organic architecture, no doubt, occurs in the Occidental world, and is developed through western civilization, fertilized by western ideas, and brought up in western civilization. To talk about Oriental architecture might seem to be breaking the continuity of the evolitional treatment. We might be surprised, however, to see that all arts come from the one origin. The Oriental philosophy of art will illustrate the principle of organic architecture to a great extent. The similarities between the principle of organic architecture and the Oriental
philosophy of art will help us to understand deeper the problem, and to study Oriental architecture will thus serve an important part of our problem.

Generally speaking, the term "Oriental" includes India, China, and Japan, which are the three main branches, especially in the study of art. There are, of course, many other parts which have their own characteristic, but we may consider them as sub-branches. Even Japan, before it was influenced by western civilization, could be reduced to the Chinese branch, and also between Indian and Chinese art Indian art is closer to that of the Occident because of continuous communication, especially with the Greeks. Chinese art is considered to have an independent characteristic which is beyond the common understanding of the Occidental world. It will be discussed more at a later place in this study.

It is said that the ancient Indian civilization starts a thousand or two thousand years, perhaps, earlier than the epics of Greece. The communication between India and the Occident existed early before the Middle Ages. The tribes of Iran left the high plateau and descended toward the horizon of the great plains. They found different country, soil, climate, rivers, and trees. The life was easy as the soil nourished the vegetation, roots, fruit, and grain, but death was irresistible because of the fierce seasons. The changeable aspect of nature germinates the intoxication of the senses

among the people. Pantheistic view was raised out of the intoxication of life and originated the science, the religion, and the philosophy of the Indians. Until the great era of Buddhism had been embedded by Sakyamuni, the Buddha, out of the flood of pantheistic intoxication.

Alexander, at a century after the time of the Buddha, reached the banks of Indus. A social revolution was going on in the peaceful and rich peninsula. The meeting of these two civilizations produced what we call Indo-Hellenistic Art. The architecture was developed in different sculptures and in the building of temples. All beasts, trees, and flowers served as the object to represent their gods, which they came to love. These passionate beliefs have been expressed in the work of architecture, and the religious spirits rise one after another to produce marvelous architectural works.

Art in India still follows the continuity of the Occident being one of the links of the system in art. China, on the other hand, departs entirely from the system beyond all understanding, and drifts away from the main stream to form another branch. To study Chinese art and architecture is to study another language. If one does not learn a new way of thinking and a new attitude toward art, he might find very little art and architecture in China. It is not an exaggeration to say that if one keeps out the presupposition that China is a country of art and brings with him the Western standard of art he will see very poor, childish, and funny architecture in China. During the 19th century, Occidental painting

developed every kind of technique to express the three dimensional feeling of a painting, while Chinese painting over thousands of years has remained unchanged, working in one plane, producing an impression of being flat and bare. 

Music in China is monotonous like common folk music in comparison with the Beethoven's symphonies. Architecture is uniform everywhere, without variety, and can only be classified within the category of industry of building construction. The philosophical background of this art is also beyond the Occidental system, as the Chinese philosophy is considered to be the way of thinking of the hermits who escape from life.

If we reorganize our thinking in another way or else go deeper to search the origin of all human thinking, we will see the universe as a whole. Chinese art is the other facet of the world, a part of the whole, the other end of the link. Considering the other facet of the world, we will be challenged by an entirely new concept. Ideas which have been shut off from the Occidental world will begin to be recognized for their one-sided concept. We must not take over the other concept and add to the other to make it a whole of that which can never be a whole, but a deep understanding of both concepts will make us aware of the coming truth. That is, the sum of the parts is equal to the whole of its parts. Organic art is the product of this truth.

The geographical conditions made the Chinese people mild, calm, and tranquil. Generally speaking, the people in China are religious, but there is little temperament in their nature as intoxication and passion. Christianity has taken its place
in Occidental world very naturally, and Buddhism arose in India, while in China both Christianity and Buddhism appear in a quite different form. Religions, when they come to the mild region, are soon diluted and become humanized and practical. Jesus could not have had the chance to be crucified and establish the symbol for Christianity in China. Buddha would not have sacrificed himself to feed the hungry tiger who was intending to eat its own baby tiger. The wisdom of Confucius teaches how a well-balanced middle way can be reached, instead of having to choose between the two extremes. It represents the typical way of Chinese thinking. The hermitistic philosophy of Lao-tze, which is not at all pessimistic, negativistic, passive, or escaping from life as many Occidentals suppose, pictures the temperament, life attitude, concept of time and space-relation with the universe. Long before the coming of modern society, religion in China was considered as a science of human relations. Gods are not "divinity" but friends of human beings. Ghosts are their enemies. Even those superstitious stories having myths are the stories of human beings instead of divine miracles. These characteristics give a way for the people to relate their thinking with real objects of the world. This can be seen from the paintings and decorations in architecture. The variety is so wide that birds, beasts, trees, flowers, and leaves are used as models. The idea of using these material things is not to express worship or love, as it is in India, but to show their artistic point of view and a certain abstract training in seeing the inner character of the things.
The process of Chinese art has been shown to be opposite to that of the Occident. It is a matter of common sense to understand that the artistic view is arrived at first, by contact with material objects, and then by improving the abstraction, impression, or imagination. But in Chinese painting, one will first get the abstract ideas and then find any kind of material with which to express these ideas. In their thinking, abstraction is reality. They are so practiced in this their whole life and live that way. This concept is applied to every aspect of daily life. The philosophy of Lao-tze teaches that the non-existent being does not represent a concept of inferiority of the physical body but one of emphasizing the reality of space outside of the physical body.

One of the proverbs in relation to Chinese painting says: "Thousands and millions of trees; not a single stroke of the painter's brush represents a real tree. Thousands and millions of mountains; not a single stroke of the painter's brush represents a real mountain. Thousands and millions of strokes; not a single stroke looks like a real stroke. Where the thing really is, there will be nothing. Where there is emptiness of space, it shows the existence of reality."

We may realize the fact that most famous painters in China, especially before influenced by western civilization, are not professionals but scholars and philosophers. They see truth in life and paint to express their sense of beauty without special technique. Yet their works are considered as
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creative, which controls the thinking in the field of art
through the centuries. Those many professional painters are
usually considered as artisans and technicians. On the con-
trary, in the Occidental world, a painter may learn philosophy
and become a philosopher through the training of art, but he
is not necessarily to be a philosopher. And he, on the other
hand, cannot be an artist without learning some technique.
There may be a basic difference in their principles, yet they
are of the same origin.

The art of architecture is not so much concerned in China
as it is in the Occident. Training and practicing in art had
been developed mostly through paintings and, later, was applied
in architecture. No doubt, the construction of temples, pa-
godas, frescoes, caves, and works of sculpture are the part
of religious art which has come from India, but the structure
of all the constructional work, the roofs of the building,
the bridges, the decorations and ornaments are from native
ideas which is so different in aspect. Abstract modeling
and conventional figures of animals, trees, birds, flowers,
human bodies are applied to the decorative art in architec-
ture. Another characteristic feature in Chinese architecture
is the use of colors. Many varieties of colors, as red, blue,
green, yellow, purple, are used to enrich the sensual feeling
of the building which can seldom be seen in any other part of
the world.

The constructional part of architecture is still not the
main work in the art of Chinese architecture, because it
belongs to the work of artisans, craftsmen, and technicians, except for the interior decoration, the paintings and calligraphy. The more important task is the design of garden and settings, the fitness of buildings, bridges, bowers, esplanades, porches, verandas, to the landscape. It seems not to be a new concept in Occidental architecture, as the same problem is also being considered, but the concept toward the surroundings is a different one. The design is attempting to arrive at such a point as the building becomes a part of nature instead of trying to conquer nature. A special field has been classified from architecture called "Wind and Water." It is an art of the terrain, with which the character, the individuality, and psychological effect to human response of the land, mountains, rivers, streams are studied besides the consideration of the climate of the region, as well as the quality of the soil.

The same principle can be found in painting. The landscape is higher in rank, while Occidental painting expresses its strength in human figures, as the beauty in the structure of human body has been considered in connection with the soul. Landscape painting in China is not limited by the form and view of the natural beauty, but the painter sees with his mind the inner character of surroundings and with the abstract idea he translates into line, color, and form. It is a reality of the communication between the artist and nature. Poets use a special language to describe mountains, rivers, and trees. Painters use the brush to create their own language.
The study of terrain came from the philosophical principle of cosmology. The concept of space leads men's thinking to recognize a new reality. It gives the artist a training in sensitizing his feeling to respond to the beauty in nature. This knowledge has been developed in a more or less scientific method, but higher accuracy has not been reached because of a lack of a new science for its tool. A part of this learning, therefore, seems somewhat magical. It can tell us, however, how architecture in China has been influenced by the philosophy of terrain and has in it roots a tendency for future improvement.

Organic Architecture

As we understand from previous statements, architecture, in any form, is organic. It represents, and expresses the contemporary human activities. It grows and changes when civilization grows and changes. But this growth and change may be following a natural law unconsciously, because art always remains in the realm of sensation, intuitive motif, and as a product of the senses, whether or not guided by intellect. So far, the art of architecture has not become an effective instrument to represent human intelligence and go ahead of its time to influence human behavior. In this sense old architecture is only organic to a limited extent. When the modern era arrived, architecture became more humanized. A necessary change in the process of development came to stage a new scene. It served not only to express the senses or human activity, but also as a new language to express human thinking and intelligence.
Modern architecture is different from that of ancient, Hellenistic, Roman, and medieval cultures because the old represents a certain style and implies the taste of that age. Modern architecture is individualistic, so "modern architecture" is not even a perfect term to use, as it does not classify a uniformity of styles. There can be as many styles as there are architects. Therefore, a different name of architecture to give to the different architects will be necessary.

The term "organic architecture" has been used by Mr. Frank Lloyd Wright since 1908. The idea of the word "organic" came first from the harmonious relationship between ground plan and elevation of building, and the belief that architecture should establish an organic integrity of the whole. Later, in 1914, it was used with a more intensive meaning. Wright stated:

I still believe that the ideal of an organic architecture from the original source, the strength and, fundamentally, the significance of everything even worthy of the name of architecture. And I know that the sense of an organic architecture, once grasped, carries with it in its very nature the discipline of an ideal at whatever cost to self-interest or the established order.

Organic architecture is not a new and strange term which seems foreign but the ideal has its roots far back in history. Democracy made this idea clear and conscious. As Mr. Wright admits: "The ideal of an organic architecture for America was touched by Richardson and Root, and perhaps other men;

8. Wright, On Architecture, p. 35.
but was developing consciously 28 years ago in the practice of Adler and Sullivan when I went to work in their office."

After a continuous process of practicing and developing, organic architecture is becoming, in Wright's mind, more and more human, not only a humanized architecture. The unity of life and work is highly achieved in that the art expression of architecture is a representation of the architect's emotional, intellectual, and social nature. The architecture is the architect himself. One should not, however, trust his own experience too much in evaluating the false and true in architecture. Unless he integrates his experience as an esthetical instrument to discover the life, individuality, psychology, wisdom of the architect, he will not understand the architecture. Here we will conclude the historical development of the meaning of architecture by quoting Mr. Wright's sentences: "I now realize that organic architecture is life and life itself is organic architecture or both are in vain."

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CHAPTER III

A PORTRAIT OF MR. FRANK LLOYD WRIGHT

Architect and Architecture

We have learned from history that old architecture represents the style of its age and pictures the civilization of a particular period, region, and people. New architecture, or modern architecture, differs from the old, because it represents the styles of individuals, the architects. Of course, it tells the story of civilization as well. It should, therefore, be free from imitation, so that the principle of functioning in the whole designing process will be identified with the personality and individuality of the architect. When we see that architecture stands for the architect himself, we are on the right track to understand it. That architecture is the architect is what we need to realize.

Furthermore, the best possible approach to the study and appreciation of architecture is a close and systematic study of the architect's life. For life itself is an art. Considering art as an act of expression, it must be present in the artist's life. The different activities and behaviors of the artist, the way he lives and thinks, the language he speaks, are interwoven to form his personality and are integrated into his way of living, which will display in every aspect of his life.
Generally speaking, human beings have their similarity, so there will be common language among them. Common language means the possible communication of ideas, although there can be many difficulties in this communication. For instance, translations are sometimes necessary. But, at the least, a certain agreement can be reached. On the other hand, no two men are exactly alike because no two life stories in the world are alike. This comes from the different responses of different organic bodies. While life is the integration of responses, it will create its own language to show its dissimilarity and agreements. The study and appreciation of art is a difficult subject because it deals always with the dissimilarity rather than the similarity.

Art can be called real art only when it has its own characteristic and its own way of expression. If we use the common language or our own language as the tool of our response, our understanding of art will be led astray. Imagine how mistaken we would be if we should try to identify the similar sounds between two different languages and so guess their meaning. To eliminate this error we must change our own functions. The study of architect's life will lead us to see the way he functions, which will teach us to discard our habit of using subjective opinion.

It is known that modern architecture has been highly humanized to become a part of daily living. One might trust his own life experience and use it as a tool of response for the appreciation of architecture. It is true that life
experiences are the only tools we could use, yet esthetic concept needs a reconstruction out of life experiences, which are merely raw materials. Art is a language but actually more than language, because it has profound meaning. We could not understand a man by biological analysis only. Psychology probably will be a better tool and philosophy can play a great part.

The Architect and His Environment

Whether we believe it or not, whether we are idealists, materialists, nationalists, or naturalists, life is the product of the interaction between the organic body and its environment. We can not tell how much the environment can influence the organic functioning and how much the mind will produce ideas disregarding the environment. We need not separate it. Art will help us to see the whole. To classify architecture into styles is to exaggerate the effect of environment and neglect the importance of organic functioning. Organic architecture belongs to no style but is itself a whole, the product of organic body and environment.

Organic architecture was born in the prairie of the Middle West, Wisconsin, and was brought up there. It is therefore of prairie nature (not prairie style). Architecture has interested itself in city life and away from nature for centuries, as we see from history. But all arts have their origin in nature. Without nature there could be no
poets, no painters, and no musicians. To go back to nature is to give ourselves the chance to rediscover our conscience in art.

The Fountain of Energy

The environment conditions the function of growth. In the case of plants, the environment is the sunshine, fertilizer, soil, water, and labor. But the thing which grows is the organic self. We suppose it is the cells of the plant. The cells are expanding reservoirs that absorb sunshine, water, and fertilizer. Without suitable environment plants will fail to grow; without the organic cell the substance has nowhere to go. Organic architecture comes out of suitable environment, and it has cells in which creation takes place.

Organic architecture inherited pioneer Welsh blood and has grown through pioneer action. We probably think that the general manner of an artist must be romantic and delicate, because generally painters, musicians, and poets so impress us. But architecture will change this idea because of its solemn and serious attitude. It is the powerful energy that stimulates the growth of organic architecture.

In Wright's Autobiography he states, and has always drilled into his followers, the secret of "add tired to tired and add it again and add it yet again."¹ This he inherited from his grandfather and was trained in it ruthlessly by his

¹. Wright, An Autobiography, p. 17.
uncle. This teaching seems plain and easy, yet it is power for the soul. The limit of adding tired has no standard. Everyone will think he has worked enough, overworked, and added tired to tired. When and how will come the last second of our energy? We can only tell by ourselves. Of course, everyone's capacity and appetite are limited; no one wishes to break or hurt himself through overworking. Organic architecture is the result of a kind of stubbornness that forces the fountain of energy to pour out and use to the last drop, and until the final second. It is not a mere method of treating ourselves, but is the power that directs our actions and attitudes which we might call soul. That is the very foundation on which everything may build.

The following story will illustrate the fact that organic architecture is not an easy matter of creation by a genius born with an extraordinary gift, but is a product of human potential energy. A seven-year-old boy worked to keep air in the bellows for the clergy to play the organ. He pumped the bellows with all his strength until the clergy finished the music of Bach. When his father called him, he made no answer. He was in a coma. It is an easy story to read, but it seldom shows its deep meaning. The boy is of an adding-tired-to-tired nature. The tremendous appetite of doing work is one of the elements of organic architecture. It is the voice from the deepest origin of the human soul, which encourages man to use his last drop of energy. Creation, if there is such a thing in the world, is that last drop of energy. Jesus
taught that, but not many understand it, and very few have it.

The Genius

There should be as many geniuses as there are human beings, but we should not apply this word to anyone unless we understand its meaning. People often call others "genius" when they refer to those who have better gifts and more extraordinary endowment than themselves. In this way they excuse their not being able to create things by complaining that they have no gift. People can easily then escape hardships and hide themselves behind fatalism. Or some may recognize their own talent and profess themselves geniuses because of their better gifts. These persons may fall into the pitfall of egoism.

Actually genius relates very little to better or worse gifts. If we wish to call some man a genius, we must know the man as he is, no more and no less, disregarding his endowments. To conceal one's evil will make him hypocritical. To hide one's good will make him timid. Both have nothing to do with creation. Creation is nothing more than the discovery of one's own nature; a disposition of pure soul; an identification of one's own vision of reality. Religions struggled to accomplish this goal; creative art works under the same banner to try to make man believe in himself, no more and no less. But few can attain their own best. Genius then becomes a beautiful name for these few, and its meaning becomes vague.
The meaning of the words egotistic and egoistic may sometimes be confused. Organic architecture emphasizes the egotistic attitude toward one's self and one's manner toward others; it claims that one develops to his utmost. Wright once said egotistically: "Not only do I intend to be the greatest architect who has yet lived, but the greatest who will ever live. Yes, I intend to be the greatest architect of all time..." Misinterpretation can lead us to misunderstand this as egoism. It is rather a statement of belief in himself than disbelief in others. A deep faith is always egotistical and is the only way to identify one's self. If we change the statement to: "Not only does one intend to be the greatest architect who has yet lived, but the greatest who will ever live. Yes, one can intend to be the greatest architect of all time..." This will be a good definition for individuality. Everyone who develops his individuality to his utmost may be called genius. Organic architecture will realize it and approve it.

Temperament

A man is called a great man when he established himself as a great personality. Great personality is achieved out of general recognition of good or one's good morality. Individuality differs from personality because it deals with the free

development of the individual temperament regardless of the
good or evil which has been in the nature of human beings.
Personality and individuality may meet at a certain point;
yet they have their own ways to arrive there. When we deal
with the general good there is relativity. Individuality,
on the contrary, cannot be compared with any other's development,
but only with the development in one's self. In the realm
of art, individuality is the essence. Art can only be crea-
tive if a particular individuality is developed to an appro-
priate perfection.

If we are compelled to choose between a great man and a
genius for organic architecture, we have to give up the former
and choose the latter, because there will be no organic archi-
tecture if there is no miracle of individuality. Wright's
temperament has been achieved by developing his real nature,
nothing more and nothing less. A nature of true disposition
of soul. There is no pretension of good and evil in his tem-
perament. We suppose that human beings are generally good,
but evil is always more or less rooted in human nature. Evil
can only be real evil when one pretends to be good. To base
everything honestly in nature is the only cure.

The Creation

Creation is always considered by common man as a mysteri-
ous world with which laymen have nothing to do. Actually
there is no distinct line between creation and deep apprecia-
tion, keen observation, firm belief, and steady action. No
doubt, creation is from the soul. We may say that everybody has equal chance and that every human soul is pure and original. Many would hide this most precious thing and not use it rightly. Minor evils are hidden behind hypocritical good, until real good is doomed and spoiled, and has no chance to communicate with the outside world. Knowledge is useful when it grows from inside but harmful when used as a disguise on the outside. Creation is nothing new or from outside, but a discovery of nature by means of communication between the human soul and nature.

Organic architecture has long been recognized as a creation. Some might think that this creation is beyond our reach, but if we keep in contact with the architecture and the architect and analyze them until we understand them, there is not a single thing which will be foreign to us. An artist needs no more than sensibility. He sees things not only with his eyes, and mind, feels things with his body, but also sees and feels with his soul. The tragedy is that many would hide their souls behind a curtain. Creative art will not come out of an indirect contact between human soul and nature. The only difference between creative artist and common man is that common man uses only his eyes or sometimes his mind as tools, while the creative artist also uses his soul as a tool.

Mr. Wright wrote a story for the prelude of his autobiography. He said that when he was nine years old he walked with his Uncle John over a light blanket of fresh-fallen snow toward a certain destination somewhere on the hill top. After
they arrived they found that Uncle John's feet had purposefully made a long, straight, mindful line; but the nine-year-old boy was interested in the beautiful weeds along the way and so his footsteps formed a wavering, searching line embroidering the straight one like some free, engaging vine as it ran back and forth across it. A child as young as nine may have a subconscious sense of beauty. But the beauty in nature, the color of the flowers, the form of the leaves, will only catch the eyes of those who expose their hearts to nature. The young child architect surely possessed the importance of proper communication between nature and his naked heart, the soul. Creation, we may repeat, is the product of a particular interaction between nature and a characteristic human soul.

Emotion and Heightened Emotion

Emotion, we usually refer to as the opposite of cold reasoning. It comes from stimuli of environment and ends in reflective response to the stimuli. When one is emotional, we mean he is mentally out of balance, especially if he is controlled by pleasure, anger, sorrow, and happiness. But if emotion is guided by reasoning, it will become the mainspring of life and will originate an aggressive power to keep life young and fresh. We may call emotion the phenomenon of out-of-balance in a good sense. Great accomplishment always comes from the process of out-of-balance because of one's dissatisfaction with the present situation. When a new balance is

obtained, the emotion is heightened.

Mr. Wright, like any other artist, and as he once confessed himself, is sentimental in nature and so is emotional as well. A few months before he would have graduated from the University of Wisconsin in civil engineering, he left the college without even saying goodbye to his mother and went to Chicago. It is not a strange thing to us if we see how the young mind has functioned. The out-of-balance motive shows the new aspect of truth he saw. The emotion built on what he saw in the new faith which is the readiness to act. But faith can never be very accurate for blueprint. It is, however, prophetic, and so has to be a kind of adventure. This pictures the attitude of creative art.

He settled down at Chicago for several years. This can retard an aggressive mind and could not satisfy Wright's appetite of creation. He left his family again without telling anyone. With difficulties, tragedies, adventures, organic architecture grows through a number of reconstructions of thoughts, emotional conversion, heightening of soul. It has never been in a static state but a continuous changing process. It is the sentimental nature that keeps the artist fresh minded and away from dogmatic principle.
CHAPTER IV

THE FAITH THAT ORIGINATES ORGANIC ARCHITECTURE

The Religion of Unitarianism

Unitarianism is a minority group among the Christian groups. The architect's grandfather brought this over from Wales and bequeathed it to his mother. The father had been a Baptist, but the mother spread Unitarian atmosphere at home, and the father was converted. Organic architecture was born in that atmosphere, therefore, with monistic nature, unity of all things.

Unity was their watchword, and "Truth against the world" was their policy. Minority group in society has always better chance to be free from dogma and unchangeable tradition. Their policy makes Unitarianism an advancing party in the religious world.

During the modern era supernatural being had been disproved by the coming of modern science. Divinity became so human that old codes in theology could no longer control human thinking. Ethics will take its place and will make humanity approach divinity. Unitarianism plays a remarkable part in advancing religious liberalism and will be a fighter in that liberalism. This is the faith of organic architecture. Once Mr. Wright wrote for the Unitarian church this: "The Unitarian church, always leads in the ethical thought of humanity, is again leading. Decentralization is now as imperative to us as centralization was a century ago. The church must
learn why—and resolve to lead or we will all be led to destruction."

The Religious Attitude of Organic Architecture

Supernaturalism can no longer control the intelligent world except as a superstition left in ignorant minds of the people. Religion, therefore, changed its aspect because of the change of the society. Churches have to accept scientific method to support this principle in order to make people understand and believe them.

As religion is a product of culture, different people have different religions. Religious conflict often comes from a different way of life. Dreadful wars are fought because of religious prejudice. It is not the fault of religion itself but the wrong human attitude toward religion. Organic architecture comes out of religious belief and goes back to religion by interpreting human attitudes.

The reconciliation of human beings lies in the universal religious attitude instead of universal religion. In modern society population has produced crowded conditions, and man cannot escape from contact with his fellow men. The frequent communication of ideas produces unconsciously the necessity of new attitudes. Christianity teaches us the principles of fatherhood of God, brotherhood of fellow man. Organic architecture demands the proper relationship of organic self

and the environment which should be a new element in reconstruction of religious attitude.

We usually suppose that the human being is the only being which has soul. Other animals have animal reflection and response, but no soul. Inanimate things have no soul and no reflection. Sympathy has nothing to do with such things. But we can see in many cases that man cherishes them. A carpenter loves his tools, a scholar loves his books, a painter loves his brush and paper, a child loves his toys. But mostly the love comes from the judgment of the values. Very few are really sympathetic to the thing itself as they are to their friends. Some, even, may treat their tools as their friends, but unconsciously. How many treat their things with the attitude of brotherhood of man and fatherhood of God? Actually sympathy and love are the inner activity of organic self. It is a kind of self respect. Love and sympathy exist even when there is no reflection from the outside world, God, fellow man, animal, or materials. This is the way love and sympathy function.

Organic architecture adds one more concern to the human behavior, which is the religious attitude toward building material. It aims at the achievement of the beauty in the nature of materials. The effect in practicing the proper way of treating materials will be nothing less than the practicing of brotherhood of fellow man and fatherhood of God. And these principles should be one. Unitarianism will agree with that.

The practice of the principle of friendship of materials
is not only a religious attitude and an integration of mind but a test of a righteous religious manner. Many who are living in a condition of easy life can always show their righteousness and benevolence to others. But the way they treat their materials will be a test of real manner.

Worship is a kind of manner coming out of one's conscience. Worship of God is not from the outside or learned from the church but a building up of one's religious attitude. The meaning of worship may often be misunderstood and misused by those who have no sense of religion. It is again a problem of establishment, fulfillment, and free development of human nature. Those who have no religious feeling will seek for dogmas out of religious groups to hold to and are satisfied with the comfort it brings. And they call that the worship of God. This shows disbelief in himself as well as in others. To imitate something beyond one's nature is hypocritical.

We can always see that many sinful people get converted and do good and are religious. Modern psychology explains that the conversion comes from the inner conscience of the organic self, not because of something which is superimposed upon him. To think sinfully is just as bad as to act sinfully. If religion means to eliminate evil only by hiding evil behind good, it will destroy good. A genuine individual religious attitude will restore the real nature of human beings.

Organic architecture stands on the foundation of its own development of nature. "Bad original is better than good imitation" is the watchword. Proper relationship toward
environment is a better term to use for religion of architecture. Free development of individuality means to bring out one's real soul, which is no less than "Worship of God." To worship God is a long continuous process of identifying our action to our highest ideals. The reality will be found in self identification. Jesus identified himself with son of God, representative of God, and son of man. This is a teaching of self identification. Many misunderstand his teaching and neglect the importance of the unity of human nature and unifying action and ideal.

With proper religious attitude one can see a brick as a brick, stone as a stone, a piece of steel as a piece of steel. It takes long and hard practice to see things this way. An architect identifies his action toward his ideal, identifies himself with the material so that he understands the language of bricks, stones, and steel. When he builds a building, he is running a democratic government. To fulfill the individuality of bricks and stones is the democracy of organic architecture. The ancient Roman Empire enslaved people. Ancient architecture, a product of ancient civilization enslaves the materials. Organic architecture is the architecture to release the slavery of materials. A sense of democracy came into the world through consciousness of human being. In ancient society slavery of men was considered lawful and on the other hand liberation of slavery was considered as rebellion. So to understand organic architecture we need to learn a new language and a new concept. Poets used
to talk with birds, trees, moon, and rivers. Architects need to talk with the materials before they use them. Those who fail to understand their language probably will produce a type of architecture which is inorganic. No matter what else organic architecture achieved, it at least started this revolutionary concept.

Love and Hatred

Religion and art are the twin brothers born out of human civilization. That is to say art can never be born without the existence of religion. In other words art cannot be creative without deep religious attitude. We, living in the modern era, believe no more the miracles or mystic stories in religious acts, but the religious spirit continues and is inherited through the centuries and applied to the human world, the naturalistic world, to meet reality. In one word, religion is "humanized" because of the coming of modern philosophy and science. From the history of religion we inherit no more dogmas, systems, or methods but the teaching of the spirit. Religion becomes a teaching of righteous relationship between man and man, man and himself, man and his environment. Creative art is the expression of the individual concept of his personal ethics in this relationships.

Usually in our thinking we relate good to religion and beauty to art. If we talk art and religion in terms of relationship between organic self and environment, one might doubt that relationship may be both good and evil; it does not qualify the goodness of religion and beautifulness of art.
One will still ask for dogmas or principles to hold to in order to go in the right direction. The point is that good and beauty come from the development of intellectual sympathy. Evil and ugliness come from the attitude of scorn. One who scorns his surroundings will not enter the realm of religion and art, while one who sympathizes with his surroundings will be religious and artistic.

Organic architecture does not teach the principles of technique, design, or any theory, but teaches how to make our organic self intimate with materials available, the environment, the terrain, the man. The righteous attitude is the most important thing to learn and the only thing we need to know. And only in this way the architecture produced by anyone can be called original and organic. On the other hand, one who follows the theories of organic architecture, the forms, the way it builds, the styles or types of the building, will go on the way to an architecture which organic architecture will deny. It will be called not organic, but inorganic, architecture. Many will think that the buildings they live in are not necessarily organic. Even an inorganic architecture will do us no harm, even though it may not enrich our lives to the utmost. But this is the world of increasing consciousness. Primitive man may not have needed any subtle language because his living was simple. In the present time we need a better way of thinking to fit our more complex situation. "Organic" or "inorganic" concept in architecture will show in the way of life and conduct of life; and organic and
inorganic are result from the origin, sympathy, and scorn. Sympathy is to become intimate with things. Scorn means to be away from things. This is the source of love and hatred. Love is the better understanding of things, and hatred is the misunderstanding of things. Organic architecture creates no style or type of building for the world but teaches a lesson of practicing sympathy and love toward the exclusion of scorn and hatred.
CHAPTER V

THE PRINCIPLES OF ORGANIC ARCHITECTURE

The Nature of Material

An architect will see the beauty in the nature of materials when he can speak their language. Here is an example of the language of the building materials:

"Hello there! Mr. Stone B! How are you getting along up there?" asked Stone A, carrying 800 tons of load on his back lying in the footing of a wall, while Stone B is sitting on top of the wall.

"I am getting along all right except a little bit too windy here. I used to be a strong guy and carry hundreds of tons load. The architect wouldn't let me do my best. When I don't do much I feel cold," answered Stone B and asked, "By the way, how do you feel down there? Are you comfortable, Mr. Stone A?"

"No! I used to be a facing stone used in the Roman Cathedral. I am still young and intelligent, but they treat me as a slave and have thrown me here for years."

Then Brick A came and joined their conversation, saying:

"I am no better off than you both, Mr. Stone A and B. My face isn't so bad, but they painted me with thick lime mortar. Makes me feel as if I were behind the iron curtain."

The Wall Paint interrupted. "I don't mean to violate your freedom. I used to cement you, girls, to make a strong group. They now use me as your lipsticks and cold cream. I
know your face is natural and beautiful. You don’t need them. But it can’t be helped. This is the way they treat us."

The steel reinforcement in a concrete beam was listening to the conversation, which provoked his own sorrow, and he said, "You are still fortunate. Please look at me. I really do not know why I should be here fooling around and acting like a fool. They are supposed to let me reinforce the concrete beam which supports the roof. But Mr. Roof is so light in comparison with our own dead load. I don’t like to spend all my life in supporting my own dumb mass and doing no work."

The Post, out there weeping, says, "I don’t know what I stand here for. People hate me because I occupy their useful space and do nothing but support the silly Beam."

"Let us talk with the architect to get him to do something good for us. This is a democratic world. It is time for us to perform our real ability," they all said.

The architect came in. All the materials were crying aloud to complain of his way of treating material. But the architect does not understand what they say. Their language is foreign to him. He is not sympathetic to them, so he does not learn their language. He is not organic.

There is no standard for the judgment of beauty, yet we can see beauty from nature, or we may say beauty is nature. This is not only true in plants, trees, flowers, moon, stars, and clouds, but also in human nature. We often relate the beauty of human beings to the physical body of human beings, but there is something more for us to consider, the beauty
in human souls, their characteristics and individuality. The point is that man was not always aware of the proper development of his nature and human nature is always more or less unconsciously hidden and obscured by artificial force. Beauty is then in danger. We may place honesty as the safeguard on the road of beauty. Let good be good and evil be evil. One who hides evil behind good makes good become evil.

Beauty is not static; nor is the truth static. Science collects facts to make truth grow. Art accumulates esthetic experience as a tool to search for beauty. As time goes on a human being changes his concept of beauty because of deeper understanding; and new discoveries out of nature. Shall we say art, in a certain sense, is not the creation of beauty but the discovery of new aspect, new countenance, new expression of nature. This discovery does not come from the teaching of others but the mind's discipline of the artist. He trains himself to see nature and to study things in his own way. His sense of beauty grows when he himself grows. In this whole life process he purifies his soul. Art can only be creative when the soul is free. Creative art is not something belonging to the outside world of knowledge. The work of the artist is to clean his mind as one clears out junk from the temple of God, the human body, and so makes the soul free for the growth of the creative spirit. Everybody can create when he is free and relaxed.

Individuality, as we know, is the very watchword to distinguish modern architecture from the old. Yet it can be misused as compared to individualism. Individualism is to
establish a style or type of architecture, while individuality is to express the character of the architecture. Organic architecture is not a typed architecture but a changing concept of seeing things. It sacrifices its individualism to fulfill the free development of the nature of building materials. Mr. Wright never imitates his own architecture so as to establish a characteristic style, but he uses his sense of beauty as a tool to inquire into and to study the deeper sense of materials and environment. When mind grows organically, the concept of beauty or the language of materials grows intensively, and the style changes.

A sculptor loves his marbles, a carpenter loves his board, a painter loves his colors and papers, they all see some nature in their materials through their craft. During ancient times man exploited men as slaves; sometimes masters also loved their slaves in order to use them. Very few could have the consciousness of treating materials as his fellowman, or parts of themselves as their arms or hands or fingers. This concept is nothing new, but it needs a reconstruction of old thought.

Here is the reconstruction:

The word "democracy" has come into common use since the coming of Modern Society. It is not a new idea but its spirit has been rooted far back in ancient history. It arrives at its maturity with the modern era. People asked for liberty, freedom, and equality. A new scene in history has to come
under the revolutionary stage. Democracy does not represent the materialistic establishment of government which is only one of the many democratic expressions. The essence of democracy comes from the liberation of heart, reflects in the liberation of action, and should go back to its origin, liberation of spirit.

Democracy should show its expression more in self-liberation, inner sense, free thinking, democratic attitude, behavior, way of treating ourselves and our environmental fellow-men and things. One's sense of democracy should be in the unity of human thinking. Generally we can judge one to be democratic or not by judging his acts. A worker of democratic government may be considered as not a democratic if he enslaves others as servants, considers himself as a superior. Democracy is a twofold feature: self-respect and respect of others. They are one and inseparable.

Therefore the unity of our thinking, behavior, and attitude, expresses itself in every phase of our life. Organic architecture claims the liberation of building materials, which seems a minor thing in our human problem, yet it protects the essence of real democracy. When we treat the building materials as our fellowman, respect the nature of materials, it is not only an organic building but it is also our organic, democratic thinking.

The Concept of Space

Primitive man piled up stones to mark the burial places of his heroes. Ancient dwellers built up walls to protect
themselves against the attack of enemies and built shelters to protect themselves from storms. Later people expressed their skills in decorating the columns, walls, and roofs. By and by the columns, walls, and roofs became the main part in architecture. The concept has been carried through even today.

The way we see the building now is different. It is not a shell, but we see it as a whole. The technique in arranging the space is more important than the decoration of the wall. Walls are no longer used as protection against attacks, but as boundaries of the space to be enclosed. The living space of the building will then be the reality, and the architect must see this. The significance of the building lies in the suitable relationship between that room space, and the interior and exterior space of the building.

In history, architecture mainly depended upon sculpture; in ancient Rome and Greece, architects were sculptors. They performed their skill in decorating the walls and columns. It is still a concept left over from the ancient custom of worshiping heroes. It was monumental. As soon as a building is humanized, buildings will be considered as buildings, and only as buildings.

The concept of a building has changed its emphasis from the decorating of a house to the building itself. It is a new concept of human life. In the olden time people thought of a house as the shelter they needed for practical usage. A beautiful house did not belong to the common life, but was a luxury for the rich, so that the magnificent columns and
sculptures were something to add to the house or something which did not necessarily belong to the house. A gulf between life and art was then formed.

Under modern philosophy, the dualistic view of supernatural and natural, practical life and ideal life, body, and mind is eliminated. Art is more or less in the nature of man, not something man has to pursue from outside or something which is far from reach but only needs to be established within himself. When one has a house, he must have the opportunity to express his sense with whatever house he has. The closest and most important part of the house to his life is the room space, not the walls and roof. The arrangement of the room space will then come through a special technique and skill, and becomes art. It is an art not mainly through the craftsmanship of hands, but a design through the mind out of practical living. Wall and roof actually became the finishing of the building or the continuity in the whole process of thought.

In old architecture, architects try to arrange the plan of the design consistent with the elevation, which will be also called an organic growth of the design or the harmony of plan and elevation. Organic architecture instead of dealing with the plan and elevation deals with abstract picture representing the room space needed. The whole process of building design is a cubical thinking which we know as three dimensional. In the result of the design we will see not only that the plan is in harmony with its elevation but the relation of room spaces is related to the daily experiences of
life itself. This can be called organic. The plan and elevation become a kind of interpretation of the architect's thinking, and are used only as a check of the three dimensional design.

The concept of space is the concept of reality and it is the origin of art. It comes from the experience of self-sacrifice to nature, self forgotten in the environment. A poet when he appreciates the scene of mountains, trees, moon, and star, considers himself as a part of nature and forgets the existence of his own physical body. The secret of the artist in understanding nature is to forget himself and to be assimilated by the environment and to recognize the reality outside himself.

**Organic Structure**

Many will think that structure is the skeleton of a building, the beam, post, and footing. Walls, roofs, ceilings, windows, doors are the supplements and accessories to the structure. This is no better than to think that a building is built for building's sake with no connection with the people who live in it. Actually what we call building is not only the materials, but the atmosphere of the building in it and around it, which is truly the parts of the building. Does structure have anything to do with the atmosphere?

Geographically, a certain region conditions the growth of a particular plant. The structure of a tree is not only a functioning in itself but is interrelated to the soil, climate, and local conditions. Not only the plant is dependent
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upon the geographical conditions, but also differs and changes according to the surroundings. Natural growth of plants in any region is in harmony with that region. Why not buildings? The structure of the building should be like the structure of the tree, in harmony with the region.

An architect sees with his organic self the character of the terrain by observing the surrounding plants, trees, ground, and soil, and he relates his concept of the nature of materials to this character. A central idea will be formed out of this interwoven process, and transferred to the structure of the building. In other words, the character of the building should be in harmony with the surrounding. Of course, there can be as many structural forms for any special place as there are varieties of plants.

We may think that the structure of a building is a sense of expression as we see in the plants, trees, and flowers. The structure of a tree or flower expresses its function and also its form. The cells of the tree or flower combined together give the structure of it, and the character of the structure will determine its finished form. A bare trunk of a tree we would not call a tree, unless it has branches and leaves. So with a stem of a flower, or a skeleton of a leaf. The plasticity of the function gives the finished form and it is the continuity of the whole structure. Mr. Wright describes his concept of structure in a metaphorical way as follows:

Here is my hand, a human hand. As I move its members, the fingers, it changes expression, doesn’t it? It may express about anything you want to express and almost anything as you feel, but what makes it
expressive? Nothing but the flowing continuous line and the continuous smooth simple surface. If you ever take off the flesh and the skin and reduce the hand to a skeleton and where to see the bones and all their joints, then you would get back toward this other thing: ancient architecture, where you would have the structural element at work instead of the plastic sense of the whole response.

Interior and Exterior Space

It is not an easy matter to define a human being. Laymen will say, "a man has got two legs, two feet, two arms, two hands, a body, a head, eyes, ears, nose, mouth, etc." The rudimentary common sense gives not much sense to us, because we may ask then what is the difference between a human being and an animal, and how can you tell whether a man is dead or alive. A scientist will define a human being in terms of his scientific knowledge, biologically and physiologically, and put man's physical parts into technical words in detail, or even more specifically relate every part, skin, blood, liver, kidney, to the biochemical equations. Poets will relate a universal human being to an emotional animal. Philosophers spend their whole life defining it by identifying human beings in many ways such as personality, individuality, temperament, and nature.

A human being cannot be defined without relating him to his environment. Man cannot be considered as a human being if he is not living on earth so that earth will be as important as a human being in order to say what is a human being. It is true that a human being cannot be separated from his environ-

ment, as Mr. John Dewey points out:

Breathing is an affair of the air as truly as of the lungs; digesting an affair of food as truly as of tissues of stomach. Seeing involves light just as certainly as it does the eye and optic nerve. Walking implicates the ground as well as the legs; speech demands physical air and human companionship and audience as well as vocal organs.\(^2\)

There will be no existence of lung if there is no air. Stomach will have no use at all if there is no food. Feet will have nothing to stand on if there is no ground. So the human being; if there is no environment, there will be no human beings. If we separate a man from society, he will become inhuman. We may call one a human being because he can respond to his environment humanly, or we can recognize a man to be a human being because he is fit to live in human society as human being is a social animal.

The physical body of a man is not enough to qualify him as a human being. A universal man is actually an idea or image in our mind; besides his physical body we must see him in relation to his action, movement, attitude. In other words, our concept of human being is not only a concrete thing but an abstract idea, as a body and his surrounding atmosphere. Atmosphere here means the integration of the man's attitude, character, temperament, an abstract personality out of his previous actions. That is to say that in a human being, besides his height, breadth and depth, there is another dimension which we can only record in the mind in the realm of thinking. We always can find an example when we see snapshots

of a person, even the snapshots are taken from many different angles and colored by accurate technicolors, we may be surprised to find something else missing in the snapshots when we see the real person, and our understanding of the person will change with more contact as time goes on.

The concept of unity of human being can be applied to every aspect of the universe, or we may say that once we have this concept we will see the unity of all things. In the case of our problem, organic architecture, we cannot possibly call a building a building when it is not connected with its environment.

In the same way, we know a layman will consider a building as his shelter or even a cave with which he protects himself for security. We will not consider his idea to be a correct definition for building as for a human being with no personality which cannot qualify him as human being. Building does not represent four walls and a roof as well as human being does not represent four limbs and a body. Let us imagine the non-existence of the walls and roof and we will see that reality lies in the whole vast space of the whole universe. The wall and roof only screen a certain space from the whole space to fulfill the human needs. The walls and roof are the weaving materials of spaces as the yarn weaves the flower pattern in the cloth; the reality of the cloth is the pattern; and no one sees the yarn again after the yarn is woven.
With the concept of space we now should consider the proper communication between the interior space and exterior space of the building. Not only this, but we will find that exterior space is a continuity of the interior space.

Just as we have seen it in the reality of the human being. The human skin does not stop the communication of the body inside of the skin with the outside environment. Furthermore, there is no line which can separate the continuity of the human being. For instance, human hands are just the continuity of the body when man works with his hands. And when he uses a tool, the tool is just as important as his hands; otherwise he would not accomplish his task. A dog cannot use tools. Man is qualified to be a human being because he uses tools. A tool, then, is a part of human qualification and is a prolongation of the human body or a continuity of the human functioning. We may go further. The tool, as we have said, is in physical contact with our body. Our communication is not limited in the physical realm, but the thing we see, the world conditions we think about, the ideas we relate, are also the continuity of human functioning and the communication of human activity. That human thinking has a highest velocity, faster than light, is still a valid assumption. We can suppose the continuity of human functioning has not yet arrived at finality, and has no limit.

In the whole process of human continuity, building is one of our links, and to see it as a link is a correct definition of building. Its achievement we may call organic architecture.
All what an architect needs to learn and what he can learn is to relate exterior space with interior space and then relate interior with the exterior. The character of the exterior space inspires the thinking of the architect to express his concept in the designing of interior space of the building. The organic arrangement of the interior space is a continual process. The extension of it is the design of the surrounding gardens, walks, and fountains.

**Terrain—Wind and Water**

Old architecture is called a method or style of building characterized by certain peculiarities of structure and ornamentation because the style gives a certain pattern for the architects of the region to follow. People judge the work of architecture by examining the skill of the craftsman or sculptor who did the construction, and also sometimes a variety in the arrangement of the columns. Certain standard architecture has generally disregarded terrain. Thus we see Gothic buildings on mountains and in valleys; French or German or other national buildings completely imitated outside their natural regions.

The art of architecture becomes more and more humanized and individualized. Art became not only sensational but intellectual as well. Artists began to be aware of expression in relation to surroundings. A higher harmony is required. Organic architecture inherits the development of ideas from history the spirit of the ancient carried through in the
...
organic self, but it learns everything from nature by itself. So that the building not only is in harmony with itself but also is in harmony with its surroundings. The problem of terrain is then becoming important, and the acknowledgment of the surroundings must be one of the main points in designing a building or we cannot call the architecture organic.

There is no standard by which we can distinguish beauty from curiousness unless we learn and study from nature. To learn from nature does not mean superficial observation of nature, and creation does not mean imitation of nature. Nature, as she is, is perfect in herself, or we could say God made everything perfect. An imitation of it will always be worse than perfection. Art is not concerned that way. An artist when he lives in nature assimilates himself with nature so that he becomes a part of nature, as we have said. One who lives above nature or superimposes nature with a sense of supremacy will never understand the language of nature. Creation is nothing else than a human interpretation of the language of nature. The work of art will then be worthy to live.

The knowledge of terrain has been only incidentally concerned in the field of art, as we see in history. Painters, musicians, and poets get inspiration from the scenery, mountains, rivers, trees, flowers. The immediate harmony of the terrain and the work of art is not required. But in case of architecture, the design of the building has to relate to the particular terrain. The special terrain is used as a part of the design, or they must be interwoven to achieve a whole.
A design of building which fits the desert does not necessarily fit in a tropical region. A prairie type of building will not agree with the terrain in mountainous country. Terrain then becomes a part of the building and building a part of the terrain. A painter paints a landscape, whether he is a realist, impressionist, or abstractionist. His idea is limited to expression upon a piece of canvas or paper. The landscape does not become a part of his painting. A pianist expresses his emotion inspired by his surrounding, but the surrounding has nothing to do with his instrument, the piano. In the case of architecture, especially organic in sense, extension of the interior space compared with the surrounding is the enlarged canvas of a painter or the additional keyboard to a pianist.

The study of terrain then becomes a science, not geographical science but the psychological response to terrain or the nature of terrain. In Chinese philosophy a special branch which is called the "Wind and Water" specializes in dealing with this problem. The characteristic of the terrain is compared to human nature. Modern science tells us that there is an influence of geographical condition upon the temperament of local inhabitants. We may say that the temperament of human nature is in harmony with the local condition. The philosophy of "Wind and Water" will give the analysis and systematic study of it. An artist is trained in such a way that he is not only in harmony with the surrounding unconsciously but he sees the character of the surrounding as he
sees within himself. After continual training and practicing, when he sees places outside his usual locality where he was born, he will be aware of the characteristic expression of the terrain where the building is to be built as well as the nature of human beings living there. The design of building can then be made to fit.

It is no longer a secret that color to a painter and sound to a musician is a psychological effect. A painter sensitizes his feeling by training in combinations of colors. The harmony of the colors becomes so stimulating to his feeling that he can detect disharmony with the slightest degree of change in color. So will a musician hear the harmony of sound. For the architect the terrain and the building is just as color to the painter and sound to the musician.

The work of an organic architect when compared with a painter will not be merely the design of a building, enclosure of a space for human occupancy, a dealing with the materials available, a fulfillment of the requirements of structure, but must be based on a whole picture in his mind, including the surroundings within his possible sight of observation. A building itself, the ornamentation, the classic order of the columns and entablature, the construction of valuts and arches, the technique of sculpture in the decoration of a cathedral, are merely the sketch drawing of the painter, a folk song or a sonata of the musician.
The Meaning of Art and Fine Arts

The word "art" came originally from the Greek Arc, meaning to plow. It involves two meanings: first, the farmer plows his soil to create something out of nature, which implies the creation; second, he shows neatness in his work to his neighbors, which is the skill. This gives us the idea that the natural history of the word "art" proves to be very practical or that is to say the purpose of art is to teach us to do something. Later the word is developed in two-fold ways, extensively and intensively. Its meaning becomes abstract and goes to skill and craft.

However, the definition of art has changed enormously as human activities have expanded. The modern interpretation of it needs to be restricted to the esthetic point of view, disregarding the etymological derivation in the past.

Art, actually, is the love of beauty. The main purpose of art is to give pleasure in the sense of beauty. In this sense there is not much distinction between art and fine arts. The utilitarian aspect of art has fallen off. Therefore, the meaning of art is thus limited to creation by an artist, out of his imagination and appreciation, for his own pleasure, disregarding the restriction of utilitarian purpose.

In considering the art of architecture usually we mean both utility and appreciation for pleasure. When we ask for
sheltering accommodation and housing against the attack of storm, rain, and enemy, we are away from the artistic point of view. On the other hand, the fitness, harmony, properties of parts, its dispositions and contrasts of light and shade; color and enrichment, variety and relation of contours, we have to classify them in the realm of art.

There, however, should be no conflict between beauty and utility. The principle of organic architecture lies in the arrangement of utilized space instead of the design, ornamentation, and decoration added to the architecture, which has nothing to do with the utility. The fine art in architecture is then expressed through the abstract thinking of proper relationship between the room spaces. But the old architecture shows its fine art through the skill and craft in the work of ornament and decoration.

In other words, the tool of an organic architect actually is the different sized spaces. The idea of utility of space is so well organized in the mind of the architect and it is organically related to the response to the surroundings and his esthetic experience, that the spaces are acting as the cell of an organism. The functioning of the cells, the framework between cells in the structure of the building, and the boundary of the functioning of the cells is the form of the building. Fine art in organic architecture cannot be found in the details or the craftsmanship of the building, but directly refers to the mind of the architect. A whole integrated mind expresses its sense in the whole structure of the architecture.
From the point of view of fine art, when the architecture is designed, the utility of spaces takes no place in the whole process. As some may think then the artistic part of the architecture will still be restricted by practicality.

The usage of the room space does not occupy the architect's mind but comes automatically into consideration as the painter using his brush, the pianist his keyboard. At the same time the architect organizes the space not according to the routine way of usage but to an ideal way of life. Fine art, as we know, is the idea that the artist foresees a tendency of life in the future of civilization. So that every organic architecture, considered as fine art, is a trial or experiment of a new way, a hypothesis for further inquiry. This is the destiny of fine arts.

Decoration and Ornamentation

Ancient man believed in supernatural beings in the spirit of heroes after death. The irresistible attack of powerful enemies, the catastrophies of the flood, storm, wind from nature, incidental benevolence referring to God, were all objects beyond the reasoning of his mind. This is the reason for erecting monuments. In the natural history of architecture the work of architecture is toward monument while the shelter for the actual living was far away from the consideration of the art of architecture. Therefore, practicality or utility was not an important part in the work.

In respect to the supernatural beings, the artists express their sincerity, love, and ideas through their
magnificent works of sculpture and painting, and later they developed their works into greater and better arrangement. Architecture is a composition of those art works. Or we may say that the art of architecture lies mainly in its decoration and ornamentation. Without these, architecture is merely a bare skeleton. Usually architecture is considered lower in rank because of this left-over idea of the skeleton.

The idea that art is the privilege of the rich comes from the monarchial society. Decoration and ornamentation of the house are luxurious parts of the house. It is true that decoration and ornamentation is a work of art, but a gulf between the housing and art was formed. When modern architecture, organic architecture, came along art was democratized and naturalized. We now believe that beauty and practicality are inseparable, and so the concept of decoration and ornamentation has been entirely changed. Decoration and ornamentation is no more a borrowed finery from the older epoch, or the type of fashion which is considered to be beautiful by the people of older ages, but are becoming a part of the whole structure. As Mr. Wright points out:

> Decoration can tell your friends lots of things, that you do not know and would not like if you did. It is of no use to you unless you do understand and appreciate it. It would not be sufficient justification for you to have it just because it looks rich or because somebody else had it.\(^1\)

Added decoration and ornamentation will make the whole structure a failure also a failure of the architecture, and

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will be against the principle of simplicity. When they are not used as the covering up of the faults in the design but a part of the structure, the decoration and ornamentation become useful.
Art is the inner activity expressed in action; and this inner activity is from the mainspring of emotion. To understand, to appreciate, or to interpret art is nothing more and cannot be more than the response of one's previous experience which is his esthetic experience in his own organic self, ready for expression within himself. The response, therefore, is itself a kind of expression. Then, we may say that no art understanding, appreciation, or interpretation can be free from emotion, no matter how careful we are trying to keep away from subjectivity.

As we already know, there is no standard set up to measure beauty and so to evaluate art. A general point of view of art work is but superficial understanding which is not deep enough to seek the essence. The crux in interpreting art lies in two points: Art is a universal language but is also an individual language. It is the special expression of the individual. Sometimes the expression can be identified with common language but mostly is only self-evident. When individual expression goes deeper, there will be no other expression or language which can be compared with it. Nor can art be judged by the valuation of its consequences.

All in all there is no choice between objectivity and subjectivity. A pure objective criticism will miss the whole thing in the essence of art. The only way out is to relate
the interpretation to appreciation which is the organic response. It is true that a big part of the original art will be left out through the response of interpretation, and the response to the interpretation is again a fraction of the whole. Probably there would be very little left of the essence of art which was originally created. But no matter how little it is, it is something true and is the reality. If there is response, there will be truth and reality. The truth and reality are the light which leads the way that life grows organically.

Organic architecture has not been well known until the last few decades, although Wright had the idea of a new aspect of architecture far back at the end of the last century. It is now recognized to be creative, especially since the highest award of the American Institute of Architecture has been granted to it. It is a long struggle for this art to meet the people, and its real value still needs more understanding and practice. Otherwise, the highest recognition means very little.

Science has made things easier to understand. Abstract things are related to concrete things through science. Eternal truth is solved into factual truth through scientific methods by collecting facts. Knowledge is said to be democratized since the coming of science. All this proved to us that science has created a condition that art has never thought of. But art has the characteristic which leads man to a profound field of thinking and training. With art, man lives in greater happiness.
Organic architecture, no doubt, is not easy to be understood, especially by the layman. One may think that we have been getting along all right with ordinary housing, while with organic architecture many will feel that it is impractical, and also it looks strange and unfamiliar to us. Why should we make it so difficult? The answer is very simple: We have no short cut to higher culture. Color and beauty are stimulating to the artist, but have little effect on a layman. Human being is higher than any animal because of his sensitive instrument, the mind, or in a better word, the soul. Our only explanation of the evolution of human beings is that human beings are becoming more and more human, as time goes on, and less and less animal. Sensitivity is the only key to it, and art is its chain.

However, this problem is not too difficult for us to solve. Continuous training will be the only cure. No one ever thinks it difficult to recognize the beauty of a flower, yet a real art judgment is a difficult thing. The reason is that we have frequent contact and communication of our senses, but it also stops us from further inquiry.

The human mind has an excellent ability to build habits of receiving and absorbing influence and knowledge from the environment. But usually human mind is limited by a saturation point. Habit then becomes a guard to keep off further sensitization. Our memory is always cut short for new thought.

Wisdom, therefore, can be defined as a destructive power used to destroy the habit and familiarity which have
formed a strong fortress to shut us off from outside influence. An office worker fully occupied with daily business affairs is less sensitive to nature than a housewife who takes care of the lawn around the house. The same flower will produce different responses, and a flower may mean more to the gardener who works in the garden. Yet the color and form of the flower may produce an entirely different effect to a painter. And we know the office worker, the housewife, the gardener, and the painter all agree that the flower is beautiful. Therefore, beauty is on the way but not a finality.

For another example, we may say that the same weather change may bring a different response from the men who live in the same region. A farmer often has the experience of making a prophecy about the weather change, but the city dweller is never as sensitive toward this. It is not necessarily to say that the farmer is more sensitive to weather than the city-dweller. In order for the city dweller to forecast the weather as well as a farmer, he must change his usual focal point of reasoning. So we may fall into a wrong concept of art, as did the city dweller in forecasting the weather change. We should not forget that our experience needs to be reconstructed around another central thought which we have never had before. And also that our old habitual and familiar way of thinking stops the reconstruction.

Art is a universal language and yet it is also an individual language with different depth. To understand it we must learn how to function in the way the artist functions.
Otherwise we can never get a right measure out of our own yardstick. An artist should have many yardsticks.

As a matter of fact, both art and science are in the nature of human beings. That is to say, man is both more or less scientific and artistic minded. These are two of many elements rooted in our nature. To eliminate or exaggerate either one of them is not organic and makes our body, mind, and soul unbalanced.

It is known that the scientific mind has been developed to a greatest extent since the coming of the modern era, but unfortunately science grows all by itself without close cooperation of others. It almost became a monster. All those modern products have been considered as gifts to mankind from science. Those contributions to life, modern equipment, necessities, are but by-products of science. Worst of all, science is viciously applied to the discovery of munitions, dreadful weapons which have performed their dreadfulness during the two world wars. Does science really mean that?

These by-products have substituted for the essence of science in the human mind. Most of us see the effect but forget about the cause. The by-products are only by-products and not science. It is a consequence of freakish development of human nature.

Many have the impression that science is materialistic and denies the spiritual existence, but in fact there is no conflict between the material and spiritual world. When a baby is born, his actions are mere instincts and reflections
of impulses. He is nothing better than an ordinary animal. We can call his action pure physical and materialistic. When the baby grows with added experience every day and moment, the brain grows organically and records the experience by memory. It starts to see things abstractly. No matter how the materialistic philosophy explains the idea in concrete and materialistic way, the idea itself is still abstract. When the body grows older, ideas become more and more complicated and systematic thinking is then needed. Therefore, the materialistic and spiritual view of mankind is just the two facets of the same object. Science may interpret ideas in a materialistic way, but it is an abstract thing. Materialists consider man as a mechanism. That is a metaphorical interpretation which is only half true, because he who establishes the system of materialistic thinking, he himself is an idealist. This recovery of unification in conception is the task of both art and science.

Furthermore, in analyzing subjects, science organizes knowledge into branches and sub-branches. Man becomes more and more specialized in a special subject in order to admit quantitative treatment. It has the advantage of taking the mass of people into operation for the expansion of world civilization, but the man specializing in a certain field does not have any more unified thinking to relate his specialization to the whole. The result is to produce vast numbers of specialists but freakishly developed human beings. Real human nature is then out of order.

De invoering van de Caldera-wet van 1973 stelde de nationale turfproductie op een Sociale voorkeur. Dit was een voorbereiding op de bouw van een nieuwe industriële infrastructuur voor het volk. 

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When we say human nature we refer to the generalized picture of human activities. Society has never realized the importance of a well-balanced development of human nature. We set up mass standards and consider them as normality. This stops the way to improvement. How can we get a good generalization out of freakishly developed human nature? Unfortunately, under a policy of greater good for greater number democracy loses its aggressive power toward the discovery of a new world.

We should not blame science that has given us this way of approaching knowledge by specializing the fields. But we must reintegrate our mind in to proper order. That is again the work of art which will help us to refine our nature.

Organic architecture actually is not only the architecture of building but the architecture of organic human nature. Here let us borrow the word "architect" and use it as a verb. We are to architect our body, mind, soul, and our human nature, so that the new world will be architected. Organic architecture really means that. Building itself is but a form of expression. When we call it organic architecture, it should relate to the organic architecture of humanity, and integration of human mind and soul.

Whether or not we like organic architecture, it has come into our generation. The art of painting, sculpture, and music has enlightened human civilization in the past, but it will be considered to be too delicate and decorative to meet present needs in human life. When science comes in
those delicate arts have to give way. In fact, there is no conflict between art and science but a stronger art has to fit with the cooperation of science. Architecture was not as high as other art in the past because it was not as abstract as painting, sculpture, and music, especially music. But now we need it as our new language of expression. It is an organic expression of art as language.

A new language does not always sound good and familiar to our ears, but it is a new technique for better efficiency in communicating ideas. The human brain after centuries of evolution has changed its shape and has become complicated. The old tool does not fit for the new necessity. A creation of new tool or instrument is quite a natural and organic tendency. The only trouble is that man does not easily accept new things. The old ideas of architecture, the classical styles, and the concept of housing have been carried through the centuries and have remained in our time. Man has to carry in his mind the conflict between the old and new language and must reconcile them.

The importance of architecture, if we put it in a position of the new language of the modern epoch, is not so hard to catch man's attention. But very few can distinguish between the old and new architecture nor detect where what seems to be new but still has the old concept, or remains in the stage of housing which is only imitating beauty. In fact, when we learn a new language we have to give up for the time being the older forms and tones. In this case we have to give
up the new way of judging architecture. New architecture should be at least as abstract as music, as delicate as painting, as decorative as sculpture. It is not an art through the hands of craftsmen, by which we usually evaluate architecture, nor is it a refined engineering work by which we usually classify architecture as a branch of engineering. But it is an abstract organizing process in the architect's mind interwoven with the mind and skill of craftsmen and workmen. It challenges the minds of workers and also their old technique in dealing with materials. While old architecture is always restricted by the technique of worker.

In the process of designing organic building there is an attitude of inquiry. A new aspect of the nature of material is always brought into the experience. The way to express the new depth seen in the material needs new technique of the workman. The relation between the draftsman, workman, and the architect can be compared to an orchestra and conductor. Yet the architect and the composer can seldom be present in the process of producing their creations, and they so lose that benefit which is accorded a conductor by direct contact with his orchestra. And the difference between an orchestra and architecture shows clearly here. The layman cannot catch the inaccuracy in a single sound in an orchestra, while even a child is aware of a rain leak in a roof. Therefore architecture should not only be abstract but also must have powerful control over its utilitarian aspects. We do not like the word dictatorship in modern times.
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but for architecture we still need this word to show the controlling power in designing, in connection with the craftsman and workman.

No doubt laymen can hardly judge with correct reasoning the architecture and what is in the architect's mind because what the layman can see is but two dimensional. Even many architects try to interpret the three dimensional organic architecture with two dimensional analytic method. But the result is in vain. Two dimensional training is not a correct approach to the concept of three dimensional thinking. But what should be the approach? Sincerity and sympathy will lead us the right way. Organic architecture needs sympathetic organic response. That is all. With this key we will unlock a deep appreciation. Both sincerity and sympathy is nothing else than an attitude of eagerness of inquiry. Without this attitude there is no chance to be sensitized.

To go on deeper in appreciation there will come to us many technical problems. To say art is a language is only metaphorical, which is not very true. It is not like learning a foreign language, especially the spoken language, where the sounds are entirely foreign to us. It has to be built up, sound by sound, word by word. But in learning art, sincerity and sympathy are already in our body, and at least not foreign to us. When this attitude is reconstructed in our mind, the problem is half done. Especially when we have the habit of appreciating beauty in nature, we need only a short transfer to get the essence of organic architecture. And, we still
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can find a way to trace the principle of it. In Wright's early work organic architecture had not gone too far from the influence of Silsbee, Sullivan, and Richardson, who were the pioneers of modern architecture in America, when architecture had just begun to be humanized. A concept of decorating housing and ornamentation was still prevailing. Mr. Wright designed and built several buildings which were not unusual but showed high skill in treating room space, which even then indicated his unlimited genius, and a creative power, which was not beyond laymen's recognition.

After continuous practicing and struggle against difficulties, Mr. Wright arrived at a new stage. Taliesin III, his home in Wisconsin, represents a distinctive change. The structure of the whole setting is arranged in a musical movement in harmony with the landscape. It is not simply an adjusting to nature, but the characteristics of the surroundings, hill, stream, trees and farms, are deeply understood by Mr. Wright and relate to the design of his building.

In his latest masterpiece we find Mr. Wright arrives at a real maturity in organic architecture. A free concept of forms of building is really attained. One can scarcely detect any similarity between his early and later stages, although there must be an organic growth of his principle.

Organic architecture, as we now know, is of prairie nature if not of prairie type, because Mr. Wright was brought up on a farm and naturally is a rural lover. He hates city life and advocates the decentralization of cities. Many
will think that this is a sign of escaping life, but under modern society life has been separated from nature for a long time. Many city dwellers cannot even imagine the color of the ground and the smell of the soil. Therefore before we criticize the principle of organic architecture we must find out what is real life. Can there ever be a city which in its congested areas can provide an economic and social system which will give its citizens a real life?

Organic architecture challenges the present world thought as a voice calling life back to nature. The danger in modern time is that many still struggle for their life by using their minds to conquer other minds. This is the mainspring of a sense of superiority and inferiority. Both superiority and inferiority are sources of conflict and too often lead to tragedy.

Organic architecture points out that the only salvation of human crisis is to go back to nature. With modern equipment we need not lack the necessary human contacts, as would have been the case in ancient times, and we can also have our contact with nature. This gives us a two-fold advantage. By learning both from nature and from interaction with our fellowman, we enrich the wisdom of all ages. When an artist appreciates a beautiful landscape, he often forgets his own existence and feels himself as a part of nature. It is a training of self-sacrifice, a deep love of nature. A poet will tell us his feeling and passionate emotion. This is the real origin from which we can get the sense of security and relaxa-
nique for interferometric studies, it is seen that even the
properties of the medium cannot always be
readily obtained from the effects of changes in
the medium on the interference pattern. In general,
the medium may be represented by a medium of
constant index of refraction, but the index may
change with time due to temperature variations,
and the effects of this change must be considered
in order to understand the behavior of the interfer-
ometric system. It is important to note that the
interference pattern is affected by the optical
properties of the medium, and that these properties
are not always constant.

Thus far, the basic principles of interferometry
have been discussed, and the relationship between
the optical properties of the medium and the
interference pattern has been established. The
next step is to consider how these principles
apply to practical interferometric systems. The
behavior of an interferometer is determined by
the properties of the medium, and the effects of
temperature variations and other changes in
the medium on the interference pattern must be
considered in order to understand the behavior
of the interferometer. It is important to note
that the behavior of an interferometer is
influenced by the optical properties of the
medium, and that these properties are not
always constant.
tion in the art, and will be expressed in the concept of space in designing organic building.

Many still believe that security depends upon material protection. There is not perfect protection unless we release ourselves in our own hearts. Otherwise a seeking for protection itself will destroy our sense of living.

Democracy is not a fixed system which fights against another system, but a self-sacrifice system which admits other systems. Many misunderstand democracy in action and insist upon their own actions, combatting the actions of others. This leads real democracy astray. The ideal of true democracy must be reconstructed.

Some still believe in dogmas, and measure morality of others with their own moral standard, refusing to consider ethical principles. The result is to fix a standard for right and wrong, good and bad. In fact human beings never arrive at perfection by destroying wrong and evil, as there is no accurate measurement between them. Democracy is a necessary attitude to recognize not only the good and right, but also the wrong and evil. Recognize the existence of evil and forgive them, and then, and then only, will evil and wrong pass away. True democracy will disclose the nature of the world and so disclose the tendency of change in world nature. We can then formulate the law of change. It is a principle of the functioning of the organic world and also organic architecture. By understanding democracy correctly we will at the same time understand organic architecture.
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PERSONAL QUALIFICATIONS

Graduate of Tientsin University, Tientsin, China.
B. S. Degree 1934, with Major in Civil Engineering.
Thirteen years of working experience in railway
and highway construction in China and Burma.
Fourteen months' study and work with Frank Lloyd
Wright, 1947-48, at his studios in Wisconsin
and Arizona.

Courses taken in Florida Southern College:
- History of Philosophy
- Research in Philosophy
- Educational Philosophy
- Methodology of Educational Research
- Religion of Jesus
- Religion of Paul
- Studies in English