

AN ANALYSIS OF LE CORBUSIER'S DESIGN OF NOTRE DAME DU HAUT
AS A PARTIAL MEANS OF UNDERSTANDING FUNCTION AND SYMBOL IN ARCHITECTURE

by

DAVID CLEMENS GONZALEZ

Environmental Design

Submitted in Partial Fulfillment of the Requirements of the
University Undergraduate Fellows Program

1984-85

Approved by:



Joseph Hutchinson

April 1985



Le Corbusier Notre Dame du Haut, Ronchamp, France

ACKNOWLEDGEMENTS

In dedication to my father and my mother to whom I owe all of my education, and to Professor Joseph Hutchinson for his kindly contribution in sharing his time and knowledge to make this paper possible.

TABLE OF CONTENTS

Acknowledgements	i
Table of Contents	ii
List of Figures	iii
Introduction	1
The Artistic Expression of Children as Compared to Symbols Employed by Prehistoric Man	8
Development of the Monument from Primitive Times through the Gothic .	19
International Style Architecture	28
An Analysis of Le Corbusier's Design of Notre Dame du Haut	36
Future Primitivism	45
Literature Sources	55
Terms	57
Vita	58

LIST OF FIGURES

Figure 1: The Golden Section 12
Figure 2: Le Corbusier's Modulor 12
Figure 3: Church in Ronchamp--Plan 35
Figure 4: Church in Ronchamp--Spatial Drawing 35

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INTRODUCTION

The birth of architecture practically speaking began when men settled in an environment that would provide shelter and protection. Today we need to re-evaluate the significance of architecture. It is necessary to begin discussing the intimate reflection of society and architecture in the past as well as in the present time. Today the real questions seem to be: What will society be in fifteen or so years? Is architecture today viewed the same way as in the past? What influences did architecture have, is it still having, and will it have on people?

Modern architecture is becoming an isolated industrialism where design is for functional aspects. Form, expressing function for pure economical and practical functions, is making architecture something other than what people desire. This creates a competition in mutations that are not totally in tune with our own biological time. Changes from mechanical time to electronic time causes a loss of sense of time because things will occur simultaneously and, therefore, refer back to the typical stage of primitive culture where there is not past or future. There will be no system of planning for the next fifty years because the future is the present, therefore creating a predictable future. Today, we evaluate architecture as being "modern" that reflects societies that are being developed like machines that tune up time. Technology in the future may

produce a reaction among societies that will create an architecture that will meet human needs by using symbol again in functional design.

Since the time of man's existence as we know him in this world, he has been characterized by his existential foothold which (incorporates or) is characterized by his capacity for adaptation. In addition man succeeds and survives because of his extraordinary ability to abstract and generalize. This means that he is capable of recognizing similarities and relationships between phenomena and discovering the factors which govern natural and human processes. The faculties of abstraction and generalization or induction are therefore some of what has distinguished man, and have created primary tools for meeting his basic needs. To grow up educated and experienced is to become aware of meanings. It is symbolism, however, that conserves the inductions of man. Function provides an essential compliment to man's faculties of abstraction and generalization. In man's early stage of evolution and self-realization, symbolization was among other expressions implicit in his pictorial and sculptural forms. This was a form of art and religion that was shaping a human desire for existence.

Art and religion, like many of man's creations, have common roots and with others serve the purpose of making man more aware of himself and his environment. This condition consists of the relationship between natural and human properties, the different processes and actions.

Referring to man's early stage of evolution, primitive mental capacity was characterized by a relatively limited differentiation of subject and object. The things perceived at this level appeared animate,

nature seemed active throughout and everything was understood to behave dynamically. In the world of primitive man things had a certain meaning in so far as they were integral parts of the concrete context in which he functions.

Le Corbusier's invention of the "modulor," a system related to proportions with the human body, led him to transmit a certain feeling for harmonious relationships in architecture. Only by conceiving an image of the body Le Corbusier was able to place man squarely with nature. He claims to have devoted his entire life to art and, more specifically, a search for harmony, which he considers the most beautiful of human passions. But man is to live in harmony, which Le Corbusier defines as that which would be a return to an underlying order. That is to say, ". . . a moment of congruence with the axis that lies within us and therefore with the laws governing the universe." We must, through symbolization, be able to transcend the individual situation to live a social and purposive life. Norberg-Schulz states that "symbolization is not confined to spoken or written language; it also comprises gestures and other kinds of expressive behavior, symbolic objects such as pictures, as well as more abstract concepts. Any human product may be considered a symbol or tool which serves the purpose of bringing order (meaning) into certain relations between man and his environment.

The most common of these products have been the arts. Ever since prehistoric times it has aided man to survive, so art began as a means of depicting animals as a prejudice that was connected with prehistoric man's dependence on animals as his food. The drawings had a function in magical rites to assure successful hunting and in certain cases for fertility.

Certain elements and symbols are universal, irregardless of time or age. Children's art and paleolithic man's symbols are similar because there is an underlying need to explain or to reaffirm one's position with nature and perhaps God through the use of motifs and other universal images. This would include space and mass as well as line and shape as symbols. Space and mass were equally important in the early psychology of man's need to create architecture as monument rather than functional shelter.

The point of departure of the monument, in India, was the phallus pillar, which was a solid sculptured object. Later on it became customary to make opening and hollow chambers called womb chambers within them and deposit divine images for worship. As the monument progresses it gives away to the sarcophagous. The first tombs were natural caves, later they were excavated out of the solid rock; and where suitable cliffs did not exist, artificial masses of rock were made, with tomb chambers within. Thus the pyramid was evolved. Then the desire to record events in the life of the deceased led to the decoration of such tombs by carved reliefs or mural paintings. The idea of the cave like a shell enclosing a kernel continued on into the temple. But at this time it achieved a new sense of purpose. It was the God house. The whole notion of the temple is one of a monolithic structure enclosing an image of the deity. Read's theory states that at some point in the history of architecture the concept of the tomb and the concept of the temple were merged, and the temple took over some of the features of the tomb. The pillar was combined with the cave; if the pillars already carried a graven image, then once the pillars had assumed the burden of the temple roof, it would be natural to transfer

the graven image to the gable or metope. Thus Greek architecture was being born, with great refinements of harmony and proportion. Later all this music, this orchestration, moved inside and became the pillars of the nave of the Christian basilica. Read concluded that sculpture was then reunited to architecture. As a result of Gothic architecture acquiring this aspect, it became a plastic monument rich in symbolism.

As late as 1904 it was possible to conceive of modern architecture chiefly as a sort of renaissance of the Gothic. Yet, it should be stressed that the relation is ideological rather than visual: a matter of principle rather than a matter of practice. Toward the end of World War I this ideological continuation of the Gothic had revisited Europe, creating new movements for a new social order. It was believed to be the basis for creating a standardized architecture, where everyone is equal in peace and harmony. This formalism with the liberating aspects of the machine, tends to reduce man's handicrafts production to the level of automata. This pragmatic form of architecture was not focusing on the primordial aspects for a sensitive architecture. Becoming a total contradiction to that architecture of the primitive where the products are the immediate result of human instinct. In contrast the architect of the modern era is able to manage these purely mechanical elements through the conscious level of the mind, by logic and consistency.

Le Corbusier with his organic design in Notre Dame du Haut at Ronchamp, France (1955) represents clearly a departure from the modern era back to the primitive aspects of architecture. It was a direction back toward the essence of symbolism that the modern era lost. Going back to Le Corbusier's original idea that man had a subconscious, that he was not a totally rational being.

Since the modern movement was sort of a continuation of the Gothic, Ronchamp acquired the ideological aspects that constituted the Gothic cathedral as Read stated from the progression of the monument. Norberg-Schulz indicates in his book Meaning in Western Architecture that in Ronchamp "suddenly all the 'proscribed' forms reappeared: the plastic mass, the hole in the wall, the expressive curve and the cave-like interior. It is a cave open to the essential meanings of human existence. He further maintains it represents a return to historical values in a new and more profound sense, and offers man the possibility of a foothold and a true centre of meaning where man may experience a return to his origins.

Ronchamp is a departure of the modern movement, yet it is not at odds with functionalism but extends the concept of function beyond its physical aspects. Meaning and character again received primary importance and the building is no longer a mere container, but becomes an expressive presence active in the environment. It looks towards the future, but is rooted in the past, and its present makes clearer man's position in space and time. This according to modern architectural historians is the essence of what is becoming known as pluralism.

During a recent study abroad in Italy this writer traveled through several countries along the Mediterranean experiencing different kinds of architecture and the cultural forces that influenced and shaped them. It was fascinating to find out that today there are viable structures that have been in existence for hundreds of years.

Therefore, the purpose of this research will be to develop the following concepts:

- A) Future architecture rests to a great extent upon an understanding of the past. That is, the relationship of primitive art and architecture to man.
- B) Architects such as Frank Lloyd Wright, Le Corbusier and more recently Reima Peitila understood this relationship of primitive art and architecture and redefined it in their own words and needs.
- C) The monument and the amulet began as distinct arts during primitive times and developed into forms of architecture and sculpture. Throughout the course of time these forms became integrated, with architecture for the first time conceived of as integral sculpture.
- D) A brief overview of the history of the 20th century international style in architecture.
- E) The philosophy of Le Corbusier's design of Notre Dame du Haut at Ronchamp, France, will be analyzed as a partial means of understanding function and symbol in architecture.
- F) The concept of space-time pluralism may become strongly emphasized in future architecture, as a result of technological advancements. This alleviation may produce a reaction among societies to create an architecture that will meet human needs by using symbol again in functional design.

THE ARTISTIC EXPRESSION OF CHILDREN AS COMPARED
TO SYMBOLS EMPLOYED BY PREHISTORIC MAN

Towards the latter decade of the eighteenth century and the first half of the nineteenth century artists drew special attention to the child and were more willing to accept the child's wonder and spontaneity. However, it was not until the turn of the twentieth century that psychologists began to analyze and understand children's art as a means of expression that provided insights toward the foundations of human development. Art historians, anthropologists and archaeologists, who encounter motifs of self-taught cultures, usually view this gestalt as a product of the adult mind, rich in symbolic meaning, and characteristic of local cultures. For example, Giedion, the noted art historian, interprets triangular diagrams as vulvas, found carved into the walls of paleolithic caves as fertility symbols. Margaret Mead believes that "art comes from art"--that each generation transmits its favorite gestalts to the next generation. It has been suggested in the literature of contemporary psychology that a better understanding of these ancient gestalts could be achieved through a greater knowledge of the universal nature of self-taught child art. "Children who have been free to experiment with and produce abstract aesthetic forms have already developed the mental set required for learning symbolic language."¹

¹ Rhonda Kellog, "Understanding Children's Art," Psychology Today, 1, No. 1 (1967), p. 22.

Human beings throughout the world, from paleolithic times to the present, have utilized some of the basic motifs of child art. Pictorial drawings made by children in many lands are remarkably similar as they each developed their motor skills. These children's earlier scribbles and designs are uniform in expression, from country to country, culture to culture, past to present, clearly indicating that the child's early abstractions are the products of innate patterns of neurological growth and human development.²

An observation can be made of primitive and children's art that it is the reduction of chaos in nature to a symbolic simplicity. Robert J. Golwater states that "the further one goes back--historically, psychologically or aesthetically--the simpler things become; and because they are simple they are the more interesting, more important and more valuable."³

According to Le Corbusier, simplicity is a basic principle of architectural design.⁴

Our search for architecture has led to the discovery of simplicity. Great art--we must never tire of repeating. This is produced by simple means. History shows that the mind tends toward simplicity. Simplicity which results from judgements and choices is a sign of

² Kellogg, pp. 22-24.

³ Thomas Munro, Evolution in the Arts (New York: Harry N. Abrams, Inc., 1963), pp. 338-9.

⁴ Jacques and Margaret Guiton, The Ideas of Le Corbusier, (New York: George Braziller, 1981), p. 39.

mastery. It gives, through a clearly perceptible play of forms, the means of expressing a state of mind, of revealing a spiritual system. It is like an affirmation, a path leading from confusion to clear geometric statements.⁵

With this in mind, Le Corbusier emphasized his architecture to be an essence of pure forms found in nature. A back-to-nature, back-to-the-primitive philosophy was his primary concern with the elemental. Primitive architecture makes a straight-forward statement, its simplicity comes from direct and strong feelings. Le Corbusier called great architecture that which originated as "a protection against the arbitrary,"⁶ which is an architecture that primitive man had been able to fulfill in two essential conditions:

The first, that having measured by units man had derived from his own body; the elbow (cubit), finger (digit), thumb (inch), foot, pace and so forth . . . his buildings were made in man's measure, to human scale, in harmony with man; and the second, that having been guided by instinct to the use of right triangles to axes, to the square and circle. These are truths of geometry, they are the truths of our eye's measure Geometry is the change of the mind.⁷

⁵ Guiton, p. 34.

⁶ Joseph Rykwert, On Adam's House in Paradise (Cambridge, Massachusetts: The MIT Press, 1981), p. 86.

⁷ Rykwert, p. 16.

Therefore, primitive architecture at all times and in all places, the bearers of high civilizations, Egyptians, Chaldean, Greeks, all these have built eternal and enduring architecture because they were linked to the human person:

They were infinitely rich and subtle because they formed part of the mathematics of the human body, gracious, elegant and firm, the source of that harmony which moves us: beauty appreciated, let it be understood, by the human eye with accordance with a well understood human concept; there cannot and could never be another criterion. The elbow, the pace, the foot and the thumb were and still are both the prehistoric and the modern tool for man.⁸

The Greeks, for example, had a system of proportions that determined rigorous precision and rhythm for their architecture. This famous system of proportions, used in all great historical periods, is called the Golden Section (see figure 1). Le Corbusier applied and understood this geometric configuration, which led to his development of the "modulor" (see figure 2), a system related to proportions which he describes as follows:

The modulor is a measuring tool based on the human body and mathematics. The height of a man with an upraised arm may be

⁸ Le Corbusier, The Modulor I and II (Cambridge, Massachusetts: Harvard University Press, 1980), p. 19.

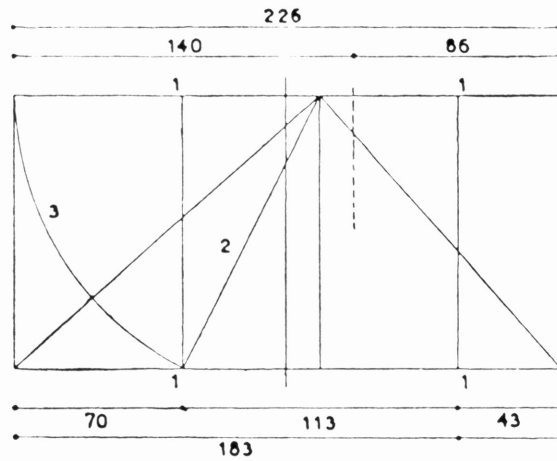


Figure 1: The Golden Section

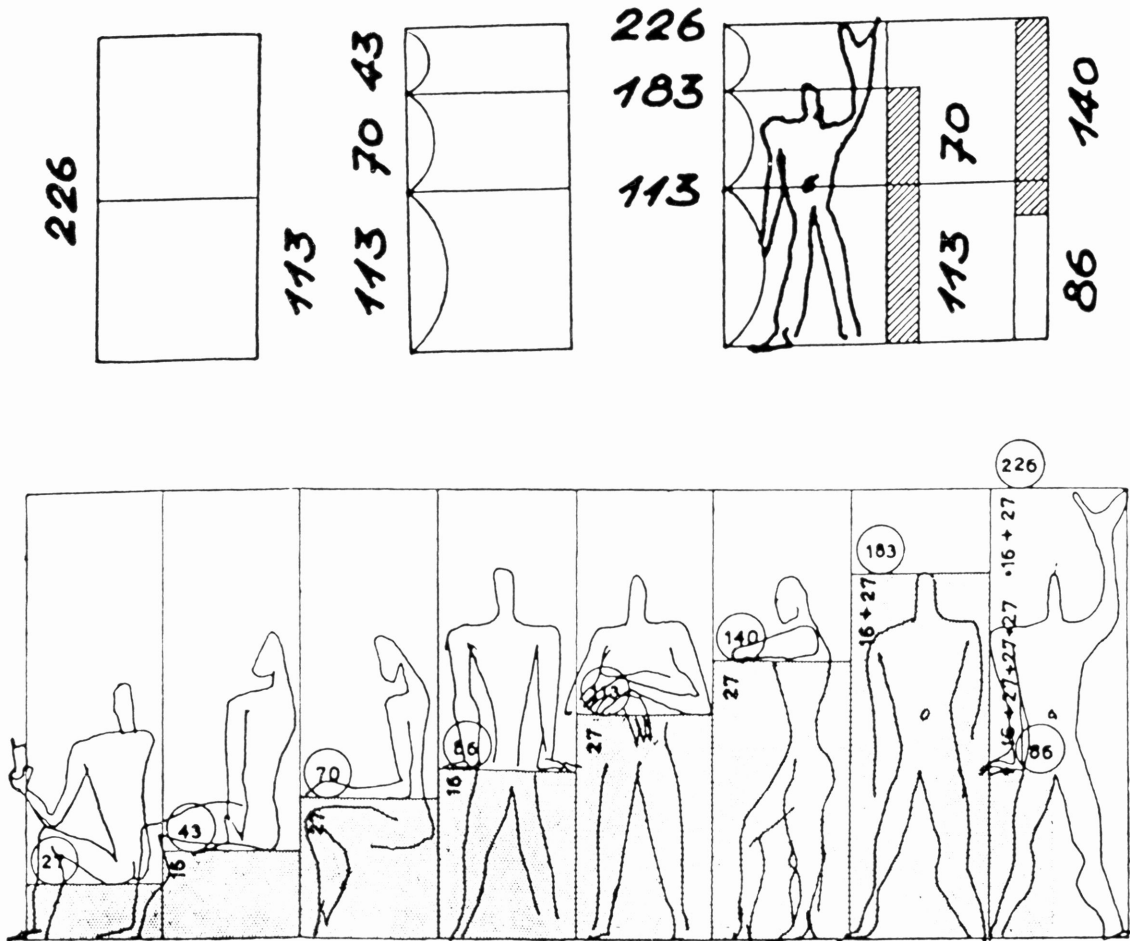


Figure 2: Le Corbusier's Modulor

divided into segments at the points determining his position in space--his feet, his solar plexus, his head, his fingertips. These three intervals produce a series of the Golden Section⁹

Only by conceiving an image of the body, Le Corbusier could transmit a certain feeling for harmonious relationships in architecture. "He claims to have devoted his entire life to art and, more specifically, a search for harmony, which he considers the most beautiful of human passions."¹⁰ Le Corbusier goes on to say that:

Harmony is the happy coexistence of things: coexistence implies duality or multiplicity and consequently calls for proportions and consonances. What sort of consonances? Those existing between ourselves and our environment, between the spirit of things, between mathematics as the secret of the universe.¹¹

In comparison Calvin Harvan states that a

"scholarly inquiry and analysis has demonstrated persuasively that all important architecture of the ancient world was modular in plan and construction. Architecture was a priestly art or an art practiced by a few men who, while being artists of the

⁹ Guiton, p. 66-67.

¹⁰ Guiton, p. 59.

¹¹ Guiton, p. 59.

highest order, were also initiates into the mysteries of mathematics and secret harmonies."¹²

Le Corbusier's primary concern was to create an architecture of emotion that arises "when a work strikes a chord within us that harmonizes with universal laws we recognize, e.g., submit to and admire. When certain proportions are established, the work takes hold of us. Architecture is proportion--a pure creation of the mind."¹³ Based on this observation we can conclude that Le Corbusier's primary concern was to place man in an environment where man and architecture were one with nature. With primitive men, there was a relatively limited differentiation of subject and object. Things were perceived as animate throughout and everything was understood to behave dynamically.

But man is to live in harmony, which Le Corbusier defines as that which would be a return to an underlying order. That is to say, ". . . a moment of congruence with the axis that lies within us and therefore with the laws governing the universe."¹⁴ We must, through symbolization, be able to transcend the individual situation to live a social and purposive life. Because, in fact, the basic purpose of any kind of symbol is to conserve the inductions of man, and the symbolic function forms a necessary complement to man's faculty of abstraction and generalization.

¹² Calvin Harvan, Vision and Invention (Englewood Cliffs, New Jersey: Prince Hall, Inc., 1970), p. 56.

¹³ Guiton, p. 18.

¹⁴ Guiton, p. 19.

Norberg-Schulz states that

symbolization, however, is not confined to spoken or written language; it also comprises gestures and other kinds of expressive behavior, symbolic objects such as pictures, as well as more abstract concepts. Any human product may be considered a symbol or tool which serves the purpose of bringing order (meaning) into certain relations between man and his environment.¹⁵

The most common of these products have been the arts. Since prehistoric times it has aided man to survive, so art began as a means of depicting animals as a prejudice that was connected with prehistoric man's dependence on animals as his food. The drawings had a function in magical rites to assure successful hunting and in certain cases for fertility. "In the world of primitive man things have meaning in so far as they are integral parts in the concrete context in which they function Primitive action thus is intimately tied to the concrete situation, but it already contains the element of generalization as when the enacted situation represents a real one."¹⁶ This element of generalization is summed up in the fact that in the primitive sphere there

¹⁵ Christian Norberg-Schulz, Meaning in Western Architecture (New York: Rizzoli International Publication, Inc., 1980), p. 222.

¹⁶ Heinz Werner, Comparative Psychology of Mental Development (New York: Science Editions, Inc., 1961), p. 148.

is a very close connection between emotion and memory image. Reality, in retrospect, is shaped strongly by the effective need. Heinz Werner gives us an example of this phenomenon as being also a common feature of children's drawings:

We find this phenomenon again in the exaggeration of affectively conditioned drawings from memory. If the Brazilian Indian draws a picture of a battle between a jaguar and a tapir, the jaguar as the more powerful member of the situation will be represented in a size out of all proportion The objective representation is determined to a large degree by an affective evaluation. We might speak here of 'emotional perspective,' a common feature, as we shall see, of children's drawings. It is a generally recognized fact that the child's memory is often radically transformed under the influence of effect.¹⁷

According to Heinz Werner, a child may exhibit concrete thinking quite as much as the primitive man. In any case, it can be demonstrated that the intellectual accomplishments of the primitive men advance little, if any, after puberty. "Since the child's thought, however, is in constant conflict with the abstract thinking of the adult world, this concrete mentality will not express itself explicitly in any characteristic concrete language, as in the case of primitive man, but will tend to translate the adult abstractions into words of concrete meaning."¹⁸

¹⁷ Werner, p. 149.

¹⁸ Werner, pp. 28-29.

It is no doubt, however, that the art of children and of ancient primitive societies, has, in itself, provided useful insights about the foundations of human development.

It has helped to introduce a new attitude toward color and symbolic expression, in opposition to a tendency characteristic of our classical tradition, which was to mock the love of bold forms and patterns in 'savages,' 'peasants,' and 'barbarians,' and to associate it disparagingly with 'physical' (i.e., sensual, emotional) rather than 'intellectual' qualities. But if we were more responsive to color, sound and texture as children, or as primitives, it was because at that moment in our lives, the boundaries between ourselves and our environment were not so sharply drawn, the present sprawled out, heavy with sensed immediacy; and a sense of being in the world, of feeling part of an aesthetic-mythic reality was not yet embarrassed by intellect limited to 'pure reason' or skeptical rationalism.¹⁹

Therefore, it appears that this research points to the fact that with all peoples, irregardless of time or age, certain elements and symbols are universal. Children's art and paleolithic man's symbols are similar because there is an underlying need to explain or to reaffirm one's position with nature, and perhaps God, through the use of motifs and other universal images. This would include space and mass as well as line and

¹⁹ Harvan, p. 2.

shape as symbols. Space and mass were equally important in the early psychology of man's need to create architecture as monument rather than functional shelter.

Le Corbusier was influenced by those artists such as Picasso, who borrow heavily from primitive art and children's spontaneity toward art. Cubism directly reflected techniques used in primitive art. such as plane, line, cubes, multi-image and primary color. Le Corbusier, trained as a painter in the Cubist tradition, naturally reflected those same primitive design elements in his architecture. Also artists and architects of the Bauhaus were equally influenced and reflected the same philosophy.

DEVELOPMENT OF THE MONUMENT FROM PRIMITIVE TIMES THROUGH THE GOTHIC

In the beginning there was neither architecture nor sculpture, as a distinct art, but an integral form called the monument. Architecture and sculpture may be conceived as evolving from an original unity, and it is by no means possible to describe this original entity as essentially architectural or essentially sculptural.

Independent from the monument, another form of art that merged with sculpture was the amulet. This had a separate origin and usage from the monument, it was a small portable charm, worn on the person as a protection against evil or as an insurance of fertility. In his book, The Art of Sculpture, Herbert Read states that in any case the monument and the amulet were kept separate in aesthetic categories, but that the specific art of sculpture, an art with its distinct aesthetics, comes into existence somewhere between these two extremes--as a method of creating an object with the independence of the amulet and the effect of the monument.

In discussing the evolution of the monument and the amulet, it is necessary first to define the artist's role in developing a piece of sculpture. As we understand it sculpture is an art of palpitation--one that gives satisfaction in the touching and handling of objects. It requires an image of the body to situate the idea of ourselves in the external world. "The artists deal with primitive facts, with sensations in their state of innocence. They work on the basis of a direct feeling and not on the basis of concepts, which are secondary intellectual

constructions."¹ Only by conceiving an image of the body can we begin to realize the concept of ourselves within a space-time relationship. To arrive at this image we must touch our bodies and must take account of all our internal bodily sensations. Form begins from the merely sensational reaction of the human organism. The solidity of a form, as it is clearly distinguished in perception, is already a sculptural sensation. "As art develops, in history or in sensuous experience of the individual, we might begin to associate with each shape an idea; we inhabit the shape with our spirit: and finally, if we are artists, we try to realize ideas as specific shapes, to create symbols for our indeterminate feelings--to become conscious, in the forms of art, of the dimensions of reality."²

The point of departure, however, in India was the phallus pillars that evolved from the monument, which was originally a solid sculptured object. This theory suggested that the first monuments were phallic. "It was in India especially that the worship of the energy of generation assumed the exterior shape and significance of the organs of sex. Enormous columnar images were in this respect raised of stone as massive towers and broadening out at the base."³ These columnar images were originally solid but at a later time it became customary to make openings and hollow chambers called womb chambers within them and deposit divine images for worship, thus they were divided into a shell and kernel

¹ Herbert Read, The Art of Sculpture (New York: American Book-Stratford Press, Inc., 1964), p.48.

² Read, p. 5.

³ Read, p. 6.

growing into pagodas. Therefore it is important to emphasize that this development was totally independent of the dwelling, because as the monument progresses it gives away to the sarcophagous, literally translated from the French meaning "flesh-consuming" stone. Ever since Paleolithic times, the disposal of the dead had assumed far greater importance than the shelter of the living. The first tombs were natural caves, later they were excavated out of the solid rock; and where suitable cliffs did not exist, artificial masses of rock were made, with tomb chambers within. Thus the pyramid was evolved. Then the desire to record events in the life of the deceased led to the decoration of such tombs by carved reliefs or mural paintings.

The idea of the cave like a shell enclosing a kernel continued on into the temple in the Western hemisphere. The temple utilized the same concept but achieved a new sense of purpose. It was the god house. "In the early animistic religions, a god might be housed in some prominent natural object, such as an outstanding rock and the first altars were stones."⁴

When at a later stage in this religious development, man began to make graven images of his god, hollowed out the messabah or stone pillar and placed an image inside. The whole notion of the temple, as it originates in the Near East, is of a monolithic structure enclosing an image of the deity, like a shell enclosing a kernel or symbolically as male and female genital symbols.⁵

⁴ Read, p. 8.

⁵ Read, p. 8.

The Greek temple had the same kind of origin: the Doric temple is a stone shelter for an image of a god. Architecturally the controlling impulse was still toward the monolithic block, like the Indian temple or the pyramid. The Greek temple, however, is essentially a plastic conception, constructed as if carved out of rock. Naturalistic sculpture was also present, tucked away in the metopes and gables as a vestige of the mural decoration of earlier tombs. Read's theory states that:

At some point in the history of architecture the concept of the tomb and the concept of the temple were merged, and the temple took over some of the features of the tomb. The pillar was combined with the cave; if the pillars already carried a graven image, then once the pillars had assumed the burden of the temple roof, it would be natural to transfer the graven image to the gable or metope. These sculptures may originally have had a very precise function, of a protective or perhaps of a minatory character; later they became merely ornamental.⁶

Within the interior of the Greek temple, now realized as a built-up sculpturally carved monument, exists an inner or "cella." Within this shell existed a cult figure (or kernel). As in the Parthenon, the cult image was a two-story carved figure in ivory, wood and gold of Athena, the patron goddess of Athens. At the temple of Zeus at Olympia, the cult sculpture was a seated Zeus, both figures created by Phidias, a leading

⁶ Read, p. 9.

Athenean sculptor of the Golden age.

The Ionic temple, whose structure was based upon the laws of matter, that is to say, upon the relationship between load and carrying power, was guided into the life of the organic. The mechanical functions became organic in their effect. "The criterion of the organic is always harmonious, the balanced, the inwardly calm, into whose movement and rhythm we can without difficulty flow with the vital sensation of our own organisms."⁷ However, we can observe that sculpture does not have to deal strictly as Read says to the humanization or animation of architecture; furthermore it can do away with the vital integrity of geometrical constructions. "The disintegration of the Classical ideal of construction was, as Regil was the first to demonstrate, the subjective need for expressive space: for space itself as a significant symbol."⁸

The outer structure of buildings has to conform to this inner need, by applying the great refinements of harmony and proportion of Greek architecture and bringing "the Doric and Ionic melodies, as subtle and as abstract as music."⁹ Inside the building, all this music, this orchestration, moved inside, and became the pillars of the nave of the Christian basilica. Therefore, Read concludes that sculpture was then reunited to architecture as an alleviation of this external severity.

In the further historic development of the amulet and its relation to the monument, this concept can also be seen in the origins of the Jewish temple and the Christian church.

⁷ Read, p. 11.

⁸ Read, p. 11.

⁹ Read, p. 12.

In the 28th chapter of Genesis, Jacob "went out from Beer-Sheba, and went toward Haran, at night he took the stones and put them for pillows and laid down to sleep." While he slept, he had his dream of a ladder set up in that place where he lay, with its top reaching to heaven and "the angels of God ascending and descending on it." When Jacob awaked out of his sleep, he was afraid and said: "How dreadful is this Place! This is none other but the house of God, and this is the gate of heaven. And Jacob rose up early in the morning, and took the stone that he had put for his pillows, and set it up for a pillar. "Pour oil upon the top of it, "he declared, "and this stone, which I have set up for a pillar, shall be God's house." Such was the origin of the sacred pillar at Beth-El, the prototype of the Jewish temple. The stones represented the symbolic and mystic union of man through the gateway to heaven. This transition of sculpture to monument also created the use of relics in medieval Christian churches.

The relics that are a part of every Christian Romanesque church in Europe continue this basic concept. Indeed, the basilica of St. Peter's in Rome was placed over the site of the crucifixion and burial of St. Peter. Numerous other churches can be named--St. Foy in Conques, Notre Dame at Chartes, Notre Dame at Paris, S'Sindore at Turin, and probably the most widely visited pilgrimage church of the 1100's, the shrine of St. James at Santiago de Compostela, Spain.

As previously mentioned it was the Christian basilica that inherited the refinements and proportions of Greek architecture when sculpture was reunited to architecture. An excellent description of this transitional process is given by Ruskin's Stones of Venice. He asserts as a principle

that, if architecture requires large surfaces of undecorated walls, then the angles of the building must be "softened" by sculpture. "The aesthetic purpose of this softening process is, according to Ruskin, to avoid a 'meagerness of effect' produced by severely rectangular wall surfaces, and the Ducal palace is given as an example of a building that 'throws the main decoration upon its angles.'¹⁰ This effect depends on some modification of the sharpness of the angle, either by groups of buttresses, or by turrets and niches rich in sculpture. It is to be noted also that this principle of breaking the angle is peculiarly Gothic. In a typical Gothic cathedral this suggestion of the foursquare block disappears by the softening of the angles with sculpture, leaving the spectator with a plastic monument, once more, with architecture conceived as integral sculpture.

Nevertheless the more the building itself, as a unity, becomes sculptural, the less the detail of its sculpture. Ruskin, in another part of The Stones of Venice, recognized this paradox. If, to produce a good or beautiful ornament, it were only necessary to produce a perfect piece of sculpture, and if a well-cut group of flowers or animals were indeed an ornament wherever it might be placed, the work of the architect would be comparatively easy. Sculpture and architecture would become separate arts: and the architect would order so many pieces of such subject and size as he needed, without troubling himself

¹⁰ Read, p. 13.

with any questions but those of disposition and proportion.¹¹
(The reader of modern works on architecture is accustomed to considering building as if they were large pieces of sculpture: the treatment of the exterior of the building as a whole is aesthetically significant, its contrast of block against block, the effect of a pitched or flat roof or a dome, the rhythm of projections and recessions. It is this aspect of the building that seems of greatest concern to Le Corbusier.¹²

Unrau states that the architect's role, however, is to assume that "their building is to be a perfect creature, capable of nothing less than it has and needing nothing more . . . He has only to do with what is part of the building itself, that is to say, its own inherent beauty."¹³ But Ruskin further maintains that ornamentation is the principal part of architecture, "the especial condition of true ornament is, that it is to be beautiful in its place, and nowhere else, and that it aid the effect of every portion of the building over which it has influence, that it does not, by its richness, make other parts bald, or by its delicacy make other parts coarse. Every one of its qualities has reverence to its place and use."¹⁴ Concluding that ornament is not

¹¹ Read, p. 14.

¹² John Unrau, Looking at Architecture with Ruskin (London: Thames and Hudson Ltd., 1978), p. 35.

¹³ Unrau, p. 63.

¹⁴ Unrau, p. 51.

something extra which is added to a building to beautify it, "whatever has nothing to do, whatever could go without being missed, is not ornament; it is deformity and encumbrance."¹⁵

Also it is to be noted that Gothic architecture, besides being a plastic monument as described, is rich in symbolism. Today the art of the past from churches and temples have direct and positive meaning as symbols of faith; indeed their very forms, such as the cross-shaped church plan, are associated with sacred meaning and symbolism. However, it is important to keep in mind that these temples and churches were founded as the house of God. The Gothic cathedral, for example, with its spatial volumetric structure, creates a space as a symbol emphasizing God and the universe. The spire within the church symbolizes where a material world ends and God's world begins. We need not know very much about the Age of Faith that produced the Gothic cathedral represented at Chartres or Amiens in order to respond to the lofty soaring quality, the mysterious impressiveness of shadowy vaulted interiors, the jeweled glow of stained glass windows that absorb and reflect light in shimmering color patterns.

¹⁵ Unrau, p. 68.

INTERNATIONAL STYLE ARCHITECTURE

"As late as 1904 it was possible to conceive of modern architecture chiefly as a sort of renaissance of the Gothic. Yet, it should be stressed that the relation of the modern style to the Gothic is ideological rather than visual; a matter of principle rather than a matter of practice."¹ Towards the end of World War I this ideological continuation of the Gothic had revisited Europe creating new movements for an ideal utopia in architecture: De Stijl in Holland, Purism in Paris, Constructivism in Russia and Hungary, Expressionism and Utopianism in Germany, Dada and Surrealism in various large cities including New York, the New Criticism in Poetry in England and the States, and Formalism in Czechoslovakia. These many movements created a community of intellectuals to work out revolutionary forms for a new social order. Architects such as Le Corbusier, Mies Van Der Rohe, and Walter Gropius practiced modern architecture which was "based loosely around certain social ideals-- humanitarian liberalism, performist pluralism and a vague social utopianism."² as an obligation to propose alternative visions to the existing social order. The Bauhaus, for example, founded by Walter Gropius (1919), was presented in the framework of this epoch and "was

¹ Henry Russell Hitchcock and Philip Johnson, International Style (New York: W.W. Norton & Company, 1966), p. 24.

² Charles Jenks, Modern Movements in Architecture (New York: Anchor Books Edition, 1973), p. 31.

expected to stimulate the view to relate it to the political and sociological realities as well as the concurrent cultural trends of the 1920's."³ The Bauhaus culture became "known as the center of modern design . . . a center of activity for the problems of creation in art, architecture, design, technique and sociology."⁴ Furthermore, the Bauhaus sought a new synthesis of philosophy towards art and technology, "that is, to give the products of the machine a content of reality and significance" ⁵ But the importance of the Bauhaus was to translate a new spiritual attitude by the use of the machine and technology and to bring in great masses housing projects (e.g., in Stuttgart, the Weissenhof, 1927).

Le Corbusier wrote in the magazine L'Esprit Nouveau the idealist incantatory tone for all future discussions of "The New Architecture" and its "Heroic Period."

A great epoch has begun . . . there is a new spirit: it is a spirit of construction and of synthesis guided by a clear conception⁶

Van Doesburg claimed this great epoch as the beginning of a new spiritual and mental discipline underlying the machine:

³ Eckhard Neumann, ed., Bauhaus and Bauhaus People (New York: Van Nostrand Reinhold Company, 1970), p. 7.

⁴ Neumann, p. 21.

⁵ Christian Norberg-Schulz, Meaning in Western Architecture (New York: Rizzoli International Publication, Inc., 1980).

⁶ Jenks, p. 32.

Every machine is, par excellence, a phenomenon of spiritual discipline . . . the new spiritual artistic sensibility of the twentieth century has not only felt the beauty of the machine, but has also taken cognizance of its unlimited expressive possibilities for the arts.⁷

He connected this formalism, natural to machine production, with the liberating aspects of the machine and contrasted all this with the tendency of handicraft production to reduce man to the level of automata:

Under the supremacy of materialism, handicraft reduced men to the level of machines: the proper tendency for the machine (in the sense of cultural development) is as the unique medium of the very opposite: social liberation.⁸

The machine made it no longer the age of the craftsman, artisans wanted to break the old existing order of the beaux arts with the idea that art could change the world and create a new spirit of architecture with the machine as the basis of it. With this idea, it was believed that creating a standardized architecture would free the human spirit and create a world in which man is free from the bonds of labor. This would result in a social environment where everyone is equal in peace and harmony. This idea of social transformation through architecture and

⁷ Jenks, p. 32-33.

⁸ Jenks, p. 33.

design was one of the driving forces of modernist culture. Rational design would make rational societies. Henry Russell Hitchcock christened this new movement "The International Style." If you had good architecture the lives of people would improve; that architecture would improve people, and people improve architecture until perfect. This new movement in architecture laid down the aesthetic principles for an architecture that emphasizes volume rather than mass, regularity rather than axial symmetry serving as the chief means of ordering design. These were two principles with the third proscribing avoidance of applied decoration.

This pragmatic form of architecture was not focusing on the primordial aspects for a sensitive architecture but rather in an architecture that had character and expression. "The architect who builds in the international style seeks to display the pure character of his construction and to express clearly his provision of function."⁹ It is, however, through the conscious level of the mind that the architect is able to manage these purely mechanical elements. The organization of the parts of the complex structure is ordered by logic and consistency. For example, in 1927 the German Werkbund housing project organized in Stuttgart, the Weissenhof, was commissioned to the best architects throughout Europe. To name a few: Walter Gropius, P. Behrens, J. Frank, H. Scharoun, Mies, J.J.P. Oud, etc. The project was, however, restricted to pure function. The plan was in "putting into practice certain theoretically proven principles--the buildings' independence of the road sides, separation of motor and pedestrian traffic" ¹⁰ Mies'

⁹ Hitchcock and Johnson, p. 44.

¹⁰ Leonardo Benevolo, History of Modern Architecture, Vol. II (Cambridge, Massachusetts: The MIT Press, 1977), p. 419.

house design however "provided an unimpeachable architectural solution to the first alternative. Every additional or ornamental element was eliminated and the architect worked as usual by distributing the relations of the functional elements with inimitable confidence."¹¹ In support of this, architects such as Hannes Meyer said that "a good building is that which provides adequately, completely and without compromise for its purpose regardless of its appearance and, "for these men it is an absurdity to talk about the modern style in terms of aesthetics at all" ¹² Modern construction receives from them a straightforward expression; they use standardized parts whenever possible and they avoid ornament or unnecessary detail."¹³ They go on to say that architecture should be determined by techniques and economics, "any elaboration of design, any unnecessary use of specially made parts, any applied decoration would add to the cost of the building."¹⁴ In contrast, Frank Lloyd Wright in his book, When a Democracy Builds, sees architecture as not being determined through purely mechanical elements but as an architecture which is "organic law understood and intelligently applied spirit given appropriate material form. Simply, too it is the structure of all life seen by man as various forms of architecture."¹⁵

11 Benevolo, p. 486.

12 Hitchcock and Johnson, p. 36.

13 Hitchcock and Johnson, p. 36.

14 Hitchcock and Johnson, p. 36.

15 Frank Lloyd Wright, When a Democracy Builds (Chicago: University of Chicago Press, 1945), p. 8.

He concluded that architecture "is this new democratic concept of man--freedom of life wherein money, land, or government is to be established as subordinate to the human being."¹⁶

With this concept Frank Lloyd Wright looks at the individual with dignity and worth to society where man is to be understood. It is, however, through the practice of art and religion that man becomes more aware of himself and his environment. "But it is to become 'organic' now as we understand it, and therefore form and function become one. On that basis a civilization might endure forever."¹⁷ Norberg-Schulz states that function provides an essential compliment to man's faculties of abstraction and generalization. "In man's early stage of evolution and self-realization, symbolization was among other expressions implicit in his pictorial and sculptural forms. This was a form of art and religion that was shaping human desire for existence."¹⁸ So it appears in an analysis of world architecture following World War I that two basic ideas were foremost in architecture design. The first was the concept of function and standardization which became known as the international style. The second was the concept of organic architecture as stated in the theories and the designs of Frank Lloyd Wright. This latter concept dealt with individualism and uniqueness and placed man squarely with nature instead of attempting to formalize it. However, the roots of the

¹⁶ Wright, p. 8.

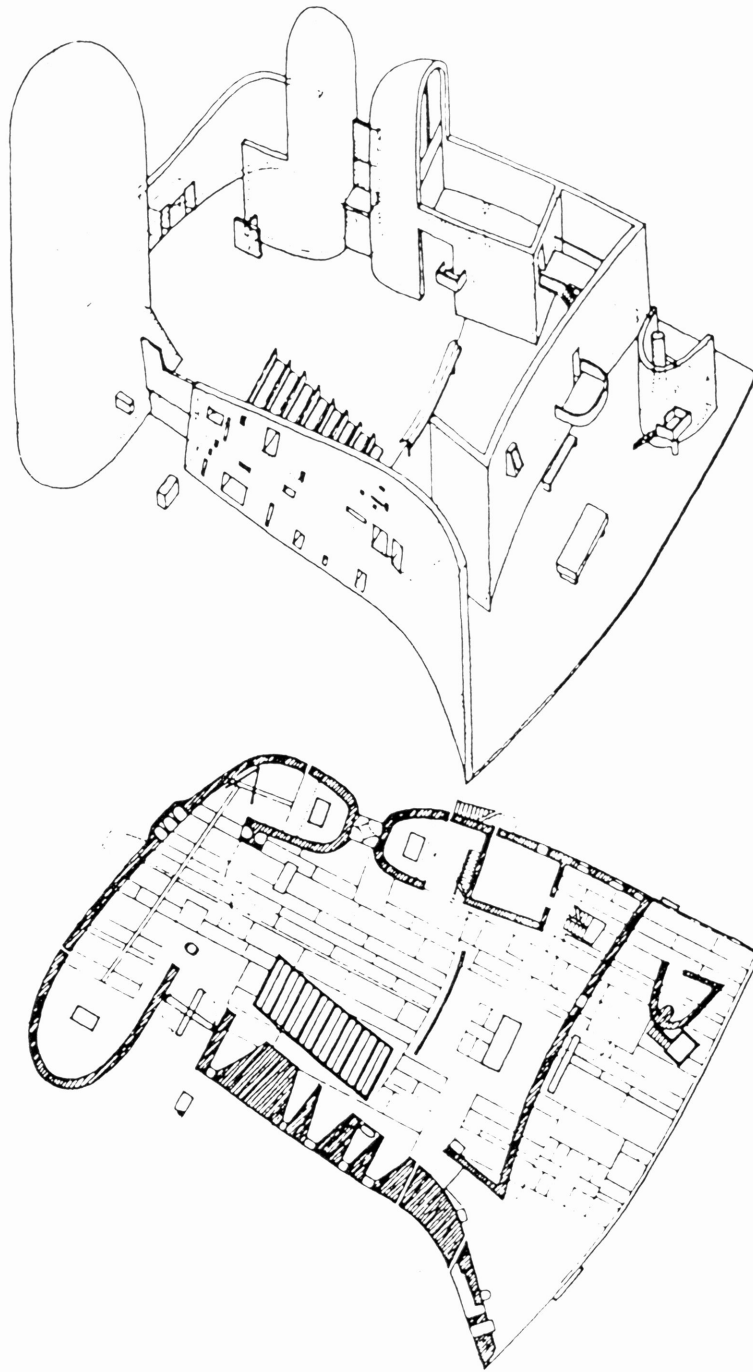
¹⁷ Wright, p. 8.

¹⁸ Christian Norberg-Schulz, Meaning in Western Architecture (New York: Rizzoli International Publications, Inc., 1980), p. 221.

European architects, especially Le Corbusier, were founded in design taken from natural form. This appears to be a contradiction until one realizes that Le Corbusier was first trained as a painter and later reflected a wedding of international style, functionalism, and organic design in Notre Dame du Haut at Ronchamp, France, in 1955 (see figures 3 and 4).

By the time of Notre Dame du Haut these natural forms break through and dominate his paintings. The painting part of the Bull Series executed during the fifties is a primary example of opposition to the aggressive content of his paintings that were executed during the twenties. Furthermore, his Purist compositions which expressed many dynamic objects that were forced into a unity was no longer repressed in his art but rather it was brought to the surface, faced, and controlled.

When Le Corbusier wrote the book on purism with Ozenfant he referred to the idea of purist concept and form, that is to say, a reduction of form via a geometric procedure; however, art and architecture split. Notre Dame du Haut was a direction back toward the essence of symbolism that the International Style had lost. It was no longer the idea of continuing on into standardization regularity that Johnson and Hitchcock wrote about the International Style. Notre Dame du Haut stands outside of that mainstream, however, it is possible to tie the monument with the International Style because the creator was part of that movement and understood the use of materials, pre-fabrication and standardization. Notre Dame du Haut is the essence of the concept of the primitive in architecture reinvested itself again in the 20th century. This goes back to Le Corbusier's original idea that man had a subconscious, that he was not a totally rational being.



Figures 3 & 4: Le Corbusier's Church in Ronchamp

Above, Spatial Drawing

Below, Plan

AN ANALYSIS OF LE CORBUSIER'S DESIGN OF NOTRE DAME DU HAUT

After the Second World War, there was what was interpreted to be a major shift in Le Corbusier's architecture. Instead of being the epitome of a machine age it was now thought to be almost primitive: instead of being made up of right angles and straight lines, it was thought to be arbitrarily made up of curves and whimsical shapes.¹

During this period all that had actually happened was that Le Corbusier's "secondary sensations" had come to the surface to contrast, ironically, with the "primary forms," "whereas many architects wished to suppress behind a Miesian austerity those aspects of man accentuated or visible in the war."² Le Corbusier, however, wished the reverse, with Notre Dame du Haut being a primary example of this trend and "here, on a site where many churches had been destroyed, he gave ironic expression to sensuality, aggression and monumentality."³

Le Corbusier intended his later buildings to be read as departures from the 'modern movement.' Charles Jenks states that Le Corbusier felt the tradition of the modern movement had become as dogmatic and restrictive as the beaux arts. So with Ronchamp conceiving a plastic image, expressing certain harmonious relationships that are variable,

¹ Charles Jenks, Modern Movements in Architecture (New York: Anchor Books Edition, 1973), p. 153.

² Jenks, p. 154.

³ Jenks, p. 154.

diverse, and innumerable throughout. That is to say, it is no longer an architecture that is concentrated with columns but concerned with plastic events which Le Corbusier describes as follows: ". . . . plastic events are not subject to scholastic or academic formulas; they are self-determined and unlimited in number."⁴

Some American critics, such as Mumford, thought Notre Dame du Haut was a return to the past and to plasticity.

English critics such as James Stirling thought it indicative of the 'crisis of rationalism.' Nearly everyone agreed that it presaged a new 'irrationalism' and new departure for Le Corbusier because it didn't appear to have right angles for discipline; and nearly everyone was partially wrong. As Peter Blake pointed out, Le Corbusier was writing his most personal document, the poem to the right angle, when he designed Ronchamp: and the orthogonal system is apparent in the earliest models and plans, as is the discipline of the modulator. Furthermore, the meanings of the building work coherently, which is the only non-ideological definition of 'rationalism,' and even further than that, all the elements of this building exist in Le Corbusier's architecture of the twenties. All he has done is turn his architecture inside out so that the curves and right angles change place.⁵

⁴ Jacques and Margaret Guiton, The Ideas of Le Corbusier (New York: George Braziller, Inc., 1981), p. 69.

⁵ Jenks, p. 158.

In 1953 when the project of Le Corbusier's pilgrimage church of Notre Dame du Haut was published, it came as a disconcerting surprise to most adherents of the modern movement. "Suddenly all the 'proscribed' forms reappeared: the plastic mass, the hole in the wall, the expressive curve and the cave-like interior. But those who visited the church after its completion in 1955 forgot their worries and recognized that a new dimension had been given to modern architecture."⁶

Le Corbusier stated that "the chapel drives its roots down into the deep layers of a high place of worship of over a thousand years and amid the means of the art of the oldest architecture."⁷ It should be stressed that the church marks a rebirth of a truly significant religious architecture. In modern Western practice, however, religious art is far less important than in those earlier periods when it sprang directly from the needs of the time. "Yet there are many religious groups today which turn to aesthetic expression as a means of bolstering faith through modernized structures, contemporary forms of religious painting, sculpture and church ornament. The paintings by Matisse in the chapel at Vence and the Le Corbusier-designed chapel at Ronchamp (1955) are among the outstanding examples of this trend."⁸

⁶ Christian Norberg-Schulz, Modern Movements in Architecture (New York: Rizzoli International Publication, Inc., 1980), p. 213.

⁷ Le Corbusier, Ronchamp. N. P. Copyright 1957 by Verlaug Gerd Hatje, p. 5.

⁸ Bernard S. Myers, ed., Understanding the Arts (Holt, Rhinehart, Winston, 1964), p. 35.

Norberg-Schulz states that:

. . . during the two hundred years which had passed since the construction of the last baroque churches hardly any ecclesiastical building of importance had been conceived, so the appearance of Ronchamp is a symptom of renewed interest in basic existential meanings. As indicated by the name Notre Dame du Haut, the church is located in a high place. Since time immemorial it had been a place of prayer, and Le Corbusier accordingly aimed at creating a vessel of intense concentration and meditation. As a high place it is integrally related to the surrounding landscape, and it is known that Le Corbusier took the 'four horizons' as his starting point. An outdoor altar serving for the pilgrims' mass indicated the symbolic relationship between the place and its environment. The building itself is simultaneously a refuge and an open, embracing form which receives the visitor. Within its heavy, protecting walls it seems that a secret is kept, which is symbolically offered to the surroundings by the extended, curved roof. The interior also has a vertical reference, thanks to the three towers which rise up to receive light. The synthesis of enclosure and openness not only satisfies the task of making a church, but creates a true 'centre of meaning' where man may experience a return to his origins. The symbolic ambiguity inherent in the simultaneous protection and extension which characterize the building implies that all the forms have a double nature or seem to undergo a constant

metamorphosis. A great sloping wall to the south is both fortress and a sign of an intense wish for communication, as it raises up and bends to mark the point of contact between the outdoor sanctuary and the interior. The hanging roof is both a heavy weight which concentrates the interior and reminds man of his precarious situation on earth, and light 'heavenly' veil which floats over the walls, separated from the physical presence by a narrow slit where light enters the room. The tower chapels are the innermost places in the church, as well as the places where divine light is most strongly felt.

Although the plan does not follow the traditional disposition of churches, Le Corbusier has succeeded in recovering the basic properties of the Christian sanctuary. His building is receptacle and giver, fortress and poetic vision of otherness. Above all he has managed to recreate the interiority of the early churches with means which are simultaneously new and old, making the interior of Ronchamp a space which simultaneously protects and liberates. It is a cave, open to the essential meanings of human existence, and supporting Heidegger's equation that 'on earth' means 'under the heavens.'

Ronchamp's importance in the history of architectural form can hardly be overestimated. "The church demonstrates the importance of physical presence, and is a lesson in how to treat plastic mass in a new and old way"⁹

⁹ Norberg-Schulz, p. 213.

Furthermore, Le Corbusier succeeded in creating a true modern monument that through its plastic presence symbolizes characters that give identity to the society for which it was built. Ronchamp then becomes an expressive presence active in the environment.

The roots of Le Corbusier as an architect and painter were founded in design taken from natural form. "He said that the inspiration of the roof of his chapel at Ronchamp came from a crab shell."¹⁰ The works of Le Corbusier show a deep interest in the geometry of energy and the geometry of growth which is a component of the expressive structure of Ronchamp. He looked for a kind of harmonic-rhythmic configuration of geometric mode, of whatever sort it has to be part of the original idea, and function as an integral part of form and feeling. The creative authority and the uniqueness of his inspiration for the creation of Ronchamp does not reside in any single idea or interest, but in a coming together of several hitherto unrelated, or very loosely related, elements. This conjoining has a quality of mystery about it, and its products seem to possess the unity and inevitability of forms in nature. They are the results of creative intuition--it becomes then rich in symbolism since it is a "natural" and "spontaneous" product that sprang involuntarily from the unconscious . . . it becomes then a multidimensional structure that is beyond the grasp of reason, unknown or hidden from us like an abstraction given appropriate material form.

Le Corbusier states that, "abstract art which, rightly, nourishes so

¹⁰ Calvin Harvan, Vision and Invention (Englewood Cliffs, New Jersey: Prince Hall, Inc., 1970), p. 73.

many passions in these days is the *raison d'etre* of Ronchamp, the language of architecture, plastic equations, symphony, music or numbers. The compass needle pointing to that space which is beyond written description All the internal harmony of the work is in the drawings. This has been so since the loftiest and most ancient cultures."¹¹

Just as Frank Lloyd Wright talked about the language and imagery of biology with his term "organic architecture" so did Le Corbusier write on drawings:

We learn to see how things are born. We see them develop, grow, change, blossom, flourish, and die . . . and the grain matures. The fundamental principle is "from the inside out" (contrary to appearances). Everything in life is in essence biological. The biology of a plan or section is as necessary and obvious as that of a creature of nature. The introduction of the word "biology" illuminates all researches in the field of building. Living, working, cultivating body and mind, moving from place to place, are parallel processes to those of the blood, nervous and respiratory systems.

From the inside out . . . the value of all things lies in their purpose, in the germinating seed. Nothing is seen, admired or loved except what is so fine and beautiful that from the outside one penetrates into the very heart of the thing by study, research and exploration.

By devious ways, we therefore reach the centre.¹²

¹¹ Le Corbusier, p. 123.

¹² Harvan, p. 73.

And indeed, Ronchamp brings into play the resources that are made strong, but primitive, sensitive and informed by "all embracing mathematics which is the creator of that space which cannot be described in words . . . Excellency, I give you this chapel of dear, faithful concrete, shaped perhaps with temerity but certainly with courage in the hope that it will seek out in you an echo of what we have drawn into it."¹³ Ronchamp, like art, is a method of trying to know the world through feeling, through the echo that once was a preconception and now a reality.

In determining the design of Ronchamp Le Corbusier dealt with primitive facts, with sensations in their state of innocence. He worked on the basis of feelings and not on the basis of concepts. Only by conceiving an image of the body he was able to transcend the individual situation into a symbolic conception in a space-time relationship, giving Ronchamp an image that first was preconceived as a spirit and then given appropriate material form it became conscious in the forms of art with the dimensions of reality. It stands out as a metaphysical symbol, that occurred throughout mankind, integrating architecture, sculpture and painting down to their essential essence. Its appearance therefore is a symptom of renewed interest in basic existential meanings, where forms in art and architecture as a result become primitive in their effect. They are not totally comprehensible or rational by our definition, reaching beyond time and space to touch human beings on a subconscious level. Furthermore, it is a product of Le Corbusier's original idea of creating

¹³ Le Corbusier, p. 25.

architecture out of man's subconscious mind, reaching beyond its rational state of being.

In addition, in the primitive world or in the world of children exists a limited differentiation of subject and object, while in nature things are to be understood to behave dynamically throughout. Primitive men, however, responded to their environment on a subconscious level, creating symbols that are the result of human instinct. Symbols transmit a certain feeling or emotion as a means of responding subconsciously to a certain need. Man's continuing precarious situation on earth gains concrete meaning through symbolization as well as with other abstract objects in the forms of art.

There is no doubt that to some Ronchamp reaffirms one's position with nature and with God. After all, art and religion are what conserve the inductions of man just as children's art and paleolithic man's symbols are similar because there is an underlying need by many to explain or to reaffirm one's position with nature, and perhaps God, through the use of motifs and other universal images.

"Ronchamp thus represents a return to historical values in a new and more profound sense, and offers to man the possibility of a foothold which is not only spatial, but temporal as well."¹⁴

¹⁴ Norberg-Schulz, p. 213.

FUTURE PRIMITIVISM

Ronchamp, as stated before, is a departure of the modern movement, yet it is not at odds with functionalism but extends the concept of function beyond its physical aspects. Meaning and character again received primary importance and the building is no longer a mere container, but becomes an expressive presence active in the environment. It looks toward the future, but is rooted in the past, and its present makes clearer man's position in space and time. This according to modern architectural historians is the essence of what is becoming known as pluralism. "Pluralism" suggests that man has lost his belief in global solutions, and hence in an "International Style."

The modern movement, however, as stated by Norberg-Schulz "has been the only living architectural force since the end of the baroque epoch, and the modern movement has from the very beginning tended toward pluralism It is the aim of pluralism to make the totality of significant human experiences potentially available again, with the result that history becomes a dimension of fundamental importance in the pluralistic world."²

Ever since the end of World War II pluralist architecture has been for the first time strongly emphasized. The reason is that "hardly any

¹ Christian Norberg-Schulz, Meaning in Western Architecture (New York: Rizzoli International Publication, Inc., 1980), p. 220.

² Norberg-Schulz, p. 220.

time before has man's environment been more problematic and his sense of existential foothold less secure."³ Since pluralism tends to take the individual situation into an urban environment of concrete meaning, there was a hope of creating an architecture interactive with the urban environment and sensitive towards the people.

In order to conceive this environmental structure it has been formulated to consist of "conceiving the urban structure as several patterns of open growth. This implies a return to topological principles of composition such as clustering and plastic continuity."⁴ This may result in a stable system where man can develop himself by having a social life and culture in general. He also needs the assurance of that plastic presence as found in the designs of Le Corbusier's Chandigarh, in Punjab, India, Frank Lloyd Wright's Falling Water, in Bear Run, Pennsylvania, Hans Scharoun's Philharmonie, Berlin, and Reima Pietila's "Dipoli" Student Union, School of Engineering at Otaniemi, Helsinki. These buildings succeeded because of their true modern monumentality, that is, "buildings which through their plastic presence symbolize characters that give identity to the society for which they are built."⁵

The examples mentioned above have "sustained the tenant that a new architecture of pluralism is in the course of development. As this architecture does not concentrate its attention on fixed types or basic principles, but aims at understanding the total character of each task,

³ Norberg-Schulz, p. 203.

⁴ Norberg-Schulz, p. 205.

⁵ Norberg-Schulz, p. 207.

it is a method rather than a style."⁶

In contrast, the modern movement of the mid-20th century attempted to create an architecture with the aspects of the machine, that is, by creating a social environment where the lives of people were formalized to fit in an urban environment of automata. Where design was restricted to pure function, today we are experiencing an environment that is being transformed by electronic systems. Starting from an individual scale (head set radios, calculators, home computers) to a huge scale of an international network (satellite communications, world-wide telephone systems). These complex and increasingly interrelated systems are changing; in architecture, both the means of production and the objects and space created have also changed in a fundamental way. "There are new possibilities of simultaneously 'being' at many places, and in various time frames. Conditions of simultaneity are evolving which undermine industrialized societies' senses of architectural time and place."⁷ What was believed of the International Style is that if one had good architecture the lives of people would improve; that architecture would improve people, and people improve architecture until perfection was reached.

Time, as we experience it today, is coming into a reality in a similar sense. With the advent of technology the lives of people would improve; that technology would improve people and people would improve technology until perfect. This means that as technology advances, our

⁶ Norberg-Schulz, p. 213.

⁷ Norberg-Schulz, p. 15.

electronic equipment will become so sophisticated and advanced that we will be able to use this equipment to make other equipment. As this process goes on in time, our technology will create better technology within a shorter period of time. until reaching a point of sophistication that our results for the evolution of technology will become simultaneous. This creates a competition with mutations that are not totally in tune with our own biological time. Changes from mechanical time to electronic time loses the sense of time because things will occur simultaneously, therefore, referring back to the typical stage of primitive culture where there is not past or future. The sense of time will be reduced to become timeless. People would become pinned down to the momentary situation, that is, only by doing the present can we shape and predict the future. In the case of primitive man, according to Heinz Werner "only 'that which is momentary' exists for him. He says of the past: 'something new is always coming along. What has gone can never be recaptured; and that of the future, there may be something of that sort for others, but I cannot know that."⁸ Based on this observation we can make the following argument: when the universe was one star (as believed by some cosmologists) there was no other object to measure its distance, but when it exploded and came into separate parts or objects the distance between these objects was the time lack of separation. Time is an objective reality in order to be perceived. In other words, you must

⁸ Heinz Werner, Comparative Psychology of Mental Development (New York: Science Editions, Inc., 1961, pp. 188-189.

become separated from these objects to understand objectively the sense of time. We must then separate ourselves from society and realize time as being the period between its events. The primitive sense of time, however, is the same concept. The basic factor behind the structural changes is a de-differentiation of the acting subject and the objective world against him. "Through this shrinking of the gap between object and subject, the individual is plunged into a swift stream of events; he more or less loses the ability to enmesh this flux of activity within a temporal schema, and thus fix and order it . . . pinned down as he is to the momentary situation, he may be said to be a 'situative cross-sectional being.'"⁹

With this observation we can conclude then, that primitive sense of time was characterized only by the momentary situation. As Alan Watts described in his book Time, "the universe started with a big bang as some cosmologists believe, now when that bang happened, it was the present, wasn't it? And so the universe began in what we call a now moment, then it goes on doing its stuff. When any event that we now call past came into being, it came into being in the present and out of the present . . ."¹⁰

The architect of pluralism becomes a separate identity from society perceiving his own biological sense of time that progresses while executing his own events. Primitive men perceived things in nature to be

⁹ Werner, p.188.

¹⁰ Alan Watts, Time, Millbrae, California: Celestial Arts, 1975, p. 15.

understood to behave dynamically, so does the architect of pluralism understand his environment in a dynamic way (or the environment where he is to develop a piece of architecture) and follows his instincts to determine his architecture. At that point he becomes more society than society itself.

In order to predict the future of architecture it is through an understanding of living "in" the present to shape the future. The architect of pluralism, however, takes into account the old because it is a product of many forces, "natural, social and historical, so while the architecture of pluralism is new . . . it looks toward the future, but is rooted in the past, and its present makes clearer man's position in space and time."¹¹

Primitive man deals with symbolism as a means of understanding himself within the individual stream of events that occurs in his daily life activities, that is to say, giving him a synthesis of freedom and order that provides him an existential foothold. Pluralism, furthermore, is the architecture of symbolism, it has aided man in making his existence meaningful. After all the basic aim of pluralism as stated by Norberg-Schulz is the new synthesis of freedom and order. ". . . every work of architecture is thoroughly individual, at the same time as expressing that it forms part of a general field of interacting forces . . . pluralism does not imply to a multitude of close worlds, but means that each solution should interpret openness in its own characteristic way."¹²

¹¹ Norberg-Schulz, p. 218.

¹² Norberg-Schulz, p. 219.

As stated by Louis I. Kahn, "a building must be what it wants to be."¹³ He further maintains that "'form precedes design,' freedom means that the solution is free to shape itself, as a product of inner and outer forces."¹⁴

This type of architecture, however, may form a sociological atmosphere almost identical to man's early stage of evolution. That is, a period of time that produced what we refer to as primitivism, where forms in art and architecture are not fully comprehensible; are not rational by our definition. Primitive forms and pluralist architecture reach beyond time and space to touch human beings on a subconscious level. Therefore, we can conclude that pluralism, irregardless of time and place, will always seem to go through a constant metamorphosis in order to meet social and cultural values; that is, by working on toward a sensitive and harmonious architecture.

In contrast, Larry Richards in his article "Enjoying Electronic Mannerisms," talks about the "complex overlays of electronic systems" which are creating new spatial relationships and new architectural conditions. He makes his distinction clearly by concluding that the result created will be an "electronized society" whose systems will reduce the probability of social encounter.

The small, twin cities of Kitchener-Waterloo, in Ontario, recently activated a computerized transit system called Telerider. By

¹³ Norberg-Schulz, p. 209.

¹⁴ Norberg-Schulz, p. 209.

dialing 888 and the local, four-digit bus stop number, the prospective rider is informed, by a computer voice, exactly (to the minute) when the next bus is due. The system also announces any delays or other service interruptions, so that students, workers, the elderly--anyone taking the bus--no longer have to walk to a bus station or wait in the snow or rain for long periods. The system is quick and efficient, but it also reduces the probability of social encounter, of "rubbing shoulders" with the crowd, of meeting new friends and talking during the wait for the bus. It individualizes and works against the messy, unpredictable nature of group interaction.

The same thing can be said about the new national and international networks of electronic banking systems--banking by machine whenever you want it. There are no more long lines to wait in, banking and bill paying can be done in the darkness and quiet of 4 a.m., grand banking hall are no longer needed.

If bus station waiting rooms and banking halls are no longer needed, if these and other institutions disappear, what will constitute our sense of community? What kind of architectural experience can be had in the quick-in, quick-out minimal enclosure needed for "personal touch" banking machines?

At a lecture in Toronto on February 2, 1983, Alvin Tofler communicated his positive vision of late-twentieth century, third-wave life in the Electronic Cottage. Tofler believes that society will be "de-massified"; that diversity will increase; that we will customize more and more of our objects and processes. We

will "reconceptualize (our notion of) job;" most importantly, there will be "new attitudes towards time and space." People have not wanted their houses to be like or look like their automobiles or their typewriter or the airplane they fly away on during their vacation. An illustration in the book Cable Communication shows this quite plainly. The home communication systems of the future--satellite dishes, interactive video systems, computers, etc. are all shown in or near a wood-frame, single-family bungalow. It is, regretfully, entirely possible that this retrograde vision of residential support systems will continue. If it does, the "container" and the "contained" will grow further and further apart. The desire to return to the cave and the fire--to primacy--is ever with us. We will be sitting in front of the warm, glowing fire with electronic remote control in hand.¹⁵

Calvin Harvan, furthermore, give us his opinions about the issues of our present time:

our twentieth century world, where technology, mass media, and the great "fetish of money" threaten to dominate both the pattern and content of our lives and where nature is looked upon as something to be "conquered," is the result of this unhappy divergence of

¹⁵ Larry Richards, "Enjoying Electronic Mannerisms," Crit 14, Fall 1984, p. 16.

man's perceiving and ordering functions--so much that the "image of the self held in past eras has been effaced from the universe in which even nature seems to be an abstraction. But modern science has yielded more than technology, it has provided a view of nature.¹⁶

In further support of this concept of space-time pluralism and our modern society, a great deal of futurist prediction has been done by several contemporary writers or sociologists and architects. Among them are Paolo Soleri, a disciple of Frank Lloyd Wright who wrote Archaeology-The City in the Image of Man; John Naisbitt, Megatrends, and Alvin Tofler, Future Shock. There have been numerous other writers who have addressed this concept, including: Levi Strauss, The Savage Mind, Desmond Morris, The Naked Ape.

So it appears that this research points to the fact that the concept of space-time pluralism may become strongly emphasized in future architecture, as a result of technology producing a reaction among societies to create an architecture that will meet human needs by using symbol again in functional design.

¹⁶ Calvin Harvan, Vision and Invention (Englewood Cliffs, New Jersey: Prince Hall, Inc., 1970), p. 168.

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TERMS

Amulet: a charm often with a spell or symbol and believed to aid the wearer or protect him against evil

Architecture of the 20th Century: Modernism in 20th century architecture including that of the International Style

Gestalt theory: a whole is greater than the sum of its parts

International Style: concept of function and standardization in architecture. Created as a result of various movements in architecture that occurred towards the end of World War I.

Monument: man-made structure used for spiritual purposes; not a dwelling

Pluralism: a method of architecture that looks upon the natural environment as a means of determining its form and function

Primitive: relating to a state of nature

Primitivism: adherence to or practice of that which is primitive

Shell and kernel: inner and outer form enclosing a cult figure