ARCHITECTURAL REPRESENTATION AND MEANING:
Towards a Theory of Interpretation

Amer A. Moustafa

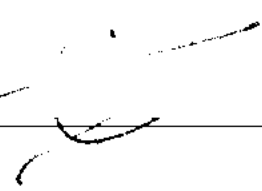Bachelor of Science in Architectural Engineering
University of Aleppo
Syria

Submitted to the Department of Architecture in partial fulfillment of the
requirements for the degree
Master of Science in Architecture Studies at

The Massachusetts Institute of Technology
June, 1988
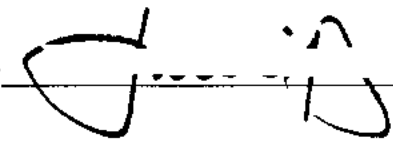
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ABSTRACT

This thesis attempts a comprehensive understanding of the process of meaning-formation in architectural works. Such an understanding contributes to the shaping of the architect's attitude toward the making of architecture.

Semiotics as a structural tool has been used for methodologically comprehending this process of meaning-formation, i.e. for the interpretation of architecture. Like religion, science, and other culturally related products, architecture is a sign system whose meaning stems from the shared interpretations of the society within which it is produced. Shared interpretations (in their varieties of time and place) are achieved through a specific mechanism of the interaction of interpretations provided by ordinary people, professionals, and perhaps the architect himself.

Since shared interpretations are generally beyond the architect's intention, wish, or control, a strategy has been proposed whereby the architect is engaged in the mechanism of interpretation. In so doing, the architect will be more capable of creating a meaningful environment -- architecture.

Thesis Supervisor : Ronald B. Lewcock
Title: Aga Khan Professor of Design for Islamic Cultures

In memory of Adham Moustafa, my father.

ACKNOWLEDGEMENT

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1 INTRODUCTION

"Two things endanger our environment today:
pollution, and the loss of meaning"
E. V. Walter [1]

How can the architect create a meaningful environment?

This thesis attempts to answer of this question, related as it is to the issue of "meaningfulness" as one crucial aspect of architecture. Meaningfulness is related to the appropriate architectural language to be used in the making of architecture in non-Western societies like the one I came from.

In such a society, the clash of the old v.s. the new, religion v.s. secularism, evolution v.s. revolution, tradition v.s. modernity, craft v.s. technology, and esoterism v.s. populism always exists. Diverse attitudes towards technologies, tastes, values, and sources of inspiration are but a few of the problems that the architect has to face. In fact the architect must be able to challenge these problems and most, importantly *express* them.

The task of the architect is to create a physical environment that is readily identifiable by members of a society as their own. Architects designing for such a society have always faced the dilemma of what formal language to use in order for architecture to represent people's beliefs, traditions and identity-- how to represent their reality.

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1 In a lecture at the Boston Architectural Center, February, 1988.

But these problems are not restricted to non-Western societies, they have their parallels in the Western world as well. Are not there some parallels between the expressions of national or religious heritage within a non-Western society and cultural pluralism in the West? Yes. In fact, these problems are of global scale.

The discussion of avant-garde architecture has revolved around the relationship of form and function. Function has been held to give meaning to form, while form has been held to "express" function. In fact, this proposition has formed the rational basis for architectural discourse within avant-garde theory for at least the last century. This proposition assumes that the "meaning" of architectural forms is the result of natural expression.

Function, however, is one aspect, and only one, through which form achieves meaning. In fact, function provides one level of meaning, denotation. Beyond that, an architectural form connotes meanings which are beyond its function. These connotations are most relevant to a society and its culture.

The meaning of architecture can only exist within its cultural specificity of time and place. In his *Elements of Semiology*, Roland Barthes writes, "a truly meaningless architecture remains outside the realm of culture and thus it would cease to be architecture." [2] Architecture is a cultural product, and its

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2 See R. Barthes, Elements of Semiology and Writing Degree Zero, trans. de Seull Editions, Beacon Press, Boston, 1967, pp .

meaning is understood when we study architecture as a cultural system, a system of signs, through which people identify with their environment, i. e. their environment becomes meaningful.

Meaningfulness is a result of the process of interpretation. This process is shaped by society's involvement despite the influence of the designer. The interpretation of forms has its life cycle whereby the form begins to be recognized by people; then different meanings are ascribed to it until finally the form becomes a canon. (however, interruptions are expected at any stage in the process).

It is through a full understanding of this process of interpretation that a different attitude for the designer can be developed. A theory of interpretation is the ultimate aim of this work.

It is argued that architecture is generally "double coded"; it has two levels of messages. The first is directed towards ordinary people; the second, towards exclusive members of the elite who possess the knowledge which enables them to grasp the more sophisticated message. In this work, the first message gains omnipresence for it has a wider social base. Shared interpretation goes beyond the individual's control to reside in [Fig. 1.1] the hands of the society members who eventually decide the meanings a form can be charged with.

[Fig. 1.1]   People eventually decide the meaning of architecture.
(Source, Rudofsky, Street for People).

This work, I believe, through focusing on the issue of interpretation, is a contribution to bridge the gap that modern civilization has created between man and his built environment. The built environment hence becomes not just the *housing* of society and its culture, but also the *representation* of them.

2 ARCHITECTURE AND CULTURE

2.1 ARCHITECTURE AND REALITY

Historically speaking, architecture and its meaning have always been based on one of two approaches. The first is the "normative" approach, whereby values were considered permanent across time; they were transmittable from one generation to the other by means of myths and absolute truth. The second approach is the "relativistic" one, whence values possess relative truth depending on the context of place and time.

Following the "normative" approach, in the Middle Ages, reality was understood as an ordered cosmos. The meaning of every social role, every human product and every human creation was achieved in relation to this order; their significance was determined by divine revelation. This view of reality was colored by Aristotelian and Neo-Platonic notions. The aesthetic and instrumental aspects of building were embraced by a single ontology according to which matter was "informed" by idea, and the architect performed a role analogous to that of God in creating the universe. The concept of beauty was inseparable

[Fig. 2.1] from mathematics, music, and the laws of nature. Geometrical and proportional schemes, that produced harmony in building, contributed to its stability; these schemes were felt to be based on divine laws.

This view of architecture was to be profoundly modified from

[Fig. 2.1] The Parthenon, Athenes. (Kostof, A History of Architecture). [Fig. 2.2] *Buttom*, Langier's Primitive hut, 1753. (Frankl, The Gothic).

[Fig. 2.2]

Renaissance times onwards. Man, instead of *belonging* to the world as in the Middle Ages, put himself *rationally* in opposition to it. Divine revelation was no longer the controlling power behind architecture. The origin of architecture was made subject to a hypothetical reconstruction of history, the purpose of which was to provide a theoretical basis for contemporary practice. The origin of architecture became the primitive hut, not the Temple of Solomon.[1]

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1 See A. Colquhoun, Essays in Architectural Criticisim, The M.I.T. Press, Cambridge, Massachusetts, 1985, pp.12.

According to such a relativistic view of history, traditions became justified by the conventions of human society. The object of the historical reconstructions as practised by eighteenth century philosophies was to go back to the primitive, and natural "reason." Although the notion of absolute standards by which to measure aesthetic values was still present, human feelings and reason (instead of natural laws) became the criteria for interpretations.
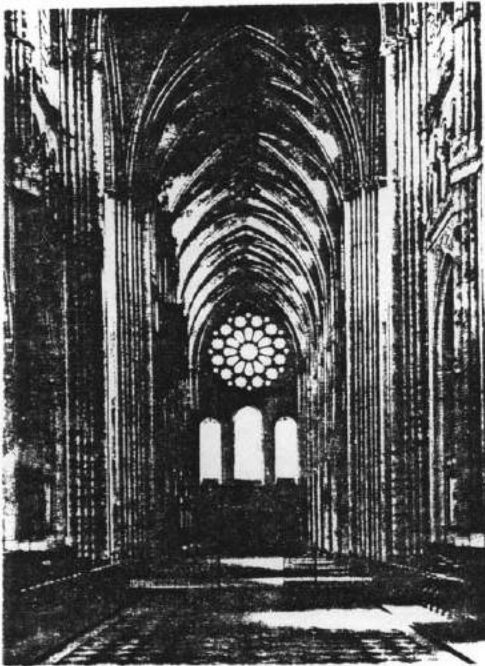
[Fig. 2.3] Chartes Gothic Cathedral, France, 13th c. (Kostof, A History of Architecture).

Gothic architecture, for example, became the new norm because, among other things, it contained the principle of "process" rather than because it was an absolute, unchanging norm. Gothic architecture was considered either as an embodiment of rational principles or as an expression of the artisan's feelings. In fact, this separation of pure instrumentality from meaning impelled architecture towards eclecticism and functionalism.

Ever since the late eighteenth century, architectural thought has followed one of two systems of thought, synchronic or diachronic relativism. The first suggested that all styles are possible; the second, that all styles are forbidden. In fact, the origins of modernism lie in a very complex interaction between the idea that architecture is relative and evolutionary, and the

idea of architecture based on natural law. This resulted in considering architecture according to either a methodological or a formal approach. According to the methodological approach, architecture was a pure instrument whose forms were a reflection of function and whose task was to change the world rather than to represent it. Architecture was a pure methodology, a process. In the formal approach, architecture was a pure art which obeyed its own internal laws. Within such a confusion of thought, the notion of history as a process of evolution was rejected. This rejection was supported by theories of structuralism which called for a systematic approach to history. Structuralism argues for a synchronic approach to the study of cultural phenomena. It is concerned with structures and with examining the general "laws" by which those structures work in any given cultural phenomenon. In such a phenomenon, the individual units have meanings by virtue of their relation to one another; meanings are not substantiated but "relational."[2] Furthermore, culture is seen as a composition of different systems which represent reality through signs and symbolic forms.

Reality was to become relative, and there was no logical reason why things happened in one specific way and not in another; things could always happen otherwise. Man's perception of the world around him was related to his experience.

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2 See Terry Eagleton, Literary Theory: An Introduction, University of Minnesota Press, Minneapolis, 1983, pp.94.
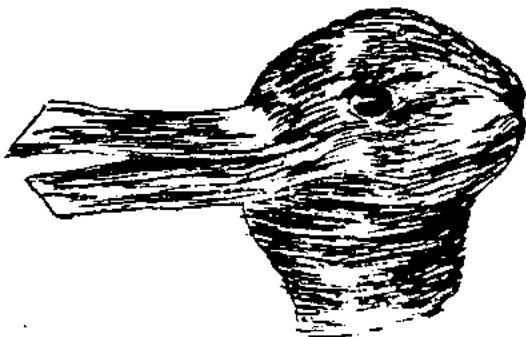
[Fig. 2.4]

[Fig. 2.4] "The Duck or Rabbit." (E. Gombrich, Art and Illusion).

In *Art and Illusion*, Gombrich uses the "rabbit or duck" figure whereby the viewer can, according to his perception, stemming from the learning process and his social experience, identify either a rabbit or a duck, or both separately--never together.[3]

Man's experience is of a synthetic nature; it grasps complex wholes, where components which have no logical relationship are nevertheless completely integrated. This is most [Fig. 2.5] demonstrated through so-called visual illusions. In the Muller-Lyer illusion , the two horizontal lines are of equal dimension.
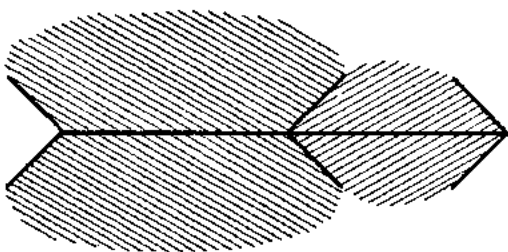
[Fig. 2.5] The Muller-Lyer illusion. (Jencks, Meaning in Architecture).

Yet they are experienced differently because the totality of the situation determines our perception. It is possible, however, to exclude the "confusing elements" (the hatched areas) that influence our judgement[4].

But in daily life, we cannot always do that. We perceive the world as it "is" in its totality. We experience complex phenomena in spontaneous synthetic wholes. Our "orientation" in the environment is therefore bound by this spontaneity. By a

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3 See E. H. Gombrich, Art and Illusion, Pantheon Books, New York, 1960, pp. 5.
4 See C. Norberg-Schulz, Intentions in Architecture, The MIT Press, Cambridge, Massachusetts, 1965,pp. 32-6.

learning process, man is supposed to be familiar with socially defined attitudes to relevant objects. To be able to participate effectively in society's daily life, man has to orient himself in the phenomenal environment. This can happen when he knows how to use the sign systems relevant to his society.

2.2 CULTURE AND THE CULTURAL SYSTEM

"Man is an animal suspended in webs of significance he himself has spun... I take culture to be those webs, and the analysis of it to be therefore...an interpretative [science] in search of meaning."
C. Geertz [5]

Religion, language, art, and architecture are examples of the sign-system. Architecture and art do not give us descriptions, but direct expressions of certain aspects of reality. Works of art "concretize" phenomenal examples of life situations.[6] In fact, through abstraction, art, and architecture in its representational aspect, there is a non-descriptive sign-system; it provides not knowledge, but experience and direction to our own behaviour. Concretization not only reflects individual situations, but also possible complexes of phenomena by means of new combinations of known elements. In this respect, art and architecture, as representation, are capable of changing man and

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5 See C. Geertz,The Interpretation of Cultures, Basic Books, New York, 1973, pp. 5.
6 C. Norberg-Schulz, pp. 61.

his reality. Culture is composed of multiple sign-systems interacting within a common order.

Clifford Geertz's studies of religions as cultural systems will help us for the purpose of the study. In *Islam Observed*, Geertz's assumption was that there is a single form of religious experience and a unity of meaning in the Islamic tradition. Human phenomena are at once organic, psychological, social and cultural.[7] It is, however, through the latter, culture, the unique capacity of humans, that the other phenomena are organized, controlled and, most importantly, possess meanings. Culture therefore gives order and significance to man's understanding of his existence and nature. Culture has the capacity of providing interpretations of human experiences.

Giving meaning to the world is rooted in the human's capacity for symbolic thought. Men impose meanings on their human experiences, be they images, events, sounds, and so on. These experiences become symbols, whereby a specific meaning, or rather a set of meanings, is associated with them. Man creates symbols which define for him the nature of worldly reality. Symbols and the meanings they carry are culturally bound. It is mutually agreed among the society's members to "mean this by that". This necessitates the existence of coherent "systems" of symbols. Each of us is born in an already meaningful world. We learn those inherited meanings of the systems and share

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7 See Geertz, <u>Islam Observed</u>, Yale University Press, New Haven, 1968, pp.14.

them with others.[8]

In an Islamic society, for example, common sense, religion and science form the most important symbolic systems. Among these, religion offers the widest interpretation of the world. Among the different cultural systems such as religion, art, philosophy, and so on, history is the shaping factor of all these systems; it is the continual process of the formation and sedimentation of meaning. This concept of history, however, carries an internal tension within it. This tension is due, on the one hand, to the fact that change is necessary for man's creation of meanings that identify him. On the other hand, man always denies change; his very creation of meanings and symbols is an embodiment of his desire to fix the meanings in objectified forms. Indeed, the struggle between the different architectural styles, between, say, the International Style and the Beaux des Arts, exemplifies this situation.

In an unusual situation of change such as a foreign intrusion or conquest, the spread out of new ideas and philosophies, and/or the spread out of new production techniques, cultural symbols and beliefs face two possibilities: either they weaken in the face of new, contradictory social conditions, or they persist, reflecting community determination to deny any forms of new social experience, any changes. Anthropologists apply a scientific process to understand such social experience. They interpret people's interpretation of reality, a process called "

8 See C. Geertz, The Interpretation of Cultures, pp.89.

thick description," a term we will go back later.

2.3 ARCHITECTURE AND THE MUSLIM SOCIETY

"The gateway [of the Sanctuary of Jerusalem], the facing of the wings, and the open hall of the gateway are adorned with designs and patterned with colored tiles set in plaster. The whole produces an effect dazzling to the eye. *There is an inscription on the tiles of the gateway with the title of the sultan of Egypt. When the sun strikes this, the rays play so that the mind of* the beholder is absolutely stunned."

Naser-e Khosraw [9]

The problem of creating a meaningful built environment is not unique to non-Western, Islamic (and any other terms we have) societies, but it has parallelsin Western societies' environments as well. Yet the scope of the problem becomes wider in non-Western societies. The difference is in the degree, not the kind. In such a society, the search for an appropriate architectural language that reflects the values, traditions and aspirations of its members is a part of a search for self identity, liberation and independence at the same time.

In Muslim societies of the past, "Islamic architecture" appears to have been symbolically charged, and therefore of great meaning

[9] See Naser-e Khosraw, Safarnama (Book of Travels), trans. W. M. Thackston, The Persian Heritage Foundation, New York, 1986, pp 51, [my emohasis].

to its members. Be it in a monument or not, a consistent system of symbols did exist. This is due to two interrelated factors. The first has to do with the fact that such a society used to be less secular than today's. This is to say that the homogenity of people's beliefs (and in this case they happened to be religious) plays a very important role in providing an atmosphere for a meaningful artifactual form. The foundation, so to speak, is set for the society to develop an artifactual language, a language through which people identify themselves, reflect their beliefs, and express their traditions. The other factor comes from the fact that no real interruption, or "rupture", to use Mohammed Arkoun's term[10], interfered with the natural evolution of the society. Even if interruptions occurred, e.g. an invasion, the society was able to maintain its coherence and adapt to the new situation without breaking down its basic set of beliefs.

In fact, it was not until the intervention of Western civilization in Muslim societies that any remarkable damage occured to it. This damage resulted in a confusion of the value system and hence in the artifactual language.

Sufism (mysticism) had played a role in preserving and developing this artifactual language. It in fact enriched, to a certain extent, the conception of symbols in Muslim society. Though it is considered timeless in its essence, Sufism's historical manifestation begins with the descent of the Quran.

10 See M. Arkoun, Islamic Culture, Modernity, Architecture, Architecture Education in the Islamic World, Proceeding for Seminar 10, Aga Khan Award fro Architecture, Granada, Spain, 1986....

"It is through symbols that one is awakened; it is through symbols that one is transformed; and it is through symbols that one expresses."[11] Symbols in the Sufi tradition reflect divine transcendence and immanence; they reflect the universality of creation and the particularity of tradition. The material world becomes a world of symbols that are the reminder of the Divine. The Sufi understanding of the world was best described by Al-Ghazali (eleventh century) when he wrote that "the visible world was made to correspond to the world invisible and there is nothing in this world but is a symbol of the other world."[12]

Symbols in the Sufi tradition are of two kinds: Universal (or natural) and Particular. The Universal symbols are primoridial to mankind; they are trans-cultural. Particular symbols differ according to various cultures. Universal symbols which are expressed in architecture, among other things, stem from the Quran and the Word. Accordingly, architecture becomes man's image of the cosmos or of himself taken in his cosmic dimension. The mosque, for instance, is the house of God where the believer should feel the Divine presence. It provides for man, amidst the imperfections of his own creation and in the sedentary environment he has built for himself, the freshness, peace, and harmony of virgin nature, which comes from the hands of God.

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11 See L. Bakhtiar, Sufi Expression of the Mystic Quest, Avon Books, New York, 1976, pp. 25.
12 See N. Ardalan and L. Bakhtiar, The Sense of Unity , The University of Chicago Press, Chicago, 1973, pp. 3.

The shapes used in architecture are inseparable from the traditional concept of mathematics, particularly geometry and geometric forms. Geometric forms and numbers are, for the Sufi, not just what they appear to be quantitatively; they have a qualitative and symbolic aspect. Each number and figure, when seen in its symbolic sense, is an echo of Unity, and a reflection of a quality contained in principle within that Unity which transcends all differentiation and all qualities, and yet contains [Fig. 2.6] them in a principal manner. The square of the Ka'ba repeated in
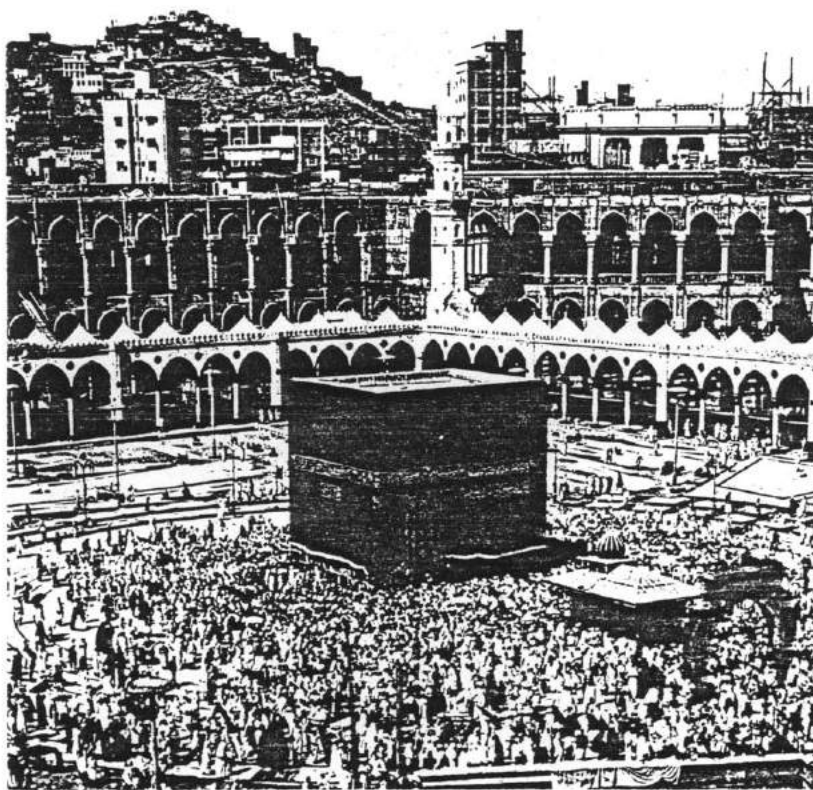
[Fig. 2.6]   Ka'ba, Mecca.   (Ardalan & Bakhtiar, The Sense of Unity).

the classical courtyards and buildings is not just a square in the Sufi interpretation, but also a symbol of stability and

completion; it is a quadrangular temple of paradise of which the Ka'ba itself is an earthly image. The octagonal form, the Sufi tradition argues, is not just an architectural device to enable the

[Fig. 2.7] placement of the dome upon a square base, as in the Dome of the Rock, but a reflection of the Divine Throne, which, according to
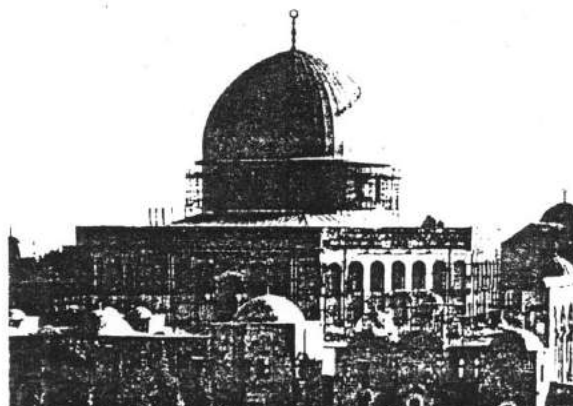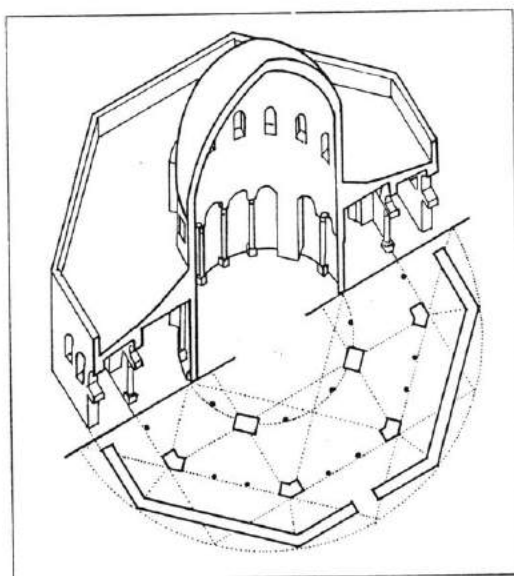
[Fig. 2.6]   The Dome of the Rock.   (Hoag, Islamic Architecture).

Islamic tradition is supported by eight angels. Furthermore, the dome is not just a way to cover the walls, but an image of the vault of heaven and beyond it of the infinite and illimitable world of the Spirit of which the sphere or circle is the most direct geometric symbol.

Archetypal forms in Sufi tradition, gain specific meaning. The garden, the dome, the minaret, the *mihrab*, the *muqarnas* and

the like, all become vocabularies of a visual language. They have their absolute interpretations and textual ones. The physical environment , therefore, becomes meaningful to the Sufi.

[Fig. 2.8] The *mihrab* (niche) in a mosque, for instance, is oriented towards the Ka'ba; it is where the *imam* (the leader) stands and recites the daily prayers. The *mihrab* reflects the *imam's* incantations of the Divine Word to the congregation, who then repeat the words after him. These Divine words which reverberate from the mihrab are symbols of the Presence of God, which evokes in the Sufi his motivation towards prayer.
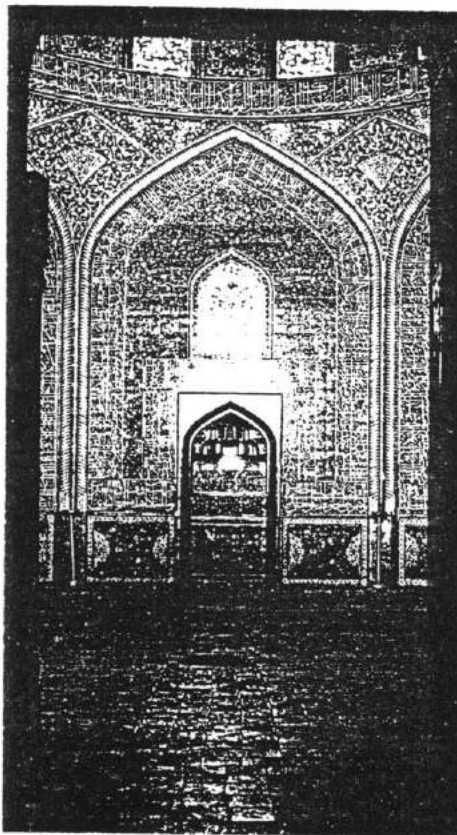
[Fig. 2.7] *Mihrab*, Masjid-i-Shaykh Lutfallah, Isfahan. (Ardalan, Bakhtiar, The Sense of Unity).

The most important thing, however, is the Sufi-artisan duality. This is to say that, often reaching a certain level of knowledge, the Sufi was able to transform the material into an artifact. The transformation is double-sided. The Sufi transforms the material into a meaningful object, a reminder of the Divine; then the Sufi himself is transformed by this

reminder. It is fair to suggest that a considerable amount of the Islamic art has been undertaken by Sufi artisans.

Apparently, the Sufi tradition, as Ardalan and Bakhtiar tell us in *The Sense of Unity*, provides a sophisticated interpretation of the world that stems from Kuranic teachings. Although the validity and consistency of such interpretations are not being questioned here, Sufism represented an exclusive group of people within Muslim society. Only those individuals in the Sufi order subscribe to those specific interpretations; other members of Muslim society might not be aware of all these interpretations and attributed meanings.

Having said that, architecture as viewed by the Sufis can not be considered as a cultural system because it is an exclusive sign system shared only by specific individuals. Our aim is to search for the meanings that are *shared* among society members. Only then is architecture considered as a sign system in a cultural context which denotes a historically transmittable pattern of meanings embodied in symbols which men can communicate, and perpetuate, and they develop their attitudes towards their environment. Semiotics is the scientific methodology for studying sign systems; it is the topic of the following chapter.

3 ARCHITECTURE AND SEMIOTICS

3.1 ARCHITECTURE AS A SYSTEM OF COMMUNICATION

Semiotics is the science of studying systems of signs within a culture. In fact, cultures can be understood as systems of communication.[1] Semiotics, however, has always been a challenge to architecture. Architectural objects, it is argued, are not made to communicate but rather to function. A roof, for example, serves to cover, and a stair serves to enable movement from one level to the other. Yet an examination of people's relationship with architectural objects suggests that architecture is experienced as communication, even though we recognize its functionality.[2] The following example will help to clarify this.

Seeking shelter from wild weather and aggressive animals, man finds a recess inside a mountain, in a cave. Later, he will look around and see an enclosed space that might be vaulted; an *idea* of a cave comes to his imagination. The cave for him is that cut-off, inside space wherein he can protect himself from rain or attacking animals. The cave is like a womb. When next time he seeks shelter and finds himself in a cave, the idea becomes more of the cave as a model, a concept. There is an association, or connotation, as the semiotic term goes, developed in his imagination that the cave is where one can get shelter and safety.

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1 See U. Eco, "Function and Sign: Semiotics of Architecture," <u>VIA</u>, vol 2, 1983, pp. 131.
2 Ibid.

He can later recognize a cave from a distance, and, at the same time, the idea of shelter and safety is suggested to him without his intending or needing to take shelter. In a sense the *model* of the cave is codified on an individual level: the cave communicates to the individual the idea of shelter. As a human being, he should be able to communicate the model to others by means of verbal, or probably graphic illustration. Therefore an iconic code is generated from a physical form. The idea of "cave" becomes communicable. It is important to stress here the fact that the image of the cave communicates a possible function without actually fulfilling this function.

In a further step, society becomes the field of such communicated signs. Roland Barthes writes that: "as soon as there is a society, every usage is converted into a sign of itself."[3] For example, the umbrella is used in most societies to protect people from rain, but this use cannot be dissociated from the sign for an atmospheric situation. The umbrella becomes what Barthes calls a sign-function; it communicates the function to be fulfilled.

In fact, what facilitates our use of architecture is, apart from the possibility of the function of the objects, the meanings connected with these objects, which dispose the viewer to a particular functional use of them.

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3 See R. Barthes: Elements of Semiology & Writing Degree Zero, trans. by du Seull Editions, Beacon Press, Boston, 1967., pp. 41.

3.2 THE CHARACTERIZATION OF SIGNS

"In all matters, but particularly in Architecture, there are those two points: the thing signified and that which gives it significance. That which is signified is the subject of which we may be speaking; and that which gives it significance is a demonstration of scientific principles."
Vitruvius[4].

Since architecture is a system of signs, the task is to categorize these signs. A well-known approach is O.K.Ogden's and I.A.Richards' "semiological triangle" that was developed originally from the theory of Ferdinand de Sassures, a leading figure in the field of semiology. In his book, *Course in General Linguistics* (1916), Sassure views language as a system of signs. Each sign has to be seen as a two-part entity: a "signifier" (a sound-image, or its graphic equivalent) and a "signified" (the concept or meaning). The relation between the "signifier" and "signified" is arbitrary. The letters "d-o-g" are a signifier that evoke the signified "dog" in an English-speaking mind. The two entities of the sign are unified by a social contract. They are bound by cultural context and historical convention. Sassure proposes that the relation between the whole sign and what it refers to is also arbitrary. He stresses that each sign in a system has meaning by virtue of its differences from all other signs. For him, in the linguistic

4 Quoted from G. Broadbent, "Meaning in Islamic Environment," in Islamic Architecture and Urbanism, King Faisal University, pp 190.

system there are only differences; meaning is not imminent in a sign, but a result of its difference from other signs.

Ogden and Richards developed Sassure 's notion of sign. The two-sided entity of the sign was developed into a three-sided [Fig. 3.1] model, the "semiological triangle" mentioned before. The model is composed of Sassure's signifier (they called it "symbol") and his signified (they called it "reference"), and they added a third element which they called "referent" (the actual object). Their triangle proposes that, in most cases, there is no direct relationship between symbol and referent. The important

●THOUGHT
CONTENT
CONCEPT
SIGNIFIED

SYMBOL●
FORM
WORD
SIGNIFIER

●REFERENT
PERCEPT
DENOTATUM
THING
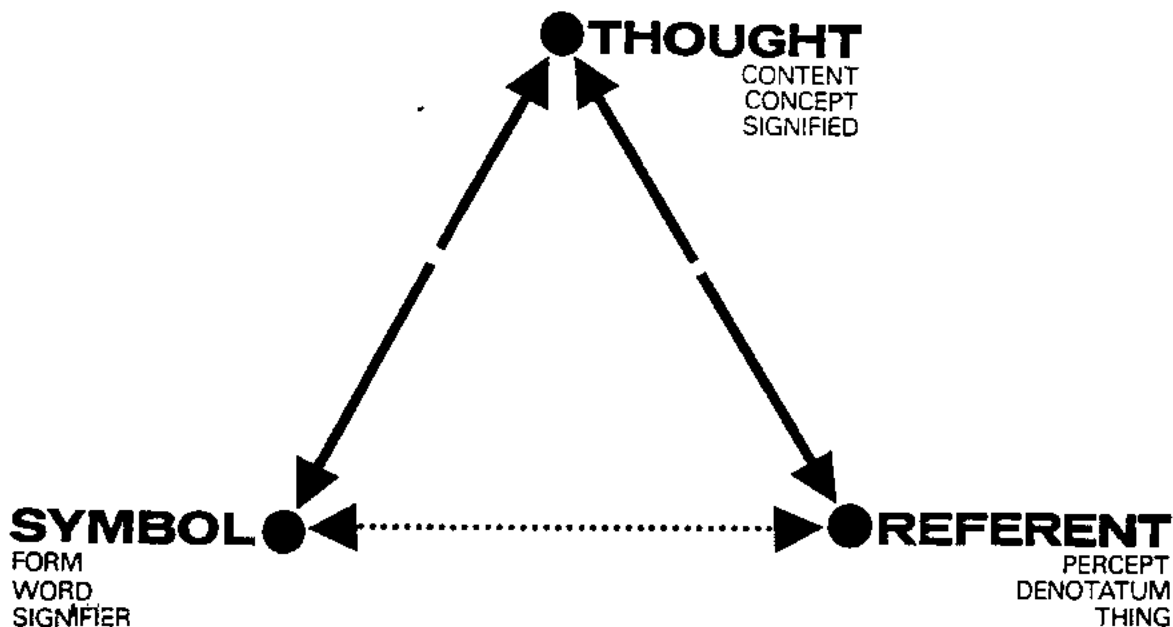
[Fig. 3.1]   The Semiological Triangle.   (Jencks, Meaning in Architecture).

contribution, according to Charles Jencks, is that the model addresses that relationship between the three sides of the triangle: symbol, reference and referent (or, for Jencks, language, thought and reality)[5].

In architecture it is suggested that any architectural form can be a symbol, a reference and a referent. But our semiological [Fig. 3.2] discussion goes beyond that. If a door is seen as a symbol which communicates "the possibility of access" (referent), then the

[Fig. 3.2]   Door.   (Poster, Doors of Boston).

referent is the hard thing to define. Is it the physical reality of the door as an object ? Well, that can be; but in this case what is the relation between this referent and its reference?   If it is going to be that "the door refers to the function it fulfills", there will be no separation between the referent and the symbol. The problem gets more difficult when we apply this model, the [Fig. 3.3] triangle, to a triumphal arch. Such an arch is a symbol: while undoubtedly it

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5 Jencks (and Baird): Meaning in Architecture, England, 1969, pp. 16.

denotes a possibility of passage, it clearly connotes "triumph"

[Fig. 3.3] Memorial Arch on Grand Army Plaza, New York. (Kostof, A History of Architecture).

and the "celebration" of it. Here the reference would branch out before replacing the referent; otherwise the referent is simply the symbol in itself. Therefore, the semiological triangle does not help our search for the characterization of an architectural sign.

Yet another approach to characterizing the architectural sign is taken from Giovanni K. Koening.[6] He defined the architectural sign from the behaviorist's viewpoint, observing that if he had a number of people living in a neighborhood he designed, he would be able to influence their behaviour. This influence might be more profound and prolonged than if he had delivered a verbal injunction like "sit down"! He concludes that

6 See G. Dorfles, "Structuralism and Semiology in Architecture," in Meaning in Architecture, The Cresset Press, England, 1969, pp. 39-40.

architecture is a system of "sign-vehicles" (i.e. symbols in the semiological triangle) that promote certain kind of behaviour *par excellence*. Hence, the architectural sign has to be verified on the basis of what Koening calls the response-sequences that it creates. The meaning of architectural form in this respect depends on the "corresponding observable human behaviour". This approach has its difficulties because it relies on human response as the criterion by which to verify an architectural sign.

Human response is not always recorded through history, for example. Texts and documents that recorded this response to architecture are, in most cases, not available to assist researchers in their search for meanings of signs. It will be impossible to [Fig. 3.4] identify an architectural sign of, say, Etruscan architecture because of the lack of concrete evidence of people's response.

[Fig. 3.4] Etruscan City Gate, Voltern, Italy. (Kostof, A History of Architecture).

A promising approach seems to be the one taken from Eric Buyssens and developed by Bonta[7]. According to this approach, the term "indicator" is introduced. An indicator is a directly perceivable event so that it is possible to learn something about other events which are not directly perceivable. When a queue of cars is jamming the road, a sound of a siren is heard, and with the appearance of a police car, drivers infer that something unusual is happening. This might be an accident, a fire, or the like. Drivers are convinced, however, that a fire has taken place when they see a sign on the roadside indicating that there is a fire and asking drivers to turn to a secondary road.

In this example, the jammed road, the sound of the siren and the approaching cars are all directly perceivable events that suggest the occurrence of the fire. They are all indicators. The police [Fig. 3.5] sign on the roadside is a different type of indicator; it is a signal.
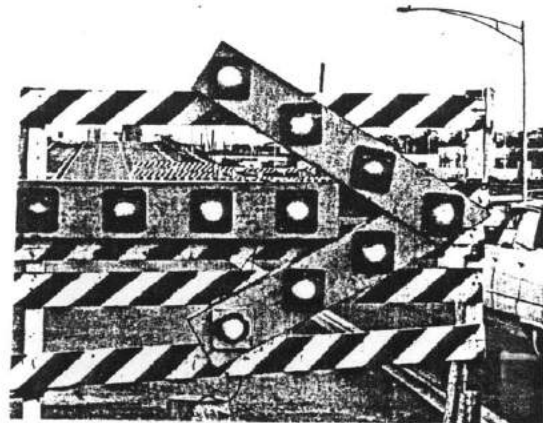
[Fig. 3.5] Police sign. (City signs and light, a Policy Study).

Signals are indicators that are supposed to fulfill two conditions.

7 See J. Bonta, Architecture and its Interpretation, Rizzoli, New York, 1979, pp. 27-7.

Firstly, they are deliberately produced by an emitter (the police, in the case of the road side sign) to transmit some kind of information (the occurrence of a fire). Secondly, they are recognized by the interpreter (the driver) as such: to communicate a certain message. Signals, therefore, like any indicator, have form and meaning, interpreter and emitter.

Another kind of indicator is the index. An index is an indicator that is not used by the emitter deliberately to communicate (e.g. the car jam in our example). Indexes, on the other hand, are understood by the interpreter as unintentional on the part of the emitter. Unlike signals, which communicate, indexes indicate; both have meaning in a different way. Their meaning depends on the individual's past experience and cultural boundaries.

Another kind of indicator is intentional indexes. Those are indicators that are intentional on the part of the emitter, but not perceived as such by the interpreter. Intentional indexes are not recognized by the viewer as deliberately used to communicate. Pseudo-signals are indicators that are believed by the interpreter to have been intentionally produced by the emitter without their really being so. It is possible to illustrate the different kinds of indicators according to their intentionality on the part of the emitter *and* their interpretation as being intentional on the part [Fig. 3.6] of the interpreter. This diagram will be called "Bonta's Model."[8]

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8 See Bonta, pp. 28.

	Interpreter assumes intentionality (Communication)	Interpreter does not assume intentionality (Indication)
There is an intentional emitter	SIGNAL	INTENTIONAL INDEX
There is no intentional emitter	PSEUDO-SIGNAL	INDEX

[Fig. 3.6] Bonta's Model. (Bonta, Architecture and it Interpretation).

Indicators operate within a system of expression (e.g. architecture). This system is composed of signals, pseudo-signals, indexes and intentional indexes; it is possible for a system of expression to be composed of any combination of these indicators. The verbal language is an expressive system composed of signals only. Indicators are intentional, and they are perceived as such.

In architecture, indicators are in continuous change. Architectural forms which are signals in one context could become indexes in another. The context can be a time period or a geographical one; it can also be both. This notion of change is going to be discussed in details elsewhere. At this point let us examine architecture as an expressive system composed of indicators and successive meanings.

3.3 LEVELS OF MEANING AND THE ARCHITECTURAL SYMBOL

Looking back at Bonta's Model, we find that there are indicators that communicate (signals and pseudo-signals) and the ones that indicate (indexes and intentional indexes). Communicative signals can be considered as having successive meanings. Meaning can be considered to be on two levels: denotation and connotation.

In fact, an architectural form can be an indicator of a [Fig. 3.7] conventionally denoted meaning: its function. A stair, for example, denotes the possibility of moving from one level to the
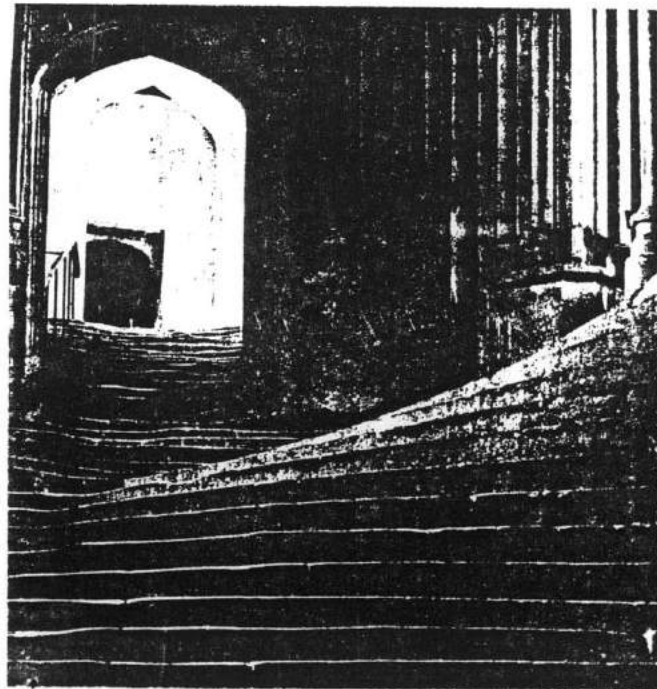
[Fig. 3.7] "A sea of Steps", Photograph by F. Evans. (VIA, Vol. 2, 1973).

other. One is expected to understand the codified relation

between the form and the function it fulfills, and it should be able to fulfill the function of going up or down if one intends to do that. An architectural form therefore should not only make its function possible, but it also should communicate this possibility to the user--denote it. The user is expected to get the communicated message and be able to know how to fulfill the possible function if he intends to do that. This communicability stems from man's expectations and habits established in a specific culture.

If an architectural form can denote its function, it can also connote a certain ideology of this function. As mentioned before, the cave for early man denotes the function of shelter. As time passes (i.e. man is using the cave fairly often), other meanings can be associated with the cave. It may start later to connote "security", "closeness", "family" or "group life". The cave can carry symbolic meanings that are beyond its direct functional denotation.

[Fig. 3.8] A chair communicates that a person can sit on it. It denotes its function: to be able to sit on it. A throne, on the other hand, would communicate more information. Although it fulfills the function of sitting, some special features in its design (its bigger size, decorated in a special way, etc.) make it connote that the person who is supposed to sit on it is of special dignity. This connotative meaning might dominate, and we might forget the throne's denotative meaning. In a sense, seeing a throne, or a

representation of it (a photograph, a model, etc.), is associated in the mind with "regality", "prestige" and "authority". For the British, however, a throne might not necessarily connote "authority", but rather "democracy". By the same token, for a struggling Catholic from North Ireland, a throne might connote "dependence", "power" and "oppression."
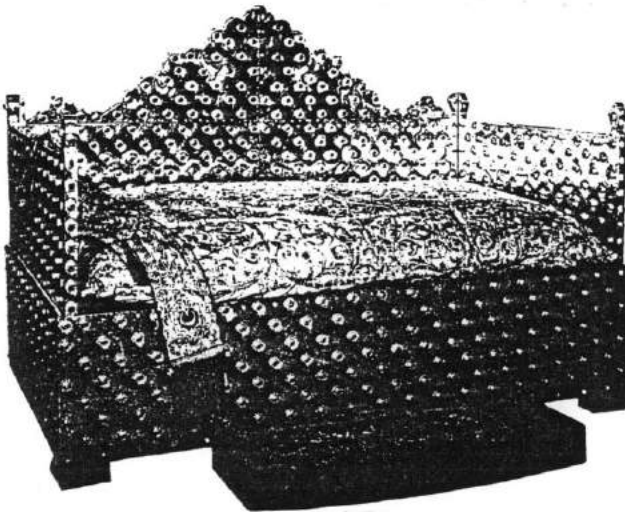
[Fig. 3.8] A chair and (Sultan Suleyman) throne. (Jencks, Modern Movements in Architecture, and The Age of Sultan Suleyman the Magnificent).
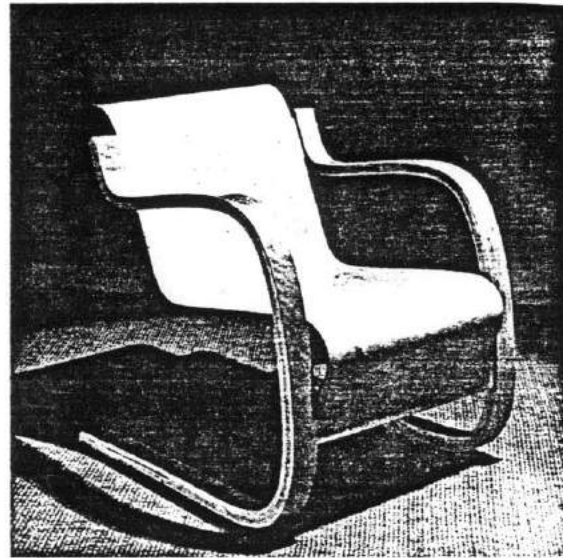
Meanings are purely conventional in a cultural context. To say that man has a similar reaction to "universal" or "cosmic" forms is to miss the point. Le Corbusier and Ozanfant once distinguished between "primary" and "secondary sensations," the former being purely determined by color and shade. They are constant and universal for all men regardless of their race, class, upbringing or creed. "Secondary sensations", on the other hand, were, for them, supposedly based on the individual's background and culture. They wrote:

"Primary sensations are determined in all human beings by the simple play of forms and primary colors. Example, If I show to
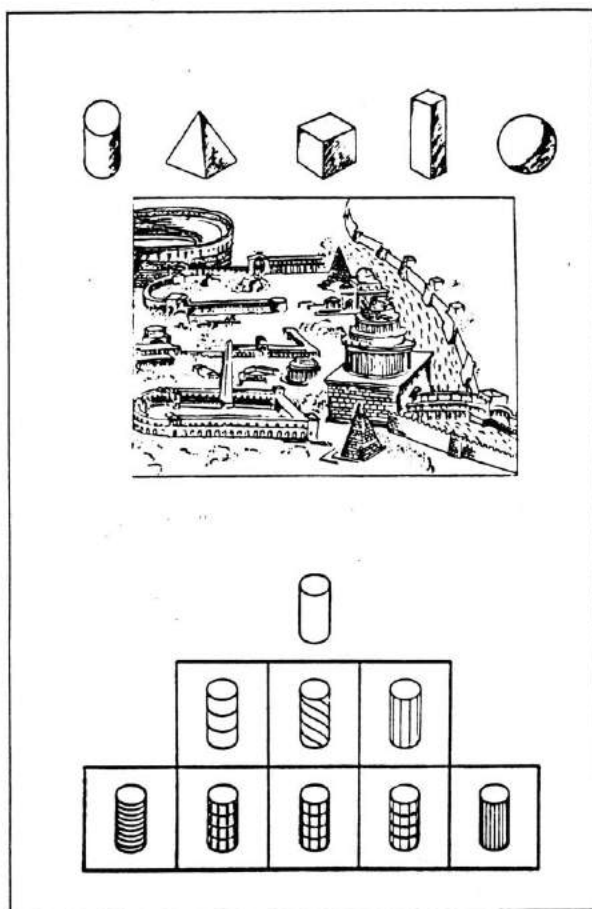
[Fig. 3.9] Le Corbusier's Illustration of Purism from *L'Esprit Nouveau*. Primary vs secondary sensation. (Jencks, Modern Movements in Architecture).

everyone on Earth- a Frenchman, a negro, a Laplander- a sphere in the form of a billiard ball.... I release in each of these individuals an identical sensation inherent in the spherical form. This is the constant primary sensation... these forms are the fixed words of the plastic language... it does not seem necessary to expatiate at length on this elementary truth that anything of universal value is worth more than anything of merely individual value."[9]

"Primary sensations" were supposedly more significant than [Fig. 3.9] "secondary" ones.

But meanings are socially bound. In Brazilia, for example, the Palace complex was built following the Purist doctrine. It was of primary pure shapes, all in light colors and simple patterns. The Congress hall was composed of two semi-spheres and rested on a flat plane of Euclidean splender. Therefore, these shapes should "release in each of [the Brazilians] an identical sensation"
[Fig. 3.10] of harmony, serenity and balance. What happened in Brazilia

9 See C. Jencks, "Rhetoric and Architecture," <u>Architectural Association Quarterly</u>, Vol. 4/3, 1972, pp. 12.

differs from what Le Corbusier wished. The two high-rises of the Palace complex symbolized the waste of money spent on the project and the bureaucratic system which is functioning in this complex.
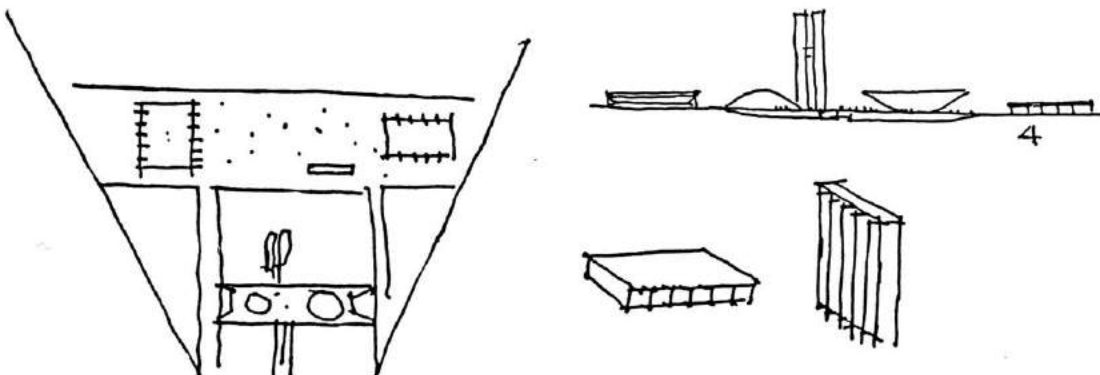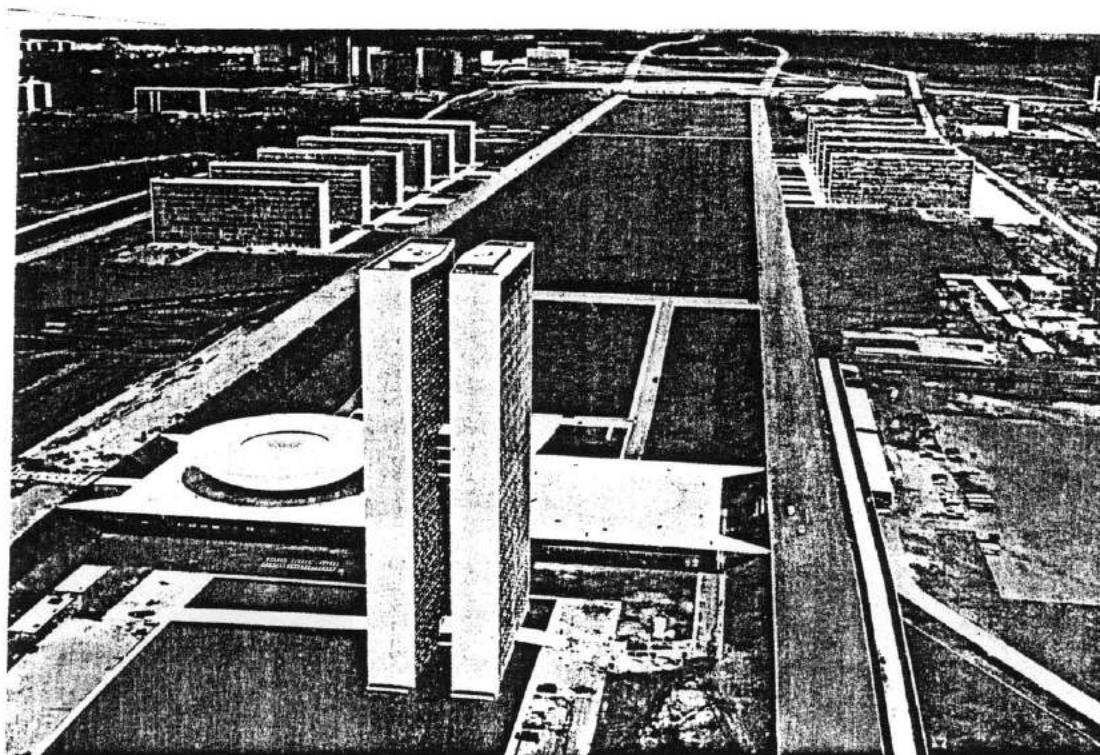
[Fig. 3.10] Brazilia, the Congress Hall. (Kostof, A History of Architecture).

The word "symbol" has been used by many authors and

semiotics researchers to mean different things. St. Augustine said that a symbol is "something which, in addition to the substance absorbed by the senses, calls to mind of itself some other thing."[10] It has been mixed up arbitrarily with terms such as sign, signal, index, icon and so on, to serve each author's [Fig. 3.11] objectives. Roland Barthes illustrates the different uses of terminology in verbal language in a table.[11]

	signal	index	icon	symbol	sign	allegory
1. Mental representation	Wallon −	Wallon −		Wallon +	Wallon +	
2. Analogy			Peirce +	Hegel + Wallon + Peirce −	Hegel − Wallon −	
3. Immediacy	Wallon +	Wallon −				
4. Adequacy				Hegel − Jung − Wallon −	Hegel + Jung + Wallon +	
5. Existential aspect	Wallon +	Wallon − Peirce +		Peirce − Jung +		Jung −

SIGNIFIER AND SIGNIFIED

[Fig. 3.11]   (Barthes, Elements of Semiology).

For Hegel, as opposed to Peirce, the term symbol refers to an analogical relation between the signifier and the signified. For

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10 See Barthes, pp. 41.

11 The point in all the terms is that they all refer to a relation between two *relata* : the signified and signifier. To distinguish between the terms the following criteria are considered in the form of presence/absence in the diagram: i) the relation implies, or does not imply the mental representation of one of the *relater*; ii) the relation implies, or does not imply, an analogy between the *relata*; iii) the link between the two *relata* is immediate or is not; iv) the *relata* exactly coincide or, on the contrary, one overruns the other; v) the relation implies, or does not imply, an existential connection with the user (see table). See Barthes, pp.35-8.

the latter, a symbol is not existential, whereas it is for Jung, and so on.

In architecture, a similar mix-up occurs. Generally speaking, "symbol" is meant to refer to the architectural forms that have connotative meanings, meanings that are beyond the direct denotative associations. In the semiological triangle, we have seen that a symbol is Sassure's "signifier." When applied to architecture, in the triangle it was difficult to always separate the "symbol" from the "referent". The triumphal arch exemplified this difficulty. Seeking a different frame of reference (Bonta's Model), we eliminated the problem of identifying the point at which a referent becomes a symbol, or, in other words, when the form develops from being denotative to its becoming connotative. Bonta's diagram, we may recall, classifies indicators according to two criteria: their intentionality by the emitter, and their perception as such by the interpreter. When an interpreter assumes intentionality, an indicator communicates, whereas, when he does not, an indicator indicates. In this frame of reference a symbol is what the interpreter perceives as intentional (i.e. when an indicator communicates). A symbol therefore is either a signal or a pseudo-signal. An architectural form is a symbol when its communicative message is perceived as being intended.

4 THE PROBLEM OF INTERPRETATION

4.1 THE "WHAT" OF INTERPRETATION

The problem of interpretation revolves around the the following question: When we are faced with a work of architecture (or art), how can we grasp its meaning?

There are reactions to architecture and art that are immediate. Users of a building, for example, may contribute their interpretations as early as their first encounter with it . Critics, historians, or journalists may have their immediate interpretations even, at times, before the building is built. All these interpretations, however, belong to individuals; they do not constitute a minimum level of consensus in the society or at least of a certain community within the society (i.e. professionals). What we are after is the "shared" interpretations which make architecture a system of signs like any other cultural system.

One step towards understanding the process of interpretation is to be able to provide a *descriptive* analysis of the way people interpret architecture. C. Geertz compared this process of interpretation with clinical inference in medicine. He writes:

> "Rather than beginning with a set of observations and attempting to subsume them under a governing law, such inference begins with a set of (presumptive) signifiers and attempts to place them in an intelligible frame. Measures are matched to theoretical predictions, but symptoms (even when they are measured) are scanned for theoretical peculiarities--

that is, they are diagnosed.   In the study of culture, the signifiers are not symptoms or clusters of symptoms, but symbolic acts or clusters of symbolic acts, and the aim is not therapy but the analysis of social discourse.   But the way in which theory is used -- to ferret out of the unapparent import of things-- is the same."[1]

This description is called "thick description".   Obviously, our focus should not be concerned with the way architecture should be interpreted according to a theory, a school, or a group of intellectuals.   In other words, we should concentrate on investigating the "collective" interpretation of architecture. This is because we are interested in *shared* meanings, not in exclusive ones.   Shared meanings stem from codes constructed in an arbitrary, conventional process, whereas exclusive meanings are the ones that develop out of a "rational", intentional process.   The latter requires a special kind of knowledge that is exclusive to a limited number of individuals.

In fact, throughout history, works of architecture and art were usually directed to meet the taste of the elitist classes in society. These works were mostly used to represent the superiority and dominance of these social strata, be they anarchical, military or bourgeois.   In the twentieth century, however, things have started to change.   In its doctrine, the Modern movement recognized that architecture should have a larger social base and called for more popular architecture.   In a purely artistic sense,

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1 See C. Geertz, Culture and its Interpretation, Basic Books, New York, 1973, pp. 26.

this approach perhaps culminated with the spread of the Pop Art movement, especially in Britain.

As we argued elsewhere, architecture is a product of culture; its meaning should be viewed as collective and consensual within community boundaries. Thus we are concerned with shared meanings that are reflected in the community's behavior as most relevant to our approach.

It is acknowledged that the interpretation of architecture is in a process of continuous, dynamic change. Any attempt to analyze the process of interpretation should take into consideration this fact and the reasons behind it. Arthur Child wrote that to interpret is to "lay out in thought and words what presents itself in sensory or mental perception."[2] In other words, interpretation is a translation into words of that which presents itself via non-verbal channels; it is people's verbal output, be it oral or written.

[Fig. 4.1] A study written by Gulru Necipoglu-Kafadar to interpret the Sulieymaniye Complex in Istanbul[3] follows an approach to interpretation that is currently pursued in academic circles. In her work, Kafadar criticizes previous attempts to interpret the Sulieymaniye Complex because those attempts:

> "center mainly on classifying Ottoman architecture
> according to formal criteria, such as typologies of dome

2 See J. Bonta, Architecture and its Intrepretation, pp 66.
3 See G. Necipoglu-Kafadar, "The Sulieymaniye Complex in Istanbul: An Interpretation," Muqarnas, Vol 3, 1985.

structure and space, and have underplayed its cultural
significance, seeking its meaning in the architect's inventions
rather than in the patron's intent."[4]
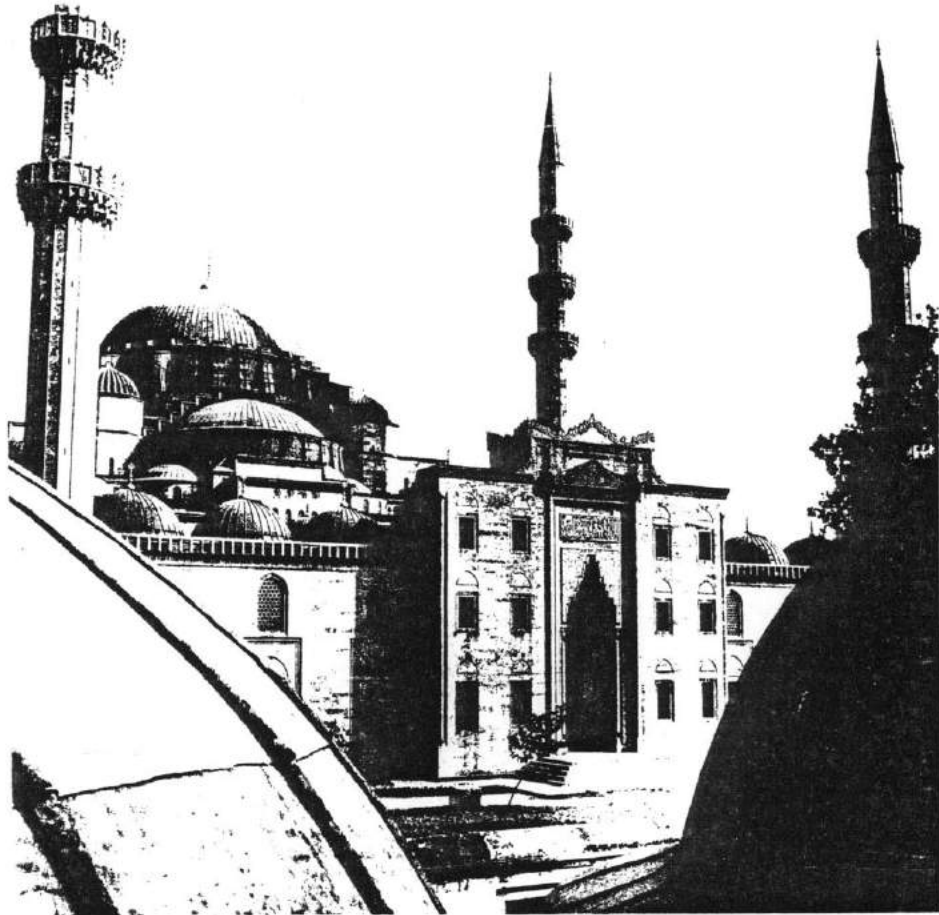
[Fig. 4.1]   The Suliemaniye, Istanbul.   (Muqarnas, Vol. 3, 1985).

In fact, the cultural associations of the Sulieymaniye Complex
tended to lose their charge over time. Yet Kafadar claims to
demonstrate the symbolic meanings of the Sulieymaniye by

4 Ibid., pp 92.

analysing the references to its architecture in its "endowment deed," inscriptions, contemporary history, and travel literature. She attempts to interpret the Complex in its original social context (i.e. when it was built). She writes:

"I claim neither to have exhausted all the cultural associations of the Sulieymaniye complex nor to have found meanings that can be assigned solely to it, but only to demonstrate that culturally recognized symbolic and ideological associations do constitute a significant aspect of the Sulieymaniye's multilayered architectural discourse. Those interacting layers of meaning... unite to communicate a single, consistent political statement of power and legitimization."[5]

A very well-constructed work, Kafadar's interpretation falls into the classical approach in methodology. She tells us how the building *should* be interpreted given specific circumstances, rather than how the building *was* really interpreted. She states what she consideres important, socially, religiously and politically, to justify her interpretations. In fact, she implicitly admits this when she writes: "Every interpretation is tied to the interpreter's own point of view."[6] People who lived in Istanbul when the building was built were most probably not conscious of all the meanings that Kafadar charges the Sulieymaniye with (at least she has not provided evidence that these meanings were shared by the society; all that she relies on are travellers' accounts that represent more or less personal views) . We insisted elsewhere that meanings should be

5 Ibid.
6 Ibid., pp. 111.

exchangeable, shared, in order to achieve validity. Furthermore, validity is relative, and limited to the boundaries of history. This relativity of meaning will be discussed in the following pages.

4.2 THE "WHEN" OF INTERPRETATION

> *"An object may be a symbol under certain circumstances and not at others."*
> Nelson Goodman[7]

We distinguished in the last chapter between the two levels of meanings an architectural (or artistic) form can provide. The first is denotation, whereby a form refers basically to the function it is capable of performing. The second level of meaning is connotation. Here, a form stimulates other associations in the user's mind related to an ideology about its actual function. Yet, the meanings of forms, viewed in their historical context, are in a continuous flux. In order to exemplify this process of change in meaning, the denotative meaning will be called "primary meaning", the connotative, "secondary meaning."[8] This should not suggest any sense of hierarchical ordering of the two meanings (i.e. the denotative meaning is not necessarily more prominent than the connotative meaning). We will try to show that the interpretation of forms

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7 See N. Goodman, <u>Ways of Worldmaking</u>, Hackett, Indianapolis, Indiana, 1978, pp 67.

8 See U. Eco, "Function and Sign: Semiotics of Architecture," <u>VIA</u>, vol. 2, 1973, pp. 142.

fluctuates according to different factors related to the changing social context through time.

The Gothic cathedral is a case in point. Architectural historians have always debated the structural code in Gothic architecture, especially the structural value of the ogive. Three major propositions were adopted by historians. The first suggests that ogives have a structural function, and the entire structure of a cathedral stands upon them, according to the principles of equilibrium. The second proposition argues that ogives do not have the structural advantages they appear to have; it is the webs of the ogival vault that are of structural value. Yet a third point of view proposes that ogives have a structural value mainly during the construction process (i.e. they function as a supporting framework). When construction is over, the interplay of thrusts and counterthrusts is picked up by the webs and by other elements of the structure. Therefore the ogives will have a reduced structural value.[9]

Undoubtedly, the ogives of the cross vaulting *denote* a structural function. The question remains whether this structural system was meant to *communicate* a structural function or really to *perform* this function--whether the Gothic is *"l' illusion d'une structure."*[10]

[9] See P. Frankl, The Gothic: Literary Sources and Interpretations through Eight Centuries, Princeton University Press, New Jersey, 1960, pp 811-2.
[10] Ibid., pp. 813

What we have been discussing so far is the different denotative meanings of the structural system in Gothic architecture. Connotative meanings, however, provide us with more varieties of attitude. There is, for instance, the Romantic attitude which suggests that the Gothic cathedral was intended to reproduce the vaults of Celtic forests, and hence the pre-Roman world. Another interpretation was provided by Abbot Suger in the twelfth century. In prose and verse, Suger suggested that the light penetrating in streams from the windows into the dark naves represented the very effusiveness of "divine creative energy." This presents a codified equivalence between light and participation in the divine essence.

In the nineteenth century, the Gothic code in its entirety became a connotation of a specific ideology. There existed a popular conviction that Gothic style equals "religiosity," and the verticality emphasizes the soul's journey toward God in Heaven; even the contrast of light (penetrating from the great windows and naves) with shadow is associated with mysticism. A Neo-Gothic style was chosen for churches in New York City, for example; they were supposed to express the presence of the Divine. Not surprisingly, those churches still elicit such an interpretation (for believers, at least) even though they are not as high as they used to be with the skyscrapers all around.

In the course of history, a form undergoes many possible changes. One possibility is that a form (a building) loses its

"primary meaning", but keeps its "secondary" ones. The Parthenon, for example, is no longer understood as a temple, [Fig. 4.2] but has kept its secondary meanings; the Parthenon is still associated with perfection, beauty, or the Greek gods.[11]

[Fig. 4.2]   The Parthenon, Athenes. (Kostof, A History of Architecture).

Another case is when both "primary" and "secondary" meanings [Fig. 4.3] are modified and replaced by different ones. The Pyramids are a case in point. Their "primary" meaning is no longer to house the Pharaohs' bodies after death, and their "secondary meanings" are no longer associated with human destiny and the eternal life after death. Rather, the Pyramids are objects to

11 This depends particularly on the individual's knowledge of Greek history.

exhibit, and to attract tourists, and they symbolize Egypt and its heritage, deeply rooted in history.
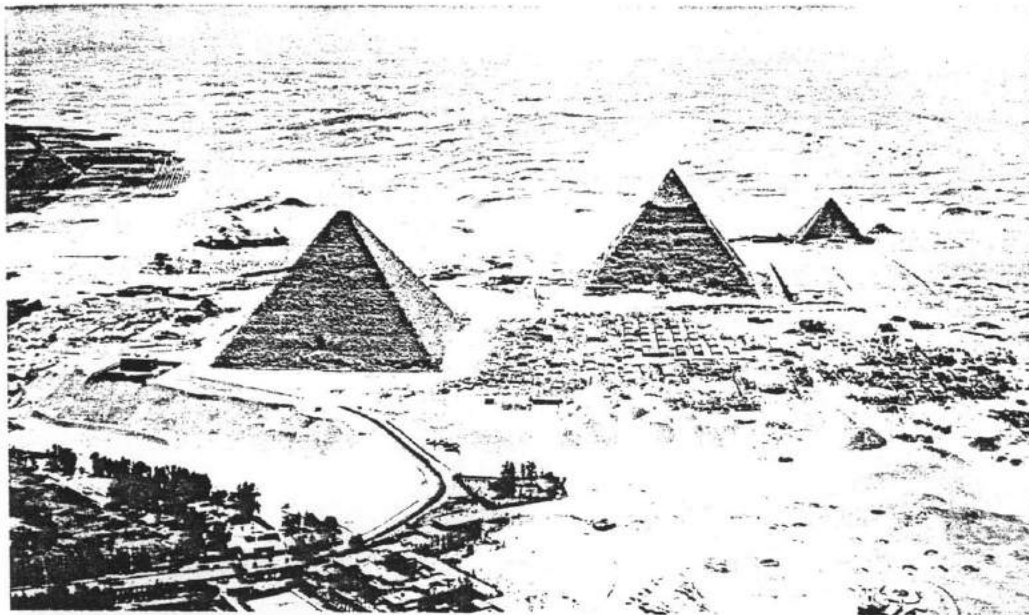
[Fig. 4.3]   The Pyramids.   (Kostof, A History of Architecture).

In a third situation, the "primary meaning" remains, but new "secondary meanings" replace the previous ones. Driving a 1940 Ford, for instance, corresponds with the "primary meaning" the car had several decades back--providing a means of transportation. On the other hand, the "secondary meanings" associated with the car are more to show an excessive richness, or a fascination with the past, and following a fashion. Living in an old, renovated house constitutes another example where a person shows a specific philosophy of appreciating the past.

What we have examined here, in the example of the Gothic, is a case where architectural form has been charged with different meanings according to a time-span, relating to different

ideologies or social convictions. But forms can, in fact, be assigned different meanings even shortly after they are made. In fact, architects and historians of the Modern movement attempted to rationalize the architectural process. They were often tempted to emphasize the necessity of the architectural programs they sought to advance.   The modernity of architecture (for the new epoch) could be seen to reside in its faithful realization of the imperatives of such material factors as function and construction.   Such functionalism established the grounds for the claim that modern architecture provided the historically determined forms that would control and shape the modern world. Following a rational process of problem-solving would, the modernists claimed, result in artifactual forms that were "correct".   This emphasized the singular interpretation of the artifact at least at the moment of its making.

But that is not the case. Stanford Anderson writes that:

> "the artifact is not merely a means of expression, but a *winning of reality*. This winning of reality already affirms that we are concerned with the process, something that unfolds in time, a situation where the maker's own thought is changed, perhaps even radically, by reality he has won. The original maker/interpreter is no longer the same after the first encounter with artifact... and artifact is something more than what was intended."[12]

In an essay defending the interpretation of works of art

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12 See Stanford Anderson: "The Presentness of Interpretation and of Artifacts: Towards a Theory of Duration and Change of Artifacts," Akshara, 1982, pp. 59.

according to the artist's intention, Wimsatt and Beardsley state that:

> "if the poet succeeded in doing (what he intended), then the poem itself shows what he was trying to do. And if the poet did not succeed, then the critic must go outside the poem--for evidence of an intention that did not become effective in the poem."[13]

If the poet does not succeed in fulfilling his intentions, then the door is opened for different interpretations. Another situation occurs, however, when the poet's intentions are perceived in addition to something else, which is beyond the poet's intentions and even control. That is when a poem communicates two kinds of indicators (keeping Bonta's Model in mind): signals and pseudo-signals are always suggested when a poem possesses a level of abstraction. In fact, Wimsatt and Beardsley claim this level of abstraction for the poem. They note that, after allowing contextual study to ascertain the meaning of words and therefore the meaning of words relative to the time context, a change of interpretation at a later time is not impossible. They hint at this when they continue that "the history of words after a poem is written may contribute meanings which if relevant to the original pattern should not be ruled out by a scruple about intention."[14]

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13 Quoted from Anderson, pp. 61.
14 Ibid., pp. 62.

4.3 THE "HOW" OF INTERPRETATION

There are different sources from whence to gather information about people's interpretation of architecture and artifactual works. One is introspection. Man can register his own interpretations; a person can write his reaction to and his reading of a specific artifactual work. The difficulty of this approach is that the same person is supposed to undertake two tasks: to provide the information (as an interpreter) and to process this information (as a researcher). It is difficult to avoid the influence of one task over the other, a thing that may affect the accuracy of the research results.

Another source of information is the field studies in which a first hand documentation of people's interpretations are recorded. Interviews and questionnaires are involved in the process. Several psychological studies and scientific methods are also applied. This is a purely empirical approach where the information gathered is external to the research analyst. This approach is obviously not applicable to more than the current points where historical works are concerned.

A third source is texts and other documents. These include critical assessments of architectural and art works produced by designers, artists, critics, journalists, and the like. This process has its advantages when historical works are the subject of the study. Historical texts are of great value in identifying the changing meanings of a specific work. By comparing the

literature of each historical period (when available), a clear idea of changing interpretative attitudes can be traced. The source of information in this approach, like the previous one, is external to, and therefore independent from, the researcher. An example of this approach is a well-known study by Paul Frankl about Gothic architecture.

In his book *The Gothic: Literary Sources and Interpretations through Eight Centuries,* Frankl scrutinizes all the major written interpretation of Gothic from the twelfth century on. His attitude is different from what we are proposing because he tries to validate all of the historical interpretations against his frame of reference. In other words, he is applying his own value judgements to tell which interpretation are factual. By contrast, our approach is descriptive. It does not matter whether a specific interpretation is right or wrong; what matters is that such a conviction about the interpretation did exist in a specific time context.

In fact, interpretations can neither be isolated from their cultural context nor from the context of ideas and positions that an interpreter takes. Architectural interpretations are subject to the general trends of the history of ideas. Interpretations are cumulative to a certain extent; each interpreter can rely on the interpretations that are at hand (i.e. what has been said before). This raises the issue of the "history" of interpretation.

The dialectical interplay of forms and their social, historical context is an interplay between structures (which generally do not alter) and changing circumstances -- hence the changing interpretations. The history of interpretation can be categorized into different stages, each of which has specific characteristics. The interpretation process can follow several steps; every stage develops from the previous one. The interpretation of forms has a "life-cycle" of its own.

The first step is "pre-recognition", when the building (or the form) is newly built and very few people have the chance to see or experience it. There will be only a few interpretations here and there offered by critics or by the architect. It takes time for the building to reach the point of possessing "shared meanings". A building like the Dome of the Rock, for example, would take a long time, probably decades, before it was charged with meanings related to Islam or the Umayyad Dynasty. Jencks shows that the German Pavillion by Mies Van Der Rohe, to give another example, took years before it really reached the level of having agreeable interpretations within the Modern movement. The Aga Khan Award for Islamic Architecture requires a mandatory three years for a building after it is built before it is eligible for nomination. The rationale behind this is, in addition to assessing that the function and structure are tested, to allow some time so that the building passes this early stage. Presently, with the tremendous achievements of mass communications, the time expected for this pre-recognition may be less than before; but it is still a significant period in the interpretational history of

the building.

In the second stage, the building starts to gain recognition and meanings beyond the personal level. At first, interpretations are regarded to be conclusive, personal, and controversial (among individuals in, say, the professional community). It takes a considerable amount of time and effort before a building reaches the level of "shared interpretation," or canonical interpretation, as Juan Bonta suggests.[15]

It should be noted that forms become fully meaningful not when they are interpreted on a one-to-one basis, but when they are placed in the context of other forms. Meanings are achieved either in opposition to, or in association with -- i.e., by comparison with--other forms. In the interpretation of a building, references may be made to other existing buildings or forms. Therefore, meanings are relative within a context.

During the "recognition" period, interpretations are most creative, especially if the form is relatively new. There is no [Fig. 4.4] better example than Le Corbusier's Ronchamp. When it was built, the associations attached to the chapel ranged from its being a vessel of contemplation, or Noah's ship of survival ... to its being a betrayal of the principles of the Modern movement with these plastic forms.

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15 See J. Bonta, pp..
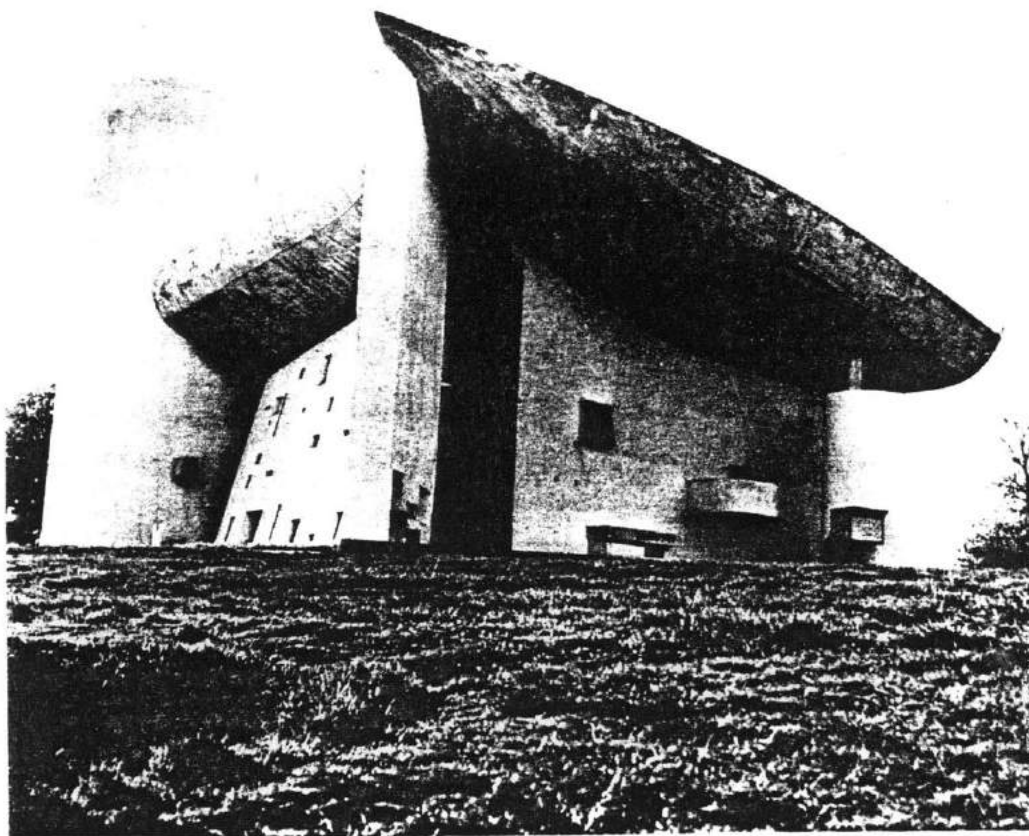
[Fig. 4.4] Le Corbusier's Ronchamp. (Kostof, A History of
Architecture).

"Shared, or canonical, interpretation", is the third stage in the
"history of interpretation." Shared meanings account for the
bulk of people's daily reaction to architecture. Forms tend to be
read as canons. People learn how to recognize the form and can
identify it in a very short time, even if distortions are introduced
to it. Canonical interpretation is the result of previous responses
during the recognition phase obtained by repetition and reduced
to their simplest essentials. Therefore, canonization is not a
growing process but rather a reductive, filtering one.

[Fig. 4.5] In Le Corbusier's Villa Savoy, for example, canonical
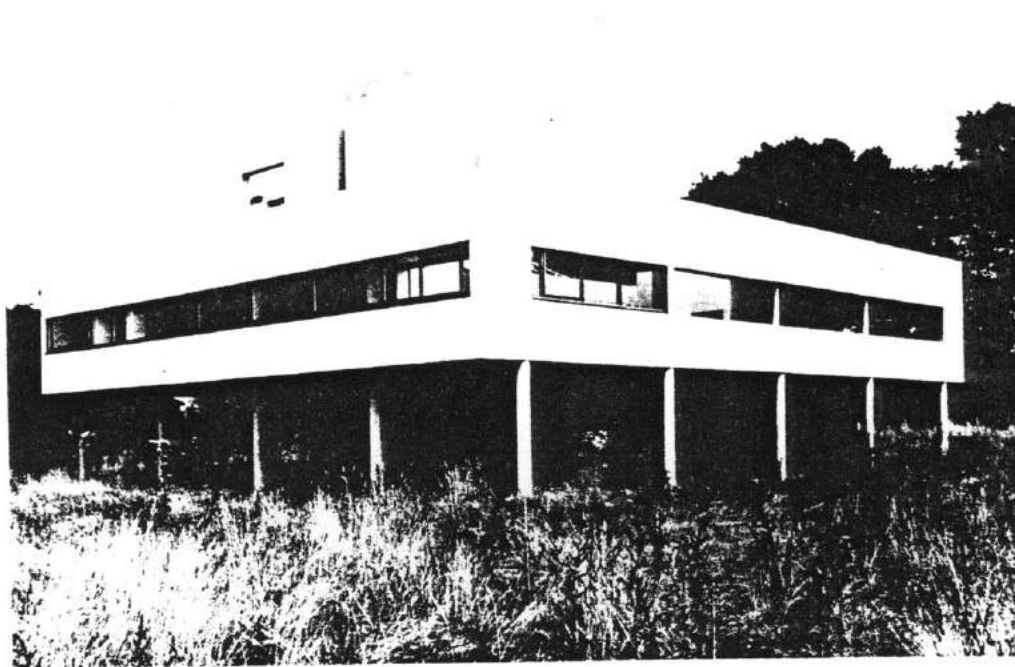
[Fig. 4.5] Le Corbusier's Villa Savoy. (Kostof, A History of Architecture).

interpretations are represented in such features as the fluidity of space resulting from the principle of "free plan" and the grid underlying the design. The pilotis, stressing the sense of order and regularity and at the same time freeing the ground floor; the ramps as a way for an architecturale promenade, the ribbon window; the cubical massing and handling of the building volume; the whiteness of the surface, representing "priority" and stressing the geometrical arrangements, etc...

Architectural canons constitute a system whereby men establish

a certain level of continual predictability in their interaction with the physical environment. This system requires maintaining a stability and an ongoing equilibrium. The system, however, should allow changes in the patterns of interaction.

In fact, the result of canonization is the concept, the type; a type is a thing, as N. J. Habraken suggests, that we cannot describe, but we can recognize. A type is independent from the intentions of the designer; it is not something that is invented, but discovered. Habraken gives the example of students being asked to describe a Tunisian courtyard house. They failed to give a good consistent description. However, when they were asked to design such a house, they did it successfully. "A type is something to do with, not to describe," Habraken says.[16]

In architectural education, the distinction between the two steps of interpretation, recognition and canonization, has interesting implications. Gifted teachers develop in their students the analytical process needed to interpret architectural forms depending on those forms' characteristics. The student should be capable of interpreting a form independently from the conventional meanings attached to it. The aim of such a process of teaching is to develop the students' ability to construct their personal interpretations, which come usually in the "recognition" process before canonization.

It is possible for interpretation, like forms, to wear out. When a

16 In a lecture at MIT, February, 1988.

canonical interpretation becomes established, it is difficult to think of a building in different ways. Yet it becomes boring to repeat the same points again. The step of reinterpretation follows the "canonical interpretations."

We often find new interpretations of forms. The Villa Savoy was interpreted as the accomplishment of "Purism" in architecture; yet in the sixties, the Villa represented "ambiguity" and tension for Venturi. He writes:

> "Ambiguity and tension are everywhere in an architecture of complexity and contradiction. Architecture is form and substance -- abstract and concrete -- and its meaning derives from its interior characteristics and its particular context. An architectural element is perceived as form and structure, texture and material. These oscillating relationships, complex and contradictory, are the source of the ambiguity and tension characteristic to the medium of architecture. The conjunction "or" with a question mark can usually describe ambiguous relationships. The Villa Savoy : is it a square plan or not?"[17]

Then he says :

> "The calculated ambiguity of expression is based on the confusion of experience as reflected in the architectural program. This promotes richness of meaning over clarity of meaning."[18]

Venturi provides an interpretation of some aspects of the Villa Savoy which does not agree with the canons established over

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17 See R. Venturi, Complexity and Contradiction in Architecture, The Museum of Modern Art, 1977, pp 20.

18 Ibid., pp 22.

three decades. Though it is an individual interpretation, who knows, all the canonical interpretations started with such individual interpretations during the "recognition" phase.

It should be noted that the "history of interpretation" does not necessarily follow the steps we mentioned earlier. In fact a building can still be in the second step of "recognition" and never achieve "canonical interpretation."

Architectural interpretations are subject to the history of ideas and philosophies. We interpret buildings in a specific way because we illuminate some aspects of our systems of beliefs -- of our world. Interpretations change because they cease to fulfill their initial cultural role. Different interpretations are needed to match current interests and ideas. In the "recognition" phase, forms are interpreted as either signals or pseudo-signals. This interpretation depends on the architect's intentions and his ability to communicate them in his intentions. Le Corbusier, for example, produced much literature, among which is the *ouvre complet*. He would interpret his work referring to what he intended to accomplish. Yet, in this process, there is an important point to make.

Anderson refers to this point when he argues that the artist creates what he intended and also something else. This "something else" falls into the category of an interpretation offered by the creator (artist, architect, etc.) or by people. It is

either a pseudo-signal or an index. As time passes, historical buildings operate as indexes only.

In *The Lost Meaning of Classical Architecture*, George Hersey writes that:

> "For an inhabitant of the Hellenistic world, the words "Doric," "echinus," or "Ionic fascia," in Greek, did not have the purely workaday associations they have for us. They suggested bound and decorated victims, ribboned exuviae set on high, gods, cults, ancestors, colonies. Temples were read as concretions of sacrificial matter, of the things that were put into graves and laid on walls and stelai. This sense of architectural ornament is very different from the urge to beauty. But indeed the word ornament, in origin, has little to do with beauty. It means something or someone that has been equipped or prepared, like a hunter, soldier, or priest."[19]

He continues:

> "But today this sense of ornament's meaning has once again been lost."

In fact what Hersey types as the "lost meaning" should surprise no one, but but be accepted as the nature of things. The classical order operates as an index and should be accepted as such. It has been suggested that the meaning of the Kuran, like the Bible, is open to new revelations in every generation -- and so is architecture.

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[19] See G. Hersey, The Lost Meaning of Classical Architecture, The MIT Press, Cambridge, Massachusetts, 1988, pp. 155-6.

5 REFLECTIONS AND CONCLUSION

How can the architect create a meaningful environment?

We started this study with this question. We have established that culture is composed of an integration of sign systems operating within society. Architecture, like science, language, religion, and so on, is a sign system. Therefore understanding how this system operates reveals to architects / designers a way of achieving better communication with society. As a result, our concentration is directed at society's shared interpretations. Taking the paradigm of interpretation into consideration, the designer is *perhaps* in a better position to create forms that have more powerful representational effects, forms that are meaningful to members of the community.

It is very important to underline the word "perhaps" because interpretation is an action which is developed within society; the designer has very little control over the formation of meaning. The emitter produces indicators, we may recall, but it is up to the interpreter to decide whether these indicators have the meanings the emitter intended.

In the process of communication, which operates in some levels of verbal language, for example, the interpreter is supposed to receive the message as it was intended. In other words, the emitter encodes the message with specific information (i.e. "encodes meanings"). The interpreter, on his part, is supposed

to "decode" the message. The encoded message should coincide with the decoded message in order for the communication process to be successful.

These encoded messages, or indicators, operate as signals in Bonta's model. Traffic lights operate according to this paradigm of communication. If we fail to understand (or decode) that the red light (the encoded message) means that we must stop, then the communication process fails.

The paradigm of communication is problematic when applied to architecture. Part of the difficulty lies in the fact that the architect's intentions are mostly not clear to the interpreter who eventually undertakes the task of meaning-formation. Intentions are not always inferred from the artifact. Stanford Anderson rightly states, as mentioned before, that: "Every artifact has unforeseen consequences, is open to unforeseen interpretations. An artifact is always something more (or first other, then more) than what was intended."[1] The coincidence between encoding and decoding is rarely achieved in artifact-making. Furthermore, the paradigm of communication fails to solve the problem of historical artifacts that have always been reinterpreted in different ways according to different time contexts.

In fact, it is in the paradigm of *interpretation*, not communica-

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1 See S. Anderson, "The Presentness of Interpretation and Artifacts: Towards a History for the Duration and Change of Artifacts," <u>Akshara</u>, April, 1982, pp.60.

tion, that our problem finds the most chance of being solved. In this paradigm of interpretation, people undertake meaning-formation according to a complex process which starts with pre-recognition, then recognition, and finally canonization (See chapter 4.). In this process, meanings may be unpredictable and beyond the designer's control. Designers may attempt to anticipate what meanings their forms are going to be charged with. They may also try to influence people's interpretations through declaring their own; this will not, however, prevent people from having their own interpretations, which may vary from those of the designer. Neither trying to predict the meanings nor to influence them seems a wholly reliable approach for the designer. Yet this paradigm of interpretation has the advantage of liberating us from the problems of the designer's intentions that we face in the paradigm of communication.

Are we not in a dead-end situation? If the architect/designer seems not to have much control over the meanings of his works, how can he produce a meaningful built environment? Admittedly, the designer does not have much control over the meanings that may be ascribed to a building in the future. But what about the present? Can he not produce works that, to some extent, reflect a society's traditions and beliefs, and, at the same time, have these works conceived as such by society members?

Let us examine the recent history of architecture starting with the Modern movement. We should bear in mind that our final

arbiter of the meanings of architecture is the interpreter, society, or the "audience," to use Hubbard's term.[2] And one scale against which works of architecture are measured is the social consensus whereby the audience's taste matches the meanings it ascribes to architecture.

Although the tendency of Modern architecture was to re-establish architecture as a public art, the message was directed to "the chosen few" by being based on a fundamentally new architectural language. Le Corbusier's *Vers une Architecture* was meant to popularize Modern architecture and to appeal to the new corporate elite. "Modern architecture," wrote Charles Jenks, "sought to be popular... at least during its heroic period when it had pretentions to transform the taste of a mass culture."[3] The heroic period of the Modern movement was preceeded by an intellectual transformation and by technological change that promoted a new architectural symbolic representation.

Indeed, the avant-garde became aware of the fact that personal sensibility is not definite and could have been "otherwise." Instead of this unreliable sensibility, function was an appealing, inevitable force at work. Accordingly, function should determine the shape of things. The architect "should discover the form that would have resulted had functional requirements been able to determine their own form."[4] Furthermore,

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2 See W. Hubbard, Complicity and Conviction, 1981, pp. .
3 See Jenks: "The Perennial Architectural Debate," Architectural Design Quarterly, 53- 7/8-1983: pp. 8
4 See Hubbard, pp.6.

architecture became a pure instrument whose forms were perfectly transparent to function. Once the criterion of function was fulfilled, the resultant form should be justified. Since those abstract forms, so went the argument, followed a rational process of design, they should be beautiful and the society should accept them. The notion of beauty as articulated in classical architecture was abandoned. Instead, a new ideology for the "new epoch" was adopted. It was the relationship between forms that gained omnipresence. Le Corbusier stressed this point when he wrote: "The Architect, by his arrangement of forms, realizes an order ...by the relationship which he creates... he gives us the measure of an order..; it is then that [the order] we experience the sense of beauty."[5] Yet the Corbusian "sense of beauty" was not easy to follow. Communication, in this case, was missing between the Modern architect and the viewer. If the viewer didn't like or understand the form, that was his problem.

By rejecting the existing architectural language, codified mainly according to the Beaux-Arts traditions, the avante gardes of the Modern movement were rejecting the use of systems of signals. In their search for new forms, they sought indexes. In other words, the content of expression should not be the subjective state of mind of the emitter (as in the case of a signal) but something which appears to the interpreter as an objective state of affairs -- as when faced with an index.

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5 Quoted from M. Gandelsonas, "From Structure to Subject," Opposition, 17, pp.21.

With the spread of the Modern movement's influence on the environment, indexes became conventionalized. Forms were neither technologically advanced nor socially committed; they only communicated "social or technological ideals." Nicolaus Pevsner, commenting on Stirling's and Gowan's design of Leicester University writes that:

[Fig. 4.5]

[Fig. 5.1]

> "The ramp to what was meant to be the main entrance is perilously steep, and people therefore do not use it much.
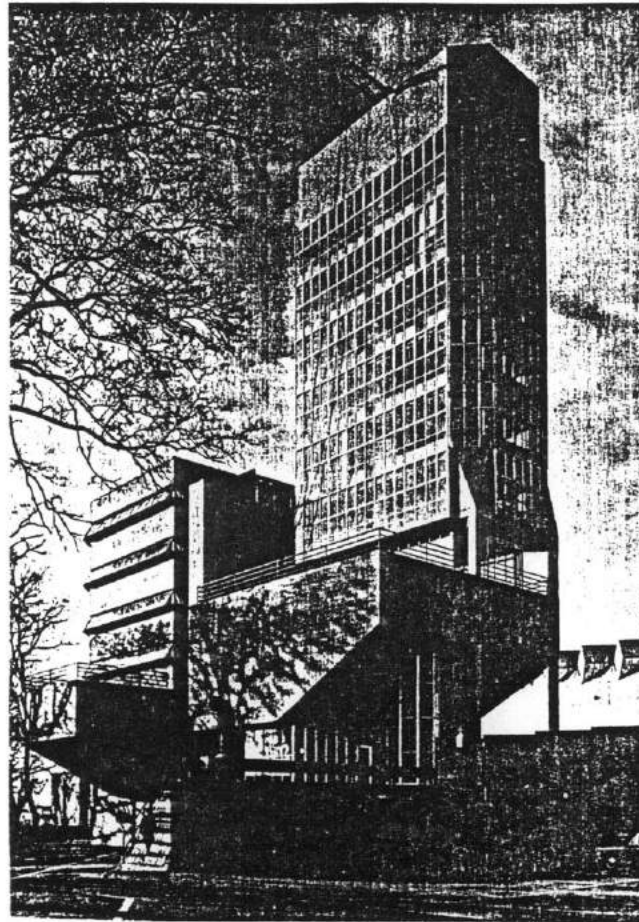
[Fig. 5.1]   Stirling,s Leicester University Building.   (Jencks, Modern Movements in Architecture).

But the architects needed a ramp; for the ramp is diagonal, and diagonals are their attack. Take the curious prisms of glass which end each bay of the (incidentally, diagonally disposed) skylighting of the low workshop range. I have tried in every way, and yet I cannot see that they have any *functional justification*. They cannot let more light in or let light in in any other more favourable, way. They are purely *expressional*, and, as such, an additional cost."[6]

In fact, it was the social conviction and "belief" that these forms are meant to represent technological advancement, modernity, and the new society. At this point, indexes are no longer indexes; they become signals. This belief did not make people like those forms, but the intended message was communicated. Here the audience had not been engaged.[7]

The Post-Modern movement appeared as a reaction to the Modern movement's approach to the architectural language. Unlike the Modernists who wanted to create a new formal language, the Post-Modernists attempted, generally speaking, to start from existing architectural codes to achieve a better communication. In the United States a new situation occurred when a group of contemporary architects attempted to use the Shingle Style in their architectural works, especially of those of the single-family house.

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6 Quoted from Bonta, Architecture and its Interpretation, my italics, pp. 16-7.

7 We should not confuse conventionalization with canonization. Canonization does not have to do with intention, but with consensus. Signals, pseudo-signals, intentional indexes, and indexes are all subject to canonization. Yet an overlap between conventionalization and canonization is always possible.

5 REFLECTIONS AND CONCLUSION

The Shingle Style was a symbol of a truly American architectural tradition that dominated the American landscape in the late nineteenth century. At that time this tradition had not yet been interrupted by the European influences of the Beaux-Arts and later the neo-Bauhaus and the International styles.

According to Vincent Scully, the revival of the Shingle Style has been a derivative of the attempt to rediscover the "special American realities and fiercely American traditions after several generations of influence from highly intolerant and increasingly abstract European sources had bred a contempt for those realities and traditions."[8]

An early experimenter withi this revival was Louis Kahn. By breaking the grip of the International Style, Khan was able to liberate himself, and most importantly his collaborators and students, from the dominance of the "worn-out model". Robert Venturi presents to us a interesting model of assimilation. Venturi's model stresses the symbolic and formal

[Fig. 5.2] preoccupations of his philosophy. In his Beach House, 1959, the "ordinary American home is transformed into a precarious aesthetic order of interdependent functional and decorative elements".[9] Though the House is a simplification of older and larger forms, its uniqueness comes from its symbolic charges. The high, probably exaggerated chimney is blasted up the center

8 See V. Scully, The Shingle Style Today, George Braziller, New York, 1974, pp.4.
9 See S. von Moos: Venturi, Rauch and Scott Brown: Buildings and Projects, Rizzoli, New York, 1987, pp 256.

of the gable as if to suggest that the house means shelter, fire and
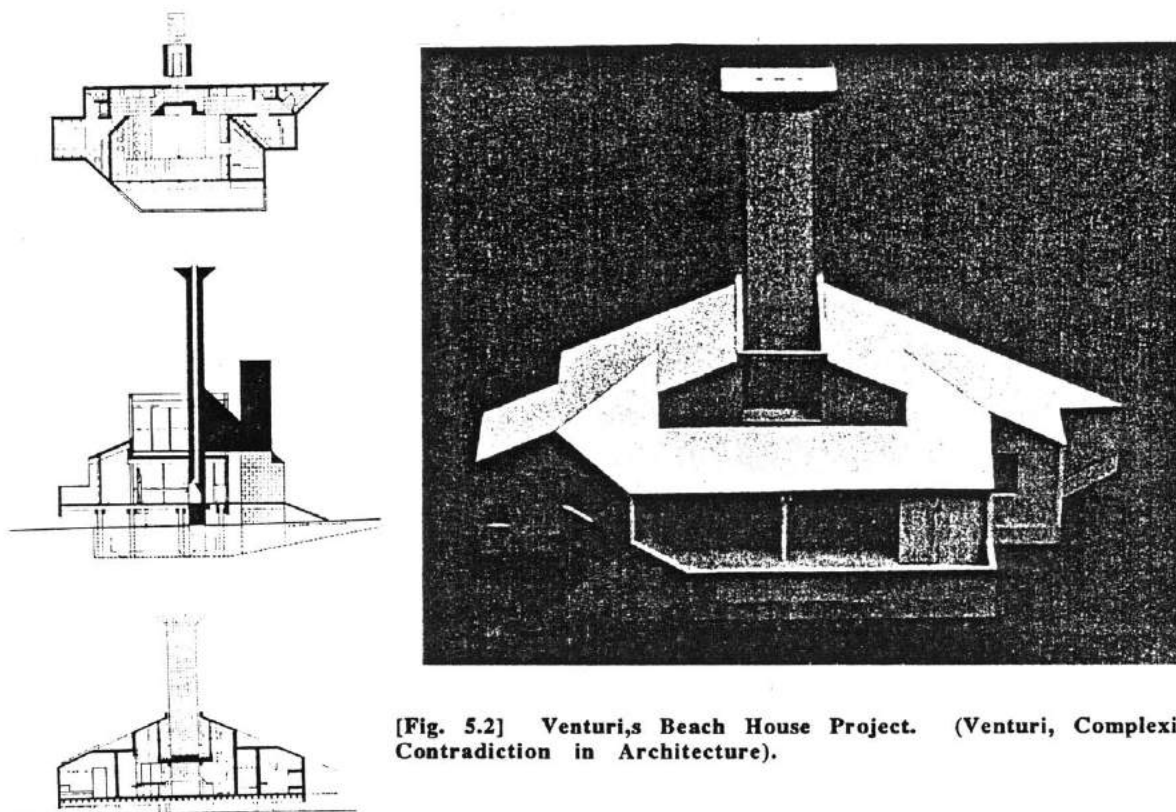
[Fig. 5.2] Venturi,s Beach House Project. (Venturi, Complexity
Contradiction in Architecture).

a sense of possession of place. It was precisely Venturi's request
for the meaning communicated through the built form that led
to such symbolic expressions. This symbolic expression, with
his design experiments, was to be supported with a more
"functional" reasoning.

Venturi's Chestnut Hill House, though not shingled in itself due
to economic considerations, was undoubtedly a revival of the
use of the Shingle Style. The ground-level gable, the chimney,
even the plan were all rooted in the same tradition. The climax
of Venturi's experiments was to be found in his Turbek and

[Fig. 5.3] Wislocki Houses in Nantucket. Two houses, like two persons, were situated as if they were in a conversation. In their "monumental" image, their elements and the spatial arrangements, the houses are very appropriate to their colonial and Shingle Style architecture. They are both traditional and new Venturi's exemplifying for the both-and phenomenon.[10]
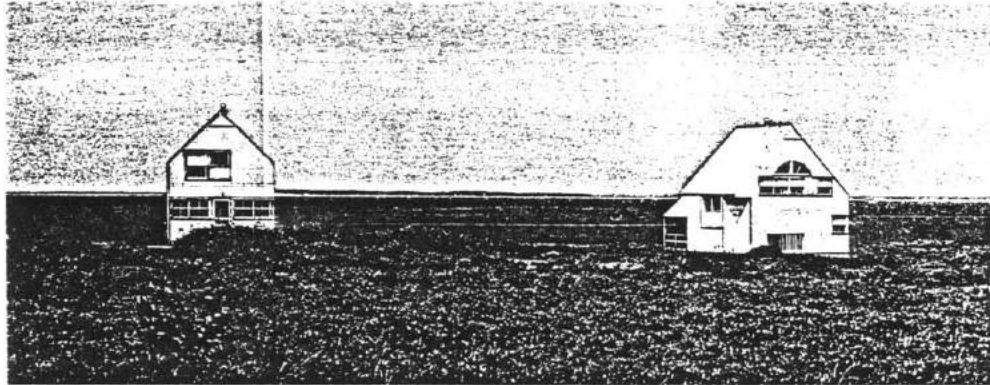
[Fig. 5.3] Venturi,s Turbek and Wislocki House. (von Moos, Venturi, Rauch and Scott-Brown, Projects).

For Venturi, the architectural work should fit its context. In this case, the architect is giving the audience what it is used to or will expect to see. The design work meets people's expectations. The viewer is expected to appreciate the design. This trend is known as the populist approach.[11]

Venturi has argued for an informal approach which would permit buildings to be designed in such a way that they would immediately relate to the context in which they are situated, a

10 See R. Venturi, Complexity and Contradiction in Architecture, The Museum of Fine Art, New York, 1977, pp. 23.

11 It is debated whether Venturi is really a populist. Prof. Ronald Lewcock suggests to me that in the Aga Khan Awards for Architecture's final jury discussions, 1986, (in which Venturi was one of the participants) Venturi strongly opposed to his being "accused" of being a populist. I believe that it is unfair to reduce any master into "boxes" of categories or styles; thier very creativity lies in being able to break such categories.

[Fig. 5.4] context which, in the case of the U.S., was more often than not the "commercial strip." Main Street is almost all right; it is what
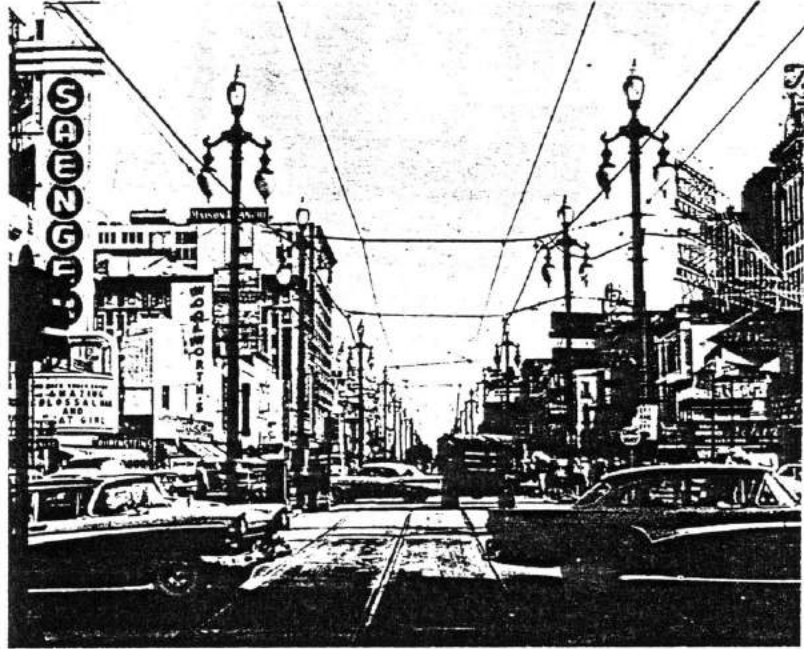
[Fig. 5.4] Main Street, an American city. (Venturi, Complexity and Contradiction in Architecture).

people are used to, as Venturi proposed. From the works of architects such as Moore we recognize the concentration on scenography. This approach has its problems, for "it undermines the society's capacity to achieve any kind of built culture at all."[12] Trying to meet people's expectations, the architect ought to become a conduit for the forces at work in the architectural process (in which peoples' expectations become *the* important component)[13]. The architect's role is dissociated from influencing or changing those expectations.

12 See K. Frampton: "Modern Architecture and the Critical Present," Architectural Design Profile, pp. 76.
13 See W. Hubbard, pp.11.

Artistic expressions would be difficult to achieve in the assumed role. Furthermore, the audience is given what it expects; therefore it is not really engaged. Venturi suggests to deal with signals, with the socially established language as one aspect to achieve communication. Signals communicate but do not stimulate. People may accept those forms, but there is nothing much new about them.

Another approach in the Post-Modern movement is exemplified in the works of Graves and Meier. In this approach, the argument goes that the true value of the building is judged by the level of integrity the building has from the architect's viewpoint. The argument is that if people have not liked a building, they must have misunderstood it (because the building should be this way). This seems to be an elitist tendency.[14] It dismisses, unitentionally perhaps, the audience's role as the final arbiter. This negates our premise that the society is the final arbiter.

Here the architects use intentional indexes. The case here is similar to what the Modernists did by neglecting the established sign system. Among these approaches, the Modern movement's and the Post-Modern movement's, neither seems to provide us with a satisfying solution to the problem.

Umberto Eco proposes that since "shared meanings" are difficult to predict, the architect is supposed to design for

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14 Ibid.

variable primary meanings and "open" secondary meanings.[15] In other words, designs should be flexible enough to maintain different functions and leave the process of interpretation to society, since we have no control over it. This proposal does not contribute to solving the problem as much as to describing it.

Stanford Anderson admits the fact that "interpretations follow arbitrariness. Interpretations are systems of conventions. But conventions, Anderson argues, "imply both structure and duration; allow both duration and change."[16] He urges us to consider conventions as competing research programs (depending on I. Lakatos's theory of science as related to epistemological conventionalism.) He concludes that "the presentness and change of interpretation is rationally accountable without relativist or positivist argument."[17]

The key issue here is to construct such research programs. This conclusion helps in advancing our search for the proper task for the architect/designer to undertake. I propose a strategy composed of different steps. Firstly, the architect designs forms that fulfill two conditions. Forms should maintain a level of familiarity. These forms should stem from existing architectural language or codes. Their reference to the existing codes should be unmistakable.

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15 See U. Eco, "Function and Sign: Semiotics of Architecture," VIA, Vol. 2, 1973, pp. 140.
16 See Anderson, pp. 67.
17 Ibid., pp. 68.

This requires the architect to do extensive research and have a deep understanding of existing codes. The architect should know that such a form, say an arched window, connotes specific meanings to people; furthermore, he should know where this belief comes from. His task here is similar to the anthropologist when giving "thick descriptions" of a specific community's use of a sign-system. On the other hand, these designed forms should not be a direct imitation of existing forms, at least in the collective sense (e.g., a designed house should not be a replica of a traditional house, though some of its elements, the windows, for example, are borrowed from existing traditional forms). New forms should maintain a level of ambiguity. I urge that . This ambiguity will stimulate the viewer to draw comparisons with existing codes, to make individual associations, and to ascribe new meanings. At this step the building will be, we may recall, in the pre-recognition stage of its interpretation history.

The second stage in the strategy I propose is to have the designer involved in the recognition stage. Like a critic, he should contribute to the interpretation process effectively. His interpretation should be expressed and distributed through different media. It is expected that contradictory interpretations are unavoidable. In fact, these interpretations are very useful because they provide important feedback for the designer; he should take them into consideration. Testing and assessing people's reaction to design work will prepare the designer for the third stage.

In the third phase the designer, taking peoples' reactions to the first design into account, should be capable of stressing certain aspects that are perceived positively by people in later works. The designer is supposed to promote the features (especially the new ones) that appear to have wide acceptance. He may generate an interest so that other designers may be encouraged to use such new forms.

In this tripartite scenario, the designer is not bound (limited) to replicate Main Street; nor is he creating "new architecture for a new epoch," which is aimed at being universal, an architectural Esperanto -- which some know but very few use. The designer has to be aware of the belief systems interacting in the society he is designing for. He has to know that the real value of his designs lies in the interpretations arising from the complex interactions among a variety of sign-systems in a specific culture, be they philosophy, science, religion, and so on.

Following this scenario, the designer will be more capable of creating forms that represent people and their culture, forms that have the potential to transform the environment. Are we asking the architect to do what others cannot do? Yes. New ideas to change a cultural situation need their prophet. The architect should be that prophet if we need things to change, if we really want a meaningful built environment, if we really want architecture.

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