A Discussion of Two Design Approaches
in Architecture

By
Qi Zhu
Department of Architecture

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Steps in In-between
   ---a discussion of two design approaches
   in Architecture

by Qi Zhu

William Brown
   (Committee Chair)

Michael O’Brien

Heinrich Schnoedt

William Galloway
Hypothesis

With this precious opportunity to study architecture abroad, I was exposed to a very different world. The concept of architecture, which was so familiar to me before, became interestingly unfamiliar. In the design studio, we discussed culture, architecture, communication...; we talked about architects and their work...

Most stimulating were the arguments of the advantages and disadvantages of two design approaches, syntactical and semantic, as well as discussions related to meaning that was inherent in and attached to architecture. The hypothesis of this thesis is that architecture, as a component of the ensemble of culture, has the capacity of bringing out some invisible color of culture with its own language and developing a distinguished identity for the culture.
A:
Architecture is a world of making.

B:
Architecture is a world of making the thinking.

A:
In my world of architecture, the thinking-of-making is a conscious mental development, while the thinking generated afterwards is autonomous. Hitherto in the design process, I am free from any burdens of the unpredictable and uncontrollable afterward “thinking”.

B:
In my world of architecture, the making-of-thinking is structurally dependent on the thinking-of-making. Moreover, I want to direct the thinking of “the making” towards a specific cultural dimension. I enjoy the restrictions imposed by it.

The above dialogue comprised the basic subject discussed in this thesis. The thesis projects are examinations of the two design approaches.
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by Antonio Gaudi, 1851-1919
GA Document, Special Issue II  Modern Architecture,
1851-1919

lifeless but alive
When I talk about the word “alive”, I become hesitant. Things which are living may be lifeless; things appear to be nonliving may be alive. A person who is working and talking can be alive or he can be lifeless.

A lion may be more alive because it may be more true to its own inner forces than a man.

In China, there was a very famous poet who was also a very positive and upright government official. He wrote:

“Never be happy for the outside happiness
Never be sad for your own sadness;
Be anxious before the public begins to worry
Be pleased after the public begins to celebrate.”

He and his poems are alive although he died 500 years ago and his own emotions were concealed for the concerns of the others.

We say plants and animals are alive, fire and music are not alive. If we are pressed to explain why we call one fire alive and the other one dead, then we are either at a loss or we give a strained interpretation by announcing that these are the rules of language.

Now we are reaching a fantastic point by figuring out that metaphor gives the word “alive” two sets of meanings: one is direct meaning, the other is referent meaning which varies in different contexts, in different cultures. The two sets of meaning together compose the complexity of the word “alive”.

When I was asked to talk about the word “alive”, I hesitated.
Opposite: Entrance Hall of Castel Beranger
by Hector Guimard in Auteuil, Paris, France
GA Document, Special Issue II  Modern Architecture,
1851-1919
If a building is considered to be alive, it suggests that it has public warmth. When going to a deeper layer, we can recognize that the “public warmth” towards a building is a combination of familiarity and intellectual empathy.

By this standard, some buildings live in a flash, like a pop song. Some buildings live as long as Beethoven’s last quartet, while some buildings are never alive.

To understand the role of “familiarity and intellectual empathy”, we can study the following proposition:

Recognition of A  
(By viewing & Experiencing)

Association  
(By linking with memory)

Imagination  
(By freeing oneself)

Empathy  
(To B)

The wilder the imagination can go, the more vigorous the building will be. Thus, the building becomes something far more than a mere shelter, a machine or a container. It is a vivid cultural entity presented in front of you.

But today, we are surrounded by the buildings which are born not to be merely twins, triplet or quartet but universal-numerous-let. It is not a wonder anymore. Tragically most of them are born to death.

The main concern of this study focuses on how a building can be built to be alive. This series of explorations is based on two design approaches which in the end, worked hand in hand, to generate a building which I hope can have a rich reading.
1, Public warmth
2, Imagination of home
3, Imagination of imagination
Quickly bypassing caves, primitive huts, forts and cottages, we arrive at a realm where architecture, instead of merely offering shelter, began to send out messages with its own mode of communication. Like the churches and temples in the past, the messages they dispersed were so powerful as to create the visually and faithfully dominant point in the town. Even in a quite poor community, people have such faith in them that they are willing to sacrifice day to day necessities to enable the construction of a new and embellished church or temple in their village.

In the late 19th century and early 20th century, the amazing developments with each passing day in technology, science and art dazzled the world of architecture. The effect of mass, of static solidity, hitherto the primary quality of architecture had been abrogated. However, keeping in step with the progression of those subjects and cooperating with technology, architects enjoyed the creative freedom that they could never get before. They stood in the forefront and with full energy, they created new types of buildings which convey the spirit of that age.

I will discuss three buildings which inspire me in these studies.
Bottom: Paddington Station, London, England
by I.K. Brunel & M. Digby
view through platform

Opposite top: Column detail

Opposite bottom: Vault detail

GA Document, Special Issue II Modern Architecture, 1851-1919
The first building is designed by I.K. Brunel & M. Digby Wyatt.
Paddington station
London, England (1852-1854)

In 1852, seven years before his death, the pioneer engineer Isambard Kingdom Brunel began to work on the execution of his finest building, the London terminal of the Great Western Railway, designed in association with the architect Matthew Digby Wyatt. It consisted of three spans of arched, wrought-iron girders covering four platforms, ten tracks and eight turntables. The initial three-span shed, spanning a total width of 238 feet, was a inconceivable structural miracle at that moment. The architect Digby Wyatt was retained expressively for the ornamentation of the structure, that is the transverse beams between the columns, the tracery of the lunettes at the end of the shed, and the vaguely Alhambric treatment if the station master’s oriel.1

I believe, although, along with thousands of its admirers, we know not more of this building than a few photographs of it, yet the generosity of the space, the elegance of the structure and structural ornament make the building read as both a technological and artistic tale.

1. GA Document, Special Issue II Modern Architecture, 1851-1919, P17
Bottom top: Chocolate Factory by Jules Saulnier
entry facade

Bottom bottom:
river facade

Opposite top:
detail of interior structure

Opposite middle:
interior view

Opposite bottom:
detail of entry facade

GA Document, Special Issue II Modern Architecture, 1851-1919
The second building that I am going to discuss is a famous sweet “Chocolate Factory” built from 1871-1872.

In 1869 Emile Menie commissioned the architect Jules Saulnier to design a new mill building to be superimposed over three turbine generators set into the river. Saulnier decided to rest his lightweight structure on the abutments of the sluice gates which took the form of four masonry piers. The structure was comprised of two exterior lattice girders running for the full height of the building and two rows of cast-iron columns running down the interior of the volume on either side of the central corridor. Both lattice girders and columns were supported on riveted, sheet-iron, tubular box beams spanning between the masonry piers, which in effect was a form of early mega-structure. The three intermediate floors were formed by brick vaulted construction spanning onto riveted wrought-iron joists which in there turn were carried by the external lattice girders and the internal columns. The lattice framework on the exterior was finally filled with a thin layer of hollow brickwork whose variegated color was coursed in such a way as to resemble alternatively the letter “M” standing for “Menier” and a conventionalized silhouette of a cacao tree.²

This building impressed me by the boldness in its structure. Opposing to the horizontal and vertical structural system, its exterior lattice girders were rotated 45 degree which truly expressed the structural logic and (stiffen) stabilize the structure effectively against the lateral forces. Beyond the technological aspect, the architects were not afraid of using symbols to announce messages. Those symbols are expressed zealously by the colorful weaving of the bricks. When we look at the “extravagant Chocolate Factory” again, it is obvious that the power of the building resides right in its rich and precise combination of the two parts, the structure and the signs.

Right: La Sagrada Familia
by Antonio Gaudi
view up the main entrance

Opposite top:
section

Opposite bottom:
plan

GA Document, Special Issue II Modern Architecture, 1851-1919
The third example is the La Sagrada Familia in Barcelona, Spain, by the passionate architect Antonio Gaudi.

Antonio Gaudi Cornet, belonged to that generation of Barcelona architects who were strongly influenced by Viollet-le-Duc. Viollet-le-Duc announced persuasively that:

In architecture, there are two necessary ways of being true. It must be true according to the program and true according to the methods of construction.
To be true according to the program is to fulfil exactly and simply the conditions imposed by need; to be true according to the methods of construction is to employ the materials according to their qualities and properties... Purely artistic questions of symmetry and apparent form are only secondary conditions in the presence of our dominant principles.

Eugene Viollet-le-Duc
Entretiens sur l'architecture, 1863-72

As a member of the Catalan Art Nouveau or Modernismo movement, he followed the perceptions of the Structural Rationalism and tried from this anti-classical position to create an a-historical style, with which to express both the ethos of modernity and the emergence of Catalinian Nationalism.
Facing Gaudi's work, we can clearly see Gaudi's strong desire in reviving indigenous architecture. He let La Sagrada Familia, the Catalan Gothic Church be flooded with sunlight and color.

The exuberant architectural detail of the project, the iconographical architectural ornamentation and the dynamic sculptural form make the church an exotic world, but at the same time, its very exoticness defines its locality. It belongs only to Barcelona.

Gaudi pushed the method of combining the use of masonry with the dynamic structural profiles and creating the iconographic architectural elements to such a forefront that it became too hard to be surpassed by his followers as well as the passions he sowed into his buildings. Standing in front of his buildings even the most indifferent person would be inspired to make an exclamatory sentence.

That is the power of architecture.
1. Grundtvig Church
Copenhagen
(1913-1926)
By P.V. Jensen-Klint

2. A.S. Wenceslas's
Church
Prague (1928)
by Josef Gocars
Pavel Janak

3. Stock Exchange,
Amsterdam, Holland
by Hendrik Petrus
Berlage
interior view

4. Stock Exchange
overall view

5. Metro Entrance,
Paris, France
by Hector Guimard
Detail of railing

6. Bradbury
Building, Los
Angeles
by George Herbert
Wyman
It was an exciting time imbued with enthusiasm, thinking and creation.

The architects fought for their beliefs and they pushed their beliefs far beyond the line that other people could reach. Frequently a wisp of fresh air would refresh the people as well as the architecture.

It was a time that architecture can be

1. “expressive of its purpose”
2. “expressive of its structure”
3. “expressive of true construction”
4. “expressive of the material it employs”
5. “expressive of noble life”
6. “expressive of the craftsman’s temperament”

The architecture can be

asymmetric
exotically local
antithetical
ahistorical...

The architecture can even be crazy. Those vigorous celebration of all these aspects make the real architecture.

4. Geoffrey Scott
The Architecture of Humanism, 1924
The International Style

Above: Chicago distinct view
GA Document, Special Issue II Modern Architecture, 1851-1919, P.44
Passing through this glorious time and especially after the trauma of the World War, in 1928, a group of architects gathered together in a conference CIAM and announced that:

**Buildings rather than architecture, as the elementary activity of man, intimately linked with evolution and the development of human life.**

As Kenneth Frampton explained:

“CIAM 1928 openly asserted that architecture was unavoidably contingent on the broader issues of politics and economics and that, far from being removed from the realities of the industrialized world, it would have to depend for its general level of quality, not on craftsman, but on the universal adoption of rationalized production method.

CIAM emphasized the need for planned economy and industrialization, denouncing as it did so efficiency as a means for maximizing profit. Instead, it advocated the introduction of normative dimensions and efficient production methods as a preliminary step toward a rationalization of the building industry. Thus, that which aesthetes would regard as a formal preference for regularity was for CIAM the initial prerequisite for increasing housing production and for superseding the methods of a craft area?"

Let us have a look at the La Sarraz Declaration

1. The idea of modern architecture includes the link between the phenomenon of architecture and that of the general economic system.

2. The idea of “economic efficiency” does not imply production furnishing maximum commercial profit, but production demanding a minimum working effort.

3. The need for maximum economic efficiency is the inevitable result of the impoverished state of the general economy.

4. The most efficient method of production is that which arises from rationalization and standardization. Rationalization and standardization act directly on working methods both in modern architecture (conception) and in the building industry (realization).
Bottom left: Overall view of Hyatt Regency, San Francisco
by John Portman & Associates

Bottom middle: Overall view of Christian Science Church Center, Boston
by I.M. Pei & Partners Araldo Cossutta 1973

Bottom right: Overall view of Federal Office Building in Lawndale, CA
by Anthony Lumsden/DMJM 1975

Opposite top: Site plan and elevation of the Christian Science Church

Opposite bottom: Typical floor plan and ground plan of the Federal Office Building in Lawndale
5. Rationalization and standardization react in a threefold manner:
(a) they demand of architecture conceptions leading to simplification of working methods on the site and in the factory;
(b) they mean for building firms a reduction in the skilled labor force; they lead to the employment of less specialized labor working under the direction of highly skilled technicians;
(c) they expect from the consumer (that is to say, the customer who orders the house in which he will live) a revision of his demands in the direction of a readjustment to the new conditions of social life. Such a revision will be manifested in the reduction of certain individual needs henceforth devoid of real justification; the benefits of this reduction will foster the maximum satisfaction of the needs of the greatest number, which are at present restricted.

6. Urbanization can not be conditioned by the claims of preexistent aestheticism; its essence is of functional order... The chaotic division of land, resulting from sales, speculations, inheritances, must be abolished by a collective and methodical land policy...5

Joining in the hum of the machines, the persuasive words and the enthusiastic gestures of CIAM, houses were produced like screws one by one out of the assembly line. Behind the exciting whistling of seeing ten identical houses being assembled simultaneously in one "place", however, a sense of homeless came up. A man can only find his family by walking very close to the labels attached in front of his door and read carefully because even the labels were all identical as a result of the efficient mass production. Man is lost.

While re-regarding the glorious and romantic aspects of the buildings of previous days, which strongly contrasts with the dull modern international style, people return to the old concept that buildings should be constructed as architecture. Architecture should communicate.

**Architecture should convey meaning.**

5. Kenneth Frampton, Modern Architecture, a critical history P269
1. Sketches by John Hejduk
2. Town Hotel in Berlin
   by John Hejduk
3. Resurrection Chapel, Woodland Cemetery
   Stockholm, interior view
4. Resurrection Chapel, Woodland Cemetery
   Stockholm, exterior view
   by Sigurd Lawerentz

Opposite: Vitruvian Man
by Leonardo da Vinci
Academic Venice, Italy
In this context, a group of architects claimed that unlike the abstract buildings their predecessors and competitors made before, their buildings are rooted in place and history. Meanwhile they went back to the full repertoire of architectural expression: ornament, symbols, humor and urban context. Relying on modern constructional means and historical memory, elite and popular meanings, the buildings are double coded, hopefully to offer a possibility of potential double reading.
Top left: perspective view of Piazza d'Italian Fountain in New Orleans, Louisiana, 1978 by Charles Moore & U.I.G.

Top right: plan

Bottom: perspective view of Piazza d'Italian
Opposite: perspective view of Piazza d'Italian
GA Document Special Issue 1970-1980
Let us look at an example which announced itself to be an architecture rooted in place and history. It is the Piazza d’Italian Fountain by Charles Moore & U.I.G. in New Orleans, Louisiana.

In this project I do appreciate the wonderful imagination of the architects in their novel way of transforming the Italian Map to an architectural element and the careful but a little bit timid way of retreating the classical columns as well as the other architectural signs. Yet it is also a very intriguing example to demonstrate the superficiality of the parallel statements made by the directly applied symbols. The symbols are so strong that they became the dominated forces in the whole project. In this context, the wisdom behind the reuse of the signs as well as the intelligence embedded in the re-composition of the signs are easily being ignored or being dismissed.

In China, there is a famous idiom handed down from ancients times, which tells a very interesting story. Man A once got a precious gem. Before he went to sell it, he decided to carve a very elegant box to contain this gem. One day he went to the supermarket. Man B seemed very interested in the gem. He looked very carefully at the gem and the box. Weighing the gem for a while, then weighing the box for a while, finally he bought the thing. Before he left, he took the gem out of the box, returned it to Man A and satisfactorily took the box home.

When I heard of the story, I laughed at Man B for his silliness of being deceived by the superficial value of the box instead of recognizing the real value of the precious gem. But behind the humor and the satire of the story, we can see we just behave in the same way that Man B did. We are so easily being deceived by the first image of the signs which preventing us from further observation.

In architecture, we are so easily being enamored by the superficial quality of the “signs” instead of delving into the heart of the building.
1. Habitation unifamiliale at Ashiya
by Tadao Ando
Couloir Des Chambres

2. Habitation unifamiliale at Suita
by Tadao Ando
Plafond de la salle de sejour

3. Blion Family Cemetery
at San Vito d'Altivole, Treviso
by Carlo Scarpa
Another group of architects, by contrast, disdain all historical imagery. They claimed that the root of the failures of modern architecture are some of the same reasons that brought its success: its rejection of the literal use of historical form and its reliance on rationalization. They concentrated on the perennial abstractions of the building,---space, geometry and light--- and generally refuse to discuss stylistic issues at all. To explain their attitude, I can use language as an example.

Though expressing the same meaning, the external composition of the sentence has been transformed dramatically. Similarly in architecture, if we simply picked up the signs from history and use them literally, it will be as strange as we say the sentence “isn’t that strange” in the ancient way in an everyday context of today, which no one could not feel ironic and strange.

In ancient Chinese language, we say “Isn’t that strange” as

-------Chinese word:

Qi Fei yi Hu?

But today the language has changed both in sounds and vocabulary. To express the same meaning, we use none of the old vocabulary. Instead we say:

-------Chinese word:

Nan Dao Bu Qi Guai Ma?

But interestingly, when we compare these two sentences syntactically, we find that they possess the same linguistic structure as:

interrogative +

negative +

auxiliary word of mood

The Continuity on the line of Modernism
Right top: Interior view of Sainsbury Center for Visual Arts at University of East Anglia, Norwich, England, 1974-1977
by Norman Foster

Right bottom: facade of Centre Georges, Pompidou, Paris
by Piano and Rogers

Opposite: Interior view of pompidou center
GA Document Special Issue 1970-1980
The architects, such as Norman Foster and Richard Rogers, hold up the banner of modern movement and approach buildings as a series of technical problems.

Norman Foster’s Hongkong Bank, which is valued as the 8th wonder in the world, is honest rather than harmonious, inventive rather than composed, a virtuosic display of industrial design at a huge scale rather than the expression of a proportional system or religious faith.

Other architects, like Fumihiko Maki, Richard Meier approach buildings by abstract propositions of geometry and space organization. In their projects, the exquisite control of the most minimal means acts as a substitute for those missing signs, taking on quite a transcendental meaning in itself.

For example, Meier’s project, the Museum of Frankfurt, it was labelled by some critics as “Neo-Baroque” without the symbolism, conventional ornament and spiritual content of the historical movement.

Their buildings may be striking and beautiful. But beauty is not an essential part of their lexicon. Principles of composition and proposition are not consciously pursued goals either. Even in their deliberate suppression of the traditional aesthetic concept and deliberate celebration of the ugliness of the building, the architects successfully expose the building to its reader the power of light, structure and geometry.

But on the other hand, the massive volume of the building is now reduced to a single play of its structure, enclosures, infills etc. It is unencumbered by works of art or the other cultural considerations which lie outside of the architects’ skills and language. The only exceptions are those architects who have inclinations to include the outside world, to care about the culture instead of arbitrarily creating the “culture” of today.

7. Late-modernism Vs Post-modernism: The Two-Party System
by Charles Jencks
in Vision of Modern, Journal of Architectural Theory and Criticism
In this church I wished to combine the quality of a low crypt-like space with that of a tall gothic-like one. Low when seated during mass; tall when walking (after entry and before leaving). Because so narrow — only 3.40m between columns — 11m seemed high enough for the tall space, and 2.50 to 3.50 not too low for the low one, if sufficiently articulated horizontally, and (this in particular) vertically; for there is little sense of right-height in today’s buildings since the literal minds of Modernist architects began to function literally, only.

The tall space — neither narthex nor nave, but something of both — became a kind of interior street with all sacred places strung along it. People filter out of and into it from end to end between the semi-circular chancels, piers and outer...
One of my favorite building is Aldo Van Eyck’s Roman Catholic Church in the Hague, Holland.

In this project, Aldo Van Eyck tried to combine the quality of a low crypt-like space with that of a tall Gothic-like one. Low when seated during mass; tall when walking (after entry and before leaving). A group of circular elements playfully inserted into the rectangular mass. Instead of making up the beam and light well in a routine way, the architect thoughtfully used the beam to bisect the circular light well. At the intersection, they are slightly detached. Light is the only material that joined the two elements. Comparing the interior which formed by those simple and delicate details with the massive and “ugly” exterior of the building, the inside of the room is totally separated from the outside secular world. And light constructed a bridge to reach heaven...

In this project, it is the simplicity that makes it rich. The architect creates an architectonic vocabulary or sign, the intersecting lightwell and beam. This is a building which can disturb the imagination of its readers and the cultural content is subtly implied yet readable!

The meaning of a building are generated from the creative architectonic signs and their architectural composition. We need to remember this: if we want to create a piece of architecture which is rooted in history and place, we need to intelligently create the meaningful sign instead of duplicating of what we have in the historic repertoire; if we want to eliminate the symbolistic aspect in design, we should first have the greatest understanding of human psychology.
Language and Architecture

architecture and language
Language and Architecture

We have used some linguistic examples to demonstrate certain explanations before. With a deep look, interestingly, we can observe some parallel similarities between the architectonic system and the linguistic system beyond the external variances. As many theorists have done or been doing, the plug-in of architecture to linguistic models becomes very interesting and useful.

In language, speak-acts are co-occurrent with events in distinct signaling media, which make up large-scale communicative events. In architecture, the space-place making activity offers the “whereness” for the event as well as signifying the essences of the events. Evidently the “essences” of the event is much more dependent upon our conventional understanding of the activities happened within and our assessment of the habits and rituals that have grown up in the tradition of building type. (Although today many efforts have spanned across the traditional means to achieve the new definition, signification of the “essence” of a certain event or even event itself)

To get to the point of events, both of the systems employ signs, which are formed in an ordered and cultural-specific macro-system and which is still actively transforming themselves along with the line of time.

Linguistic system

- speak-act
- --------- event

Architectural system

- space-place making activity
- ---------- events
1. The formation of signs in linguistic systems

Language, originating in the increasing complexity of social-culture, is a cross-mode communication system. It has basically two different sets of signs. One is verbal sign, and the other is gesture sign.
The verbal signs developed in Chinese culture bear a very interesting transformation from the semantic development of one sign to the semantic development of the relationship between the signs.

Signs in Chinese Language

In ancient times of China, the writings, similar to some other cultures, had its origins in drawing of the natural objects, and many Chinese characters are used today may still be recognized as such altered pictures of some natural objects. for example:
the symbols of

- Sun -- ri
- Moon -- yue
- child -- zi
- tree-- mu

A written system, to be anything more than a mere mnemonic, could not remain at the level of picture-writing, for the conveyance of abstract notions and even of many concrete ideas, the drawing of the external forms is plainly inadequate. The Chinese met this difficulty in several ways. Ideas which could not well be shown in drawing were suggested, more or less clearly; by means of what we call today, "logical compounds", thus "brightness" was indicated by placing the sun and the moon side by side.

- brightness-- ming
- symbols such as
two --- er
up --- shang
down--xia

Different from this type of suggestion, in the following two cases, we can see another transformation

- come--lai
Originally it is the drawing of an ear of corn, now universally transformed to represent the meaning of "come"
The third personal pronoun -- qi
originally it is the drawing of a picture of caldron (basket), now applied to the homophonous word for the third personal pronoun.

In these two cases, actual words having no writing of their own have taken possession of characters left idle by disuse. The use of the “borrowed forms” from using the obsolete characters and even others still in use for totally unconnected ideas happened in most cases because they have the same or nearly the same sound as a word of which a writing is required when the development of writing went further ahead of pronunciation. This “substitution” messes the direct signification or suggested significations from the form of the sign. Today when we study those words, they became “absolute abstraction”

In modern Chinese, the great majority of the writing characters are compounds of two parts:

- yang--ocean
- yang--nourish
- xiang--discuss

It can be seen that the part “Yang” is common, with slight modifications to all three of the words; and “yang” is also a word in its own right, with the meaning of “sheep”.

Now it is plain that the word for “sheep” is not built into the other three characters because of any connection in meaning; actually, it is what is known as the “phonetic” and we can speculate that when the characters were first put together, it gave a fairly close approximation to the sound of all three of the others, though sound changes since time has deprived “Yang” itself and two of these compounds of their initial constants which leave the connection in sound less clear than it once was.

After we have deducted the “sheep” device from each of the three examples, the part remaining in each case is known as the “radical” or better as the “signific”. The signific element in each case denotes, or more commonly, merely suggests, an order of ideas to which the meaning of those whole belongs; hence the signific in these three cases are abbreviated and adapted forms of the word of

water---yang---ocean
eat-----yang---nourish
speak--xiang---discuss

This is a very clear case; in many cases the connection of the phonetic element, whether in sound or shape, with a word still existing independently, or with the same phonetic in other character, has become much more obscure through the changes in sound or in written form.

As the signs evolves into more complexity, the semantic development of the individual sign in the language receded to a secondary position. In modern Chinese, many phrases consist of words each respectively having a separate existence. The speaker and the reader is conscious as a rule only of the joined meaning of the whole.

Such as:

- piao ling---- blow on and fall
- Piao-- flow
- Ling--zero
Based on the discussions above, we can find that the developments of linguistic signs in Chinese are very clear. The line can be traced from the primitive mimetic drawing of the natural objects to the series of transformations by direct or suggested significations, accompanied simultaneously with the gradual lessening of the semantic development of the original sign itself, till now, the intelligent, artistic or in another sense, semantic composition of the signs and the in-between of the signs makes the meaning as well as the signs themselves glorious and meaningful.

9, refer to: The Chinese Language by R.A.D. Forrest
Faber and Faber LTD. Three Queen Square
**Sign: PATH**

**Scales in architectonic sign**

1. The walls surround Beijing City. It is a path as well for walking around the city.

2. Silk Way which greatly encouraged the cultural communication between China and Western Asia.

3. Highway, path that belongs to modern transportation system.

4. Path of fun

5. Path of nostalgia

Images 1, 2 from Living Architecture, Chinese Research by Nicholas Bouvier, assisted by Denise Blum, Macdonald, London, Plate 31

Images 3, 4, 5 from Tao of Health 28, 40, 66
In the visual-and-experiential-communication system, the architectonic signs turn out to be more complicated than those in language.

First, the architectonic signs are realized through what appears to be an impossibly complex hybrid media. It would seem that the built environment can employ anything from frozen blocks of water in the Arctic to aggregates of steel and glass; from twigs on a thatched roof to a high polymer just polymerized from the lab.

Second, the architectonic signs exist in different layers of scale and complexity. It can be as big as an entire church, or as small as the stone pavilion standing in the middle of a quiet lake; it can be as complex as the elegantly constructed curved roof in traditional Chinese architecture and as simple as a massive cross erected in front of the church...

Third, the significations that an architectonic sign conveys, in most cases, run out of the realm of architecture. Meanwhile this very character bridges the architectonic system with other cultural-specific sign systems.

For example, the high-rise X, which labeled as the highest building in the world, symbolized power in some sense. The sophisticated exposed duct systems in some projects symbolized the astonishing wonder of the modern technology... and home symbolized one of the human instinctive need, safety and affections.
1. B. S. Ouen Rouen Church, France
The layerization of the church

2. Front Gate of the entrance of Beijing city
The Layerization of the Front Gate
Unlike what we did to the verbal signs in the linguistic system, the sophistication of the architectonic signs make them seemingly unaccessible to systematic analysis. But if we put a mark on the scale parameter that an architectonic sign possesses, we can construct a network to explain the formation of the architectonic sign.

In this system for sign A (or object A), $a_1, a_2, \ldots$ is an individual sign which can be regarded as a complete entity and have a potential of taking a variety of different forms. But it is ambiguous in this very multi-orientation, or in another word, in its indetermination. Thus, it depends on the other sub-signs to get its own form and by correlating with the other signs, it fulfilled the meaning of the object.

So all the sub-signs provide a special context for each other. With and only with the correct correlations among the sub-sign systems can the whole sign or the object achieve the meaning that the designer embedded into it.

The semantic development of each individual sign is lessened and the intelligent and artistic composition of the subsigns makes the whole thing as well as the subsigns themselves meaningful.

In this respect, the architectonic sign system goes along the same track as the linguistic system. The transformation of the signs in the linguistic system is very provocative to the transformational process of the architectonic signs.
Tools

The architectonic signs, also are very dependant on the tools at hand. Someone said that if we only have one tool, a hammer, maybe today we will take everything as nail. Tool using and tool making is obviously such an important ability that the associations between an abstract concept and a tangible object could not be formed without it.
Projects and Investigations

http://www. com
In the previous discussions, I tried to explain my position regarding architecture. As a mode of art, it is bounded by culture. It communicates and it makes itself meaningful by conveying meaning to its observer. This semantic dimension is achieved by intelligent and artistic formation of an architectonic sign-system.

In this system, each sign as well as the sub-sign contains formative elements in which meaning is ambiguous until an indexed correlation to another series of signs has been established.

In this thesis, I tried to explore this idea by first directing myself to a totally opposite direction. In the first project, I explored it while bracketing as much as possible any external references and cultural concerns. By diminishing the semantic load, I could better reexamine the potential of two materials, wood and steel and the possible dynamic transformation between the two materials within one structural system.

In the second project, I deliberately confined myself to the semantic field which is strongly associated with tradition, culture and context. In that project, I attempted to form a non-architectonic sign architectonically, and also to try to open up a view into a secondary dimension of our memories and dreams by crossing the borders of different sign systems.
Blacksburg

Blacksburg is a small town which contains a big university. The town becomes prosperous and dynamic because of the presence and the development of the institution.

The interdependency of the town and the university is inherent. Along with the dramatic exchange between inside world and the outside for academic purpose, more and more international students bring their own culture to this small town.
Site

Blacksburg itself is surrounded by mountains, but this site is a piece of flat land, currently used for parking.

Diagram

1. Newman Library
   the main library serving the whole university
2. Virginia Tech Bookstore
3. Squares Student Center
   all the necessary facilities for students’ activities are contained
4. Alumini Hall
   Hotel
5. Henderson Hall
   Hospital
6-1-9. small shops, restaurants, tattoo art studio, post office
   all of these constitute the downtown area of Blacksburg
Project One

What can this parking lot offer? What does it take away?

The lot currently offers space for 200 cars, but it fragments the College Avenue into three pieces. Of the two ends, one is the downtown, intersecting the civic activity. The other is adjoining university activity. The lot itself in in-between is inarticulated and lacks vitality. Because of this lack of definition in the middle of College Avenue, people pass this part of College Avenue in a rush.

The surrounding buildings typically have two distinguished facades: A front facade, neat and accessible, and a back facade, dirty and inaccessible.

In this urban context, all the efforts of this project are directed to reconstruct the continuity of College Avenue to achieve a better link between the downtown and the school.
The in-between + Under Theater Square
Program

The program of this project is intended as a theater. Instead of considering merely the square footage, some other architectural aspects are considered which could make this building an architectural contribution through an appropriate insertion in this urban environment.
Stepped Square

Step 1

Step 2

Step 3  6m

Step 4  6.5m

Step 5  7m

Step 6  7.5m

Entrance of the theater

Public square

Auditorium
One interesting element of a theater is the sloping of the floor in the auditorium. This simple phenomenon easily develops the space beneath into two extremes, one, a mere dark leftover; the other, an exciting space with stepped roof above.
A dialogue between wood and steel

Wood structure is progressively transformed to steel structure.
Vice Versa,
Steel structure is progressively transformed to wood structure.

The floor, roof and the seats in the theater have the same theme and rhythm of transformation.
A dialogue between wood and steel

floor plans of auditorium

interior perspective
Project One

Syntax in Architecture
Culture is a word which contains both the quality of abstractness and concreteness. Culture is not composed elements which can be disassembled and then recomposed. Cultures mature and sediment slowly as they become fused into the context and the continuity of tradition.

Culture is an entity of facts and beliefs, history and present, material realities and mental conditions. It proceeds unconsciously and can not be manipulated from outside. It forms by the collective efforts of all the individuals while it seems totally indifferent to most of the individual endeavors at all.

Culture now has been taken as an objectified external independent and given reality which can be consciously applied and expressed in design, but meanwhile, the cultural-specific character of architecture is not a matter of simple manipulation of recognizable elements or icons. Especially today, the trend of worldwide internationalization works against cultural isolation and the distinctions among many icons are being dramatically desalinated.

Culture
Steps in in-between
The program for this project is inspired by the fact that more and more international students, especially from Asia, come to Blacksburg. This influx changes Blacksburg to a more internationalized and multi-cultural aggregated university town.

These different cultures generated forces which are constantly reshaping the previous culture of Blacksburg. The International Street Fair held in ever Spring is a typical example of the cultural coexistence and mutual influence. Merely on one day, people coming from all over the world, wore different folk costumes, spoke one language--English to try to explain to you how delicious their native food was. This simple side by side juxtaposition of all the different cultures construct a sharp contrast scenery to that of 20 years ago, when the foreign students were rare.

Different cultures also consciously influence each other as long as there is dialogue. However, each individual culture still promotes its own root within this agglomeration. In this cultural context, this project intends to address this condition with an architecture that could support events relating to the Asian culture in Blacksburg.

Here “support” does not merely mean to offer a place for the events to happen. It extends to the realm that the implied essence of the culture should also be expressed by the powerful messages that the architecture could convey.
Divi-Divi Tree

There is a tree, named Divi-Divi tree. We usually can find this tree on Aruba and other wild locations. These trees, particularly their branches grow in such a way that, when the wild wind blows, all the branches bend to absorb the violent forces into the system. And because of this balance, no harm is done. The configuration of the Divi-Divi tree makes it an sustainable entity in harmony with its wild natural environment.

The tree and the forces of nature united and become a “whole”. Obviously the integrity of the wholeness is enforced by the compliance and resistance of the forces between the tree and the wind.

Now we can observe an interesting position. The wholeness can become very impressive by containing two polar systems. This concept goes along all my projects.

“Wholeness” can only be realized when we view from a large scope. The word carries a subtle hint of self-containment, but the real “wholeness” can only exists with the assistance of the outside of the self-enclosed “wholeness” itself.
The unfamiliarity of the Asian culture and the attempt of harmonious integration with the current culture become the forces that shape the project. The design idea is to structure the meaning of “wholeness”.

“Wholeness” has three layers of meaning. On the first layer, it indicates that the Asian culture itself is an independent entity. On the second layer, it indicates the scope exclusive of the Asian culture. The third layer is the reconciliation of the two realms.

The meaning of “wholeness” is constructed by employing a set of architectural language with Asian essence.
Above: section
Existing site condition

Below: section
Proposed site condition
Rhythm can be highly ordered sequence. A repetitive display of an object or the patterned transformation of an object could be perceived as rhythm.

Rhythm can also be perceived without the expressed order. Like the Chinese Landscape painting, the rhythm is implied in the gradual unscrolling of the painting and the pleasant joining of the painter's itinerary of discovering of the beauty of nature.

On a linear path which links two destination points, the rhythm is formed by the rhythmical positions of the objects along the path. On a detoured path with "digressions" in in-between, the path itself offers a form to embody the rhythm. The rhythm is enhanced by both the movement of the people and the movement of the environment.
We can see how the different positions of the two buildings actually affect the urban fabric. On the first image, the setback of the proposed buildings form an extended plaza beside a line. The clear street-plaza differentiation is often employed in the western concept of urban design.

The second composition offers a more linear activity or “path-experience”. The detours, which are introduced by the shifting of the two buildings increases the width of the interface between buildings and its urban context.
The increased interfaces between buildings and its urban context by the detoured path offer the potential to discover multi-target-points, multi-camera-points and the multi-alternations among those points. Those various choices generate “shifting perspective”, a highly admired philosophy of Chinese to understand environment.
Project Two

Path
The overall view of the two buildings
There is a very famous sign which represents the “universe” and the “wholeness”.

The light part represents Yang, which literary translation in Chinese means Brightness. The dark part represents Yin, which literary translation in Chinese means darkness. Yang embraces Yin and Yin embraces Yang. Neither can exist without the other, similar to the interdependency of day and night, or silence and sound.

As the Dao De Jing says:

When everyone recognizes beauty as beautiful, there is already ugliness. When everyone recognizes goodness as good, there is already evil. “To be” and “Not to be” arise mutually. Difficult and easy are mutually realized. Long and short are mutually posited. Before and after are in mutual sequence.

In Western world, the same philosophy existed. Heraclitus, for example, who lived in Greece in 500 B.C. had got very strikingly similar paradoxes.

God is
day and night
winter and summer
war and peace
satiety and want
And it is one of the same thing to be living or dead, awake or sleep, young or old.
Above: Photoshop transformation of the sign Yin-Yang
**Sign Yin-Yang** (Split into two parts)

- base exposed
- infill projected
- light Below
  (Welcome darkness)
- horizontal
  (towards inside)
- core aside
- “M” structure
- base concealed
- infill recessed
- light above
  (Welcome brightness)
- vertical
  (towards outside)
- core centered
- “W” structure

**Sign A**

- highly structured element

**Squares Student Center**

- a-order

This contrast interestingly hint the semantic implication of “wholeness” in the urban context.
Building A

Concept $B \approx A$
Motivated by the desire to architecturally reform the sign of Yin-Yang, two complementary buildings are proposed, based on the idea of inter-dependency in a Yin-Yang relation.

They have qualities which, in a sense, oppose each other. Yet by contrast and, in my point of view, only by this contrast, the inherent quality of a thing itself could be clearly understood.
Base concealed
Project Two

Base exposed
Vertical
Project Two

Horizontal
The “W” Structure
Project Two

The “M” Structure
Light from above
Project Two

Light from below
Light from below
Enclosure indented in
Project Two

Enclosure projected out
Enclosure projected out
Project Two

details
Steps in in-between

http://www. .com
Conclusion and Reflection
The traditional Chinese poetry has a very strict structure. Like the couplet below, every word and phrase in one line must be matched in the same position of the second line by a corresponding word in the same semantic category. In addition, the two lines must be parallel in a broader and looser matching of “sense” or “meaning”. Syntactically these are the two kinds of parallelism, of categories and of “sense” or “meaning” which is named as Strict Parallelism. In “Regulated Verse”, the strict parallelism is reinforced by the antithesis of tonal categories in corresponding positions.

Move-(on)-earth is a joined phrase modifying “sun”, just as “cross-mountain” modifies “clouds”. It is the assumption of parallelism that forces “flow” (transferred from its more common subject: river) into its peculiar transitivity. “Flow” and “enter” are both motions, which must be construed to link plain and sunlight; or joint the river to clouds.

If we want to describe sending Friend A back to his home, it is possible to assert simply: “Friend A will travel for days through the mountains to reach his home.” As we set this statement alone in the middle of a paragraph, it is a bare assertion, syntactically complete, but begging for some context in which the assertion might be significant.

To make such an assertion a literary whole, we might transform it into a plot: the friend’s arduous journey through hardships met and overcame, struggles with dangers that threaten to keep the traveler from his destination, then the attainment of the deferred goal. To create a literary whole, the event is spread out in time, and its parts are fused by the venerable laws of narrative.

Chinese poetry develops different means to turn a bare assertion into a literary whole, not the whole of a poem, but a whole event.

Friend A must travel for days through the mountains...

To describe this action naturally, two parts were amplified:
1. travel by day and rest by night
2. a journey through the mountains naturally requires that the friend also cross the valleys and streams between the mountains. And the travel is condensed into a series reiteration of “going towards” and “arrival”

Each word in each line matches the word in the corresponding position, and the relations within each line are roughly the same.

Move-(on)-earth is a joined phrase modifying “sun”, just as “cross-mountain” modifies “clouds”. It is the assumption of parallelism that forces “flow” (transferred from its more common subject: river) into its peculiar transitivity. “Flow” and “enter” are both motions, which must be construed to link plain and sunlight; or joint the river to clouds.
A complete process is circumscribed by the antithetical components, river and mountains, movement and rest, the implied passage of day and night, following (that is, going toward) and arrival. Through complementary counterparts, we can confronted with an imaginary situation.¹

In Chinese poetry, the strong syntax forces a “word” into an extraordinary realm of implication and imagination. Meanwhile it provides the form for the poem. Without the form, the poem will not exist anymore. But we are also clear that the pure syntax in poetry could not reach the soul of the poem. Losing the soul, the poem will never be alive.

The world of architecture speaks similarly. The life of a piece of architecture is deeply bound by both the syntax of the architecture and the power that the building possesses to convey meaning.

¹. refer to: Traditional Chinese Poetry and Poetics by Stephen Owens, The University of Wisconsin Press
Meaning and meaningful

The meaning of an object or a space may be different from one interpreter to another. But the intention to search for meaning or “the essential” is always the same.
Designing an object which possesses the capacity of transmitting meaning (or creating a meaningful object) is always a driving force in the progression of our design world. Moreover, the rediscovery and reemphasis on the meaning aspect can also enable us to find a way to make our new environment meaningful as well as find a person’s own identity.
Semantics and Syntactics

After the itinerary of the two design approaches, it becomes clear that semantic approach is more focused on the relationship between architecture and the realm that the architecture could possibly refer to. While syntactic approach deals more with the relationships within the architectural world itself.
The possible relationships between the column and the projected walls
Architecture is a concrete phenomenon. It comprises landscapes and settlements, buildings and characterizing articulation. Therefore it is a living reality. Since remote times architecture has helped man in making his existence meaningful. With the aid of architecture he has gained a foothold in space and time. Architecture is therefore concerned with something more than practical needs and economy. It is concerned with existential meanings. Existential meanings are derived from natural, human and spiritual phenomena, and are experienced as order and character. Architecture translates these meanings into spatial forms…

By Norberg-Schulz
Meaning in Western Architecture
Meaning in Architecture

The meaning in Architecture can be achieved from two interrelated aspects.

As Michael Graves noted in his early discussion of semantic dimension in architecture,

First aspect is a set of possibilities for structuring the components, subcomponents, systems and subsystems of a building, the architectonic aspect.

The second aspect is a repertory of ideas, images and notions from an architectural repository, the repository aspect.  

The architectonic aspect does not provide the sources of form, but only the multi-possibilities of structuring the form; the repository aspect could provide the sources of actual formal patterns. Interestingly the expansion of the sources to other cultural systems, like painting or writing, can bring out some hidden quality embedded in the other cultural systems through the form of architecture.

But the two aspects are tightly bounded together, like the sign of Yin-Yang. The weakness of either the syntactic or the semantic aspects could make the building tasteless.

1. Progressive Architecture, 1972, P69
Appendix: Chinese Architecture

1. Courtyard surrounded by pavilions in the private part of a palace. We can clearly see the timber structural system with pillars, beams and brackets. from: Living Architecture: Chinese, Plate 75

2. Pottery house model
Han Dynasty, Kansas City, Nelson Gallery of Art and Atkins Museum from: The Art and Architecture of China, P379

3. Pilgrims and the pagoda
Detail of a mural painting in Cave 140, Dun Huang from: Living Architecture: Chinese, Plate 107


From images 3 and 4, we can tell the influences that foreign cultures played on the form of the pagodas.
As early as 200 A.D., in the reign of Han Dynasty, it was realized that grand architecture was a prerequisite of stable government and might become an instrument of power. From then on, architecture and decoration grew so important that they became major subjects in Chinese literature.

The great advance in building techniques was due to innovations introduced after the epoch of the Warring States. And the regional traditions accumulated to that point that the synthesis of earlier ideas came into form. It was under Han that the principles of axiality and the timber structure with pillars, beams and brackets were formulated and the system became the ideal that all the after dynasties sought to attain.

Following Han, it is a troublesome period with an unstable society and wars. The feudal system was restored and the contrast became more strident between the luxury of the local courts and the misery of a peasantry menaced by invasion pillage and civil war. At that time, man's hope was fed by Taoism and Buddhism. The latter, introduced under Han, spread throughout the whole empire. It led to the development of building built in brick and stone and to the erection of innumerable monasteries and temples in towns and countryside after the 5th century. Sanctuaries were cut in the rock in Gansu, Sichuan, Shanxi, Henan and as far as Shandong in the east and Jiangsu in the south.

In Sui Dynasty, the emperor Yangdi requested almost half of the labor of the whole country to build the Grand Canal between Luoyang and Yangzhou, enabled the cereals produced in the regions of the lower Yangzi to reach the old centers of consumption along the middle reaches of the Yellow River. And he also crazily built 40 palaces on the banks of the canal and so embellished the city of Yangzhou——that it even ri-
valled the capital. This mania for building, stimulated by Buddhism and the vast programs due to frequent changes in the site of the capital, reached an unprecedented level under the Tang Dynasty.

The Tang Dynasty (618-907) was one of the most glorious in Chinese history and indeed one of the most brilliant civilizations the world has ever seen. During the 7th and 8th centuries of our era China, having recovered her hegemony over central Asia and Korea, was the most powerful state in the whole continent. Trade prospered and the capital Chang'an was the most cosmopolitan city in the world. Buddhism was at its apogee, but building activity resulted in excessive deforestation and a shortage of metals, besides placing a heavy burden on the peasantry. Yet architecture flourished and there was an extraordinary renaissance in every cultural sphere --- literature, music and the visual arts.

After the collapse of Tang Dynasty and another warring period of anarchy, Song Dynasty was one of the consolidation behind the great expansion under Tang. The major features of Song culture were the growth of cities, the prosperity of the merchant class, the spread of printing, the development of science and technology, the supremacy of mandarins, the blossoming of literature and landscape painting. In the architectural sphere the Song developed and refined the simpler, homelier style of the Tang. This was characterized by improvement of the timber framework, more use of decoration, curved roofs and increased height.

Later in Yuan Dynasty, reigned by Mongols, the architecture felt the impact of foreign influences. The first Emperor of Yuan Dynasty commissioned an Arab to build the palaces at Peking
with the assistance of a Chinese and a Nepalese for the sculpture. (Today’s Peking basically remains the same plan as that in Yuan Dynasty.) The result was a greater use of stone for terraces, balusters and gateways, which continued under Ming and Qing Dynasty. Meanwhile the arrival of Tibetan Lamas in Peking in 1267 influenced religious art by introducing to North China the lamasery style and a new type of pagoda.

After Yuan Dynasty, in Ming Dynasty, the architecture was continued without much imagination. Under Qing Dynasty who tended towards exaggerated decoration, greater complication and a taste for grandiose which as someone suggested: is the “sublimity of decadence.” Thus from the 16th century to the 19th century, Chinese architecture declined -- with a few memorable exceptions. --- The art and science of building were shadowed by the spurious boldness of corrupt ornamentation.

That is the context of architecture along the line of time. Although slight differentiation exists in different dynasties, yet it is amazing to notice how stable and sustaining the structure of architecture remains. But after a further understanding of the Chinese philosophy and attitude towards the universe, the human being and the relationship between the universe and the human being, the endurability of architecture which is very well controlled by the language of human mind instead of the language of architecture becomes something self-evident.
In the ancient Chinese cosmology, which considered Heaven round and Earth square, space is imagined as a series of imbricated squares. The center of this "ranked" space is the capital, a square core marked by four gates at the four cardinal points towards which the cosmic influences converge. This leads to a geometrical image of the universe, enlivened by an elementary network of spatial correspondences. The alternations and contrasts of oppositions inherent in this notion of the universe are repeated in the human space, where everything is ideally determined by the same total order.

In Chinese architecture, incorporating some essential principles of ancient theories such as orientation, pure geometrical forms, and a symmetry that mirrors the alternation of summer and winter, day and night, the ancestors tried to crystallize the harmony in the form of buildings.

Architectural space is like a series of closed worlds, of complete, independent, progressively smaller units, from the town to the private house which repeat on a reduced scale of the forms of the larger units. A house may be reviewed as a microcosm of the town; the town as a macrocosm of the house. This conception matches on the moral and social plane: the supreme importance of balanced overlapping relationships between individual and family, human order and cosmic order. This interplay of relationships strengthens the independent family cells, just as the symbolic organization of space harmonizes the architectural units. In practice, each community whether town or household, enjoys great autonomy, but this decentralization is never a symptom of anarchy. In China, before the influence of the Modern Movement,
Generally speaking, the arrangement of space has always been governed by laws. Architecture has always been an art guided and controlled by status, aimed not only at the organization of the environment but also at providing a frame for the social system. The size of a building, its internal arrangement and its architectural decoration were already determined by the owner’s social position prior to its construction. The front of the house gives direct indication as to the status of the owner. In this case, architecture is symbolic of a form of human social organization within a specific period of Chinese history.

1. Plan of the Xingqing Palace, erected at Chang'an in 714.
In the center, the oval dragon’s pool surrounded by pavilions.
This is a clear example to explain how the cosmetic concept is applied into planning and then transformed into human spaces.
from: Living Architecture: Chinese Plate 8

2. Painting of Yuanming Yuan (Garden of Perfect Clarity)
The spaces are composed by a series of independent units. Based on order, those units are joined together to form a larger unit. The order is always there. So the larger unit could always be expanded again and again.
from: The Art and Architecture of China, P183

3. A succession of courtyards and galleries in the private part of the Imperial palace.
Certain symbols and certain decorations could only be applied to certain buildings.
All these regulations were generated simultaneously with the classification of the people into different social status.
from: Living Architecture: Chinese Plate 71
3, Aspects of Meaning, Two

Perenniability of types and ephemerality of material

Under these strict sociological requirements, the building developed into a system which the complexity could only be discovered through the gradual advancing in space and time, like a piece of music or a scroll painting.

Obviously the repetition on various scales of a single image resulted in a great structural stability. The most frequent unit is a rectangular pavilion (dian) usually divided by cylindrical pillars into three or more transverse naves. Frequently the first of these naves form a portico, except where a colonnade frames the whole building, which may be square, polygonal circular. The few variants of this simple plan are obtained by raising the terrace on which the pavilion stands, by multiplying the number of storeys, or by a combination of the two.

As we can see, the edifice itself is less important than the terrace that supports it and the roof that covers it. Between these two essential elements, symbolizing respectively of earth and heaven, the walls do not perform a supporting function. In fact, since the ensemble is always protected by a surrounding wall, those of each building serve only to protect it from weather. Coincidentally, in this respect China was prepared by its architectural tradition to adopt modern materials and techniques.

Structure of this type (pavilions with one or more storeys, towers, kiosks etc.) were equally well suited for palaces, temples or private dwellings. They were built of timber and destined to be rebuilt by each generation to meet its needs. The preference for timber matched an original concept regarding architecture. It did not derive from any lack of other materials or of ability to handle them. In fact, there was also a tradition of building in brick and stone reserved for bridges, ramparts, terraces, pavements, tombs and certain pagodas.
This preference may have been due partly to the frequent earthquakes which demanded a flexible structure. But it had its disadvantages. The gradual disappearance of forests and the quantity of highly skilled labor it involved made timber construction so costly that after the 12th or 13th century, steps had to be taken to economize materials. Another serious drawback was the risk of fire which also doomed the temporality of the structure.

But they deliberately made an ephemeral architecture that was not destined to defy time. This is linked with the fact that China has never linked its destiny with the transient fate of its material realizations. It views history as a predestined, inevitable sequences of events in which various moments count less than a certain coherent continuity. It was not in their monuments that the Chinese expressed their passion for eternity, but in the ideas that presided over their design and the spiritual tradition they exemplified. The types are perennial, the material are ephemeral.

The traditional Chinese architecture symbolized a certain conception of man’s relationship to the universe. It draws no fundamental difference in respect of materials and methods, structure, shape and styles, between public and private or between secular and religious edifices.
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A Discussion of Two Design Approaches in Architecture

Thesis Defense

Qi Zhu
May 7th
2:00pm
Cowgill 305b
A Discussion of Two Design Approaches in Architecture

Qi Zhu

May 1999
I dedicate this thesis book to my parents.
Thanks for your consistent support, encouragement and love.
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Vita

Qi Zhu
December 16 1972

1991 - 1996
Tongji university, Shanghai, P.R.China
Bachelor of Architecture

1997-1999
Virginia Polytechnic Institute and State University
Master of Architecture