An Analytical Approach to the Concept of 'Topography' in Architecture

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ABSTRACT

The symbiosis of man and nature reveals their diverging interrelations, which are based on man's shifting idea of nature throughout history. These alterations in man's conception of nature have changed his attitudes towards it, thus his creations in relation with topography. Hence, within the scope of the study, the idea of nature, exploring its shifted meanings, is analyzed in order to contemplate the relationship between manmade and natural environment.

Being guided by the urge to anchor to the world, man has always been in search of establishing somehow ideal relationship between manmade and natural environment within which **topography remains as the most prominent concept** in the context of physical surrounding. Therefore, the concept of topography is handled as the main concern of the thesis. By means of treating topographical formations whether as sacred places or as physical aspect of the world with which to create intimate relationship or as mere subordinate elements, man testifies that topography has had differing impression on his mind in accord with his idea of nature.

In today's world where everything may be questioned about its authenticity or its state of being natural, the concept of topography in contemporary architecture, which has also an artificial sense and very different understanding than its precedent conception, is aimed to be explored while revealing its roots.

Consequently, in the context of the study, besides the investigation of the changes in the conception of nature and its reflections on manmade environment, **the concept of topography is examined in order to disclose the changes in its meaning that direct the way man deals with it**. The consequences are aimed to be justified through an analytical method.

Keywords: nature, topography, ground, folding, continuity

ÖZ

Tarih boyunca, insan ve doğanın birlikteliği, insanoğlunun değişen doğa düşüncesi dolayısıyla farklılaşan karşılıklı ilişkilerini ortaya çıkarmıştır. İnsanoğlunun doğa tasarısındaki sürekli değişim, onun doğaya karşı olan tavrının ve dolayısıyla yapıtlarınında topoğrafya ile kurduğu ilişkinin de değişimine neden olur. Dolayısıyla, bu çalışma kapsamında, doğa düşüncesi, insan yapımı ve doğal çevre arasındaki ilişkiyi sorgulamak amacıyla, değişen anlamları ortaya çıkartılarak incelenmiştir.

Dünyaya tutunma bir başka deyişle varlığını sürdürebilme güdüsü ile insanoğlu daima doğal çevre ile bir şekilde ideal bir ilişki kurma arayışında olmuştur. Topoğrafya bu fiziksel çevre bağlamında en önemli kavram olarak karşımıza çıkar. Bu yüzden, topoğrafya kavramı tezin ana problemi olarak ele alınmıştır. İnsanoğlu, çevresindeki topoğrafik oluşumları bazen derin ve özel ilişkiler kurabileceği kutsal yerler, bazende kendinden daha değersiz salt fiziksel görüntüler olarak algılamıştır ki, bu gibi farklılaşmalar da onun topoğrafya fikrinin doğa düşüncesine paralel olarak değişim gösterdiğini ortaya koyar.

Herşeyin otantikliği ve doğallığıyla sorgulanabileceği bugünün dünyasında ise, yine yapay içeriği dolayısıyla geleneksel anlamından uzak olan bir topoğrafya kavramı karşımıza çıkar. Bu çalışma ile, çağdaş mimarideki bu topoğrafya anlayışının, neden sonuç ilişkisi içerisinde ortaya çıkarılması hedeflenmiştir.

Dolayısıyla, bu çalışma kapsamında, doğa düşüncesindeki farklılaşmalar ve bu farklılaşmaların insan yapımı çevreye yansımaları araştırılmıştır. Bunun yanısıra, **topoğrafya kavramının anlamındaki değişimler, bu değişimlerin sebebleri ve tüm bunların topoğrafyanın mimaride ele alınışına olan etkisinin açığa çıkarılması amaçlanmıştır.** Sonuçlar analitik bir metodla doğrulanmaya çalışılmıştır.

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CHAPTER I

INTRODUCTION

1.1. Definition of the Problem:

The search for an ideal relationship to be established between manmade and natural environment has been one of the essential concerns of architecture. The concept of topography, in its conventional meaning, remains as the concrete interface between these two environments, namely; between building and the ground. Thereupon, in the context of this study, topography is handled as the subject of the problem.

Nature, as an entity regulated by flawless cycle and possessing beauty as well as absolute harmony, appears as a divine source of inspiration to mankind. From the very beginning of humanity, the primary concern of man has been to conceive the world of nature with the urge to decipher the latent meanings lying in its recessive aspect; to disclose the implicit notions, which engender this harmonious unity. With this urge to clarify the secrets of nature, each attempt to understand outside world have formed the idea of nature that one hold.

Every kind of relation that man has endeavoured to establish with nature throughout history has always been affiliated with his conception or his idea of nature. This idea of nature, similar to nature itself, has been changing and developing since the beginning of humanity, justifying the theory of evolution. In addition to the improvements in technical skills and the great discoveries in science, this shifting character of the idea of nature is also strongly linked with the social, cultural and religious factors.

The wilderness, danger and unpredictability were some of the first impressions of man about nature. The urge to protect himself from the threats of nature and thus to survive in this world led man to create somehow shielded and sheltered environment. This manmade environment within natural environment was seen as the revelation of human existence. The intentions, which direct the creations in manmade environment, are, in fact, the manifestations of human nature that derive from nature itself, since man is primarily informed and inspired by nature. Moreover, in respect to the fact that every

living being in nature is dependant to one another in order to survive, which means that no one is capable to survive on his own, independent from the surrounding, one of the human basic instincts is to anchor to the world, to cling to the landscape somehow, in order to testify his existence. Furthermore, it is evident that built environment is set into the world of nature either in a direct or indirect manner. Thus, there is an absolute interdependency between these two environments, which avoids the consideration of them as separate entities. However, along with this interdependency, they diverge from each other in terms of their formal appearances since man's ability to image allows him to create environments according to his imagination thus distinct from the natural one; man has not built caves in order to dwell. This apparent formal distinction engenders a tension between manmade and natural environment, which reveals the importance and sensitivity of architectural approach towards topography.

Man, according to his inner drive, has not been satisfied with simply covering his need to be sheltered but he has always been in search of beautifying his artefact; owing to the compelling stimulus derived from human nature, he has always marked progressing developments in his works, in order to make them perfect. This search for more results in ever-changing architectural approaches.

To sum up, as long as we cannot envision manmade and natural environments as separate entities from each other, man has always attempted to establish ideal relationship between natural and manmade environment, through architectural approaches towards topography. Nevertheless, the concept of topography alters with respect to the shifts in the conception of nature, in socio-cultural values and to the changes in the idea of building. Therefore, **the problem of the study can be defined as the revelation of the changes in the meaning of topography due to the shifts in *Zeitgeist* and the changes in its employment in architectural practice.**

1.2. The Aim of the Study:

Throughout history, there have been great changes in human conception of nature dependent upon the shift in his life style or the discoveries in science. These changing conceptions forming differing ideas of nature have affected man's attitudes towards

outside world. One of the aims of the study is **to define major shifts occurred in the contemplation of nature during human history, through retrospective analysis.**

The absolute interdependency between natural and manmade environments implies human task to create his environment with more or less respect to nature, which discloses the important effect of the idea of nature in architectural approaches. Therefore, the second aim of the study is **to testify the reflections of the shifting idea of nature to manmade environment through analysing gardens,** since gardens are considered as the most appropriate and earliest manmade environments reflecting diverging ideas of nature.

Topography appears as the concrete natural element through which man has endeavoured to create ideal relationship with the physical surrounding. The concept of topography has also had many changes in terms of its understanding following the differences in the idea of nature. The changes in its meaning are also linked to cultural, religious or social differences. Consequently, the major aim of the study is **to explore these changes in the conception of topography that has played prominent role in man's creations and in his style of building,** and exemplifying them within an analytical framework.

1.3. The Method of the Study:

The study is constituted by three major parts. The first part focuses on interrelations between man and nature. The second part deals with the mutual relationship between manmade and natural environment revealing the concept of topography in its conventional meaning. The third part of the study explores the concept of topography with its understanding in contemporary architecture. The consequences of the study are wished to be exemplified in an analytical method.

The first part is formed by the analysis of man's attitudes towards nature based on his beliefs on it. In the beginning of his history, man, with his minimum capabilities, considered the world of nature as dangerous, wild, unpredictable and fearful. However, the progress he made, during centuries, in terms of his mental and technical abilities, led him to use nature (including topography even without explicitly naming it as

topography), even to transform it according to his benefit. This attitude towards nature led man to become aware of his existence, and pointed out a significant change in his status in the world; this was a move from the subjugation to nature to prevailing it. Nevertheless, the urge to master nature, in fact, meant its exploitation and abuse by man, which caused huge decreases in natural resources signifying the absolute necessity to reconsider man's stand against nature. This shifting idea of nature is widely examined while trying to disclose its consequences. On this account, gardens in different cultures are investigated while taking into consideration their different ideas of nature, as long as the conception of garden remains as the clear examples of manmade environments reflecting the idea of nature at that time. They serve as the evidences of differing concepts of nature diverging from one era to another and from one culture to another.

In the second part of the study, mainly dealing with the dualism of manmade and natural environment, it is firstly endeavoured to clarify the interdependence of these two environments. Afterwards, according to this interdependency, the architectural approaches developed with respect to physical surrounding, whilst being guided by man's urge to establish an ideal relationship with nature, in various cultures and eras, are studied. The concept of topography, on this account, remains as the most prominent notion considering the building's relationships endeavoured to be set within natural environment. Consequently, the concept of topography, in the last part of the chapter, is tried to be explored broadly in the context of its conventional meaning.

In the beginning of the last part of the study, the concept of nature with its new identity attributed by our contemporary world is focused. Contemporary life, living in urban environment takes humanity away from the natural, in as much as technology serves as an artificial nature, leading towards blurring of boundaries between the natural and the artificial. By the great progress made in technology, the ability to reproduce nature out of its context results in an idea of artificial nature. This reproduced, artificial nature allows the fusion of nature and architecture even to create artificial landscapes by bending and folding planes.

In this context, the concept of folding, allowing integrating unrelated, diverging elements within a continuous mixture, is taken into consideration, firstly by disclosing

its theoretical background in order to clarify its ideology. Revealing its roots from philosophy, folding in architecture is studied by exemplifying with the works of Peter Eisenman. Eisenman is the only architect analysed in this section since he is the most important figure in the field with his consistency in his discourse and works. Being the primary architect to be referred in most of articles on folding testifies his importance.

Consequently, the concept of topography in contemporary architecture, within this world of artificiality and contradiction, attains a new meaning. The last part of the forth chapter endeavours to explore this sense of artificial topographies forming another language and style of building. This new understanding of topography is analysed through the discourses of its creators and their works in an analytical manner.

CHAPTER II

MAN, HIS IDEA OF NATURE AND ENVIRONMENT

"The horse, like the man, knows where to put his foot (on the stoney path), but only man knows he knows."
Teilhard de Chardin

One of the prominent characteristics of human being that obviously separates man from the rest of the animals, is its 'self-awareness', as long as he knows what or who he is and is aware of his mental abilities. It is this consciousness that allows man to extract his being from the cyclical chain of nature, which seems inseparable, and thus it is this consciousness that gives man a higher status to contemplate this natural world in a different platform. Besides, due to human nature, man has an inner drive to question the phenomena occurring around him instead of accepting them as they appear. Having a standpoint in an upper level, man had been questioning his relationship with nature experiencing it as separate from himself, in as much as in the nature of a relationship lies the conception of at least two distinct entity. Man's idea of nature which has been the result of this inner drive, meaning questioning the world of nature, has been a shifting conception throughout history.

2.1. The Shifts in the Idea of Nature:

During history, there have been differing expressive conceptions of nature whether based on scientific discoveries or socio-cultural differences or akin other reasons. The transition in the life style of man from hunter-gatherer position into agriculturist status in order to survive, point out the root of the significant shift in man's conception of nature in Neolithic Age. Man was no longer a member of nomadic community but instead a permanent dweller. This stability and the ability to survive by choosing the way unlike the rest of the animals acting instinctively, altered man's position in nature radically than it had used to be.

Man became homo faber, 'man the maker', creating in order to endure and outlast the presence of the mortal man. Norman Crowe interprets this transition in man's life as a circumstance of a shifting idea of nature: "*Now we could begin to see*

nature as that which lies outside and beyond the village rather than something of which we are a complete and inextricable part. It became possible to see the natural world as something that we might exploit and control for our own benefit." (Crowe, 1995; 21) As a matter of fact, Crowe's interpretation is close to Rene Descartes' thought.

In the 16th century, René Descartes claiming that our minds are capable of contemplating nature, (it should be outside our world, something excluded from us), draws the clear distinction between mind and nature. This distinction refers to man's 'questioning mechanism' which lead man to have an idea about the phenomena that he contemplates. Science, on this account, is the result of this contemplation. The dualism of mind and matter, which was taught before by Aristotle and Plato as well, revealed the objectivity required in science. Following the great discoveries in science, we encounter other prominent changes in the concept of nature. There are three remarkable events in science history, which may be considered as thresholds in the turn of the idea of nature as well. These are Copernican *revolution*, Newton's *predictable clockwork universe*, and Darwin's *theory of evolution*, which arose in the sixteenth, seventeenth, and nineteenth century, respectively.

The main idea of the first of these discoveries was the revelation of the place of the sun in the center of the universe as opposed to the prior belief that the earth was. The second one disclosed the cosmos as regulated with the precision of a clock. And the third announced that humankind was not the supreme creation of God as very distinct from others. These all three were indeed informing us that neither earth nor humankind had the preeminent status as we had come to believe as a dogmatic idea till then. Copernicus and Darwin's theories led man to consider himself much more integral with nature than he had used to believe to be. As to Newton's theory, the cosmos was something systematised so that it is predictable to some extent. Consequently, these discoveries are appropriate to exemplify the shifts in the idea of nature based on scientific discoveries.

Throughout history, different cultures have had different ideas of nature, which have directed their attitudes towards natural environment, and different writers made different classifications in order to explore this shifting meaning of nature. For instance, Robin George Collingwood is a prominent writer, who in his book, *The Idea of Nature,*

investigates the concept of nature by making three subdivisions based on shifts in its meaning which were come out by scientists and philosophers. These are Greek, Renaissance and Modern perception of nature. Besides, David Pepper, an anthropologist, made his classification as; nature as a living being, nature as a machine, and Christianity and nature. However, in the context of this chapter, being heavily based on the writings of the anthropologist; Florence Kluckhohn, the classification of these ideas of nature is made with regard to the shifts occurred in man's conception of nature due to the notions like differing religious, socio-cultural values or technical advancements, or diverging natural environments that peoples have lived in. Kluckhohn described three 'general orientations to nature held by people in different cultures and at different times in history'. Quoting from Irwin Altman these are: *"people as subjugated to nature, living at the mercy of a powerful and uncompromising nature; people as over nature, dominating, exploting, and controlling the environment; people as inherent part of nature, like animals, trees, and rivers, trying to live in harmony with the environment."*(Altman, 1989; 15) It would be wrong to claim that each of these world views have dominated an era or a culture. It is rather possible to see some orientations, which are constituted by two of them or some cultures in which two of those ideas of nature co-exist. Therefore, although there are some cases where these three conceptions of nature are barely discernible from each other by means of determining the dominant world view in a society, it is appropriate to handle these differing thoughts in a threefold classification.

2.1.1. Being Submissive to Nature:

This conception of nature has appeared mostly in societies having low level of technology or 'living in excessively harsh and unpredictable climates'. This aspect of nature has led people to envision the world as a powerful and uncontrollable entity thus all they can do is 'to adapt as best as they can' and accept submissively the good and bad that nature offers. Taking this fatalistic stand, people have seen themselves as subordinate beings respectful to the world that they have little direct control. They, especially who have lived in lands exposed to earthquakes or thunders, envisage natural disasters as 'the will of God' warning and punishing mankind by virtue of their abuse nature.

During twelfth through fifteenth centuries, this orientation has made his presence felt in fairy tales and myths of Western Europe in which the forest was 'the personification of evil'. It had believed also that there were some monsters living in forest. This imaginary aspect of nature was imbued with fear and thus compulsory obedience, which goes back even further in history as may be witnessed in Greek mythology. Pan, the lord of the Woods, is one of the horrible imaginary character living in forests and threatening travellers. These thoughts on the outside world were the results of the 'inability of people to control nature and on the association of nature with the supernatural and demonic' as long as nature was a complete obscure entity.

Similar to the frightening image attributed to forest, desert with its uncompromising demands, its uncontrollability, and its threat to human survival appeared as a fearful alien existence to the early Judeo-Christian feelings. For them, life was directed by God, and it was up to him whether to punish them with drought or offer them good crops and water. People's only 'recourse' was to adapt as best as they can to the conditions that nature presents and to hope that 'good behaviour would bring them forth positive treatment'. The ancient Hebrews also believed that there were some monsters living in desert like forest's scary characters.

Although modern societies, with great advancements in technology, seem much more powerful against nature, such views as a result of feeling submissive to nature crop up from time to time. Farmers while they face with long lasting drought, people exposed to natural disasters like earthquakes or storms, or hikers lost in mountains often feel powerless against nature. People confronting with this dangerous and threatening aspect of nature, re-notice their inferior status versus nature and their inability to control it. While considering imaginative fearful characters in nature, Irwin Altman states; *"And we have our own 'monsters' to match those of the Middle Ages... Rather than trembling in apprehension at the existence of such beings, though, our society sends out expeditions to study or capture the creature."* (Altman, 1989; 17)

Consequently, 'from the early Hebrews to the Greeks, to the Romans, to the Middle Ages, and even to the present' there have been societies whether with its majority or minority, maintaining this mentioned view of nature, being subjugated to it. As long as people confront this powerful, uncontrollable, and uncompromising natural

environment, they envisage nature as something to which they must 'adapt, bend, and be respectful'.

2.1.2. Prevailing Nature:

This world view may be considered as the opposite of the previous mentioned conception. This time, it is nature that is envisaged in the inferior status rather than man. Man sees himself as the master of the world who is capable to control and even to rule nature. This orientation has mostly been held in Western cultures and is especially 'characteristic of American life'. According to Irwin Altman this idea is explained as; *"...humans are separate from nature, are superior to it, and have a right and even a responsibility to control, subjugate, and bend the environment in accordance with human needs."* (Altman, 1989; 18) Through the advancements in technology, man became aware of his abilities and thought that he is the supreme creature of God, thus very distinct from and in a differentiated position than other creatures. These so-called advancements in human life led man abuse nature even exploit natural resources. Besides, by virtue of improved technology, man has endeavoured to have nature function in an other way than its ordinary and natural cycle and this attitude has led to artificial world. For instance farmers have used 'pesticides, fertilizers and other forms of technology to generate higher quality and greater crop yields', or in the case of natural resources man has used and consumed them and carried to 'the extreme of strip mining, deforestation and resource depletion'. Consequently nature, in the context of this idea, is seen as an existing to serve people; hence man accepts anything, which may bring comfort to his life even it might be considered as exploitation of nature.

Great discoveries in science have allowed mankind to speak of 'conquering' nature. Travelling in space, 'cracking the genetic code, unlocking nature's secrets', all 'symbolizes the modern view that people are different from nature, are superior to it, and have the responsibility to overcome nature'. While questioning the historical and cultural roots of this conception, two major origins of this world view are set forth; firstly 'the Judeo-Christian heritage of Western society' and secondly 'the scientific and industrial revolution'.

Although in earlier Western society nature was a fearful entity, there was also an orientation which was considering the natural environment serving 'purification and penance function'. In as much as some religious leaders like Moses and Jesus 'spent time in the desert alone, communing with God and cleansing their souls. Besides, Judeo-Christian peoples believed that *"...controlled and conquered nature, in the form of farms and cities, was desirable and that God would help them create such places if they conscientiously practiced religious values."* (Altman, 1989; 19) Moreover, man considered himself as a superior being sent on earth in order to represent God and commanded by him to conquer, and thus to rule the earth.

As a matter of fact, 'the idea of evil in unsettled nature' had been held since Adam and Eve's thrust from the Garden of Eden into the bad world. In early and Medieval Christianity, the primary duty of the church was to overcome the wilderness. People inclined to clear the dense forests, which were supposed to be filled with the power of evil, in order to have it nullified, thus carrying out their religious duty while being able to control the environment. According to Altman, this orientation may clearly be seen during 'the settlement of United States, beginning with the early Puritans, extending through the development of the West, and even holding to the present day'. The Pilgrims' belief was heavily based on this religious duty, their goal was as Nash stated; 'to carve a garden from the wilds; to make an island of spiritual light in the surrounding darkness'. *"Building cities, towns, farms, and gardens was doing God's work and fulfilled the destiny of humans as God's agents. One can easily see how such values served a young and growing society located in a natural environment of unparalleled abundance and potential."* (Altman, 1989; 19) 'Reclaiming nature, transforming the wilderness into fruitful and productive land, creating a Garden of Eden', as to Irwin Altman, form the seminal ideas of manmade environment.

In addition to Judeo-Christian values, scientific and industrial revolution reinforced the superior status of man. By virtue of science and technology man became able 'to control temperature by creating artificial spaces, to cure illness, to ameliorate the quality of agricultural crops, to defeat wild animals by killing them, to explore outer space, to build seemingly impossible edifices, or to benefit from natural resources carelessly. Therefore, being aware of his abilities on one hand and believing that human

being was the supreme creation of God above all other animals on the other, man's 'feeling of omnipotence' grew and grew. Beauty was not considered as intact nature, on the contrary, as the transformation of nature into gardens, farms, or cities, briefly manmade creations was envisioned as transmuted and beautified environments.

Renaissance perception, which is the second world view according to Collingwood's classification, implies close meaning to this mentioned idea of nature since as to Renaissance thought nature was seen as a mechanical system open to man's manipulation. It was emerged as opposed to the Greek's in sixteenth and seventeenth century. The central point of this opposition is that the world was not a living organism. It was deprived of life and intelligence. That is why the world was not capable of regulating its internal dynamism rationally. The dynamism it performs must be guided by something from outside.

The world of nature was not an organism but a machine. Machine in its literary meaning, is a regulation of pieces produced for a specific goal, which are joined together and designed rationally by an outer intelligence. Renaissance philosophers like Greeks based the order in nature on an intelligence but the difference between them was that Greeks believed that the mentioned intelligence had belonged to nature itself however in the latter era's philosophers' point of view, the owner of it was a divine force, creator and the director of the world. This is the main discrimination of the two poles of the idea of nature.

The intelligence that Socrates, Platon and Aristotle pursued in nature was in fact the mind, which leads and directs the body. As a matter of fact, when they discovered that the mind is something beyond the body they remained confused. Because they encountered some reasons justifying the relationship as being partial or coincidental and their prior belief on the intimate, inseparable relationship between mind and body collapsed. Nevertheless, this confusion was not eliminated in Renaissance thought either. Although Descartes announced the disunity of mind and body, he knew that these two things must be somehow interconnected. Therefore he endeavoured to avoid this dichotomy yet his explanations were unsatisfactory.

Consequently, the main question, as yet, was; on what kind of interconnection is the dualism of nature and intelligence based, while considering the alienation of nature with its mechanical and bodily existence. The responses of the prominent philosophers of the era like Berkeley, Hume, Kant and Hegel were similar; intelligence creates nature thus nature is a 'by-product' of the absolute existence of intelligence. Renaissance view of nature as a machine is also based on an analogous relation likewise Greek thought of nature as human being, but in a very different way. Firstly it is based on the idea of God of Christianity, and secondly on the experience of man in designing and manufacturing machines. Greeks and Romans used to utilise a few machines hence those machines were not as important as to change their life style or re-evaluate their relationship with universe. However, as eighteenth century the industrial revolution was on the way. Printing-press, clock or windmill were intrinsic parts of daily life. Everyone was able to understand their functioning principles. Hence, what was a watchmaker to watch, was God to nature.

As David Pepper has emphasized; *"Basic to its view that environmental problems must be approached and managed scientifically, objectively and rationally is a conception of nature as machine-like and fundamentally separate from humans, and open to control and manipulation once it is understood. The roots of this perspective are surprisingly recent, and spatially restricted to the West. They lie in the scientific revolution of the sixteenth to eighteenth centuries, which was concurrent with the beginnings of industrial capitalism. This period, from Renaissance* (fourteenth to sixteenth century) *to eighteenth century Enlightenment, laid the grounds for the 'modern' period, from the mid-eighteenth to twentieth century* (such dates may be rather arbitrary, and not undisputed, so they should be regarded as indicative only)." (Pepper, 1996; 124)

There are two major consequences of this Western view mentioned above, as; a linear view of the universe and the scientific philosophy of experimentation. This view of linear life should be considered with the statement; 'In the beginning God created the heaven and the earth.' Thus there was a beginning of the history and it is believed that there is also an end of this worldly life marking the beginning of another life 'in a new form'. It is also evident that the 'Western sense of history is continuous and progressive'. According to Altman, Western society's thought is moving forward,

progress, and a long-term expectation of a future. *"This value system has permitted us to act on and subdue nature, to control it and alter it, because doing so fits with the idea of a future optimal state that depends on our fulfilling God's dictum to multiply and alter the earth."* (Altman, 1989; 21) Meanwhile, in Western science, experimentation as a method, which means learning by changing things, is valued more than learning by observation as long as 'the central ethos in Western science is change, control and experimentation'. On this account, it becomes clear that this Western scientific value fit perfectly with the Judeo-Christian view of man as superior to nature, and as controller of it.

As mentioned for the preceding world view, this orientation can neither be attributed to a limited period nor to a specific culture or society. Moreover it is not possible to see its roots as only religious and scientific heritages even they constitute major sources.

2.1.3. Being Part of Nature:

This world view envisions human beings as an intrinsic part of nature just like an animal or flower or river. This symbiosis of man and nature may be best exemplified with Oriental philosophy and religion. Although it is not the only thought predominating the Oriental society; 'All things in nature are sacred and are not to be unduly exploited by people'. As to Altman, people's lives are intertwined with nature. *"One cannot impose oneself on nature; rather, one must flow with it, be part of it, understand its changing patterns, and adapt to natural events. This does not mean passivity or surrendering; it means understanding nature's flow and changes and working within its boundaries."* (Altman, 1989; 21) This implies the belief that the world does not revolve around humanity but instead man is just a part of it just like one of its other components. Thus man should care about nature, 'must blend with it and be responsible for it'.

The early Greeks saw nature as a harmonious unity and themselves as part of it. For them nature was 'a stable, orderly, and smoothly operating system'. Every component of nature was a part of the chain, which function in a cyclical and systematic way. All seasons, and nights and days occurred in this perfectly regulated system.

According to them, even life and death, meaning man himself were part of this harmony and cycle.

Greek nature science is based on the belief that the world of nature is filled with intelligence. The source of regularity and order, which were seen as fundamental characteristics, and essential components of nature, is assumed as that intelligence. For them the world of nature was the world of objects in motion and the intelligence in it was the fountain-head of order and the dominant regulator of this ceaseless motion.

Consequently, Greek idea of nature was that the world of nature is not only a living organism with its dynamic components but also a rational entity giving order to its own internal dynamism. As a matter of fact this conception of nature was based on an analogous relationship set up with human being. Man conceives himself on the one hand as a being constituted of parts filled with harmonic interrelation and ceaseless motion on the other hand as a mind directing and leading this body as its will. Thus, in Greek thought, the world of nature as a whole is a macrocosmos analogous to that microcosmos of human being.

David Pepper, in his book 'Modern Environmentalism' mentioned about this interaction telling; "*As Mills (1982) has stressed, it was not a matter of likening nature to, for instances, a book. To the pre-modern mind this metaphor meant that nature was a book. Nature and the cosmos -the macrocosm- itself was made up of a system of science, which needed to be read accurately in order to guide how humans –the microcosm- would live."*(Pepper, 1996; 125) He emphasizes the strict dependence of man to nature in pre-modern thought whilst considering man as the micro model of nature formed by same principles.

Considering George Collingwood's classification, as mentioned before, the Greek and Renaissance perception of nature are based on an analogous conception, as a matter of fact, so modern perception of nature is, likewise. Similar to the analogous relationship between the macrocosmos nature and microcosmos human being, and nature as the work of God and machine as the work of man which are the basis of the Greek and Renaissance thought, respectively, modern perception of nature lay in the

analogous connection between the history of man's works studied by historians and the process of the natural world, by scientist.

The emergence of this conception was only possible via the acquaintance with historical studies concerning the concepts of progress, change and evolution. These studies did appear in the first half of eighteenth century. In the following half-century, the idea of progress, which had been imported in natural science terminology, became a compelling concept fairly known as the "theory of evolution".

The theory of evolution, given birth by Erasmus Darwin, basically means that living organisms are not constant, unchangeable types of community; they come to existence in time and so disappear from being likewise. In fact, this emerged theory points out a state of depression and crisis in the history of human thought.

In what circumstances, knowledge is available? This is the question that Collingwood proposes in order to reveal the thoughts of people in different eras to explore the world of nature. In Greek point of view it was a priori knowledge that nothing can be known unless it is unchangeable or constant. In the context of the same point of view, the world of nature is filled with motion and change. Thus one may claim that the science of nature is not available in Greek thought.

However, Renaissance thought avoided this result with a 'distinguo'. They admitted that nature cannot be understood by the way we experience it via our senses, yet, besides, they claimed that there lay essential characteristics which do not change, known as 'secondary qualities', behind this nature as appearance. Firstly, there were in their point of view, some realities which are the changing adaptations and regulations of the matter that do not change in itself. Secondly, there were some rules that these adaptations and regulations are based on. These were the unchanged characteristics of the science of nature.

Collingwood argues that the reality and rule mentioned above are the same concepts emerged to satisfy the need of clarifying the secrets of nature. As a matter of fact, the search for 'unchanged' in nature issued from this need of understanding nature somehow and it is pursued in two ways. Firstly, by trying to extract an unchanged

essence from the 'skin' of nature that we perceive and experience by our senses. Secondly, by trying to reveal unchanged relationships among changeable phenomena. Pepper argues on that issue stressing; *"The job of alchemy and natural magic was to know and manipulate, via images, the occult (hidden) forces which inspired the cosmos, so as to bring together and dissolve, synthesize and unify, mind and matter and all other opposites. Thus Renaissance science was monistic, rather than the dualisms of classical science and modernism. Its approach to knowing nature refused, as in postmodernism, to distinguish between 'signifier and signified'. This means that images and metaphors were not considered to be surface ways of representing a deeper underlying reality, they were that reality."* (Pepper, 1996; 125)

Until the beginning of nineteenth century, historians had recognized that there was neither any unchanging supporter behind changes nor constant rules that regulate the changes. They came to understand that they might contemplate a world of man's work with endless change. History, as a field of science and as an interrogation that put out the results in a trustful way, had already developed itself. In this way, it is experimentally proved the possibility of a scientific knowledge concerning changing phenomena. This concept of history concerning the process and change that can be scientifically understood was adapted to the world of nature in the name of 'evolution'.

The change is no longer cyclical but progressive: The concept of change was conceived in a new way. Greek, Renaissance and Modern philosophers agreed on the changing characteristic of nature as we perceive it. However Greek philosophers argued that the change in nature was cyclical. Life to them was also cyclical phenomenon. When they were to admit that 'getting older' is an irreversible change thus doesn't allow a cycle to complete itself, they assumed that it was in fact a cycle but an incomplete one because of a missing part. Consequently, although defective, it was a cycle anyway.

Modern thought is opposed to that Greek assumption. Under dominant influence of the idea of progress of the concept of history issued from the tenet claiming that history never recurred itself, modern perception assumed the world of nature as a second world that nothing is recurred in itself and like the field of history, as a secondary progressive world filled with brand new things emerging ceaselessly.

Nature is no longer mechanical: It is impossible to define the same thing as a machine and as something changing or evolving in the same time. Something evolving may produce machine but cannot be a machine itself. Therefore the theory of evolution argues that there may exist machines in nature, however nature as a whole cannot be a machine. *"Machine in its essential meaning is a completed craft, a closed chain. It is not a machine unless it is finished. It cannot function while it is in the process of production. Therefore, it can never develop because development means trying to be something that hasn't been yet*. (just like as a little cat trying to be a mature cat*) as for an incomplete machine can no way function. The only change that can occur in a machine is a breakdown, and this doesn't mean gaining new abilities or functions just loosing the old ones thus it cannot count as development."* (Pepper, 1996; 127) Thereupon, modern world view, as to George Collingwood, refuses the perception of nature as mechanical, thus any manipulation from outside and as it is testified in the field of history, claims that the world like all its parts is evolving.

On the account of being part of nature, the Pygmies and many American Indian cultures are worth to notice since they have conceived themselves as the member of the family constituted by all living beings in nature. All members of this family were equal to each other. There is also a strong feeling that nature and man are interdependent. This interdependence has led man to take from nature what he really needs but not more, thus to conserve and care about nature. The Pueblo Indians also live in harmony with nature considering the sun to be their father and the earth their mother, who 'govern life and create an endless series of cycles'. Thus, as Altman stated, as opposed to preceding world view, *"beginnings and endings are unimportant; rather, there is a process of emergence and re-emergence, a cycling through and around of life."* (Altman, 1989; 22) In this cycle people are an intrinsic part of the world without having any superiority or inferiority considering other living beings.

This feeling of being part of nature appears so often in contemporary life as well, especially when one retreats to nature leaving the built environments of cities, this artificial world rejecting technology. Modern ecology has emerged in recent years reflecting this idea of oneness of nature and man. Irwin Altman states; "It is hard to assess, however, whether recent sensitivity to ecological concerns reflects a deeply rooted value system of the type espoused by Eastern philosophies and by American

Indians or whether it is really only a statement of the need to exploit nature more carefully, while still holding to the basic superiority of people over nature." (Altman, 1989; 24)

2.2. Evaluation

Today the most important threat facing humanity is the rising environmental crisis. With great progress occurred in science man has a different approach and perception in addition to his mental process driven by human nature. This scientific thinking offers man a distinct interpretation mechanism with great reliance on numeric analysis. Hence, the world is more obvious and clear than it was while considering it evaluated by our scientific thus objective determinant world view that excludes the mythical side.

In every thought and attempt to develop an alternative solution in order to eliminate the global crisis, lies the idea of reciprocal dependence of the world of nature and man. While being aware of the constant impact and influential existence of nature over humanity we should also be aware that without man's care nature would no longer show its generous, productive and gentle side.

It is evident that there is no a single idea of nature which has predominated different cultures throughout history. There have been different conceptions of nature prevalent in different cultures in different times of history. The best way to justify the variation among different ideas of nature is to explore the creations of man parallel to their distinct perceptions of nature. As the search for a balanced world is shifting, the idea of nature and its perception is differed as well, while considering different cultures. The best way to exemplify that divergence may be to discern the differences among different cultures' garden designs.

2.3. The Idea of Manmade Environment:

By the Neolithic age, the transition in man's life style, from hunter-gatherer's position to agriculturist status, brought along the formation of permanent settlements.

"*Having once departed Eden by creating a 'second nature' all our own, it has been our task to nurture and perfect it ever since-even, it seems, to the detriment of the natural world our of which it was formed*." (Crowe, 1995; 5) Due to the human nature, man has never been satisfied simply with covering his need in terms of functionality; that is most probably why a basic shelter that provides him security and protection from wild life and unpredictable progress of natural conditions, did not meet his need of dwelling. He has always been in search of beauty, perfection and order. Thus he has always been compelled with the desire to build something beyond a 'shelter' which legitimize/make necessary the profession of architecture; building not only a functional shelter but also a work of art.

Although, it is clear that man is primarily informed and inspired by nature, it is also apparent that the artifacts we create, constituting our built environment, do not seem like they manifest nature as their source; we do not build caves in order to dwell. As archaeological evidences affirm, our built environment is shaped by fine sense of geometry. This geometry, as to Crowe, originate in two natural sources, which are 'the order of building', and 'human body and human perception of space'. The order of building is based on the structural characteristics of building materials. Considering the two principle forms of architecture as post and beam, it is clear that the geometry is one of a three dimensional grid. Besides, as Crowe stated on human perception; *"We perceive the world from a referential structure of right angle relationships in both the horizontal and vertical planes, and it is from this natural characteristic of our perception of the world that geometry is born."* (Crowe, 1995; 51) Our primary orientation to the world is dependant on the body's symmetry and its frontality which is the reason why one perceive right, left and rear sides and thus three dimensional space.

Human being differs from animals in many ways especially in terms of mental capacity. The ability to image and thus to abstract allows man to reconceptualize objects, forms or phenomena in a different way than they display themselves as appearances. This is a prominent input in creating the world of artifice, as long as it is recognized that nature is the origin and source of the knowledge, thus constituting the primary reference organ in human creations. *"We are the observers of nature, the beings whose capacity for artifice separates us from nature and joins us to it at the*

same time." (Crowe, 1995; 20) Hannah Arendt, the philosopher, emphasizing the world of artifice that we create and belong to, named human being as 'homo faber'.

Norman Crowe points out the Ice Age artisans to demonstrate their wall paintings in the walls of their caves in order to display the historical roots of human ability to image; *"Raised to the level of artistic expression, the figures on the walls are made to transcend factual nature by means of that remarkable human capacity to re-create from nature's example-to 'imitate nature', an act of the human will that the Greeks called mimesis."* (Crowe, 1995; 20) Questioning nature in this sense, meaning not to concede the facts or objects (in this case) occurring, being in nature as pictures in our mind, but to add interpretation imbued with personal imagination. This quotation also testifies the intention of man not to create replicas of natural formations. The abstraction or 'image' capability of human being permits him to conceive nature in a deeper way, and to investigate the 'meaning' in it.

To investigate the idea of nature in human creations, the concept of garden is worth to focus on.

2.3.1. Garden as a Manmade Natural Environment:

"Man wants nothing as Nature made it, not even man itself."

Jean Jacques Rousseau

Garden is, in fact, the humanly transformation or design of nature, based on the human drive of not to acknowledge nature as it is. As Norman Crowe stated; *"By intervening in the natural order, each garden becomes a kind of crystallization of a concept of nature."* (Crowe, 1995; 18) In general, the word garden is used 'for grounds laid out ornamentally'; they may also be 'places of public entertainment'. *"A garden is an arrangemnet of nature; landscape gardening turns nature into a picture and architecture becomes the staffage of this picture."* (Kruft, 1994; 257) Consequently, garden is taken up as a human creation in which 'use' could be combined with beauty.

Garden is usually considered as places to retreat. It was a retreat from the dangers of political or religious strife or a retreat from the stressful daily life. As if like U. Schwarz, quoting *"Trying to bring more nature experience, variety, and aesthetics to open space by applying close-to-nature life communities from preindustrial times"*. (U. Schwarz,; Gröning, 1997; 232)

Christian thinkers considered gardening as a divine activity; *"It was a way of recreating the paradise which man had once shared with God."* (Garden Visit) and monastic gardens appeared as the early examples. They had influenced subsequent garden designs until the 16th century's renaissance ideas of garden. Gardening, being firstly the proof or the display of the wealth and power in aristocracy, at the beginning, was in fact some individual landscape design attempts. Following two centuries, especially in England, gardens were used for parties and festivals by royalty. In time, professionally treating to gardening there emerged very characteristic garden designs reflecting different conception of nature and cultural identity, like Japan, English or French garden.

2.3.1.1. The Dignity of Nature:

Japanese gardens, driven mostly by religious and cultural ideas of Japanese people, are generally designed to show great reverence to nature itself. Shinto, their religion, is rooted in the admiration and worship of Japanese people on the spirits and greatness of nature. This religion, Shinto, became the basic concept to create Japanese gardens. In addition, people from Chinese continent brought Buddhism and Confucianism, which may be considered as other input of the design of these gardens. Generally telling there are three major types of Japanese garden; the Artificial Hill Garden, the Flat Garden, and the Tea Garden.

The Artificial Hill Garden is mostly an imitation of the Japanese mountains, hills, lakes, briefly an imitation of Japanese landscape. Katsura-Rikyu is a famous and appropriate one to demonstrate this artificial natural environment.

Fig. 2.1 Katsura-Rikyu, a Famous Japanese Garden

Fig. 2.2 Katsura-Rikyu, View of the Bridge

Fig. 2.3 Katsura-Rikyu

Fig. 2.4 Katsura-Rikyu

The Flat Garden is an enclosed garden formed mainly by stones and sand without any hills and water forms. Sand was an implicit symbol of water and stone of mountains. The sand is raked daily in a different way in order to represent the ever-changing pattern of the surface of the sea. In short, this garden is a figurative representation of mountains and water scenery without using themselves. *"The Japanese kare-sansui garden is a product of human intervention that takes direct inspiration from the natural order as well."* (Crowe, 1995; 15) The noticeable difference of Flat Garden from Artificial Hill Garden is its symbolism of Japanese landscape in an abstract manner. Kare-sansui is a prominent garden in order to exemplify Flat Garden.

Fig. 2.5 Kare Sansui, a Flat Garden in the Zen Temple

Fig. 2.6 Kare Sansui

Fig. 2.7 Kare Sansui

Fig. 2.8 Kare Sansui, Interior View

The last major type of Japanese garden is the Tea Garden, which is the garden on the way of the tea house, where the traditional tea ceremony was held. The most important element of the Tea Garden is its Roji; " The garden is mainly consists of the path to the house called roji. *'Again the roji, the garden path which leads from the waiting pavilion to the tea room, signified the first stage of meditation-the passage into self-imitation.' as Kazuo Okakura says in the Book of Tea...When guests walked through the roji, they can forget anything about outside and organize their mind for the tea ceremony".* (Taguchi, 3) This style of garden discloses the function of garden as a place to 'retreat' as mentioned above and the use of nature in order to get free of outer annoyance.

Fig. 2.9 Roji, Tea Garden

Fig. 2.10 Middle Gate Divides Roji into Inner and Outer

2.3.1.2. Geometrization of Nature:

The early renaissance garden in Italy is constituted mostly by flowers terraces. The uses of terraces, especially in Italian and French gardens, or other architectural features were considered as the result of using straight lines. The delicacy and variety in mannerist architecture find their correspondence in terms of landscape, in Villa Lante. Its plan is formed with regard to the sloppy topography of the site. The slope allowed locating several terraces to different altitudes organised by retaining walls. This offered diversity in perception and hierarchy in design. The garden also includes the water features and in order to make water more as it by magic, they used hydraulic pumping devices, which may be considered as first machines in garden design. As a whole, the form of this garden was organized by geometrical and symmetrical theory.

Fig. 2.11 Villa Lante, General View

Fig. 2.12 Villa Lante

Fig. 2.13 Villa Lante

Another prominent garden design at that time was Villa d'Este. The lack of flatness in site was also used for the benefit of creating countless fountains and too many terraces, which speak directly to human senses with variety and beauty. The progress that Italians made in terms of addressing to human senses through the use of natural elements influenced French and English royalty and thus their garden designs.

Fig. 2.14 Villa D'este, General View

Fig. 2.15 Villa D'este

According to Hanno-Walter Kruft, an autonomous theory of gardening emerged by the work of Josepf Dezallier, 'La Theorie et la Pratique du Jardinage', claiming four basic maxims; *"the first, that art must yield to nature, second not to congest a garden to excess; third, not to expose it all to immediate view; and fourth, always to make it appear larger than it reaaly is."* (Kruft, 1994; 257) In his earlier works, Ledoux seems adopted the formal tradition of landscape of Andre Le Nostre nonetheless it is noticeable to find less building in his landscape plan prepared for the city, Chaux. Ledoux, on this account, appears to reflect the new sensitivity towards nature, emerged in reason age. *"The Italian and French garden of the 16th and 17th centuries was the product of a geometrical arrangement that sought to apply the laws of architecture to the disposition of flower-beds and shrubs, and treat an open-air setting as though it were an interior."* (Kruft, 1994; 257)

2.3.1.3. Mimesis of Nature:

In the 17th century nature was seen as an entity to be to tamed, domesticated and controlled. However by the beginning of the 18th century this conception changed radically. Linda Pollak, in her text argues on this desire of control; *"In the midst of this desire for control, however, 'freely' arranged and untrimmed trees took on a new and decisive role as symbols of English liberty, in contrast to the French 'tyranny' of geometricized nature."* (Pollak, 1997; 29) As a result, especially the aristocracy of England adopted totally new concept while planning the surrounding of their rural residence. Before this revolution English garden design was affected by the Italian renaissance movement and French gardens and imitated their style, which controlled nature by human power. Their geometrically organized gardens were testifying this human dominance.

Martha Schwartz, a post-modern landscape architect, argued on the geometric order; *"When we impose a geometric order on the landscape, we inhabit the landscape with human thought. Geometry clearly defines a man-made, rather than natural environment."* (Schwartz, 1997)

Fig. 2.16 Center for Innovative Technology

Fig. 2.17 Necco Garden

Christian Cay Lorenz Hirschfeld, German professor of philosophy, also, scorning the symmetrical French garden which he accuses of abusing nature by forcing it to submit to rules; *"Garden design in their hands was no more than architecture imposed upon the earth."* (Hirschfeld, Kruft, 1994; 268)

However the new type of garden emerged in England was a mimic of nature, which came from the concept that art should imitate nature. Briefly, forms in gardens were to be directly taken from natural landscape, which is the source of the perfect beauty. Instead of designing terraces (parterres) in an arbitrary geometrical layout they preferred to emphasize the natural contours of the site; they built retaining walls on rivers in order to form irregular lakes, they planted trees to render the view asymmetric. Besides, based on the William Kent's discourse of 'nature abhors a straight line', rounded lines and random curves replaced these straight lines in garden design. The garden in Stourhead is a striking example of this English style.

Fig. 2.18 Stourhead, Wiltshire, drawing by Fredrik Magnus Piper, 1779

Sir William Temple, an important figure in English garden design history, supporting the thought opposed to the formal design in gardens, praised the irregular, natural Chinese garden. In as much as, Chinese scorn the placement of beauty in some certain proportions, symmetries, or uniformities. Arranging trees based on a gridded layout or plants at exact distances seemed them as easy as a child work. Hanno-Walter Kruft quotes William Temple; *"..their greatest reach of imagination is employed in contriving figures, where the beauty shall be great, and strike the eye, but without any order or disposition of parts, that shall be commonly or easily observed."* (Kruft, 1994; 258) Tory William Chambers was another admirer of Chinese garden for their 'beautiful irregularities' and 'variety of scenes'. He also found English garden of the time boring, unnatural and affected. He put the difference between European and Chinese gardens as the fact that in Chinese garden design not only gardeners but also botanists, painters and philosophers are involved. He claims that Chinese gardens besides acknowledging beautiful irregularities of nature, corrects its mistakes, thus not rejecting the application of the principles of art. The aim was novelty and effect in addition to variety. According to Kruft his work based on these thoughts is rooted in the sensualist theory of landscape design.

By the 19th century, the discourse of 'gardens should imitate nature' had been lost. Edward Kemp stated; *"I have had occasion more than once to refer to Nature as the great school of landscape gardening. It may be worth while, then, specifically to inquire how far the imitation of nature is possible and right...A garden is for comfort, and convenience, and luxury, and use, as well as for making a beautiful picture. It is to express civilisation, and care, and design, and refinement...In these respects, it is fundamentally different from all natural scenes."* (Garden visit, 12)

CHAPTER III

TOPOGRAPHY AS AN INTERFACE BETWEEN MANMADE AND NATURAL ENVIRONMENT

Nature, with its inner rules that constitute its latent order ('second qualities of nature', as mentioned in the second chapter) thus flawless function and animated existence, has always inspired man as a divine precedent of environment.

3.1. The Interdependence of Manmade and Natural Environment:

Built environment is seen as the revelation/identification of human existence. Norman Crowe uses the term 'second nature' of Cicero, in order to substitute 'man-made environment'. He proposes the environment that we create as another nature within the world of nature as long as it is brought into and maintains existence based on some rules. Yet these rules are manifestations of human nature. Nevertheless human nature is definitely an intrinsic part of and derived from nature itself. Hence, our contemplation and formation of rules, in order to direct the environment we create, are based on our fundamental knowledge that is rooted in nature. At this point, it is sensitive to contemplate the mutual relation of natural and built environment. It is evident that built environment is set into the world of nature either in a direct or indirect manner. In addition, as mentioned above, the inspiration of nature in terms of process or form is to be considered as input in man's conception of 'artificial' environment. Consequently, it is senseless to consider these environments as distinct and separate entities.

Our creations are frankly distinct from the natural formations. This distinction is clarified by the search of order. According to Darwinian Theory, this search of order in the built environment is stemmed from the need of insurance for survival in an unpredictable world of nature; man was also in search of order in nature in order to decipher it, and be prepared to its consequences at will. As Norman Crowe stated; "*We are compelled by something we call 'human nature' to apply our search for order in*

nature to that which we create for ourselves: our cultures and the physical world we create for ourselves in the form of towns and buildings" (Crowe, 1995; 7), our built environment is definitely dependant on the natural one.

By the transition in his life style, man chosed agriculture as a way to survive which leaded him to a permanent living. 'The first tentative steps' toward permanent shelter discloses the utilisation of tent of the nomad, which serves to the realization that man's manipulation of nature for man-made environment. Agriculture, on this account, is a good example to demonstrate the revelation of nature's potential of yielding crop generously under the condition of human care. Bernard Rudofsky states; *"Agriculture has been competing with architecture in shaping the surface of the land."* (Rudofsky, 1981; 28) Being aware of the ability of transforming nature to his benefit led man to explore its resources in order to find out other opportunities and possibilities to make his life easier. The more discoveries are made the more man become familiar to and experienced in using them. However man has never recognized a limit in using these resources and continued to consume thus exploit them to such an extent to witness the clear decrease in the amount. Today's world is explicitly threatened by the environmental crisis. Hence especially after 60's 'green concerns' has come out, at least to diminish this decrease.

Fig. 3.1 terraces in the loess area in Honnan, China

The main idea that lies behind these concerns, more or less implicit, is the search for a balanced world. The conception of balanced world cannot be identified simply with objective scientific values. Although it is evident that it refers to moderate consumption of natural resources, it also bears some more latent meanings. "*If we want to live in a world that we perceive as balanced, we hold at the back of our minds the*

notion of an ideal balance between the built world and nature. That balance guides the way we shape our world whether or not we realized it." (Crowe, 1995; 8) This balance mainly depends on the one's perception /idea of nature. As mentioned before the idea of nature has a shifting characteristic and its meaning may differ from one society to another or from one era to another and even from one person to another. Therefore the balance to be established between nature and built environment may not awake same expectations in everyone's mind. Besides, personal experience, religious and cultural forces play prominent roles in the shifting meaning of a balanced world. It is personal and thus one's conception of balanced world may be easily different from the others' according to their distinct perception of environment formed ultimately by former experience. It is dependant on the cultural or religious values one holds, by virtue of the significance and compelling drive of culture and religion in 'building'.

3.2. Design with Respect to the Physical Surrounding:

The aim at creating a man-made environment was eliminating the ever-changing conditions all around man. The search for having more predictable environment than the 'capricious' natural world offers, resulted in man-made settlements still having certain natural characteristics; *"...These early dwellings, like those of some primitive peoples today, were often imbued with magic and situated according to a strict directional orientation and alignment with the heavens or with an important topographic feature such as a distant mountain or sacred place, or an important feature of the immediate surrounding landscape. In this way dwellings could be integrated with the order of the infinitely larger world outside them."* (Crowe, 1995; 30) As a matter of fact, what mentions Crowe is a clear disclosure of the natural drive of anchoring to the world. Considering the fact that every living being in nature survives dependant on others and one can talk about an existence only if it is in a dependant relation with another, it is obvious that in order to grab hold of the landscape in terms of settling within, built environment are intended to be formed as it clings to the world somehow; being in relation with the landscape, anchoring itself within the limit of our visual perception of the world, the horizon, in order to testify its existence.

3.2.1. Horizon:

> *Whether you like it or not, whatever we do we are going to violate that horizon, we are going to violate the equilibrium between the sky and the earth.*
>
> Raimund Abraham

Fig. 3.2 general view of pyramids, Egypt

David Leatherbarrow in his book Uncommon Ground touching on the field of the relationship between inside and outside of building, puts in words the concern of the work of an architect as; *"Architects are responsible for the design of individual buildings, not entire towns or landscapes, of which, nevertheless, they must reasonably be aware…While it is natural and necessary for architects to concentrate on the building itself, the bright light of this focus often eclipses the surrounding world, darkening the very horizon that grants the building its standing."* (Leatherbarrow, 2000; 168) The environment in which architectural artefact is sited is generally less worthy than the architecture itself. That is not to say that it is ignored but it is a concept hard to determine its boundaries, limits and to what extent of the land should architects be aware.

As a matter of fact, there are some views that may be considered as distinctive in some aspects. In order to exemplify them, David Leatherbarrow's thought is noteworthy. He is arguing that *"individual settings are always interconnected with and*

dependant on a horizon that transcends them, sewn into a fabric of rooms, is reason buildings, streets, towns, and nature; but in design work the colours of this textile are often allowed to fade to a dull or penumbral shade ... I suspect that this penumbral spread, not the landscape of well-defined objects, is the proper framework for truly productive work, even though it is very hard to describe and rarely noticed." (Leatherbarrow, 2000; 170)

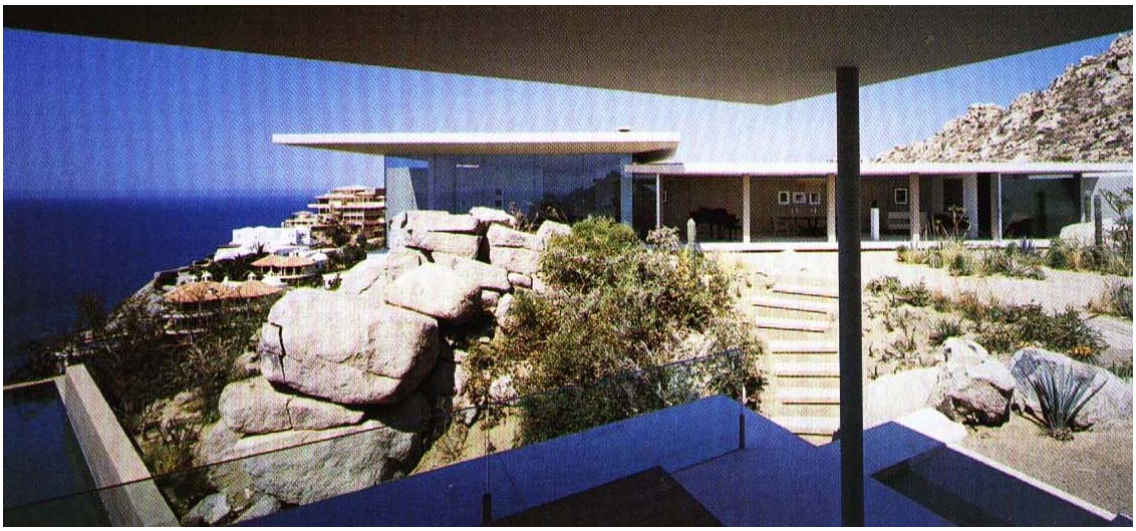


Fig. 3.3-4-5 views from Ar House, Cabo San Lucas, Mexico, Steven Harris Architects

The term ‘horizon’ is usually defined as the extreme limit of the surrounding landscape. Leatherbarrow claims that as a topographical phenomenon the horizon is generally taken for granted in architectural thought. He puts two reasons to testify his arguments; Firstly, ‘*being distant it can hardly be affected by design’s initiatives’* (Leatherbarrow, 2000, 171) and secondly, *‘it is an aspect of the landscape’*. Yet, this aspect of the landscape is unreachable because horizon is always keeping itself remote. One may see it and consider it as a limit of the view of landscape but never can grasp it. It is intangible in this sense, for any attempt to get closer is refused by its invariable remote existence. Once arrived to where it was, one realizes that it is not closer even a bit than before. This is the result of, as Leatherbarrow points out*, “its style of presenting itself, inaccessibly, or always ‘there’ but entirely indifferent to my experience of it.”*

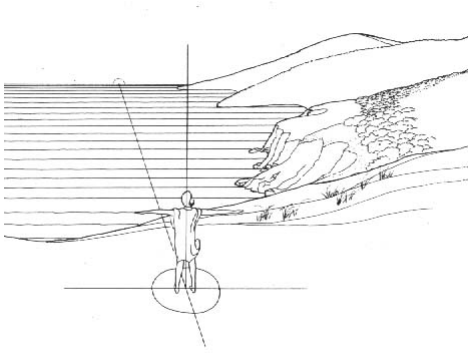


Fig 3.6 Existential Space

Considering the remoteness of the horizon, the author concludes as; *“For this reason it is senseless to see the horizon as a destination, because it can never be reached; the horizon cannot be reached because is not a place at all.”* (Leatherbarrow, 2000, 172) Place, in this sense means a specific and stable setting or location just like as the site of a building. Besides, one should take into account that; *“Nevertheless the horizon is always only a potential site, its remote constancy reinforcing the sense one has of the radical contingency of human experience.”* (Leatherbarrow, 2000, 172)

As a matter of fact, the term horizon has a simple explanation or meaning in customary sense; it is a line on the landscape, formed by the meeting of the sky and the earth. By the term landscape one usually means a scene or picture, something visual

from a constant point of view. In this understanding, the concept of horizon attains a stability as well; a definite limit of the scene. However, in the case of regarding to that concept of landscape as something measurable instead of picture then it is certain that horizon is becoming a concept somehow ambiguous. In this point Leatherbarrow argues that; *"It would be wrong to say it is gone, for it is (still) there when I look for it, when I thematize it, but at all other times, which to say at most times, it recedes into a condition of latency, being at most a quasi-object of my awareness."* (Leatherbarrow, 2000, 172)

This mentioned latency allows also elaborating the conception in a cultural context. So the definition of the horizon is 'not only a line at the edge of the visual field but the field itself.' In order to establish an analogous similarity to explain this 'cultural' aspect of the concept, David Leatherbarrow puts forward the term 'world'. In fact we are familiar to this sense of the 'world'. Exemplifying its uses in this understanding, he uses 'the world of Greeks' or 'Kafka's world'. *"Circumstances in both cases are not only matters of terrain but also of cultural practice, earthy elements with equipmental and narrative sense."* (Leatherbarrow, 2000, 173)

Thus there are two distinct dimension of the meaning of the 'horizon'. While the one has a visual perception, the other has a cultural value, and both are intangible. The cultural side of the concept has a meaning impossible to evaluate only within a geometrical terminology. It is rather conceivable in the cultural and historical context formed by social, political and historical life. On this aspect of the term, Leatherbarrow argues; *"..a depth not measured in meters or feet but in the patterns and present force of a tradition. Much of this depth is concealed in potentiality, but it is powerful just the same, perhaps for that very reason. And it is this matrix that confers orientation in architecture, serving as the 'within which' of the life buildings seek to accommodate and represent."* (Leatherbarrow, 2000, 173) Raimund Abraham, in a lecture, also interprets the concept of horizon as; *"Architecture must remind itself how vulnerable the surface of the earth has become: the horizon; magic site of all beginnings."* (Abraham, 1996; 18)

"One could see horizon as the means by which we anchor ourselves in the world." David Leatherbarrow, by this thought, mentions about the search of basis that

man may hang himself, because as a rule of nature everything is dependant on another thing in order to survive thus exist. In such a world that almost everything may be questioned about its absolute existence, horizon appears as a grid or network of reference points that locations or positions may be determined based on its fixed presence. However, in fact, as mentioned before horizon is a concept on the move, it has an unreachable or inaccessible presence, the more one advance towards it, the more it goes away. The author of the 'Uncommon Ground' claims in order to find out the appropriate and correct physical context in which the architectural artefact may be co-exist and so interact; "*Thus, it is not only its remote distance that makes the horizon difficult to grasp, but also its hidden stratification. This begins to explain why it is neglected in architecture, because whatever has attained stable form and visibility is assumed to be the building's true and proper framework."* (Leatherbarrow, 2000, 173)

3.2.2. Landscape:

The concept of landscape diverges from the notion of topography in terms of its strict connection to vision. Alessandro Ponte puts the difference between landscape and topography by demonstrating the description of Frank Lloyd Wright himself about his work, Fallingwater House. He, according to Ponte, consciously avoids using the word landscape but instead he uses the terms site or place while depicting the vicinity of the project since from the debut he intended to build the house not in front of the fallingwater but above it, as a result of his urge of not just looking at it from a distant point of view but living it. Ponte also describing the approach of Edgar J. Kaufmann puts into consideration the the concept of landscape as; *"Landscape was the section of country which the observer succeeded in embracing in a glance from a privileged view point."* (Ponte; 1997; 16) This mentioned 'privileged view point' has its roots in painting since they were the painters who first envisioned from which standpoint to look to the landscape in order to depict the scene in the best way. To choose the point of view, introduce a distance, frame the scene and to bring the elements in the view, forward or send them to background according to their significance, were some prominent tools in painting and then picturesque.

3.2.2.1. Picturesque:

The opposing thought to the use of the straight lines and formal concerns in garden was, in fact, a request for wildness, romance and a growing trend toward pictorial consideration, which brought along the picturesque. Consequently a new picturesque aesthetics has emerged respecting English garden and its irregularity, the vistas encountered suddenly while walking through the landscape. Stowe, in Buckingham, is a very important garden in this sense. *"The whole space is divided into a number of scenes, each distinguished with taste and fancy; and the changes are so frequent, sudden and complete, the transitions so artfully conducted, that the same ideas are never continued or repeated to satiety."* (Whately, Taguchi; 7) As for William Gilpin the park was a collection of pictures. 'Irregularity' and 'roughness' were two major concepts to him, forming 'picturesque'. He describes this style as Hanno-Walter Kruft quotes *"the happy union of simplicity and variety, to which the rough ideas essentially contribute...Elsewhere he describes the Picturesque as the combination of the sublime with the beautiful, and by the end of the century the word, which had initially been used more in the sense of pictorial or painterly, had become a particular term of aesthetic connotation."* (Kruft, 1994; 264)

Fig 3.7 Stowe, General View

Fig 3.8 Stowe, General View

Fig 3.9 Stowe, View of the Bridge

Whately also argues on the superiority of the landscape gardening to landscape painting as long as its third dimension and ceaselessly changing conditions like the play of light. In addition the fact that one may move around the landscape garden and may experience more than one view is another input to testify the superiority of landscape gardening to Whately.

As opposed to this thought, Church, a modern garden designer, says; *"It is important that the garden be built around a dominant idea. Do one thing well and let all others be subordinate in scale to this idea...Peace and ease are the dominant characteristics of the new garden-peace and beauty for the eye and ease of maintenance for the owner. Fewer and simpler lines are being used in the garden, and fewer and simpler materials. All is calculated to give complete restfulness to the eye."* (Church, Taguchi; 8) emphasizing minimalism. Peter Walker who adopted minimalism in his profession, landscape design, argued; *"Minimalism continues to imply an approach that rejects any attempt to intellectually, technically, or industrially overcome the forces of nature."* (Walker, 1997)

The picturesque gardens, embracing nature with its complexity and irregularity, was, in fact, the constituting the roots for another world view opposing the rationality of the enlightenment era; Romanticism. The movement was a reaction against the stiffness of the restrictive and narrow mathematical models of enlightenment. Senses and imagination were priorities to the supporters of the movement. Edmund Burke was a remarkable author preparing a literary ground to Romanticism, argued contradictory to the thinkers of enlightenment, the 'rise in senses' caused by great natural power like dark, danger and noisy fallingwaters, storms and volcanoes' explosions. That is why in

addition to the refined symmetry and proportion, and to the irregular layout of the picturesque, there was submissiveness of the sublime as a concept speaking mostly to senses. As for Gilpin, the picturesque as a concept was between the sublime and the beautiful. Uvedale Price, being guided by Burke and Gilpin considered picturesque as having equal value with the sublime and the beautiful, and he used the term to such an extent to characterise Gothic architecture. In this point Kruft puts the difference between the sublime and the picturesque; *"The sublime was not amenable to human manipulation, but the picturesque – combined with roughness, as Gilpin had put it – could serve as a shaping principle"* (Kruft, 1994; 265) Kruft writes also on Richard Payne Knight, the significant poet, defining landscape gardening in terms of the imitation of landscape painting based on the compositional principle of uniting foreground, middle ground and background. Referring again to Knight's description of Downtown Castle in a pictorial manner leads Kruft to point out; *"The fact that not only the garden but also architecture itself was judged in terms of the picturesque shows how blurred the dividing lines between the arts had become by the late eighteenth century."* (Kruft, 1994; 266)

The philosopher Jean-Jacques Rousseau compelled the rise of a sensitivity towards nature in France. In his 'Discourses', he claimed that man is intrinsically free, virtuous, and happy yet by virtue of bad conditions of the city and of society they become spoiled, hence he proposed a return to the 'natural humanity'. A friend of Rousseau, Girardin Markisi, with his idea of creating a landscape where the natural humanity could be rediscovered in mind, designed a park reflecting all the atmosphere that Rousseau intended to describe in his 'Julie ou la Nouvelle Heloise' where he aimed at approximation of the park to natural landscape, by the use of picturesque building and whether in an unobstructed, clear or wooded views.

However within the rising interest in these concepts there lied a dangerous trap, which is the reduction of garden design to the compositional principles of painting as long as it leads to leaving behind the practical considerations of the garden. On this account Humphrey Repton becomes an important figure claiming that it was the beauty which may be considered as the criterion instead of picturesque to criticise the garden design. Although he did not reject the penetration of painting to design to an extent, he

emphasized the difference between these two concepts, as it existed between ‘landscape’ and ‘prospect’.

As a matter of fact, the urge of English designers was to recreate the pastoral classic landscape with real natural materials like soil, water, trees in the real world as long as it was not satisfying to them experiencing those landscape in paintings or literature, hence they used the nature itself to be contented in their search for real landscape.

After the completion of the Parthenon, meaning by the middle of the fifth century B.C., temples appeared as simple buildings rather than embodying divine personalities. Siting in less sacred landscapes, they serve mostly to shape the environment. The Agora of Athens, on this account, displayed itself with its regular rows of trees planted along the temple’s sides as very important proof, which testifies *“the beginning of the end of the old awe of landscape.”* (Scully, 1991; 104) In as much as it was first attempt to embellish the surrounding of a building in terms of landscaping, and from then, it was also human beings who shape the landscape besides their gods.

Roman landscape painting strengthens this sense of human control over landscape. Vincent Scully interprets this art as; *“this does not represent the first time that human beings responded to nature, as some archaeologists still seem to think, but the beginning of the last response, a pictorial one.”* (Scully, 1991; 108) The capacity to create environments through illusion points out the human control and direct intervention in order to shape the environment.

This pictorial approach had also some effects on architecture.*“..from the end of the eighteenth century on, Anglo-Saxon culture had developed a theory and practice of picturesque architecture, or rather an architecture designed to frame the landscape or insert itself within the countryside in a picturesque manner.”* (Ponte; 1997; 18) In fact, as mentioned before, this may be considered as the reflection of the urge of English designers to recreate the pastoral classic landscape with real natural materials like soil, water, trees and buildings in the real world. Besides creating those landscapes in paintings or literature, they also used the nature itself in order to create real landscape.

Buildings constructed in gardens are appropriate to demonstrate differing approaches to picturesque architecture.

3.2.2.2. Building in garden:

While considering buildings constructed in gardens one encounters distinct standpoints. Blomfield, for instance, argued that there should not be any natural shapes or planting anywhere near the house, yet Gertrude Jekyll claimed that it is appropriate to have a terrace near the house however natural elements like plants should be grouped in a natural setting. Jekyll praised Repton by virtue of his thought about the transition one lives from the house through the garden. This transition, he believed, should be a gentle slide from the man-made through the natural. He aimed at; *"achieving formality near the house, merging into the natural by degrees, so as to attach the house by imperceptible gradations to the general landscape."* (gardenvisit)

The young partner of Jekyll, Edwin Lutyens was responsible for buildings in gardens designed by Jekyll. He thought that gardens are ornaments to the buildings with little use or beauty of their own. (Gledstone hall, Tyringham)

As a cautious critic of the concept of the formal garden, which was the product of geometrical arrangement, Sir Henry Wotton, famous English garden designer, insisted on the strong contrast that should be between 'the regularity of a building and the irregularity of a garden'.

The prominent poet William Shenstone considered garden as a landscape painting. The compositional principal, he adopted, in the painting was not symmetry but balance. A building in the landscape was to be located based on this principle; *"A building for instance on one side, contrasted by a group of trees, a large oak, or a rising hill on the other."* (Shenstone; Kruft, 1994; 260) It was this kind of an 'associative effect' he was in search.

A building to be constructed in garden has often be seen as a structure that supposed to increase the picturesque quality of the landscape. As for William Mason garden and architecture should be in a complete union; *"buildings should be disguised*

so as to merge with the landscape – a farmhouse, for instance, should become a Norman castle." (Kruft, 1994; 261)

3.2.2.3. Ruins in Gardens:

Stephen Switzer claimed that the garden must be adapted to suit the site. He argued on intensifying the locality of the site by erecting ruins. Hanno-Walter Kruft signifies this attitude as giving rise to the late 18th century cult of ruins. He quotes Switzer; *"since the noble and ingenious natures a piece of ruin is more entertaining than the most beatiful edifice; and the sorrowful reflections they draw from the soul ascend to very heavens."* (Kruft, 1994; 260) In the 'natural' landscapes, constituting picturesque, there often were built historical or exotic edifices, which were supposed to impel one to contemplate or to remind different associations from different period of time. Linda Pollak handles the effect of ruins in garden as they appear through the grove; *"The partial and ambiguous boundaries of a grove paralleled 'the irregularity of surface' that ruins presented to the sight, linking the idea of fragment-space that folds into other spaces with that of an artifact whose existence folded into other historical times."* (Pollak, 1997; 30) John Vanburg while he discovered the ruins of Woodstock chateau in the site of Bleinheim Palace, he claimed that those ruins would lead to deep and pleasurable thoughts about the way people lived and about the happenings occurred in those buildings that period of time. He also suggested nature's covering with herbs or ivy to render ruins as best views. This approach to ruins had been acknowledged and it is even possible to witness to some garden examples where some replicas of the originals historical buildings are constructed in case there were not any real one as in Hagley Park, Worcestershire, England.

Fig 3.10 Hagley Park, Worcestershire, 1749

Fig 3.11 Woodstock Manor, Bleinheim, Oxfordshire, 1714

Fig 3.12 The Temple of Philosophy, Artifice of Ruin near the Tomb of Rousseau

While considering the visual sense of landscape, Dan Kiley appears as a modern landscape architect, with his discourse on transparent character of landscape. He was *"engaged in the pursuit of transparency, that modernist desire of seeing and experiencing seamlessly across the boundaries between architecture and landscape."* (Kiley; Taguchi; 9) Linda Pollak mentioning about the transparent properties of the grove points out; *"An intricately structured scene is one in which artifacts visually fragment each other, through their overlapping, such that their relationship is not immediately transparent to the gaze. According to the logic of intricacy, part of what makes the picturesque please is the challenge it offers to the dominance of the eye, calling into question notions of both viewing (of landscape) and enclosure (of architecture)."* (Pollak, 1997; 30) She exemplifies this sense of transparency in Kent's garden at Rousham, 'where each space is part of other spaces without being privileged above any other'.

Fig 3.13 Rousham, Oxfordshire, Sketch of Kent of Venus' Vale, c.1737

The dominance of vision, in the meaning of landscape, makes it acquire a sense of theatricality. This theatricality may clearly be seen in the settlements of antiquity, which were sited on sloppy hills permitting to embrace the vast landscape through terraces or through the seats of theatres. Rana Nergis Öğüt, in her text, titled 'Reflections of the Conception of Nature Within the Framework of the Dialectic of Enlightenment', states; *"...the ancient Anatolian settlements (such as Priene, Sardis, Pergamon, and Aphrodisias) justify this theatrical approach to the experience of landscape"* (Öğüt, 2000; 41) On this account Greek and Roman theatres are to be exemplified displaying the major difference between them derived from the dominance of the interior space in Roman architecture.

Fig 3.14 Epidauros, Greek Theater, View Northward

Greek theatre, however, derived mostly by acoustical requirements, shows great kinship with the topography of the site, as if it is anchored to the cliff opening up to vastnesses.

Considering the geography of Italy it is clear that there are no many individual peaks standing out among the mountains like spines. Hence the sacred sites are rather the slopes. Fortuna Primigenia at Praeneste south of Rome is the most important of this kind of sacred sites worth to analyze. Praeneste, unlike its earlier precedents constituting another entity in addition to the mountain, appears rather as the part of the slope as if it is built into it. Christian Norberg-Schulz claims; *"Hardly anywhere else in Roman building is the use of landscape so evident."* and continues as; *"Continuity is a basic formal property of the sanctuary at Praeneste. It is not composed of individual plastic bodies, such as its Greek counterpart in Delphi, but consists of terraces,*

colonnades, ramps and stairs, which are unified to form an integrated whole." (Norberg-Schulz, 1993; 49) The side ramps leading to the terrace are closed by walls cutting any visual contact with the landscape lying downward, until reaching the terrace enveloping the entire visible landscape. *"exactly so did Roman architecture eventually come to enclose space entirely, to create perfectly controlled interiors, set off from the messy inconsistencies of the natural order… The important point here is that Rome changes the Greek relationship to nature by enclosing it within a hollow shell."* (Scully, 1991; 111) At the summit of the sanctuary there is no access to the upper slopes of the mountain, which Vincent Scully interprets as the conclusion indeed closing of the experience.

Fig 3.15 Temple of Fortuna Primigenia, Palestrina

Unlike Greek theatre where the seats are engraved to the slope and spectators have the limitless view of the landscape, Roman theatre, as if supporting the importance of the interior space of Roman architecture, had its stage house raised to the height of the seats and thus obstructing the view by manmade construction.

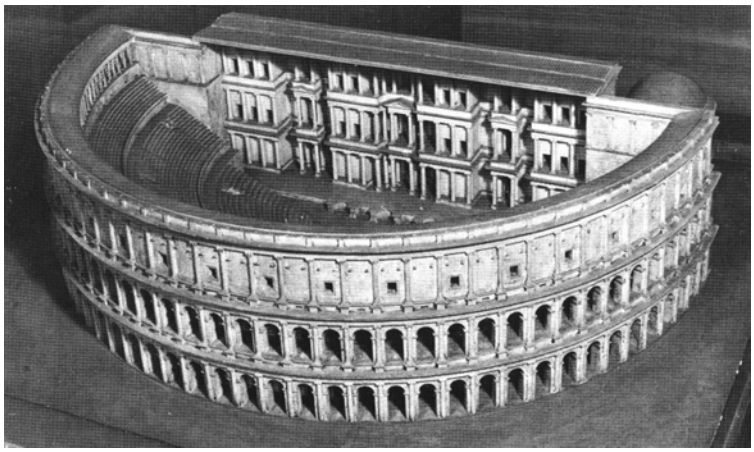


Fig 3.16 Theater of Marcellus, Rome

3.2.3. Topography:

> *Before transforming a support into a column, a roof into a tympanum, before placing stone on stone, man placed the stone on the ground to recognize a site in the midst of an unknown universe: in order to take account of it and modify it.*
>
> Vitterio Gregotti

One of the enemies of modern architecture is seen as the idea of space considered indifferent to the ideas of the site. As the Italian architect, Gregotti stated 'through the concept of the site and the principle of settlement, the environment becomes the essence of architectural production'.

On this account, David Leatherbarrow states; *"Architecture is an art, not a work of nature ... Were the land in itself an adequate setting for the purposes of life, architecture would be unnecessary. Just as no one lives in ideal space, no one lives on the land as given. Here I am not referring to the so-called natural landscape only, but also to the one that has been shaped through the arts of design, which is to say one that is urban".* (Leatherbarrow 2000, 211)

The term topography's etymological roots, comes from Greek, topographein, from topos place and graphein to write. (Merriam-Webster's Unabridged Dictionary) From topos are derived the names of sciences dedicated to the study of terrain and site, like topography, topology and toponomy. Since the time of the emergence of the word is determined as the fifteenth century, it would not be wrong to refer to Leon Alberti Battista, who appears as the initiator of surveying with his instrument he called 'Horizon' in the middle of the fifteenth century.

3.2.3.1. The Latent Side:

While considering the relationship between inside and outside of the building we notice the disappearance of the distinction between them via the implementation of window walls, cantilevers and extending slabs to buildings. This kind of implementation is conceived as "more concrete continuities between the interiors and

their landscape setting" by Leatherbarrow as he concludes his claim by putting its consequence as *"architectural design was discovered to be an art of articulating topography; its continuities, reciprocities, and displacements."* The concept of topography used in this thought refers, in fact, to something recessive and inconspicuous just the horizon conception referring to not only to a line on the edge of the field but to the field itself. Since David Leatherbarrow, although he admits the customary sense of the topography conception as " actual terrain", where the levels and strata of the dwelling practices are actually laid out.", claims that *"Topography is neither a matter of retaining walls nor of pictures (although construction results in both); its appearance is more like the tacit presence of equipment* (in as much as he before considers the serviceable equipment as similarly recessive, no single piece of them is apparent in terms of being aware of unless it is broken; like the recessive or obstructed characteristics of even single part of a machine. One is even not aware of a piece's existence of the machine if it always functions harmonically with other pieces.) *its manner of presenting itself is indirect or lateral, a milieu of which one is aware, less like a painting than the light that allows it to be seen."* (Leatherbarrow, 2000; 176)

Kenneth Frampton, in the book, Studies In Tectonic Culture, mentions about topography referring to the essay of Dimitris Pikionis, 'A Sentimental Topography'. Frampton analyses Pikionis' work in Philopapou hillside park; *"Pikionis's work testifies to the fact that the earthwork tends to transcend our received perceptions about both aesthetics and function, for here the surface of the ground is kinetically experienced through the gait, that is to say through the locomotion of the body and the sensuous impact of this movement on the nervous system as a whole."* (Frampton, 1995; 9)

David Leatherbarrow puts forth the conception of 'flow' for consideration in order to elaborate the 'in and outside relationship' of architecture. As its literary meaning 'flow' refers to continuity, unobtrusiveness, while speaking on a transitional relationship.

3.2.3.1.1. Continuity Through Vision:

George Howe has a prominent role in defining this term, based on his paper entitled "Flowing Space: The concept of Our Time". (1947) He commences introducing

to distinct space conception; 'real space' and 'ideal space'. Real space on his account is a 'containment' deployed to satisfy the needs of housing. Yet, ideal space refers to *"the microcosmic embodiment of the cosmos...the invisible, mysterious, numinous, emanation of the God or gods of (the) day, the unsubstantial image of the collective unconscious, which, affected from without as well as from within, sets the general pattern of thought and behaviour for men of a common heritage."* (Howe, 1949; 165) He continues in order to make clearer this obscure explanation by taking up the conception of 'ideal space' within the framework of Greek, gothic and modern thought. Analysing the concept during this process, he observed a certain going towards 'movement'.

Being guided by the widespread characteristic of 'fixity' in Greek thought, it is clear that the temple is always considered as both 'directionless and timeless' mostly in virtue of its immovable position. Yet, by the emergence of the new sense of time ("the consciousness of a time before and after epiphany (a Christian festival observed on January 6)") in Christian centuries, the meaning of the 'ideal space' conception shifted.

The reflection of this movement in time to space appeared as Leatherbarrow indicates *"the chiming clock, the bells in the church tower, a 'universal calendar imposed on the earth' meant that cathedral would become an 'almost temporal structure' because through it and by means of it believers could move toward salvation."* (Leatherbarrow, 2000: 178)

According to George Howe, the modern period is filled with an 'accelerated sense of movement', and he claims that *"Space-time mathematics, in their practical application to daily life, have destroyed nearly all dimensions of timeless space."* (Howe, 1949; 165) As stated by David Leatherbarrow "to accommodate these new transits the traditional landscape had to be reformed, 'disintegrated'." In as much as there occurred a great shift in space conception from 'fixed' or 'static' to 'movement' and 'flowing'. Hence, George Howe, in his paper on flowing space mentions about a landscape in which *"all would be in flux...flow of traffic, flow of production, flow of people."* Consequently, he argues on conceiving cities and landscapes in a world in which "two faced of Janus, god of the threshold and monumental steps, had been

banished...for ideal space invisible and mysterious has turned out to be one with real space after all."

As a result, George Howe argues on the need to replace the customary understanding of 'space' by 'flowing space', which brings together a different sense of enclosure in architecture. The traditional elements like walls used to render the space as a 'containment' are to be questioned. He puts forth the meaningless of the traditional concepts of 'scale, proportion, facade, grouping and so forth' for consideration emphasizing the need of architectural thought to be changed.

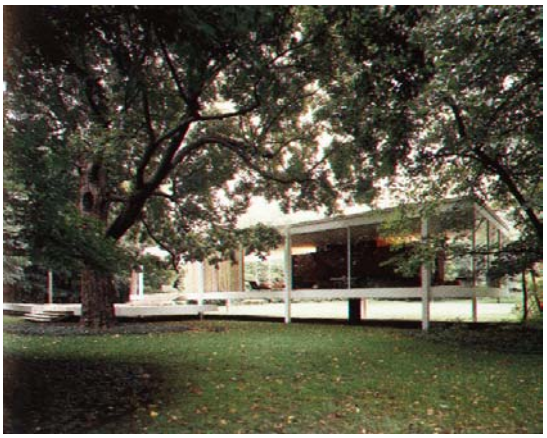


Fig 3.17 Farnsworth House, Illinois, 1946-51, Mies Van der Rohe

Fig 3.18 Japanese Tea House

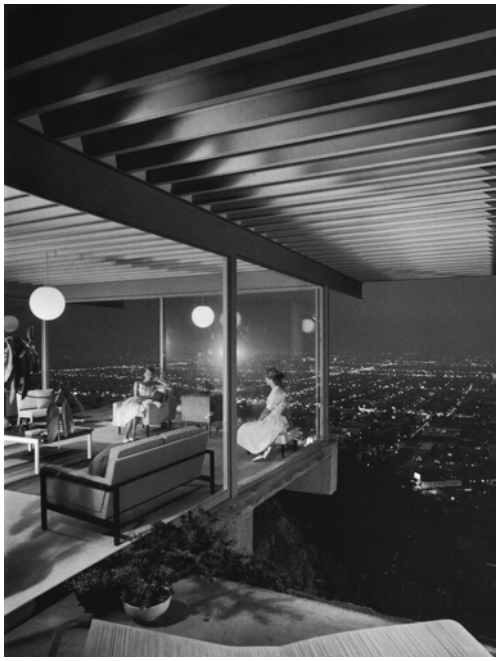


Fig 3.19 Stahl House, California, 1959-60, Pierre Koenig

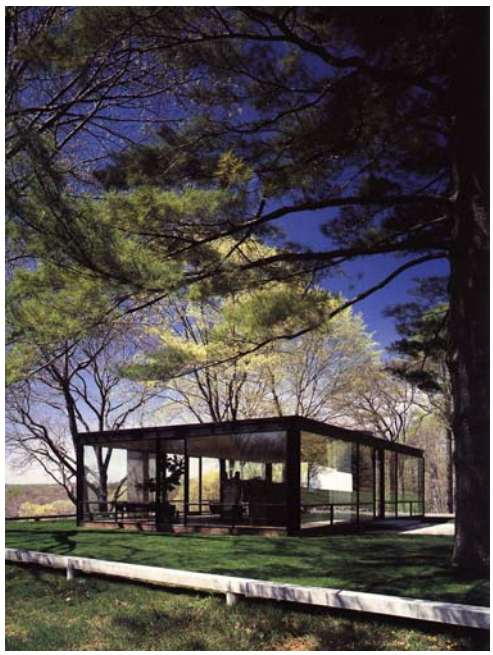


Fig 3.20 Glass House, Connecticut, 1949, Philip Johnson

Richard Neutra, in his 'Nature Near', wrote about 'flow' in nature. *"In nature there are flowing transitions and dynamic connections between all phenomena. Only man has imagined an intellectual antithesis, giving everything a...category or classification"*. (Neutra, 1989: 15) He is obviously pointing the distinction between 'discrete part' versus the 'flowing transition'. Susannah Hagan comments on his mentioned distinction in her book 'Taking Shape' as; *"the first* (discrete part*) is easy to delineate, because fixed; the second* (flowing transition) *is much more difficult, because fluid. This fluidity is a different aspect to be drawn from nature, an intuition of what science will begin to explore from Einstein onwards, and what a number of architects are now interested in expressing: relativity, instability and complexity. This model bears no resemblance to the nature that classical –and modernist- architecture looked to, which embodied balance, stability and linear order."* (Hagan, 2001: 24)

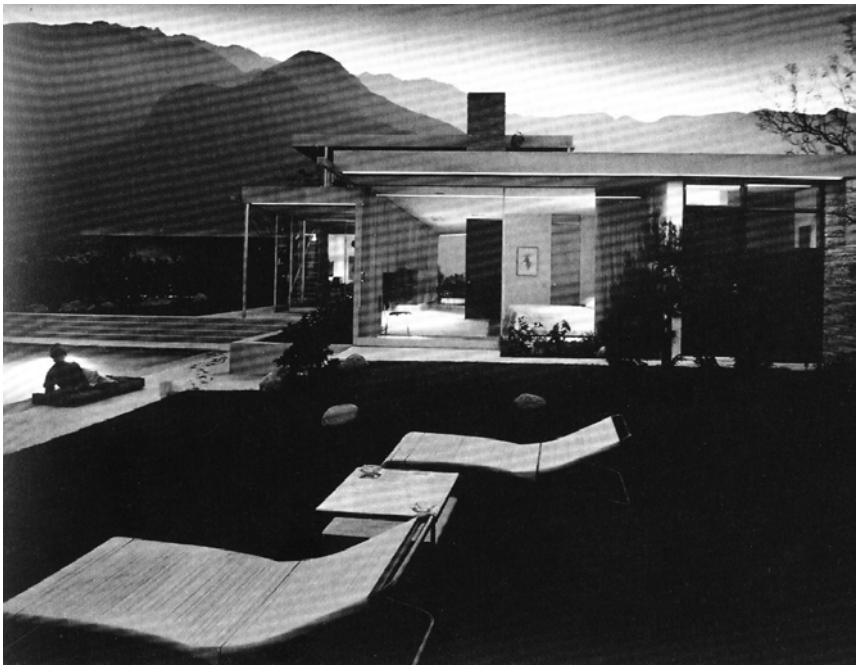


Fig 3.21 Desert House, California, 1946, Richard Neutra

Quoting Moholy-Nagy; *"Harmony does not lie in aesthetic formula but in organic, undisruptedly flowing function."* (Moholy-Nagy, 1986: 219) also testifies the prominent meaning of the conception of 'flow' in architectural thought.

3.2.3.1.2. Continuity Through Material:

While considering 'material' used in building construction, it is possible to encounter different approaches to create intimate connection with the surrounding. Wright's attitude, in terms of material choice, demonstrates his thought; "belonging of architecture to its vicinity resulted from the use of materials indigenous to the site."

Leatherbarrow calls this approach 'topogenesis'. *"From terrain to terrace or riverbed to plastered walls, material continuity was to be unobstructed, as if design creativity were able to merely (but magically) crystallize the palpable potential of place".* (Leatherbarrow, 2000; 190) 'Konstantinidis' approach may be displayed in two ways. Quoting him where he takes architecture as 'geographic'; it springs from the earth as the trees, the bushes and flowers … every building grows as a particular site as a self evident natural element; (190) whereas he also stated that he could use the most modern of materials (like steel, concrete and glass) and still have the building relate 'harmoniously' to the landscape. (190) He once wrote that "to be traditional means to be always contemporary". (Leatherbarrow, 2000; 212)

Considering the relationship of the building to its surrounding, the choice of material is not only judged by its substance but also by its colour. Thus, using local material means also using local pigments. As long as the vicinity of the building is filled with those pigments by means of colour appearance, the harmonious integration of the building to the landscape is no doubt obtained. Vernacular or pre-industrial architectural examples may be displayed to demonstrate this approach.

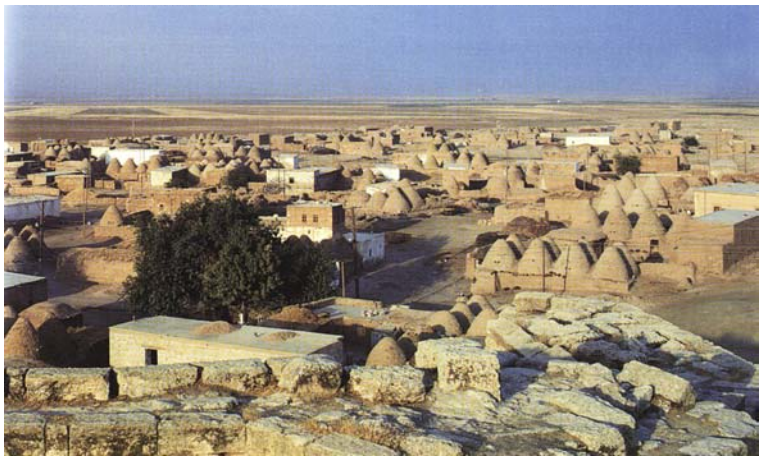


Fig. 22 Harran, Akcakale, Urfa, view from the castle of Harran

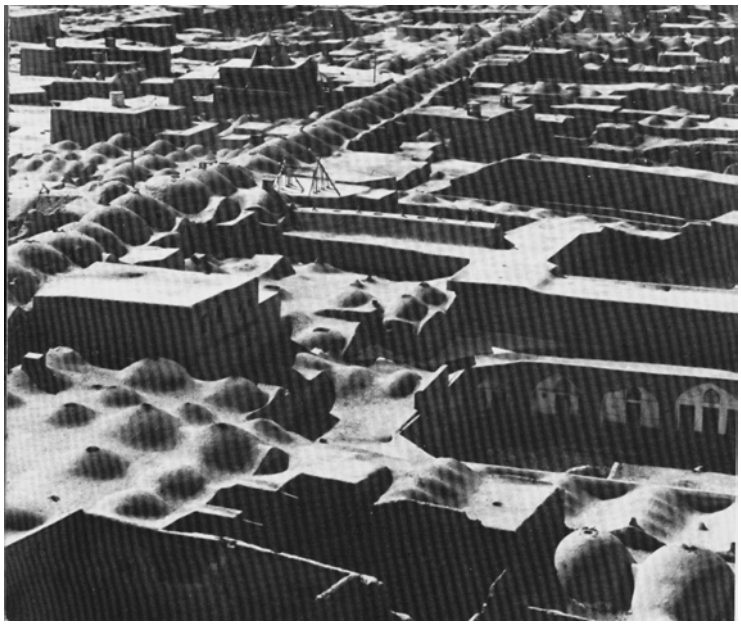


Fig. 23 Isfahan, Iran, general view

It is apparent that he often uses these ‘modern’ materials in combination with traditional ones. This attitude is leading him close to Antonin Raymond’s mix usage of materials. With this combination the end product possesses an apparent contrast. Consequently, it is possible to speak on Konstantinidis’ approach to material selection only if one accepts his conception of *“continuity that tolerates interruptions, a manner of concordance that admits disconcordance, a harmony that remains hidden beneath outward differences, especially where it includes modern materials, which obey no territorial obligations”*. (Leatherbarrow 2000, 191)

Contemplating (Konstantinidis’, Wright’s and many) approaches like rooted in the landscape, David Leatherbarrow argues; *“... as if close approximation to the bower or cave were the aim and test of any architectural work, as if the natural world were a domain of truth to which architecture should conform. But such a physicalist and romantic reading would literalize the metaphor far too quickly, thereby short-circuiting its real insight”*. He continues to his argument, bringing the misleading the ‘tree metaphor’ into consideration. *“The building is like the tree because it unfolds and develops under the complementary but distinct forms of care performed by a people and place. These acts are forms of resistance to nature’s corrosive effects. Not rooting but renewing is important, the first being a way of elaborating terrain and the second of contesting it. The outcome of this contest gives voice to topography”*. (Leatherbarrow 2000, 195)

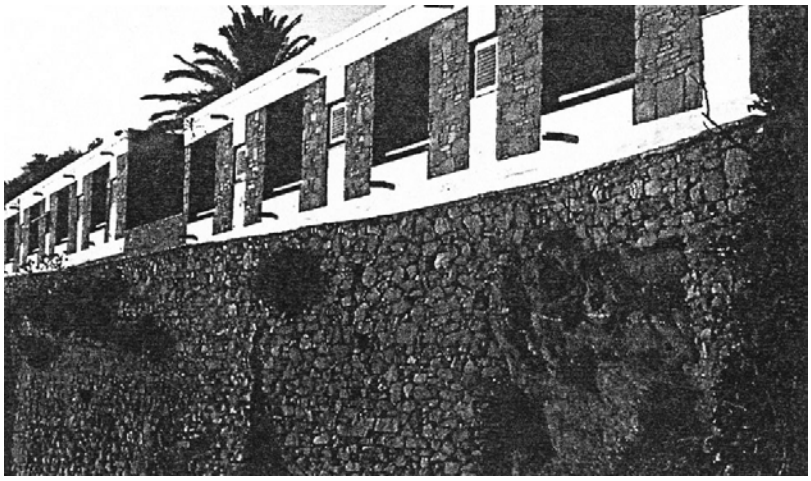


Fig 3.24 Hotel Xenia, Mykonos, Aris Konstantinidis

It is evident that Leatherbarrow emphasizes the natural differences between the work of man and nature. His concern on the ideal relationship is definitely not the continuity of terrain. Besides the continuity of landscape to render the building 'rooted in the soil' as Konstantinidis conceived, there is also a sense of flow while considering his conception of light, penetrating into the building the window. He is claiming, with this transition between in and outside of the building, in mind, as; *"... we would no longer know whether we are 'within' or 'without'. Here the landscape comes near us, it comes into the building, not so much because we see it with our eyes, but more because we know it exists"*. (196) However, Leatherbarrow described his approach as serving to separate himself from Wright's, Neutra's and Howe's conception of continuity, for he senses a kind of enclosure in the passage. Konstantinidis wrote in his text 'Elements'. "*Limits were built up in service of territorial definition and these interrupted 'flows' of all sorts, even of 'space'*." (Leatherbarrow 2000, 198)

Critic on flow:

The concept of flow in architecture is rooted on the sameness of the building and site that may be in terms of atmosphere or geology. However, 'sameness' in this sense imposes the definition of one dependent on the other which is to say that to define the horizon or topography in terms of building. Yet the trapped side of this explanation derives from the fact that topography is not the same than it was neither before nor than it is going to be. In this point, it is necessary to take the concept of incompleteness in consideration. Incompleteness of a building has appeared to mean the search for final form thus to continue to complete itself through time, being sensible to the changing

conditions around it. One may claim that incompleteness served, as if it is an attempt to cover up the mentioned discordant concept of sameness' in the context of flow.

"If a form is to flower into perfection (Konstantinidis' explanation on incompleteness)*, it will be on a daily basis never the same as it was before, never formed once and for all; for if it has been shaped it can be reshaped, and repeatedly like the manifestations of the land or earth of which it is part".* (Leatherbarrow 2000, 203)

Turning to the nature of building and horizon, it is evident that they display differences in terms of spontaneity, whereas arguments for flow ignore the differences and thus the necessary resistance between in and outside of architecture. The unobstructed transition makes the outside an extension of the inside. Leatherbarrow emphasizing the spontaneous character of the land as a fact, criticizes the concept of flow in terms of 'sameness'; *"Yet no matter whether one develops liquid or atmospheric metaphors, arguments for the continuity of the same assume the unlimited extension of something always and everywhere manifest, manifest in the same way as the building itself. This is the world –as- picture. But this very extension conceals the hidden side of the horizon, which is exactly what it has to supply for the building's wants: latent significance, stratified depth, and historical substance; what the whole has to give to the part. Only when we recover a sense of the horizon as tacit will we remember what the building always lacks, and for that very reason depends upon".* (Leatherbarrow 2000, 203)

He puts the latent side of topography still in the horizon but emphasizes its being 'serving as the underside of my visual field rather than the outside of the window'.[In Leatherbarrow's standpoint describing architectural topography seems to be problematic, difficult – latent side, in fact, he explores the ambiguity of the meaning of topography.

"Both the land and the building are much more than aggregates of physical properties, those one might measure scientifically or enjoy aesthetically. Topography is not terrain, or not just that … Although the building and the land can never be the same thing, they are equally tacit and articulate when taken up in the typical enactments of

prosaic life. Topography is a name for this passive and productive, silent and eloquent milieu". (Leatherbarrow 2000, 210) In this account it is clear that topography and land are not only a part of the surface of the earth but have recessive characters also filled with fear or joy, likewise, the building is not just a containment constituted by four walls and a roof but also 'space to be lived in' and this life is measurable.

Having this recessive character of topography in mind, design concerns seem to be to involve interpretation of what is unseen and inconstant, slipping the building into the same 'unobtrusive standing as the horizon'. Hence, it is possible by reducing the insistence of its visual aspect.

3.2.3.2. The Physical Side:

Vincent Scully pointing out; *"...the fact of nature, and of humanity's response to the challenge-the threat, the opportunity-that nature seems to offer in any given place. It follows, therefore, that the first fact of architecture is the topography of place and the way human beings respond to it with their own constructed forms."* (Scully, 1991; 1) questions whether they echo the shapes of the landscape or contrast with them. Norman Crowe claims; *"...archaic peoples saw what they built as equivalent to features of the natural landscape. They could envision their buildings and settlements in relation to the enclosure of a valley, the demarcation of a cliff, the dominance and objectlike presence of a single hill or mountain or tree."* (Crowe, 1995; 73) According to Scully, without denying the existing alternatives of these two poles, cultures other than Greek chose to be in a reciprocal relation with nature in imitation of landscape, whereas Greek cultures stands in contrast with it.

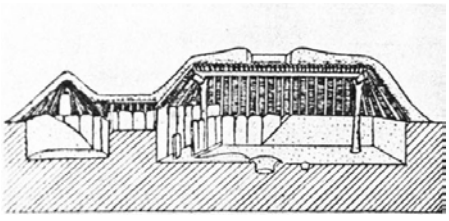


Fig. 3.25 Mesa Verde, Colorado, Pit House, Modified Basket Maker, Section

The Pueblo people's dwellings are noteworthy in order to exemplify settlements imitating natural formations around them. Partly dug into the earth, their individual

dwellings with their low roof profiles echoed the shapes of the mesas in vicinity. The same principle is apparent in their work in larger scale; monumental edifices serving to communal function. Teotihuacan, the most important ceremonial centre in North America, with its 'Avenue of the Dead' heading towards the 'Temple of the Moon' is seen as the echoed shape of the mountain which constitutes the background of the temple. The outline of the silhouette of the mountain backwards is accentuated by the human innate drive of symmetry and geometry what Vincent Scully interprets as 'harnessing and abetting' the power of the nature. He also comments on echoed sacred mountains; *"In return, the human structures themselves take on enormous power; they resonate to the horizon."* (Scully, 1991; 14)

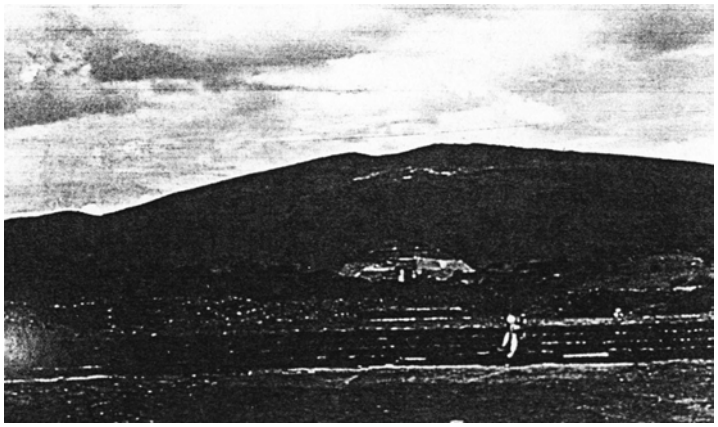


Fig 3.26 Teotihuacan, Temple of the Moon, 3rd century A.D.

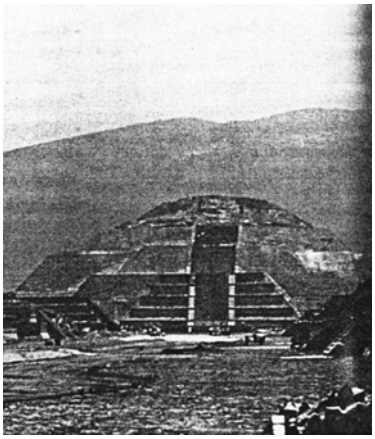
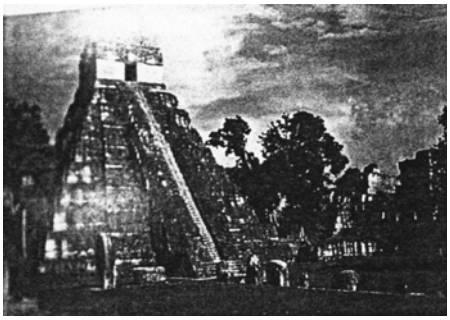


Fig 3.27 Temple of the Moon

While analysing, however, the temples in the Classic Maya site of Tikal, in Guatemala, one realizes easily the divergence in terms of the source of their imitated forms. Although there are no mountains on the horizon, the bases of temple are very tall. The temple I and II at Tikal, of the king Ah Cacao and the queen Lady Twelve Macaw, respectively, are considered as embodiments of human figures as long as their forms reflect the King and the Queen. As stated Scully; *"As in Greece, there is some sense that human beings are now confronting nature with forms evocative of their own bodies rather than of nature's topographic shapes. But is there only that? Is the natural analogy wholly absent?"* (Scully, 1991; 16) The summit of the temple touches the clouds filling the chambers in it by wet breath, 'the very breath of the clouds, the chill of rain' which serve as evidence of his claim.



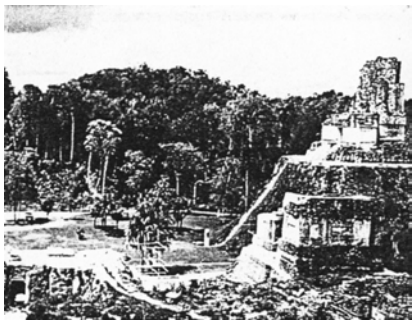


Fig 3.28-Fig 3.29 Tikal, Guatemala, Temple I, Ah Cacao, and Temple II, Lady Twelve Macaw

Early Egyptian civilization considered the world of nature as cyclical and predictable by their accurate calendar. Thus by following seasons they were able to predict the harvesting and planting time. In addition, according to Crowe their world was characterized by the constancy of the Nile valley; *"..by a closed and finite cosmology, and of course they sought a similar consistency, predictability, and sense of unity and closure in the places they built."* (Crowe, 1995; 74) Christian Norberg-Schulz, in order to describe the Egyptian settlements, also emphasizes the geographic structure of such simplicity and regularity. Analyzing the pyramids and even the temples in Thebes, he concludes; *"We see, thus, how planning and architecture were employed to complete and articulate the natural structure of the country."* (Norberg-Schulz, 1993; 7) The ziggurats and pyramids in Egyptian culture demonstrate same principles as the temple at Teotihuacan; imitation of mountains, yet without any mountain on horizon. They were intended to connect the earth and the sky as in Mesopotamian myth. Egyptian building attempts of pyramids culminated in those in Gizeh where the avoidance of the appearance of the weight is achieved. The four planes of the pyramids' faces slant back and recede, disappearing to a point in the sky. However, in the tomb of Queen Hatshepsut the pyramid disappeared completely and the tomb was cut deep back into the cliff itself. The tomb positioned as closely as possible to the shape of the cliff as if returning entirely back to earth.

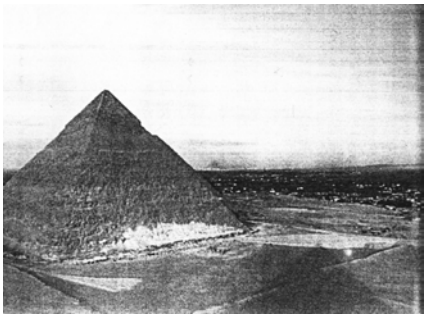


Fig 3.30 Pyramid of Khafre (Chephren), Egypt

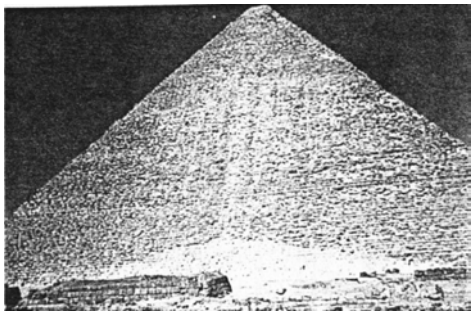


Fig 3.31 Pyramid of Khufu (Cheops), Egypt

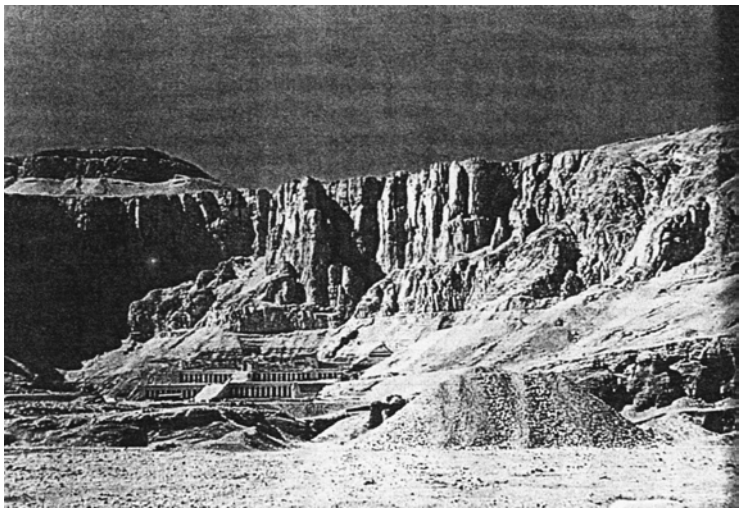


Fig 3.32 "Quarnain" with Tomb Temple of Queen Hatshepsut, Egypt, Circa 1480-1450 B.C.

Greek architecture is described by Christian Norberg-Schulz as; *"Basically, Greek sacred architecture is an architecture of plastic bodies"* and he continues exploring different approaches; *"Greek space is therefore characterized by its heterogeneity. It is not ruled by the same laws on all environmental levels, like Egyptian architecture, but is determined by a multiplicity of modes of organization."* (Norberg-Schulz, 1993; 23) Greek world was very different from Egyptian in terms of its geography including coastlines, harbours, and varied lands whether filled with forests or barren. On this account they perceive their world within an open system unlike Egyptian closed and finite cosmology. In addition Norman Crowe points out that Greeks were merchant traders and therefore interacted with peoples who looked, thought, and lived differently. These conditions are most probably some reasons why they had changing attitude in architecture and idea of nature.

In Delphi, according to Schulz, the landscape has a great imposing power. The distribution of the elements of the sanctuary in an irregular way, worth to be analyzed in order to exemplify the topological planning of Greek sacred architecture. *"The word 'topology' can be used in its fullest sense in relation to Greek sanctuaries. They are determined by the character of the place, the topos, and do not admit any geometrical grouping of buildings which would symbolize a more abstract, general order. Buildings are individual units representing archetypal human characters which participate in the situation symbolized by the site. Different topological groupings are established, according to the situation."* (Norberg-Schulz, 1993; 24) Greeks intended to build

'individual' settings different from one another whether for suiting to the differing demands of the distinct functions or for embodying different divine people. Topological grouping of this sacred architecture is therefore fundamental for "*it conserve the individuality of each element."* (Schulz, 1993; 39) This statement discloses a clue about the conception of topography in Greek culture.

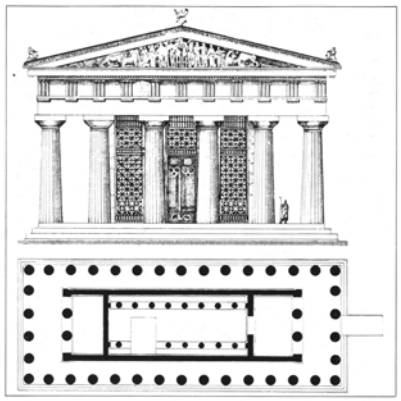


Fig 3.33 Sanctuary of Apollo, Delphi, Reconstruction of the East Facade, and Plan

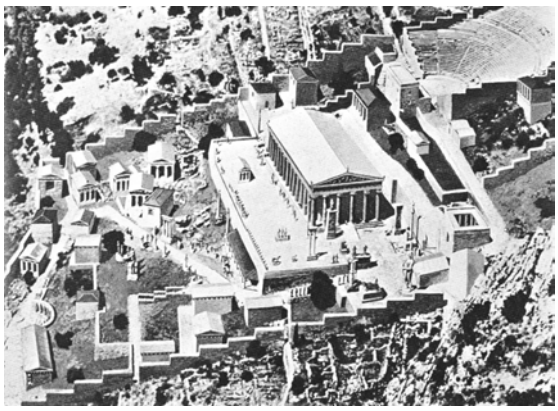


Fig 3.34 Sanctuary of Apollo, Delphi, Reconstruction, c.350 B.C.

Greek temple diverges from earlier precedents emerged in Egyptian and American culture. *"The Greek temple was an image of victory. It embodied the Greek conquest of the Aegean and the intrusion of the Olympian gods into the domain of the old goddess of nature."* (Scully, 1991; 39) Their temples were no longer imitation of forms of the earth; they rather became divine persons with their bodily unity, and compact mass made up vertical, self-sufficient, geometric units. *"By the late seventh century, in any case the Greeks seem to have decided that the way to make their new temples express their divinities as they imagined them, with human characteristics distinct from those of the sacred topographical formations in relation to which they took their stand, was to surround them with a peripteral colonnade of columns…suggesting an Egyptian temple turned inside out."* (Scully, 1991; 49)

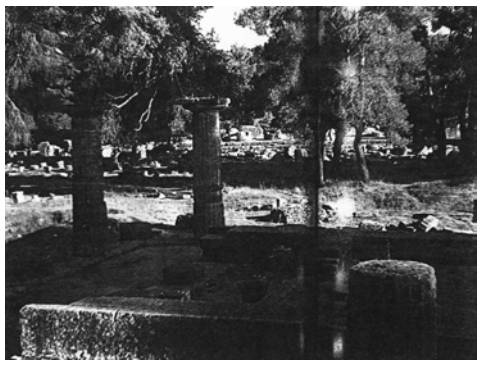


Fig 3.35 Temples of Hera and Zeus, with Pelopion, Olympia, Greece

As mentioned before, Greek architecture displays heterogeneity, which also appeared in two major sites of Classic period; the Sanctuary of Zeus at Olympia and the Acropolis of Athens imbued with two distinct world views. At Olympia Greeks explore the concept of law by Zeus, the character of crime and thus the limits of human behaviour contemplating the differences between man and nature while avoiding any victorious attempts. Olympia sited in a plain landscape filled with trees displaying peaceful relationship with the surrounding. However, at Acropolis, as Scully pointed out, there was breaking of limits, 'the ready acquiescence of nature to human action and the victory of polis. It is located on the summit of the mountain like a fortress, in a bare land dominating the view. Christian Norberg-Schulz interprets these different approaches in terms of siting; *"Siting, then, was anything but arbitrary; rather it is determined by the experience of the natural environment, as manifested by its particular forms, and interpreted by it."* (Norberg-Schulz, 1993; 24)

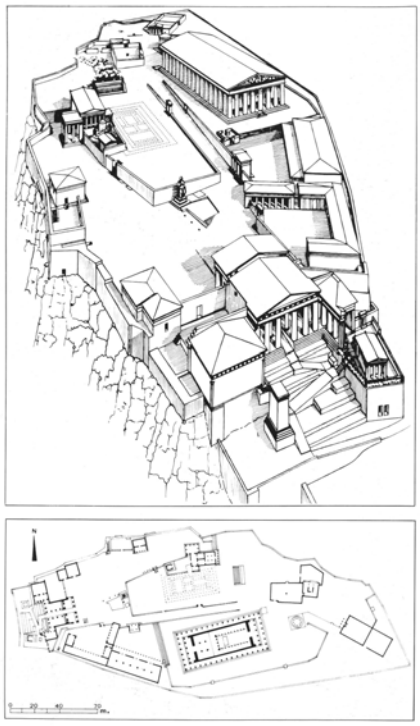


Fig 3.36 Acropolis, Reconstruction, Athens, c.400 B.C.

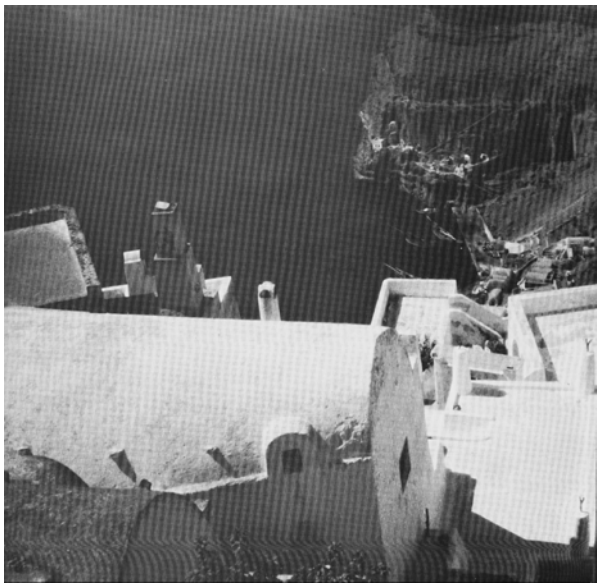


Fig. 37 Phira, the capital of the small Greek archipelago of Thera

Fig. 38 view from Greek island, Santorini

In addition to its axial planning, Roman architecture is mostly characterized as being spatial as opposed to the Greek plastic architecture, thus there was the interior space that counted. However that is not to say that Romans ignored the outside world. Schulz states; *"In the Roman world places were chosen or considered sacred because of their particular character. Genius Loci"* (Norberg-Schulz, 1993; 42) Besides, Schulz puts into consideration another Roman intention, which is participating actively in history; *"Whereas we do not know the foundation date of any major Greek building, all Roman monuments represent important historical occasions. The built environment thus*

became a concretization of the cosmic Roman state and its history." (Norberg-Schulz, 1993; 56)

The great interest and tendency to the interior of Romans was in fact the sign of Europe's obsession far beyond Christianity; to control nature, or to keep it out, hence, as stated Vincent Scully, the preoccupation with interior space has dominated European architecture and has largely superseded, in symbolic terms, its relationship to nature.

It is apparent that the early civilizations' concept of natural topographical formations constituting the physical world around them is imbued with religious and mythical beliefs. Although Greeks concentrated on humanity, they did symbolize divinities like Egyptians. The world of nature, whether it is predictable or not, was filled with reason, regulated and directed by divine forces. Therefore the physical appearance of the world was in fact the embodiment of those divinities to them. Whereas, this conception of physical world has altered and it became to be envisioned as it appeared to human eye, like a visual formation.

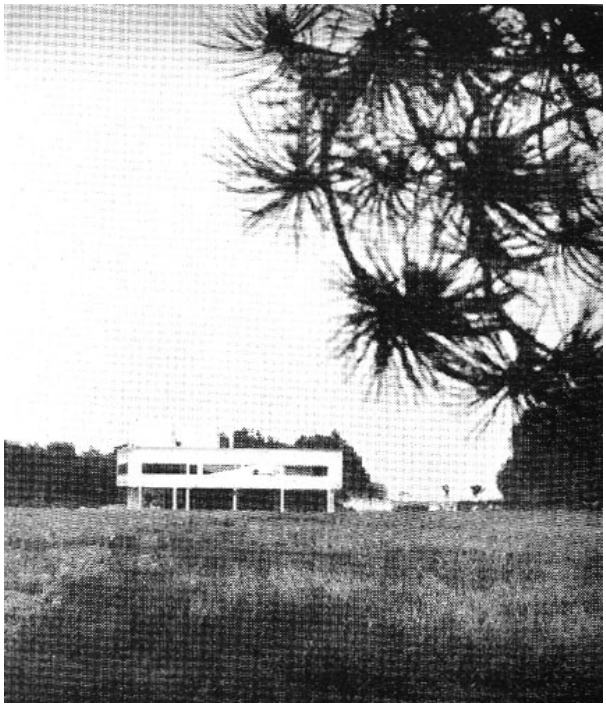
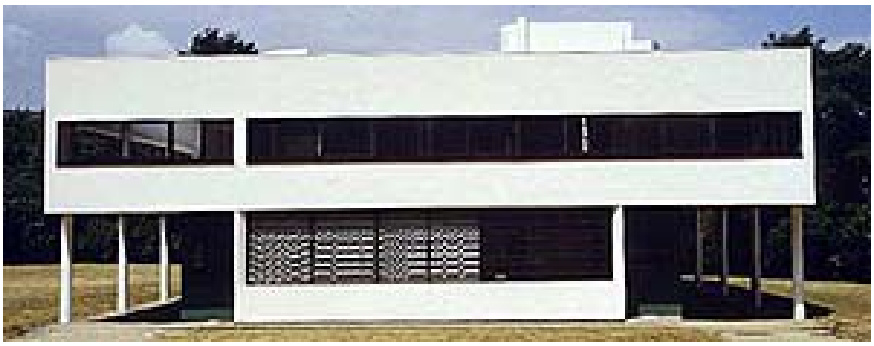


Fig 3.39 Villa Savoye, General View

Villa Savoye, that Crowe finds it resembled to a Greek temple, and that usually associated with Greco-Roman classicism and continental European traditions is sited in a flat topography and its vicinity is surrounded by groups of trees. It has an

unobstructed appearance within the natural context, thus clearly discernable by its colour, form and siting. Savoye, raised with its pilotis, seems to cut its connection with the ground. In the interior of the building one is guided by the ramp through the roof where one is faced with a framed aperture of the sky rather than the vicinity of it as if it is intended to contact the terrain as less as possible.

Fig 3.40-Fig.3.41 Villa Savoye



Le Corbusier's similar approach to the site may also be observed in his Unite D'Habitation, with its minimum connection with the ground and its roof garden where one can celebrate the amazing view of surrounding mountains.

Fig 3.42 Roof Garden, Unite D'Habitation

Fig 3.43 Unite D'Habitation, General View

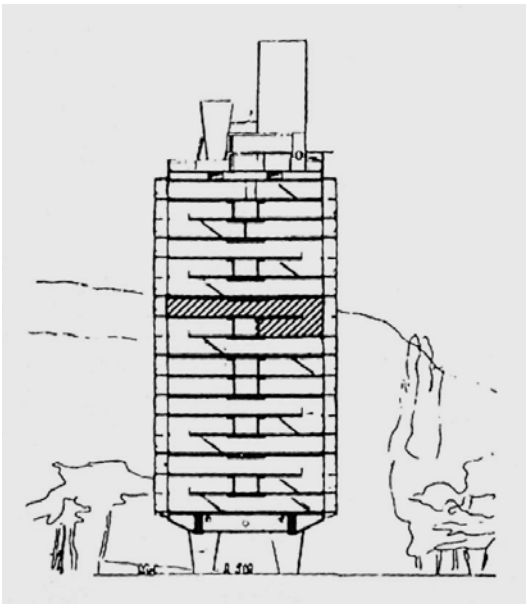


Fig 3.44 Unite D'Habitation, Section

Fallingwater house designed by Frank Lloyd Wright and imbued with the romantic period and certain Anglo-American traditions is sited in the 'heart' of a natural setting without any attempt to make itself distinguished and noticed within. Frank Lloyd Wright, describing his approach to Fallingwater House mentions about his intention on 'feeling place' but not just looking at. That is why, the house instead of being located near fallingwater allowing its view openly perceivable, is sited on it. "The 'place' for Wright was not an environment just as it was not a landscape. If one were to look fro a sense in which Wright responded to the place, it would be necessary to turn to that which was more elemental, topographical." (Ponte, 1997; 20)

Fig 3.45 Fallingwater,View from below

Fig 3.46 Fallingwater,View from Bridge

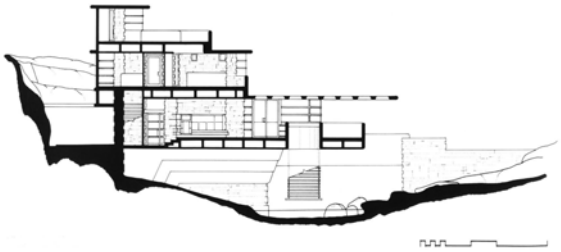


Fig 3.47 Fallingwater, Section

Fig 3.48 Fallingwater, First Floor Plan

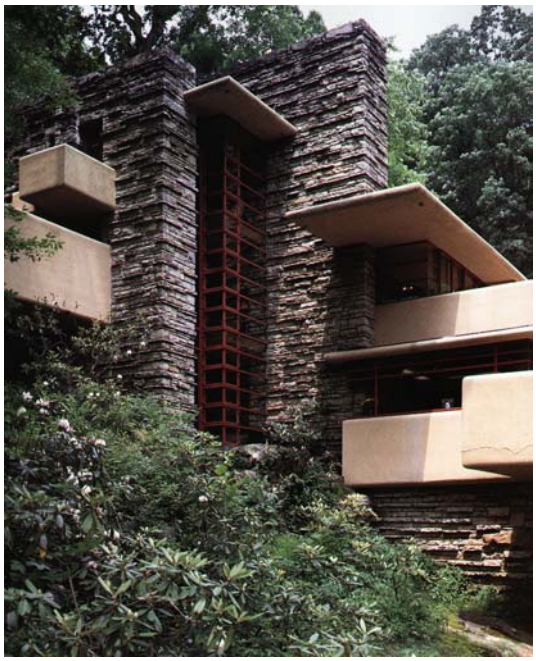


Fig 3.49 Fallingwater, Exterior Detail

The building, as opposed to Villa Savoye, acknowledges some references from the topographical formations of the site. In the outline of the house appearance, the parallelism between this layered composition formed by the outcropping stones and the cantilevers of the building is noticeable. In other words Fallingwater House is designed to fit into the site. While considering the relationship with the fallingwater especially from the platform just above the water even permitting to touch it, and the stone belonging to the ground but permitted to penetrate in the building to form the partial floor of living room, the unification of the building with the landscape is such intimate that it is difficult to discern where finishes the natural and begin the artificial. However that is not to say that it is designed to appear as the continuation of the natural setting, rather, to establish concordant connection with it testifying the possibility to display a delicate human touch in nature.

Fallingwater House and Villa Savoye appear as two distinct examples in terms of the ideal relationship with nature based mostly on differing cultural factors that these two prominent architects possess. As a matter of fact, attitude towards topography is threefold; building over the ground, on the ground and underground.

Fig 3.50 Glass House, near Sao Paulo, Brazil, 1950-51, Lina bo Bardi

Over the Ground

Fig 3.51 Green Valley Yatsugateke

On the Ground

Fig 3.52 Dance School, V. Garatti, Aerial View
Under the Ground

In addition to these examples, that mentioned threefold classification of the architectural approaches towards topography may be exemplified by buildings from vernacular architecture or by settlements from non-pedigreed architecture of different cultures differing from each other mainly by virtue of their diverging climatic conditions.

For example, in the name of ‘building under the ground’ the settlement near Tungkwan, China remains as an appropriate model of troglodytism. In virtue of the quality of the earth around Honnan, Loyang, and some other parts of China, it is easy to carve the ground and settle in while forming rooms with vaulted ceilings.

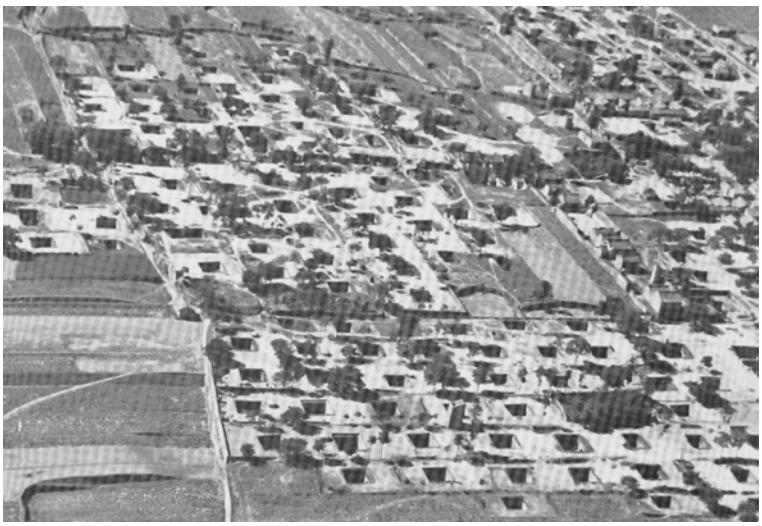


Fig. 53 settlements near Tungkwan, Honnan, China, general view

Fig. 54 settlements near Tungkwan, Honnan, China, partial view

Fig. 55 an underground village near Loyang in northern China, partial view

The Anatolian valley of Goreme, with its volcanic formations eroded by wind and water, offers man also soft soil to be carved without difficulty. Bernard Rudofsky, in his book 'Architecture Without Architects', states; *"Whether the stylised shapes suggested houses or not, the soft stone had only to be enlarged and smoothed in order to provide habitable spaces."* (Rudofsky, 1981; 49) Rudofsky calls this way of forming habitations 'architecture by subtraction'.

Fig. 56 view of carved cone, Capadocia

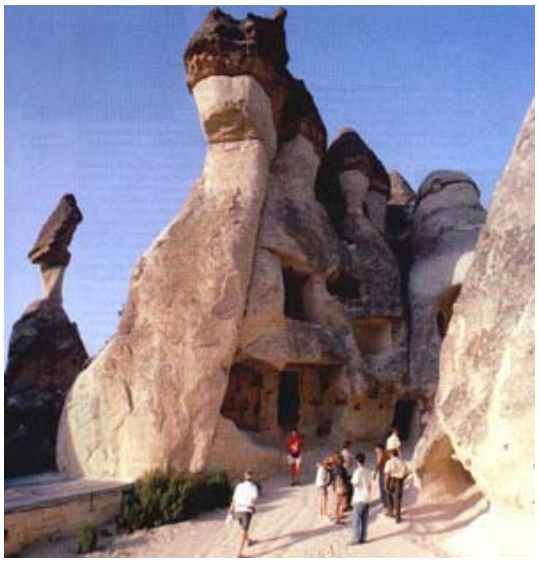


Fig. 57 cones with living quarters, Capadocia

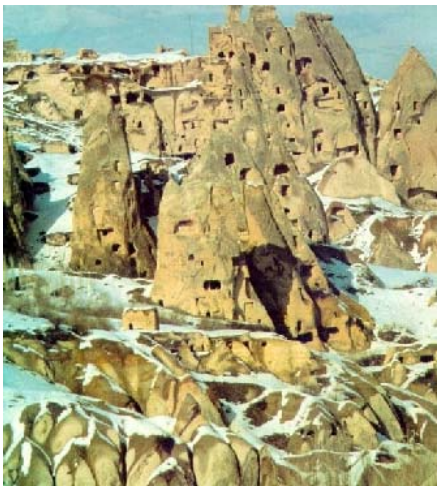


Fig. 58 view of cones, Capadocia

Fig. 59 general view, Capadocia

Fig. 60 general view, Goreme valley

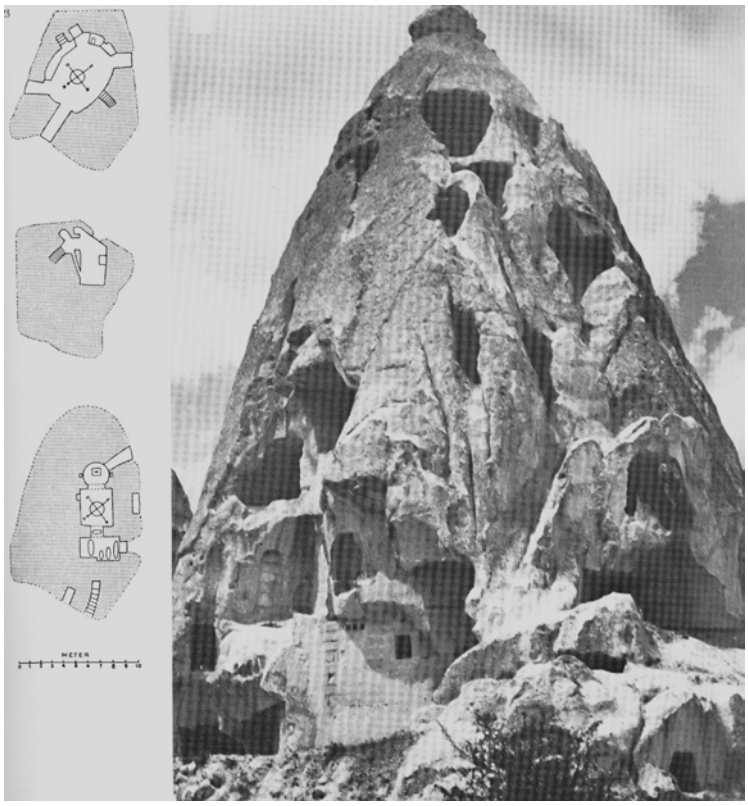


Fig. 61 view of a great cone ‘sculpted by nature’, with its plans of the apartments, Capadocia

As to ‘building on the ground’, Turkish vernacular architecture offers outstanding approaches worth to exemplify. Houses which are sited on steep hillsides in Blacksea Region or in Anatolia are lined up in accord with the road parallel to the slope of the site.

Fig. 62 Seyrantepe, Karacam, East Blacksea

Fig. 63 Sahintepe, Caykara, Trabzon

Fig. 64 terraced soil, Karacam, Caykara, Trabzon

Fig. 65 general view of Sirince

Fig. 66 general view of Safranbolu

‘Building over the ground’ implies having minimum contact with the earth namely topography. This approach may be adopted in order to be protected from insects or wild animals, or in order to take precautions against floods, briefly this way of building is usually employed because of the uncomfortable natural conditions.

Fig. 67 Abai house from Malaysia

Fig. 68 a house lifted from the ground in Malaysia

Oscar Niemeyer whose name is called usually with Le Corbusier, is a prominent Brazilian figure in architecture, with his monumental edifices integrating complex functions into volumetric unities boldly structured via advanced techniques of reinforced concrete. There is no doubt that he is strongly inspired by Le Corbusier by

means of adapting his principles to the unique circumstances of his native Brazil. He has developed a 'free-form' modernism going beyond the rational architecture of the rigid and rectilinear geometry of the International Style.

Analysing his synthesis of 'modernist oppositions', the conditional factors appear as the historical circumstances and physical and socio-economic contrasts of Brazil. David Underwood touches on this point stating; *"Extremes appear in the country's topography and climate, ..., from the dramatic mountain's luxuriant vegetation, and picturesque curving shorelines of Rio's Atlantic coast to the vast, scrubby flatlands of the Brazilian frontier."* (Underwood, 1994; 18) He also claims that Oscar Niemeyer saw himself as a 'creator of sculptural forms that echo the curving contours of the tropical landscape and are thus in tune with the mystique of a mythical Nature'.

"It is not the right angle that attracts me, nor the straight line-hard and inflexible-created by man. What attracts me is the free and sensual curve, the curve that I find in the mountains of my country, in the sinuous course of its rivers, in the body of the beloved woman. The entire universe is made of curves, the curved universe of Einstein." (Oscar Niemeyer, translation by David Underwood, 1994; 41) Especially, in his own house Canoas, the ministry of Education theatre project and the project for new exhibition annex for Ibirapuera, it is readable his fascination with the curving forms and feminine mystique of the Brazilian landscape.

The Lagoa house is designed by Oscar Niemeyer in 1942 at Rio de Janeiro, for himself. This house is seen as a synthesis of Corbusian five points and vernacular traditions of Rio de Janeiro. Corbusian five points are considered as input as long as the house has pilotis lifting it from the sloppy ground overlooking the Lagoa Rodrigo de Freitas, a free plan, a free facade, and modified ribbon windows. However the last point of Corbusier, meaning the roof garden, is inverted by means of its position; it is arranged in the ground level. This departure from Corbusian principles, allowed him to establish a more organic link between the house and the site. In addition, in so doing Niemeyer, according to Underwood, *"took a first step toward neutralizing the Corbusian mechanistic distinction between the building as work of art and nature as something to be artificially contained, framed, or controlled."* (Underwood, 1994; 36)

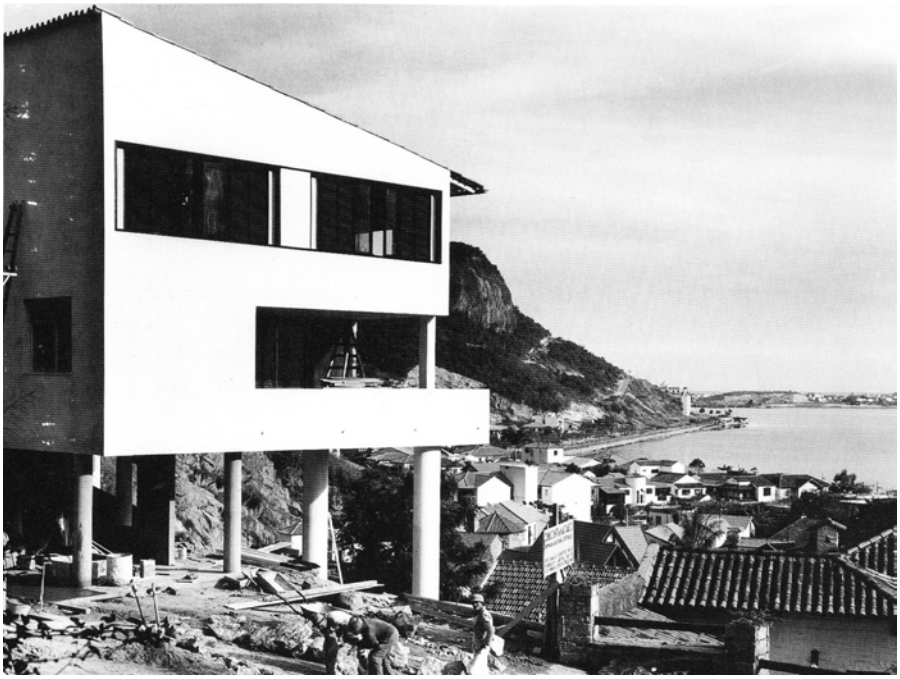


Fig 3.69 Lagoa House, near the Lagoa Rodrigo de Freitas, Rio de Janeiro, 1942

The piloti construction system provided Niemeyer topographical advantages like leaving the terrain unprepared for any elaborate foundation or freeing the dwelling from the limitations of the site by elevating it from the ground and offering a commanding view of nature. This attitude also brings along 'tropical airiness, structural lightness, and monumental elegance' which are the three most 'characteristic features of Niemeyer's new Brazilian modernism'. Its siting on the sloppy site elevated by pilotis, is interpreted by David Underwood as 'a modern monumentalization of the vernacular' for its resemblance to surrounding dwellings by means of their siting in hills providing magnificent varying views and cool wind to each.

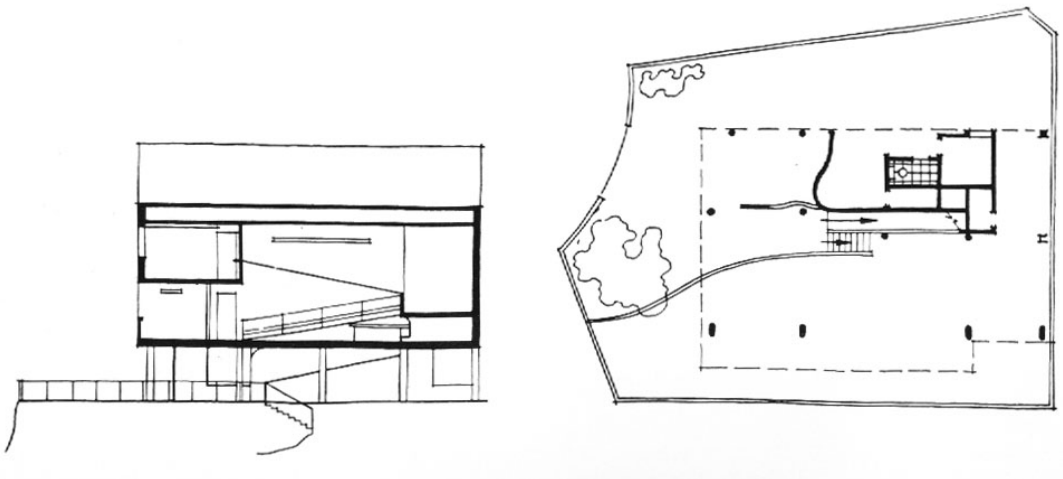


Fig 3.70 Lagoa House, Rio de Janeiro, 1942, Section and Floor Plan

Based on the discourse that architects' own houses are the personal playground, this house may be conceived as Niemeyer's favourite design game. This masterpiece is seen as the full synthesis of building and natural nature. *"My concern was to design this residence with complete liberty, adapting it to the irregularities of the terrain, without changing it, and making it curved, so as to permit the vegetation to penetrate, without being separated by the straight line. And I created for the living rooms a zone of shade, so that the glazed walls wouldn't need curtains and the house would be transparent as I preferred."*(Oscar Niemeyer, translated by Underwood, 1994; 79) The house designed in 1953, is set on a steep mountain site surrounded by a dense forest and having a vast view towards the sea. Its roof is a meandering canopy 'open to and in harmony with' nature. *"The thin, horizontal concrete slab roof cut into a series of flowing curves borrowed from the natural context seems to cover an indefinite space that flows beyond it on all sides."* (Underwood, 1994; 79) The most important feature of the house is its complete integration with natural elements omitting the conventional distinction between nature and architecture.

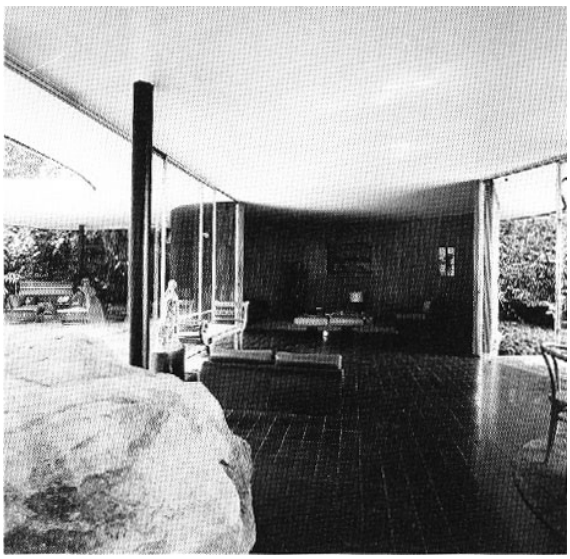


Fig 3.71 Living room

Fig 3.72 Canopy against Mountains

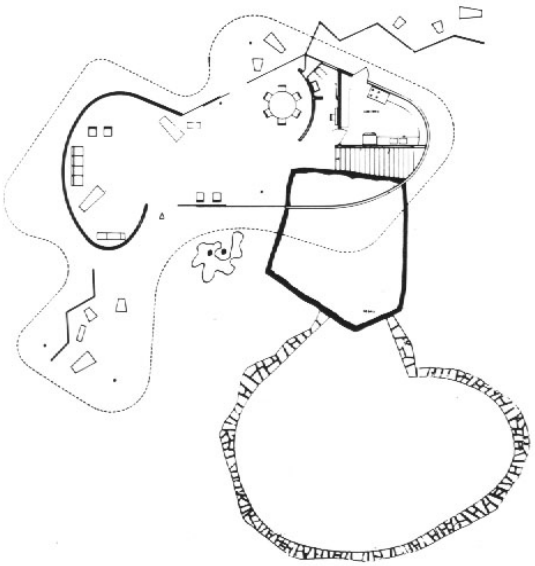


Fig 3.73 Canoas House, Plan

In this house design, the disappearance of the pilotis, allows the building, which is brought, back down to earth, be in closer relationship with the 'natural nature' of the mountain. In so doing, especially by the integration or penetration of the huge boulder, the building appears as emerging from the site. This boulder, partaking of 'the water of the pool, the space of the exterior terrace, and the interior volume', presents the 'timeless geological process' and 'spiritual presence that gives this house a sense of transcendence, permanence, and belonging'. It is apparent that the major formal elements of the design belong to nature as if testifying the architect's attitude towards the lyrical forms of Brazil's natural milieu. On this account, Underwood claims that 'At Canoas, Niemeyer let nature be his decorator'.

Fig 3.74 Canoas House, Garden, Rio de Janeiro, 1953-54

Fig 3.75 Canoas House, Interior View, Rio de Janeiro, 1953-54

As a matter of fact, this design is considered as the symbiosis of the conflicting theories, a neutralization of the distinction between 'art being created and artificial, and nature which is to harnessed by technology', a total 'reconciliation of nature and art'.

In Howe's architectural 'flow' and so in the conception of 'flowing space' lay the idea of space's being immaterial, meaning, something other than 'matter'. As stated David Leatherbarrow *".. for materials are always and everywhere limited; space, by contrast, is not."* (Leatherbarrow, 2000; 179) Confronting these two concepts, 'space' and 'matter', Frank Lloyd Wright, through his 'corner window' pointed as; *"In this simple change of thought lies the essential of architectural change from the box to free plan and the new reality that is space instead of matter."* In Leatherbarrow's standpoint, Wright's thought explains *"the collapse of the distinction between ideal and real space, suggesting that the former outlines the essence the latter."* (Leatherbarrow, 2000; 179) He uses the term 'collapse because he thinks that by the emergence of 'flowing space', it is no longer possible to talk about two different concepts of space as 'ideal' and 'real', speaking in Howe's terms.

However, Leatherbarrow points the failure of this ideal space conception in the field of architecture. In as much as "built elements can never be dematerialized to allow for unobstructed flow or drift." In the nature of flowing space lay also the impossibility of talking about distinct places. As long as 'flow' requires ceaseless passage, it is not

possible to fix the boundaries, and places without boundaries are not places at all. Hence, he also puts the concept of 'movement' in consideration, for movement can no longer be seen as a 'form of transit' from one place to another because in this context, there is no site with fixed boundary. *"Instead, movement is the ambient glide that planes of reference provisionally direct; in flowing space there is a blur or haze between what had been assumed to be the points of rest, something less objectlike than vague, or 'mysterious' as Howe said."* (Leatherbarrow, 2000; 180)

However, if flowing space is something that can be directed then it cannot be nothing. Therefore, Leatherbarrow describes this ambiguous existence as; *"Instead, flowing space is something in the manner of light or perhaps of sound, something sufficiently concrete to be directed but not so concrete as to be contained,"* (Leatherbarrow, 2000; 180)

The concept of spatial flow was often connected to thought on glass, transparency and reflection. David Leatherbarrow, consequently, parallels his conception of topography with flowing space as; *"On this account, flowing space would seem the milieu, matrix, or medium of architectural design. It is equivalent to what I have described as the building's background, to architectural topography? Both have the capacity (and extensity) to transcend the economy of the building's enclosure. And both antecede its articulation. Are they not one and the same thing: the real and ideal horizon of architectural definition?"* (Leatherbarrow, 2000; 181)

Frank Lloyd Wright's concept of 'destruction of the box', suggesting 'the freedom where before imprisonment existed', has, in fact, precedent as testified by his writings. Being guided by the book of Okakura Kakuzo, he contemplates a quotation from the famous Chinese poet-prophet Laotze; "The reality of the building does not consist in the four walls and the roof but in the space within to be lived in." Wright interpreted this passage as; "that space, not matter, is the reality of the building."

Arata Izosaki observed Wright's intention on inside connected to outside and judged this connection as being actual. He strengthens his observation by Wright's emphasis on cantilevers as a sign of their capacity of 'leading the vision beyond the walls.' Leatherbarrow clarifies the similarity of this in and out relationship in Japanese

understanding besides pointing out a difference. For in Japanese case, this mentioned relationship and connection is established not only in actual manner but also in a metaphorical way. He puts the Japanese 'tea house' into consideration in order to clarify the issue. The house equipage addresses to our senses of smell or hear and not to visual senses and makes feel to be *"in a distant sea breaking among the rocks, a rainstorm sweeping through a bamboo forest, or of the soughing of pines on some faraway hills."* (Leatherbarrow, 2000; 182_Laotze) *"Such an 'invisible' presence is not inferior to the visible sort, although it is not known in the same way, nor does it need to be noticed to be significant."* He links the resemblance of the tea house to the landscape in which it is located, to its being different from it. *"Landscape and building can be joined only if they are distinct, interlocked only if separate, for only when they are different can they perform their roles similarly, and only then can the energies of the first, the landscape, animate the second, the building, by filling it to capacity."* (Leatherbarrow, 2000; 183) He continues integrating his conception of 'continuity'; *"as long as continuity is taken to be unobstructed and direct, as long as materials, light, and space are thought to flow without interruption from in to outside of architecture, there will never occur the kind of participation the tea house ceremony celebrates."* (Leatherbarrow, 2000; 183)

Consequently, David Leatherbarrow's understanding of 'continuity' is apparently different from whose topographical understanding is the continuity of the terrain. His 'continuity' is not something direct. In this case, with phenomenological approach, Leatherbarrow suggests a harmonic unification of differences or a continuity of obstructions. Therefore, it is evident that his understanding of the dualism of landscape and building is founded on a respectful interrelation with regard to the distinct performances they display and a dualism established by a relation deprived of any attempt of dominion.

According to their nature, they are distinct, yet that is not to say ignoring each other's existence, in contrast, having a corresponding interrelation in a reciprocal manner. Hence, he defines the task of describing topography; *"to develop vocabularies and concepts that will demonstrate how settings that are distant and distinct from one another can also be interconnected, how they can remain apart and be joined."* Accordingly, he explains his concept of topography as; *"To see architecture and its*

horizon topographically means to focus on the performances separate settings sustain, and to discover analogies or similarities between them. Only in this way will architectural topography be seen to exhibit not just remoteness but familiarity: that is, typicality of recurring situations. Only in this way can the horizon be both dispersed and compact." (Leatherbarrow, 2000; 183) However, in order to avoid any misleading of his words, he emphasized his thought of establishing reciprocal and respectful interrelation between landscape and building, not by 'imitation. *"This does not mean that the patterns and situations by which topographies are known need to manifest themselves in the same materials (as if isohylic), nor be spatially continuous (isotropic), nor given the same shape and profile (isomorphic); instead, they have to accommodate similar performances, each serving as a receptacle and 'singing' in its own way, like the kettle, the tea master, the tea house and the forest."* (Leatherbarrow, 2000; 183) In order to create an ideal relationship, he argues; *"For topography to maintain itself as a coherent horizon, it must be allowed to retreat from its well-known forms."* (Leatherbarrow, 2000; 185)

David Leatherbarrow exemplifies his understanding of topography via the work of Aris Konstantinidis, Greek architect educated in Germany in the 1930's and practiced in Greece. It seems to Leatherbarrow appropriate to display Konstantinidis' work, in virtue of differences that he maintains in his design, in order to establish harmonious relationship between the landscape and building. He also has a tendency to establish 'friendly spatial transition' from the inside to the outside of the building in his architectural work. This transitional approach is becoming apparent through his overhangs and cantilevers, however they are used in shorter extent and less stylized than Wright's. Similar again to Frank Lloyd Wright, Aris Konstantinidis thought *"that the building should look as if it were always part of the terrain in which it was sited."* (Leatherbarrow, 2000; 186) Considering the architectural work of Frank Lloyd Wright, Leatherbarrow explains the conformity of his buildings to their locations as continuity by virtue of similar forms' that he later describes as 'isomorphism'. In fact, Konstantinidis does not seem to agree a different approach. *"Every true Greek work of architecture is made to the scale of the landscape in which it stands, and becomes with it."* (Leatherbarrow, 2000; 187_ Konstantinidis) He thus claims that modern buildings should have an appearance to be built long ago; *"more genuine and contemporary a*

building is, the more it looks as if had always been there, from time immemorial, rooted in the landscape." (Leatherbarrow, 2000; 189_ Konstantinidis)

As the means of differences that he maintains in his design approach, David Leatherbarrow, although in many of his discourses he appears close to Frank Lloyd Wright, puts the difference between them as; *"Whereas Wright stressed the similar appearances of rooflines and hillsides (the similarity he pursued between the form of the roof of the building, Taliesin East, and the hillside), Konstantinidis recognized their necessary differences. Instead of literal parallelism between the soil's geometry of repose and the angle of a designer's adjustable triangle, he maintained there was a strong contrast between the work of nature and of art, despite the fact that they had to be understood as 'one'."* (Leatherbarrow, 2000; 189)

Aris Konstantinidis displays as examples of this 'concordant discordances' the vernacular examples of Greek villages, standing sharply in terms of forms and colors against the steep slope of mountains. *"Form and color could not be in stronger contrast. Despite this, the village and mountain reciprocated one another."* and continues in order to explain the dissimilarities between built and natural environment; *"... the effort that integrated the people and the town was a collective response to the circumstances in which they had been born, those that presented them with abundance and lack. Thus anything 'discordant or alien' would be assimilated over time, but not entirely."* (Leatherbarrow, 2000; 189)

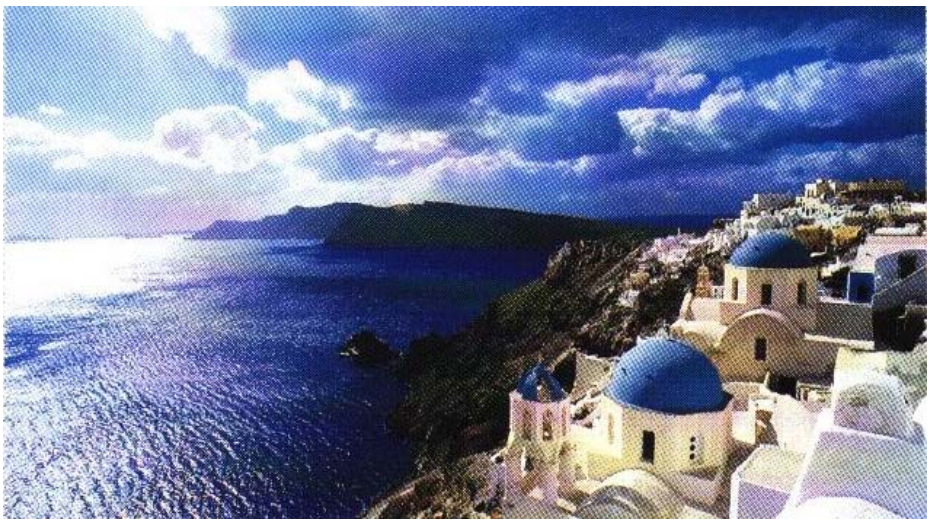


Fig. 76 general view from a Greek island

fig. 77 general view of Santorini

Unstable character of topography:

One of the main differences between building and landscape is the unstable character of the landscape, for it is an inextricable part of the natural world which is in constant motion. This unstable character, uncertainty and changing conditions of the surrounding drive the building to adopt itself to it in order to maintain this reciprocal relation in harmony. (White wash, adjustable equipment cool in summer, heat in winter) Hence, quoting Leatherbarrow; *"But topography is not just what it appears to be; indeed it is this but also what this conceals, the latency to which I referred earlier. Like the horizon at the edge of all that I see, it is both apparent and recessive or manifest and withdrawn; although articulated, it is also indistinct, which is to say it is both what has emerged and what is still emerging"*. (Leatherbarrow 2000, 202)

Considering architectural design, it is evident that evaluation and perception of an artifact is not independent from its vicinity, the landscape in which it forms its existence. The architectural approaches on design, in nature considering the mutual relationship between topography and building is more or less abrupt, two folds; Design by opposition or parallelism.

David Leatherbarrow mentions about the conventional perception of sites as; *"Articulated topography is also what we picture when describing the site 'as it really is'. Conventional studies of sites or regions seek to discover and describe the conditions as they are. In most of these we envisage or aim at some kind of picture which is why we speak of landscape rather than land"*. (Leatherbarrow 2000, 202) In this point, it is important to contemplate the literary and meaning of these two words: landscape and land. While land is 'the solid part of the surface of the earth in contrast to the water of oceans and seas', landscape is defined as the 'portion of land or territory that the eye can comprehend in a single view including all the objects so seen'. (Merriam-Webster's Unabridged Dictionary)

Hence, conventional studies of sites seem to derive from seeing and perceiving the land as a picture, something crystallized and stuck in a moment. Thus, the land is perceived something 'stable' whereas it is, in fact, definitely not. This being not stable issued from being a part of the world in a constant motion, like climatic changes, earthquakes.

This side of landscape which is unseen and rejecting to be pictured (like the secondary qualities of the world of nature mentioned in Chapter 2) is also significant, in David Leatherbarrow's standpoint, for he stated; *"... this is what gives rise to all the adjustable instruments that virtually animate the building, as it gives rise to what the building is able to narrate"*. (Leatherbarrow 2000, 202) This quotation also points the importance of hidden, internal aspect of landscape that dictates the building to change.

CHAPTER IV

THE CONCEPT OF TOPOGRAPHY IN CONTEMPORARY ARCHITECTURE

4.1. Nature in contemporary architecture:

Man, first of all, took shelter in the voids that he found in nature. Afterwards he settled in the voids that he created imitating those in nature. He endeavored to create his own nature (second nature) over the world of nature. He began to question the rules of this world whose formation endured billions of years, 6000 years ago. As a result of his insistence in his own rules against the rules of nature there emerged a conflict still active today. (Kiraz, 2001; 14)

Tadao Ando, in his essay 'Amplitude's Promise Fulfilled', claims that nature and architecture, originally, 'enjoyed a symbiotic relationship, an integrated fusion'. However, in modern times, this relationship is conceived as disintegrate and architecture has been attributed an extreme prominence against nature. *"Nature has been severed from the environment of architecture and reduced to the status of a subordinate element. When, concomitantly, economic efficiency was given priority, nature came to be treated as a mere visual accent."* (Ando, 1992; 41) Nature was only an aspect of landscape, a tool for embellishment, and too often it was 'relegated to the margin of the site'. Nevertheless, in recent years, there is a somewhat different inclination towards the fusion of nature and architecture than Ando's remark referring to their original state.

4.1.1. Technology; leading the world towards artificiality:

Man's technical ability acquired more and more characteristics since especially he became homo faber, man the maker. These technical abilities developing as time passed, allow man to learn, to self-repair, self-direct and to reproduce, culminating in the state of self-sufficiency. By the great developments occurred in technology man became aware of

his capabilities which encouraged him to work harder and produce more in order to enlarge the limits of his abilities. Technology which offers comfort to man was seen as a world of possibilities to ease life. It also brings domination and freedom to human life. Tansel Korkmaz interprets these notions that technology offers as on one hand the causes of modern man's enthusiasm and optimism towards modern technology, while on the other, the reasons why man is and should be anxious about technology.

"For some peculiar reason, their existential affinity in the modern world (nature and technology) *is too close for comfort and, while one can only speculate on this, it may be that our greatest fear is not the loss of nature or the restriction of technology. Rather, it may be the inconceivable but intuited sense that they may somehow collapse into one another that is at the heart of our discomfort."* (Wheelwright)

Hence, the growing interest and effort directed on technology paved the way to an artificial world. Man's handicap to get used to comfort easily and prefer the easier way rendered technology as an inextricable and indispensable part of our life. Thus technology, bringing comfort to life, created artificiality, which coiled up our life. Le Corbusier who claimed that house should be a machine in which man can live, was in fact implying a mechanical regulation and bringing forth the possibility of the replacement of nature with machine with its predictability, efficiency and its defectless existence. The functional complexity of modern life was possible only if it is eliminated by the defectless mechanical regulation. Contemporary life, living in urban environment takes humanity away from the natural since technology serves as an artificial nature. All these developments lead to a blurring of boundaries between the natural and the artificial with the loss of authenticity.

As mentioned in the second chapter, which explores the shifting idea of nature, the conception of nature, at the beginning, is based on man's self identification as subjugated to nature. *"Nature in its raw wild form represented a challenge to overcome, an enemy to defeat. Sanctioned by Old and New Testament alike, the "taming" of the wilderness was not only necessary for survival, it was sacred work. Today, this reverence has seemingly reversed. The relentless texture of civilization has become "savage" and "wilderness" treks*

antidotal. Yet, how has it happened that in political discourse and popular rhetoric, we privilege the natural over the technological while, in practice, continuously call upon technology to reconstruct the body of nature?" (Wheelwright)

Tansel Korkmaz, in her article entitled 'Technologism', claims that technology operates based on two motives; firstly it is based on the taming of the world through control and discipline (systematization, classification and standardization), secondly, on continuity of the power and thus dominion through the passion of multiplication and boundlessness. Hence architecture focuses on standardization and mass production thus on the process rather than the result; the passion to construct the tallest tower, the longest bridge or the longest cantilever replace the endeavor to build the city. She puts out another side of technology, which is technology as challenge. (Korkmaz, 2001; 118)

By 1980's, technology focused on the simulacrum rather than object itself, intensifying on flexibility and adaptation through benefiting from the possibilities of post-Fordist production and the developments occurred in communication technology, thereupon technology survives with dominion splitting from the real world. The 'subject' of the modern world had become a subject with multiple identities, which flows from one (identity) to another. (Korkmaz, 2001; 118) Greg Lynn's article about folding in architecture may be demonstrated as an appropriate example testifying this multi-identity. He mentions about the morphing effects used in contemporary advertising and film industry in order to display the connection with recent developments in architecture. He exemplifies the video of Michael Jackson; Black & White. *"In this video multiple genders, ethnicities and races are mixed into a continuous sequence through the digital morphing of video images. It is significant that Jackson is not black or white but black and white, not male or female but male and female. His simultaneous differences are characteristic of a desire for smoothness; to become heterogeneous yet continuous."* (Lynn, 1993; 12) Modern subject searching for a support to grab hold of in this modern world filled with flow acknowledges this fluidity at the end. A cyborg flowing into one shape to another or even a person surfing in internet thus to flow into one identity to another may be given as examples.

The ‘subject’ rhetoric of the twentieth century is based on self-awareness and realization of individuality, thus on unification, collection and maturation. However today, to cope with life is only possible with being broken to pieces, classifying the relations differently and with flow. On this account architecture tries to represent this idea of flow by the help of new software. The technologist discourse is focused on defining some ‘new liveliness’ and on emancipating by getting rid of restrictions of ‘Cartesian space’ concept by the aid of software programs developed by the animation and film technology. This time high technology creates ‘change’ not in the construction process but during the process of representation. (Korkmaz, 2001; 119)

4.1.2. The ability of reproducing nature:

Philipp Oswalt argues; *“The two spheres* [natural and artificial] *are beginning to interpenetrate and fuse with each other (which does not mean that at the same time, all contradictions disappear or that problems diminish). Nature is no longer something given; rather it is something that is made.”* (Oswalt, 1998;) In this statement, it is clear that ‘Nature as something made’ is used in order to recall the ‘reproduction’ of nature by mankind. In recent years, nature appeared as a constitutive element in a large number of projects. *“There has been a fusing of natural elements and architecture which is not the nostalgic attitude of the call for a return to nature, but instead is based on a radically modern conception. Nature is understood as both an artificial and an artistic element.”* (Oswalt, 1998;) In much of these contemporary projects nature is considered as an element to be implanted in architecture. The reason why Philipp Oswalt uses the terms ‘artificial’ and ‘artistic element’ referring to nature is because nature is used out of its context, in a totally artificial environment and mostly in a dead state; something made which is intervened and integrated into the work. This concern also testifies the possibility of manipulating and transforming nature, and even the ability to reproduce it anywhere.

Fig 4.1 Villa Savoye, Roof Garden

Fig 4.2 Villa Savoye, Roof Garden

Reproducibility of nature, rendering its artificial version, removes the absolute necessity of its rooting to the ground. On this account, Le Corbusier's roof garden appears as the reproduction of the landscape. A contemporary example of this kind of reproduced landscape is The Dutch Pavilion designed and constructed for Expo 2000-Hannover by MVRDV. The pavilion is constituted of several superimposed stages of artificial landscape like a huge stack as long as it has no any continual connection between its each floor and the only element that connects these floors to each other is the circulation system. The roof offers a view of the fair over an artificial lake, two storeys below the roof one encounters a Dutch forest reproduced in a platform without any connection with the ground. The pavilion seems like a stack of artificial landscapes ranging from a forest to synthetic spaces including tomato plantation or multimedia cinema. This project seems like the representation of the degree/extent of how much nature can be compressed and how much its qualities of use and experience can be intensified.

Fig 4.3 Dutch Pavilion, Expo 2000, Hannover

Fig 4.4 Dutch Pavilion, Tomato Plantation

Fig 4.5 Dutch Pavilion, Interior View

On this account, the design of Emilio Ambasz for Worldbridge Trade and Investment Center appears also as a building stacked of manmade landscape. This 'graduated stacking of organically shaped floor plates and garden terraces' allows Ambasz to cover the requests of not affecting the view of the countryside and not reducing the local bird population's habitat in the site. The interior of the building house a winter garden lit from above. The building which seems like an 'unusual topographic event, appears to have resulted from the orchestrated uplifting of the earth's surface.'

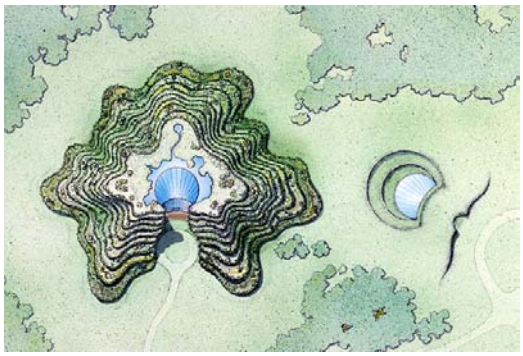


Fig 4.6 Worldbridge Center, Aerial View

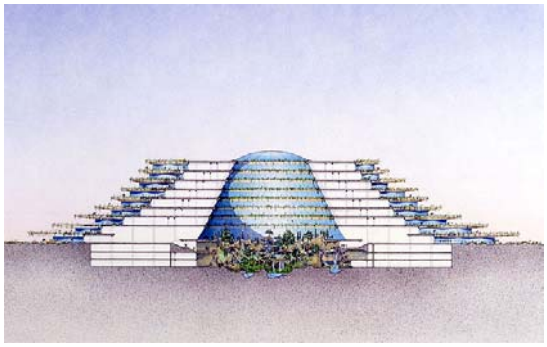


Fig 4.7 Worldbridge Center, Section

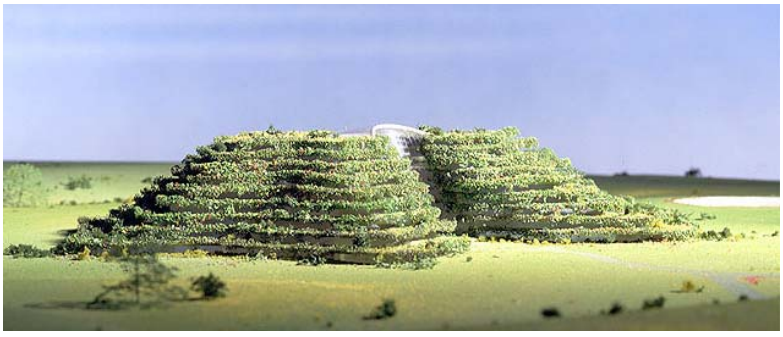


Fig 4.8 Worldbridge Trade & Investment Center, General View

Patrick Blanc, a French botanist, works on a project, which makes possible vertical gardens. According to him these are vegetal walls 'in which plants grow on vertical surfaces without ant substratum of earth, nourished only by a circulating fluid.' Thus these transportable vegetal walls may be positioned as will without any grounding necessity.

The use of nature as an artistic element may be observed in the work of Herzog & de Meuron, Dominus Vineyard in Napa Valley. The walls of the building consist of wire meshes, which are filled with stones. Henceforth these walls, besides their stability, permit light penetrate inwards. Another similar example is the project of Francois & Lewis for the renovation of an office building in Rouen where pine needles gathered from the surrounding forest were poured into the spaces between the double-glazing. These projects are the representatives of the use of raw nature as material in terms of its visual appearance and perception. However the naturalness of those materials may be questioned for their dead state and use out of their context. These projects are also pointing an intention towards the 'decontextualism' of nature.

Fig 4.9 Dominus Vineyard, California, General View

Fig 4.10 Dominus Vineyard, Wall Detail

Fig 4.11 Dominus Vineyard, View from the Corner

The production of artificial landscapes may be observed obviously in leisure industry. These spaces of consumption are the result of introvert-designed projects, which intend to create a so-called microcosm without any connection with outside, neither in terms of vision nor context. This also clarifies why they are situated usually in the edges of the city; they are supposed to contain every activity that man seek while his intention is leisure, therefore they don't need to be close to any other building serving similar activities. Hence they appear as buildings self-sufficient within the framework of entertainment architecture. These new types of buildings contain usually great variety of artificial landscape; lakes, trees, even forests, ski trail, beach palms, or lagoons. As a matter of fact, likewise the Dutch Pavilion designed for Expo 2000 Hanover, these projects exemplifies the intensification and compression of landscape which is the outcome of the desire for maximum intensity of experience that the world of consumption is based on. As a result there is a clear loss of authenticity.

The artificial landscapes offering more comfort are predictable, reliable and thus safe on the contrary of their natural models. Comfort as mentioned before as a charming concept leads man to prefer the non-authenticity. Jeffrey Deitch stating; *"Now, at a time when the sciences are dedicating themselves to creating artificial life and computers generate virtual realities, when it is a more a question of image than of substance and when everything is marketed, from cars to politicians, the search for truth might have become obsolete. There is no absolute reality any more, just the possibility of multiple realities, each of them as 'real' or as 'artificial' as the next. There is no longer the absolute reality of nature."* (Oswalt quoting Jeffrey Deitch, 1998;) mentions about the loss of authenticity by using the truth obsoleteness through the framework of artificiality.

4.1.3. The fusion of nature and architecture:

In contrast to the earlier conception of nature and technology as separate entities, today's conception of these two realms is rather close to the 'hybridization' of them. They are no longer considered to be opposites. The figure of the cyborg in science appears as the most revealing example of this thought representing a synthesis of nature and technology.

Greg Lynn uses the example of the film Terminator 2 *"where the actor both become and disappear into virtually any form"* testifying the capabilities of computer technology of *"constructing intermediate images between any two fixed points resulting in a smooth transformation."* (Lynn, 1993;12) One may easily encounter similar examples to testify this conception in other disciplines as in medicine in which there occur incredible implantations of mechanical apparatus in human body or industrial ecology which aims to insert the tools for energy efficiency created by man into natural cycle. Philipp Oswalt interprets these developments as; *"In this connexion, it is not a matter just of achieving a production cycle as close as possible to nature, but of the idea of integrating technical civilization and nature into a global system."* And he quotes Kevin Kelly who describes the fusion of biology and technology in his book 'Out of Control'; *"The sphere of that which is born - everything that is nature - and the sphere of that which is made - everything that is constructed by man - are becoming one. Machines are becoming biological and the biological is becoming a technical construction."* (Oswalt, 1998)

Fig 4.12 Five Courtyards Project in the City Center, Munich, Hypopassage

While regarding the realm of architecture on the account of hybridization of nature and technology Jacques Herzog and Pierre de Meuron remain as a prominent figures whose view of nature through their work is; *"We see artificial and natural processes as one entity, as a continuum. We no longer believe that nature and society, nature and city confront each other dialectically…we believe that architecture should fuse with life, the artificial with the natural, the mechanical with the biological."* (Oswalt quoting Jacques Herzog and Pierre de Meuron, 1998) Their plant curtains developed for Hypopassage project in Munich

and the new office building for Ricola in Laufen may be conceived as the outcome of this thought. The definition of space is provided by the veils of plant. Consequently solid walls and ceilings, which are the elements of classical architecture, are substituted by plant elements, which make architectural space come into being.

On the account of the fusion of architecture and nature, the Argentine architect, Emilio Ambasz appears as a prominent figure, with his sensitive approach towards the site and local practices. In all its projects, he seeks to reconcile the building with nature, through the complete integration of building and the landscape. The quest of "The Green Over the Gray", or the landscape over the building, in his works it is easy to notice his pursuit for minimalism; a minimalism with nature. Peter Buchanan interprets this minimalist approach as; *"Instead of formal complexity or semiological conundrum, he adds or draws attention to the primordial elements of nature-sun and sky, earth and grass, water and wind."* (Buchanan, 1992; 21) As to him, this tendency results in edifices which seem as if they display a 'sacredness' in the term of earlier cultures. According to Tadao Ando the architecture of Ambasz may be called 'environmental architecture' and he adds; *"Someday we may just call it, again, architecture... His works promises an ample domain where the found and the made, the natural and the artificial, coexist joyfully."* (Ando, 1992; 43)

Fig 4.13 Fukuoka, Front View

In his project for Fukuoka, Ambasz's main concern was twofold. Firstly, he was supposed to maintain the green area constituting the site of the project, which was the last remained green part of the city, secondly, he was in charge to build a new governmental office building into this green space. His successful reconciliation between these two opposing aims resulted in a multi-use building with 41 stories, containing an exhibition hall, museum, proscenium, theater, conference facilities, government and private offices, as well as large underground parking and retail spaces.

Fig 4.14 Fukuoka, Aerial View

Fig 4.15 Fukuoka, Terraces

The fusion of architecture and nature, whether it be in the sense of direct inclusion of natural materials into building or 'translation of landscape qualities in architecture' by means of forming artificial topographies, points to a 'turning away', as Philipp Oswalt puts forth, from the mechanical age that had significant influence on the architecture of classical modernity. According to him, this turn from the architecture of a 'Neue Sachlichkeit' goes far beyond the 'counter-designs of an organic architecture (like Frank Lloyd Wright, Hugo Haring or Hans Scharoun) or a deconstructionist architecture (like that of Daniel Libeskind or Peter Eisenman)': *"the inclusion of nature throws into question not only the exact, the right-angled, the standardized and the homogeneous, but also the hygienic, hardness, smoothness, firmness and the constructed. It discovers for architecture the amorphous, the soft, the damp, the living, the unpredictable, the dirty, the rough and the formless."*(Oswalt, 1998; 07) The inclusion of natural materials may be exemplified by the exhibitions of Land Art. Since these works are usually the results of process rather than being merely end-

products. The land art works put in galleries in order to display them to the visitors are still in the process of being/self-construction. It is the case when exposing organic materials like earth or plants and witnessing their germination, moulding or decaying as if they testify that there is no a terminated form, finished, unchangeable object. On this account, what Ayşen Savaş mentions in her writing, 'Against Nature: Atrophy and the Museum of Natural History' is worth to notice. She analyses Antero Kare's, the artist, experimental glass cubes that she calls what they contain as a formation process but not a pre-designed objects. These are the models of animal forms cut out of styrofoam which will allow the incubation of some kind of bacteria. *"At the different conceptual levels, these three animal simulations and their representation of the esthetization of environmental atrophy."* (Savaş, 2000; 104) They appear as if they are 'bio-indicator' change.

These works of art prove the radical approach of the artists who integrate the process into their works in order to escape their control. However, in architecture, the works that include natural elements are still the result of the controlled process by the architect who, 'in so doing, determines the final appearance of the building'. It is the case even if they use the 'objets trouves' in site, like in the project of O.M.A., the Rotterdam Kuntshalle, where they integrated logs in their raw states, as columns of the building, or the SNU museum in Seoul where they used a large erratic boulder as a support for the suspended exhibition floor. Yet, in the works of Herzog & de Meuron, the factory building for Ricola in Mulhouse-Brunstatt (1992/93) and the project for the Kunstkiste in Bonn, the use of the rainwater comes closest to such a concept of process, as long as rainwater 'runs down concrete walls where moss and lichen form, and the polluted rainwater turns the concrete brown'. Besides, the rubble walls of the Californian vineyard project offer nesting places for birds, as if animating the walls. These projects are the indicators of the urge to escape the direct control of the architect through natural process like sedimentation, growth and settlement. As a matter of fact, these projects formed by the inclusion of nature into or around the building are not the first examples. Frank Lloyd Wright had also an intention, as Donald Hoffmann stated, *"to surround his buildings by nature with all the signs of change that speak more directly of life"* (Hoffmann, 1986; 5). Therefore, in these cases the works gain an 'autonomy from the author' and they acquire a life on their own.

Fig 4.16 Ricola Factory, Mulhouse, General View

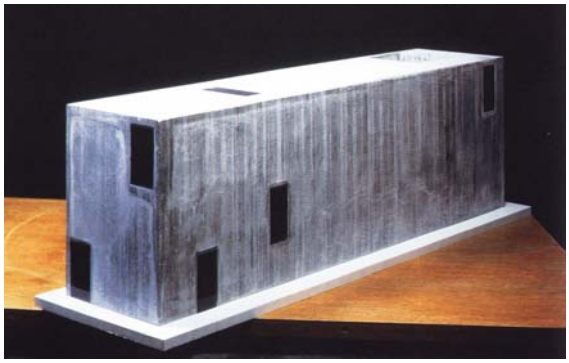


Fig 4.17 Kunstkitse, Bonn, General View

Philipp Oswalt argues on this account, that *"Such liveness is no longer dependent on the inclusion of natural process"* since he points the paradigm change in computer science from constructing to automic evolution. He adds quoting from Kevin Kelly, author of the book 'Out of Control'; *"The world of the made will soon become like the world of the born: autonomous, capable of adapting and creative, but – logically – beyond our control."* (Oswalt quoting Kelly, 1998; 09)

In contemporary architecture, as exemplified above, there is an intention towards considering the design as a process rather than attaining a final form of the end product, taking into account the characteristics or the elements of the formless. Philipp Oswalt states; *"In this way, the process of folding for example, as it is implemented to generate landscape buildings, is not based on that which is precisely fixed but instead, represents a process in which the form is the result of reacting flexibly to local particularities – regardless of whether they are the part of the surroundings or part of the program."* (Oswalt, 1998; 08)

4.2. The concept of folding:

"Folding is an art of seeing something not seen, something not already 'there'."

John Rajchman

4.2.1. The theoretical background of folding:

Modern architecture was based on rationalism. Modern world ignored all irrational existences and developments trying to establish a complete homogenous world. Hence in this homogeneity there was no room for any incongruent component. In the context of modern world the possibilities that counted and were taken into consideration are those, which obey to rationality whereas those considered irrational were not paid attention. This mechanism of exclusion of modernity has received attacks, for example Foucault's writings on insanity and crime may be considered as responses to that exclusion mechanism in order to reveal other ignored reality; a counter reaction against modernity's homogenization project of the world and society eliminating incongruities.

Another prominent characteristic of rationalism is its strict connection with functionalism. Rational architecture is based on functionalism; it builds aiming to serve something. Tschumi's Follies also testifies these counter reaction against rationalism. In his project for Park 'La Villette' he designed plastic objects to locate in strategic nodes as if they are embodiments of absurdity and nonsense thought without taking in account and thus attributing any function, hence as if they are aimed at breaking rational strict stereotype of modernity. Follies pointed out the limits of the reason.

Fig 4.18 Follies, La Villette, B.Tschumi

It is clear that designing involves subjectivity; it is a subjective act as long as it is a process directed by the designer's mind whether it be an individual or a group embracing inner personal drives. An architect imposes a life style, dictates the way of using his craft or predetermines the social life in his building to some extent as to his thoughts. Consequently, he designs and builds according to his own will. This is an obvious sign of power testifying Foucault's claim that space is ideological.

In his essay 'Towards a New Architecture', questioning the concept of architecture to be considered new, Jeffrey Kipnis also argued on post-modern discourse which has demonstrated both the impossibility of 'invention tabula rasa' and the necessity to 'celebrate the very differences' Modernism sought to erase. As to him, an architecture can be judged only if it conforms his fourfold precondition. These criteria are as followings; *"it must continue to avoid the logic of erasure and replacement by participating in recombination. As far as possible, it must seek to engender the heterogeneity that resists settling into fixed hierarchies. Furthermore, it must be an architecture, ie, a proposal of principles (though not prescriptions) for design. Finally, it must experiment with and project new forms."* (Kipnis, 1993; 42) These criteria are put forward by him in order to distinguish or predetermine the so-called 'new' architecture. Therefore Post-Modernism is seen by him as detached from the theorization of 'new' architecture as long as it does not cover the last two criteria. Moreover he sets forth this detach as the explanation of the shift in some New Architecture theorists' attention from 'post-structural semiotics towards 'a consideration of recent developments in geometry, science and the transformations of political space'. He also adds the interpretation of this shift that is usually marked as; 'move from a Derridian towards Deleuzian discourse'. Ignasi de Sola-Morales claims that a moment of change is marked by a crise, and he continues as; *"...every situation of this nature* [crises] *is a situation of extreme consciousness, hyper-awareness, and also loneliness."* (de Sola-Morales, 1996; 4)

In the context of the mentioned writings, Kipnis states; *"...the Deleuzian cast is reinforced with references to Catastrophe Theory-the geometry of event-space transformations-and to the new Biology. Not only are geometry and science traditional*

sources par excellence of principles and form for architecture, but, more importantly, the paramount concern of each of these areas of study is morphogenesis, the generation of new form." (Kipnis, 1993; 42) It is ironic that although these areas of study are considered as prominent fields, which affected architecture, they are, in fact, emerged and developed within their own realm, and without interacting with the discipline of architecture as if supporting the claims on architecture as an applied science. It is even argued by some critic like Ignasi de Sola-Morales, that new theorists like Greg Lynn are judged inconsistent since their discourse rely on these field. They seem like they embrace these discourses belonging to outside of architecture in order to legitimate their work.

Deconstructivism escapes and stay away from ideology. Its concern is not 'to construct' as long as construction involves ideology. Construction is an indication of will power. Deconstruction functions in order to dissect what kind of will or ideology does it involves and thus to decipher what it excludes. The 'différences' of Derrida focuses on the particulars, differences, on small parts, which are separated from the homogenization concern of modernity getting free of its all misleading ideology.

During the last three decades, especially since Robert Venturi's 'Complexity and Contradiction in Architecture' and Colin Rowe and Fred Koetter's 'Collage City' and following 'Deconstructivist Architecture' of Mark Wigley and Philip Johnson, there have been a growing concern towards heterogeneous, fragmented and conflicting formal systems. According to Greg Lynn these were the attempts to embody the 'differences within and between diverse physical, cultural and social contexts in formal conflicts'. Consequently the architecture of these concerns may be interpreted as the representation of differences.

Ignasi de Sola-Morales also argues on differences stating that; 'What makes it possible to delimit the specific condition of each individual, subject, or work of art is its differences.' Since, according to him the knowledge of the 'same' allows only 'tautology'. Respecting the difference means also the 'affirmation of the plural' and a plural culture obtains its 'profile, distinctive outline and characteristic feature' by manifesting its

differences. *"To approach the description of current situation of contemporary architecture a s a question of differences means taking plurality not only as a starting point but as a multiplicity within which to situate any segment of this contemporary reality."* (de Sola-Morales. 1996; 7)

As to Greg Lynn; *"Deconstructivism theorised the world as a site of differences in order that architecture could represent these contradictions in form... These same architects [deconstructivists] are beginning to employ urban strategies which exploit discontinuities, not by representing them in formal collisions, but by affiliating them with one another though continuous flexible systems."* (Lynn, 1993; 9) He explains this formal transition, meaning from collision to flexible-more smooth forms, as the search to exploit more fully the particularities of urban and cultural contexts. It is considered as a reasonable transition because deconstructivist projects stemmed from the internal discontinuities encountered within the building and site. However there is movement, as quoted from Lynn, towards employing urban strategies, which exploit discontinuities.

R. E. Somol, in his book 'Diagram Diaries', exploring the work and thus ideology of Eisenman, states as; *"The history of architectural production over the last forty years can broadly be characterized as the desire to establish an architecture at once autonomous and heterogeneous in contrast to the anonymous and homogenous building associated with the interwar rhetoric and postwar experience of the modern movement."* (Somol, 1999; 9) According to Somol this quest for autonomy and heterogeneity ('with its fundamental antinomy in the call for both identity and multiplicity') has taken several forms during that period.

On this account, there emerged some discourses aimed at breaking ideological space and exploring the outside of the rationality. The structuralists endeavored to build based on the search for meaning, identity, and memory. Rossi's discourse on collective memory may be considered as an example of this search. They, withdrawing personal drives aside, put the external inputs in the foreground of the design thus eliminating subjectivity they wanted the building formed by the search of meaning. In this point

Venturi's semiologic discourse on building like hotdog appears as the search of meaning going to absurdity. However Eisenman remains in a distinctive position.

Greg Lynn mentions about the architecture of the last twenty years, exemplifying Robert Venturi's Sainsbury Wing of the National Gallery, Peter Eisenman's Wexner Center, Bernard Tschumi's La Villette park and the Gehry House, that invests in the architectural representation of contradictions through which 'architecture represents difference in violent formal conflicts'. On this account there occurred also a counter reaction to formal conflicts with the emergence of Neo-Modernism or Neo-Classicism and Regionalism in order to reconstruct a continuous architectural language, through historical analysis and identifying local consistencies, respectively. According to Lynn these movements endeavored, in a sense, to conceal the already hidden contradictions that exist in the context. Thus one may conclude that both the search for unity and contradiction result from contextual analysis.

According to Greg Lynn the dichotomy of the options, which are conflict-contradiction and unity-reconstruction, which emerged in response to the discovery of complex, differentiated and heterogeneous cultural and formal context, may be framed by an alternative smoothness. *"Smooth mixtures are made up of disparate elements which maintain their integrity while being blended within a continuous field of other free elements...For the first time perhaps, complexity might be aligned with neither unity nor contradiction but with smooth, pliant mixture."* (Lynn, 1993; 8) Thus pliancy is understood by him as a concept which allows architecture to become involved in complexity through flexibility'. He states that; *"It may be possible to neither repress the complex relations of differences with fixed points of resolution nor arrest them in contradictions, but sustain them through flexible, unpredicted, local connections...Pliancy implies first an internal flexibility and second a dependence on external forces for self-definition."*(Lynn, 1993; 8) Smooth mixture is another concept that Lynn uses in order to determine the embodiment and incorporation of disparate elements by an external force. Smoothness implies pliant integration of these differences rather than representing them by collision of forms. *"The smooth spaces described by these continuous yet differentiated systems result from*

curvilinear sensibilities that are capable of complex deformations in response to programmatic, structural, economic, aesthetic, political and contextual influences... A logic of curvilinearity argues for an active involvement with external events in the folding, bending and curving of form." (Lynn, 1993; 10) Thus the recent pliant projects display a more fluid logic of connectivity than the contradicted employment of external forces in the context of Deconstructivism.

4.2.2. Folding:

Folding is seen as a concept that embraces the complexities, which are inherent in entities. These complexities forming incongruities are neglected and thus disregarded in modern world as if it serves as evidence of the mentioned project of modernity, which is homogenization. In this point, folding is conceived as a conception that allows to disclose the latent existences, which are actually in a receded position in entities and thus imperceptible as to an empiric eye which relies on factual information, observation or direct sense experience rather than questioning a deeper meaning lying in.

To take one step further in order to deepening in the investigation of the folding conception it is appropriate to look at its etymological root. Quoting from Merriam Webster's Unabridged Dictionary, the verb 'enfold' means; 'to surround with a covering: contain', 'to cover with or as if with folds: envelope' and 'to clasp with or within the arms: embrace'. These literary equivalents also reveal the involving potential or mechanism of the term. Therefore, on this account, unfold may be conceited as the exploration and thus the disclosure of the inert constituents whether unobstructed and obvious or latent.

On this account, it is appropriate to quote Gilles Deleuze. According to him; *"Folding-unfolding no longer simply means tension-release, contradiction-dilation, but enveloping-developing, involution-evolution. The organism is defined by its ability to fold its own parts and to unfold them, not to infinity,*(as long as it is a living being) *but to a degree of development assigned to each species. Thus an organism is enveloped by organisms one within another, like Russian dolls."* (Deleuze, 1993; 19) He also puts into

consideration that a part of the animal is not the same as the whole; that is why he exemplifies 'metamorphosis' as a state of change beyond something dimensional. In this point he contemplates the animals 'a heterogeneous or heteromorphic' creatures, like the fold of a butterfly into the caterpillar that will soon unfold. He continues as to clarify the issue; *"The simplest way of stating the point is by saying that to unfold is to increase, to grow; whereas to fold is to diminish, to reduce, to 'withdraw into the recesses of a world'."* (Deleuze, 1993; 19)

The fold has gained its most elaborate conceptions in the book of Gilles Deleuze; Le Pli. Deleuze, prominent philosopher, engendered 'Le Pli' as a study of Leibniz and the Baroque. In this book, he sets forth Leibniz's philosophy as a great baroque edifice, he claims that in Baroque's edifice lies the idea of an endless fold; 'folding into folding to infinity'. As Rajchman quotes Le Pli ends with the following words; 'We discover new ways of folding...but we remain Leibnizian since it is always a question of folding, unfolding, refolding.' However John Rajchman also argues that with these concluding words Deleuze discusses l'informe in music, painting and sculpture without referring to architecture. In this point Rajchman puts the work of Eisenman in Rebstockpark as an invention of the 'informe' or an 'informel' way of building and designing.

Rajchman contemplates and explains Deleuze's concept of 'informe' in the context of Baroque; *"Deleuze explains that the arts of the 'informe' are about two things: textures and folded forms. The baroque invents one possibility of fold and texture: there are the textures through which matter becomes 'material' and the enfoldings of the soul through which form becomes 'force.' In the baroque as in Leibniz, the metaphysics of formed matter is replaced by a metaphysics of materials 'expressing' forces."* (Rajchman, 1997; 14) The architecture of the 'inform' according to Peter Eisenman is; *"an architecture that exposes its containing grid as 'constraining' or 'framing' something that is always exceeding it, surpassing it, or overflowing it."* (Rajchman, 1997; 20) That is why he uses the word excess and the grid as his an indispensable element. Eisenman uses the Derrida's term, 'frame in order to discuss on grid. According to Jacques Derrida 'the dream of a completely unframed space is vain'. Grid in Eisenman's architecture is something which serves to

accommodate or encircle what is exceeding it, thus disclose the excess in a direct manner. The excess is in fact the literary equivalent of what surpass the Vitruvian commodity, firmness and delight. Rajchman interprets; *"..something that cannot be simply read as the adequation of form to structure, site, or function but that allows form to detach itself from such determinants and freely fold: namely the intensity that releases an 'excess' that takes a space outside its bounds or through which it becomes 'beside itself'."*(Rajchman, 1997; 21)

Somol claims that 'informe' is not simply the negation of form but 'a more complex maintenance and subversion of it.' On this account the fold appears, without ignoring 'a geometric rigor or discipline', as permitting 'a relaxation of homogenous or hierarchical organizations.' Even if the fold is considered as an aspect of a topological mathematics, as to Somol, it still promises to overcome 'not only the formalism of Rowe's classical mathematics but also a faith in the efficient functionality of Alexander's cybernetic version.' Greg Lynn uses the term 'anexact' in order to determine a concept of geometry also rigorous. While exact geometries may be reproduced and even repeated by anyone and anywhere as long as they rely on strict and fixed mathematical quantities, inexact geometries do not posses any mathematical rule thus lack the precision and also rigor for any attempt to measure. However 'anexact' geometry appears in this issue as a concept irreducible yet rigorous which implies that there is no sense to reproduce it outside of its context. According to him Shoei Yoh's roof structures are the result of this understanding of geometry. Odawara Sports Complex's roof structure is designed according to a mapping of a detailed analysis into structural diagram. This analysis is based on the contingent forces confronting the roof like snow loads. This kind of projects may be displayed as attempts to eliminate subjectivity from design process, as mentioned before. However one may suspect about this movement towards objectivity while especially regarding the words of Greg Lynn; *"soon we'll be designing form based on the air turbulence generated by pedestrians walking near the building."* (Kipnis quoting Lynn, 1993; 47)

John Rajchman continues in order to emphasize another significant concept of Deleuze, to clarify the fold; multiple. Deleuze uses this word at the beginning of his book

where he states that multiple should not be understood as only what involves many parts; *"The multiple is not only what has many parts but also what is folded in many ways"* (Deleuze, 1993; 17). *"In such multiplicities what counts are not the terms or the elements but what is in between them or their disparities; and to extract the ideas that a multiplicity 'enfolds' is to 'unfold' it, tracing the lines of which it is composed. Multiplicity thus involves a peculiar type of complexity-a complexity in divergence"* (Rajchman, 1997; 15) On this account it is apparent that unity is not conceived as an homogenous whole rather it is understood as an embodiment of the differences.

4.2.3. The fold in architecture:

If there is a single effect produced in architecture by folding, it will be the ability to integrate unrelated elements within a new continuos mixture.

Greg Lynn

The concept of folding in architecture was still in use even before the Deleuzian approach. It was mainly argued by Henry Cobb who developed his conception as a response to commercial development. He claimed that there was a need to 'both dematerialize and differentiate the massive homogeneous volumes dictated by commercial development'. As a matter of fact, his urge was also to establish a finer relationship with the heterogeneous urban conditions. He suggested a continuous surface which enclose and thus smooth the elements. This shared surface may be exemplified by the John Hancock Tower whose facade allows the building 'disappear into its context through reflection rather than mimicry'. Consequently folding was understood by Greg Lynn as a 'method by which the surface of a large homogeneous volume could be differentiated while remaining continuous'. The Allied Bank Tower with its folded and continuous facade also supports the principle of Henry Cobb.

Folding testifies another way of designing. It takes into account some precise environmental conditions, and reflects them into the form as consequences. These environmental factors may be the probable force applied by a huge mass of a building in

the vicinity, or a flowing effect that the flow of traffic or circulation may cause. Thus it is an understanding of form, which is created by the effects, emerged from the context formed by built environment. Whereas it may be inconsistent when one considers this way of design implemented in a site where there is no any building like a desert. Greg Lynn puts into consideration RAA Um's Croton Aqueduct project designed for Manhattan which is constituted by a single line passing through various places of differing functions in order to exemplify how these programmatic elements influence and alter the form of the project within context.

The shift from a concern for semiotics towards a concern for geometry, topology, space and events, as quoted before from Jeffrey Kipnis, is subdivided in two camps according to him; DeFormation and InFormation. Deformation, which may be considered as the substitute of folding in Kipnis' term, endeavors to engender altering affiliations which 'resist entering into stable alignments' by using abstract topologies irreducible. Information that he exemplifies with Koolhaas' Karlsruhe and Tschumi's Le Fresnoy, aims at forming a collective graft, 'usually by encasing disparate formal and programmatic elements within a neutral, modernist monolith'. Another characteristic of Information is its insistence on orthogonal language of Modernism. Kipnis puts the differences between them; *"While DeFormation emphasizes the role of new aesthetic form and therefore the visual in the engenderment of new spaces, InFormation de-emphasizes the role of aesthetic form in favour of new institutional form, and therefore of programme and events."* (Kipnis, 1993; 43) In order to clarify the distinction between these two concepts Jeffey Kipnis puts forth two projects to exemplify them; The National Center for Contemporary Arts at Le Fresnoy of Bernard Tschumi and Nara Conventional Center of Shirdel. Tschumi's attitude towards the existing structures at Le Fresnoy was unexpected as long as he did not endeavored to restore or manipulate any existing structure, rather he chose to build a partially enclosed modernist roof enveloping the entire complex. Tschumi's intention was also to programme all residual space, vitalizing them with events. The final project 'promise a spatial heterogeneity that defies any simple hierarchy'.

Fig 4.19 Le Fresnoy, the National Center for Contemporary Arts, B.Tschumi, General View

Like Tschumi, Shirdel also intended to unify incongruities in his project at Nara, whereas the form and internal structure was the result of 'folding a three bar parti with two complex regulating line geometries'. The first geometry's effect is to make flow the form of the non-referential monolith into the landscape. The other has a similar effect on 'the structural piers'. Between these two geometries the main space of the building remains as a residual space, because the programmes of the building are compressed in the floating volumes without contact with the main space. Briefly there are two key principles of Deformation according to Kipnis; the first is *"an emphasis on abstract, monolithic architectural form that broaches minimal direct references or resemblance and that is alien to the dominant architectural modes of a given site."* and the second is *"the development of smoothing affiliations with minor organizations operating within a context that are engendered by the intrinsic geometric, topological and/or spatial qualities of the form."* (Kipnis, 1993; 46) In addition to these criteria Kipnis can't help stating that a last criterion may be added, that is the portioned skin of the building according to the programmatic differences.

Kenneth Powell in his essay entitled 'Unfolding Folding' puts forth the goal of contemporary architects in their urban scale projects with regard the Baroque architecture which grew out of an age of conflict and violence, as; *"In particular, as Baroque architects transformed Rome and Prague, while respecting the existing form of those cities, the new organic architects of the 1990's are passionate urbanists. Urban transformation without violent upheaval is perhaps the central theme of their work."* (Powell, 1993; 7)

Within the framework of geology, folding refers to the sedimentation of mineral elements in the plateaus of strata. The beds of these strata forming continuous layering contain various different deposits compressed by external forces. This analysis of the word within the terminology of geology proves its sense of supple layering.

4.2.3.1. The architecture of Eisenman:

One may claim that Eisenman's primary concern is 'form'. His Ph. D. thesis of 1963; entitled 'The Formal Basis of Modern Architecture', in the beginning of his career, also testifies this argument. He argued that rationalism dragged us to platonic geometries. His earlier house designs, which he calls by numbers, were the result of experimental works aimed at transcending the rationality. Nevertheless, he was still using rational tools like grid. Then, his subsequent design works were formed by 'vectors'. His intention was also to send the ideology of the architect to backwards as much as possible and have the design free of subjective inputs. According to his work, vectors, which are the symbol of the external, surrounding conditions, were transferred to the computer in order to create the form. Therefore he represented the final form as the end product of a natural process. It is a representation of the reason of formation rather than its meaning. However while considering the vectors, which are the predeterminations of the design process, one becomes aware that it is the indicator of rationality too, which is ideological. In as much as it is the designer's decision to include these vectors as input and not the others, to design process.

Fig 4.20 House II, P.Eisenman

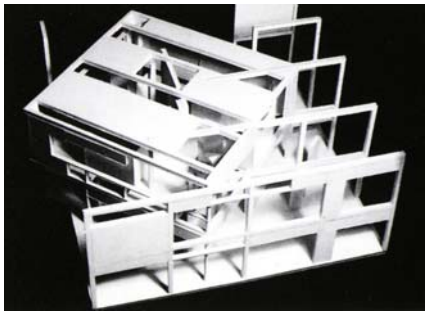


Fig 4.21House III, P.Eisenman

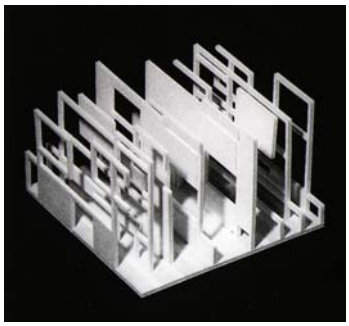


Fig 4.22 House IV, P.Eisenman

Therefore it is evident that it is not possible to get rid of rationality completely, as long as the predeterminations about the input of the design, which is set forth as purified from the personal ideology and thus relativity, are decided by architect or designer. Moreover, in fact, were the designers not involved even in this design process, then the 'raison d'être' of architects would disappear.

Somol interprets his projects that have been evolving since the Wexner Center as; "[they] *cannot really be discussed as 'works' or 'objects' or 'forms' or even 'structures'- all these terms being too aesthetic or technical, too well demarcated and defined. Rather, they really seem to be just 'things', with all the formless and transformative possibilities of the monstrous and grotesque that the term implies."* (Somol, 1999; 18) These 'things', according to him, indicate 'a transition from the clear structuralism of the early Roland Barthes to the base materialism of Georges Bataille, theorist of the excess.' who used the term 'formless'. Peter Eisenman's theoretical investigation of form, after his project for Colombus Convention Center, has moved towards 'informe' or what he calls 'weak form'.

On this account it is necessary to put into consideration the article of Charles Jencks, entitled ''Landform Architecture; Emergent in the Nineties'. He calls the works of contemporary architects like Zvi Hecker (Heinz-Galinski Jewish School in Berlin), Frank Gehry (Guggenheim Museum in Bilbao), Enric Miralles (Eurhythmics Center in Alicante) and Peter Eisenman as 'landform buildings'. He argues that the new complexity paradigm is evolving in different directions that these landform buildings deploy one of them. According to the Spanish architectural critic, Luis Fernandez-Galliano these works stems from the writings of George Bataille who attacked, as mentioned before, 'the notion of hieratic form in architecture and proposes, instead, a formlessness.' This formlessness is also pursued in art as in Yves-Alain Bois and Rosalind Krauss' exhibition held in Centre Pompidou, or as in the works of Robert Smithson or Andy Warhol. Charles Jencks claims that; *"The problem of the art, aside from the fact that its predictability becomes boring, is that none of it is truly informal, formless or entropic... It is hard to approach a condition of complete chaos, but computer programs can help our progress along this road if we want to travel it."* (Jencks, 1997; 31) However he finds Eisenman's work not as pursuing

formlessness but emergent form, within a stage of random generation. At the end of his article, Jencks interprets this tendency as; *"The intention may be the desire to get closer to the reality behind nature, the generative qualities behind both living and dead matter, that is, once again, the cosmogenic process which complexity theory has recently tried to explain."* (Jencks, 1997; 31)

The concept of 'weak' in Eisenman's architecture is interpreted by Somol as; *"For Eisenman, architecture-unlike writing-must struggle against its literal presence, which has traditionally been reinforced by the icons of 'strong from.' To articulate this non-dialectical condition between presence and absence, Eisenman posits the term 'presentness' as one possibility for a 'weak' practice, the hazard of architecture as event."* (Somol, 1999; 19) As to John Rajchman, Eisenman's understanding of the weak conception is the 'potential for reframing'; reframing the implicit complexities of a space. On this account, according to his principles of perplication there is no space that is not weak. *"...that weakness is always imperceptible, prior to the point of view that one normally has on the space or the place. Thus where architectural and urban vision for Venturi and Rowe remains a matter of discovering an imperceptible unity in a perceptible diversity of elements, in the Rebstock project it becomes a matter of 'indexing' an imperceptible disparation in what presents itself as a perceptual totality."* (Rajchman, 1997; 19) Furthermore, according to Kenneth Powell, this concept of 'weak form' paved the way for a 'flexible and flowing, soft-edged approach' to architectural design.

Folding therefore stands as a prominent concept in this sense. In the context of Folding the conception of 'contingency' is remarkable in order to propose it against the modern world as a critic. John Rajchman comments the architecture of Peter Eisenman as playing a game; *"...a game where chance becomes an inextricable part of design, and not something design must master or eliminate-a game whose object is to maintain the play of chance within the space of design."* (Rajchman, 1997; 34) Since, it is possible to get free of ideology with this unpredictability. It is a search of a dynamic form which may stand against the constant and static form of modernity.

While considering the concept of 'fold' in Eisenman's architecture, Somol interprets it as the resolving mechanism of the dilemmas that are inherent in Eisenman's earlier works. Considering these earlier works as consisting of two phases; the development of the first phase, meaning house series, was based on the manipulations of internal structure, besides, his larger scale archaeological projects which constitute the second phase, were designed according to the external contingencies of the contextual field. In that point Somol states; *"In addition to providing a means to negotiate the relations between the internal frame structure and the external urban grid, the fold enabled the development of figural effects (which had been precluded by the earlier house processes) as well as complex sections (which were hindered by the plan orientation of the larger scale archaeological work)."*(Somol, 1999; 21) R. E. Somol mentioning about the movement from 'the structuralist forms to textual grafts to folded singularities', puts Eisenman as the one who has provided a coherent program for the dual project of 'dismantling the classical-modernist object and the liberal-humanist subject.' *"While the house series focused on process as a way to displace the designer as an authoring agent, the archaeological projects (from Cannaregio to Wexner) sought new definitions of context that would destabilize the static identity of place. As a continuation of these reconfigurations of process and context, the folded projects have added a concern with section as a critique of the planimetric decidability of typology, which tends to contain objects through a limited logic of extrusion."*(Somol, 1999; 22)

John Rajchman, author of the book Constructions, puts the Rebstockpark project of Peter Eisenman as folded in many senses and many times over. He states as; *"...many things are implicated in it or implied by it. To explicate what it implies, or to unfold what is implicit in it, one must thus unravel the general questions of space, time, vision, technology and architecture that its Idea involves. For, in architecture as elsewhere, an Idea is never exhaustively or integrally realized in a single work; in any given case, there are always 'complications'."* (Rajchman, 1997; 12) He concludes his interpretation of Rebstockpark as about folding in architecture.

Rebstockpark:

This project of Eisenman according to Rajchman represents the idea of passing 'from a punctual dislocation of a Place to a multilinear smoothing out of a Site, and from notions of trace and archaeology to notions of envelopment and actuality' (Rajchman, 1997; 12) It is another view and contemplation of context revealing its hidden implications. He sees the formal characteristic of Rebstock as the result of a disaster, a catastrophic event which deformed the units. Moreover, it bears the sign of the possibility that may be occur again without displaying a certain time, without in a specific manner; it awares the existing 'calm solidity' with its all unpredictability.

Fig 4.23 Rebstockpark, Frankfurt, 1990-1994, General View

Eisenman narrates his own project putting into consideration that the urban strategy deployed in Rebstock is a reconsideration of the 'siedlung'. Siedlung is an urban form which dominated the German urbanism in the first half of the century. With the emergence of the grand boulevards cutting through whether the existing fabric or the bare land where there is no any pattern, the roads became the determinant of the edges of the buildings. However siedlung brought a new understanding; the ground became a neutral datum, and the buildings considered as the figures had no relationship with the pattern of the site that they occupy. Siedlung was neither a perimeter block nor a free standing villa on pilotis, it

was rather as Eisenman defined ‘a new linear type form that could be extended infinitely in one direction.’ Nevertheless, it eschewed the pattern for the sake of its ‘autonomous condition of form’. It had no a front or back as long as it was accessible from both sides. This linear form was in fact a conceptual line without hierarchy ignoring any traditional idea of place and disregarding any public-private distinction. Eisenman considers the world of siedlung where everyone and everywhere are equal. He also states that ‘difference was homogenized in favour of an implacable idea’ whether it be of spatial modulation or individual identity.

According to Eisenman with rehandling siedlung, two aspects of twentieth century urbanism have come out; space-time and repetition-the individual. Siedlung offers a conception of multiple that is the repetition of the individual as if it were the same as the individual and this understanding caused both the individual and the block lose their specific identity. In the context of this repetition of the individual Eisenman states; *“repetition not only involves space but also time...the idea of repetition has been greatly altered by the shift from what can be called the mechanical paradigm to the present era of the electronic paradigm. The idea of repetition has changed because the idea of time has changed.”* (Eisenman, 1993; 24) He argues that time conception in the mechanical paradigm was understood as narrative, linear and sequential whereas in the electronic paradigm time has lost its immediacy meaning that it can be fast-forwarded, slowed down or replayed. It is this shift of the condition of time which causes the loss in the individual expression and ‘response to an immediate or present action’.

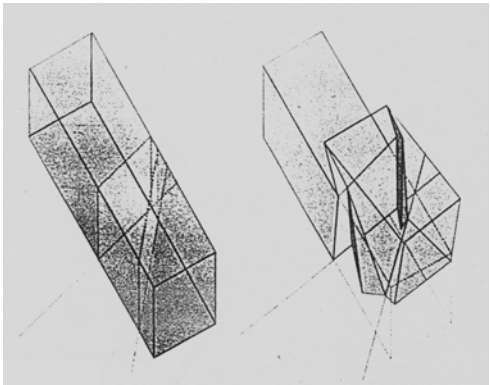


Fig 4.24 Rebstockpark

In this media time, the urbanism that Eisenman proposes in Rebstock reveal two interconnected concepts which are the idea of fold and of singularity. Deleuze argues that 'in mathematical studies of variation, the notion of objects is change'. With respect to Deleuze the new object can not be defined within the framing of space, 'but rather a temporal modulation that implies a continual variation of matter'. *"Place and time when no longer defined by the grid but rather by the fold, will still exist, but not as place and time in its former context, that is, as static, figural space."*(Eisenman, 1993; 24) In this point the fold appears as the characterization of the continual variation. Deleuze claims that 'No longer is an object defined by an essential form.' Consequently his conception of 'object event' emerges. This idea of event allows Eisenman to collaborate it with his singularity. Event implies a different concept of time which does not belong to the flow of narrative time.

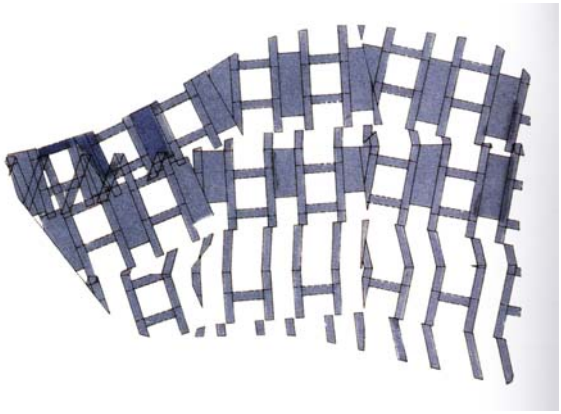


Fig 4.25 Rebstockpark

In siedlung the ground was neutral as long as it was not determining a specific context or pattern that the building should obey and thus it did not have any strict boundary or noticeable edge. The fold according to Eisenman can never be a neutral datum in as much as he claims that 'it is the quality of unfolding in time that allows the possibility of singularity'. Consequently it is clear that as to Peter Eisenman the fold as a moment in the flow of time possess a singularity which he pursues in siedlung.

In addition to the singularity in time, the ground of Rebstock is also seen to display a sense of singularity in terms of its 'groundless ground', in Eisenman's terms. Since, the fold is put forth with its state that is neither a frame nor a figure as ground but including

both. Therefore this ground should not be considered as origin or as in figure-ground. Consequently Eisenman states; *"Thus, Rebstock uses the fold as an attempt to produce conditions of a singularity of place and time using the siedlung. Here the topological event, the dissolution of figure and ground into a continuum, reside physically in the fold; no longer in the point or the grid. The ground surface as a membrane which becomes a topological event/structure is also simultaneously the building form."*(Eisenman, 1993; 25)

The presentation of the project is neither performed with a conventional technique. As long as it is not possible to represent the concern of the project via figure-ground relationship as a planimetric view, there was a need to use another technique. Rebstock is not a project folded two-dimensional but the folding may only be read completely in a three-dimensional perception. Thus the combinations of plan and sections were not satisfying besides required a topographical map and another sign system which is called by Eisenman as 'index'.

John Rajchman puts the difference between the visual perception that modernism offers and that one experiment in Rebstock; *"Thus, in Rebstock the eye is no longer directed, as in modernism, to an uncomplicated and unadorned space, where clarity is distinctness; it is no longer an 'illumination' of structure and use so pure that all reading would be eliminated....The vision of modernism meant a replacement of what was already there; the 'vision' of contextualism meant an emplacement with respect to what was already there. What Rebstock would give to be seen is rather a displacement or 'unplacing' that would be free and complex, that would instigate without founding, that would open without prefiguring."* (Rajchman, 1997; 27)

Paul Virilio, urbanist and philosopher, also conceits the city as a complex entity and the way to deal with this entity is first to depart from the static concept of urbanism and to replace it with movement, flow, speed. The traditional understanding of an immobile city must be abandoned. Rajchman points out a passing to an intensive cityspace or metroplex where the search of identity, tradition, context or reason does not count, it is even, no longer supposed to be pursued.

Alteka Office Building:

Alteka Office Building project of Eisenman is in Tokyo, which is a city of accumulation, juxtaposition and compression. The city, according to Eisenman, is based on tentative and contingent relations. The buildings constituting the urban pattern of Tokyo are assumed to be essential and unchangeable. The design of the office building suggests; *"..the notion that an object is no longer defined by an essential form where the idea of standard was one of maintaining an appearance of essence and of imposing a law of constancy, but of our actual situation where the fluctuation of the norm replaces the permanence of law when the object takes place in a continuum by variation."* (Eisenman, 1993; 28) He claims that this new status given to the object allows 'a temporal modulation' rather being merely a mould of the space. This temporal sense offers a continuation in the variation; a 'perpetual development of the form'. Then, in Eisenman's words, the object is defined as 'event', which leads to his conception of 'becoming'. Thus the project neglects the Cartesian definition ('emerging from the context to fold/unfold') and its representation is rather a form 'becoming'.

Fig 4.26 Alteka Office Building, Tokyo, 1991

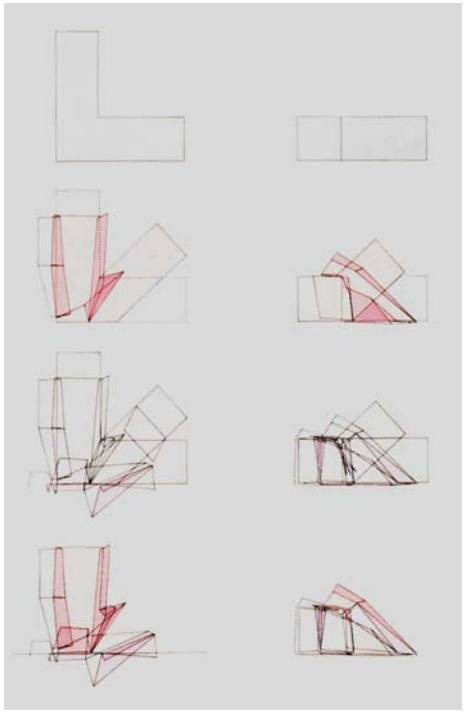


Fig 4.27 Alteka Office Building

Center for the Arts:

In Atlanta, the Center for the Arts that Eisenman designed in the campus of Emory University has a primary focus besides other buildings. The center is located between an existing multiple level garage structure and a natural hill and it seems like it bears the traits of both. On the one hand it allows the garage structure to penetrate the building while on the other it 'projects its main spaces onto the knoll'. It is constituted of four branches where each is serves to a particular function; a music hall, a theater, a cinema and a recital hall. The architectural design of the building is seen as responsive to its different environment in terms of topographical, historical and programmatic considerations. Eisenman mentions about the topography of the ravine that deformed the grid system of the historical quadrangle configuration when extended to the Center's site. *"The initial deformation produced by the ravine approximates a fundamental sine wave, similar in amplitude and frequency to the ravine topography. These fundamental lines and their related harmonic run to the Center, affecting the site and the four 'bars' which constitute the building. The harmonic lines compress and deform the continuous surfaces of the bars, folding them in a multiplicity of different configuration."* (Eisenman, 1993; 31)

Fig 4.28 Center for the Arts, Atlanta, 1991

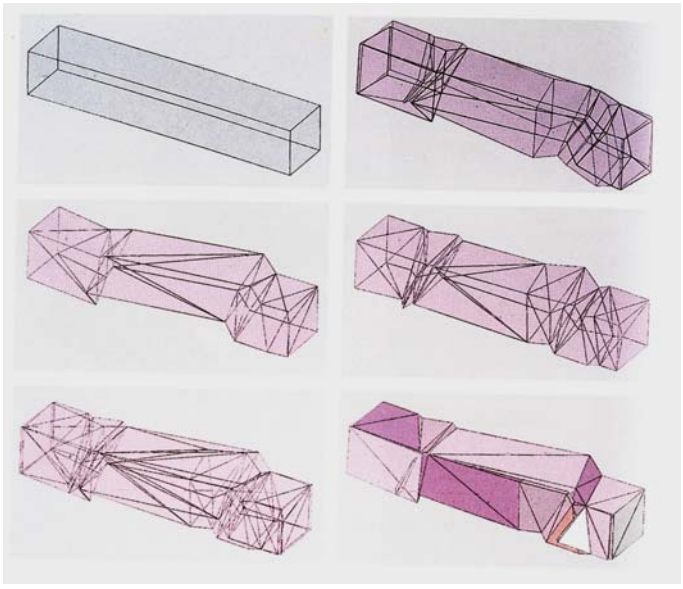


Fig 4.29 Center for the Arts

Similarly, there are other ways of manipulating elements 'engendering smooth, heterogeneous and intensive organization' than folding. Although there exist some differences between these practices, it is for sure that the sensibility they share resists 'cracking or breaking in response to external forces'. According to Greg Lynn these tactics and strategies are all *"compliant to, complicated by, and complicit with external forces in manners which are: submissive, suppliant, adaptable, contingent, responsive, fluent and yielding through involvement and incorporation."* (Lynn, 1993; 14)

4.3. The contemporary understanding of topography in architecture:

The urge to question the form in architectural realm mostly since Deconstructivism, has revealed different architects having differing design approaches of form thus different coverings of buildings. Folding, on this account, which aimed at embodying the differences and incongruities lying in context and taking physical conditions as predeterminations into design, has led the rational understanding of form of modernity, based on mostly the ideology of the architect, take another meaning, acquire another visual characteristic while acknowledging and encompassing the heterogeneity in a continuos manner.

4.3.1. Artificial topographies:

In contemporary architecture there emerged another style of forming heterogeneous continuum by means of artificial topography. Philipp Oswalt, with his article 'Implantationen/Nature in Contemporary Architecture', explores this tendency as; *"The intention is to implement the quality characteristic of landscape, of an ongoing and at the same time, heterogeneous space in architecture. By bending, folding and distorting the floor slab, a continuous space with locally differing qualities comes into being-as it does in a natural landscape which, with its hills and valleys, forests and water, forms a continuous, but locally starkly differentiated space."* (Oswalt, 1998; 05) This style of designing also may be considered as a counter-reaction towards the flowing space of classical modernity, which was thought to be 'neutral and homogeneous'.

As a matter of fact, this architectural approach is the result of the fusion of landscape and architecture. In addition to the direct inclusion of the natural 'materials' into architecture, as mentioned in the beginning of the chapter, this understanding of 'rendering buildings landscapes', meaning, to 'make them into landscapes' testifies the hybridization of nature and architecture in an artificial manner. This tendency may be observed in the works of O.M.A. (the congress Center in Agadir, 1990-the Jussieu Libraries, 1993) The Congress Center is formed by the continuation of the surrounding desert's dunes through the building by means of architecture. Oswalt interprets this competition entry project as forming a heterogeneous space by its topographically distorted floor slabs of the open ground floor, and as if this heterogeneous space merges seamlessly with the surroundings. In fact, surely, this is not the first example of artificial topography implemented in design. The Brazilian Pavilion designed for Expo 1970 in Osaka, by Mendes de Rocha, which is 'supposed to embody a synthesis of nature and artifact', is formed by an undulated concrete floor and a roof over it. This building without any strict, determined boundaries allows the inside and outside merge into each other. As Rem Koolhaas stated, this kind of space permits programmatic elements positioned in an architectural landscape 'without comprehensiveness and conventional definition' as long as through its topographical development, the design of the floor provides to diversify the space in order to accommodate differing functions. On this account Oswalt, referring to the 'smooth space' conception of Gilles Deleuze and Felix Guattari' in 'Mille Plateaux' states; *"The absence of hermetic boundaries and classifications typical of nature and its characteristic multiplicity and dynamics are thus carried over into architecture."* (Oswalt, 1998; 06)

The question of interior and exterior of the building acquires a new dimension through the implantation of the landscape inside the architectural structure, in as much as any use of 'natural elements inside refers to the reality lying outside'. This may also be exemplified by Land Art exhibiting the works in enclosed space. A prominent Land Art artist, Robert Smithson developed a conception he called sites/non-sites. While 'sites' according to him refers to an 'extensive landscape, an existing free space', 'non-sites' means 'an artistic representation or mapping of a site in a museum.' The Dutch Pavilion with its appearance as stacked landscape is again an appropriate example to display the

subversion of interior and exterior in architecture. The functions usually accommodated inside the building like conference room, library, are implemented on the artificial landscapes implanted into the pavilion, as if 'interior space becomes exterior space'.

4.3.2. Operative character of contemporary topographies:

Manuel Gausa, in his article, proposes an idea that he describes as 'lands in lands': 'operative landscape over host landscape'. This idea stems from the counter-reaction against the traditional relationship between figure and ground. The author mentions about an old figure-ground hierarchy as an 'edilic figure on an expansive ground' which is getting substituted by new approaches developed recently, in order to fuse the contours, to dissolve the limiting boundaries between them. Gausa, in this context, puts forth his concept of 'operative carpets'; just like a carpet lying on the floor, these virtual carpets over the ground ready to serve as material to this potential architecture, imply an approach to design artificial grounds atop receptive, natural grounds.

The blurring of the limit that points to the separation of the figure from the ground, refers to a continuity in their junction as if they merge into each other, to a smooth transition. The developments occurred in construction technology and the help of new computer technology allows this new 'transitional geographies' come true. According to Gausa, the great possibilities offered by these developments *"permit one to posit a deformation of the ancient Euclidian structures, transforming them into dynamic spaces, movements of intersection, functional fluctuations, overlaps between different levels which orient the new architecture towards quasi-geological process consisting of multi-layered superimpositions and imbrications: spaces of folding rather than of prismatic volumes; programmatic 'complications', of alluvium, rather than predetermined, pure 'crystallographies'. Topographies rather than volumetries."* (Gausa, 1998; 45)

This new building style does not engender space through expanding vertically but instead horizontally, forming 'dunes, reliefs, trenches or folds, as topomorphic manifestations of a potential artificial geography which is not far removed from the more

natural one' in terms of its spatial image. *"More than architectures, constructed geographies. Geographies in which the effectiveness of the architecture would not be based on the figurative definition of the object, but on the actual capacity to propose a new abstract topos."* (Gausa, 1998; 46) As if supporting Gausa's proposition of 'lands in lands', these projects represent 'grounds' on grounds and thus they offer their representative grounds meaning roofs to serve to passage rather than being merely a part of the enclosure.

Yorgos Simeoforidis, architect and critic, in his article, named 'New Topos', puts into consideration a transition in architectural thought which occurred from the centripetal tendency that exists in the traditional order where the distinction is apparent between figure and ground or between the city and territory, to centrifugal action offering uncertain, ambiguous and dissolved edges. *"New mechanisms inclined towards faint outlines, in vague forms, in the continuing fluidity between exterior and interior space. An architecture made from the interior towards the exterior, in communion with nature, precisely through a logic of transition, capable of generating elastic and flexible spaces, decidedly topological."* (Simeoforidis, 1998; 73) According to him it is an 'architecture of the ground surfaces' which favors the content and thus counts rather than an 'architecture of the walls'.

The fusion of landscape and architecture is formulated by Foreign Office Architect as reconfiguration of the ground. Today's world is filled with movement, flow, transition and dynamism. It is almost impossible, even, to talk about the classical relationship between building and ground in their work. As long as ground has lost its conventional definition, it is no longer characterized as 'delimited, stable, horizontal, determined and homogeneous'. They argue; *"We are no longer bound to a particular space, but our life has to permanently run across new spaces rather than mastering any single one: we have once again become a nomadic culture. The problem of a nomadic culture, a practice of foreignness, could also be termed a problem of re-configuration of the ground."* (Zaera, 1998; 34) The flat, stable ground, which characterized modern architecture by its 'domestication', is questioned by FOA in order to recover 'potentially wild differential intensities'. The surface and the space are not defined as merely a two-dimensional skin constituting the envelope of the three-dimensional void, but also it is the determinant of the

space thus they are connected. The architecture, according to them, no longer appears ‘as vertical, active entity constructed over the horizontal, passive ground plane’. In as much as the ground is an active determinant element ‘where the architecture emerges as an improbable, fluctuating figure’. It is considered and handled as a constructive tool, rather than used as a stable background.

Farshid Moussavi and Alejandro Zaero presented a text published in ‘Arquitectos’ putting forth a six-fold definition of their understanding of ‘new grounds’. As to them new grounds are not natural but instead they are reproduced, artificially constructed. They are not abstract nor neutral nor homogeneous, rather, they appear as concrete and differentiated because they do not represent a figure nor background but operating system. Thirdly new grounds have ‘an uncertain frame, as the field in which they exist is not a fragment but a differentiated domain affiliated to external process.’ They are ‘neither a datum nor a reference, neither solid nor structured by gravity and they are hollow and diagonally structured’. (FOA, 1998; 41)

As to Marie-Ange Brayer, likewise, the conception of the ground in contemporary architecture is envisioned as an active field, she states; *“... the ground gets rids of the binary contrast between style and content, between the two-dimensional and the three-dimensional. With FOA, the ground is neither a volume, nor a flat surface, but lies somewhere in between the two, in a figurative possible that has been released from the determination of the anchorage.”* (Brayer, 04)

The ground, in its conventional meaning, is understood as an ideal background prepared to frame the architectural object and to render it readable. It is supposed to neutralize the field. However today’s understanding attributes grounds a sense of ‘operative systems’, since they function as an architectural tool. In this point, while regarding the conventional mutual relation between building and the ground, which were conceived as two distinct, separate entities, it becomes clear, that is why there has always been a question of congruence, a concern of establishing the ideal relationship between them. However, with the emergence of operative topographies in contemporary architecture, this

symbiosis has attained another dimension, as long as it is hard to discern where the ground finishes and the building starts.

4.3.2.1. Merging figure into ground-transitional boundaries:

Yokohama International Port:

The competition entry of Foreign Office Architects for Yokohama International Port was selected as the winning project. According to Charles Jencks this project pushes several idea of Complexity Architecture like folding, superposition and bifurcation. As to Jose Antonio Sosa, the design comprises a ground where 'a succession of expressly de-territorialized urban and maritime activities are permitted.' It is a long, low horizontal folded plate, 'that seems like undulating across the water'. Jencks mentions about the project as a multi-layered topography for Yokohama achieving both diversity and unity, disjunction and continuity. Its architect describes their work as a continuous but not uniform system, since it 'folds various function into a continuous surface full of feedback loops of circulation'. Although this great possibility to access into interior of the building from many 'openings' of the shell, leaves suspicions about the difficulty of its administration, the project as to FOA, constitutes a crucial step which is 'to move to a strategy of differentiation of a tectonic system: the folded surface'.

Fig 4.30 International Port Terminal, Yokohama, General View

Fig 4.31 International Port Terminal, Yokohama

Fig 4.32 International Port Terminal, Yokohama

The gentle undulations of the plate forming this shell-like structure also make the building acquire the structural strength. The intention was to displace stresses through the surface of the shell rather than 'distributing by gravitational force through columns' in order to eliminate the lateral loads which are so frequently produced by the seismic movements, in Japan.

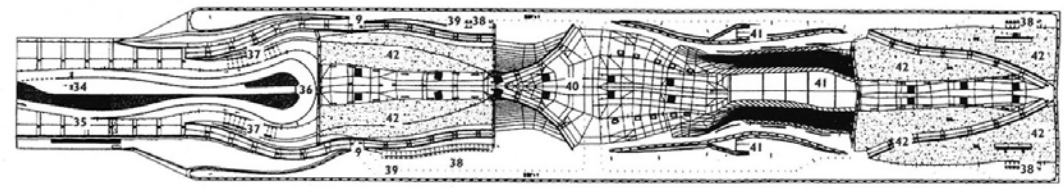


Fig 4.33 International Port Terminal, Yokohama, Roof Plan

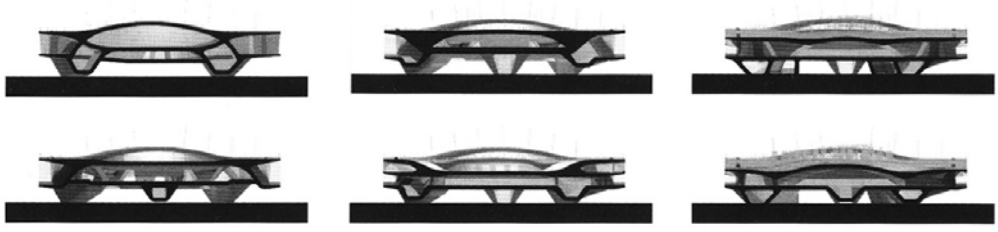


Fig 4.34 International Port Terminal, Yokohama, Sections

The building as a result of nonlinear architecture, as interpreted Jencks, forms a contrast to Eisenman's 'staccato' grammar, *"the grid, the fold and undulation are employed in a soft way that blurs the distinctions... this ferry terminal is a very abstract system, a landscape of otherness, a surprising flatscape without the usual orientation points; it does not look like a building at all.. Artificial land, second nature, has reached an apotheosis."* (Jencks, 1997; 24)

Fig 4.35 International Port Terminal, Yokohama, Detail from the Roof

Belleria Marina:

Emilio Ambasz's project for a new marina in Italy is another successful example of the continuation of the landscape by treating to the roof as an artificial topography. 'This roof, like an embroidered undulating carpet, extends from the edge of the residential area towards the port'. Belleria Marina offers to the city as much green space as the building occupies through the surface of its roof under which are placed all the ancillary functions necessary for a marina, such as car parking, boat moorings, repair shops and restaurants.

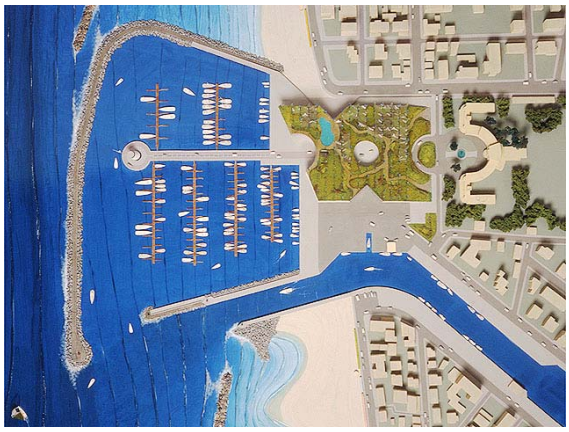


Fig 4.36 Belleria Marina, Aerial View

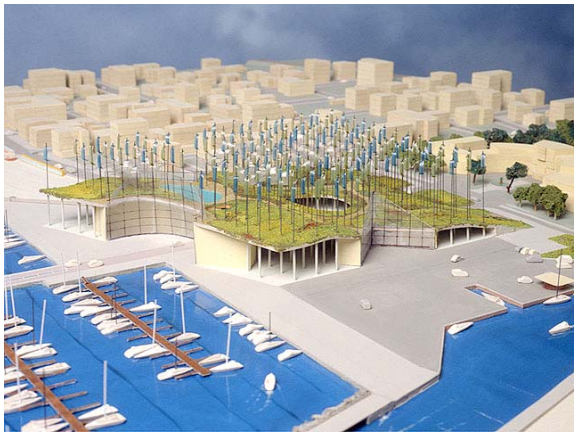


Fig 4.37 Belleria Marina, General View

Fig 4.38 Belleria Marina, General View

Myeong-Dong Episcopal Headquarters:

The projects' programme required a unification of very fragmented collection of buildings and 'reintegration' of these buildings in the surrounding environment whish is constituted with dense 'urbanistic domain'. Therefore the approach of FOA was to propose an artificial ground which is supposed to encompass mentioned fragmented buildings and thus simplifying the fabric to bind the complex to the surrounding. In this way they also escaped to introduce another figure in an 'already crowded field'. FOA narrates their design as*; "In Myeong-Dong, like in Yokohama, the building expands immediately to the physical limits of the ground, so that object and frame, figure and field, merge."* (FOA, 1998; 38) According to Sosa, the roof is treated as an 'extension or prolongation of the adjacent public ground' and thus it becomes the city's own ground whilst accommodating various activities in a single shelter.

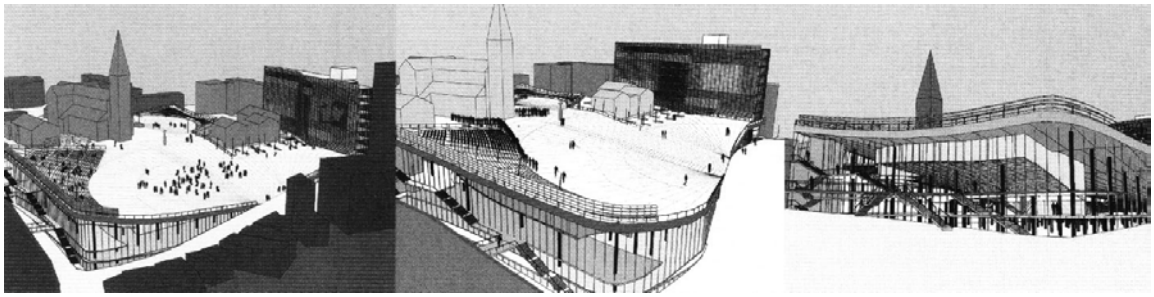


Fig 4.39 Competition for the area surrounding the Cathedral of Myeong-Dong, Seoul, 1995

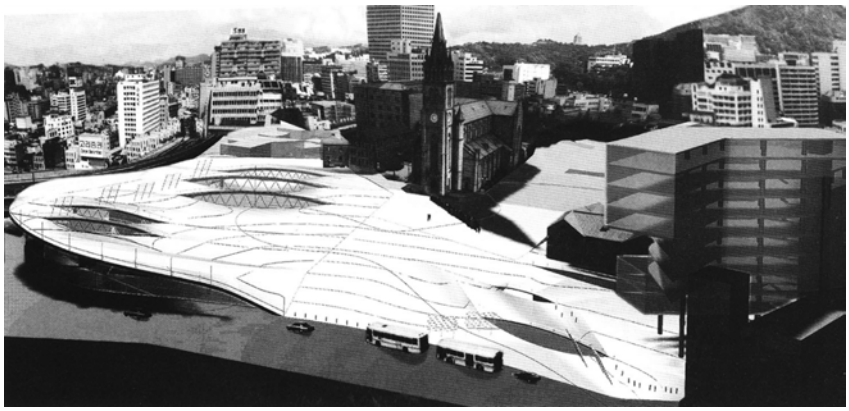


Fig 4.40 Reorganization of the cathedral of Myeong Dong, Seoul, 1995

Glory Art Museum:

This museum is designed upon the request of a Taiwanese collector, to house his art collection. Emilio Ambasz's inclination for this project is not far from his precedent approaches. 'The building gives back to the community all the land that the building's footprint covers. In this building by creating a roof, which is at the same time a façade, the visitor goes from the inside to the outside exhibition spaces in a seamless flow.'

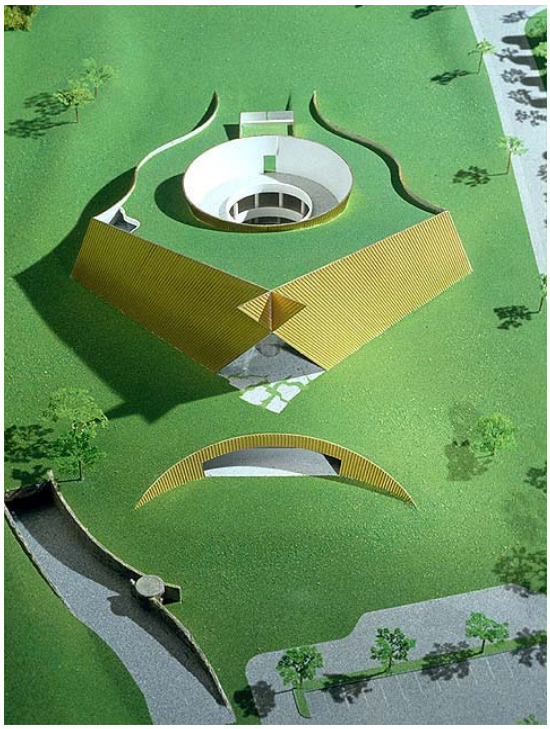


Fig 4.41Glory Art Museum, Aerial View

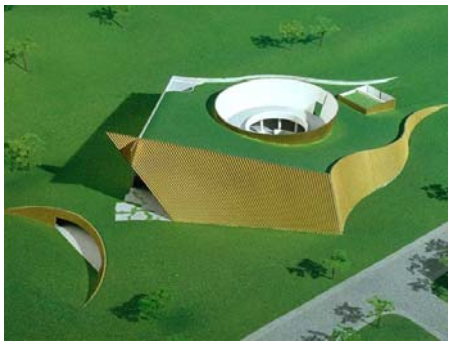


Fig 4.42 - Fig 4.43 Glory Art Museum, General View

Simulated topography:

The architect Kelly Shannon's project for Amsterdam is sited in a barren, triangular Zeebrugerelland which is surrounded by water. This project is defined as a topography, a topography of infrastructure, designed to serve two major function; cinema and park. The volumes constructed to enclose spaces for film are dissolved into the landscape as if they disappear within a continuum provided between figure and ground. 'The ebb and flow of time continually reframes and renews the landscape with topographical flexibility and mobility'.

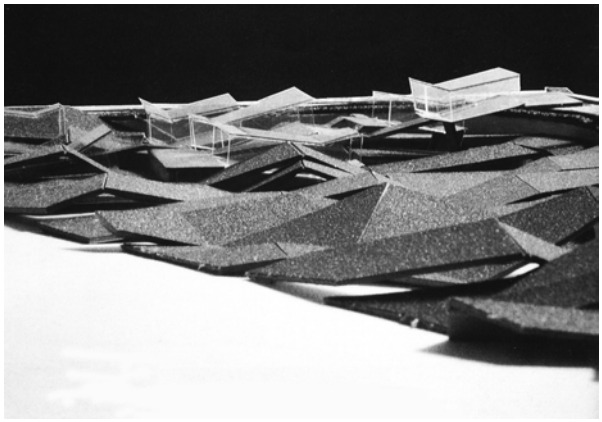


Fig 4.44 Simulated Topography, Amsterdam, 1993, General View

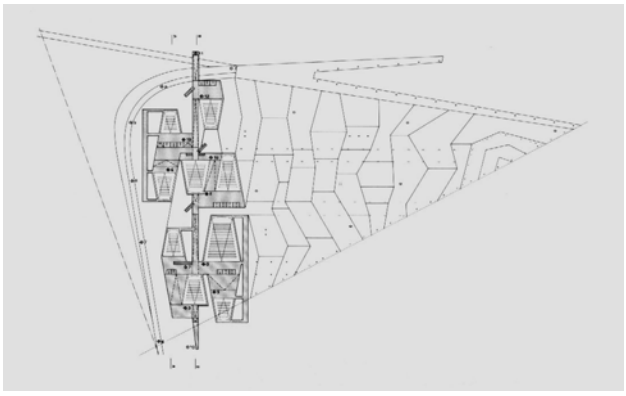


Fig 4.45 Simulated Topography, Amsterdam, 1993, Level with Halls and Entrances

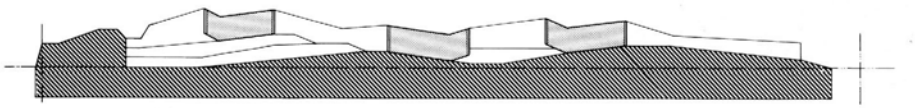


Fig 4.46 Simulated Topography, Amsterdam, 1993, Section

Villa Wilbrink:

The Villa Wilbrink's design is in fact dictated by the client's hatred of gardening. That is why its architect Ben van Berkel chose an expanded plan scheme in order to minimize the land for gardening. The space left at the back and the sloping roofs which effectively make the house without an elevation are covered with shingle.

Fig 4.47 Villa Wilbrink, Amersfoort, 1992-1994, GeneralView

Fig 4.48 Villa Wilbrink, Amersfoort, 1992-1994

Fig 4.49 Villa Wilbrink, Amersfoort, 1992-1994

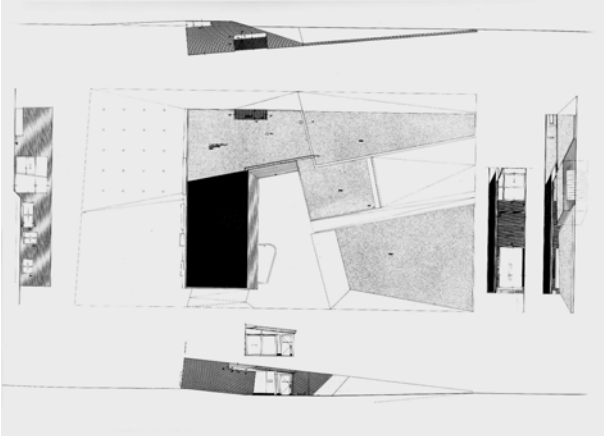


Fig 4.50 Villa Wilbrink, Amersfoort, 1992-1994, Roof Plan

Topographical overpass:

Another project from Kelly Shannon is designed for Atlanta, which is called a car-culture city. It is intended to organize the two horizontal planes, which are over the Expressway that physically cuts up the city. The thoroughfare is conceived as a continual surface which will serve both to the overpass, meaning to the flow of cars, and to the functions for public programs. These programs do not refer to particular uses therefore there is no any specific form designed and separated for them, instead the continuous surface is handled as an ‘urban playground’, accommodating some outdoor sports activities like skateboarding or rollerblading, an ‘advertisement field’, or ‘an urban gallery’.

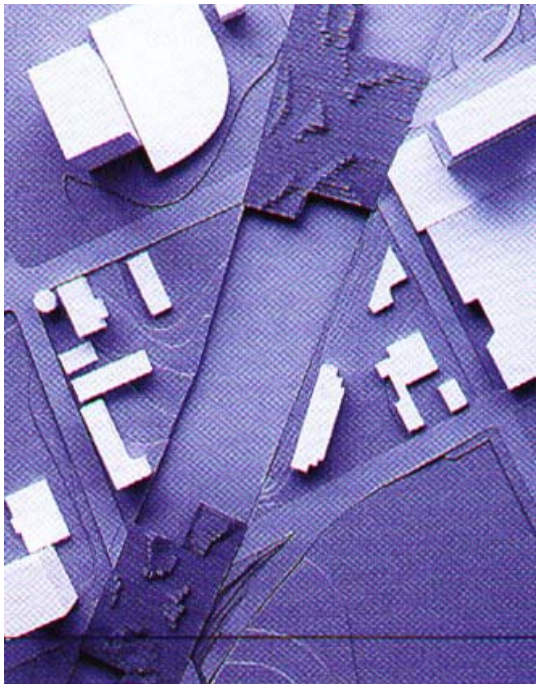


Fig 4.51Topographical Overpass, Atlanta, 1994, Aerial View

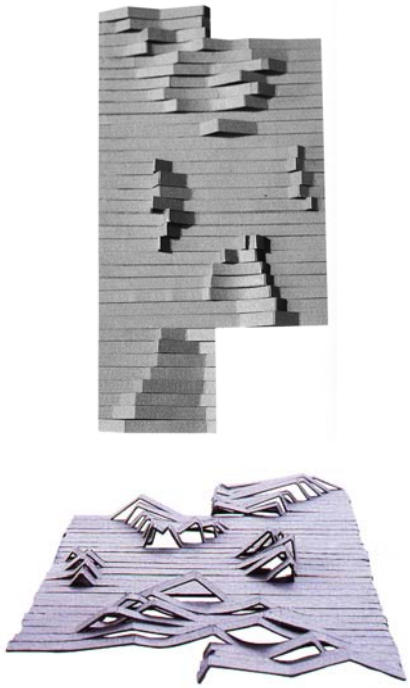


Fig 4.52 - Fig 4.53 Overpass 1, Overpass 2

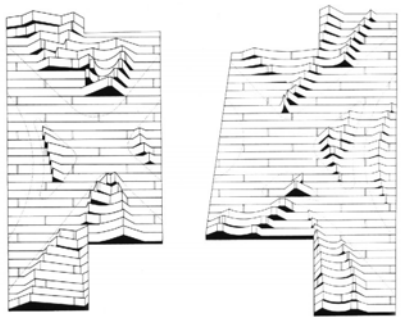


Fig 4.54 Overpass 1, Overpass 2

4.3.2.2. Scraping the ground:

Groundscrapers:

The architect, Martin Price, proposes a concept that he named groundscrapers. As to him, a groudscraper is a ‘dense horizontal packaging of space which organically anchors to the ground'. His project, at La Jolla, California, is an example of his mentioned concept of horizontal composition of forms, which is supposed to connect naturally to the land, hence his design addresses ‘the basic and unique conditions of the site’. *“In La Jolla, the rhythms of flowing land form were to inspire the flow of built form.”* (Price, 1998; 69) He develops two schemes pursuing the rhythms of the hills. The first scheme sited offices ‘in a continuous unfolding arc-like form’ which provides a buffer zone between ‘visible elements and audible noises’ coming from the adjacent highways.

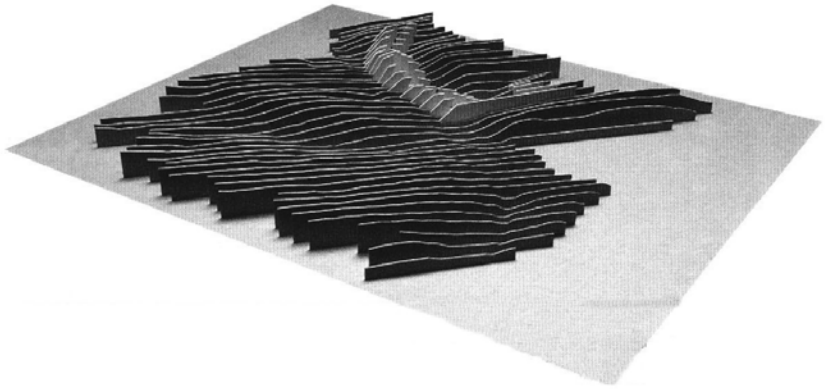


Fig 4.55 Groundscrapers, First Scheme, California, 1996, General View

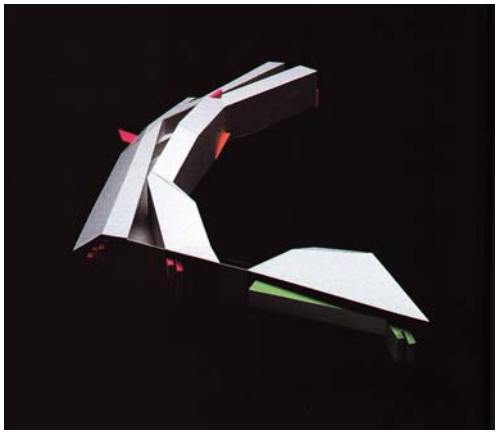


Fig 4.56 Groundscrapers, First Scheme

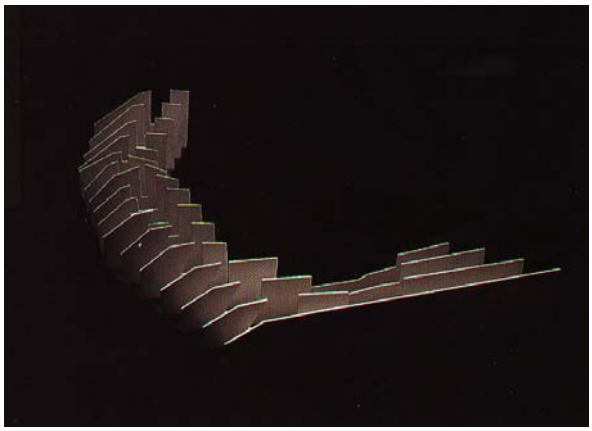


Fig 4.57 Groundscrapers, First Scheme

The second scheme constituting the hotel is curled around a hill and as long as it is sited in a valley, engenders a new hill with its profile.

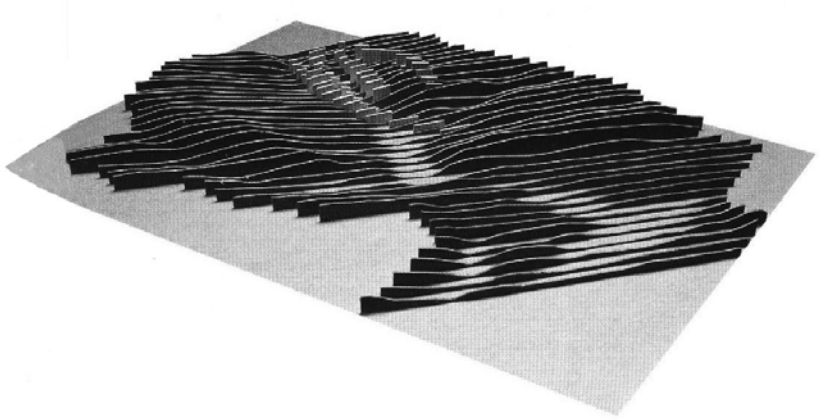


Fig 4.58 Groundscrapers, Second Scheme, California, 1996, General View

Fig 4.59 Groundscrapers, Second Scheme

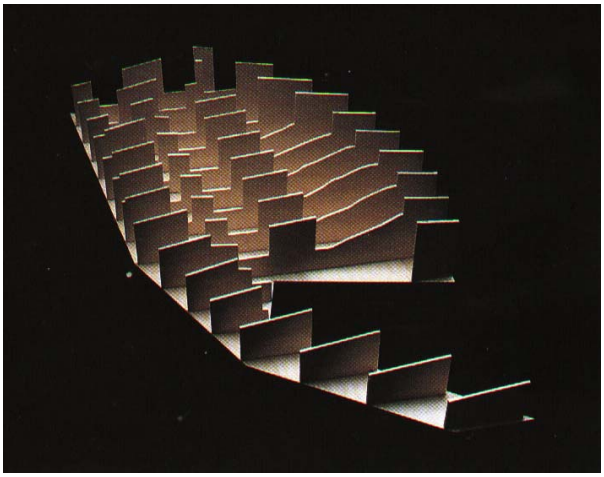


Fig 4.60 Groundscrapers, Second Scheme

Fitness Center in Barcelona:

The fitness center, built in Barcelona by Carlos Ferrater and Joan Guibernau, in 1996 is another example of underground construction. It looks like a sculpture in the landscape using reinforced concrete as the sole material. The central courtyard is floored by a reflective pool which helps the light penetrate inside. The building's functions are solved in two layers, saunas, jacuzzis and changing rooms in the lower level and the all fitness activities in the upper. The architects call their building as an 'underground box of light', relating indoor space with the gardens outside and protecting its spaces from prying eyes.

Fig 4.61 Fitness Center, Barcelona, 1993, Aerial View

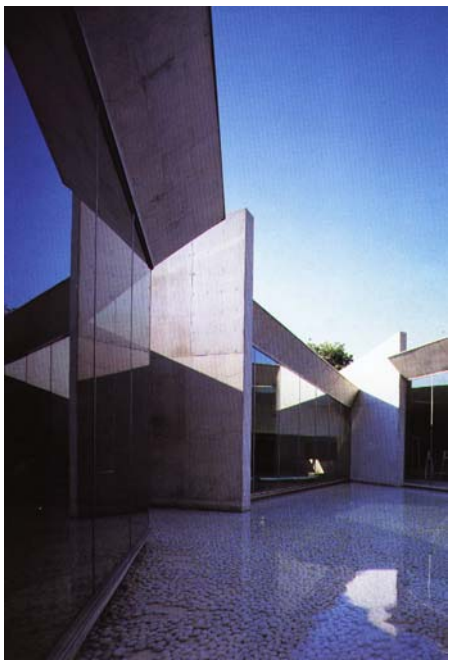


Fig 4.62 Fitness Center, Barcelona, 1993

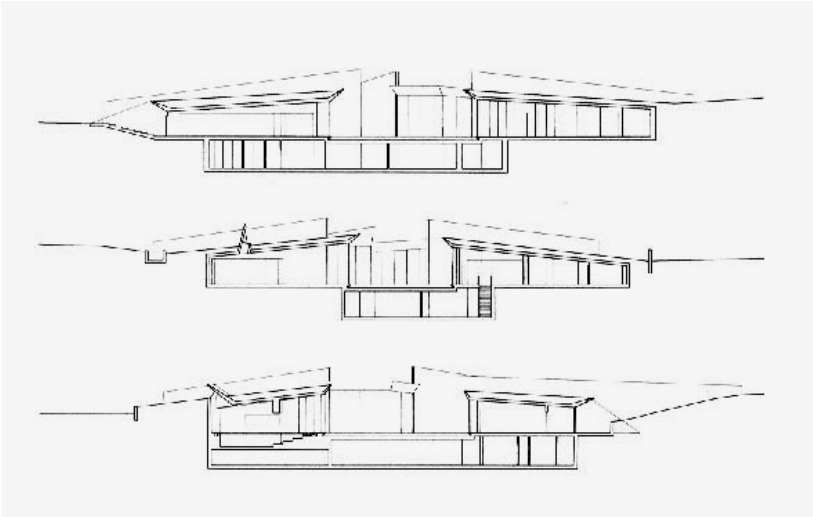


Fig 4.63 Fitness Center, Barcelona, 1993, Sections

Schlumberger Laboratories:

This work, winner of the 1986 Architectural Project Awards organized by American Institute of Architects, also testifies the general intention of Emilio Ambasz to design buildings in harmony with the landscape. Slipping into the topography of the site, the

building, ‘neighbors see only a beautiful park landscape instead of a collection of intrusive buildings’. All the facilities required for computer research are arranged along an artificial lake as if intending to create a picturesque ambience. The buildings blend into the surroundings while maintaining the continuation of the topography even if in an artificial manner.

Fig 4.64 Schlumberger Laboratories, General View

Fig 4.65–Fig 4.66 Schlumberger Lab., Aerial View

Puzzle:

A proposal project by Dominique Jakob and Brendan MacFarlane, involves several house projects forming a plot as if like pieces of a puzzle. This innovative plot proposal implies a new relationship between house and garden. Even if the houses’ plans are not identical the general layout is in effect for all of them, ‘a ring shaped layout around a garden, ground-floor bedrooms, obtuse angles which encourage the fluidity of the spaces’. In contrast to the architecture conceiving the figure and ground as separate entities, this project propose a complete integration of habitat and landscape. Quoting Jacob and MacFarlane, ‘the green sloping lawns form an undulating artifact worthy of a Baroque landscape’.

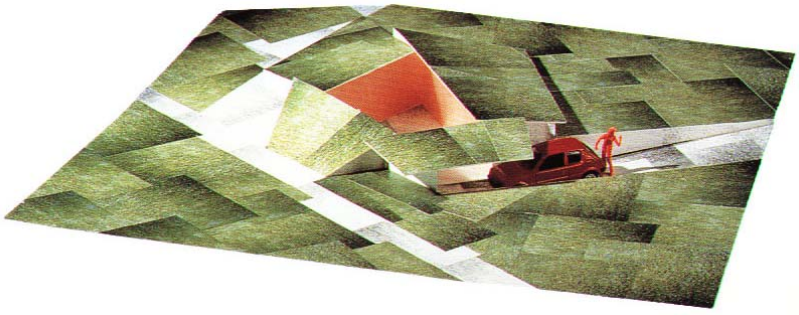


Fig 4.67 Puzzle, 1997, General View

Fig 4.68 Puzzle, 1997, Aerial View

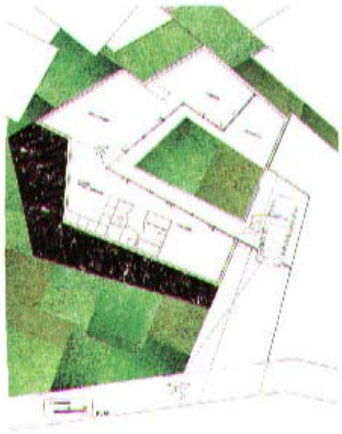


Fig 4.69 Puzzle, 1997, Ground Plan of Model House

4.3.2.3. Instrumentalizing the roof:

Leon:

The project designed by Carlos Muro and Ton Salvado, at Leon, Spain, in 1995, is constituted by a continuous ramp covering a hall complex. This ramp, taking people from the ground guides them to the entrances of the four halls respectively, is an open exhibition space at the same time. Thus, the ramp emerging from the ground level, and curling along the building forming its contours and its form, is the dominant element, which leads the design. According to its architect the strategy is inverted; 'here we add rather than divide'.

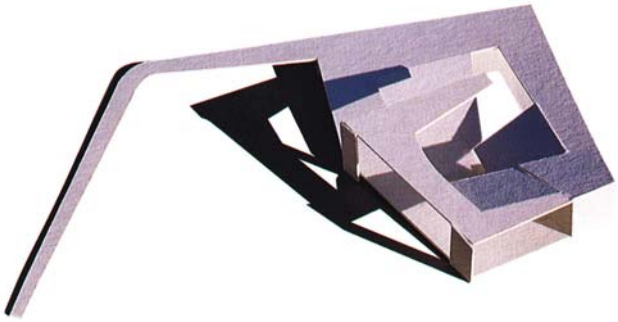


Fig 4.70 Leon, Spain, 1995, General View

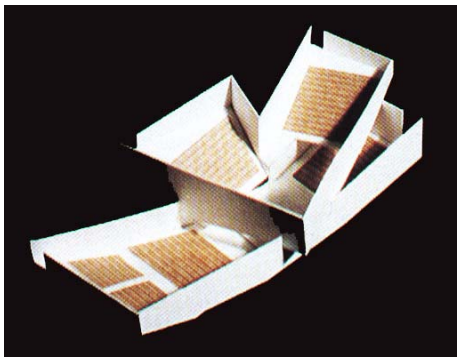


Fig 4.71 Leon, Spain, 1995

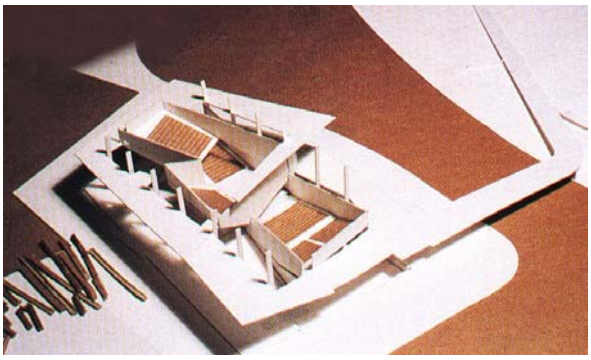


Fig 4.72 Leon, Spain, 1995

Projects by Shoei Yoh:

Greg Lynn interprets the works of Yoh as exhibiting both the architectural tendencies which model itself on nature. First of them is the classical tradition which is dependant on the existence of forms of nature, while the second is the combinatorial tradition which is dependant on the processes of formalization. The architecture of Shoei Yoh manifests, on the one hand, 'the embodiment of organic forms, and on the other, 'a more vital construction of form through multiple factors'. He justifies the 'progressive development from reductive Cartesianism toward more complex and topological methods of design'. His buildings' fundamental parts, his roof structures are designed with regard to multiple independent requirements thus takes their forms in an 'undulating, organic' manner in order to correspond to those multiplicities. Besides, these forms being heterogeneous and continuous but not duplicating any single contours, resembles to natural formations, topographical forms.

Fig 4.73 Uchino, Fukuoka, 1994-1995

Fig 4.74 Uchino, Fukuoka, 1994-1995, General View

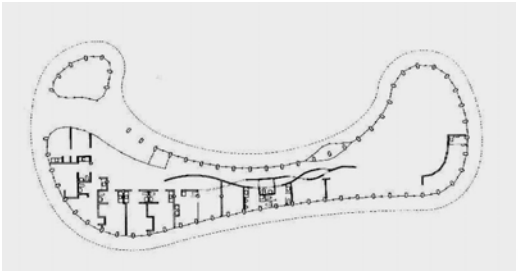


Fig 4.75 Uchino, Fukuoka, 1994-1995, Ground Plan

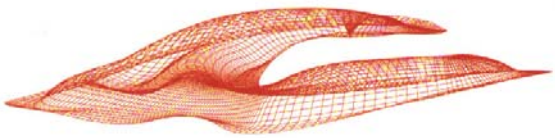


Fig 4.76 Uchino, Structural Frame

Having a discourse as; '*I haven't been able to find a constant, stable existence of architecture with time. Dynamic deformation is inevitable sooner or later.*' Shoei Yoh designed Odawara Municipal Sports Complex with a dynamic undulating roof structure. The inputs which affected its generation are the specific span lengths, ceiling heights and snow load also taking into consideration the lighting and acoustical needs. This understanding of a single, continuous, heterogeneous roof structure responding to the varying functions' requirements of the building is also apparent in his design for Uchino, Community Center for Seniors and Children, emerging out with its landscape-like character.

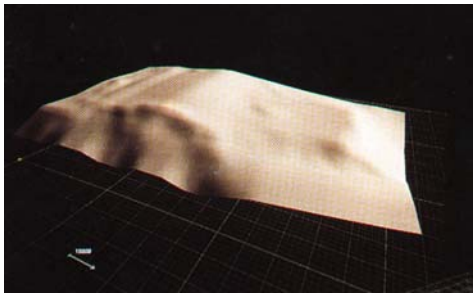


Fig 4.77 Odawara, Kanagawa-ken, 1991, General View

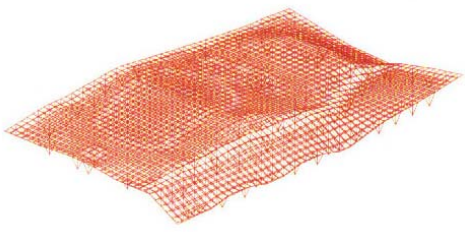


Fig 4.78 Odawara, Structural frame

4.3.2.4. Layering:

Large Multi-Modal Transport Interchange in Pusan:

The existing layout of the tracks is taken as determinant element while constructing the new terminal, since it was an obligation to maintain the station functioning. The intention was also to turn the station in a new public space connecting the ground level with the station 'concourse'. According to the architects the 'frame' is 'extended even beyond the limits of the legal ground, by melting topographic and programmatic conditions between the project and its frame'. This is seen as one step furthers the figure-ground relationship in Myeong-Dong. *"The topography we proposed was a shredded surface linking the different levels by weaving undulating bands to provide access, light and ventilation to the concourse and the platforms."* (FOA, 1998; 39)

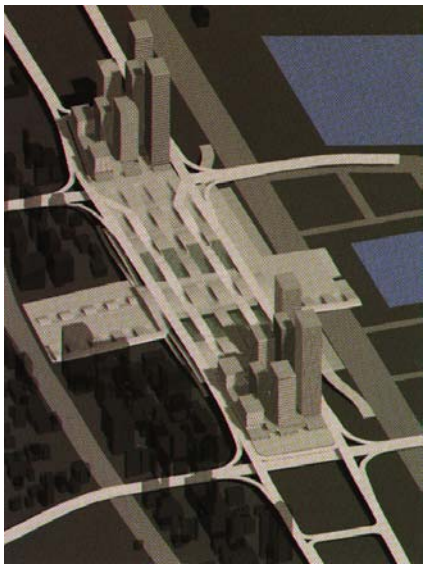


Fig 4.79 Pusan, Korea, 1996, General View

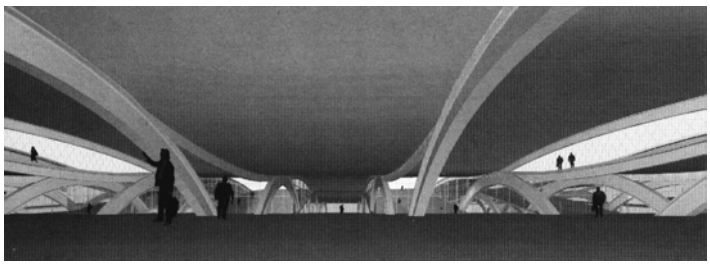


Fig 4.80-Fig 4.81 Pusan, Korea, 1996, Platforms

Urban Design Forum:

Another project for Yokohama designed in 1992, by Rem Koolhaas as a proposal for the central area of the city, is constituted by three superimposed layers engendered by the undulating planes. The general intention is; *"We wanted to investigate a form of urbanism which would not necessarily have pretensions of permanence or stability, an urbanism like plankton, which could infiltrate or invade."* (Sosa quoting Koolhaas) The

undulation allows to accommodate diverse functions, like car parks, roofs, gardens, theaters, churches etc., in a simultaneous combination and justifies the aim at achieving 'the greatest number of possible events with minimal definition of stable and permanent elements'. Taking this aim into consideration, OMA proposes 'continuous surface in three superimposed and undulating layers' supposed to function as if it is a 'triple ground', instead of designing buildings 'with their inevitable separations and limitations'. (1998; 95)

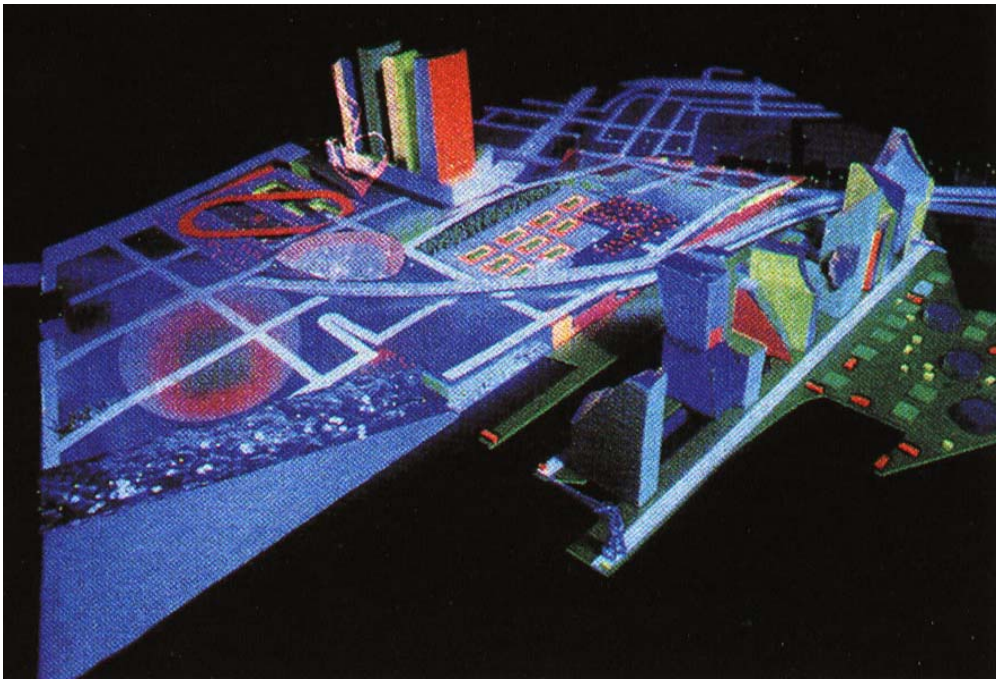


Fig 4.82 Urban Design Forum, Yokohama, 1992, General View

Soweto:

The gardens of Soweto designed by Francois Roche, DSV & SIE, in South Africa, embodies a multi-functionality accommodated in different levels. The project 'tackles the creation of a commemorative museum, incorporating the archives of the township'. The site in respect to its memorial characteristic calling the death of little Hector Peterson with his constructed tomb and to its natural characteristic with the vegetation of the marshes, engenders some situational obligations. On the ground level there are only the glass containers, which protrude from the surface placed regarding the undulations of the terrain.

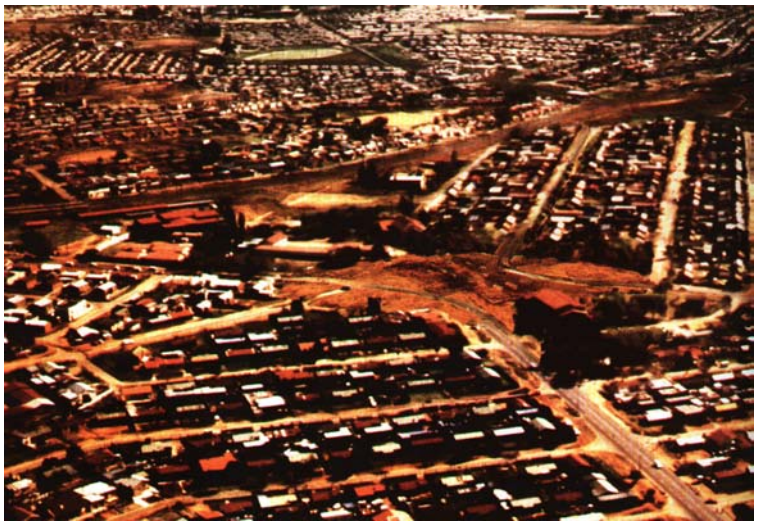


Fig 4.83 Soweto, 1997, Aerial View

Fig 4.84 Soweto, 1997

Fig 4.85 Soweto, 1997

Philippe Rahm interprets the main building situated underground as a tunnel-like construction and the bridges above the ground level as augmenting the relations between people while preserving 'the fauna and vegetation of the marshes' at ground level. Hence, this architecture below ground leaves 'the singular emotional charge of the place' to Hector Peterson's tomb. These two constructions, one in underground while the other over the ground, serve to an architecture of 'alterity which engages with the territory without destroying or mono-functionalizing it'. This alterity is explained by Rahm as encountering of the contradictory energies of the territory each other and it is only possible the architect finds himself once more, 'on the ground of the sentient world', through accepting this alterity while 'conjoining matter with the nature of the land'. This explanation of his apparently calls the discourse lying behind the folding in architecture. *"Formally the*

project was seen as the expression of pressure on a place: a prudently applied force whose manifestation is not the destruction but the deformation, the folding, of a preexisting territory." (Rahm. 1998; 61) According to him, the project is a simple topographical modification which denied the 'architectonic image' formed by constructing on the ground.

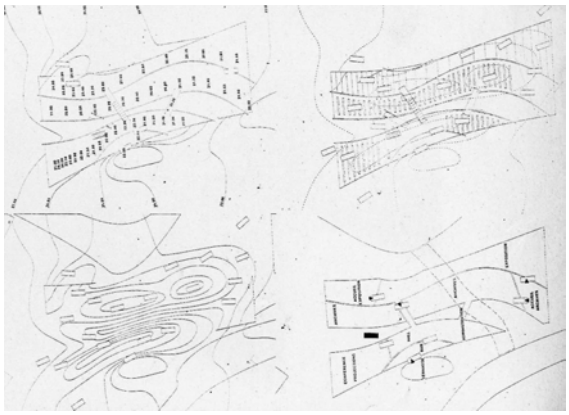


Fig 4.86 Soweto, 1997, Plans

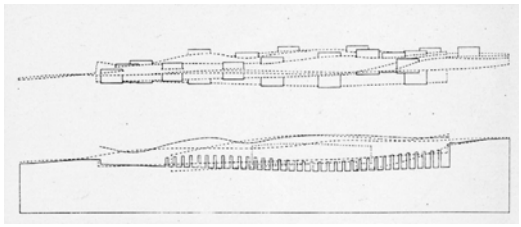


Fig 4.87 Soweto, 1997, Sections

Namur:

In Namur with a headland and citadel Le Grognon in France, Francis Soler has designed a 'fortified' project. Just as the other aforementioned examples, here too, the site was not conceived in its traditional sense, a matter fostering a composite work or an 'aleatory space set around a now autonomous work', but instead it was handled as the 'site itself came into play'. The general inclination was to create a 'telluric' (terrestrial) homogeneity, prolonging the walls and horizontal green spaces of the citadel till the headland and containing the whole, meaning the town and the Parliament, within huge walls.

Fig 4.88 Namur, France, 1995, General View

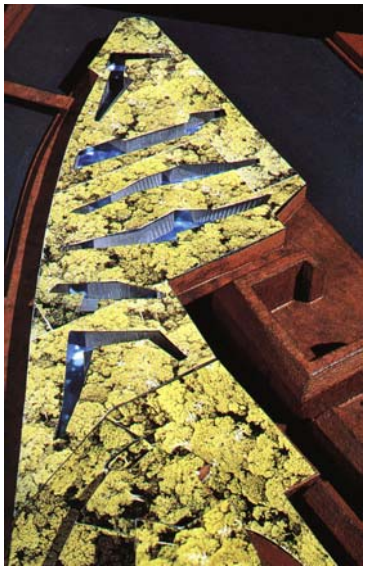


Fig 4.89 Namur, France, 1995, Green Layer

Fig 4.90 Namur, France, 1995, Building Floor

4.3.3. Evaluation:

In these projects there are some innovative common characteristics, which can be attributed to all similar contemporary examples. Firstly the limits of these projects appeared as having an ambiguous, diffused, uncertain notion, they do not have strictly defined edges anymore, which causes one having difficulties to discern where the ground finishes and the figure starts. Secondly there is no longer an architecture of facades as long as the building is handled as the continuation of the terrain rather than being an alien object rising from the ground. Thirdly the ground plane does no longer serve as stable, passive background to architectural artifact. It is rather an operative tool for design. That is why these projects are conceived as to many critics like Sosa, as causing 'rupture of the binomial relationship' between figure and ground or architecture and place.

The object-oriented approaches contrasted against a stable background are replaced by the simultaneous condition between ground and architecture, which brings along the de-territorialization of activities and programmes. Jose Antonio Sosa, mentioning about the classic tradition where the site and landscape have had 'scenographic' and permanent identity, and thus the architecture performed in order to deploy this character of the ground have been similarly stable, states that there brought progressive number of change to their

roles. The first of them is undoubtly the loss of the stability, in terms of, both, formal and conceptual understanding, in as much as, there are *"free objects which are disconnected from the ground and the place, or in making itself formally unstable, flexible or contingent on its uses and in becoming ever more weightless, light and ephemeral."* (Sosa, 1998; 97) and subsequently, going towards the redefinition of the ground which once was 'a tranquil symbol of the stability and apparently unalterable support of human activities' has radically changed. As a matter of fact, there are strong links with contemporary conditions of the world. For instance, Sosa exemplify a few of them as, the city which became a paradigm of everything undetermined, or its ground as a place that every square meters is money, or the system of global production as disconnecting concrete space and consequently *"the activities are shifted within their territories."* (Sosa, 1998; 97)

Although Ignasi de Sola-Morales, within the framework of his book 'Differences' expresses clearly his debt to Deleuze's thinking, he firmly distances himself from contemporary architects who have, according to him, 'instrumentalized' Deleuze's thought. He explains his critic on recent works in architecture as; *"A certain fashion, first in Europe and then in America, has seized upon the dazzling images of his thought, either as forms to be directly visualized in new architectures or as verbal metaphors with which to beautify a conventional, if not vulgar, way of thinking."* (de Sola-Morales, 1996; 9)

Ignasi de Sola-Morales, in his article, 'Topographies of Contemporary Architecture' analyses also the relationship between architecture and its criticism. In the modern era critics, according to him, 'coined a whole series of new concepts precisely in order to legitimate the new architecture.' There was a coherent relation between architects and critics, justifying one another, whose aim was *"to convince a culture not prepared for such things of the newness, goodness, and appropriateness of the new discoveries"* (de Sola-Morales, 1996; 14) However, by the prevailing climate emerged after World War II, 'serving as a corollary to the individualistic, decentered thought of existentialism', the mentioned consistent relationship had turned to mutual ignorance. Subsequently, there appeared a new conception, which is called 'radical criticism', which repudiated and disowned architectural practice based on a deceptive rhetoric. Morales argues on today's

architectural criticism having lost its radical character which is the result of the lack of a 'generally accepted system' or absolute truth. He states; *"The proliferation of declarations of intent is accompanied by a dearth of well-founded reasoning… A diffused heterogeneity pervades the world of the architectural object. Each scheme emerges from the conjuncture of partial, fragmentary discourses."* (de Sola-Morales, 1996; 16)

As supporting the general uncertainty and alienation of the self with the others dominating contemporary world, contemporary topographies are hardly considered as backgrounds within which architectural object may manifests itself in an inserting, integrating or diffusing manner. *"This world no longer admits place and form as separate, disjunctive entities. On the contrary, it talks in terms of "topomorphs", morphologies and morphogeneses of place."* (Brayer; 01) As to Morales, 'deterritorialization' that Gilles Deleuze put forth, situates today's architectural objects in 'non-places, in non-landscapes'. Even their self-representations are mediated through computer renderings as if justifying the inevitable movement towards artificiality. Ignasi de Sola- Morales claims that, although this is an opposite aspect of what is dominated the fifties calling return to 'picturesque integration', as a matter of fact both fifties' and contemporary approaches release the 'two faces of the same problematic coin'. *"The fifties pantheistic fusion with the landscape and today's isolated stupor of the object both serve to demonstrate that the architectural object no longer establishes a stable and hierarchical relationship between itself and its surrounding."* (de Sola-Morales, 1996; 21) Since, he conceives the organicist pantheism as paving the way of a 'rootless atheism' and the 'mediated condition of architecture' leading to establish an 'adventitious, improper, extrinsic' relationship with its surrounding. The existence of the concepts, like 'accumulation, reiteration, difference, and disconnection', most internalized in contemporary architecture, is conceived by Morales as the case that 'the ideals of integration, coherence, and synthesis have become patently unattainable'. This loss and 'fitting silence', he argues, causes the practice of architecture to correspond to an indefinite, undetermined field that he exemplifies as the surface of the moon; *"lunar spaces in which recognition of the topography affords us a knowledge that is as disturbing as it is useless. The topography of contemporary architecture that might be drawn up by criticism today is one of desolate landscapes..."* (de Sola-Morales, 1996; 24)

CHAPTER V

CONCLUSION

The urge of man to anchor to the world has always led him to endeavour to establish ideal relationship with natural environment. This study focuses on the concept of topography, which plays the major role within this interrelation between natural and manmade environments, exploring its differing conceptions throughout history.

These attempts to find ideal relationship with nature have differed with regard to the changes in the conception of nature. The idea of nature in response to the changes and developments in man's mental and technical abilities, thus in his life style, has been subjected to significant shifts in terms of its conception. In the scope of the study, the reflections of this shifting idea of nature into manmade environment are testified with diverging concepts of garden in different cultures, based on their different beliefs. Each garden design appears as a distinctive kind of crystallisation of a concept of nature driven mostly by religious and cultural ideas of different people.

In the context of the study, the analysis of the concept of topography throughout history, which emerges within the dualism of manmade and natural environment, discloses its differing meanings while corresponding to the changes in the conception of nature. People, in early civilisations, envisioned their buildings as equivalent to features of natural landscape. Whether in small scale like dwellings or large scale like monumental edifices, conceiving nature as a divine force, they display a great reverence towards nature mostly by echoing the topographical formations in the surrounding, as in Pueblo culture that they contemplated as sacred. The world view as a predictable universe, in Egyptian culture, which is readable from their simple, consistent buildings announcing unity, also resulted in forms as imitations of 'sacred' natural formations. However, on this account, Greek approach emerges as departed from these tendencies by its architecture of plastic bodies. Greek temples were no longer imitation of forms of the earth; they rather became divine persons with their bodily unity, and compact mass made up vertical, self-sufficient, geometric units. Although these early cultures, examined within the scope of the study, diverges apparently from each other in terms of

their attitudes towards topography, they allow to explore the common feature among them, which is the fact that the early civilisations' concept of natural topographical formations, constituting the physical world around them, is imbued with religious and mythical beliefs. The world of nature, whether it is predictable or not, was filled with reason, regulated and directed by divine forces. Therefore the physical appearance of the world was in fact the embodiment of those divinities to them.

However, this conception of physical world and thus the concept of topography have altered in subsequent eras following the changes in the conception of nature which were whether the results of discoveries in science or improvements in human technical abilities, and it became to be envisioned as it appeared to human eye, like a mere visual formation. Topography was a stable background, a passive field whether for an architectural artefact to be settled in or for a sublime landscape design to be generated with, being rid of any sacred meaning. In other words, topography, in its conventional meaning, is understood as an ideal background prepared to frame the architectural object and to render it readable. It is supposed to neutralise the field. The ideal relationship with topography has tried to be set whether through situating over the ground by raising the building mostly on pilotis, or through settling on the ground or via fitting in it by means of occupying under ground. These differing approaches stem mostly from the diverging conceptions of nature or world views. In these cases, topography has been envisaged as neutral plane forming the submissive playground for designers.

In a world where there is an accelerated sense of movement, where all is in flux as the flow of traffic, the flow of people, the flow of knowledge and the flow of space, there occurred significant shift in the conception of space from fixed or static to flowing existence, which brought along the concept of continuity. Moreover, by the emergence of complexity and contradiction paradigms in architecture, the urge to embody the differences that Modernism sought to erase, lying implicitly within diverse physical, cultural and social contexts, there have been a growing concern towards heterogeneous, fragmented and conflicting formal systems, revealing the concept of folding in architecture. Furthermore, in addition to folding, there also has been an inclination towards framing complex, differentiated, and heterogeneous physical and cultural context through an alternative smoothness. These recent pliant projects display a fluid

logic of connectivity in the employment of external forces. Unity is no longer conceived as an homogenous whole rather it is understood as an embodiment of the differences within a new continuous mixture.

Meanwhile, the idea of nature in contemporary world emerges with a different meaning. It is conceived mostly in an artificial manner. The great progress made in the field of technology which leads the world towards a complete artificiality, allows man to, even, reproduce nature outside its context. This ability of reproducing nature has brought along the possibility to fuse nature and architecture. However, this hybridization of nature and architecture is far from the conception of fusion in romantic era where there was an intention to integrate built environment with real nature intrinsically. Today's understanding of their fusion is rather achieved artificially, since nature is mostly integrated in a dead state or artificially constructed.

The concept of topography in contemporary architecture, which is formed with regard to aforementioned emerging conceptions, bears very distinct meaning than its former understanding. It is conceived as an artificially constructed plane, which makes building seem like slipped into landscape, thus it leads to a blurring of boundaries between figure and ground. Instead of being discrete parts of environment, the blurring of the boundaries refers to a continuity in their junction as if they merge into each other, to a smooth transition. In this point, while regarding the traditional reciprocal relation between building and the ground, which were conceived as two distinct, separate entity, it becomes clear to clarify the reason of why there have always been a question of coherence, a concern of establishing the ideal relationship between them. However, with the emergence of operative topographies in contemporary architecture, this symbiosis has attained another dimension, as long as it is hard to discern where the ground finishes and the building starts.

This new building style does not engender space through expanding vertically but instead horizontally. Therefore, there is an architecture of roof rather than walls or facade. They offer their representative grounds meaning roofs to serve as a floor of the building, rather than being merely a part of the enclosure. A floor which is generally the continuation of the surrounding terrain.

Continuity, on this account appears as the key concept in contemplation of the concept of topography throughout history. Whether provided by unobstructed view or flow of space, as in Japanese Tea House or Wright's architecture, or by the continuation of the local materials in buildings, or by the mimesis in form in order to maintain the physical appearance coherently with nature, as in early civilisations, and finally by continuation of the terrain through reconfiguration of the ground, the concept of continuity has been persisting being the common concern within the conceptual framework of topography.

The ground is considered and handled as a constructive tool, rather than as a stable background. This sense of 'operative systems' that is attributed to the conception of topography, by today's understanding, by virtue of their functioning as an architectural tool, makes the surface and the space of the building not only be considered as a two-dimensional skin constituting the envelope of the three-dimensional void, but also the determinant of the space, thus they become connected.

Consequently, there is no longer classic interaction between building and topography nor traditional description of the ground as horizontal, homogenous, delimited or stable. There is no longer passive ground but instead there is an active constructed plane giving birth to the conception of 'operative topography'.

REFERENCES

1. Aalto A., *Alvar Aalto in Seven Buildings: Interpretations of an Architect's Work*, Museum of Finnish Architecture, Helsinki, Finland, 1998
2. Aksoy Ö., *Biçimlendirme*, Karadeniz Gazetecilik ve Matbaacılık A.Ş., Trabzon, Türkiye, 1977
3. Altman I. and Chemers M.M., *Culture and Environment*, Cambridge University Press, New York, USA, 1984
4. Ambasz E., *Inventions: The Reality of the Ideal*, Rizzoli International, New York, USA, 1992
5. *Any Seçmeler*, Edited by Haluk Pamir, Mimarlık Derneği Yayınları 3, Ankara, 1998
6. Aydın A.B., "The Relation between Natural and Man-made Structural Systems-Examination of 20th Century Examples in Special Case of the Modern Architect: Santiago Calatrava", A Master Thesis in Architecture, University of Dokuz Eylül, February 1997
7. Benevolo L., *The History of the City*, Scolar Press, London, Great Britain, 1980
8. Benjamin A., "Time, Question, Fold", website: http://www.ee.duth.gr/data/maillist-archives /cyberunity/1996/msgoo117.html
9. Birkerts G., *Process and Expression in Architectural Form*, University of Oklahoma Press, Norman, USA, 1994
10. Brayer M.A., "Maps", website: http://www.archilab.org/public/2000/catalog/brayeren.htm
11. Capon D.S., *Architectural Theory Volume II*, John Wiley, Chichester, New York, USA, 1999
12. Collingwood R.G., *Doğa Tasarımı (The Idea of Nature)*, İmge Kitabevi, Ankara, Türkiye, 1999
13. Crowe N., *Nature and the Idea of a Man-Made World*, The MIT Press, Cambridge, Massachusetts, 1995

14. Dennis M., *Court & Garden: from the French Hotel to the City of Modern Architecture*, The MIT Press, Cambridge, Massachusetts, 1986
15. "Dijital Mimarlık: Topolojiden Tasarıma", *Arredamento Mimarlık*, Sayı 2001 / 07-08, Boyut Yayın Grubu, İstanbul, Türkiye, p.96 -116.
16. *Eore Saarinen on his Work: a Selection of Buildings Dating from 1947 to 1964 with Students by the Architect*, Edited by Aline B. Saarinen, Yale University Press, New Haven, USA, 1962
17. Eidlitz L., *The Nature and Function of Art-More Especially of Architecture*, Da Capo Press, New York, USA, 1977
18. "Eisenman Mimarlığı", *A4*, Sayı 13 - Ekim 2000, Mimar Sinan Üniversitesi Mimarlık Fakültesi Araştirma Görevlileri Yayını, İstanbul, Türkiye, p.3- 5.
19. *Environmental Design Best Selection 5*, Edited by Orange Book, Graphic-sha Publishing Co. Ltd, Tokyo, Japan, 1993
20. Eşkinat Y., "Identification of a Theoretical Framework for the Natural-Essential Properties of Settlements Bound to Human Identify", A Master Thesis in Architecture, METU, June 1990
21. Farmer J., *Green Shift: Towards a Green Sensibility in Architecture*, Edited by Kenneth Richardson, Architectural Press, Oxford, Great Britain, 1996
22. "Folding in Architecture", *Architectural Design Profile*, Number 102 , Academy Group Limited Editions, London, Great Britain, 1993
23. Frampton K., *Studies in Tectonic Culture: the Poetics of Construction in 19th and 20th Century Architecture*, The MIT Press, Cambridge, Massachusetts, 1995
24. *Frank Lloyd Wright-Architect*, Edited by Terence Riley with Peter Reed, The Museum of Modern Art, New York, USA, 1994
25. Garden Visit and Travel Guide, "Garden Visit and Travel", website: http://www.gardenvisit.com
26. Gröning G., "Ideological Aspects of Nature Garden Concepts in Late Twentieth Century Germany", in *Nature and Ideology-Nature Garden Design in Twentieth Century*, Edited by J.W. Bulmahn, Dumbarton Oaks Research Library and Collection, Washington DC, USA, 1997, p.221- 248.

27. Guggenheimer T.S. , *A Taliesin Legacy-The Architecture of Frank Lloyd Wright's Apprentices*, Van Nostrand Reinhold, New York, USA, 1995
28. Hofmann D., *Frank Lloyd Wright: Architecture and Nature*, Dover Publications, Inc., New York, USA, 1986
29. Imperiale A., *New Flatness: Surface Tension in Digital Architecture*, Birkhäuser-Publishers for Architecture, Basel, Switzerland, 2000
30. Jencks C., "Landform Architecture-Emergent in Nineties", in *Architectural Design: New Science-New Architecture,* Volume 67-Number 9-1997, Academy Editions, London, United Kingdom, p.15- 31.
31. Kruft H.W., *A History of Architectural Theory: from Vitrivius to the Present,* Zwemmer; Princeton Architecture London, New York, USA, 1994
32. Kurukowa K., *Intercultural Architecture: The Philosophy of Symbiosis*, Academy Editions, London, England, 1991
33. Leatherbarrow D., *Uncommon Ground*, The MIT Press, Cambridge, Massachusetts, 2000
34. Leland M.R., *Mimarlığın Öyküsü: Öğeleri, Tarihi ve Anlamı (Understanding Architecture: its Elements, History and Meaning)*, Kabalcı Yayınevi, İstanbul, Türkiye, 2000
35. Lootsma B., "Disconnecting Nature, Connecting Nature: West 8 in New York", in *Daidolos*, Number 65 – September 1997, Bertelsmann Fachzeitschriften, Berlin, Germany, p.104.
36. Mack G., *Herzog & De Meuron: The Complete Works Volume 3*, Birkhäuser-Publishers for Architecture, Basel, Switzerland, 2000
37. Mugerauer R., *Interpretations on Behalf of Space: Environmental Displacements and Alternative Responses*, State University of New York Press, Albany, USA, 1994
38. *Nature as Space: (re)Understanding Nature and Natural Environments*, Edited by Güven A. Sargın, METU Faculty of Architecture Press, Ankara, Türkiye, 2000
39. Nio M. and Spuybroek L., "The strategy of the form", website: http://www.v2.nl/DEAF/96/ nodes/NOX/text1.html

40. Oswalt P., “Implantationen: Nature in Contemporary Architecture”, in *Arch+,* Number 142- Juli 1998, Arch+ Preis, Aachen, Germany, website: http://www.baunetz.de/ arch/archplus/142/implanc_.htm
41. Özdemir İ., “The Ethical Dimension of Human Attitude towards Nature”, A Doctor of Philosophy Thesis in Department of Philosophy, METU, April 1996
42. Palma Di V., “Architecture, Environment and Emotion”, in *AA Files - The Journal of the Architectural Association School of Architectur*e , Number 47 - September 2002, AA Publications , London, England, p.45- 56
43. Palumbo M.L., *New Wombs: Electronic Bodies and Architectural Disorders*, Birkhäuser-Publishers for Architecture, Basel, Switzerland, 2000
44. Pepper D., *Modern Environmentalism: An Introduction*, Routledge, London, England, 1996
45. Pfeifer O., “The Concepts of Artificiality and Authenticity in Architecture”, ARCH 610 Thesis Research, Pratt Institute, May 1999, website: http://pratt.edu/~opfeifer/ projects/thesis/Research_Paper/99-05-20/
46. Picard C.G., *Living Architecture: Roman*, Grosset&Dunlop, New York, USA, 1965
47. Pollak L., “Pieces of the World: Nature Object & Nature Space”, in *Daidolos,* Number 65 – September 1997, Bertelsmann Fachzeitschriften, Berlin, Germany, p.28- 42.
48. Ponte A., “Topic and Topography: Wright’s Falling Water”, in *Daidolos,* Number 63 – March 1997, Bertelsmann Fachzeitschriften, Berlin, Germany, p.16- 25.
49. Princen B., “Mutating Landscape”, in *Daidolos,* Number 75 – May 2000, Bertelsmann Fachzeitschriften, Berlin, Germany, p.87- 89.
50. Raith F.B., “Everyday Architecture”, in *Daidolos,* Number 75 – May 2000, Bertelsmann Fachzeitschriften, Berlin, Germany, p.7- 17.
51. Rajchman J., *Constructions*, The MIT Press, Cambridge, Massachusetts, 1998
52. Richardson Jr. L., “Introduction to Roman Topography”, website: http://www.cvrlab.org/ Library/Richardson/RichardsonIntroduction.html
53. Rudofsky B., *Architecture without Architects*, Academy Editions, London, Great Britain, 1964

54. Schulz C.N., *Meaning in Western Architecture*, Rizzoli International Publications, Inc., New York, USA, 1980
55. Scully V.J., *Architecture: the Natural and the Manmade*, St. Martin's Press, New York, USA, 1991
56. Scully V.J., *Frank Lloyd Wright*, G. Braziller, New York, USA, 1960
57. Sola-Morales R.I., *Differences: Topographies of Contemporary Architecture*, Edited by Sarah Whiting, The MIT Press, Cambridge, Massachusetts, 1997
58. Somol R.E., *Peter Eisenman-Diagram Diaries*, Thames & Hudson Ltd, London, United Kingdom, 1999
59. Stairs D., "Biophilia and Technophilia: Examining the Nature/Culture Split in Design Theory", in *Design Issues,* Volume 13-Number 3-Autumn 1997, The MIT Press, London, United Kingdom, p.37- 43.
60. Taguchi M., "Harmony between Man and Nature", website: http://holly.colostate.edu/ ~masat/textfinal2.pdf
61. "Tema: Yapay, Yapaylık, Teknoloji", *Mimarlık Kültürel Dergisi XXI*, Sayı 7 – Mart-Nisan 2001, Ofset Yapımevi, İstanbul, Türkiye
62. "Tema: Doğa, Doğal, Doğallık", *Mimarlık Kültürel Dergisi XXI*, Sayı 8 – Mayıs-Haziran 2001, Ofset Yapımevi, İstanbul, Türkiye
63. "Theme: Operative Topographies", *Quaderns*, 1998, Ingoprint SA, Barcelona, Spain
64. Tschanz M., "In spite of Nature: Alpine Chalets of the Swiss Alps Clubs", in *Daidolos,* Number 63 – March 1997, Bertelsmann Fachzeitschriften, Berlin, Germany, p.56- 61.
65. Underwood D., *Oscar Niemeyer and the Architecture of Brazil*, Rizzoli International Publications, Inc., New York, USA, 1994
66. Walker R., *The Use of Nature*, Henahan House, New York, USA, 1957
67. West 8 Landscape Architects, "Green Manhattanism", in *Daidolos*, Number 65 – September 1997, Bertelsmann Fachzeitschriften, Berlin, Germany, p.105- 109.
68. "What is Nature Now?" *Harvard Design Magazine*, Winter/Spring 2000, England
69. Wheelwright P., "The Machining of Nature", website: http://www.pmwarchitects.com/ ac_machining.htm

70. Widder L., “Room Constituted by Topography: on Vancouver Island”, in *Daidolos,* Number 63 – March 1997, Bertelsmann Fachzeitschriften, Berlin, Germany, p.116-121.
71. Wittenberg H., “A Head for Heights: Ruskin, Buchan and Topography”, website: http:// www.uwc.ac.za/arts/english/lamp/WITTENB.html
72. Wright F.L., *An American Architecture*, Edited by Edgar Kaufmann, Horizon Press, New York, USA, 1955
73. Wright F.L., *An Organic Architecture: the Architecture of Democracy*, The MIT Press, Cambridge, Massachusetts, 1970
74. Wright F.L., *A Testament*, Horizon Press, New York, USA, 1957
75. Wright F.L., *Genious and Mobocracy* , Duell, Sloan and Pearce, New York, USA, 1949
76. Wright O.L., *Our House*, Horizon Press, New York, USA, 1959
77. *Writings on Wright: Selected Comment on Frank Lloyd Wright*, Edited by H. Allen Brooks, The MIT Press, Cambridge, Massachusetts, 1981