DIONYSIAN LIGHT
A RESEARCH ON LIGHT AND ARCHITECTURE

A THESIS SUBMITTED TO
THE GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES
OF
THE MIDDLE EAST TECHNICAL UNIVERSITY

BY

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IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARCHITECTURE
IN
THE DEPARTMENT OF ARCHITECTURE

DECEMBER 2000

Approval of the Graduate School of Natural and Applied Sciences

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ABSTRACT

DIONYSIAN LIGHT
A *RE*SEARCH ON LIGHT AND ARCHITECTURE

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December 2000, 125 pages

The subject of this *re*search is *Dionysian light*- presented as an architectural concept that has been introduced for the first time in this *re*search though the phenomena it represents is a familiar one. *Dionysian light* as a concept stands for the *what*, *how* and *why* of the nature of relation between light and works of architecture. It corresponds to the *symbiosis* of seemingly different phenomena; light, matter, space and time. This *symbiosis* has been studied in terms of Nietzsche's 'the Apollinian and the Dionysian,' in the duality of which, according to Nietzsche, the origins of art and all human creativity exist. Just as Nietzsche brings Dionysus back into the Greek world that the classicists had created or as the priesthood of Apollo had brought the Thracian deity back into the temple of Delphi and had merged his orgiastic abandon with the measured beauty of their native gods; so the current research on one of the basics of architecture is also an attempt to discover the Dionysian realm in

architecture hidden by the thin veil of Apollinian consciousness. Light is asserted as one of the essential phenomena of this Dionysian realm, and a Japanese word *utsuroi*, corresponds to how it is perceived. *Utsuroi* is defined as the perception of things fading and growing; perception of shadow shifting with the light; and perception of space as a moment in the continual process of change. *Dionysian light* is not analysed or explained but rather described with various media from a wide course of time and disciplines.

Keywords: Dionsian light, utsuroi, light, shadow, darkness.

ÖZ

DIONYSOS'CA IŞIK
IŞIK VE MİMARLIK ÜZERİNE BİR ARAŞTIRMA

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Aralık 2000, 125 sayfa

Bu araştırmanın konusu, her zaman algılayageldiğimiz bir olguya karşılık geldiği halde bir mimari kavram olarak, ilk defa bu araştırmada tanıtılan *Dionysos'ca ışık* kavramıdır. *Dionysos'ca ışık*, ışık ile mimarlık eserleri arasındaki ilişkinin doğasındaki *ne*, *nasıl* ve *niçin* sorularını açıklarken, farklı olgularmış gibi algılanan ışık, madde, mekan ve zaman olgularının 'ortak yaşamına' karşılık gelir. Bu 'ortak yaşam', Nietzsche'nin tüm insan yaratıcılığının ve sanatın temellerinin yer aldığını düşündüğü Apollo'ca ve Dionysos'ca karşıtlığı ışığında incelenmiştir. Nasıl ki Nietzsche, Dionysos'u klasiklerin yarattığı eski Yunan dünyasına geri getirmişse, ya da Apollo'nun rahipleri Dionysos'u Delphi tapınağına getirip, onun çoşku ve taşkınlığını kendi tanrılarının ölçülü güzelliğiyle karıştırmışlarsa, mimarinin temel öğelerinden ışık üzerine olan bu araştırma da, mimarlık eserlerindeki, Apollo'ca bilincin ince örtüsü ile gizlenmiş Dionysos'ca olguları ortaya çıkarmayı hedeflemiştir. Işığın, bahsedilen bu Dionysos'ca olguların en önemlilerinden biri

olduğu ileri sürülmüştür. Japonca bir kelime olan *utsuroi*, nesnelerin soluklaşıp, belirginleşmesinin algılanması; ışıkla birlikte değişen gölgenin algılanması ve mekanın sürekli bir değişim sürecinde bir an olarak algılanması olarak tanımlanır.Bu tanımıyla *utsuroi, Dionysos'ca ışığın* algılanmasına karşılık gelir. Yöntem olarak, *Dionysos'ca ışık* çözümlenmeye ya da açıklanmaya çalışılmamış, farklı zaman ve disiplinlerden elde edilen araçlarla betimlenmeye çalışılmıştır.

Anahtar Kelimeler: Dionysos'ca ışık, utsuroi, ışık, gölge, karanlık

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INTRODUCTION

es·sence /'esəns/ *n* **1** [U *of*] the central or most important quality of a thing, which makes it what it is: *The essence of his religious teaching is love for all men.* **2** [C;U] the best part of a substance, taken out and reduced to a jelly, liquid, etc.: *essence of roses*|*Did you use coffee essence in making this cake?* **3 in essence** in its/one's nature; ESSENTIALLY (1)

es·sen·tial /ɪ'senʃəl/ *adj* **1** [*to, for*] necessary: *We can live without clothes, but food and drink are essential to life.* **2** [A] central; most important or most notable: *What is the essential difference between these two political systems?* **–essential** *n*: *The room was furnished with the simplest essentials: a bed, a chair, and a table.*

es·sen·tial·ly /ɪ'senʃəli/ *adv* in reality; BASICALLY: *She's essentially kind.*

Fig.1 : *Essence, essential, essentially* ; Longman Active Study Dictionary, 3rd.ed.

It contains every kind of visibility yet is in itself invisible; *it* is familiar and simple, yet entrancing and never the same. Like the soul it can inhabit for a time that which is solid and while we can sense its presence, it remains beyond our touch.[1] This ambiguous nature of *light* has attracted man throughout the ages as represented in their myths, beliefs and celebrations. Ernst Cassirer for example, informs that, in the creation legends of nearly all peoples and religions such as those of Iranian, Egyptian, and Babylonian together with those of all the members of the Indo-European family of peoples, the process of creation merges with the dawning of the light and the worship of light is woven into the whole of human existence.[2]

One can see the traces of this strong affinity between man and light in the structure of the Indo-European languages in which all understanding of 'the Divine', of 'Being', and of 'Appearance' relies on the semantics of light.[3] *God*, is light; his manifestation is a shining forth, an epiphany. Hartmut Böhme notes that in almost every religion, the experience of dazzling radiance, in all its terrifying power, has coalesced with that of the *divine*. So "one way of mitigating the power of light and making it more approachable" says Böhme, "is by equating Eros with light- as in the Orphic tradition, where Eros appears as the creative light under the name of Phanes, who is the Appearer, but also He Who Makes Things Appear."[4] One of those things that borrows its appearance from light is the *soul* which, indeed, derives from light.[5]

Yet it is not only the *God*, the *Eros* or the *soul* but also the '*truth*' is light which is the origin of Heidegger's notion of *Seins-Lichtung*, the clearing or lighting of being. Actually, the hierarchic order of being depends on degrees of participation in light: the lighter, the more *pure* and *worthy*; the darker, the more despised and worthless.[6] In Plato, the *Good* is the most radiant aspect of being. Böhme notes that *speech*, itself, lights and clarifies. And finally light 'clears' space in the first place;" it makes room. Etymologically, 'room' is cleared land, a clearing, which in German is eine Lichtung."[7] Böhme, concludes as follows;

> And so it is immediately evident that the Divine, Nature, Space, Man himself, and most particularly what he feels to be his vital essence- soul, Eros, language- all this is light, or a modification thereof. *Quinta Essentia*.[8]

Yet, to man as to all diurnal animals, light is the essential for most activities in his or her 'everyday life-world' as well. It is no doubt that light is one of the revealing elements of life, for without light the eyes can observe no shape, no colour, no movement or space. Indeed, light is as much *essential* in our experience of architectural spaces as it is to life in its most literal sense. It reveals the building, its intentions, its place, its form, its space, and its meaning; light reveals architecture and, architecture reveals light.[9]

Yet, the essentiality of light for life and for architectural spaces in particular, is neither the subject nor the assertion of this *re*search but an observation -sufficiently shared by many others- that which forms the motive behind it. Rudolf Arnheim, in his book *Art and Visual Perception: A Psychology of the Creative Eye*, points out that "if an event or thing is experienced frequently and we have learned to react to it smoothly, our reasoning and feeling are not likely to remain actively concerned with it."[10] This is also the case for light, as the powers of it over the practice of daily life and the space we live in become sufficiently familiar, light is threatened with falling into oblivion. And yet, continues Arnheim, "it is the most common and elementary matters that reveal the nature of existence with powerful directness."[11] Accordingly, to keep 'our *reasoning* and *feeling*' on light is intended, with a question on mind related to the nature of relation between light and works of architecture. In abundance of approaches, styles, concepts and theories of architecture at the dawn of new millennium, this question, just as that of Louis Kahn's 'what does the building want to be?', is believed to address one of the essential phenomena of architecture that may reveal the nature of it with 'powerful directness' Arnheim points about.

Certainly, the relation between light and works of architecture has been subject to many studies though they vary in their approaches. There is a wide range of data that we have been used to take for granted and became familiar with so much that, we do not need to dwell on it once more. Amidst such a context, this study is a *re*search on light and architecture questioning the nature of their relation, and set out to find *what else* or *what instead* can be said about it. *It is believed to be at the outset that, any research on the essentials may promise an opportunity to build new concepts, however a modest one as it*

may be, such as *Dionysian light* that is going to be introduced later in the present *re*search. Before specifying the subject of this *re*search, it would be well to introduce and identify briefly the key terms and the roles that have been attributed to light so far, as it will better put forward what constitutes the particular contribution of this architectural *re*search.

I.A. BACKGROUND

According to Plummer, the roles light have played in architecture over the centuries have ranged from the *'cognitive'* to *'poetic'*;

> Light was often distributed in space to provide clear and easy vision, and to give us information about the world. But it has also been shaped into sensuous and beautiful phenomena meant to be deeply felt for their own sake, and for the echoes they awake in the innermost part of the soul. These two very different kinds of light reflect contrasting human needs, while both remain essential to our lives, they are rarely sought at the same time.[12]

James Brogan on the other hand, describes the *'literal'*, *'abstract'*, *'poetic'*, *'symbolic'*, *'metaphorical'*, *'emotional'*, *'spiritual'* and *'mystical'* uses of light, in his essay on the history of the role of light in architecture.[13] According to Brogan, the Roman Pantheon with its central oculus and the resultant rays of traversing light was an example to the *literal* use of light, so that as sunlight moved through the space it would highlight the figures and the statues presented along the Pantheon's drum.[14] Whereas in the Middle Ages and in the Gothic cathedral in particular, we can see the glorification of light and shadow exploited to *poetic, emotional* and *mystical* effect. Light in those works of architecture was the symbol of the supernatural, with the manifestation of God in the ordinary, earthly objects of the building- the stone, wood and mortar.[15] Yet, the most brilliant example of the *symbolic* use of light as a representational medium in architecture, says Brogan, is in the Baroque period of the sixteenth and seventeenth centuries. The *symbolism* and the *imagery* of light and dark were the ideal vehicles for the expression of religious mysteries and were used to inspire devotion.[16]

Brogan argues that there is a shift from this more *spiritual* use of light in the Neo-classical time of the eighteenth century where architects such as Boullée and Ledoux exploited

light to its full advantage using light and shadow to clarify their geometric forms and spaces, which were based on the dynamism and rules of nature. However it is particularly "Modern" architecture, beginning with the nineteenth century Industrial Revolution that brought with it a shift from a *poetic, symbolic* use of light to a more *literal* treatment of light and architecture. As at Taut's pavilion, says Brogan, light was used *literally* to express the architectural philosophy of the time, a move to the machine, new materials, and a rejection of history.[17]

In his essay on the history of the role of light in architecture, Brogan goes on to say that it is not until later in the modern period that we see a revived interest in the orchestration of natural light for *emotional* intensity and *symbolic, poetic* expression. Accordingly, a more *spiritual* use of light in architecture can be found in the later works of Le Corbusier such as his church at La Tourette or Ronchamp chapel.[18] Louis Kahn was another notable proponent of the *poetic* treatment of light in architecture in the later twentieth century. Brogan concludes with how light and shadow are used at the end of twentieth century by giving examples from Ricardo Legorreta, Tadao Ando and Steven Holl in whose works *poetry* and a *mystical, metaphorical* treatment of light can be found.[19] James Brogan argues that the relationship of light and architecture has continuously made evident the 'dialogue' between society and light, the expression of which through the art and architecture of a particular time and place have represented the philosophy of a specific society, geographic location, as well as the deeper beliefs of a society as a whole.[20]

In an another study on light and architecture, Millet categorises the roles light has taken in terms of its capacity of *revealing*. Accordingly, at the first category there is the *experiential* light which reveals our experience of place, genius loci, climate and time. The second one is *formal* light which 'emphasises or dematerialises' form, 'reveals or conceals' structure and 'emphasises or mutes' materials. The third category is *spatial* light which unifies, differentiates, connects or separates and directs space. Finally in the last category light reveals *meaning* where it is called '*contemplative*', '*festive*', '*theatrical*', '*metaphorical*', '*symbolic*', '*divine*' and '*sacred*' light.[21]

Maurizio Vitta, on the other hand, argues that the history of the role of light in architecture is probably still waiting to be written, noting however that the narrative has changed course quite dramatically in the twentieth century.[22] Vitta claims that "Modern" architecture has usually relegated light to the fringe of design, except on a functional level;

> It was indeed the Baroque period that marked the transition from an *anagogical* interpretation of light in architecture to a *metaphorical* reading, replacing its *mystical* connotations with a more *allegorical* approach designed to multiply its range of possible meanings. But the triumph of rationalism, accompanied by the first discoveries related to electricity, meant the whole issue faded into a sort of abstract universalism resulting in rather dry *technicalism*: the Kantian "light of reason" was reduced, on a practical level, to reasonable calculations in lighting technology...[23]

Actually, even for the science of physics that these reasonable calculations were based on, light has been a puzzle from the earliest times and remains so today.[24] In elementary optics light can be considered to consist of light *rays* and the majority of phenomena can be explained within the framework of this idea. However, the ray concept breaks down when it is tested in other events which require light to be considered as a part of the electromagnetic spectrum, travelling in *wave* form. Gomez and Pelletier, likewise, emphasise the mystery of light in their book *Architectural Representation and the Perspective Hinge* as follows:

> It is significant that twentieth-century scientific theories, such as Einstein's theory of relativity and quantum theory, have re-established the mysterious nature of light as a substance irreducible to a single scientific explanation. Recent theories in quantum electrodynamics declare that light is made up of corpuscles that travel through different media but do not behave in a 'rational' way. In conducting experiments, all we can observe are 'probabilities' *noted as little arrows.*[25]

I.B. THE SUBJECT

The subject of this architectural *re*search is *Dionysian light*- an architectural concept that has been introduced for the first time in this *re*search though the phenomena it represents is a familiar one. This *re*search is a matter of describing, not of explaining or analysing the *Dionysian light*.[26] *Dionysian light* as a concept stands for the what, how and why of the nature of relation between light and works of architecture. This *relation* has been studied in terms of Nietzsche's 'the Apollinian and the Dionysian' in the duality of which, according to Nietzsche, the origins of art and all human creativity exists. Just as Nietzsche brings Dionysus back into the Greek world that the classicists had created or as the priesthood of Apollo had brought the Thracian deity back into the temple of Delphi and had merged his orgiastic abandon with the measured beauty of their native gods;[27]so the current research on one of the basics of architecture is also an attempt to discover the Dionysian realm in architecture hidden by the thin veil of Apollinian consciousness. Certainly, within the scope of this architectural research, it has been concentrated on light which is asserted as one of the essential phenomena of this Dionysian realm involving 'the whole wet element' in nature- blood, semen, sap, wine, and all the life-giving juices.

As has been said, *Dionysian light* as a concept corresponds to a phenomena that we have always been experiencing, and perhaps questioning, as in the case of Robert Irwin, an artist whose works are so called 'Light and Space' or 'phenomenological' works:

> Name all the events (facts) in a moment of perceptual experience. Do we have enough words to adequately reflect such a moment's complexity?... A cloud passes over the sun, trailing its shadow over the landscape, and a chill wind passes. A surface that a moment ago appeared rough, is now smooth; something in profile is now lost in its environment. How do we picture such a phenomenon, the weave of its texture? Is it enough to say (picture) that a cloud has passed over the sun? and if it (white, curved, rough) was real before, is it (violet, flat, smooth) equally real now? Then what do we mean by reality? Is neither or both the case? Can we disregard these perceptual changes as merely incidental, somehow less then real? While I

> might walk up to touch the surface, to know its roughness in its objectness, what am I to do about the phenomenon of (white) to violet? Certainly we can say (picture) that a nameable object-clouds- has passes over another nameable object- sun. But how do we account for all the phenomena we experience in such an event? If we say the cause and the effect of the shadows and the wind are the clouds and the sun, does such a logical explanation now do away with all the perceptual ambiguities?[28]

I.C. APPROACH, METHOD AND SCOPE

> What distinguishes our nineteenth century is not the triumph of science, but the triumph of the scientific method over science.[29]

This study is not an architectural research but an architectural *re*search, and it has been the subject itself, the *Dionysian* light, which had the greatest impact on its method. In other words, the concept of *Dionysian* light has determined not only *what* is said but also *how* it is said. As such, it may be regarded as having an *ad hoc* method or approach.[30] Nevertheless, below is the discussion of some approaches to man, to world, to way we understand them, as well as to architecture, to research, to light, and to how we express them -all of which have influenced in one way or another the forming of the approach applied in this *re*search.

In *The Birth of Tragedy*, 1872, Nietzsche or 'the disciple of Dionysus' as he calls himself, argues that ever since Socrates-the 'theoretical man'- replaced the tragic vision by a vision of nature as ultimately understandable and intelligible, the Western man has lost the Dionysian elements of his being. Thus in the absence of Dionysus, now exist rational structures in which the mystical, musical mood and its powerful dramatic rhythm are replaced by logical argument, debate, and rhetoric. Apollinian rationality, clarity, and lucidity replace the problematic, ambiguous, and mysterious depth of earlier tragedies.[31] Actually it has already been mentioned that light is, in its essence, ambiguous just as its relation with works of architecture. Accordingly, it is not the purpose of this *re*search to remove that ambiguity and make it explicit, or 'understandable' and 'intelligible' in Nietzsche's terms, but rather to include

this ambiguous nature to the *re*search, as in the concept of *Dionysian light* where it is already implied by definition.

In its *re*search for one of the basic concepts of architecture, the current study if not as a method, then at least in its intention, resembles to that of phenomenology. As M. Merleau-Ponty defines it;

> Phenomenology is the study of essences; and according to it, all problems amount to finding definitions of essences: the essence of perception, or the essence of consciousness, for example. But phenomenology is also a philosophy which puts essences back into existence, and does not expect to arrive at an understanding of man and the world from any starting point other than that of their 'facticity'.[32]

Subsequently, Merleau-Ponty explains what he means by 'facticity' as, 'a direct and primitive contact with the world.' Phenomenology offers us "an account of space, time and the world as we 'live' them,"[33] once;

> To return to things themselves is to return to that world which precedes knowledge, of which knowledge always speaks, and in relation to which every scientific schematizetion is an abstract and derivative sign-language... as is geography in relation to the country-side in which we have learnt beforehand what a forest, a prairie or a river is.[34]

Consequently, the phenomenological approach requires excluding of the procedure of analytical reflection on the one hand, and that of scientific explanation on the other.[35] As Axel Madsen describes, "phenomenology meant to stand back and suspend all judgement and to try to grasp things and ideas with a kind of primal intuition."[36]

C. Norberg-Schulz's book, *Genius Loci: Towards a Phenomenology of Architecture* would be an appropriate example to phenomenological approach in architectural criticism. In the opening pages of his book, Norberg-Schulz argued that; "after decades of abstract, 'scientific theory', it is urgent that we return to a qualitative, phenomenological understanding of architecture," which "understands architecture in concrete, existential terms."[37] Emphasising

that though it is not a wrong approach, he says that in case of the scientific analysis of art and architecture; "we miss the concrete environmental character, that is, the very quality which is the object of man's identification, and which may give him a sense of existential foothold."[38] According to Norberg-Schulz, the reason for this lies in the fact that "being qualitative totalities of a complex nature, places can not be described by means of analytic, 'scientific' concepts," which 'abstracts' from the given to arrive at neutral, 'objective' knowledge;

> What is lost, however, is the everyday life-world, which ought to be the real concern of man in general and planners and architects in particular.[39]

In fact there are architects, who use phenomenology as a way of thinking and seeing in forming their architectural conceptions. Steven Holl is one of those, as in his following quotation in which he describes a phenomenological approach to the experience of architecture with words that recalls Merleau-Ponty's 'facticity';

> Experience of phenomena -sensations in space and time as distinguished from the perception of objects- provides a 'pre-theoretical' ground for architecture. Such perception is pre-logical i.e., it requires a suspension of a priori thought. Phenomenology, in dealing with questions of perception, encourages us to experience architecture by walking through it, touching it, listening to it.[40]

Those 'sensations in space and time' Holl mentions about, involves the experience of space, light, and material and those other *intangible qualities* of space which usually tend either to be regarded as *poetic* interpretations or to be dismissed altogether as *subjective responses* of the individual designer or the viewer. As a result, these essential qualities of space that we experience in 'everyday life-world' have yet to receive adequate attention.

It was Louis Kahn, who was one of the most influential architect in his phenomenological approach. He had mostly posed the problems in their existential and essential forms as in his well-known quotation, 'what does the building want to be?' -a question just as much important as its answer. Indeed, besides his phenomenological

approach, the architecture of Louis Kahn has often been characterised as having one of the most elaborate and inspiring examples of the use of light. For this reason, a more comprehensive analysis of *how* Louis Kahn was explaining his architectural concepts on light through his words, may suggest how we might proceed to obtain the needed understanding and more particularly the ways of expressing the nature of relation between light and works of architecture. Accordingly, following are the extracts that reveal the phenomenological, poetic and esoteric approach of Louis Kahn, from his talk with the students at the School of Architecture of the Eidgenossische Technische Hochschule, Zurich, in February 12th, 1969, at the opening of the exhibition of his works:

> Silence and Light. Silence is not very, very quiet. It is something which you may say is lightless: darkless. These are all invented words. Darkless- there is no such a word. But why not? Lightless; Darkless. Desire to be ; to express....
>
> I turn to light, the giver of all Presences: by will; by law. You can say the light, the giver of all presences, is the maker of a material, and the material was made to cast a shadow, and the shadow belongs to the light....
>
> I did not say things yet made here, desire being that quality, that force, unmeasurable force, everything here stems from the unmeasurable. Everything here promises the measurable. Is there a threshold where they meet? Can a threshold be thin enough to be called a threshold in the light of these forces; these phenomena? Everything you make is already too thick. I would even think that a thought is also too thick. But one can say, light to silence, silence to light, has to be a kind of ambient threshold and when this is realised, sensed, there is Inspiration.... [41]

It is no doubt that the ideas that Louis Kahn had presented at the exhibition of his works have influenced not only what he said but also *how* he had tried to say it which is also the case in this *re*search. In the first chapter, light is proposed and discussed as one of the essential phenomena of the Dionysian realm in architecture, yet hidden by the thin veil of

Apollinian 'measured restraint,' and calm of the sculptor god. The two artistic energies the Apollinian and the Dionysian together with the two worlds of art 'dreaming' and 'intoxication' they correspond are introduced. The interaction of these art impulses as contained in *The Birth of Tragedy* are discussed as well. The role of *nature* and the concept of *play* are highlighted and how these are incorporated into the subject of this *re*search is emphasised.

Correspondingly, the second chapter introduces a Japenese word, *utsuroi*, as a manifestation of the experience of *Dionysian light* -the *symbiosis* of space, time, light, and matter. As such *utsuroi* helps to define concepts that have no counterparts in English. Jan Butterfield gives the definition of *utsuroi as perception of things fading and growing; perception of shadow shifting with the light; perception of space as a moment in the continual process of change.*[42] Accordingly, each section in the second chapter gives examples which reveals best, the kind of perceptions as defined in *utsuroi;* noting however that, both the *Dionysian light* and the *utsuroi* correspond to a single phenomenon. So the first section responding to perception of space as a moment in the continual process of change, presents the cases with reference to the concept and context of *room* which Kahn believes is the beginning of architecture. On the contrary, the second section discusses perception of things fading and growing in the exteriors of works of architecture. Finally, the last section in this chapter is devoted to perception of shadow shifting with the light as it is represented in a cut or *section* of a building or "the art of drawing shadows" as it was generally understood till the nineteenth century. The representation of shadows through section not only connects the exterior and the interior but also reveals the 'idea' of architecture in Vitruvius's terms.

The last chapter is a *darker* one with respect to preceding chapters, as it presents darkness as a form of light. In this sense, darkness becomes a specific case to observe the phenomena defined in *utsuroi.* The introduction of darkness causes a loss of materiality of the things and the milieu while stands as a background from which *Dionysian light* shines forth with substantial presence. In terms of the cases and the approaches and ideas presented, diverse media from a wide course of time and disciplines have been referred to, which, as a method is in accordance with the central assertion of the current study.

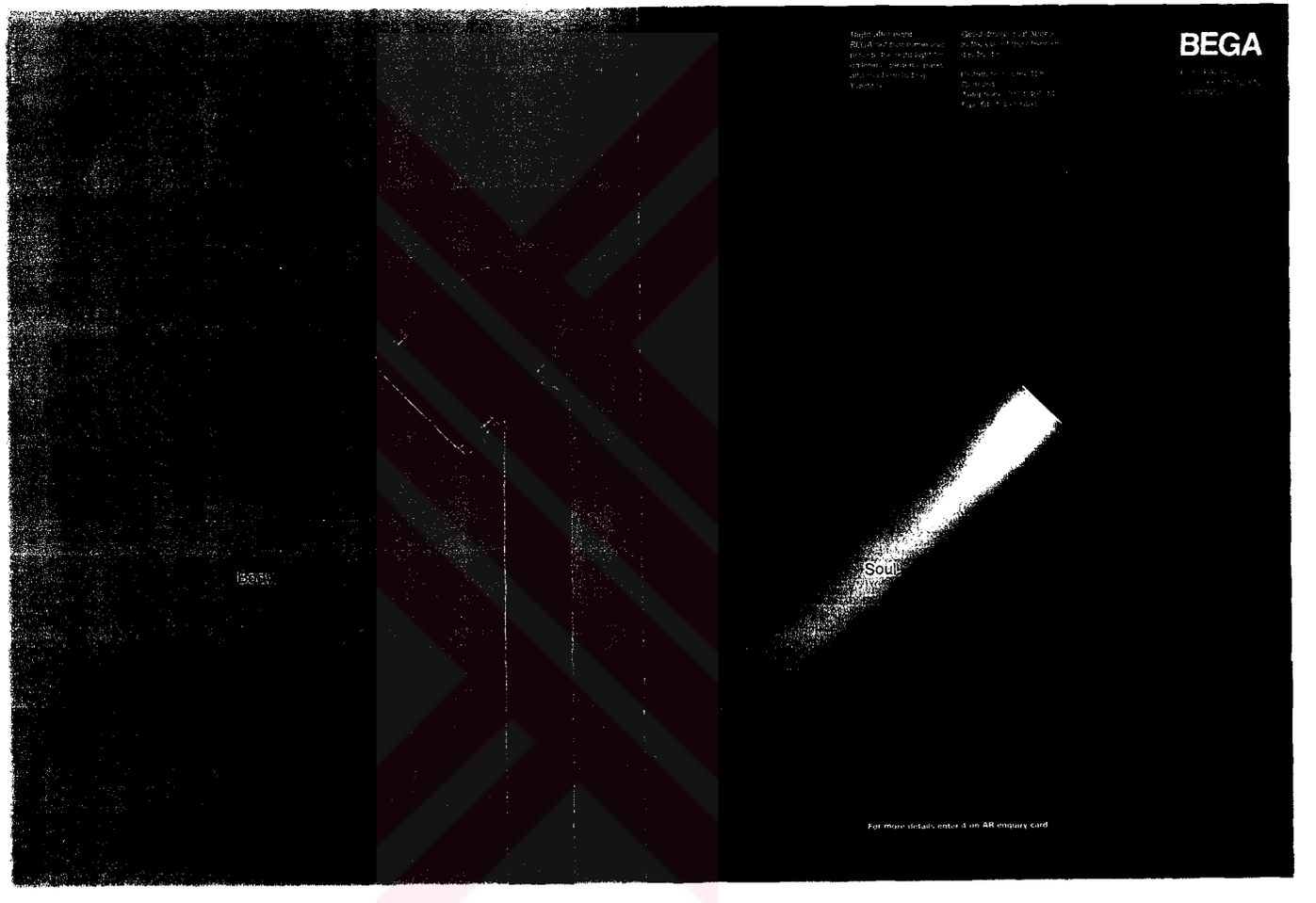


Fig.2: "Body" / "Soul"; BEGA advertisement by Leonhardt & Kern, Architectural Review, February 1996.

CHAPTER II

THE APOLLINIAN AND THE DIONYSIAN

In *The Birth of Tragedy,* Nietzsche had made a research on the origins of art and more particularly the Greek tragedy which he introduces as the expression of two interwoven artistic impulses, the Apollinian and the Dionysian. According to Nietzsche the origins of art and of all human creativity exists in the duality between the Apollinian, as art-world of dreams and the Dionysian, as the art-world of intoxication. Yet, as it has been already said, ever since Socrates the 'Western' man has lost the Dionysian elements of his being. Thus in the absence of Dionysus, there have been attempts to restore the Dionysian elements consciously in the creation of works of art and architecture as in the case of Deconstruction movement, as if the Dionysian needs the mediation of the human artist to assert its energy. Certainly this is not the case for Nietzsche's the Apollinian and the Dionysian:

> Thus far we have considered the Apollinian and its antithesis, the Dionysian, as artistic energies which burst forth from nature herself, without the mediation of the human artist; energies in which nature's art impulses are satisfied in the most immediate and direct way: first, on the one hand, in the pictorial world of dreams, whose completeness is not dependent upon the intellectual attitude or the artistic culture of any single being; and, on the other hand, as drunken reality, which likewise does not need the single unit, but even seeks to destroy the individual and redeem him by a mystic feeling of Oneness. With reference to these immediate art-states of nature, every artist is an 'imitator,' that is to say, either an Apollinian artist in dreams, or a Dionysian artist in ecstasies, or finally- as for example in Greek tragedy- at once artist in both dreams and ecstasies:...[1]

As to repeat in Nietzsche's words, the Apollinian and the Dionysian are firstly, artistic energies which burst forth from nature herself, without the mediation of the human artist. They are the nature's art impulses satisfied in the most immediate and direct way. This is an important statement since now it will be proposed that *works of architecture, as they are constructed, and exposed to nature, both in literal sense and in the sense that life goes in and around them, open a ground for nature to burst forth its Dionysian artistic energy.*

Fig.3: Traces of the Dionysian artistic impulses;
fountain at the Faculty of Architecture, METU.

One can see the traces of this Dionysian energy in 'the everyday life-world' of the works of architecture. The beauty of various colours and textures of the weathering of a stone or oxidation of metals in time almost have a painterly dimension.[9] Yet nature does not only involves weather or air but also 'the everyday life-world' of man; continuously reconstructing, relocating, revising, re-evaluating the spaces they live. "The architect can fix the dimensions of

solids and cavities," says S. E. Rasmussen in his book *Experiencing Architecture*, "he can designate the orientation of his building, he can specify the materials and the way they are to be treated; he can describe precisely the quantities and qualities he desires in his building before a stone has been laid."[3] However what the architect designates is not an *end*; what may appear to be finished is but one stage in the development of the matter.[4] Works of architecture, rather then being a solid, objective vision of an immobile and permanent reality, are constantly subject to transfiguration similar to mathematical concept of an asymptotical curve, progressing infinitely toward a goal while never quite reaching it.

The present study presents *light as just one of those energies of nature*, and more precisely as *Dionysian*, the reason of which will be clear through a more comprehensive discussion of the Apollinian and the Dionysian later in this chapter. However it is important to point out now that this is the kind of light that Tadao Ando speaks of;

> *Light* shone within darkness and breathed life into space.[5]

or likewise, what Steven Holl mentions about;

> The materials of architecture communicate in resonance and dissonance, just as musical instruments in composition.... Like a musician's breath to a wind instrument or touch to a percussion instrument, *light* and *shadow* bring out the rich qualities of materials which remain mute and silent in darkness.[6]

and, finally, *Dionysian Light* is the kind of light that Plummer observes, as he expresses;

> The powers of light to transform space and matter, from something inert and dead to something abundant with spirit, occur as if by magic, passing a spark and vitality to the darkened mass of things. Neutral space can be shrunk and expanded, calmed and excited, subdued and revived as if by the ebb and flow of an electric current, invading inert matter with a play of energy, forces and intensity.... Light was projected, reflected, dimmed, focused, diffused and scattered not to expose the surface of things, but to bring into the deadened weight of architecture a more enchanting and vibrant reality.[7]

Dionysian light is the *interaction* or *symbiosis* of seemingly different phenomena; light, material, space and time. Light and material are constantly in contact, and constantly affecting each other; and bringing about changes in the other as the other worked changes upon it. *The point* or *the zone of contact* and *the time of interaction* is the '*threshold*' that Kahn believes to exist between 'light to silence,' and 'silence to light,' or between 'the measurable' and 'the unmeasurable,' just as between the Apollinian and the Dionysian.In *The Birth of Tragedy*, the Apollinian and the Dionysian, symbolised with the ancient gods Apollo and Dionysus, are introduced as the basic impulses operative in art. They are the manifestations of basic tendencies discernible both in man and nature. In the present *re*search, the Apollo and the Dionysus, once more comes to the stage yet, not to that of Greek tragedy but to the stage of architectural theory where the Apollo represents the architectural work in its essence with its materials, surfaces, masses and volumes and the Dionysus for this time represents light.

So we need a more comprehensive description of the Apollinian and the Dionysian as it can be found in Nietzsche's *The Birth of Tragedy.* Apollo is the god of beauty, harmony and that of light which seems at first contradictory to identify it as Dionysian: "Apollo, the god of all plastic energies, is at the same time the soothsaying god. He, who is the 'shining one,' the deity of light, is also ruler over the beautiful illusion of the inner world of fantasy."[8] Apollo is also the "ethical deity" who "exacts measure of his disciples, and, to be able to maintain it, he requires self-knowledge. And so, side by side with the aesthetic necessity for beauty, there occur the demands 'know thyself' and 'nothing in excess'...."[9] Accordingly Apollo represents measure, harmony, clarity, and lucidity.

On the other hand, there is the Dionysus that takes many forms and masks in Nietzsche's philosophical works as presented by Pfeffer; Dionysus is Promethueus, Faust, Zarathustra; he is a sceptic, critic, destroyer, and he is a builder and creator. He is the 'Ur-Eine,' primal oneness and the ground of being, ever contradictory and ever suffering; he is Heraclitean flux and becoming; he is Schopenhauer's eternally striving will. But he is also the will to power, the will to overcome, to affirm, and to create.[10] Dionysus represents, as Plutarch observed, "the whole wet element in nature- blood, semen, sap, wine, and all the

life-giving juices."[11] Accordingly Dionysus is the god of chaos and destruction, but he is also the god of fertility and productivity. He is the god of nature at Greek mythology, connected with vegetation and fruitfulness, who comes to life in the spring and brings all men together in joyful intoxication and abandonment. Dionysian worship had its origin in Thrace and Phrygia, where it was associated with orgiastic rites and drunken frenzy. But when introduced into Greece and received by the priesthood of Apollo, the old Thracian god was united with the native gods of Olympus and the non-Hellenic orgiastic elements of Dionysian excess merged with the measured sublimity and form-giving force of Apollo. Because of these dual characteristics, Dionysus was at once the patron deity of Greek tragic festivals at the height of Greek culture while, simultaneously, he also represented the most primitive and archaic spirit of Greek history.[12]

In his later notes at *The will to Power*, 1883-1888, Nietzsche gives the definitions of the Apollinian and the Dionysian as follows;

> The word 'Dionysian' means: an urge to unity, a reaching out beyond personality, the everyday, society, reality, across the abyss of transitoriness: a passionate-painful overflowing into darker, fuller, more floating states....
>
> The word 'Apollinian' means: the urge to perfect self-sufficiency, to the typical 'individual,' to all that simplifies, distinguishes, makes strong, clear, unambiguous, typical: freedom under law.
>
> The further development of art is as necessarily tied to these two natural artistic powers as the further development of man is to that between the sexes. Plenitude of power and moderation.[13]

As pointed out by Richard Schacht, Nietzsche's discussion of the Apollinian and Dionysian duality in *The Birth of Tragedy* is intended to bring out the radical difference between what he takes to be the two basic life-serving and art-generating impulses these names designate. It is with this difference in mind that Nietzsche speaks of the emergence of "two worlds of art differing in their intrinsic essence."[14] One is the "Apollinian art of sculpture" and the other is the "non-imagistic, Dionysian art of music." As presented by

Nietzsche, "These two different tendencies run parallel to each other, for the most part openly at variance ; and they continually incite each other to new and more powerful births."[15]

In correspondence to these two worlds of art, there are two fundamental experiential 'states' which are 'dreaming' and 'intoxication'. The beautiful illusion of the dream worlds, is the prerequisite of all plastic art as observed by Schacht;

> Nietzsche explains his use of the name of Apollo in terms of its association with 'all those countless illusions of the beauty of mere appearances that at every moment make life worth living at all and prompt the desire to live on in order to experience the next moment' -whether in 'dreams' or in the 'imagistic' art which is a refinement and elevation to a higher plane of development of the 'creation' of the 'beautiful illusion of the dream words'.[16]

On the other hand Nietzsche warns us of that "delicate boundary" -similar to Kahn's thin "threshold" between the "measurable" and "unmeasurable"- which the dream image must not overstep: "We must keep in mind that measured restraint, that freedom from wilder emotions, that calm of the sculptor god."[17] Nietzsche continues to describe the Apollo with the following words of Schopenhauer, when he speaks of "the man wrapped in the veil of *máyá*"- a Sanskrit word usually translated as illusion:

> Just as in a stormy sea that, unbounded in all directions, raises and drops mountainous waves, howling, a sailor sits in a boat and thrusts in his frail bark: so in the mist of a world of torments the individual human being sits quietly, supported by and trusting in the *principium individuationis.*[18]

As opposed to 'calmness' and 'measuredness' of the Apollinian, the Dionysian has a 'glowing life' either under the influence of the 'narcotic draught' or with the potent coming of spring penetrating all nature with joy just as light penetrating through a window. So now, "under the charm of Dionysian not only is the union between man and man reaffirmed, but Nature has become estranged, hostile, or subjugated, celebrates once more her reconciliation with her prodigal son, man."[19] While arts painting, sculpture, and epic poetry represent an

Apollinian individuating act, the Dionysian music transports us into a state in which the boundaries between individuals and the limits of space and time are broken down, and a sense of mystical unity with the universe is experienced;[20]

> Now, with the gospel of universal harmony, each one feels himself not only united, reconciled, blended with his neighbour, but as one with him; he feels as if the veil of *máyá* had been torn aside and were now merely fluttering in tatters before the mysterious Primordial Unity.[21]

Now that these two artistic energies together with the two worlds of art, 'dreaming' and 'intoxication' they correspond are introduced, we can describe their *interaction* as briefly expressed in the following quotation of Nietzsche;

> The difficult relation between the Apollo and Dionysian in tragedy may be symbolised by a fraternal union of the two deities; Dionysus speaks the language of Apollo, but Apollo finally speaks the language of Dionysus; thereby the highest goal of tragedy is reached.[22]

Pfeffer observes the interpenetration of the Apollinian and the Dionysian in Nietzsche's tragedy as follows;

> Apollinian clarity and visual beauty, as expressed in dialogue and image, and Dionysian intensity and depth of feeling, as contained in the music of chorus. While Greek tragedy was an offspring of a Dionysian cult, it reached its greatness and height when it succeeded in counterbalancing the orgiastic forces of Dionysus with the formative powers of Apollo. For Nietzsche, the highest goal of tragedy is achieved in this interpenetration of the Dionysian and Apollo, in the harmony between two radically distinct realms of art, between the principles that govern the Dionysian art of music. In this union Apollinian art is no longer limited to mere surfaces but, with the aid of music, reaches a higher intensity and greater depth. At the same time, Dionysian musical excitement and intensity is released in Apollinian images, thereby gaining clarity and concreteness.[23]

So with the aid of Dionysian wisdom and its deeper insight into reality, as Pfeffer states, Apollinian isolated images and the individual characters and events of tragedy reach deeper levels of existence. On the other hand, with the aid of Apollo, "the musical elements find expression in concrete representations, and Dionysian discord and dithyrambic excess are given harmony, clarity, and form."[24]

Likewise, materials of the works of architecture in their *symbiosis* with light in space and time, "communicate in resonance and dissonance, just as musical instruments in composition.... Like a musician's breath to a wind instrument or touch to a percussion instrument, light and shadow bring out the rich qualities of materials which remain mute and silent in darkness."[25] Correspondingly, light that which is invisible and forever changing, becomes visible and gains form; "like the soul it can inhabit for a time that which is solid and while we can sense its presence, it remains beyond our touch."[26] Tadao Ando speaks of materials of works of architecture gaining deeper levels of existence by their interaction with light, and in turn give light its concrete representations:

> Light grants objects their distinct being and weds form with space. Light that has been drawn and isolated within the interior of architecture stops on the exposed surface of objects and gathers shadows behind them. Objects thus go through ceaseless transfiguration, while light, through its isolation and its interception by objects, becomes objectified and is given form for the first time.[27]

Pfeffer notes that in Nietzsche's later philosophy, the two deities are no longer separated and the concept of Dionysus represents a synthesis in which negation and affirmation, suffering and joy are reconciled in terms of a Dionysian faith that includes both gods and achieves the 'true tragic greatness.' Yet, "this synthesis must never be understood as a static and finalistic one, in which the contest between the opposing forces is abolished and the dialectical elements are destroyed. Dionysus remains, as Nietzsche calls him, 'the great ambivalent one,' forever changing, forever struggling, and yet forever giving structure and form."[28]

As has been proposed, works of architecture are Apollinian in essence at the first stage which however is not an *end*, but subject to a subtle interplay with Dionysian artistic energies that burst forth from nature herself just as light.

> Nature speaks to us through Dionysian art and its tragic symbolism in a voice that is true and undisguised: "Be like me, the original mother who, under constant change of appearances is eternally creating and eternally giving birth and finding joy and satisfaction."... In spite of pity and terror we are happy in having life, not as individuals but as part of a life force with whose procreative lust we have become one.[29]

Actually, as pointed out by Schacht, Nietzsche argued that art requires to be understood not as a self-contained and self-enclosed sphere of activity and experience detached from the rest of life, but rather as intimately bound up with life, and as having the greatest significance in and for it.[30] Pfeffer, likewise, supports the idea of the merge of life and art in Nietzsche's thought:

> In the silence of art, life and art merge. What we experience in art is not a single or simple emotion, but the dynamic process of life itself in its continuous oscillation between opposite poles, between chaos and form, detraction and creation, joy and despair. The formative powers of the creative man are like the generative forces of nature, both struggling and overcoming, both 'building and destroying in innocence.[31]

However, most striking of all, Nietzsche refers constantly to 'nature' herself as 'artistic,' and terms both the 'Apollinian' and 'Dionysian' tendencies 'art-impulses' of *nature*. Thus he initially presents them 'as artistic energies which burst forth from nature herself, without the mediation of the human artist,' and goes on to say; "with reference to these immediate art-states of nature every artist is an 'imitator.'"[32] Furthermore according to Schacht, Nietzsche "even goes so far as to attribute the true authorship of all art to 'nature' rather than to human agency considered in its own right." Schacht continues with Nietzsche's own words: "'One thing above all must be clear to us. The entire comedy of art is neither performed for our betterment or education, nor are we the true authors of this art world.' The human artist is

said to be merely 'the medium through which the one truly existent subject celebrates his release in appearance.'"[33] Likewise, Pfeffer stresses the fact that according to Nietzsche, the nature, just like art, has the Apollinian and the Dionysian artistic energies that burst forth from nature herself;

> Art is interpreted as a dialectical process that symbolises the productive activity of nature. The two art-sponsoring deities become symbols of the metaphysical principles of life and being; the two interacting artistic impulses, in their continuous evolution of Apollo and Dionysian duality and their continuous reconciliation, are likened to the very forces of nature, which contain both decay and generation, both passing away and coming into being. Both art and nature work according to the same pattern, a pattern that Nietzsche calls tragic, consisting of two opposing yet complementary activities that inevitably belong together, eternally destroying and perishing and eternally creating and giving birth.[34]

Then Pfeffer goes on to say that "the creative activity in art and nature is compared by Nietzsche to the activity of play" which does not mean however games of illusion and simulated images, or the forming of pleasurable feelings and associations.[35] She argues that *play* represents an activity that does not aim at any practical utilitarian needs and ends, being unconcerned with good and evil, truth and falsity but rather "it involves creativity in the playful manner of the child and of the eternally active Heraclitean fire". Pfeffer points out that Nietzsche's *play* theory has both common and different elements with that of Schiller's as well as Darwin's and Spencer's theories:

> But, unlike Nietzsche, Schiller did not consider play a general organic activity, but a specifically human one which led to a freedom that, influenced by Kant's idealism, existed only in the 'intelligible' and not the phenomenal world. In this respect the points of contact are stronger between Nietzsche's views and Darwin's and Spencer's biological and naturalistic theories, wherein play and beauty are regarded as general natural phenomena.[36]

Light , being one of those natural phenomena and more specifically as a Dionysian artistic energy, has often been associated with *play*. Plummer, as has been mentioned, was talking about the powers of light as "neutral space can be shrunk and expanded, calmed and excited, subdued and revived as if by the ebb and flow of an electric current, invading inert matter with a *play* of energy, forces and intensity."[37] Likewise, Melhuish was describing Pawson's work as "obsessively concerned with the *play* of unadorned planes and volumes in light, the textures of materials, and the revealing of empty space."[38] Butterfield, on the other hand, describes the works of 'Light and Space' artists as "dealing with nothing but the *play* of disembodied light." These artists, that are going to be introduced in the next chapter, "try to make their statements separate from any object; they want to suggest the ripple of sunshine on water, the flicker of light through trees, a spill of moonlight or the change of daylight through the day."[39]

Still another example is Steven Holl as he is giving the hints of his architecture; "to open architecture to questions of perception, we must suspend disbelief, disengage the rational half of the mind, and simply *play* and explore.."[40]And finally Helen Rosenau, in *Boullée's Treatise on Architecture* mentions about the architect's emphasis on "the *play* of light and shadow,"[41]who declared himself to be the 'inventor of the architecture of shades and shadows.'

As noted by Pfeffer, Nietzsche's interpretation of Greek culture was in sharp conflict with that of the great classicists of the eighteenth century; "in the classic view, it is not Dionysus, or the union of Dionysus and Apollo, but Apollo alone who is the central phenomenon of the Greek genius. His greatness consists in a peaceful serenity and sublimity, and in a clarity and harmony that are free of doubt and Dionysian discord. Nietzsche challenged these familiar conceptions of the Greek genius, as held by Goethe, Schiller, and Winckelmann, among others."[42]The ideal of classicists, based upon "Apollinian consciousness but a thin veil hiding the Dionysus realm...In order to comprehend this, we must take down the elaborate structure of Apollinian culture stone by stone until we discover its foundation."[43]

> Wincklemann's Greece of 'noble simplicity and serene greatness' had its base in an Olympian realm where Apollo reigned. The gods bore the countenance of Winckelmann's cold, marble figures which lacked expression, the signs of sorrow, suffering, pain. The air was still and motionless and nothing disturbed the serene activity of pure contemplation.... With this bold stroke {Nietzsche's return of Dionysus} he razed Winckelmann's Olympus to the ground and destroyed its happy harmony. We hear cries of pain and primitive fear in the deep stillness; we see terror in the mask of the beautiful. Classical beauty is no longer static and lifeless; its sunny, optimistic mood is darkened by the agonies of life; its clarity and rationality become obscured, but also deepened, by the elements of doubt and irrationality.[44]

This *re*search is also an attempt to discover the Dionysian realm in architecture hidden by the thin veil of Apollinian consciousness. Light is one of the essential phenomena of this Dionysian realm, and it is the purpose of this study to bring out that *play* of light, enabling materials of architecture 'communicate in resonance and dissonance;' and 'neutral space' to be 'shrunk and expanded, calmed and excited, subdued and revived.' Light as such is the *Dionysian light* as opposed to Apollinian which lacks expression or which puts forward an *ideal, beautiful, illusionary* expression that is *still, motionless* and *lifeless*. However, *Dionysian light* is the kind of light which *breathes life* into space as Tadao Ando had said. Similar to weathering of a stone nature exerts its Dionysian artistic energy through light to works of architecture bringing into "the deadened weight of architecture a more enchanting and vibrant reality." Because, Dionysus represents what Plutarch had observed; "the whole wet element in nature- blood, semen, sap, wine, and all the life-giving juices."[45] While works of architecture gain deeper levels of existence by their interaction with light, in turn light, one of the Dionysian artistic energies of nature gain its *concrete* representation as also implied by Tadao Ando:

> Although they are essentially very different from the normal regularity of daily life, geometric principles both give order to architectural form and serve as a mediator in making architecture a material representation of an intangible theory of life. Introducing

> the processes of nature and human movement brings dynamism to architecture...[46]

It is important to emphasise that light alone, is not able to explain such a phenomena but only with its *symbiosis* with time, matter and architectural space. This is not surprising as we have seen how the Dionysian transports us into a state in which the boundaries between individuals and the limits of space and time are broken down, and a sense of mystical unity with the universe is experienced.[47]

Accordingly, the next chapter discusses how a Japenese word *utsuroi,* manifests the experience of such a symbiosis of space, time, light, and matter. Such an experience is not, however, specific to a culture or nation but universal as implied in the Cathedral series of Monet; or in a sentence taken from Orhan Pamuk's novel Kara Kitap; or in the drawings of Villa Bardellini by Vincenzo Scamozzi, all of which together with others are going to be presented in the next chapter.

CHAPTER III

UTSUROI : THE EXPERIENCE OF *DIONYSIAN LIGHT*

As has been proposed, *Dionysian Light* is the *symbiosis* of seemingly different phenomena space, time, light, and matter; now that "with the gospel of universal harmony, each one feels himself not only united, reconciled, blended with his neighbour, but as one with him."[1] The question now arises is that, how this symbiosis is perceived? A Japanese word, *utsuroi,* corresponds to this phenomena. Jan Butterfield gives the definition of *utsuroi* as *perception of things fading and growing; perception of shadow shifting with the light; perception of space as a moment in the continual process of change.*[2] It is also defined as *the interplay of light and shadow that takes place in a certain locale over a certain period.*[3]

Utsuroi, a single word, combines seemingly different phenomena; time and matter, matter and light, light and space, space and time. As time passes from one moment to other the light changes, so does the space. This play of light and shadow; forever changing, forever struggling, and yet forever giving structure and form is perceived in *utsuroi.* Yet it is not only the space that is transformed as the light changes, but also the materials in the space. This is, for instance, what we experience at sunset; as the darkness fills the world, things in our environment began to *fade* ,and after spending hours in the darkness at night, they began to *grow* with the first rays of sun at dawn. Actually, it is not surprising that there exists a word like *utsuroi* in Japanese, since as described by Japanese novelist Jun'ichiro Tanizaki in his book *In Praise of Shadows*: "the beauty of a Japanese room depends on a variation of shadows, heavy shadows against light shadows-it has nothing else."[4] However, what is experienced in this symbiosis of space, time, light, and matter is not specific to Japanese only

but also a part of 'our everyday life-world' and as much familiar as light itself. Steven Holl, for instance, describes the same phenomena without naming it;

> Architecture interweaves the perception of time, space, light and materials, existing on a "pre-theoretical ground". The phenomena which occur within the space of a room, like the sunlight entering through a window, or the colour and reflection of materials on a surface, all have integral relations in the realm of perception. The transparency of a membrane, the chalky dullness of plaster, the glossy reflection of opaque glass, and a beam of sunlight intermesh in reciprocal relationships that form the particular experience of a place.[5]

III.A. PERCEPTION OF SPACE AS A MOMENT IN THE CONTINUAL PROCESS OF CHANGE

The *symbiosis* of *light, space,* and *time* seems to be one of the most subtle among that of light, space, time, and matter ;not only since its constituents are not as *concrete* as the *matter,* but also because of the way we used to perceive our world. Robert Irwin, a so called 'Light and Space' artist, for example points out that "we perceive through a system of reference points that we have been conditioned to believe are real, we allow ourselves small room for expansion." Accordingly, "what we see is what we seek to see. There is little place in our frame of reference for 'not seeing.'"[6] It is no doubt that light is one of the revealing elements of life, for without light the eyes can observe no shape, no colour, no space or movement. Yet, though it is invisible and remains beyond our touch, light is also a phenomena in itself. However, since man's attention is directed mostly toward objects and their actions, the debt owed to light is not widely acknowledged. We deal visually with human beings, buildings, or trees not the invisible medium generating their images, and so, revealing the persistence of the way we actually think about light. As James Turrell point out, "light is often seen as the bearer of the revelation. It is 'something' that 'illuminates' other 'things'... But light may just as well be the content, the 'substance.'"[7]

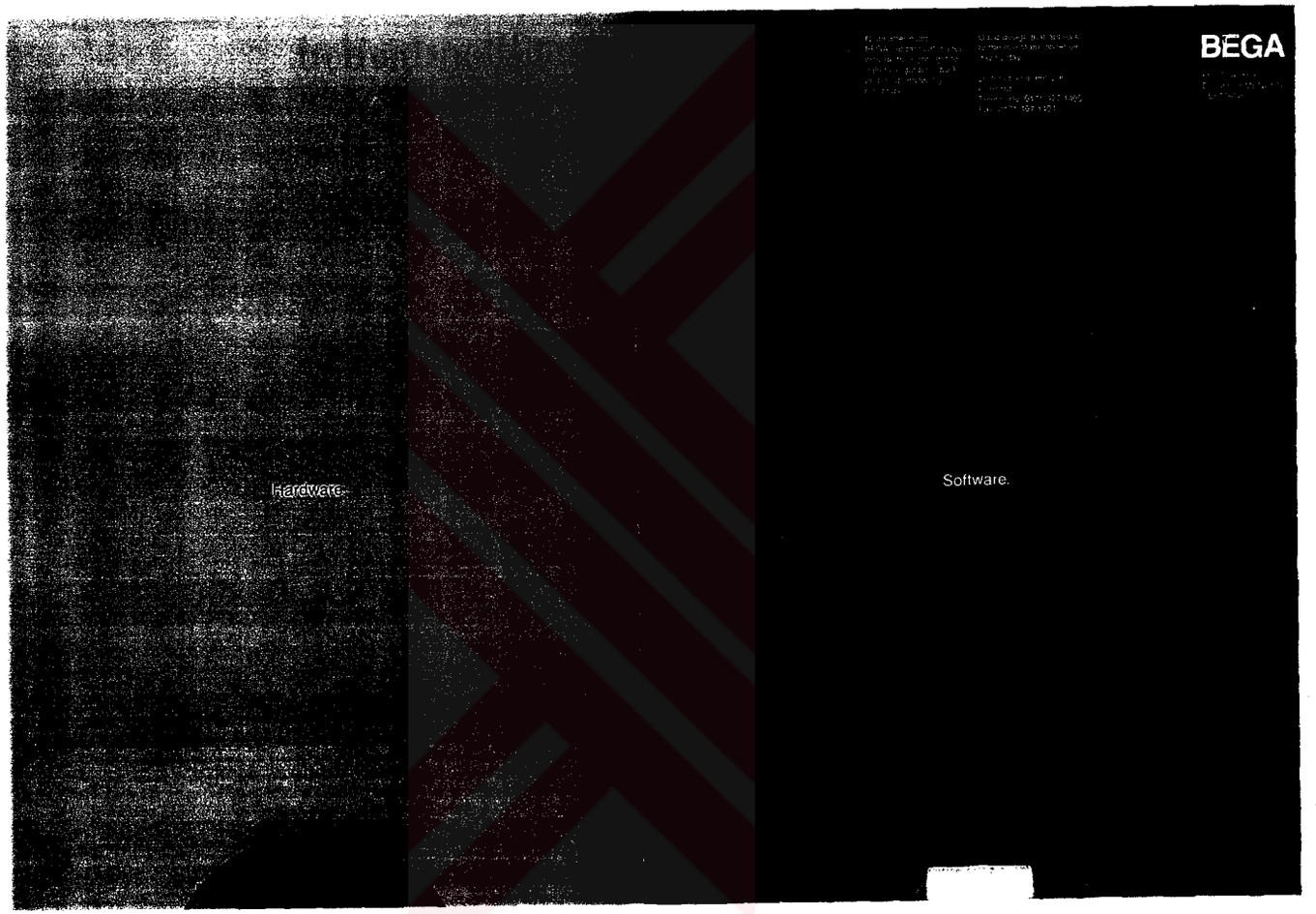


Fig. 4: "Hardware" / "Software" ; BEGA advertisement by Leonhardt & Kern, Architectural Review, September 1996.

Similarly, space has been mostly perceived as empty or simply as 'nothing' around other objects. Günter Nitschke argues that, "the western concept [of space] was, and still is, inherently static and unchanging, without any dynamic sense of variation or human subjectivity. It is merely three-dimensional."[8] Like Nitschke, Perez Gomez and Pelletier notes 'the homogeneous space and time' in 'our instrumental world' and compare this notion with that of antiquity where they find the opposite:

> In antiquity, the notions both of natural place (topos) and of space were opposed to the perspective image of the world and to the homogeneous space and time that have become primary assumptions of our instrumental world. In Pythagorean philosophy, space was conceived as *pneuma apeiron*, and only occasionally as *kenon* (void), and it served as the "limiting agent" between different bodies..." The dominant notion of apeiron still associated the concept of space with that of matter; time and space were not separate mathematical concepts, and air was identified with void. Something similar is true for the Platonic chσra, the "third" element of reality (besides Being and Becoming) which Plato describes in Timaeus as both prima materia and as the place and matrix of all things.[9]

However, these three-dimensional spaces are subject to, and indeed open to, artistic energies which burst forth from nature, and as has been discussed without the mediation of the architects. *Dionysian light* is one of these artistic energies, shining within darkness and 'breathing life' into this static, unchanging space, symbolised by Apollinian measure, harmony, clarity, and lucidity. Yet, as soon as we uncover 'the thin veil', we are faced with the Dionysian 'glowing life'. Now the "neutral space can be shrunk and expanded, calmed and excited, subdued and revived as if by the ebb and flow of an electric current, invading inert matter with a play of energy, forces and intensity."[10] This *forever changing* and *transforming space* is perceived in *Utsuroi* as *a moment in the continual process of change.*

Accordingly, what distinguishes the spatial nature of the *rooms* that are going to be presented in the following paragraphs is the *presence* of space in symbiosis with time and light, rather than being 'nothing' around other objects. Actually it is not only the space that

gains its presence but also the light itself, exists in these rooms as a 'pure presence in space.' In other words the light in these rooms are *'disembodied light'*, emptied of everything but space.

Nevertheless, it must be noted here that this does not mean the absence of a material realm in the following cases, since the Dionysian symbiosis of space, time and light also includes matter, the interaction of which is going to be described later in the present study in detail. However these cases concentrate on light as itself, rather than the matter it reveals, and thereby allow us to observe the subtle interplay of space, time and light; which is also the case in the room as described by Orhan Pamuk in the sentence from his novel *Kara Kitap*:

> Dışarıda hava kararmış, odanın içinde örümceklerle kaplı, ışıksız mahzenlerdeki küf ve ölüm kokusunu hatırlatan o elle dokunulabilir loş ışık birikmişti.[11]

Pamuk's sentence illuminates some essential phenomena of our life-world, and in particular, the basic properties of light and space. First of all it informs us about *time* expressed by the *darkness* of the outside. Actually it had *became* dark and this transformation is perceived in a room in which, at the same time, a gloomy light has been *accumulated*. The way in which light is described connects the room to the outside atmosphere- the İstanbul after sunset. We are also made known that this *play* of light and darkness takes place in the room over a certain period. At the end of this period the invisible light gains clarity and concreteness so much that it can be touched. We have no idea about any matter in the room except light which exists as a pure presence in space.

Furthermore, this disembodied light gives space itself a fullness that can be felt physically. We are strongly aware of the *ambience* of the room, it has an *aura* that reminds us the smell of death and mould in the lightless cellars full of spiders. Actually the *ambiance* defined as *the character, quality, feeling, etc., of a place* [12]and the *aura* defined as *an affect or feeling that seems to surround and come from a person or place* [13] has much to do with those "sensations in space and time" involving the experience of space, time, light and material in *symbiosis*. Those intangible qualities of space are usually tend either to be regarded as poetic

interpretations or to be dismissed altogether as subjective responses of the individual designer or the viewer. Nevertheless, they form the *essential* qualities of space that we experience in 'everyday life-world' and as Louis Kahn puts it; "the most wonderful aspects of the indoors are the *moods* that light gives to space."[14] Furthermore, Günter Nitschke emphasises that "a 'sense of place' does not negate an objective awareness of the static or homogeneous quality of topological space with an additional subjective awareness of lived, existential, non-homogeneous space."[15]

Actually, this sentence proved that language and literature are able to concretise those phenomena which elude science, and may therefore suggest how we might proceed to obtain the needed understanding. Another sentence taken again from Orhan Pamuk's *Kara Kitap* describes us a light as a pure presence in again a room, yet in a different one this time;

Odada, lacivert perdelerin soldurduğu kursuni bir kış ışığı vardı.[16]

What makes extraordinary the sentence taken from *Kara Kitap* is its description of light as a pure existence in the space. In terms of grammar, the *subject* of the sentence is light; light that belongs to winter; light that is greyish; light that is dimmed by the deep blue curtains; and finally this light exists in the room. Firstly, Pamuk purposes that there is a *winter light* apart from the *one* that of summer, spring or fall; so light is identified with a specific time of the year. Secondly, giving a hint of the mood existing in the room, light is described as greyish just like the blue tones of light at dawn or red tones at sunset. Furthermore, such light can be projected, reflected, focused, diffused, scattered or faded- faded such as the *one* by the deep blue curtains. Yet, the most important thing this sentence purposes is that, light with the '*content*' above *exits* in the room. What makes this sentence so peculiar is its description of such *existence of light* without referring to any object such light reveals. The only given object in the room, the curtains, are mentioned not as something revealed by light but, in a way, creator of such light. At the end, what makes up this *room* in the our mind is this *disembodied light* in its pure presence.

As a matter of fact, for Louis Kahn both the *room* and the *light* are essential for architecture. "The room is the beginning of architecture," says Louis Kahn, "it is the place of

the mind. You in the room with its dimensions, its structure, its light respond to its character, its spiritual aura, recognising that whatever the human proposes and makes become a life..."[17] However, it is not only the room but also the light which is essential for architecture; as he claims that "a building begins with light and ends with shadows."[18] And lastly, these two essentials are also essential for each other;

> For the making of a room, it is there the room in its light, the light has much to do with what you are. You bring the room with glare, with too much light, with too little light, with light it does not have somehow definable. It seems to be contrary to the room's dimension where it oriented it all, influencing what will happen in this room in the course of the day, the course of the month, the course of the year.[19]

So another room, that is going to be presented in the current study is a Dutch one in its light, as depicted in a Jan Vermeer painting; and the light has much to do with what this room and the painting is (fig.6). As Rasmussen describes in his book *Experiencing Architecture*, because of the limited land in Holland typical old Dutch houses were built side by side with narrow front facades looking outside to the street.[20] Accordingly, there were no openings at deep, side walls as they are often shared by neighbouring houses, whereas the lower part of the front facade was pierced by many large window openings to admit enough light for the dwelling. As depicted in the painting these large windows had upper and lower halves and these halves further divided in to two parts. This produced a four-framed window with a shutter to each frame that could be opened or closed independently so that the light could be regulated at will. Vermeer's painting furthermore depicts two persons standing by a musical instrument and many other objects. One may think that this figurative painting does not serve our purpose well, since it tries to illustrate the objects revealed by light rather than light itself. Yet if this painting is regarded with other Vermeer paintings, it becomes vice versa.

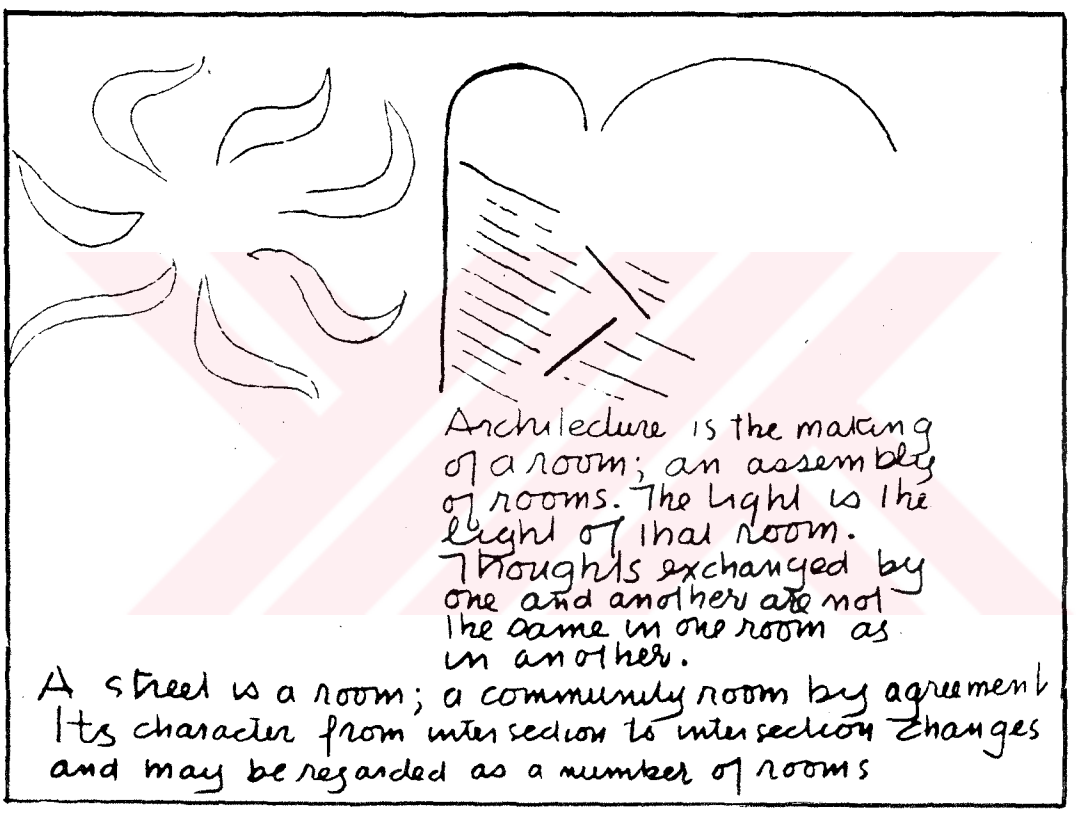


Fig. 5: "Architecture is the making of a room; an assembly of rooms.. The light is the light of that room ..."; sketch by Louis Kahn

Fig.6: "Lady at the Virginals With a Gentleman" Vermeer 1662-64.
Oil on canvas, (73.5x64.5cm)Buckingham Palace, London

Fig.7 (upper left): "Milkmaid" Vermeer 1658-60.
Oil on canvas, (45.5x41.0cm) Rijkmuseum, Amsterdam.

Fig.8(upper right): "Woman Weighing Pearls" Vermeer 1664.
Oil on canvas, (42.5x38cm) National Gallery

Fig.9(lower left): "Woman With a Water Jug" Vermeer 1664-65.
Oil on canvas, (45.7x40.6cm)The Metropolitan Museum of Art, New York

Fig.10(lower right): "Girl reding a Letter" Vermeer 1657.
Oil on canvas, (64.5x83.0cm)Gemaldegalerie, Dresden

By looking at other paintings of Vermeer all together, we may conclude that these are paintings of light rather than objects. Because his settings for them are almost always the same. His easel stands in the same spot, with light always coming from the left, and his usual background is a white washed wall parallel with the picture surface. Even the figures does not change much like the hanging on the wall but what changes is the light itself.

Vermeer works experimentally with natural light by arranging the shutters of windows. As Rasmussen points out, the paintings are such accurate studies that it is possible to determine exactly how the shutter were arranged for each picture. For example, in the *Woman Weighing Pearls*, the light comes from the upper half of the rearmost window alone and it is further dimmed by reddish curtains-but not by deep blue ones as in the case of Orhan Pamuk's room.

Vermeer's contemporary Pieter de Hooch was also working with rooms and natural light but in a more complicated manner. As Rasmussen explains; "in his paintings you very often look from one room into another and from one light to another. But the form of each room is clear and simple and the light in each is very distinct so that there are no ambiguous zones in his pictures."[21] For both Vermeer and Hooch, light was more than that which is illuminating objects they are depicting, but rather it has a presence of its own. To put it another way, it was not the light which formed the setting for depicting objects but it was objects which formed the setting for depicting the light.

Actually, in twentieth-century there are various artistic experiments dealing with nothing but the play of disembodied light. These works are variously called as "LightArt", "Experiential", "Situational", "Phenomenal", "Phenomenological", "Site-Specific", "Ambient", or "Light and Space". Key among the artists making such work are Robert Irwin, James Turrell, Doug Wheeler, Maria Nordman, Larry Bell, and Eric Orr. As Jan Butterfield describes these artists make altered *room* environments by incorporating the light and space of the place and leave the viewer to experience it; "they try to make their statements separate from any object; they want to suggest the ripple of sunshine on water, the flicker of light through trees, a spill of moonlight."[22]

Likewise, James Turrell states that; "light is often seen as the bearer of the revelation. It is 'something' that illuminates other 'things.' For example, we speak of hanging a show and then lighting it, revealing the persistence of the way we actually think about light. But light may just as well be the content, the 'substance'."[23] As Hartmut Böhme puts it light in these works is what the philosopher Hans Blumenberg calls an 'absolute metaphor': by which is meant that light reveals and denotes, but only itself; it is pure presence.[24]

Accordingly, their original materials are generally light and dark, sunlight and shadow, time and space, sound and silence, fire, smoke; or materials like scrim, Plexiglas, polyester resin, cast acrylic, fiberglas, the transparencies and the seeming immaterialities of which made them ideal for their purposes. They also use more complex media and methodologies including di-electricoated glass, luminescent or phosphorescent materials, neon, fluorescent lights, high-intensity xenon projectors, and so on.

In fact some of these works are highly experimental, such as those of Turrell *in which* one experiences a Ganzfeld which is described as 'no thing' or 'homogeneous tri-dimensionality'.[25] Ganzfelds are most often experienced as white-outs in arctic conditions and pilots flying in fogs sometimes experience them, but otherwise they are very rare. Turrell arranges such experiences in the rooms as described by Adcock: "By carefully counterbalancing the information available in the light, he makes it difficult to find the location of the surfaces reflecting the light. The actual physical configuration of the space is indeterminate, and the light itself becomes present to perception as substance."[26]

Indeed, altered room environments arranged by 'Light and Space' artists have been generally characterised as architectural, as they incorporate the light and space of the room, allowing and inviting the viewer to project himself into the piece in ways that are specifically architectural.[27] Melinda Wortz, for instance, has called them "architects of nothingness" as in the following quotation;

> The most remarkable level which the "architects of nothingness" touch is that which transcends the material. By reducing the physical and visual incident in their art to almost nothing, or at least creating the illusion of nothingness, they challenge us to share in these perceptions. And they are important perceptions, which go beyond common sense experience of ineffable states of consciousness, giving us access to the unfamiliar, the unknown, or those levels of knowing that cannot be translated into words. these are precisely the states of being least addressed by our culture at large.[28]

The next room that is going to be presented in the current study belongs to Count Giuseppe Panza di Biumo's Villa in Varese, Italy where Turrell has realised one of his works, *Virga*, 1975. What we experience in this work says Craig E. Adcock is subtle divisions of light generated by hidden fluorescent fixtures and natural light drop down from the ceiling:

> Slits set back approximately three feet from the upper corners where the end walls and the ceiling meet allow light from fluorescent fixtures hidden in the ceiling structure to fall across an apparent division that intersects the lower corner of the room. The central part of the chamber takes on a rhomboid shape. In addition to the fluorescent fixtures, there are also skylights hidden in the ceiling structure. These allow sunlight to mix with the fluorescent light and to modify the intensity and quality of the "veils" depending on the position of the sun. Virga has a constantly changing quality during the day and a steady state at night.[29]

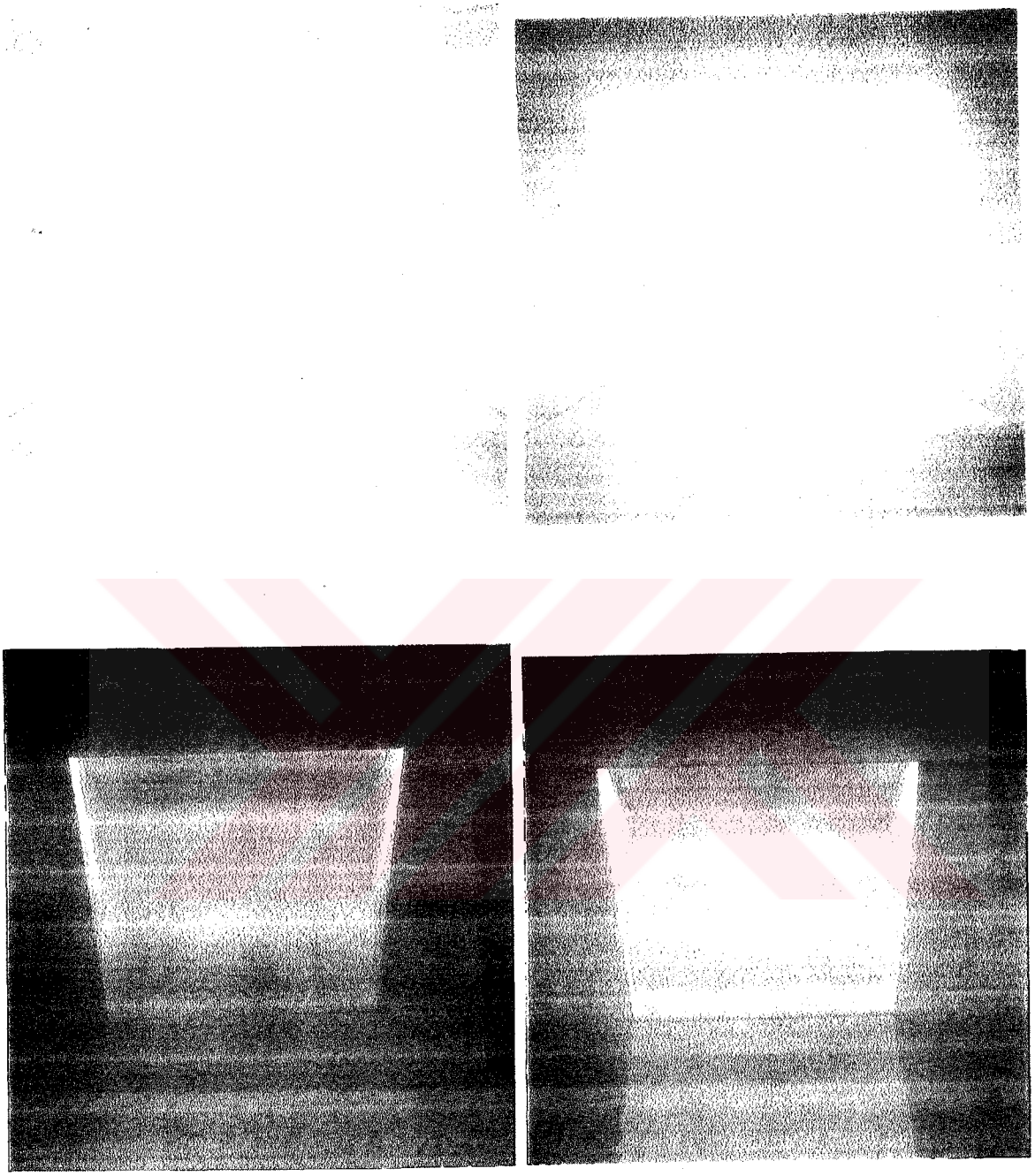


Fig. 11-14: 'Virga', as installed at Villa Panza, Varese, Italy, 1974 by James Turrell.

The above two figures show 'Virga' in daytime whereas the lower ones at night.

Though it is hard to translate into words just as to photographs the phenomena that one experiences in such a room, some Japanese words like *utsuroi* may help us define concepts that have no counterparts in English and come far closer to capturing the experience of light and more specifically *Dionysian Light* -the *symbiosis* of space, time, light, and matter. Another such a word is a special character in Japanese pronounced variously as *ma* or *aida* or *kan,* used to describe "the *overlapping* of *time* and *space* in the same space at the same time."[30] Günter Nitschke, describes the character of *ma* -as chiefly pronounced- as an expression of a particular experience of light:

> Originally, this character consisted of the pictorial sign for 'moon' (月)- not the present day sun (日)- under the sign for 'gate' (門). For a Chinese or Japanese using language consciously, this ideogram, depicting a delicate moment of moonlight streaming through a chink in the entrance way, fully expresses the two simultaneous components of a sense of place: the objective, given aspect, and the subjective, felt aspect.[31]

Fig.15 : The character of *ma;* (Nitschke, Günter)

Nitschke translates *ma* as 'place', noting however its translation as 'space' in the dictionaries. Actually none of the translations do justice to the full spectrum of use and meaning this character represents. The potential of *ma* for the present study is best revealed with the meanings it gains when it is combined with other characters to form words. To repeat, these words help to capture the experience of light more specifically in everyday life-

world and define concepts that have no counterparts in English. One of these words is *ji-kan*, where *ma* is pronounced as *kan*, representing time, and literally time-place.[32] Nitschke clarifies the meaning of *ji-kan* as follows:

> This is abstract time, with no indication of length, beginning or end. The *ji* character, which incorporates the radical for 'sun', is said to have denoted 'forward movement of the sun' in ancient China....Thus, 'time' is expressed in Japanese as 'space in flow', making time a dimension of space.[33]

時間

Fig.16 : *Jikan;* (Nitschke, Günter)

As expressed by Nitschke 'forward movement of the sun' interprets to the eyes the life cycle of the hours and the seasons" and this is expressed in conjunction with the character *ma* standing for place. This reflects that all experience of space is a time-structured process, and all experience of time is a space-structured process.[34] It might be important to recall here "the difficult relation between the Apollo and Dionysian in tragedy" which is "symbolised by a fraternal union of the two deities; Dionysus speaks the language of Apollo, but Apollo finally speaks the language of Dionysus; thereby the highest goal of tragedy is reached."[35] Below are two more words containing the *ma* character and used to denote either temporal or spatial extension:

相間　　間近い

Fig.17 : The first is *ai-no-ma*: literally, reciprocating place 1. A room in between. 2.Interval, leisure. The second is *ma-jikai* : literally, a close space. 1: Close at hand. 2. Drawing near (temporally) ; Nitschke, Günter;

In deed, most cultures measure and express time in terms of intervals in space. '*Aralık*' in Turkish language for example, denotes 'interval' both in time and space. '*Yakın*' and '*uzak*' are still another example corresponding to 'near' and 'far-off' respectively, and again both in time and space. Likewise '*arkasından*' means not only 'from behind' denoting a location with respect to another, but also 'after', denoting a time with respect to another one.

Examples for expressions that measure and express time in terms of intervals in space or vice versa can be extended, but the following uses of *ma* add another dimension to the realm of experience of light, space and time in symbiosis :

Fig.18 : *Konnoma* and *iwama*; the first, meaning *among place / time / mood of trees* and the last, meaning *on place / time / mood of rocks.* Nitschke, Günter; "From Shinto to Ando: Studies in architectural anthropology in Japan"

These words not only denote the *overlapping* of *time* and *space* but also the *mood* of the place. The mood of a place, just as with the ambience, the aura or the atmosphere of a place form the *essential* qualities of space that we experience in 'everyday life-world'. As has been the case in the room described in *Kara Kitap,* these elusive aspects of space has much to do with the experience of light which is also pointed out by Louis Kahn; "the most wonderful aspects of the indoors are the *moods* that light gives to space."[36] Similarly, Nitschke mentions about the *mood* of place as expressed in the words above, and notes the existence of both subjective and objective aspects in its experience;

> This shows us another aspect of the *ma* concept- the notion that animation is an essential feature of place. The animation may be something which is projected from one's subjective feelings; but it also may be some external, objective quality, the genius loci or the spirit of the place, which projects itself into our minds... The uses of *ma* highlight the fact that the identity of a place is as much in the mind of the beholder as in its physical characteristics.[37]

The subtle symbiosis of light, time and space demands a kind of 'not seeing'; turning one's attention to '*nothing*' around other objects and to light, not only as 'bearer of the revelation' but also as a '*content*' in itself.

Likewise, Nitschke presents the *rakugo*, the traditional comic storytelling performance, the aesthetic quality of which depends as much or more on *the timing of the pauses* as on the quality of the voice. He emphasises that the *pause* is both an interval in time and a bridge between sound and silence and supports his words with the words of the fifteenth-century poet Shinkei as he reminds about *ma* in the recitation of poetry; 'in linked verse, put your mind to *what is not*.'[38]

However it is the *noh* acting, according to Nitschke, which is the supreme expression of the art of *ma* combining all the aspects that have so far been elaborated; "it epitomises the traditional Japanese artistic preoccupation with dynamic balance between *object and space*, action and inaction, sound and silence, movement and rest."[39]Nitschke goes on with the oft-quoted dictum on *noh* acting by Zeami, the great formulator of the *noh* plays; "what (the actor) does not do is of interest," and further clarifies what he means by the words from Komparu Junio's book *The Noh Theatre: Principles and Perspectives*:

> Indeed, Komparu Junio regards *noh* as no more, nor less, than the art of *ma*: the staging is meant to 'create a constantly transmuting, transforming space (*ma*) of action'; the acting, to do 'just enough to create the *ma* that is a blank space-time where nothing is done': the music, to 'exist in the negative, blank spaces generated by the actual sounds'; the dance, to acquire 'the technique of non-movement'.[40]

The last room that will be presented in this chapter is closed on four sides but open to the sky. Actually it is a courtyard bisecting into two parts the *Wall House* (Matsumoto Residence) by Tadao Ando. According to Frampton, the courtyard as such, presents the concept of *Ma* in the idea of '*gap*' or '*discontinuous-continuity*' that he believes to exist in Ando's architecture;

> Seen in this light, a courtyard becomes a space within which the ubiquitous void may be rendered perceivable, partly through changes of light and climate, and partly through the changing ethos of the space itself. This is close to the idea of *yugen* in Japenese poetry, wherein the ineffable presence of living nature is sensed through such things as a faint drizzle or a sudden unexpected breeze, the onset of twilight or the premonition of dawn.[41]

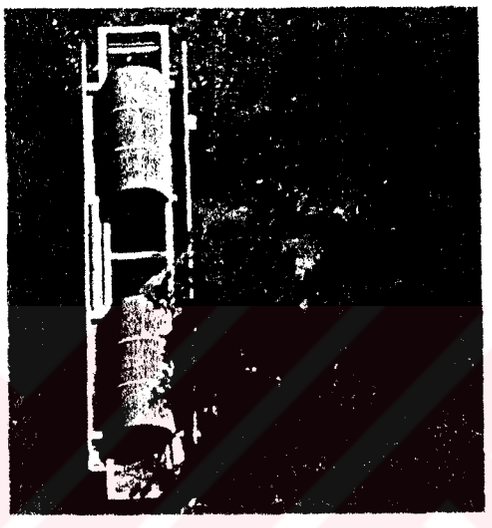


Fig.19 : Tadao Ando,Wall House (Matsumoto Residence), Ashiya; Hyogo, 1976-77. Aerial view.

Similar to Nietzsche's the Apollinian and the Dionysian, Frampton informs that within the Japenese philosophical tradition, nature manifests itself as two interrelated but opposed aspects, the tangible and the ineffable, that is to say; "the palpability of the natural forest landscape as it literally encroaches onto the terrace of his Wall House..., and the equally apparent intangibility of light and other changing climatic elements as these are consciously integrated into all of Ando's work." [42] Frampton goes on with a quotation from Ando as he emphasises the intangible elements which constitute a part of our experience of architectural space;

> 'Light is a mediator between space and form. Light changes expressions with time. I believe that the architectural materials do not end with wood or concrete that have tangible forms, but go beyond to include light and wind which appeal to our senses.' And, moreover, not only light and wind but also rain, snow, and fog are to be directly experienced...[43]

It is important to recall here what has been purposed at the beginning regarding works of architecture; that is once they are constructed, and exposed to nature, both in literal sense and in the sense that life goes in and around them, works of architecture open a ground for nature to burst forth its Dionysian artistic energy. Ando describes the same phenomena as it is observed in the *Wall House* as follows;

> In this house, walls standing independent in the world of nature delineate a territory for human habitation. Inexpressive in themselves, the two major bounding walls are protective devices for the interior. At the same time they reflect the changes taking place in the world of nature and help to introduce this world into the daily lives of the inhabitants.[44]

Now, it is the time/place for another architect, Steven Holl who translates the skills of the *noh* theatre into the field of architecture as takes the *void* -what is not- as *massiveness* similar to a mass of stone;

> Destroying clutter is seeing the 'thickness' of space, the depth of the world: not an object for manipulation, not a locus for clutter, nor something to conquer... The architectural work must open up space and preserve it. Unoccupied space is not useless or wasted or lacking. The emptiness in a jar, in a corner, in a lawn of a cloister is not nothing. On the contrary: the space in a wine glass is what makes the vitreous body of glass. The essence of construction lies neither in pilling up layers of building materials nor in ordering them according to a plan, but solely in the opening up: when we set up a new space another 'atmosphere' opens up precisely through what is set up. Thus the architectural work is positing that construct: that is, it founds, erects and opens up a new seeing.[45]

The kind of 'new seeing' that the architectural work opens up, includes '*not seeing*' or in the other words seeing '*what is not*'. In his works, Steven Holl takes the *void* as a "mass of air; as breathing, as depth, as possibility for movement, as visual clarity."[46] Accordingly the next section will present through an analysis of works of Claude Monet, how the *invisible* makes the stone facade of a Gothic cathedral more or less visible; confers upon it its hues and shades; sharpens or blurs its edges; enhances or erases its crevices, and brings out or flattens its relieves.

III.B. PERCEPTION OF THINGS FADING AND GROWING

Everything changes, even stone.
Claude Monet

That *contact* between *light* and *matter* is expressed in *utsuroi as* perception of things *fading* and *growing*. Just as space, the matter in our everyday life-world is subject to a constant transfiguration by the *play* of light and shadow; forever changing, forever struggling, and yet forever giving structure and form. Naturally, it is not only the matter that goes to transfiguration but also light, itself, as the interaction between them is mutual:

> Light grants objects their distinct being and weds form with space. Light that has been drawn and isolated within the interior of architecture stops on the exposed surface of objects and gathers shadows behind them. Objects thus go through ceaseless transfiguration, while light, through its isolation and its interception by objects, becomes objectified and is given form for the first time.[47]

While perception of space as a moment in the continual process of change puts emphasis to 'what is not', perception of things *fading* and *growing* shifts the emphasis to the matter around us. However we must bear in mind that, as the complete definition implies, both *the perception of space as a moment in the continual process of change* and *perception of things fading and growing* together with; *perception of shadow shifting with the light,*

corresponds to a single phenomena-to the experience of *Dionysian light*. So while the cases in the preceding section were the appropriate examples to discuss the symbiosis of light, space and time following are the ones that will concentrate on the symbiosis of light and matter in time. Furthermore, though it was the concept of *room* that was common in the previous cases now it will be the *facade* as it allows us to observe better the interaction of light and matter.

As Joachim Pissarro presents, on 10 May 1895, the Durand-Ruel galleries in Paris opened their doors to the public for an unusual exhibition of paintings by Claude Monet.[48] What was unusual in the exhibition was that of the fifty paintings exhibited, twenty depicted a single subject- the cathedral of Rouen. Besides these twenty exhibited views, there were ten more canvases in the same series that remained in Monet's studio at Giverny. Altogether, thirty paintings had been executed by the artist over two separate periods of work in Rouen. The reason for including these thirty paintings depicting a single subject into the current study lies in the following analysis of them by Joachim Pissarro in his book *Monet's Cathedral*:

> Monet painted the air, the so-called *enveloppe* - an invisible amalgamation of air, light, moisture and temperature that alters our perception of what we see. What usually we do not see (what Monet calls the *enveloppe*) colours and transforms the visible. The reality, the subject matter in itself - the cathedral- is therefore not as important as what is around it- the invisible *enveloppe* that makes the cathedral more or less visible, that confers upon it its hues and shades, that sharpens or blurs its edges, that enhances or erases its crevices, that brings out or flattens its relieves. For Monet, reality is not a simple, monolithic concept. Monet's pictorial conception of reality, as seen through the cycle of the *Cathedrals*, establishes a fundamental distinction between the visible- the motif- and the invisible- "what there is between the motif and myself".[49]

Fig.20: Sixteen plates from the *Cathedral* series, Monet, 1892-1894.

Though it is not named as such by Pissarro his criticism implies that, Monet's thirty paintings of the cathedral of Rouen were actually depicting nothing but Dionysian light. As the objects together with a typical Dutch room was the appropriate setting for Vermeer to depict the light, now the cathedral of Rouen becomes the relevant milieu for depicting the symbiosis of the light of Rouen and gothic stone in time. For this reason, a more comprehensive analysis of the idea behind the *Cathedral* series, may suggest how we might proceed to obtain the needed understanding for a research on the contact between light and matter. However it must be noted here that this analysis is not for the sake of the art of painting and does not aim to reveal the idea behind in terms of the art of painting. Rather, these paintings are taken as objects for the current *re*search as much as they reveal the phenomena discussed in the present study. Afterall, Monet, himself, establishes the relation between his paintings and the architecture;

> I have searched for the same thing as always; I have wanted to do architecture without doing its features, without the lines.[50]

Monet selected a monument of Gothic architecture, the Rouen cathedral, as his motif- or, to be more precise, as a background to his study of the *enveloppe* of light surrounding the cathedral. Actually, it was just the right choice for such a study as one of the most unique and important aspects of Gothic Architecture is its use of light.[51] According to Otto von Simpson, the answer to the question of "what is Gothic?" is not the cross-ribbed vault, the pointed arch, or the flying buttress; "all these are constructive means (developed or prepared by pre-Gothic architecture) but not artistic ends..." Thus they cannot be "the decisive feature of the new style". Two aspects of Gothic architecture, however, according to Simpson are without precedent and parallel: the use of light and the unique relationship between structure and appearance.[52] Yet, the relevance of Gothic architecture for Monet's *Cathedrals* as well as to present *re*search is best revealed in the following quotation where Simpson clarifies the way Gothic architects used light:

> By the use of light I mean more specifically *the relation of light to the material substance of the walls.* In a Romanesque church, light is something distinct from and contrasting with the heavy,

> somber, tactile substance of the walls. The Gothic wall seems to be porous: *light filters through it, permeating it, merging with it, transfiguring it*...The stained -glass windows of the Gothic replace the brightly covered walls of Romanesque architecture; they are structurally and aesthetically not openings in the wall to admit light, but transparent walls. As Gothic verticalism seems to reverse the movement of gravity, so, by a similar aesthetic paradox, *the stained -glass window seemingly denies the impenetrable nature of matter, receiving its visual existence from an energy that transcends it. Light, which is ordinarily concealed by matter, appears as the active principle; and matter is aesthetically real only insofar as it partakes of, and is defined by, the luminous quality of light.*[53]

As a matter of fact, as pointed out by Pissarro, it was the first and only time in his career that Monet chose to abandon his preference for a motif from nature in favour of a study of a work of architecture. Before he had painted the *Haystacks* and the *Poplars* series which are motifs from the nature. Why then did Monet suddenly decide to distance himself from a motif from nature and experiment with a monumental work of architecture - the cathedral at Rouen? Actually for Monet, this is not a matter of question as he says; "the motif for me is nothing but an insignificant matter - what I want to reproduce is what there is between the motif and myself."[54] Pissarro affirms Monet's intention by saying that, "Monet painted the air, the so-called *enveloppe* - an invisible amalgamation of air, light, moisture and temperature that alters our perception of what we see. What usually we do not see (what Monet calls the *enveloppe*) colours and transforms the visible."[55] This brings to mind the subtle symbiosis of light, time and space that has been discussed in the preceding section and which demands a kind of 'not seeing'; turning one's attention to '*nothing*' around other objects and to light not only as 'bearer of the revelation' but also as a '*content*' in itself.

What did the Monet paint was also this '*content,*' but with a slight shift of emphasis as the word *envelope* implies. The *enveloppe* is what there is between the motif and Monet and *to envelop* means to wrap up or cover *something* completely. So the motif, which is a work of architecture as opposed to haystacks or poplars, becomes the setting for Monet to

depict artistic energies which burst forth from nature herself. As has been purposed works of architecture, as they are constructed, and exposed to nature, both in literal sense and in the sense that life goes in and around them, open a ground for nature to burst forth the Dionysian artistic energy. Light is one of these artistic energies and transforms the inert matter such as a Gothic stone:

> For Monet, nature never could be grasped as a whole; trees, rivers, fields and sky could never be reproduced faithfully at once, since 'nature', together with its *enveloppe*, was in a constant tremor; since the light that made it more or less visible was itself in continual change; since the whole of reality was in perpetual movement. By deciding upon painting the cathedral, Monet took his stance one step further, by demonstrating that even the facade of a Gothic church, permanent, static and solid as it may be, or appear to be, does not resist the changes imposed by light. Light in its intangible, immaterial, invisible essence, embraces even the solid, massive, impermeable stone structure of a cathedral and transforms it from day to day, from hour to hour, so that the cathedral will perennially appear to differ from itself.[56]

For the sole purpose of demonstrating the intervention of the *enveloppe* between the artist's eye and the motif notes Pissarro, one canvas of the individual motif would have sufficed. Through the device of the series however, Monet presents a yet more complex description of this interaction. In the thirty canvases of the *Cathedral* series, each moment and each vision of the cathedral reveals a different operation of the invisible components of the *enveloppe* on the texture of the cathedral walls.[57] Indeed, Pissarro describes the thirty paintings as "a reading of the passage of time" such that "its mark that can be almost arithmetically measured through the progression of light against shade in the morning, or of shade against light in the afternoon." And finally Pissarro argues that Monet's paintings of the cathedral, offer a precise rendering of the effect of time on the object depicted, more so than any other of his series paintings.[58]

However it must be noted here that, though each different view of the cathedral represents a separate moment, an individual and separate slice of time and light as perceived by the artist in front of the cathedral, everything in Monet's working process -as described in Pissarro's book *Monet's Cathedral* - indicates that the paintings were conceived, thought out and worked out together, and such were almost inseparable; "not only is each painting as a unit almost unfinishable, but the whole cycle of the series as a unified representation of time is in essence limitless."[59]Actually the totality of the completed series rules out the possibility of ever finishing any work; the claim to have 'finished' a work of art is, according to Monet, an unreasonable pretension.[60] Pissarro notes that at nineteenth-century, this was an unacceptable conception to the mind of the Academy student in search of an absolute ideal.[61] He goes on to say that; "while historical and 'realistic' painting in the nineteenth-century French Academy produced paintings that appeared a-chronical, a-temporal (timeless), because the artist tried to cram too many time sequences into a single canvas, Monet proposed a radical break with this type of art, by reinjecting one sequence of time at a time within one particular canvas."[62]As a consequence each painting in the series is the immediate vision of an 'effect' that took place 'instantaneously' on the cathedral facade, in front of Monet's eyes. One of essential points of each painting of the cathedral is to catch the effect of a few minutes, of a given hour, indicated by the position of the light on the wall. [63]

The impossibility of a claim to have 'finished' a work is also valid for the works of architecture since what the architect designates or even what is built, is not an *end*; what may appear to be finished is but one stage in the development of the matter.[64] So the building, rather then being a solid, objective vision of an immobile and permanent reality, is constantly subject to transfiguration as in the case of Rouen Cathedral skilfully depicted by Monet.

Steven Holl argues that "phenomena that can be 'sensed' in the material and detail of an environment exist beyond that which can be intellectually transmitted."[65] In this respect the *Cathedral* series may help us come far closer to capturing the experience of light. It is evident that, the concept of *enveloppe* is one of the basic elements of this experience forming the relationship between Monet and the cathedral. As purposed by Pissarro, a practical

perception of the relationship between Monet and his motif is to imagine a triangle *ABC*, in which each letter represents one of the three factors involved in the making of the *Cathedral* series. *A* represents Monet's eye in front of his canvas while he paints the cathedral. *C* is the cathedral itself, a work of architecture but the visible motif in this case. *B* is 'what there is between the motif and myself', the *enveloppe* - or what Monet claims is his real interest and to which he attributes the greater significance in his paintings of the cathedral.

Within this triangular relationship, says Pissarro, one can clearly discern two possible ways to go from *A* to *C* (to view the cathedral). Either *A* grasps *C* directly, or *A* goes via *B* in order to reach *C*. The first is the 'objective', direct, traditional, immediate way to view the cathedral. Actually this is the view of Socrates or the 'theoretical man' in Nietzsche's words who has been wrapped in the veil of *máyá;* "just as in a stormy sea that, unbounded in all directions, raises and drops mountainous waves, howling, a sailor sits in a boat and thrusts in his frail bark: so in the mist of a world of torments the individual human being sits quietly, supported by and trusting in the principium individuationis."[66] Having lost his Dionysian elements of his being, the 'theoretical man' searches for analytic, 'scientific' concepts, which 'abstracts' from the given to arrive at neutral, 'objective' knowledge. However as supported by Norberg-Schulz this 'objective' knowledge cannot describe the concrete environmental character of places which is the 'qualitative totalities of a complex nature'. [67]

If we recall the relationship between Monet and his motif, Pissarro informs that Monet is solely interested in the *triangular, complex* and *unbreakable relationship* where *C* can only be apprehended through *B;* where *B, constantly changing,* and as such *constantly changes* how one views *C*. If the roles in this triangular relationship is to be evaluated, B is clearly dominant and from its position dictates how *A* reaches *C*. Yet it is *A* that establishes the priority, or hierarchy, of *B* and *C* and according to Monet's own words, *C* is insignificant. To illustrate, Pissarro gives the example of figure 25, in which "the cathedral is almost totally absorbed by its *enveloppe*: its contour, its presence almost completely dissolves into the mist; the invisible has almost completely taken over the visible."[68]

From the perspective of the art of painting, and even for Monet, *C* - the Gothic cathedral of Rouen- is not much more then a fruitful setting to depict artistic energies which burst forth from nature herself. Yet this is already what is purposed in the present study as works of architecture *as* they are constructed, and exposed to nature, both in literal sense and in the sense that life goes in and around them, open a ground for nature to burst forth the Dionysian artistic energy. By looking at the Gothic cathedral through B, which is constantly changing Monet steps on that 'delicate boundary' that Nietzsche believes to exist between the Apollinian and the Dionysian just as Kahn's 'thin threshold' from 'silence to light' or between the 'measurable' and the 'unmeasurable'. Dionysus represents, "the whole wet element in nature- blood, semen, sap, wine, and all the life-giving juices;"[69]just as the *enveloppe*, transfiguring the cathedral into "ambiguous configurations" that can not be found in the strictly defined, well delineated and ornamented structure of the Gothic facade. As Pissarro describes; "Rouen Cathedral stands as a monolith whose rigidity, permanence and massive unity is impermeable."[70]Dionysus is the god of *chaos* and *destruction*, but he is also the god of *fertility* and *productivity*. Gustave Geffroy, Monet's first biographer, comments on the Monet's *Cathedral* series as follows;

> These works will give all the same sensation of the eternal beauty of life, present at every hour, at every moment. The reality is present and becomes transfigured. These pinnacles, these portals, these buttresses, these Rouen sculpture, all that stone seen at every hour of the day, in the softness of the morning, in the illumination of noon, seen under all the aspects of the atmosphere, under the caress of the sun, through the opacity of the fog or the air loaded with rain.[71]

Both Pissarro and Geffroy mention Monet's predominant pictorial concern with unifying the elementary diversity into a harmonious whole, a function which, according to Pissarro, the *Cathedral* series subsequently carried out to its extreme.[72] About Monet's painting of Belle-Ile in Brittany of 1886, Geffroy wrote: "Monet, painter of the sea, is at the same time a painter of the air and sky." Geffroy, emphasised this particularly important factor of unification in Monet's work as follows:

> His paintings are seen as whole. All these shapes, all these shimmers order each other, saturate each other, influence each other with their mutual colours and reflections (...) Hence, the unity of his paintings which reveal the shape of the seashore and at the same time the movement of the sea, they indicate the time of day through the colour of the rocks and the colour of the sea.[73]

Likewise, Pissarro describes Monet's concern with unifying the elementary diversity into a harmonious whole in the Cathedral series as in the following quotation:

> The two [the air and light (invisible) and stone (visible)] are constantly in contact, constantly interfering with each other. As we can see in many of the cathedral paintings, the sky or air sometimes seems to be piercing through the stone- the air seems to become stone, while the stone itself is vaporising. Monet is painting the contact, the shock, the interference of these elements.[74]

Actually this "unification of the elementary diversity into a harmonious whole" is nothing but the union "under the charm of Dionysian" not only between man and man, but Nature "which has become estranged, hostile, or subjugated, celebrates once more her reconciliation with her prodigal son, man."[75]Accordingly the boundaries between individuals and the limits of space and time are broken down, and a sense of mystical unity with the universe is experienced.[76]

> Now, with the gospel of universal harmony, each one feels himself not only united, reconciled, blended with his neighbour, but as one with him; he feels as if the veil of *máyá* had been torn aside and were now merely fluttering in tatters before the mysterious Primordial Unity.[77]

As pointed out by Pissarro it is a noteworthy coincidence that one of the principal implications of Monet's works was "to refute the notion of a solid, objective vision of an immobile and permanent reality, while at the same time scientific investigation was moving toward similar conclusions."[78]It is extraordinary to realise that as Monet was transforming the usual notion of one's perception of reality through their experiments with 'series', relativizing

everything, scientists were conducting parallel investigations into the relationships of energy and matter in the physical world. Pissarro goes on to say that; "the traditionally incompatible notions of mass, light and energy found their pictorial resolution in the visual and poetical blending of Monet's *Cathedral* series of 1892-93, as they found a scientific and theoretical resolution in Einstein's notes in the *Annalen der Physik* of 1905."[79]Accordingly, this is also the case for *utsuroi*, combining seemingly different phenomena; time and matter, matter and light, light and space, space and time in a single definition. The *light* in this definition is what in the present study is called *Dionysian light*, symbolised with the Dionysus- the god of chaos and destruction, as well as the god of fertility and productivity.

It is apparent that for both Monet and Gothic architects, "light was the source and essence of all visual beauty" and furthermore "the theme of the fusion of light and stone had the same emotive connotation, the same affective potency, in the erecting of the cathedrals as in the painting of one of these cathedrals by Monet six hundred years later."[80] As has been quoted from Otto von Simson at the beginning, two aspects of Gothic architecture, are without precedent and parallel: the use of light and the unique relationship between structure and appearance; "the Gothics were most innovative insofar as their architecture was inherently expressing 'the relation of light to the material substance of the walls'."[81] Light that filters through the Gothic wall seems to be porous: permeating it, merging with it, transfiguring it.... Light, appears as the *active* principle; and matter is aesthetically real only insofar as it partakes of, and is defined by, the luminous quality of light.[82]

James Brogan emphasises another aspect of Gothic architecture, where light was employed "as the medium through which the representation of the heaven was given a temporal earthly reading." Gothic architecture presents light as the symbol of the supernatural, with the manifestation of god in the ordinary, earthly objects of the building - the stone, wood and mortar; "the transparency of screens of stone-set glass and other-worldliness of the dematerialization of the Gothic structure is realised with light."[83]

Like wise, Pissarro notes that, Monet and the Gothics both introduce an ethereal element into the configuration of their works; "in the construction of the cathedral it is referred

to as a transcendent principle, Heaven, of which the cathedral is merely an earthly shadow." Whereas in Monet's *Cathedral* series, "the ethereal is present everywhere, surrounding the cathedral with its all-encompassing *enveloppe*, filling the intervals, reflecting, vibrating against the stone facade, shaping or unshaping the details of the sculpture and architecture." Light "is not referred to symbolically, as in the original construction of the cathedral, it is depicted as an imminent force, painted as an element perspiring through the stone, imbuing the cathedral with all its presence. The sky becomes part of the cathedral, struggling with or caressing the stone facade."[84]Pissarro concludes as follows;

> For both the Gothic architect and the Impressionist painter, reality only stands as a pretext to express something else- something invisible. In the former case, it is the principles of creation- God and his word; in the latter, it is what makes reality visible, while itself remaining invisible- the air or the *enveloppe*, an invisible filter of light.[85]

In a letter written to a friend, Monet expresses his admiration of light as quoted by Pissarro; "I am fencing and struggling with the sun- and what a sun here! We ought to paint here with gold and precious stones. It is admirable."[86] Pissarro goes on to say as follows;

> Gems are used, by both Monet and the Gothics namely, to illustrate the fusion between light and stone. Indeed, like stones that have become porous to light, translucent coloured gemstones filter light and in them light turns into a solid element. The medieval theologians gave to gems a singular, moral value: they were one significant symbol that could lead the soul to progress from the created (stone) to the uncreated (light), from the material to the immaterial.[87]

It is no doubt that the *Cathedral* series by Monet proved their relevance as they have revealed Dionysian realm in architecture even in the "firmly rooted, unchanging immobility of a Gothic stone facade."[88] *Dionysian light*, as one of the most essential components of the invisible *enveloppe* -a manifestation of the Dionysian artistic energies of nature, 'confers' upon the Gothic cathedral its 'hues and shades', 'sharpens or blurs' its 'edges', 'enhances or erases'

its 'crevices', 'brings out or flattens' its 'relieves.' Monet paint that *contact* between *light* and *matter* which is expressed in *utsuroi* as perception of things *fading* and *growing.*

The fusion of light and matter was also a prime concern for art movement called ZERO centred around the three German artists Heinz Mack, Otto Peine, and Günther Uecker and French Yves Klein during late fifties and sixties. Light is seen by the ZERO members, 'children of the light' as they call themselves, as the most essential power of life:

> How old is light? Where does light come from? Who has first seen light? Who has seen light last? Does light come to the eye? Does the eye come to the light? How much is a kilogram of light? To whom does light belong? How transparent is light? How deep does light penetrate into the skin? Is light sharp? Is light shy of light? How does light dress? How often does light take a bath? Where bathes it? Where does light sleep? With whom does light sleep? By whom is light loved?[89]

Accordingly, ZERO's main idea was the optimistic synthesis of man, nature, and technology with art as a mediating force.[90] C.W. Thomsen informs that the publication of the three issues of their ZERO magazine (1958-1961) proved extremely influential, especially among fellow artists who soon spread ZERO messages to the United States, where they received their great show in 1965, the uniting aspect of which was "the fascinating attraction of light" as expressed by Otto Piene. Thomsen adds that, as different as they may be as individuals and in their specific works, what the ZERO artists do have in common is "their fascination with light and their *architecture-related visualisation of immateriality*, where lines and forms become fluid, stream along, merge, melt into one another, expand, contract, fuse as if they were made out of liquid material."[91] Actually as pointed out by Thomsen, ZERO artists expressly wanted to link and integrate their work with architecture :

> Their way of realising this was closely connected with architecture. Their shining surfaces tried to do away with materiality; they tried to create spaces of vibration, reflection, and motion. Especially in many of Mack's works, interference, intervals, and superimposition of different layers played an

> important role. He used aluminium foils, industrial glass, mirroring glass, acrylic glass, and honeycombed aluminium grids which have since found frequent use in architectural constructions. Mack mainly intended to create objects which convey spatial images that look immaterial, oscillate by means of interference, force the eye to journey through the sculptures, making discoveries of new spatial experiences, using the existing space as a kind of body of resonance.[92]

It is no doubt that the shining surfaces of the materials that ZERO had used was much more potential to present the *Dionysian light* then the gothic stone. Actually those materials that create spaces of vibration, reflection, and motion are what characterises the facades of the most recent works of architecture. The development of new, all-glass structures have allowed the play of light and shadows to become part of the language of building, to animate structures with a complex and shifting slide-show of diurnal and seasonal patterns. Light reflects and refracts through glass, it takes on the green hue of the material or is separated into rainbow colours; it can be transparent, translucent, reflective or opaque depending on the angle of view. Montaner for example, describes the Great Library of France as a 'transparent volumetric form';

> In fact, following the co-ordinates set by minimal art, some architectural works harmonised with the search for simple, isolated, even transparent volumetric forms such as the recent case of the Great Library of France by Dominique Perrault (1989) which was aimed at a certain dematerialization of the object.[93]

We may recall here the *enveloppe*, surrounding the Rouen Cathedral and filling the intervals, reflecting, vibrating against the stone facade, shaping or unshaping the details of the sculpture and architecture as depicted in Monet's series. The *enveloppe* surrounding Frank O. Gehry's Guggenheim Museum, Bilbao, Spain (1991-97) is no less Dionysian then that of Rouen Cathedral. As the sky had became part of the cathedral, struggling with or caressing the stone facade,[94]now the Dionysian in nature bursts forth on the titanium panels of the Guggenheim Museum.

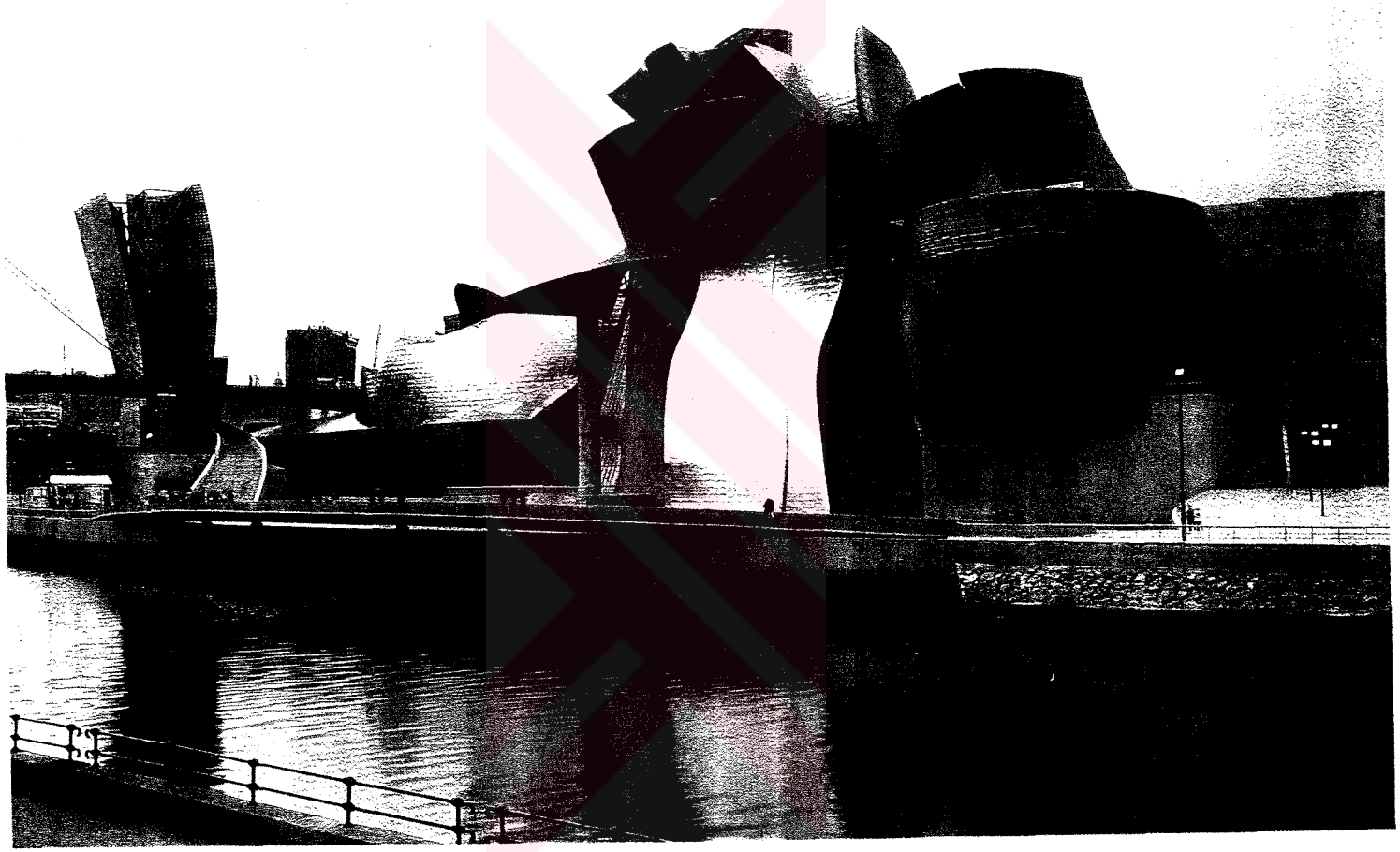


Fig.21: Frank O. Gehry. Guggenheim Museum, Bilbao, Spain (1991-97).

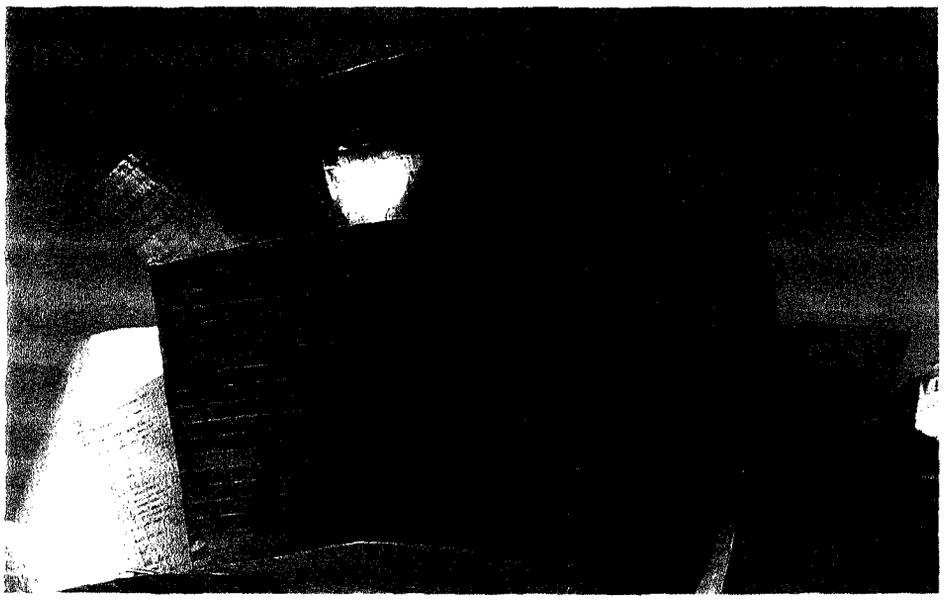


Fig.22-23: Frank O. Gehry. Guggenheim Museum, Bilbao, Spain (1991-97).

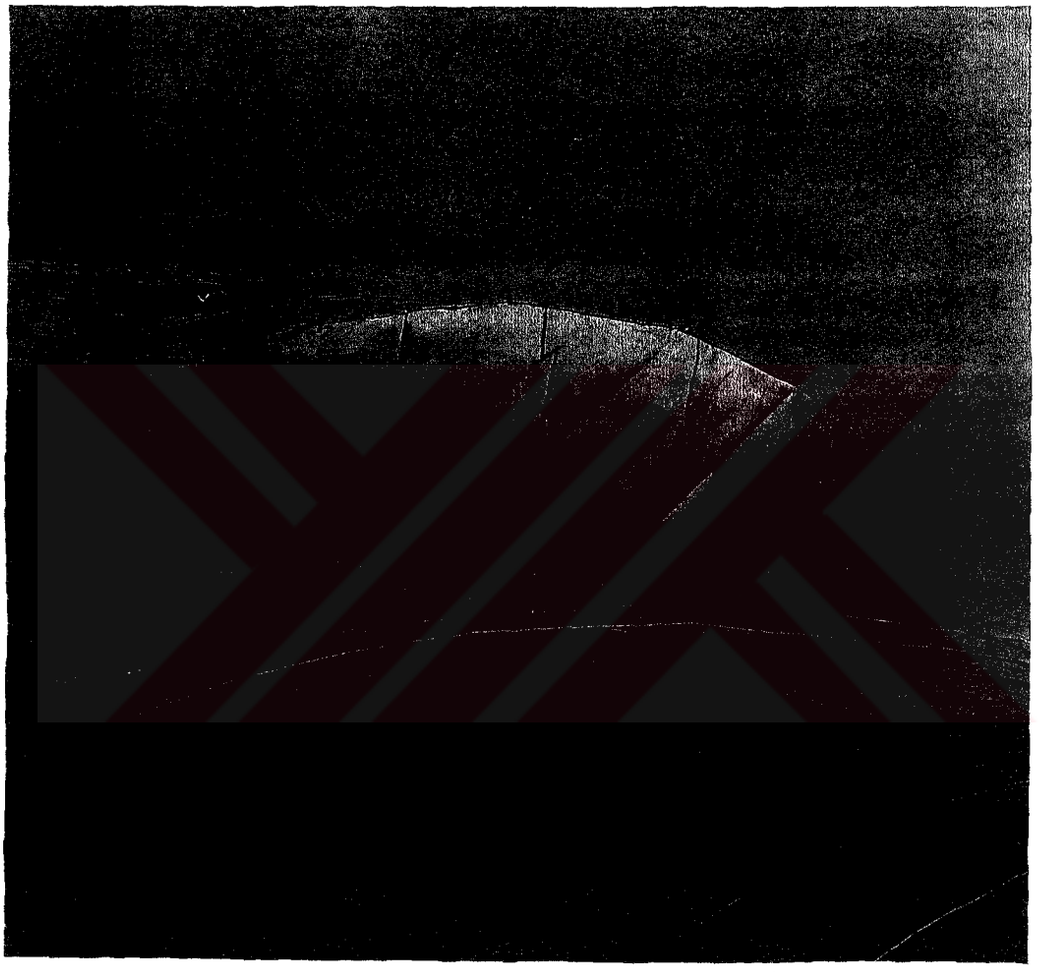


Fig.24: Frank O. Gehry. Guggenheim Museum, Bilbao, Spain (1991-97).

III.C. PERCEPTION OF SHADOW SHIFTING WITH THE LIGHT

In the preceding sections we have seen how the Dionysian artistic energy of nature bursts forth through works of architecture that are subject to constant transfiguration. Each single moment of this transfiguration is nothing but the space itself, together with the fading and growing of the materials it involves. One of the essential phenomena behind all this sensations in time and space is light, but light as such that is called in the current study as *Dionysian light*. Yet the true character of *Dionysian light* is not derived purely from light itself, but requires the introduction of darkness and shadow to assert itself in all its power, as also implied by Louis Kahn in the following quotation;

> I turn to light, the giver of all Presences: by will; by law. You can say the light, the giver of all presences, is the maker of a material, and the material was made to cast a shadow, and the shadow belongs to the light.[95]

Actually *perception of shadow shifting with the light* already reveals the mutual relationship of light, matter and shadow in time and space, as also expressed in the *interplay of light and shadow* that takes place in a certain locale over a certain period. It might be important to recall at this point what Pfeffer has noted when she said that "the creative activity in art and nature is compared by Nietzsche to the activity of play."[96] She argues that, for Nietzsche, *play* represents a general organic activity that does not aim at any practical utilitarian needs and ends, being unconcerned with good and evil, truth and falsity but rather "it involves creativity in the playful manner of the child and of the eternally active Heraclitean fire." In this respect Nietzsche's view was parallel to that of Darwin's and Spencer's biological and naturalistic theories, wherein play and beauty are regarded as general natural phenomena.[97] The *interplay* of light and shadow are one of these natural phenomena and works of architecture offer a rich *playground* for them. It is no doubt that shadows are an essential and probably the most alive part of play; ephemeral and therefore very much of the present. Shadows can animate the lumpen stuff of which buildings are made, give them form and reveal texture.

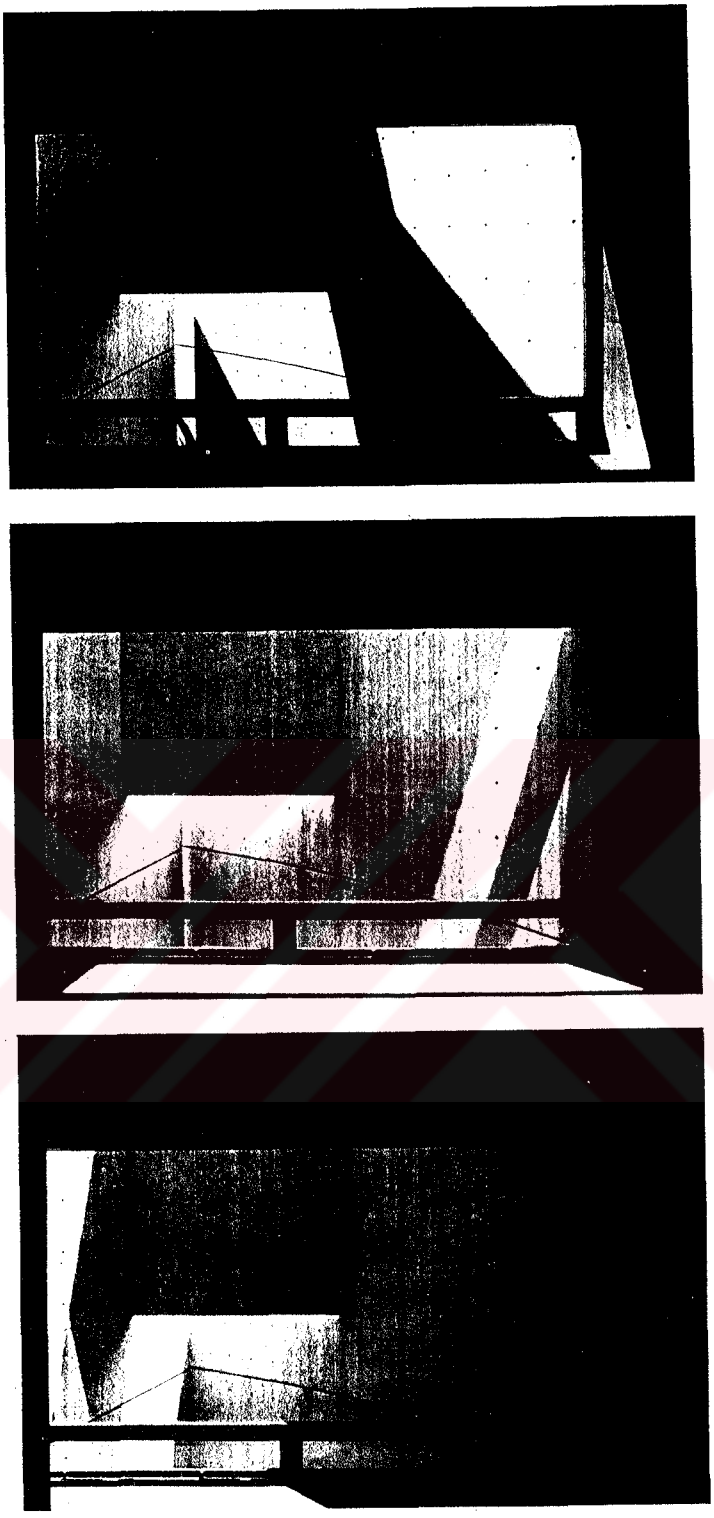


Fig.25 : Tadao Ando. Atelier in Oyodo, Osaka. 1981-82.
Views of light court at 10 a.m., 12 noon, and 1 p.m.

> The whole motivation of presence is to express. And what nature gives us is the instrument of expression which we all know as ourselves, which is like giving the instrument upon which the song of the soul can be played. The sanctuary of art- I'm taking this little lesson to say that it is the treasury of the shadows.[98]

"The Treasury of the Shadows, lying in that ambience, light to silence, silence to light "[99] was certainly one of the key terms in Kahn's architecture as well as for Boullée or the "inventor of the architecture of shades and shadows," as he declared himself. The invention of "the architecture of shades and shadows" of Boullée will be discussed later in the present study, but now we must turn back to another invention, to the invention of sections as a form of architectural representation.

The notion of vertical and horizontal sections was not common before the sixteenth century, says Alberto Perez Gomez, and Louise Pelletier in their book *Architectural Representation and the Perspective Hinge*, just as anatomy rarely involved the actual dissection of cadavers until the early modern era. Though it was not common then, the invention of sections was based on the Vitruvian idea of the role of buildings as *gnomons* or *shadow tracers* as pointed out by Gomez and Pelletier;

> When section drawings were introduced into the process of architectural ideation, they were not simply extrapolated from other drawings such as the plan and the elevation; rather, they seem to have originated from a fascination with the role of buildings as gnomons or shadow tracers.[100]

Gomez and Pelletier goes on to say that the co-ordination of the vertical and the horizontal sections of the buildings reveals that light and shadow constituted the architecture's symbolic order, very much in the spirit of Vitruvius, who had introduced gnomons -together with *machinae* and buildings- as one of the three artifacts within the province of architecture.[101] Sundials were crucial for determining the orientation of buildings and cities in accordance with the symbolic directions and regions of the heavens. In this way, architecture could be propitious for human life.[102]

Yet, the relevance of a discussion of the notion of sections to the perception of shadow shifting with the light is best revealed through the commentary of Daniele Barbaro on the architectural 'ideas' of Vitrivius, as again elaborated by Gomez and Pelletier. They recall that in Vitrivius's Ten Books, the Greek word *idea* referred to three aspects of a mental image that constitutes the germ of a project and as such enabled the architect to imagine the disposition of a project's parts.[103] These were the ideas according to Vitruvius that define architectural design.

Gomez and Pelletier informs that, on one hand, there were *ichnographia* and *orthographia* which were for Barbaro straightforward terms and as such he simply accepted them in his treatise on perspective (1569). While *ichnograhpia* corresponds to *horizontal trace* or *footprint, orthographia* refers to *vertical trace* or *face*. In the late middle ages, a plan generally was conceived as the composite 'footprint' of a building, and an elevation as its face. Since the nineteenth century however, these original terms would eventually be translated by modern concepts such as 'plan' and 'elevation' but did not yet suggest the systematic correspondence of descriptive geometry as argued by Gomez and Pelletier:

> These architectural 'ideas' coincided with the horizontal and vertical dimensions of *lived space*, yet they often included apparent *contradictory information* that was nonetheless important in *nonhomogeneous space-time*; they were not "precise" projections homologous to perspective.[104]

Actually we may recall here what Nietzcshe had pointed out regarding the end of tragic vision, replaced by the vision of Socrates-the 'theoretical man'- which is a vision of nature as ultimately understandable and intelligible. As a consequence the 'Western man' has lost the Dionysian elements of his being which are replaced by logical argument, debate, and rhetoric. Apollinian rationality, clarity, and lucidity replace the problematic, ambiguous, and mysterious depth of earlier tragedies.[105]

Likewise, as noted by Gomez and Pelletier, "the obsession with revealing the inside of bodies -dissecting and magnifying as roads to knowledge- took hold of European epistemology only after the mechanisation of physiology in the seventeenth century," and

conclude that, though the power of cutting have reached its limits in science, further cutting in biology and particle smashing in physics do not seem to able to reveal a greater interiority; "we are always left on the outside by objectified vision."[106] This was also what Norberg-Schulz have remarked; "What is lost, however, is the everyday life-world, which ought to be the real concern of man in general and planners and architects in particular."[107]

Accordingly, as indicated by Gomez and Pelletier, "the apparent truth of a section" promoted the use of sections in architectural representation and eventually, the modern plan, section, and elevation or the scientific projections as Gomez and Pelletier name, became to be "conceived as homologous sections along the *x*, *y*, and *z* axes. Sections became a legitimate embodiment of architectural ideas because they were more precise than composite drawings and therefore were considered more appropriate to embody Platonic truths."[108]

It is no doubt that such a use of sections is nothing but a manifestation of the Apollinian realm in works of architecture. However, as it was not the case for *ichnograhpia* and *orthographia*, this was also not the case for *sciographia*, the third Vitruvian idea which has been wrongly translated according to Barbaro as 'perspective' because of the misreading of *sciographia* as *scenographia*. Gomez and Pelletier defines *sciagraphy* (also written 'sciography', meaning etymologically the inscription or description of shadows) as 'the art of drawing shadows' as it was generally understood until the seventieth century. Between the seventieth and nineteenth century, it also referred to a cut or section of a building, yet different form the notion of section in the modern sense.[109]

Those translations which take *sciographia* as *scenegraphia* assume *scenographia* - the "semblance or shaded image of the front and the retreating sides, and the correspondence of all lines to the centre of a circle"- to be a literal description of perspective drawing. However, Gomez and Pelletier points out that, "the introduction of these modern concepts implies that Vitruvius's text describes an objective system of coordinates with an absolute correspondence between projections, excluding the temporal unfolding from a graphic representation of space."[110] Yet, they believe that the hypothesis of a homogeneous space, with its system of spatial coordinates among plan, section, and elevation, did not appear until the eighteenth

century. In antiquity, the notions both of natural place (*topos*) and of space were opposed to the perspective image of the world and to the homogeneous space and time that have become primary assumptions of our instrumental world. Accordingly, in Vitruvius's *De architectura;*

> the very notion of order (*taxis*), the ultimate objective of architecture, is *simultaneously spatial and temporal.* For Vitruvius architecture thus comprises not only buildings but also gnomons (solar clocks), indispensable for interpreting celestial signs, and machines for revealing the spatial and temporal mathematics of the macrocosm.... Time thus intervened in manifold ways in the realisation of architecture from the *ideae* to the building, as if the horizontal and vertical traces had a status similar to the signs of musical notation, both *being subject to temporal actualisation.* In the experience of architecture, the order is revealed to the inhabitants through their participation in the rituals that the building literally houses.[111]

This 'temporal actualisation' similar to execution of 'musical notation' is nothing but the Dionysian artistic energies which burst forth from nature in the most immediate and direct way. The term nature here involves all the natural phenomena like man but also the light-the object of the present study- as just one of those Dionysian energies of nature. Accordingly works of architecture, though itself belongs to Apollinian realm, open a ground for nature to burst forth its Dionysian artistic energy. Actually, it must be more than a coincidence that, this phenomena has been likened to the temporal actualisation of *musical notation* by many, as it was the case for Nietzsche's the Apollinian and the Dionysian: with the aid of Dionysian wisdom and its deeper insight into reality, as Pfeffer states, Apollinian isolated images and the individual characters and events of tragedy reach deeper levels of existence. On the other hand, with the aid of Apollo, "the musical elements find expression in concrete representations, and Dionysian discord and dithyrambic excess are given harmony, clarity, and form."[112]

The manifestation of Dionysian realm through the temporal actualisation in architecture- similar to execution of musical notation- is described by Steven Holl as follows;

> The materials of architecture communicate in resonance and dissonance, just as musical instruments in composition. Architectural transformations of natural material, such as glass or wood, have dynamic thought and sense provoking qualities. Analogous to woodwinds, brass and percussion instruments, their orchestration in an architectural composition is as crucial to the perception and communication of ideas as the orchestration of musical instruments as for a symphonic work. Like a musician's breath to a wind instrument or touch to a percussion instrument, light and shadow bring out the rich qualities of materials which remain mute and silent in darkness.[113]

Again, in another case, Holl expresses that "we hear the 'music' of architecture as we move through spaces while arcs of sunlight beam white light and shadow."[114] as with Louis Kahn when he said that, "to me, when I see a plan I must see the plan as though it were a symphony, of the realm of spaces in the construction and light."[115]Still, in another case, Kahn emphasises the similarity between architecture and music lying "in the sanctuary of all expression, which he likes to call the "Treasury of the Shadows":

> Architecture has no presence, music has no presence, I mean, of course, the spirit of architecture and the spirit of music. Music, in this sense as in Architecture, favours no style, no method, no technology: this spirit is recognised as Truth. What does exist is a work of architecture or work of music which the artist offers to his art in the sanctuary off all expression, which I like to call the Treasury of the Shadows, lying in that ambience, light to silence, silence to light. Light, the giver of presence, casts its shadow which belongs to light. What is made belongs to light and to desire...[116]

Just as Monet's *enveloppe*, rather than being '*nothing*' around other objects, was a '*content*' in itself, in Pythagorean philosophy, space was conceived as *pneuma apeiron*, and only occasionally as *kenon* (void), and it served as the 'limiting agent' between different bodies. [117] As Gomez and Pelletier informs;

> The dominant notion of *apeiron* still associated the concept of space with that of matter; time and space were not separate mathematical concepts, and air was identified with void. Something similar is true for the Platonic *chora*, the "third" element of reality (besides Being and Becoming) which Plato describes in *Timaeus* as both *prima materia* and as the place and matrix of all things.[118]

There was an overlapping of the notion of section as a cut with that of section as shadow or imprint, revealing the presence of light and the order of the day, yet framed by the order of the architecture, which was capable of enduring darkness. Gomez and Pelletier inform that, Vincenzo Scamozzi's treatise *L'Idea dell'Architettura Universale* (1615) contains fascinating examples of this ambiguous concept of section. They note that Scamozzi, probably influenced by Barbaro, introduced the use of shadows into his practice of architecture "as a component of his polysemantic third architectural *idea*."[119] Then Gomez and Pelletier goes on with a description of a plan and a vertical section of *Villa Bardellini* as included in Scamozzi's architectural treatise, in which the villa has represented as a kind of 'inhabited sundial,' showing shadows cast onto the ground:

> The geometric tracings in the plan of Villa Bardellini recall a Rose of the Winds, and with it the Vitruvian tradition. The projected shadows transform the architectural space of Scamozzi's villa into a complex system of relationships that unfolds in a nonlinear temporal sequence. The shadows in Scamozzi's drawings do not acknowledge an ideal position of the sun casting its shadows at a given moment, or even a single source of light that would follow a specific trajectory. The shade areas in the drawing present more than a realistic representation of space: they disclose the relation between the "soul" and the "body" of villa. Scamozzi intentionally denies a complete correspondence among the drawing, the anticipated building, and its shadows, because in his skiagraphy, "shadows reveal the light of architecture-the representation of shadows reveals the idea embodied in the design.[120]

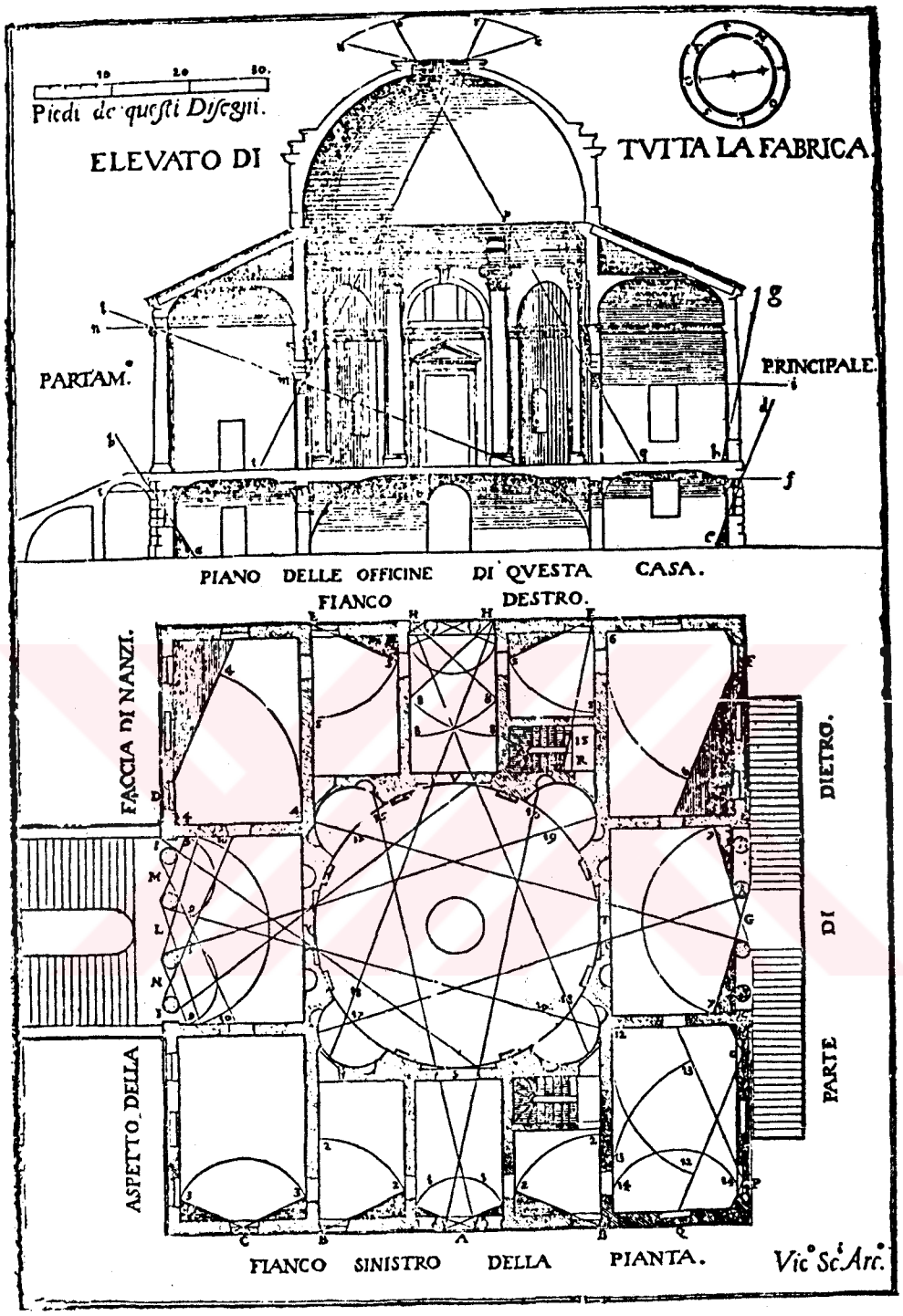


Fig. 26 : Vincenzo Scamozzi's Villa Bardellini,
L'Idea dell'Architettura Universale, 1615.

It is no doubt that, the plan and the vertical section of Villa Bardellini were representations of shadow shifting with the light or in the other words, of the interplay of light and shadow that takes place in Villa Bardellini over a certain period just as Monet's Cathedral series was the representation of the fading and growing of a Gothic stone facade. Monet, though being an artist, had searched for the same thing as always; he had wanted to do architecture without doing its features, without the lines, in his own words.[121]

Whereas Etienne-Louis Boullée, while being an architect, was nevertheless interested in being a painter. Actually, the subtle shadings of numerous tones of grey in his drawings depicting the effects of light and shadow in his projects was an outcome of this interest.[122] Helen Rosenau also point out that for Boullèe "the tinted drawing almost was the artistic creation, and in this respect his attitude remained akin to the painter's."[123]However Boullée's emphasis on light and shadow was not solely the outcome of his painterly interest, but also of his architectural ideas, leading him to declare himself as "inventor of the architecture of shades and shadows." Boullee describes in his Architecture; essai sur l'art how he walked along a forest in the moonlight one night;

> Finding myself in the countryside, I skirted a wood by the light of the moon. My effigy produced by its light excited my attention (assuredly this was not a novelty for me). By a particular disposition of the mind, the effect of this similacrum seemed to me to be of an extreme sadness. The trees drawn on the ground by their shadows made the most profound impression on me. This picture grew in my imagination. I then saw everything that was the most somber in nature. What did I see? The mass of objects detached in black against a light of extreme pallor. Nature seemed to offer itself, in mourning, to my sight. Struck by sentiments I felt, I occupied myself, from this moment on, in making its particular application to architecture.[124]

From then on Boullée was looking for a project whose impact would result from the effect of shadows. To reach that goal, he imagined how the light as he had observed it in

nature gave everything back to him that he had created in his mind.[125] Rosenau points out that, when compared with his predecessors Boffrand and Blondel, Boullèe's contribution to the theory of architecture is clear; Boffrand and Blondel were concerned with the *static* elements of building ; "the effect of light and shadow so apparent in Boullèe's drawings is missing. Boullèe's colour in architectural design brings out the most important structural and emotional aspects. It is never used for its own sake, but as a vital part of the general scheme."[126]

According to Emil Kaufmann, the art of combining the masses effectively was the most important for Boullée in architecture.[127]All *effect* was to be "derived from the whole, but not from its details." Accordingly "the masses should be grand, and *full of movement*, the 'character' depends upon them." Yet, then questions Kaufmann; "how can movement be brought into the masses when the richness of the Baroque has been superseded by the austerity of stereometric forms?" At this point, Kaufmann refers to Villar as he was able to learn the architect's point of view from Boullée himself, rather than from his manuscript:

> Villar informs us of the means which Boullée chiefly emphasised. The artist declared himself to be the "inventor of the architecture of shades and shadows," i.e., disposing the masses so that their contrasting forms produce attractive lighting effects.[128]

Rosenau informs that Boullée borrows from Vitruvius the concepts of "regularity, and symmetry as equivalent to proportion," but adds to it a special emphasis; that is "the play of light and shadow and variation in the connections between buildings and their respective proportions."[129] Afterall, Boullée, had himself claimed that the architect should "put nature on the stage"[130]- a remark which recalls what has been purposed in the present study that, works of architecture, as they are constructed, and exposed to nature, both in literal sense and in the sense that life goes in and around them, open a ground for nature to burst forth the Dionysian artistic energy. Furthermore, both Boullée and the current study take light and shadow as one of the essential phenomena of this Dionysian realm.

However, "it would be erroneous," says Rosenau, "to class Boullée as a Romantic, since his individualism was based on a reason and appreciation of function, and ruled by the

recognition of the laws of nature, founded on Newton's theories." She argues that, Boullée had no desire to 'improve' nature, and he was no follower of contemporary thought in this respect; "in his eyes, the architect's task is to reproduce by his own means and in a structural idiom, the ennobling impression which nature makes on the spectator."[131] Rosenau goes on with a description of how Boullée managed this task:

> To attain this end the architect has first to select from natural forms, under the guidance of a concept of regularity, based on Platonic traditions. Accordingly the sphere is the most perfect of bodies. Secondly, the painterly approach is nourished by the different hues appearing during the seasons, leading to the desire of emulating nature. This is achieved by emphasising the emotional impact of natural and structural settings, by stressing the purpose of the building, when of a moral character, and by appealing to the emotions of sorrow and joy. In these terms Boullée envisages what he terms "architectural character"...His approach is not a painter's, only seeking the picturesque or colour for its own sake; his colours are a means of clarifying and stimulating the emotions.[132]

As mentioned above *combining* and *disposing* the grand masses so that their contrasting forms produce attractive lighting effects capable of stimulating the emotions was the main theme in Boullée's architecture. Thus the *masses* would be '*full of movement*' and reveal the 'architectural character'. The interplay of light and shadow that takes place in these masses over a certain period was certainly the essential phenomena to combine masses as well as to provide them *movement*. The 'power' of most of the last buildings of Louis Kahn, such as the library for Phillips Exeter Academy, the Kimbell Art Museum, and the Yale Centre for British Art, "derived from their almost alchemical integration of mass and space- Kahn's longsought wedding of the fundamental and apparently antithetical elements out of which architecture was made."[133] He goes on to say that;

> For Kahn, mass was always analysed *rationally* as a question of structure- the substance of a building- while space was defined more *mystically* in terms of natural light- *the energy that brought space to life*. The manipulation of both structure and light was

> essential in making "the room" which Kahn has long maintained was the basic compositional element of architecture, and he believed that they could be made to work together. He loved to say that architecture itself had begun "when the walls and the columns became," admitting light and creating a system of support at the same time.[134]

Actually, the Japanese word *utsuroi*, a single word, is also an 'alchemical integration' of seemingly different phenomena; light and matter, matter and time, time and space, and finally space and light. As time passes from one moment to another, the light changes, so does the space. This *play of light and shadow*; forever changing, forever struggling, and yet forever giving structure and form is perceived in *utsuroi*. We have seen how Boullée came to discover the potential in shades and shadows as he walked along a forest in the moonlight one night, and now it is time-place to see how the Japenese discover the beauty in shadows as described by Japanese novelist Jun'ichiro Tanizaki in his book *In Praise of Shadows* :

> Our ancestors, forced to live in dark rooms, presently came to discover beauty in shadows, ultimately to guide shadows toward beauty's end. And so it has come to be that the beauty of a Japanese room depends on a variation of shadows, heavy shadows against light shadows- it has nothing else.[135]

Fig.27: "Day after day" / "Night after night", BEGA advertisement by Leonhardt & Kern, Architectural Review, August1995.

CHAPTER IV

DARKNESS AND LIGHT

Light contains every kind of visibility yet is in itself invisible; it is familiar and simple, yet entrancing and never the same. This constant transfiguration was represented in the *Cathedral* series by Monet who believed that, nature together with its *enveloppe*, was in a constant tremor; since the light that made it more or less visible was itself in continual change; since the whole of reality was in perpetual movement. Light in its intangible, immaterial, invisible essence, embraces even the solid, massive, impermeable stone structure of a Gothic cathedral and transforms it from day to day, from hour to hour, so that the cathedral will perennially appear to differ from itself.[1] This play of light and shadow on works of architecture; forever changing, forever struggling, and yet forever giving structure and form is perceived in *utsuroi* as it is defined as the perception of things fading and growing; perception of shadow shifting with the light; and perception of space as a moment in the continual process of change.

It is no doubt that the most evident of this changes, is the one that we experience between day and night or in the other words between light and darkness. At sunset, the darkness fills the world and the things in our environment began to fade and after spending hours in the darkness at night, they began to grow with the first rays of sun at dawn. However, it must be noted that, both the light of day and the darkness of the night is subject to continual process of change as implied in the *fading* and *growing* of things. Indeed, darkness is nothing but a form of light just as the last of the other. Accordingly, light and darkness are both the same and the opposite just as the Apollinian and the Dionysian or *yin*

and *yang;* they are complementary. This recalls what Ernst Cassirer had noted regarding the opposites in mythical concept:

> In all these transitions we are again immediately aware of that dynamic which belongs to the essence of every true spiritual form of expression. In every such form the rigid limit between "inside" and "outside", the "subjective" and the "objective", does not subsist as such but begins, as it were, to grow fluid. The inward and outward do not stand side by side, each as a separate province; each, rather, is reflected in the other, and only in this reciprocal reflection does each disclose its own meaning.[2]

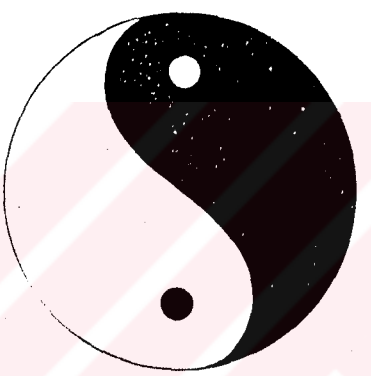


Fig.28 : Yin-yang ; interaction of opposites.

Louis Kahn, on the other hand, had expressed *darkness* and *light*, as *lightless* and *darkless* respectively:

> Silence and Light. Silence is not very, very quiet. It is something which you may say is lightless: darkless. These are all invented words. Darkless- there is no such a word. But why not? Lightless; Darkless. Desire to be; to express.[3]

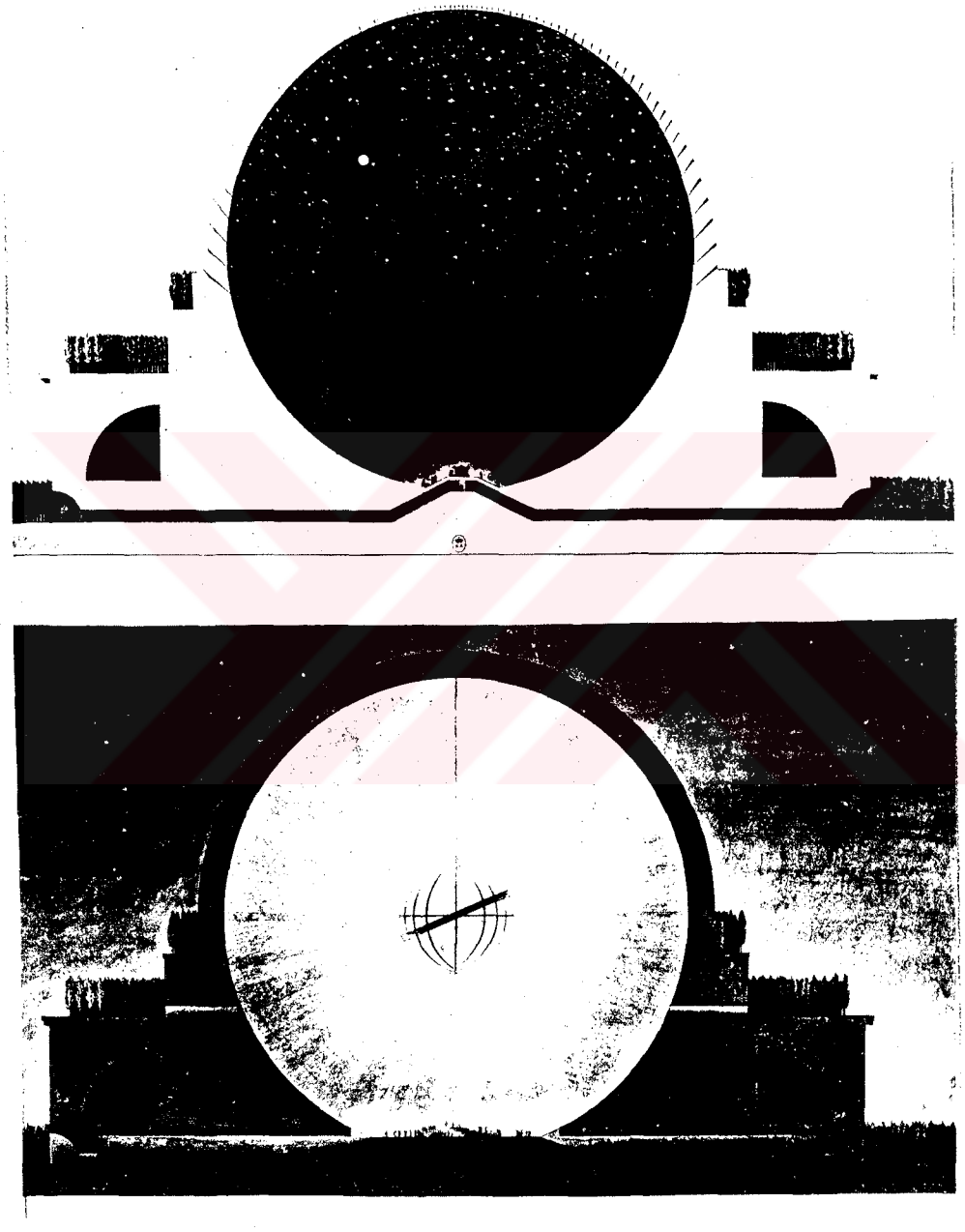


Fig.29-30: Boullée, Project of Cenotaph for Newton, representing day and night, 1784.

Plummer, points out how through the reciprocal reflection does darkness and light disclose its own meaning:

> Yet even where sheer lumunosity was sought by artists and builders, its beauty and power depended upon shadows to give the light a substantial presence, and a background from which to shine forth. Darkness had its own value, as well, for the mythic mind, bringing to space an aura of mystery, and a brooding atmosphere to induce contemplation, as well as providing the matrix which prepares for reviving light, in the same way that night prepares for dawn, and the womb for birth.[4]

Accordingly, we are at the point of introducing darkness to present study for two reasons; firstly as a loss of materiality of the things and the milieu, because of the *fading* of the matter and secondly as a background from which *Dionysian light* shines forth with a substantial presence.

Norberg-Schulz, at the first lines of his book *Genius Loci: Towards a Phenomenology of Architecture* introduces one of Georg Trakl's poem, which he claims, illuminates some essential phenomena of our life-world, and in particular the basic properties of place. Norberg-Schulz believes that the poem is able to *concretise* basic properties of existence and goes on to say that 'concretise' here, means to make the general 'visible' as a concrete, local situation. Finally he concludes that, in doing this, the poem moves in the opposite direction of scientific thought; "whereas science departs from the 'given', poetry bring us back to the concrete things, uncovering the meanings inherent in the life-world."[5]

Likewise, in the present study, in its research on one the most essential phenomena in architecture, a poem by Can Yücel will help us to open our discussion on darkness and the loss of materiality of objects and the milieu with it:

YA'U

Elektrikler söndü dün gece,
Zorbela toplayıp satırancın taşlarını
Mecburen yattık.

Simsiyah kediler gibi dolaşıyor koğuşta
Uyuyan dostların nefesleri.
Dolaşsınlar azıcık!

Tam ben de eve doğru açılıyordum
Şıpırdatmadan hiç kürekleri,
Yanmaz mı o tepemdeki yüz mumluk ısık.

Bir kürek mahkumunu Boğaz'da sandal sefasına
Haklılar, bırakmazlar tabii ama...
Ya'u ne güzel şeymiş meğer karanlık!

We shall not repeat Can Yücel's words, but rather point out a few properties which illuminate our problem. It is no doubt that, to man as to all diurnal animals, light is the prerequisite for most activities revealing the space and the matter in our everyday life-world. Accordingly, in the presence of light, our attention is directed mostly toward objects and their actions; we deal visually with human beings, buildings, trees or etc... So, when compared with the 'light space', our perception and feeling of space is widely affected by the materiality of objects whereas in darkness, as the matter around us fades, these play only a totally modest role. In Roger Caillois's terms;

> There is something positive about it [dark space]. While light space is eliminated by the materiality of objects, darkness is "filled," it touches the individual directly, envelops him, penetrates him, and even passes through him: hence "the ego is *permeable* for darkness while it is not so for light; the feeling of mystery that one experiences at night would not come from anything else.[6]

Actually, this was probably such a mystery of darkness that Yücel experienced when the electrics cut off. The resulting darkness, or lightlessness in Kahn's words, caused him and his friends to collect chess-men only with difficulty. The '*koğus*', which is probably of a *prison*, loses its *boundaries* with the introduction of such a sudden darkness and consequently, prisoners are free to wander, but not necessarily in physical terms, as the distinction between the inside and outside disappears.

Eugéne Minkowski likewise, comes to speak of 'dark space' on the contrary to 'light space', almost as a lack of distinction between the milieu and the organism:

> Dark space envelops me on all sides and penetrates me much deeper than light space; the distinction between the inside and outside and consequently the sense organs as well, in so far as they are designed for external perception, here play only a totally modest role.[7]

Again, one could be tempted to hear in the opposition of light space to dark space echoes of Nietzsche's fundamental vision of Apollo and Dionysus. Just as the Dionysian music transports us into a state in which the boundaries between individuals and the limits of space and time are broken down, and a sense of mystical unity with the universe is experienced,[8] darkness, which is a form of light, darkness "touches the individual directly, envelops him, penetrates him, and even passes through him, eliminating the distinction between the inside and outside. Now, as Pfeffer states, with the gospel of universal harmony, each one feels himself not only united, reconciled, blended with his neighbour, but as one with him; he feels as if the veil of *máyá* had been torn aside and were now merely fluttering in tatters before the mysterious Primordial Unity.[9]

At last, in Can Yücel's poem, the darkness of the *koğus* lasts with the illumination of 'yüz mumluk ışık' above , preventing his voyage to home. Nevertheless, this was as expected, since they were prisoners. But, after all, how beautiful was that darkness which allowed them such an experience. Antony Vidler examines such dark spaces in relation to conventional wisdom of modern urbanism as expressed by 'flood dark space with light' and modern architecture as expressed by 'open up all space to vision and occupation':

> Transparency, it was thought, would eradicate the domain of myth, suspicion, tyranny, and above all the irrational. The rational grids and hermetic enclosures of institutions from hospitals to prisons; the surgical opening up of cities to circulation, light, and air; the therapeutic design of dwellings and settlements; these have all been subjected to analysis for their hidden contents, their capacity to instrumentalize the politics of surveillance through what Bentham termed 'universal transparency'.[10]

Vidler goes on to say that such a spatial paradigm was, constructed out of an initial fear, which was, as he quotes from Foucault, the fear of Enlightenment in the face of "darkened spaces, of the pall of gloom which prevents the full visibility of things, men and truths." Tadao Ando, likewise, speaks of the kind of "formless, unregulated and nebulous space" that the modern age has turned its back on: "modern architecture has devised a world where all is transparent, illuminated, and utterly devoid of darkness." Yet, he notes, "the true character of light is not derived purely from light itself, but requires the introduction of darkness to assert itself in all its majesty, power and brilliance."[11]

Actually, in the last hundred years, the development of the electric light source has had the greatest impact on light and architectural design. James Brogan, in a genuine way, suggests how we might proceed to obtain the needed understanding for how the discovery of electricity in the nineteenth-century changed the discussion about light completely;

> Light could now be put anywhere- inside, outside or affixed to a building - to create structures that could literally be described as glowing lanterns at night. The values of dark and light have been completely reversed: what is light during the day (the solid material of the wall) has become obliterated by the darkness of the night, while what is rendered a darker value during the day (the glass curtain wall) has become a glowing membrane, due to the electrically illuminated interior.[12]

The play of light and darkness from day to night and from night to day transfigures works of architecture; as what is light during the day, the solid material of the wall, *fades* by the darkness of the night, whereas what is rendered a darker value during the day, the glass

curtain wall as Brogan states, *grows* to become a glowing membrane, due to the electrically illuminated interior. The phenomena described by Brogan will be discussed later in the present study, yet before we have to visit the *Paris World Exposition* of 1900 where, Thomsen believes to exist the real beginnings of a 'light architecture' which is concerned with night and artificial light and the man-made mediation of architecture.[13]

Thomsen states that "the exposition offered two buildings which paid homage to electricity and light effects in a way that distinguishes them as early examples of our genre." One of the buildings was Binet's *Porticus* and the was *Palace of Electricity* (*Palais de l'Electricite*), which was the official symbol and central building of that exposition. Actually it was this last one, the *Palace of Electricity*, which was a great achievement of its own at the time being, and in retrospective is the earliest forerunner of today's media facades:

> Differing from Binet's Porticus, which always shimmered in the same color, a lively continuously changing, almost breathing light event happened at the Palais... the real fascination originated from the building's own interior and exterior lighting. The facade was covered with thousands of light bulbs which could be activated from a central desk. Special lines, figures, ornaments, areas, and color compositions could be selected out of the complete register. The light facade could gleam in one single colour: red, blue, orange, amber. It could also be dissolved into complementary color-light-dots. The facade could present the entire cycle of colors, gradually and softly merging from one tone to the next.[14]

This was also the case for Monet's cathedral as "the invisible *enveloppe* that makes the cathedral more or less visible, that confers upon it its hues and shades, that sharpens or blurs its edges, that enhances or erases its crevices, that brings out or flattens its relieves."[15] However, while it was the natural light that was transfiguring the facade of the Gothic cathedral, the facade of the *Palace of Electricity* was subject to transfiguration with thousands of light bulbs. Thomsen informs that, during the exposition every friday night there

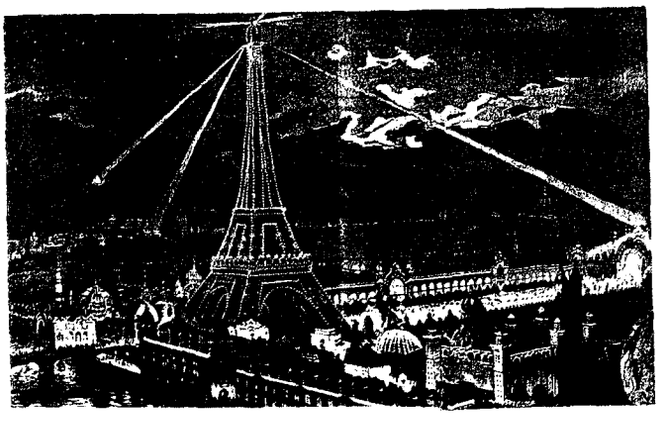


Fig.31: Light beams from the Eiffel Tower
during the Paris World Exposition 1900.

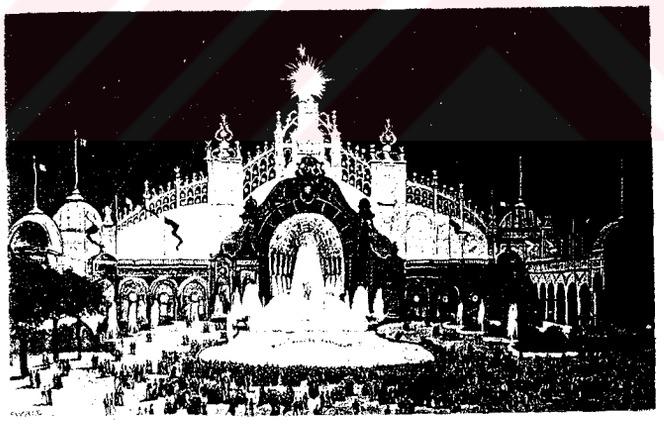


Fig.32: The Palace of Electricity (Palais d'Electricité),
Paris World Exposition 1900.

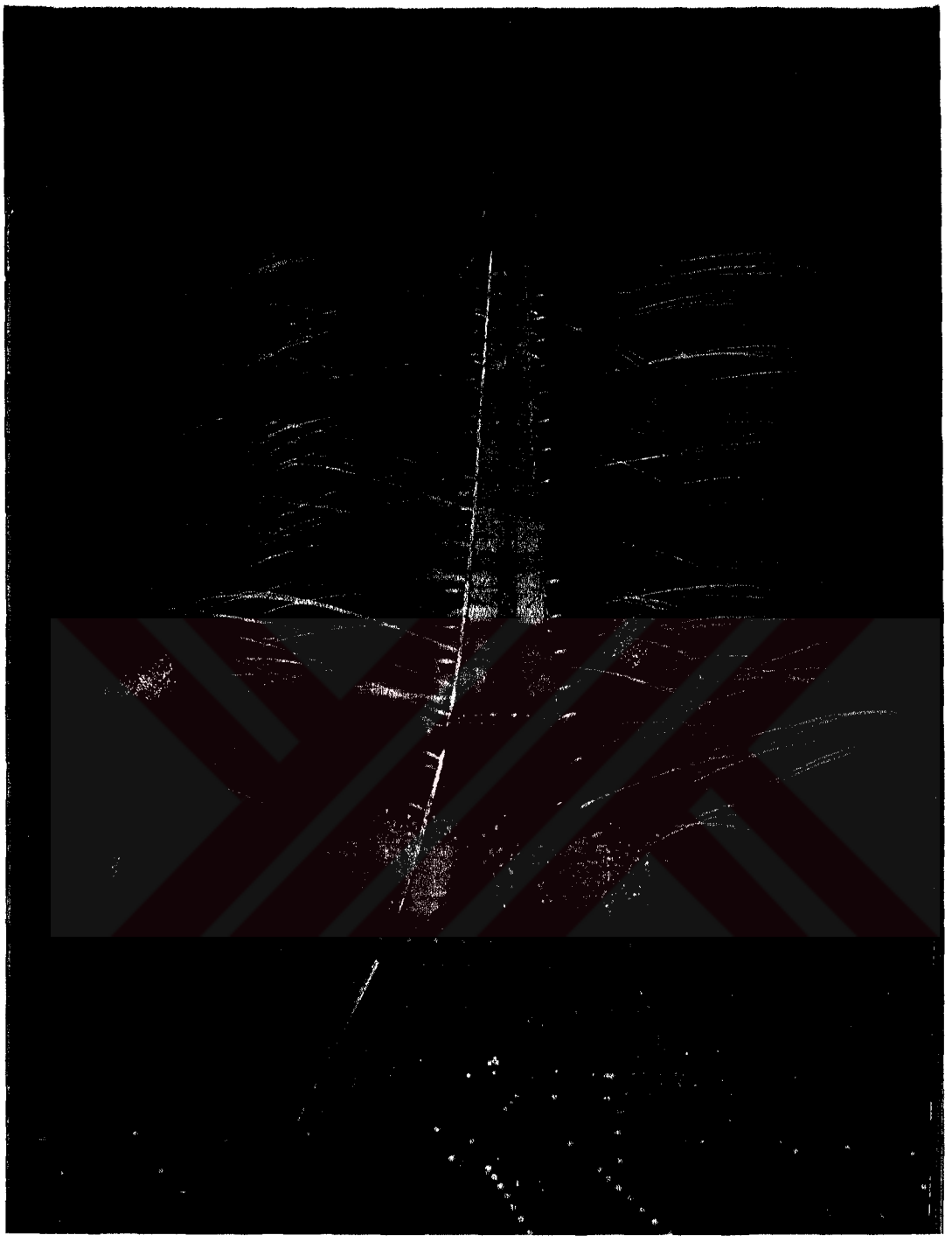


Fig.33: Eiffel Tower in millennium celebrations,2000; Time.

was a complete show of all the building's light potential, and the *Palace of Electricity* turned into a light-concert-hall and goes on to say that "the building's immense impact was based upon the fact that, in this case, architecture was not illuminated from the outside but became in itself the source of light and colour."[16]

Though, one is natural and the other is artificial, both of the lights transfiguring the facade of the Rouen cathedral and that of the *Palace of Electricity* are Dionysian light. It has been discussed in the preceding sections how light as one of the Dionysian artistic energies of nature, breathed life into the static, unchanging space, symbolised by Apollinian measure, harmony, clarity, and lucidity. According to Nietzsche, every artist is an 'imitator,' with reference to these immediate art-states of nature. Just as in the experience of light and darkness, he believed that "what we experience in art is not a single or simple emotion, but the dynamic process of life itself in its continuous oscillation between opposite poles, between chaos and form, detraction and creation, joy and despair." In this sense, "the formative powers of the creative man are like the generative forces of nature, both struggling and overcoming, both 'building and destroying in innocence.'[17]

Accordingly, the 'glowing life' of Dionysus transforms space and matter of the *Palace of Electricity* , from something inert and dead to something abundant with spirit, occur as if by magic, passing a spark and vitality to the darkened mass of things and as such brings into the deadened weight of architecture a more enchanting and vibrant reality.[18] While darkness vanishes the materiality of things, it provides a background from which light shines forth with a substantial presence. It is no doubt that *Palace of Electricity* was one of the earliest forerunners of today's media facades, however it was Nazi-Germany on where darkness was again used as a background from which *Dionysian light* shines forth with such that neutral space can be shrunk and expanded, calmed and excited, subdued and revived as if by the ebb and flow of an electric current, invading inert matter with a play of energy, forces and intensity.[19]

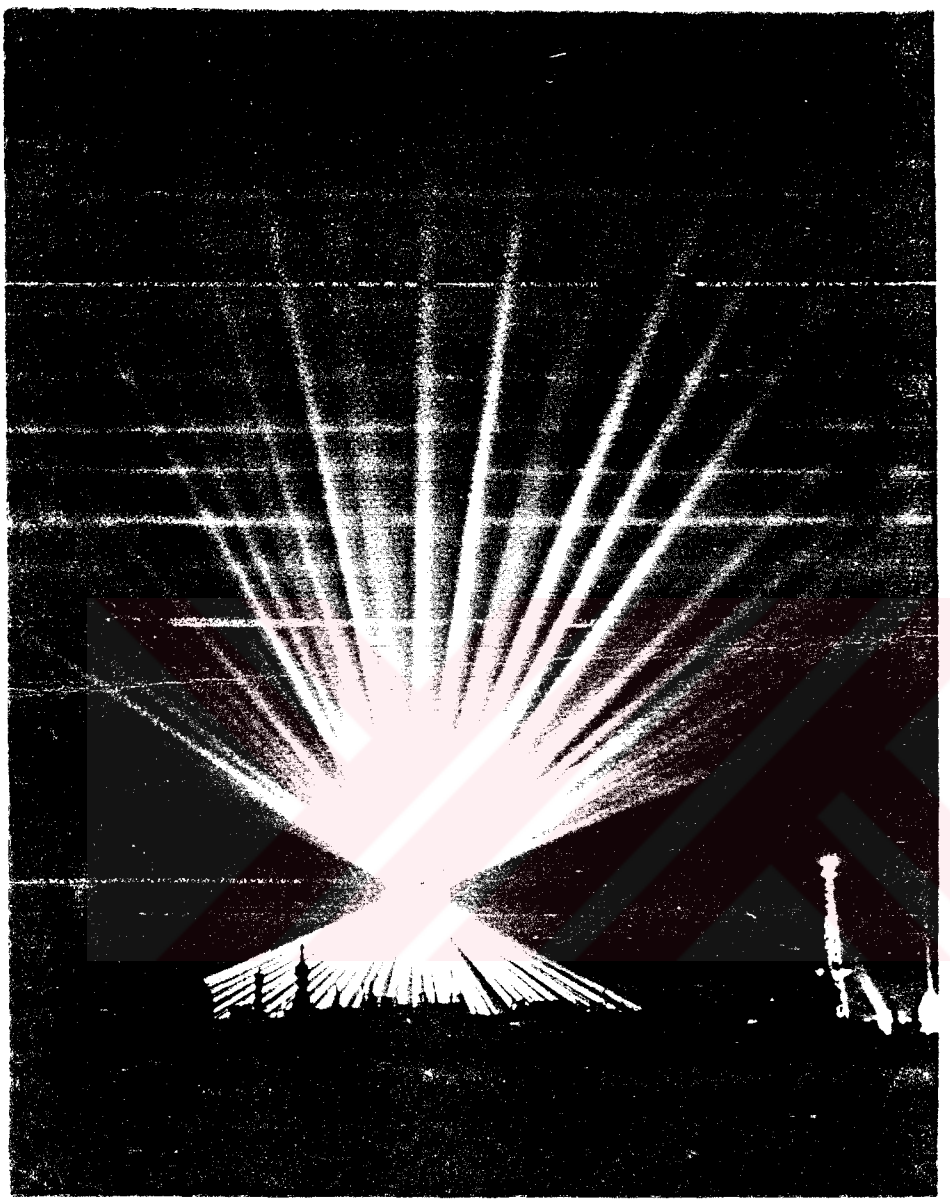
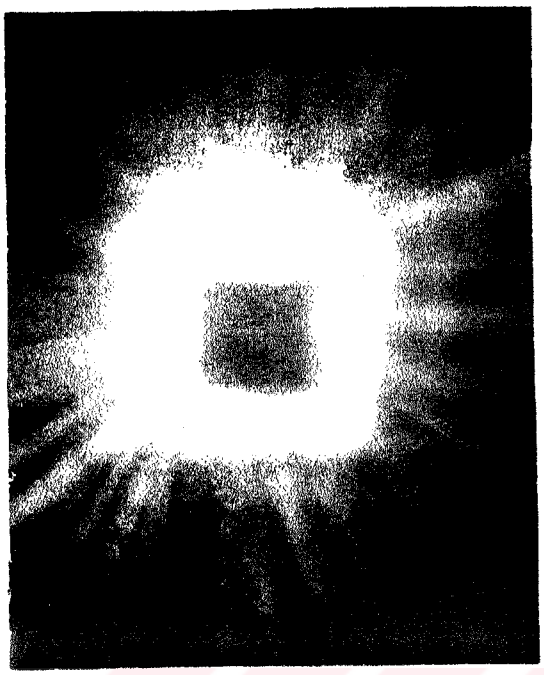


Fig.34: Albert Speer, "Light Dome" in the Berlin Olympic Stadium, 1936.



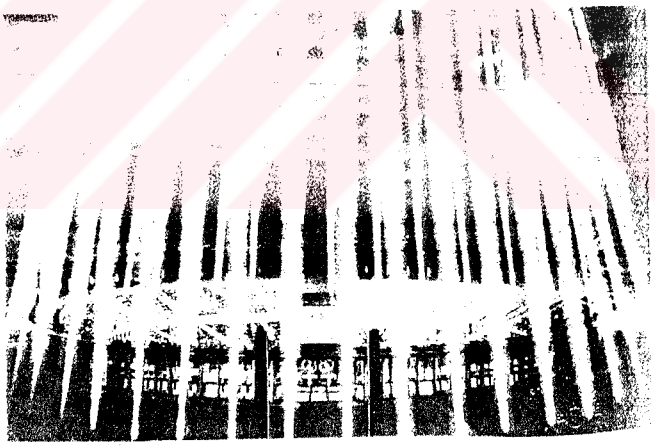


Fig.35 and 36: Albert Speer, "Light Dome"
in the Berlin Olympic Stadium, 1936.

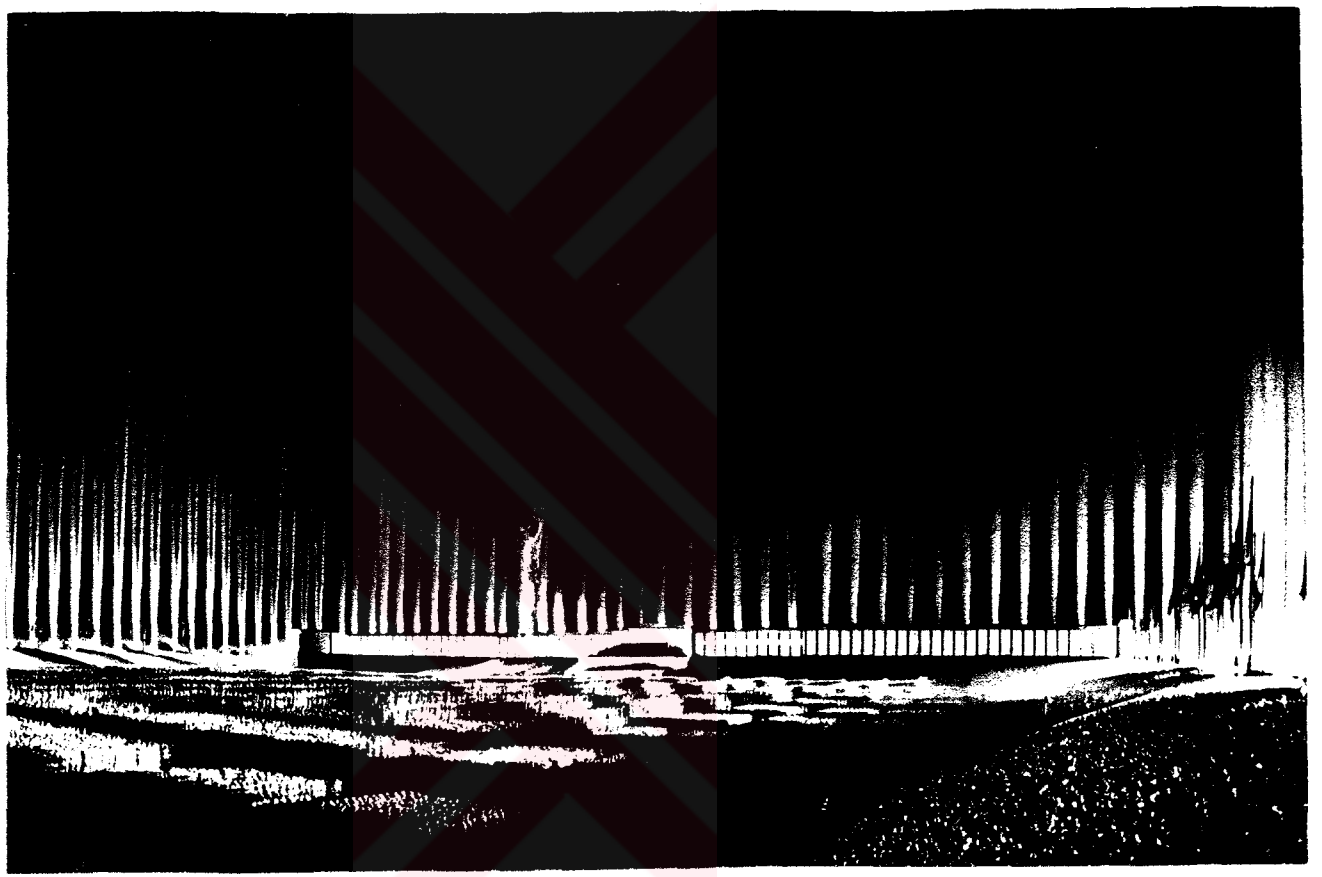


Fig.37: Albert Speer, Nazi Party Rally, Nuremberg,September 11th 1937, 8 p.m.

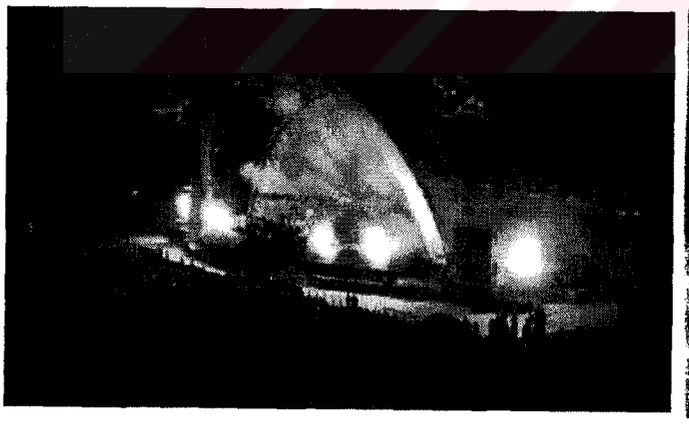
This is what the Nazi party's rally was like so far it could be depicted by photographs and it was described by the official press agency as follows;

> Nuremberg, the 11th of September, 1937 at 8 p.m. From giant projectors, beams of light shoot into the misty night sky like meteors. High up on the cloud cover the shining pillars unite into a glowing square. The myriad of flags crowning the surrounding stands wave gently in the gleaming light and increase the overwhelming impression created by the picture.[20]

Designed by Albert SPEER with the batteries of anti-aircraft searchlights the affect of such a contrivance was described as 'licht-dom'. As Christian Thomsen says what Speer achieved, better than anyone else before, was the ability to collect every mythic and symbolic quality attributed to light so far and, with the creative power of an architect, used it organising mass events. Thousands of people over-powered by emotion experienced these artistic light games created by immaterial walls of light. As Thomsen describes, light radiating from the powerful reflector lamps of Zeiss-Ikon, enabled Speer to build illusionary spaces from the monumental structures of Nazi-Germany; "there can be no doubt about Albert Speer's genius as an architectonic master of ceremonies who set the stage for his tyrant ruler by endowing monumental, solid, oppressive architecture structures with qualities of mystic, transparency, and immateriality."[21]

Clearly over-powered by emotion at the sight of an height-kilometre high space formed by 130 beams of light, the impression of the British ambassador,was that; "the effect was both solemn and beautiful, it was like being in a cathedral of ice."[22] As expected these German anti aircraft searchlights, used for blinding the attacking aircraft, and making them a clear target had to be dedicated to those war games for which they were originally intended. Nevertheless with the advent of new technologies such as laser, controlled with computer programming, *Dionysian light* as *defining, cutting out,* and *creating* spaces with immaterial walls now combined with rhythm, music and images on screens is what transforms a football stadium into an instant temple for a night.

Fig.38: German anti-aircraft serchlights during war.



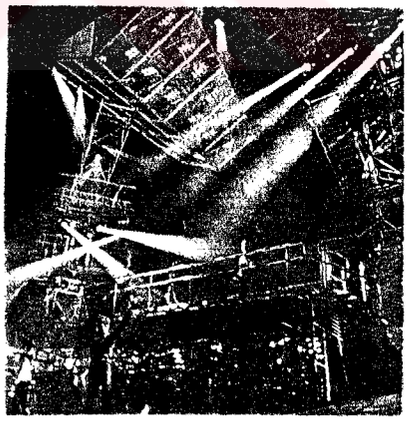


Fig.39-40: View from concerts.

As it was the case for the Nazi Party rally, rock and pop concerts, such as those of *U2*, *Rolling Stones* and *Pink Floyd*, have used light as defining, cutting out, creating spaces with immaterial walls in darkness. As Thomsen describes, these settings have been consisted of semipermanent architectural structures reminiscent of the aesthetics of steel works and cement factories: rough, open constructions with pylons, flexible scaffolds, moveable stages, electronic screens with projected animation and a combination of images and text, found materials, enormous batteries of light, fragmented pieces of a hard-edged industrial look, polished only by colored light, dramatic light changes and apocalyptic fireworks.[23]Thomsen points out the effect of such setting as follows:

> It resulted in powerful, dynamic, theatrical representations of a media culture and media reality, under-charged with emotion, excitement, aggressiveness, lyrical under- and overtones.... Combined with rhythm, music, and images on screens, it achieves genuine media aesthetics.[24]

One of the best examples for this media aesthetics is Rolling Stones American tour *Steel Wheels* designed by Mark Fisher. Philip Arcidi compares his design with that of Archigram's; "although we rarely find any more proposals for cities that walk, fly, or float, Fisher is regaling massive audiences with a computerised display of electronics and video images that Archigram envisioned, but never realised."[25]Arcidi describes the atmosphere, the ambiance, the mood that one experiences in *Steel Wheels* as follows:

> The Steel Wheels set is programmed with a different lighting pattern for each song: as the music changes, so does our perception of the stage's space and structure. Its profile is outlined by blinking pinpoints of light; banks of floodlights, wrapped by conveyor belts of gels, sometimes define the structural frame... Foreground and background, as well as solid and void, are continually reconfigured with new arrays of illumination. Fisher's incandescent illusions prove Archigram's proposition that a space need not be defined by solid enclosures; he brings to North American football stadiums a fragment of Idea City: immaterial entities-music, lights, and projected images- have become a medium for marking a place.[26]

Earlier in the present study, it has been discussed how light was likened to music as both being subject to *temporal actualisation* and symbolised by Dionysus. Just as *Dionysian light* allows us the experience of the *symbiosis* of light, space, time and matter, the Dionysian music transports us into a state in which the boundaries between individuals and the limits of space and time are broken down, and a sense of mystical unity with the universe is experienced.[27] Mick Jagger of Rolling Stones with whom Fisher had collaborated very much in the design of *Steel Wheels* expresses how, one experiences *Dionysian light* together with music in the concerts:

> So far as the relationship between music and stage design is concerned, it's just very much one thing... Therefore the stage is a very strong statement which sets the tone of the show. The music and visual aspect are one thing. I don't actually think you separate them. You see the lighting and the stage, and hear the music all at the same time so when you come out you say 'Well that was a great show'. You don't say the light was good and the song was good or whatever, You've had a good time for whatever reasons. They are all very much the same thing, which is why collaborating very early on makes good sense.[28]

These settings are not only the realisation of what Archigram envisioned, but also what Maholy-Nagy had dreamed of; that is light devices which allowed the projection of light visions into the air, in large spaces and upon screens of unusual design upon fog, gas, or clouds either by hand or mechano-automatically. Maholy-Nagy had studied light throughout his life and had expressed his obsession to get "a job for a light fresco, a piece of light architecture consisting of terraced straight and curved walls which are covered with artificial material like galalithe, troilite, chrome, nickel. With the turn of a switch you could have bathed it in shining light, *while the spaces gradually change and dissolve into an infinite number of controlled details.*"[29] Actually, the kind of state of trance reached in pop culture by computer controlled sound, motion and light was achieved in indigenous cultures and societies by religious rituals performed in buildings like Hagia Sofia.

Fig.41: Hagia Sophia, İstanbul. Interior view.

With the advent of new technologies light could now be put anywhere- inside, outside or affixed to a building - to create structures that could literally be described as glowing lanterns at night. The values of dark and light have been completely reversed: what is light during the day (the solid material of the wall) has become obliterated by the darkness of the night, while what is rendered a darker value during the day (the glass curtain wall) has become a glowing membrane, due to the electrically illuminated interior.[30]

A contemporary architect Richard Meier expresses this transformation as follows;

> A particular challenge for me as an architect is not so much the question of how I light spaces, but of how, under the given circumstances and conditions, I light both the interior as well as the exterior spaces. It's not a question- and this very important- of balance or equilibrium but of relationship or dialogue...There's no sense in interior spaces being perfectly illuminated when the exterior space is ignored completely. That means that the architecture dies at night, because it becomes invisible.

In the darkness of the night where the light emanating from the works of architecture mix with the lightlessness of the milieu light continues to be Dionysian as it represents, what Plutarch observed, "the whole wet element in nature- blood, semen, sap, wine, and all the life-giving juices."[31] In this regard, following extract from an interview of Meier by Karen Rudolph summarises what has been discussed:

> K.R.: In other words, the great expanses of glass in your buildings not only provide the link with the exterior space but also bring the architecture to life at night through the light they give off?
>
> RM: Yes, even though it's perceived differently from the actual interior lighting. But for me there's a direct link between the two. This complexity of lighting exterior spaces is often overlooked in lighting design and general discussions on lighting... Why is it that people think that a city is such a wonderfully dynamic place?
>
> KR: Because it conforms to what your artist friend Frank Stella once said: '*Light is life*'[32]

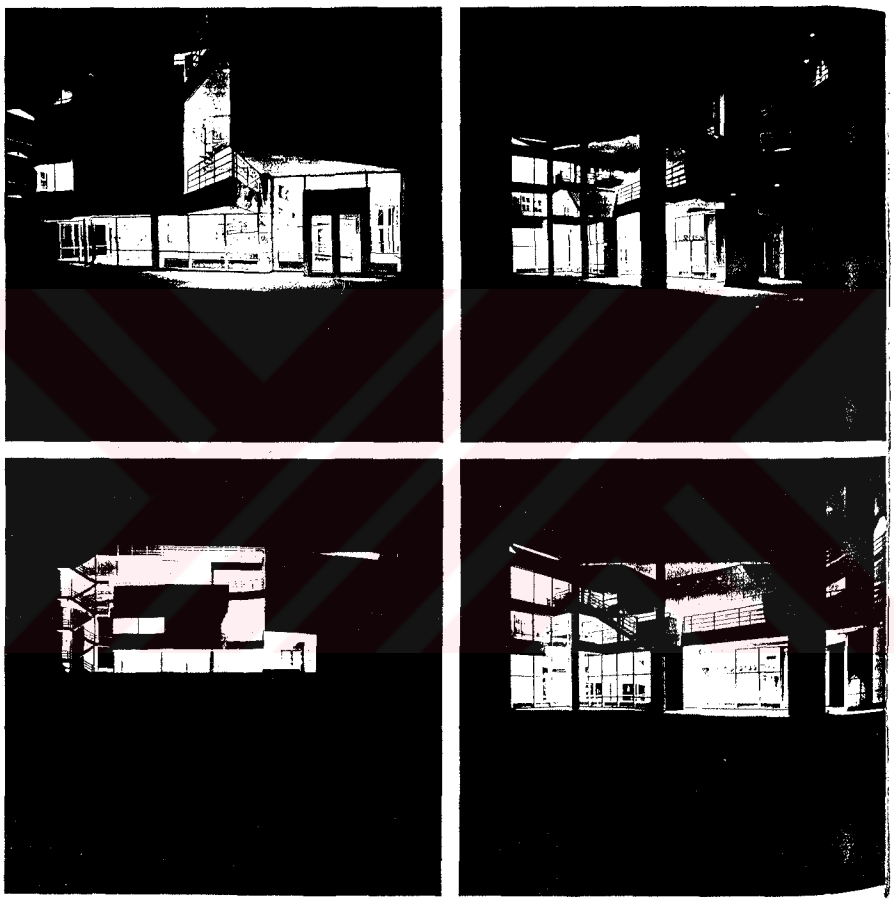


Fig. 43-46: Richard Meier, night views from one of his buildings.

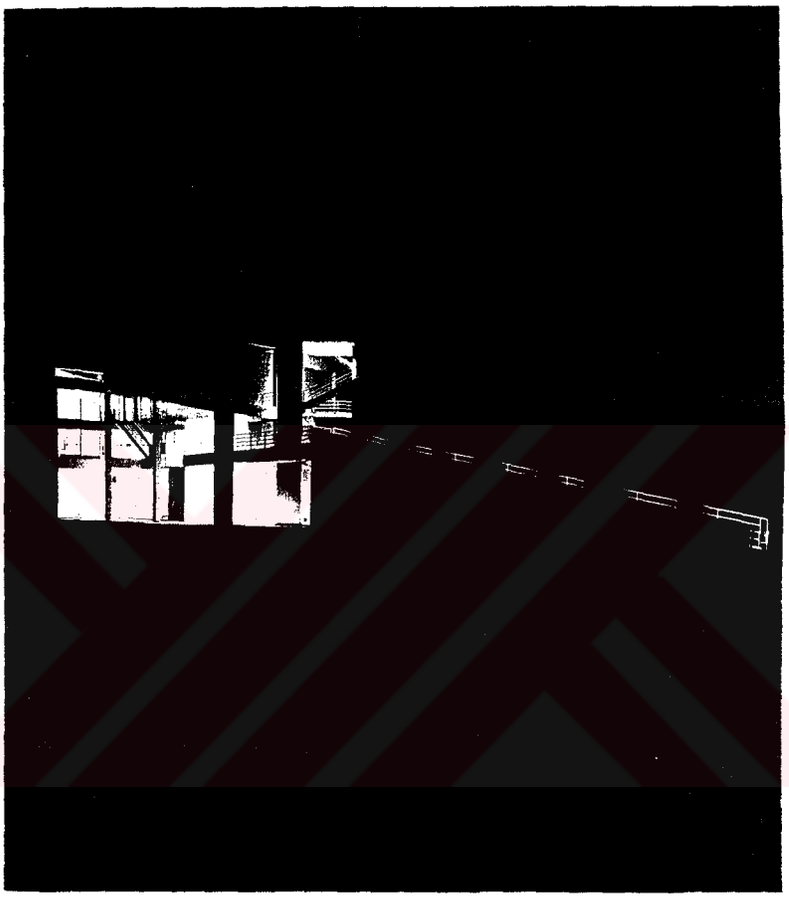


Fig. 46: Richard Meier, night view from one of his buildings.

CHAPTER V

CONCLUSION

We had begun our discussion with a quotation from Rudolf Arnheim, emphasising that "If an event or thing is experienced frequently and we have learned to react to it smoothly, our reasoning and feeling are not likely to remain actively concerned with it." Accordingly we have tried to keep our reasoning and feeling on light-one of the most essential elements of life and space.

The question was the nature of *relation* between light and works of architecture. Correspondingly, the answer was *Dionysian light*, an architectural concept standing for the *what*, *how* and *why* of this *relation*. As such it represents the intrinsic relation between light and works of architecture. Accordingly it has been argued that works of architecture, whether it is a Gothic cathedral or Gehry's Guggenheim Museum or even the room described by Orhan Pamuk -regardless of their period, style, type, function, creator or our critical attitude- open a ground for nature to burst forth its Dionysian artistic energy. And the *Dionysian light* is one of these artistic energies corresponding to the *interaction* or *symbiosis* of seemingly different phenomena; light, material, space and time.

The *Dionysian light* as opposed to the Apollinian light which lacks expression or which puts forward an *ideal, beautiful, illusionary* expression that is *still, motionless* and *lifeless*. However, *Dionysian light* is the kind of light which *breathes life* into space as Tadao Ando had said. Similar to weathering of a stone nature exerts its Dionysian artistic energy through light to works of architecture bringing into "the deadened weight of architecture a more enchanting and vibrant reality."

Indeed, in addition to its emphasis to the intrinsic relation between light and works of architecture, one of the other outstanding characteristic of the *Dionysian light* as a concept, is its description such a relation as a *symbiosis;* as discussed in the *perception of things fading and growing; perception of shadow shifting with the light; and finally perception of space as a moment in the continual process of change.* The term 'Dionysian' as proposed by Nietzsche also represents a 'fraternal union' of the two deities, the Apollo and the Dionysus, where they reach the 'highest goal' of tragedy in case they speak the 'language' of the other.

The concept of *Dionysian light* is both 'cognitive' and 'poetic' if we regard the categories proposed by Plummer. *Dionysian light* gives us information about the world; yet this information is not a solid, objective vision of an immobile and permanent reality, but rather it is constantly subject to transfiguration. One can present this phenomena by scientific data, showing the differences of illuminance levels together with the molecular properties of the material surfaces or as in the present study by describing it as it is *experienced* whether by Monet, Can Yücel or Steven Holl, etc... Yet *Dionysian light* as a concept, represents the 'poetics' of light in its strongest sense, as again described in detail throughout the current study.

As a consequence, *Dionysian light* means, by definition, the intrinsic relation between light and works of architecture in which the *Dionysian* corresponds, in analogy with Nietzsche's the Apollinian and the Dionysian, to life, to the soul, to the 'software', to the great ambivalent one, to that forever changing, forever struggling, and yet forever giving structure and form.

NOTES

NOTES TO CHAPTER I: INTRODUCTION

[1]Plummer, Henry. "Building with light", *Architectural Design.* (March-April 1997),p.16.

[2]For details see Cassirer, Ernst. *The Philosophy of Symbolic Forms.* Trans. by Ralph Manheim.(New Haven: Yale University Press,1953-57),p.96-99.

[3]Hartmut Böhme. "The Philosophical Light and the Light of Art", *Parkett* .(1993;no:38),p.16.

[4]Ibid.p.17.

[5]Ibid.p.17.

[6]Ibid.p.17.

[7]Ibid.p.17.

[8]Ibid.p.18.

[9]Millet, Marietta S. *Light Revealing Architecture.* (New York: Van Nostrand Reinhold 1996),p.2. Certainly this is not to say that the whole experience of architectural space depends on light or perception.

[10]Arnheim, Rudolf. *Art and Visual Perception: A Psychology of the Creative Eye.* (Berkeley: University of California Press,1974),p.292.

[11]Ibid.p.292.

[12]Plummer, Henry. *Architectural Design*,p.16.

[13]James Brogan in his "Introduction" to the special issue of *Architectural Design* with the theme "Light in Architecture" (Vol. 67, No:3/4 March/April 1997),p.6-7.

[14]Ibid.p.6.

[15]Ibid.p.6.

[16]Ibid.p.6.

[17]Ibid.p.6.

[18]Ibid.p.7.

[19]Ibid.p.7.

[20]Ibid.p.6.

[21]For details see Millet, Marietta S. *Light Revealing Architecture.*. (New York: Van Nostrand Reinhold 1996) Millet examines four different buildings corresponding to these categories as a case study in her book. For *experiential* light she takes as case study Arthur Erickson Architects' Museum of Anthropology, University of British Columbia, Vancouver; for *formal* light Le Corbusier's Monastery of Sainte Marie de La

Tourette, Eveux-sur-l'Arbresle; for *spatial* light Alvar Aalto's Mt. Angel Abbey Library, Oregon; and finally for *sacred* light Louis I. Kahn's The Kimbell Art Museum, Fort Worth, Texas.

[22]Vitta, Maurizio. *L'arca.* (Special issue on light) (July-August 1997, no:117), p.3.

[23]Ibid.p.3.

[24]Tilley Richard. *Colour and the optical properties of materials.*(London: John Wiley & Sons, Ltd. 2000)p.1.

[25]Perez Gomez, Alberto and Pelletier, Louise.. *Architectural Represantation and the Perspective Hinge..* (Cambridge:The MIT Press,1997) p.83.

[26]In the prefece of his book *Phenomenology of Perception* Merleau-Ponty defines the phenomenological approach or "method" as "a matter of describing, not of explaining or analyzing. Husserl's first directive to phenomenology, in its early stages, to be a 'descriptive psychology', or to return to the 'things themselves', is from the start a rejection of science." Merleau-Ponty, M. *Phenomenology of Perception.* Trans. from French by Colin Smith,(New York: Humanities Press, 1962),p.vii.

[27]Pfeffer, Rose.. *Nietzsche: Disciple of Dionysus.* (Lewisburg: Bucknell University Press.1972)p.214-215.

[28]Irwin, Robert,"Some Notes on the Nature of Abstraction," in *Perception and Pictorial Representation,*ed. Calvin Nodino and Dennis Fisher (New York: Praeger,1979), n.p., as quoted by Butterfield, Jan. *The Art of Light and Space,* (New York: Abbeville,1993),p.46-7.

[29]Nietzsche, in Will-to-Power, n.466 as quoted by Hasan Ünal Nalbantoglu in his lecture *Playful points regarding the theme-park of the day, "Social Scientific Approaches to Architectural Research"* at *Arch 626-Approaches to Architectural Research II,* a course by Prof. Dr. Necdet Teymur 1996-97 Spring Semester, METU Faculty of Architecture.

[30]*ad hoc*: made, arranged, etc., for a particular purpose. *Longman Active Study Dictionary,* 3rd.ed.

[31]Pfeffer, Rose. *Nietzsche: Disciple of Dionysus.*p.56.

[32]Merleau-Ponty, M. *Phenomenology of Perception.* Trans. from French by Colin Smith,(New York: Humanities Press, 1962),p.vii.

[33]Ibid.p.vii.

[34]Ibid.p.ix.

[35]Ibid.p.ix.

[36]Madsen, Axel as quoted in Butterfield, Jan. *The Art of Light and Space.* (New York: Abbeville, 1993),p.9.

[37]Norberg-Schulz, C. *Genius Loci: Towards a Phenomenology of Architecture.* (Italy: Rizzoli,1984),p.5.

[38]Ibid.p.5.

[39]Ibid.p.5.

[40]Holl, Steven. "The haptic realm" in *Steven Holl.* Original writings by Steven Holl; introd. by K. Frampton, essay by F. Migagron. Bordeaux, Arc en rewe Centre d'architecture, (Zurich:Artemis, 1993),p.21.

[41]Kahn, Louis I. "Silence and light" (Talk with students at the School of Architecture of the Eidgenossische Technische hochschule, Zurich, February 12, 1969) in *Louis I. Kahn: Writings, Lectures, Interviews.* Int. by and ed. by Alessandra Latour.(New York: Rizzoli,1991)p.234-47.

[42]Jan Butterfield. *The Art of Light and Space..* (New York: Abbeville, 1993) p.100.

NOTES TO CHAPTER II: THE APOLLINIAN AND THE DIONYSIAN

[1]Nietzsche, F. W. as trans. by Hauser Arnold. *The Philosophy of Art History.* (New York: Knopf, 1959)p.502. Emphasises belongs to Nietzsche.

[2]Holl, Steven.*Steven Holl.* p.31.

[3]Rasmussen, S. E. *Experiencing architecture.* (Cambridge: The MIT Press. 1962)p.187,190.

[4]Teymur, Necdet. From the text of "UB: Unfinished Buildings" a school-wide sketch design project organised by Necdet Teymur at Faculty of Architecture in Middle East Technical University. 1995.

[5]Ando, Tadao. "Apertures that summon in the light", *Architectural Design* with the theme "Light in Architecture" (Vol. 67, No:3/4 March/April 1997),p.27.

[6]Holl, Steven.*Steven Holl.* p.31.

[7]Plummer Henry. *Architectural Design.* p.16.

[8]Nietzsche, F. W. as trans. by Walter Kaufmann. *The Birth of Tragedy and The Case of Wagner* (New York: Vintage Books, 1967)p.35.

[9]Ibid.p.46.

[10]Pfeffer, Rose. *Nietzsche: Disciple of Dionysus.*p.35,36.

[11]Ibid.p.216.

[12]Ibid.p.35,36.

[13]Nietzsche as quoted by Richard Schacht. *Nietzsche* (London:Routledge & Kegan Paul Ltd.1983)p.509.

[14]Nietzsche, F. W. *The Birth of Tragedy and The Case of Wagner.* p.16.

[15]Ibid.p.33.

[16]Richard Schacht. *Nietzsche.*. p.487-8.

[17]Nietzsche, F. W. *The Birth of Tragedy and The Case of Wagner.* p.35.

[18]Schopenhauer as quoted by Nietzsche, F. W. Nietzsche, F. W. *The Birth of Tragedy and The Case of Wagner.*p.35-6.

[19]Nietzsche, F. W. as trans. by Hauser Arnold. *The Philosophy of Art History.*p.501.

[20]Pfeffer, Rose. *Nietzsche: Disciple of Dionysus.*p.52.

[21]Ibid.p.52.

[22]Nietzsche, F. W. Nietzsche, F. W. *The Birth of Tragedy and The Case of Wagner.*

[23]Pfeffer, Rose. *Nietzsche: Disciple of Dionysus.* p.32.

[24]Ibid.p.54.

[25]Holl, Steven.*Steven Holl.* p.31.

[26]Plummer Henry. *Architectural Design.*

[27]Ando, Tadao. *Architectural Design.* p.27.

[28]Pfeffer, Rose. *Nietzsche: Disciple of Dionysus.*p.30,31.

[29] Nietzsche as quoted by Pfeffer, Rose. *Nietzsche: Disciple of Dionysus.*p.63.

[30]Richard Schacht. *Nietzsche.*. p.482.

[31]Pfeffer, Rose. *Nietzsche: Disciple of Dionysus.*p.204,205.

[32]Nietzsche, F. W. as trans. by Hauser Arnold. *The Philosophy of Art History.* p.502.

[33]Richard Schacht. *Nietzsche.* p.483.

[34]Pfeffer, Rose. *Nietzsche: Disciple of Dionysus.*p.33.

[35]Ibid. p.207.

[36]Ibid. p.208.

[37]Plummer Henry. *Architectural Design.* p.16. Emphasis belongs to me.

[38]Melhuish, Clare. "On minimalism in architecture" in "Minimalism in architecture" *Architectural Design* . p. 12. Emphasis belongs to me.

[39]Jan Butterfield. *The Art of Light and Space* .p.14. Emphasis belongs to me.

[40]Holl, Steven.*Steven Holl.* p.21. Emphasis belongs to me.

[41]Rosenau, Helen. *Boullée's Treatise on Architecture.*. (London: Alec Tiranti Ltd.,1953)p.12. Emphasis belongs to me.

[42]Ibid.p.38.

[43]Nietzsche, F. W. as quoted by Pfeffer, Rose. 1972. Pfeffer, Rose. *Nietzsche: Disciple of Dionysus.*p.38.

[44]Ibid.214-215.

[45]Ibid.p.216.

[46]Ando, Tadao. *Architectural Design.* p.28.

[47]Pfeffer, Rose. *Nietzsche: Disciple of Dionysus.*p.52.

NOTES TO CHAPTER III UTSUROI: THE EXPERIENCE OF *DIONYSIAN* LIGHT

[1]Pfeffer, Rose. *Nietzsche: Disciple of Dionysus.*p.52.

[2]Jan Butterfield. *The Art of Light and Space.* p.100.

[3]Ibid. p.47.

[4]Tanizaki, Jun'ichiro. *In Praise of Shadows.* trans. by T.J. Harper and E.G. Seidensticker. (New York: Leete's Island Books,1977) quoted by Clare Melhuish. "On minimalism in architecture". *Architectural Design* . p.11.

[5]Holl, Steven.*Steven Holl.* p.31.

[6]Irwin, Robert as quoted by Jan Butterfield. *The Art of Light and Space.* p.9.

[7]Turrell, James as quoted by Craig E Adcock. *James Turrell: The art of light and space* . (Berkeley: University of California Press,1990),p.227.

[8]Nitschke, Günter. *From Shinto to Ando: Studies in architectural anthropology in Japan.* (Academy Editions, Ernst & Sohn, 1993,p.52.

[9]Perez Gomez, Alberto and Pelletier, Louise. *Architectural Represantation and the Perspective Hinge.* p.198-99.

[10]Plummer Henry. *Architectural Design.* p.16.

[11]Orhan Pamuk. *Kara Kitap.* (Istanbul:Can Yayınları,13th Edition,1992)p.242. "The sky had became dark, and that tangible gloomy light which reminds the smell of mould and death at the lightless cellars full of spiders had accumulated in the room."Trans. by me.

[12]*Longman Active Study Dictionary of English.* (Bungay, Suffolk: Longman Group Limited.Third impression, 1984)

[13]*Longman Active Study Dictionary of English.* (Bungay, Suffolk: Longman Group Limited.Third impression, 1984)

[14]Kahn, Louis I. "Architecture: Silence and light" (Reprinted from Arnold Toynbee et. al., *On the future of art* (New York:Viking Press, 1970) in *Louis I. Kahn: Writings, Lectures, Interviews.* Int. by and ed. by Alessandra Latour.(New York: Rizzoli,1991)p.252.

[15]Nitschke, Günter. *From Shinto to Ando: Studies in architectural anthropology in Japan.* p.49.

[16]Orhan Pamuk. *Kara Kitap.* p.9. "In the room, there was a dark grey winter light faded by the deep blue curtains." Trans. by me.

[17]Kahn, Louis I.

[18]Kahn, Louis I. as quoted in Büttiker, Urs. Trans. by David Bean. *Louis I. Kahn: Light and space.* Whitney Library of Design. (New York: Watson-Guptill Pub. 1994).

[19] Kahn, Louis I. 1973. "Thoughts" (Reprinted from *A+U* vol.3. no:1. January 1973, p.23-40. in *Louis I. Kahn: Writings, Lectures, Interviews.* Int. by and ed. by Alessandra Latour (New York: Rizzoli. 1991)p.314,315.

[20]Steen E. Rasmussen. *Experiencing Architecture* .p.198-201.

[21] Ibid.p.204.Emphasises are mine.

[22]Jan Butterfield. *The Art of Light and Space*..p.14.

[23] James Turrell quoted by Craig E Adcock. *James Turrell: The art of light and space* . p.227.

[24] Hartmut Böhme. *Parkett* .p.21.

[25]Perceptional psychologists James J. Gibson and Kurt Koffka respectively as quoted by Craig E Adcock. *James Turrell: The art of light and space* . p.222.

[26]Ibid. p.222.

[27]Riley,Terence. "James Turrell-An Architect's Perspective" from the catologue to accompany exhibition *James Turrell: Spirit and Light, June 6-July 26,1998.* (Contemporary Arts Museum, Houston, 1998) p.53.

[28]Wortz, Melinda as quoted by Jan Butterfield. *The Art of Light and Space*.. p.16.

[29]Craig E Adcock. *James Turrell: The art of light and space* . p.100.

[30]Jan Butterfield. *The Art of Light and Space.* p.100.

[31]Nitschke, Günter. *From Shinto to Ando: Studies in architectural anthropology in Japan.* p.49.

[32]Ibid. p.53.

[33]Ibid. p.53.

[34]Nitschke, Günter. *From Shinto to Ando: Studies in architectural anthropology in Japan.* p.54.

[35]Nietzsche, F. W. Nietzsche, F. W. *The Birth of Tragedy and The Case of Wagner.*

[36]Kahn, Louis I. *On the future of art.* p.252.

[37]Nitschke, Günter. *From Shinto to Ando: Studies in architectural anthropology in Japan.* p.55.

[38]Shinkei as quoted by Nitschke, Günter. *From Shinto to Ando: Studies in architectural anthropology in Japan.* p.56.

[39]Nitschke, Günter. *From Shinto to Ando: Studies in architectural anthropology in Japan.* p.56.

[40]Ibid.p.56.

[41]Frampton, Kenneth. "Tadao Ando"in *Tadao Ando.* (New York: Museum of Modern Art,1991)

[42]Ibid.

[43]Ibid.

[44]Ibid.

[45]Silvestrin, Claudio. "Architecture of Lessness".. in "Minimalism in architecture" . *Architectural Design.* p.32-41.

[46]Ibid.p.33.

[47]Ando, Tadao. *Architectural Design.* p.27.

[48]Pissarro, Joachim. *Monet's Cathedral: Rouen, 1892-1894* . (New York : Knopf),p.6.

[49]Ibid.p. 22.

[50]Monet as quoted by Pissarro, Joachim. *Monet's Cathedral: Rouen, 1892-1894* . (New York : Knopf),p. 10.

[51]Simpson, Otto von. *The Gothic Cathedral: origins of Gothic Architecture and the medieval concept of order.* (Princeton; Princeton University Press,1988).

[52]Ibid.

[53]Ibid. Emphasis belongs to me.

[54]Pissarro, Joachim. *Monet's Cathedral: Rouen, 1892-1894* . (New York : Knopf),p. 21.

[55]Ibid. p.21.

[56]Ibid.p. 25.

[57]Ibid.p. 22.

[58]Ibid.p. 22

[59]Ibid.p.6.

[60]Ibid.p.6

[61]Ibid.p. 10.

[62]Ibid.p. 23.

[63]Ibid.p. 23.

[64]Teymur, Necdet. 1995. From the text of "UB: Unfinished Buildings" a school-wide sketch design project organized by Necdet Teymur at Faculty of Architecture in Middle East Technical University.

[65]Holl, Steven. *Steven Holl.* p.21.

[66]Schopenhauer as quoted by Nietzsche, F. W. Nietzsche, F. W. *The Birth of Tragedy and The Case of Wagner.*p.35-6.

[67]Norberg-Schulz, C. *Genius Loci: Towards a Phenomenology of Architecture.* p.5.

[68]Pissarro, Joachim. *Monet's Cathedral: Rouen, 1892-1894* . (New York : Knopf),p. 22.

[69]Ibid.p.216.

[70]Ibid.p. 7.

[71]Ibid.p. 31.

[72]Ibid.p. 8.

[73]Ibid. p.8.

[74]Ibid.p. 26.

[75]Nietzsche, F. W. as trans. by Hauser Arnold. *The Philosophy of Art History.* p.501.

[76]Pfeffer, Rose. *Nietzsche: Disciple of Dionysus* .p.52.

[77]Ibid.p.52.

[78]Pissarro, Joachim. *Monet's Cathedral: Rouen, 1892-1894* . (New York : Knopf),p. 10.

[79]Ibid.p. 10.

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[102]Ibid. p.113.

[103]Ibid.p.45.

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[111]Ibid.p.98.

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[10]Vidler, A. *The Architactural Uncanny: Essays in the Modern Unhomely.* p.168.

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[12]Brogan, James. *Architectural Design.* p.6-7.

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