THE EFFECTS OF TIME PERCEPTION

ON THE DESIGN AND USE OF ARCHITECTURAL SPACE

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A. DUYGU KAÇAR

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Prof. Dr. Tayfur Öztürk
Director

I certify that this thesis satisfies all the requirements as a thesis for the degree of Master of Science.

Assist. Prof. Dr. Selahattin Önür
Head of Department

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Science.

Inst. Dr. Ali Cengizkan
Supervisor

Examining Committee Members

Assoc. Prof. Dr. Selahattin Önür

Assoc. Prof. Dr. Abdi Güzer

Assoc. Prof. Dr. Baykan Günay

Assist. Prof. Dr. Cana Bilsel

Inst. Dr. Ali Cengizkan

ABSTRACT

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KAÇAR, A. Duygu

M. Arch., Department of Architecture

Supervisor: Instr. Dr. Ali Cengizkan

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Time and space are the basic and everlasting themes of architecture and our perception of time determines the built environment by imposing changes on our everyday lives. This thesis stresses that the way of constructing time changes with the mechanical and then digital understanding of time and here they are exemplified with clock tower and mobile phone, which limits the study. The effects of time perception are explored with an understanding of the First, Second and Third Industrial Revolutions, in order to clarify the contemporary "Artificial Intelligence Age" and the new period. To shed light on the transformations in architecture, cosmic, public and personal time constructions are discussed with their spatial reflections. Throughout the thesis, by dwelling on the changing dynamics of time and its perception, it is intended to reveal the substantial importance and direct influence of time perception, to provide architects insight to understand the everyday influence of time and temporality.

Keywords: time, temporality, space, revolutions of understanding time, transformation, architecture, public, personal, speed.

ÖZ

ZAMAN ALGISININ MİMARİ MEKAN TASARIMI VE KULLANIMI ÜZERİNDEKİ ETKİLERİ

KAÇAR, A. Duygu

Yüksek Lisans, Mimarlık Bölümü

Tez Yöneticisi: Öğr. Gör. Dr. Ali Cengizkan

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Zaman ve mekan mimarlığın temel öğeleri olup, zaman algısı gündelik hayata değişiklikler empoze ederek, dolaylı ve dolaysız biçimlerde, inşa edilen çevreyi belirler. Bu tez, zamanın kuruluş biçiminin mekanik ve daha sonra dijital zaman anlayışıyla değiştiğinin üzerinde durmakta ve bu durum çalışmanın sınırlarını belirleyen saat kulesi ve cep telefonu ile örneklendirmektedir. Zaman algısının etkileri, günümüze ait "Yapay Zeka Çağı" ve yeni dönemi açıklayabilmek amacıyla Birinci, İkinci ve Üçüncü Endüstri Devrimleri bağlamında verilmektedir. Mimarlıkta yaşanan dönüşümlere ışık tutabilmek için, kozmik, kamusal ve kişisel zaman kuruluşları, mekansal yansımalarıyla birlikte aktarılmaktadır. Amaç, günümüz mimari mekanlarının kurgulanmasında, değişmekte olan dinamikleri gözler önüne sererek, mimarlar için bir içgörü oluşturmak ve onlara yeni zamana özgü iç değerler konusunda bir anlayış zemini oluşturmaktır.

Anahtar Kelimeler: zaman, zamansallık, mekan, zaman algısı ve deneyiminde devrimler, dönüşüm, mimarlık, kamusal, kişisel, hız.

To My Family,

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INTRODUCTION

1.1. Aim of the Study

The rapid transformation of our environment is affected by our life styles but also affects our everyday lives. We can feel this transformation not only in our built environment but also in every part of our lives. The way of living changes with new technologies, with new scientific inventions, economic developments, cultural transformation, and thus, with the perception of time.

The altering time perception determines the future of building types and the future of the built environment. Architectural culture is also in a process of transformation with all these transforming dynamics.

The object has been to describe the situation of the city of the 21st century facing the city dweller and what changes have come about in its physical and social composition during the last century. It is exemplified with commerce, which is one of the main factors that have conditioned the size of cities, the extent of their growth, the type of order manifested in street plan and in building, the composition of their economic and social classes, their physical manner of existence and their cultural style, hoping to shed light on further works of architects.

1.2. Method of the Study

To clarify the changing time perception and a collective time perception with the regularization of time, two examples of indicators of time are chosen; clock tower for being the first instrument of declaring the abstract time to society; and mobile phone for being the contemporary instrument of declaring the time to single individual.

In Chapter One, a brief summary of the problem is defined under the subtitles of "Nature of Time", "Abstract Time Perception", "Indicators of Abstract Time", "Transformation of the City" and "Spatial Reflections of Indicators of Time".

To understand and have better conception of the notion of time, modern time establishment and its indicator mechanical clock are discussed with their former type natural time perception in Chapter Two.

Chapter Three is the part, where these indicators are discussed with their reflections on space perception, socio-cultural and urban structure, to have supplementary information about these dynamics.

In Chapter Four, under the title of "Spatial Reflections of Indicators of Time" two examples from the area of commerce are given to make possible the argument of daily movements of the crowds and attraction zones of cities, for the public use of time. Bazaar / Market place is chosen as an example for the town center of clock tower and shopping malls are the second example for the contemporary situation of public use, showing contrast with their spatial and cultural use.

Conclusion part is an attempt to relate all the outcomes of these discussions to further and more elaborate points.

1.3. Limits of the Study

Although many examples could be given for the subject, clock tower is chosen as a symbolic example for the transformation of the establishment of time from natural to the mechanical; and mobile phone is chosen as a symbolic example for the establishment of digital time in the age of artificial intelligence, just to determine the limits of the thesis.

1.4. A Brief Literature Survey

In the fourteenth century with the invention of the mechanical clock, a universal, abstract establishment of time was beginning to build up, which was apt to standardize societies' lives. Before the invention of the mechanical clock, natural incidents like sunrise or sunset were to determine the everyday life of societies. However, with the abstract and universal time perception disseminated by the mechanical clock, the notions of space and time became independent from each other.

With the Industrial Revolution, social life to gain speed with mass production was the reason of the division of a day into three equal fragments, to increase the efficiency and profit of work. Workers would have equal time for pleasure, rest and work. Clocks played a role of mechanical media and transformed tasks and created new work and wealth by accelerating the velocity of human association. By coordinating and accelerating human interaction and activity, clocks increased the sheer quantity of human exchange.[1] Therefore, modernization permitted human life to be spent organized, rational and efficient.

[1] McLuhan, Marshall, (1964), Understanding Media, p. 155

The wide spread of vehicles, which were invented in the process of modernization, swiftened time perception. With the common use of mapping, railway, steam ship, automobile and aeroplane, space became easy and rapid to reach. Other than telephone and telegraph, mass media devices like newspaper, radio and television allowed the news to be published for wide crowds.

By the end of the twentieth century, with the shared social life styles of the global world, the perception of time and space are also altered and transformed. Developments in science and technology, allowed the simultaneous and continuous communication and common share with satellites. Today, the news at any point of the world, reach simultaneously to another point on the world. Technology eliminates time and space factors in human association; radio, telegraph, telephone, and TV, create involvement in depth.[2]

Towards the end of this rapid and mechanical process, in the space-time world of electronic technology, just for being uniform, the older mechanical time began to be felt unacceptable.[3] As McLuhan mentions, technical changes alter not only habits of life, but also patterns of thought and valuation.[4] Architecture is also in the cycle of life and it is rebuilt to reconstruct the quality after the worn out and decay. The process itself is always and in any case, the construction; thus, in this sense, everything in the world is under construction.[5] Clocks and then mobile phones let the individual use of time and cause the dispersion of space.

In our day, where time perception is dispersed with the overwhelming consumption culture, Internet is to be the virtual space and the

[2] ibid, p. 9
[3] ibid, p. 147
[4] ibid, p. 63
[5] İsozaki, Arata, (1998) "Simulated Origin, Simulated End", Any Time, p.84

shopping malls, which have no temporality except opening and closing hours, are the alternative city centers. As Rajchman quotes from Deleuze, 'there are many cities at the same time and other cities in the city every time'.[6]

Shopping malls, which can be referred to as "compact city centers" for becoming important attraction zones in the city, can be examples of twenty-first century spaces in the sense of time, temporality, time perception and space construction. This thesis, as a research of reflections on the social, cultural, economical transformations and alterations in contemporary architectural and urban spaces and also in human psychology, targets a research on the themes of time perception and space construction.

Similar studies for analyzing the dynamics of specific periods were published by Reyner Banham "Theory and Design in the First Machine Age" in 1960 and by Robert Venturi "Learning From Las Vegas" in 1977, but for discussing the contemporary situation of the third revolution, which can be defined as the miniaturization or personal use of invented objects, in the age of artificial intelligence, this thesis is separated from the analysis of those two.

As Tschumi mentions, the object is to discuss the main transformations of today's society, which can be stated as "a function of time", where the juxtapositions of simultaneities form the duration. While stating that, he comments, "for us, as architects, time is spatial because space is what we construct, and time is there to activate these spaces, occasionally to transform them by challenging the perception of their boundaries."[7]

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[6] Rajchman, John, (1998) "Time Out", Any Time, p. 163
[7] Bernard Tschumi in Paul Virilio's book, (2000) "A Landscape of Events", p. viii

1.4.1. Nature of Time

Time can be defined as the system of those relations which any event has to any other as past, present, or future; or indefinite continuous duration regarded as that in which events succeed one another; or a particular period considered as distinct from other periods.[8]

As Gurevich mentions, social time differs not only as between different cultures and societies, but also within each socio-cultural system as a function of its internal structure. In every society there exists not one single 'monolithic' time, but a whole series of social rhythms governed by the laws of the different processes and by the nature of the various human groups.[9]

In this thesis, it will be discussed that, time is produced by the modern society and different societies may have different concerns about time. Time will be cited as a social construct and will be considered more social than natural.

1.4.2. Abstract Time Perception

Mechanical clock, which started to be produced in the fourteenth century in Europe, structured the everyday life - which was determined by the movements of sun previously - with its divided and abstract time idea. In this way, societies came to determine their lives by other than the natural cycle, with the mechanical clock's order.

During the Middle Ages, common perception of time by clock towers, extended by the bell permitted high coordination and regularization of the energies of small communities. In the Renaissance the clock

[8] The New Grolier Webster International Dictionary of the English Language.
[9] Gurevich, A. J., Time As A Problem Of Cultural History, p.239

combined with the uniform respectability of the new typography to extend the power of social organization almost to a national scale. By the nineteenth century, it had provided a technology of cohesion that was inseparable from industry and transport, enabling an entire metropolis to act mechanically. In the electronic age of decentralized power and information, in this age of space-time, McLuhan mentions, under the uniformity of clock-time, we look for variety, rather than repeatability, of rhythms.[10]

As Tanyeli mentioned in his paper at the Any Time Conference, for the first time in history, mechanical clock supported a different, new cycle and order in the individual's life, different than the natural rhythm. Almost in every scientific work, mechanical watch is presented to be the main reason or the base of modern time idea. It had an ordering role in organizing the social practical with a new cycle. The first thing in history, which changes and "dwells" the natural reality, is the mechanical clock.[11]

Before the mechanical clock, all technical tools and machines were addition to the opportunities of nature, nevertheless mechanical clock did either work with nature's occasions or joint them. By working completely independent from nature, it organizes a radical different life style, for its own cycle. This variation started the process of modern time and modern space – modern time concepts. It also determined the boundaries of Modern and Premodern ages.[12]

With the mechanical clock, time, not with regular repetition of the natural cycle, but with universally accepted, equal intervals of hour and its smaller units, and space, in its own three dimensional reality,

[10] McLuhan, Marshall, (1964) Understanding Media
[11] Tanyeli, Uğur, (1998) Any Time, p. 168
[12] ibid

became representational.[13] The time of spaces on the abstract world map is determined with the abstract meridians and parallels.

> As a piece of technology, the clock is a machine that produces uniform seconds, minutes and hours on an assembly-line pattern. Processed in this uniform way, time is separated from the rhythms of human experience. The mechanical clock, in short, helps to create the image of a numerically quantified and mechanically powered universe... Time measured not by the uniqueness of private experience but by abstract uniform units gradually pervades all sense of life.[14]

As McLuhan mentions, the natural needs of men like eating and sleeping, other than work, came to accommodate themselves to the clock rather than to the organic needs. With printing and assembly line mechanical measurement of time was also a way of fragmenting the process. "Not only the hours and days, but seasons and zodiacal signs were simultaneously indicated by a succession of carefully ordered scents."[15]

Urry reveals that, modern societies accept mechanical watch time more than premodern societies.[16] In modern societies, consequently time is not constructed upon social activities. These kinds of societies are settled around an abstract, divided, universal and measurable idea of time. To him, the mechanical watch discerns the modern civizilation, more than the steam machine. Mechanical watch is the characteristic of industrial capitalist societies.

> Work came to be measured by time (or more precisely the clock), which acquired great importance, becoming an essential factor of production. The appearance of the mechanical clock was the perfectly logical outcome of

[13] ibid, p.169
[14] McLuhan, Marshall, (1964) Understanding Media, p. 146
[15] ibid
[16] Urry, John, (1999) Mekanları Tüketmek,

> the new feeling of time, which it also served to strengthen. Invented at the end of thirteenth century, clocks were, in the words of Spengler, a 'terrifying symbol of passing time. In the fourteenth and fifteenth centuries, clocks adorned the towers of the town halls of numerous European cities. Inaccurate though they were, and lacking a minute hand, they nevertheless marked a veritable revolution in the perception of social time.[17]

As Tanyeli points out, being the standpoint of modernization process, measurable time will form the main axis of this thesis and the alienation from nature will be connected to the social meaning of time.

Marshall McLuhan, in his book "Understanding Media", identifies technological developments as; roads and paper routes, clothing (our extended skin), housing (new look and new outlook), money (the poor man's credit card), the print, comics, wheel, bicycle and airplane, the photograph, press, motorcar, ads, games, telegraph, the typewriter, the telephone, the phonograph, movies, radio, television, weapons, automation and clocks for being the scent of time.

Giddens stresses the point that time was still connected with space (and place) until the uniformity of time measurement by the mechanical clock was matched by uniformity in the social organization of time.[18] Clock towers, press, radio, pavement clocks, television, watches, and today mobile phones got the obligation to notify time and to communicate. In the chapter 'Indicators of Abstract Time', clock tower and mobile phone will be examined, for having radically different spatial reflections and having the qualities of starting the alienation process to nature and transforming the social connotation of time.

[17] Gurevich, A. J., Time As A Problem of Cultural History, p.241
[18] Giddens, Anthony, (1990) The Consequences of Modernity, p.18

1.4.3. Indicators of Abstract Time

Clock Tower is an indicator of time. Mostly attached to the city square, containing the daily activities like bazaar, coffee-house and worship spaces, clock towers helped the uniform understanding of time in and through urban spaces.[19]

As Cengizkan mentions in his article 'Clock Towers and Public Space', the public space, containing bazaar, coffeehouse and worship spaces, which house the dynamism of daily shopping and activities, has the power of spreading its own energy outside and strengthening itself. Clock towers construct the communication between public and private spaces and order the physical flow of this communication.[20]

Before the First World War, transport was by foot or with the help of animals. Thinking that the speed of walking is 1 meter per 1-4 seconds, for the easy transportation in city, settlements were not scattered. City center was at one point, containing the activities like shopping, working and worship, and the dwellings were around the city center. Usually settled at the city center, clock tower was at a distance that could be seen or its bell heard from the periphery.

Mobile phone is also an indicator of time today. Since about ten years, the use of mobile phones, which allow continuous and free communication, increased. Today mobile phones are not only tools for communication, but also a kind of computer. With the properties of a clock, alarm, schedule, organizer and calculator, they have the obligation of time to declare and also time to be established.

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[19] Cengizkan, A., (1999) "Saat Kuleleri ve Kamusal Mekan", *Arredamento Mimarlık,* p. 97
[20] ibid

We can mention that mobile phone, which provides continuous and free communication, removes the boundaries between public space and private space, so that the space notion disperses. Tschumi mentions that, with the acceleration of time, space itself becomes engulfed in time and becomes temporal.[21]

> We have entered the digital age, the age of a universal network with no one in charge, no president, no chief... Because of the network's decentralized structure, it will in any case be impossible to censor it without banning the telephone! And this is a good thing, for cybernetic space should reflect *a society of individuals* and in no case become the plaything of government![22]

In all communal life there is a dynamic balance between public and private activities. Although the public-private balance is unique to each culture, it shifts under the influence of cultural exchange, technology, changing political and economic systems, and the ethos of the time.[23]

> Technology also enters as a factor defining the public-private balance and the use of public spaces in at least two ways. First it sets out what can and cannot be accomplished in a particular society. The available technology provides limits to the nature of construction and transportation, shaping the form of the community by influencing the ability of residents to have access to available resources, including public spaces... Secondly, technology enters public life in another way, in its integration into the society. In this second sense, the availability of computers for work at home provides a useful example.[24]

There has been much discussion of the apparent decline in public life, but one can suggest that the recent public space is simply taking new forms. The expansion in the number and types of public places seen

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[21] Virilio, Paul, (2000) A Landscape of Events, p. viii
[22] ibid, p.8
[23] Public Space, p.3
[24] Public Space, p.28

today, including new commercial spaces, community gardens, greenways and preserved natural areas, shows how changes in the ways we live together continue to shape the design and management of places.[25]

In the mechanical age, many actions could be taken without too much concern. Slow moment insured that the reactions were delayed for considerable periods of time. Today the action and the reaction occur almost at the same time.[26] This rapid formation is both the cause and the reason of the explosion in the fields of technology and economy. The economical race, which occurs with these variations and makes it gain *speed*, creates artificial needs and new kinds of specializations in human and community life.

1.4.4. Transformation of the City

For McLuhan, technologies possess the power to isolate the senses and thus to hypnotize society.[27] Until the invention of mobile phone, many technological developments caused a transformation of urban space. At the top of these technological developments, there is the railway, which is the main invention of Industrial Revolution, and the private car, which started taking its place before the First World War.

The alterations of the technology of the transportation in the city center caused a transformation in the city form. The birth of the suburb gained speed with the development of railway transportation in the nineteenth century. The railway caused a rupture from the city center, but the new settlements were ordered towards the railway and massed

[25] ibid, p.1
[26] McLuhan, Marshall, (1964) Understanding Media, p. 4
[27] McLuhan, Marshall, (1962) The Gutenberg Galaxy, p. 272

around the stations. [28] This is not only a universal fact, but also very regional and even national.

McLuhan mentions that, for the massage of any medium or technology is the change of scale or pace or pattern that it introduces into human affairs. He explains that, the railway did not introduce movement or transportation or wheel or road into human society, but it accelerated and enlarged the scale of previous human functions, creating totally new kinds of cities and new kinds of work and leisure. [29]

The airplane, on the other hand, by accelerating the rate, frequency and speed of transportation, tends to dissolve the railway form of city, politics, and association, quite independently of what the airplane is used for.[30]

In 1908, Ford produced Model "T" in the United States. With conveyer belt, the production of cars got cheaper and middle class owned cars. The speedy and widespread construction of roads and transportation in the midst of 19th century, the free postal service in the provinces and Model "T" of Ford let the postal stores, like "Monkey Wards", to serve the rural parts of U.S.A.[31]

After the First World War, electrical subways and double-storey busses became dense in the city center of Paris, Berlin and Moscow. In these years, commerce was in the city center, in multi-floored stores, like La Fayette in Paris and similar big stores in such big cities. Berlin was the capital of an industrial region and Siemens and Borsig were close to the city center. While the goods were being transported in the canals and via railways, the communication of workers was on

[28] Tekeli, İ., Okyay, T., (1981) Dolmuşun Öyküsü, p.67
[29] McLuhan, Marshall, (1964) Understanding Media, p. 8
[30] ibid
[31] Cogito 5, (1995) Dünya Büyük Bir Mağaza

foot. The social needs took the place of personal needs in the production area.

The design of the *automobile* and the widespread of *private car* based another change of the forms of the cities. The increase of the private cars did not cause an ordered spread but sprawl of the city. The density at the city center was decreased and an immediate spread towards the outer city started. But this spread was different from the railway's.[32]

Figure 1.1 City invaded by highways.

Automobile increased the capacity and the ability of movement of human beings and the computer also became an addition to the human brain. Thus vehicles redefined the human capacity and allowed a freedom in space. This caused growth of not only the cities, but also the problems of urban life.

[32] Tekeli, İ., Okyay, T., (1981) Dolmuşun Öyküsü, p.67

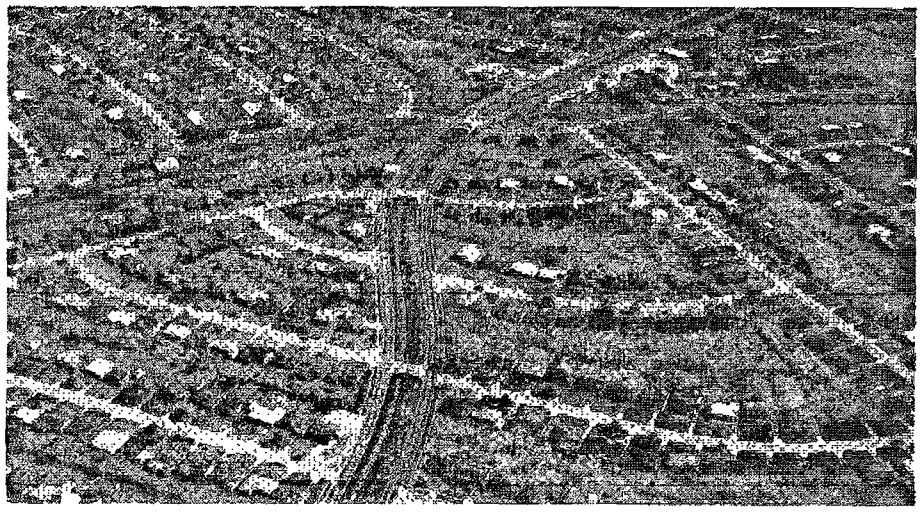

Figure 1.2 Highway dividing the city.

As Lefebvre mentions; "the Automobile is the 'King – Object', 'Guide – Thing'"[33]. This superior object, from economics to pronunciation, orders the behavior in many fields. Traffic is included in the social functions and stays at the top. So this gives rise to parking places, roads and precedence to a perfect management of highways. The city cannot resist this system. The technocrats are ready to demolish, where it exists, and where it survives.[34]

> Automobile, in the simple and poor analysis of the society, occupies an important and precious place, gradually. . . In reality and genuine, the thing which the automobile has caught and "structured" is the *everyday life*, not the society.[35]

[33] Lefebvre, Henri, (1996) Modern Dünyada Gündelik Hayat
[34] ibid
[35] ibid, p.104

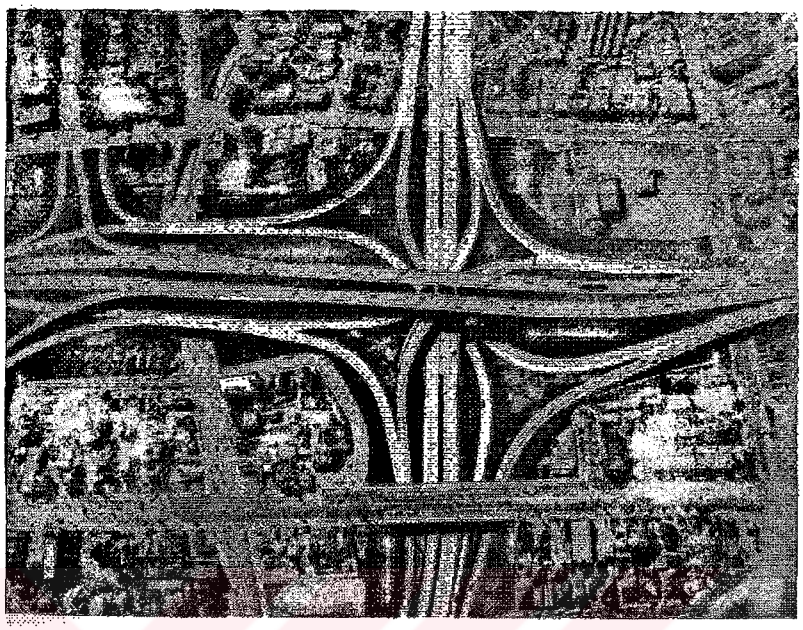

Figure 1.3 The dominance of the highways on the city.

Michael Sorkin points out that today, with the help of the innumerable prothesis and vehicles we have invented our capacity of hearing and seeing increased. It is probable to say that, this prothesis cause alienation to our bodies.[36] The vehicles turned out to be the part of the human body and redefined human capacity in this process.

> Today we are entering a space, which is speed-space. Contrary to popular belief, the space we live in is a speed-space. This new other time is that of electronic transmission, of high-tech machines, and therefore, man is present in this sort of time, not via his physical presence, but via programming. We program a computer or a videotape machine to record a telecast in our absence, to be able to watch it the next day.[37]

[36] Sorkin M., (1998) "Telling Time", Anytime Conference,
[37] Virilio Live: Selected Interviews; Speed-Space, p.70

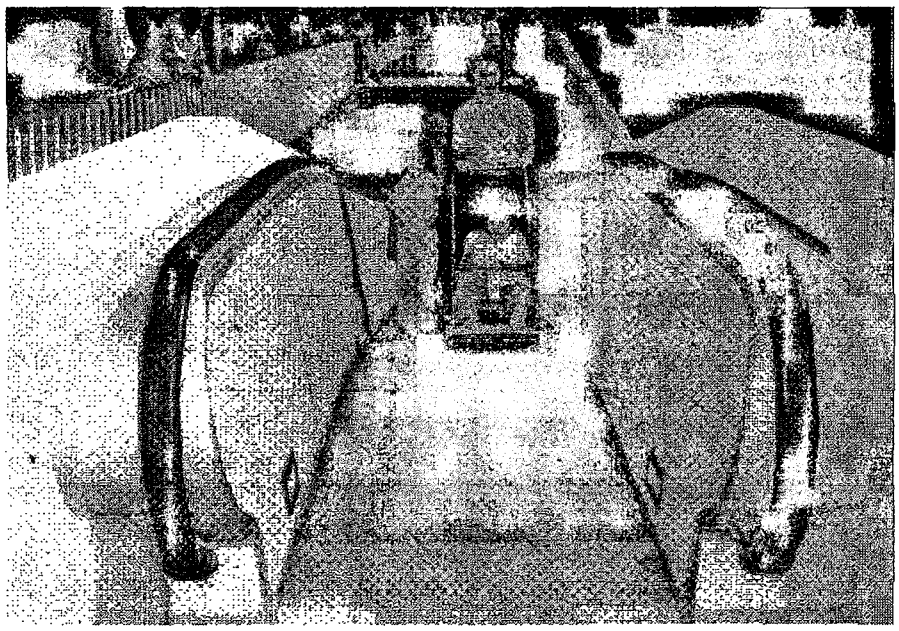

Figure 1.4 A ramped speedwalk installation in a shopping center. The safety of the system is illustrated by the baby carriage.

While urban objects and urban space are formed by everyday life and by human praxis, the style of contact started to be ordered with the car speed. Just for the automobilized life, facades facing the roads are turned into signs; that can be seen from distances and be recognized at momentary experiences.

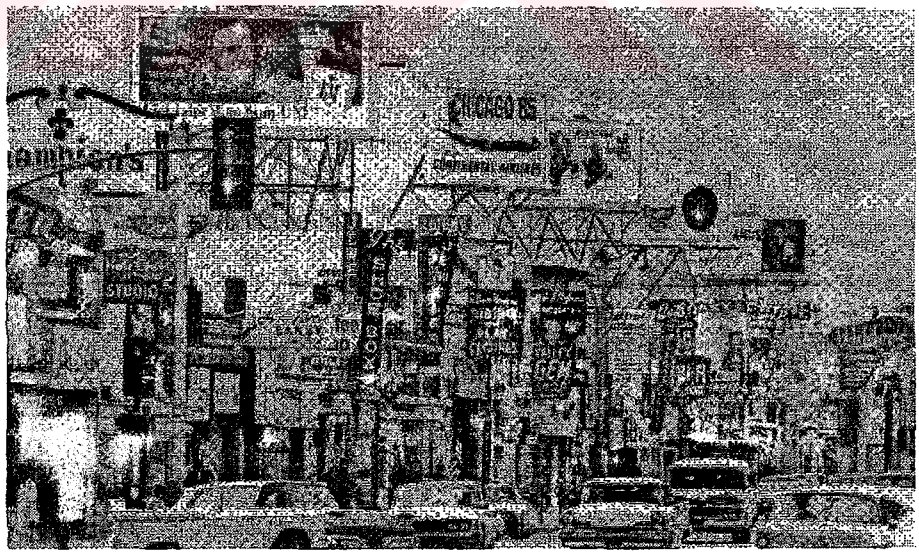

Figure 1.5 The city invaded by advertisements.

Public space has vanished by the invasion of the advertisements and signs. The fragmented images are collected during the movement of the automobile. While the image bombardment and the speed of telecommunication cause fragmented spaces, speed has expanded space by compulsing it.

Figure 1.6 Waste of motorcars.

1.4.5. Spatial Reflections of Indicators of Time

> ... any technology gradually creates a totally new human environment. Environments are not passive wrappings but active processes.[38]

As an indicator of time, having different technologies, clock tower and mobile phone have radically different spatial reflections. Contrary to clock tower's properties of initiating the gathering and communicating between public and private space, today we can mention the mobile phone collapsing the time / distance and demolishing the public space.[39]

Reflecting the rhythm and activity of social life, bazaar and shopping malls will be exemplifying the spatial reflections of these two time indicators:

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[38] McLuhan, Marshall, (1964) Understanding Media, p. vi
[39] Cengizkan, A., (1999) "Saat Kuleleri ve Kamusal Mekan", *Arredamento Mimarlik,* p. 97

Bazaar is one of the attraction zones of the city with the clock tower. It is also a kind of an introverted, centralized space but it has relations with its surroundings. It is formed with the speed of pedestrian and there is a direct influence between them. Individuals are face to face with the seller and have the chance of closer relationships involving bargaining.

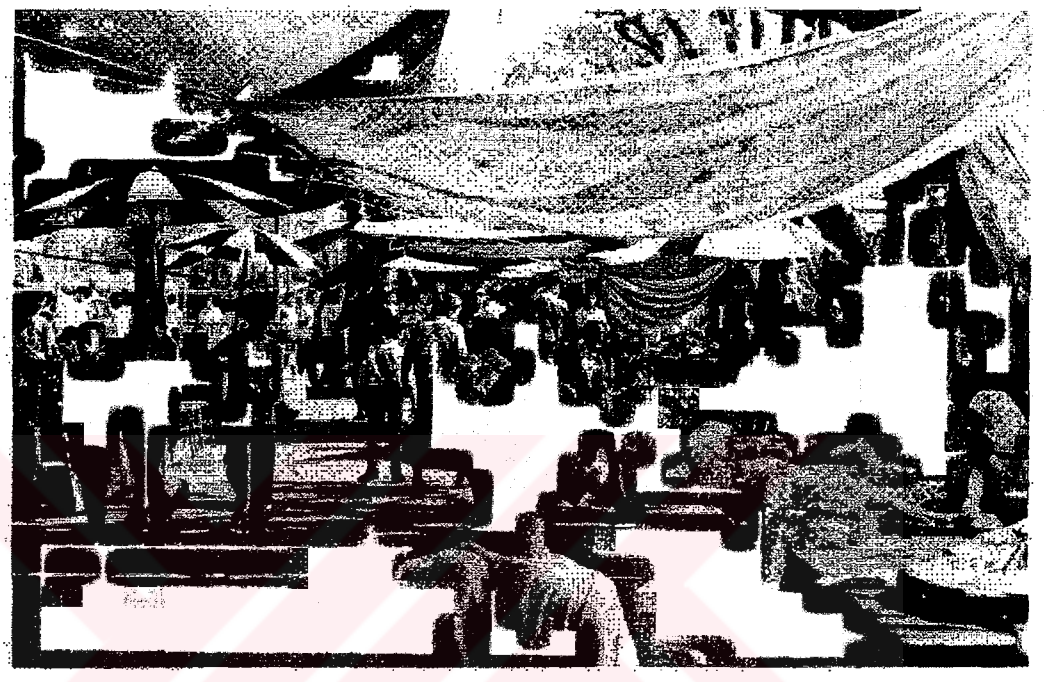

Figure 1.7 Light shelter structure in a bazaar / market place.

With the new possibilities of technology and new materials, new kinds of buildings were introduced: Airports, hotels, exhibition halls, shopping malls and etc. surrounded the cities. The life styles of individuals are now defined by the 'urban life', which is shaped by capitalism.

> ...in terms of the electronic age, that a totally new environment has been created. The content of this new environment is the old mechanized environment of the industrial age... When machine production was new, it gradually created an environment whose content was the old environment of agrarian life and the arts and crafts. This older environment was

> elevated to an art form by the new mechanical environment.[40]

Shopping mall can be given as a symbolic example of the contemporaries of mobile phone, for gathering the crowds and being an attraction zone in today's city. The swift communication weakened the cultural communication in societies and the simultaneity has transformed the space. The differences between seasons, between night and day, as well as the vulnerability to weather conditions were radically transformed and regularity of connection coupled with reasonably accurate timetables placed merchants in a very different operating milieu.

As middle class and working class people have moved to the suburbs, where they have private outdoor spaces, their way of living and use of public space changed. The isolated travel in automobiles and an obsession with traffic flow have diminished and degraded the life of the street. The impersonal shopping center and commercial strip have replaced downtown as a setting for communal life and the shopping mall as the new center of city. Views of absolute decline have been tempered by the idea of a transformation of public life into new forms of association and communication that do not depend on primary relationships in traditional public places, but on an emphasis on boutiques, eating, and entertainment, supporting a new form of public life known as recreational shopping.[41]

Stressing the point of consumption, McLuhan mentions that the method was extended from production to consumption not until the nineteenth century. In the first great age of mass production of commodities, and

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[40] McLuhan, Marshall, (1964) Understanding Media, p. vii
[41] Public Space, p.5-8

of literature as a commodity for the market, it became necessary to study the consumer's experience.[42]

Political profits formed a base for consumption culture in global world. The instinct for more and more consumption is spread by media and television, and taken under control with credit cards. Consumption paradises, to live this culture most easily and most comfortable, are built with their own temporality and architecture.

> Along central avenue, the Strip is bordered by caricatures of buildings, and every year twenty-two million insomniac visitors line up to take their turn in the endless night of the windowless *slot-machine halls* of luxury hotel casinos.[43]

Today, we can mention the togetherness of different attraction zones. These attraction zones cause an image bombardment. In our day, the shopping malls, which became the compact form of city centers, are the spaces for the human activity and social interaction.

Individual initiated to exhaust more, to buy more, is broken from time in these shopping malls. As it is in buildings like cinema and casino, we can mention shopping mall's own temporality. Without the spaces that remind time, like worship space; every person gains his/her own knowledge of time from his/her mobile phone, which each of them carries with, or from their wrist watches individually in shopping malls.

Based on the idea of the automobilized life, shopping malls are built in their hugeness and various colors, which can be realized from a far distance and be recognized at momentary experiences. The style of contact started to be ordered by car speed. Thus, speed provides pure objects and wipes out the nodal character of place. It causes shallow

[42] McLuhan, Marshall, (1962) Gutenberg Galaxy, p. 276
[43] Virilio, Paul, (2000) A Landscape of Events, p.5

connections. With highlights and neons, the objects are more attractive.

New kind of public space is defined in the new shopping malls, which are constructed usually out of the city. They become isolated in a sense, with their own climate and lightning, without any relations with the outside. The sense of reality is abandoned and imitation take its place. The sense of direction is blurred with instant space effects. Modern man has to solve his necessities in these huge malls, to gain speed without asking the price. People are mostly strangers to each other in this new type of public space.

Particularly in many urban settings, we interact more or less continuously with others whom we either do not know well or have never met before – but this interaction takes the form of relatively fleeting contacts. Giddens mentions that, in modern social life many people, much of the time, interact with others who are strangers to them. As Simmel pointed out, the meaning of the term "stranger" changes with the coming of modernity. In pre-modern cultures, the local community always remains the basis of wider social organization, and the item "stranger" refers to a "whole person" – someone who comes from the outside and who is potentially suspect. There may be many respects in which a person moving into a small community from elsewhere fails to receive the trust of the insiders, even perhaps after having lived in that community for many years. In modern societies, he mentions, by contrast, we do not characteristically interact with strangers as "whole people" in the same way.[44]

McLuhan points out that, if a technology is introduced either from within or from without a culture, and if it gives new stress or

[44] Giddens, Anthony, (1990) The Consequences of Modernity.

ascendancy to one or another of our senses, the ratio among all of our senses is altered.[45] If a new technology extends one or more of our senses outside us into the social world, then new ratios among all of our senses will occur in that particular culture.[46]

> Blake makes quite explicit that when sense ratios change men change. Sense ratios change when any one sense or bodily or mental function is externalized in technological form... When the perverse ingenuity of man has outered some part of his being in material technology, his entire sense ratio is altered. He is then compelled to behold this fragment of himself "closing itself as in steel".[47]

Human kind is socialized by interaction, but this interaction in metropolis is reduced to 'shopping'. Simmel argues that economic exchange can best be understood as a form of social interaction. Money is subject to precise division and manipulation and permits exact measurement of equivalents. When money becomes a prevalent link between people, it replaces personal ties anchored in diffuse feelings by impersonal relations that are limited to a specific purpose. Over and above its economic functions, it symbolizes and embodies the modern spirit of rationality, of calculability of impersonality.[48]

To Giddens, money permits the exchange of anything for anything, regardless of whether the goods involved share any substantive qualities in common with one another. He mentions that, the most far-reaching and sophisticated account of the connections between money and modernity, however is that written by Georg Simmel.[49]

> Money, we can say, is a means of bracketing time and so of lifting transactions out of particular milieux of

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[45] McLuhan, Marshall, (1962) Gutenberg Galaxy, p. 24
[46] ibid, p. 41
[47] ibid, p. 265
[48] Simmel, George, "Metropolis and the Mental Life" in Rethinking Architecture.
[49] Giddens, Anthony, (1990) The Consequences of Modernity, p.22

> exchange. More accurately put, in the terms introduced earlier, money is a means of time-space distanciation.[50]

Habermas, separates everyday life from the systems of money and power, stressing that these systems tend to penetrate and colonize everyday life through monetarization and bureaucratization.[51]

Returning back to the subject of consumption, quoting from Polanyi, McLuhan states, "no society can exist without a system of some kind, which ensures order in the production and distribution of goods. Nineteenth century society, in which economic activity was isolated and imputed to a distinctive economic motive, was, indeed, a singular departure" [52]. He claims that, a market economy, which must comprise all elements of industry, including labor, land and money, (the last is an essential element of industrial life and its inclusion in the market mechanism) can exist only in a market society.[53]

In the twenty-first century, the developments in technology and science not only changed and transformed the socio cultural values of societies but also the time and space perceptions. The connection with present and past is broken down and a series of present experimentations, which have no relation with each other, are lived simultaneously.

The developments in technology of communication, electronics, industry and nuclear, present both opportunities and problems. The values, which shape and order life styles, change immediately. In the rapid period of transformation, reflections of consumption on architecture can be seen as the destruction of the old and

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[50] ibid, p.24
[51] Madanipour, Ali, (1996) Design of Urban Space, p. 18
[52] McLuhan, Marshall, (1962) quoted from Polanyi, Gutenberg Galaxy, p. 272
[53] McLuhan, Marshall, (1962) Gutenberg Galaxy, p. 271

constructing the new. Thus, a collapse in cultural, historical and social structure is observed.

On the contrary, we can see that, transshipment of technological knowledge or product is either a competent situation or a support for modernization alone. The concept of time and other concepts like: motion, space, human actions and consciousness are related to each other. While analyzing the social processes involved in the making of space and place, the element of time will be integrated into our understanding.

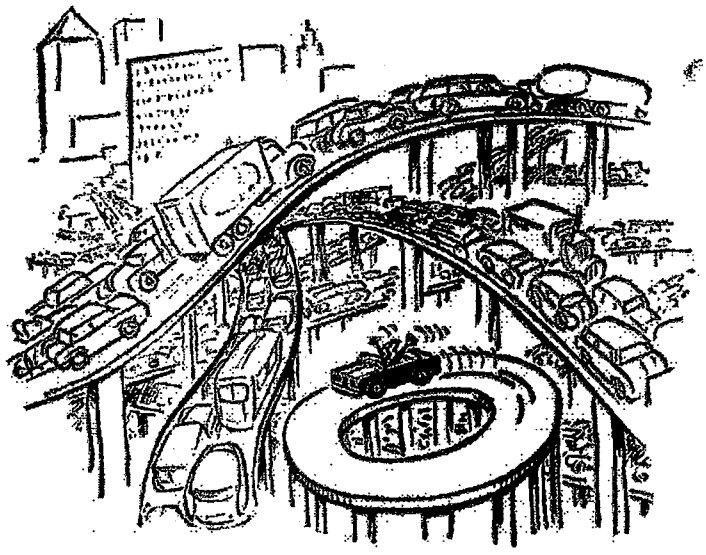

Figure 1.8 "Oh, well, it was bound to happen one day."

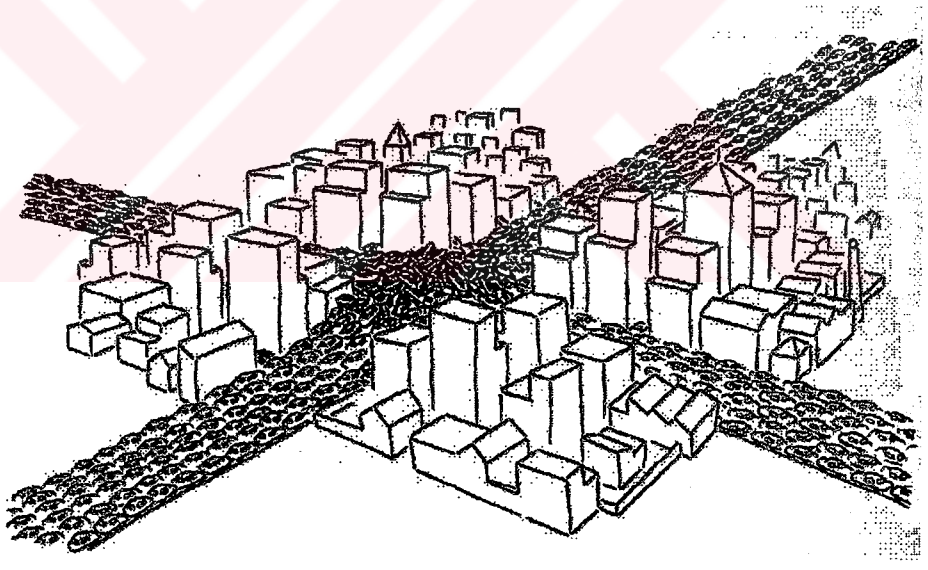

Figure 1.9 This cartoon demonstrates convincingly what must happen if one moves automobiles from millions of outlying points to one central point.

CHAPTER 2

ABSTRACT TIME PERCEPTION AND THE MECHANICAL CLOCK

The structure of social consciousness reflects the properties, which mark the evolution of society and culture. Discussing the time perception, for being one of the main components of social consciousness, Gurevich mentions that, the mode of perception and apperception of time shows the fundamental trends of society. To him, every stage in the development of production, in the evolution of social relations and in the progress of man's autonomy in relation to his natural environment is matched by special ways of experiencing the world. In this sense, all the categories enumerated above including 'time', reflect social practice.[54]

> If it is true that culture is 'second nature' to man, it would appear to be equally true that it is impossible to understand a particular historical type of structure of the human personality without having studied the modes of perception and apperception of time pertaining to the corresponding culture. The sense of time is one of the essential 'parameters' of personality.[55]

2.1. Historical Approaches to the Perception of Time

Newton and Smith who started to analyze time from the Cambridge Neo-Platonists, tell us that time, being an attribute of God, is among the few really real things. Some tell us that, there is only a sort of temporal arrangement of events; the past, present and future: being mere anthropomorphic projections of the human mind. According to

[54] Gurevich, A. J., Time As A Problem of Cultural History, p.229
[55] ibid

others, it is only the present that is really real. Some others say that the advances of twentieth century physics established time to be really like space. Others tell us that physical theories give us no recourse but temporalize space.[56]

Time, then, in virtue of being a system of abstract temporal items, is a rich source of philosophical perplexity. Oxford Dictionary's explanation of time is 'duration, continued existence' and Aristotle's explanation of time is 'the number of motion with respect to earlier and later'.[57]

Aristotle's view is important for forming the base of Heidegger's position. Lyotard mentions Aristotle's time analysis as:

> The substance of what Aristotle says is what is impossible to determine the difference between what has taken place (the proteron, the anterior) and what comes along (the husteron, the ulterior) without situating the flux of events with respect to a now. But it is no less impossible to grasp any such "now" since, because it is dragged away by what we call the flow of consciousness, the course of life, of things, of events, whatever – it never stops fading away.[58]

Both Aristotle and Augustinus share the idea of past is not present now on, and future is not present yet, so how can be time present without its components, past and future.[59]

In Newton's view, time is an absolute, independent, infinite, one-dimensional, fixed, uniform 'framework'.[60]

In June 1905, Einstein published a paper entitled 'On the Electrodynamics of Moving Bodies'. Christopher Ray's comment on it

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[56] W. H. Newton – Smith, (1980) The Structure Of Time, p. 2
[57] ibid, p. 3
[58] Lyotard, Jean Francois, (1991) The Inhuman-Reflections on Time, p. 24
[59] Aristotle, Augustinus, Heidegger, (1996) Zaman Kavramı
[60] Ray, Christopher, (1991) Time, Space and Philosophy, p. 99

is: if someone were to leave the Earth in a fast-moving spaceship, then on that person's return, say ten years from now in Earth terms, any clock carried in the ship would have ticked off fewer seconds than any clock on Earth. And since a person is, in an important sense, no more than a biological clock, the space traveler too would have aged less than those who stayed behind.[61]

Heidegger identifies time as being. Being is time and time is temporal. Being is not time but temporality. Time percept as being; time is "*principium individuations.*"[62]

Mensch gives Heidegger's position as, "Aristotle's treatment of time, has essentially determined every subsequent account of time – Bergson's included. Even the Kantian interpretation of time operates within the structures which Aristotle set forth."[63] He reveals, given that the modern position, as exemplified by Kant, makes time subjective while Aristotle argues the reverse. In terms of Mensch's analysis, it is the forgetting of the Aristotelian position, which characterizes the modern tradition. He concludes that the implication here is that only its recovery and renewal can move us beyond modernity.[64]

2.2. Modern Time

Norbert Elias mentions time as to establish the connections of the beginning and the end positions or the duration between these positions of two or more events in action.[65]

In primitive societies, there was no need to connect the events with time or to date them. But in bigger state societies, the need for

[61] Ray, Christopher, (1991) Time, Space and Philosophy
[62] Aristotle, Augustinus, Heidegger, (1996) Zaman Kavramı, p. 99
[63] Mensch, James Richard, (1996) After Modernity, p.7
[64] ibid
[65] Elias, Norbert, (2000) Zaman Üzerine, s.23

determining time increases for sharing the common sense of time between the individuals.[66] So, the perception of time by primitive man appears to the modern mind as unorganized.[67]

According to Elias, time is the tool for determining when something will be done in the social life and for ordering the common lives in the social world. The natural processes, which were standardized by human interference, were used for determining the periods of social activities. But the clocks and watches, which were started to be used in the new age of First Industrial Revolution, gained a new peculiarity for being an instrument of determining not only the period of the social activities but also the natural events. As instruments, clocks are used for the common lives of the societies and they are produced and used for very definite purposes.[68]

To Giddens, one of mechanical clock's main aspects is the worldwide standardization of calendars and a second aspect is the standardizing of time across regions. The "emptying of time" is in large part the precondition for the "emptying of space" and thus has causal priority over it.[69]

Gurevich stresses the point that, in the primitive or mythological consciousness, the time category does not exist in the form of an abstraction, it is mainly concrete, object-related and sensible. Time appears not in the form of neutral co-ordinates but as a powerful, mysterious force governing everything.[70] In this ancient perception of the world, time was not an autonomous category, experienced independently of its real object – related content. It was not a 'form' of

[66] Elias, Norbert, (2000) Zaman Üzerine, s.159
[67] Gurevich, A. J., Time as a Problem of Cultural History, p.230
[68] Elias, Norbert, (2000) Zaman Üzerine, s.16
[69] Giddens, Anthony, (1990) Consequences of Modernity, p.18
[70] Gurevich, A. J., Time as a Problem of Cultural History, p.231

the existence of the world: inseparable from existence itself, it was apprehended through natural, anthropomorphic concepts.[71]

Time becomes definitively vectorial, linear and irreversible with the mechanical clock.[72] It is not possible to draw a clear distinction between past, present and future until the linear perception of time, linked to the idea of its irreversibility, comes to predominate in the social consciousness. Linear time does not predominate in the human consciousness; it is subordinated to a cyclical perception of the phenomena of life, to a mythical image of the world.[73]

To Gurevich, nothing indicates more clearly the profound difference between ancient culture and the modern than their interpretation of time: whereas contemporary society is wholly dominated by vectorial time.[74]

> Time for the first time, and for good, 'extended' in a straight line, from the past to the future, passing through a point called the present. In earlier ages, the differences between past, present and future had been relative, and the dividing line between them had been movable; but with the triumph of linear time these differences became very precise, and present time was 'compressed' until it was merely a point sliding continuously along the line which runs from past to future, transforming the future into the past. Present time became fleeting, irreversible and elusive.[75]

To Elias, in developed societies, the clock is the first time representation mechanism. But still, it is not the "time" itself. The tool is the instrument to inform the proclamation to the individual who wants to know the time, like the example of newspaper, which informs the

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[71] ibid, p.241
[72] Gurevich, A. J., Time As A Problem Of Cultural History, p.235
[73] ibid, p.232
[74] ibid, p.233
[75] ibid, p.242

printed knowledge to the reader. Whatever the source and the peculiarity are, the instruments that serve to determine time are always the message sources for people.[76]

Certainly we use clock to measure something. Nevertheless, the thing we measure is not that invisible "time", but something concrete; so-called, "the length of a workday", or "the period of moon eclipse", or "the speed of a runner in a 100-meter race".[77]

Akira Asada mentions that, the difference between the time which our watches inform and which the sun clock shows, reveals that time is a plural existence and an artificial construct.[78]

The invention of an instrument for measuring time created the conditions necessary for evolving a new attitude towards time, regarded as something flowing at a uniform, regular pace, divisible into equal, non-qualitative units. It was in the European city that time begun, for the first time in history, to be 'isolated' as a pure form, exterior to life.[79]

Great cultural changes occurred in the West when it was found possible to fix time as something that happens between two points, as McLuhan mentions. From our division of time into uniform, visualizable units comes our sense of duration and our impatience when we cannot endure the delay between events. He adds, such a sense of impatience, or of time as duration, is unknown among non-literate cultures.[80]

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[76] Elias, Norbert, (2000) Zaman Üzerine, s. 27
[77] Elias, Norbert, (2000) Zaman Üzerine, s. 13
[78] Asada, Akira, (1998) "Simulated Origin, Simulated End", *Anytime*, p. 79
[79] Gurevich, A. J., Time As A Problem Of Cultural History, p.241
[80] McLuhan, Marshall, (1964) Understanding Media, p.145

Fraser points out that, the clock has become the most important single instrument in the collective enterprise that forces the environment to adapt to man, rather than vice versa.[81]

> The clock began its Western career, perhaps as early as the 14th century, as regulator of monastic life, when, in the words of Lewis Mumford (1963), it "helped give human enterprise the regular collective beat and rhythm of machine." With the advance of the industrial revolution which it helped to create, it first became a bourgeois, then a Communist, ideal: a symbol of perfection which other machines were to imitate.[82]

Sharing the same idea, Gurevich emphasizes that, being imposed to catch the time and to be in a hurry, men are being forced to be the slaves of time, which is independent from man and events with the widespread use of this technology that can be mentioned as the Second Industrial Revolution. On the contrary, man used to be "the master of his own time" [83] in the past.

> Contemporary man claims to foresee the future, to plan his activities . . . Having mastered time, having learned to measure time and divide it up with precision, to save it and to spend it, man finds himself, at the same time, a slave to it. And indeed, the idea of time, with its passing and its irreversibility, is continually present in the mind of modern man 'in a hurry'.[84]

Lynch points out that, carrying a watch is a serious act in developed countries. Although the individuals become indisposed under the sanction of mechanical time, their daily lives are depended on it. Not the natural needs of men, but the mechanical time determines when to eat, when to sleep and when to work. As he mentions, "when "time" or

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[81] Fraser, J. T., (1978) Time As Conflict, p. 249
[82] Fraser, J. T., (1978) Time As Conflict, p. 249
[83] Gurevich, A. J., Time As A Problem Of Cultural History, p.242
[84] ibid, p.230

schedule changes they jump to follow"[85], like a travel and an adaptation to another time zone of the world. Wherever he goes, "to be asked the hour" is not an extraordinary situation, as it is one of the most important knowledge in a scheduled society. Although time announcement is a simple technical problem, the clock is rather a complex tool. [86]

With the wide use of mechanical clock and its derivatives, a universal literacy is developed, which presented the character of "an enclosed or pictorial space that can be divided and subdivided" and be filled in. The terminology of a filled up schedule is the result of this period reinforced by the clock. McLuhan, sharing the comments of Lynch on the subject of the authority of abstract time, mentions that it allows men "to eat not when they were hungry but when it was 'time to eat'".[87]

Man reveals his independence by rejecting either to carry a watch or to use the schedule in the society of this era. [88] Its first widespread use in the thirteenth century was to ring the hours for clerical devotions.[89] The modern clock, mechanical in principle, embodied the wheel, as McLuhan mentions. The clock has ceased to have its older meanings and functions. Plurality of times succeeds uniformity of time.[90]

> Neither minutes nor hours nor half days correspond to the natural cycles of our bodies or the sun . . . Other external time signals in normal use are equally unfitted to human perception. Electric bells and buzzers regulate the scheduling of schools, factories, and other prisons, just as bells were used to order life in

[85] Lynch, Kevin, (1972) What Time is This Place?, p. 66
[86] ibid, p. 66
[87] McLuhan, Marshall, (1964) Understanding Media, p. 153-154
[88] Lynch, Kevin, (1972) What Time is This Place?, p. 66
[89] ibid, p. 66
[90] McLuhan, Marshall, (1964) Understanding Media, p.152

> the monastery . . . simply reminding us of common time.[91]

To Giddens, the separation of time and space notions and their recombination in forms of social life allows the dynamism of modernity, by structuring and forming the social relations with continual inputs of knowledge, which affects the actions of society.[92]

In pre-modern cultures time, which was usually imprecise and variable, was linked with place, and formed the basis of day-to-day life. Telling the time without any reference to any social or spatial markers was nearly impossible, but with the invention of mechanical clock, time was separated from space and virtual time came into scene. "The clock expressed a uniform dimension of "empty" time, quantified in such a way as to permit precise designation of "zones" of the day (e.g. "working day")".[93]

For Giddens, time and space, separated from each other, are recombined again in social activities, which can be exemplified with timetable.[94]

McLuhan mentions that, the incompatible effects of electric age on time issue caused some complaints about clocks. "In the space-time world of electric technology, the older mechanical time begins to feel unacceptable, if only because it is uniform. Time for Hopi Indians is not a uniform succession or duration, but a pluralism of many kinds of things co-existing. They no longer try to contain events in time, but think of each thing as making its own time and its own space".[95]

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[91] Lynch, Kevin, (1972) What Time is This Place?, p. 67
[92] Giddens, Anthony, (1990) The Consequences of Modernity, p.16-17
[93] ibid, p.17
[94] Giddens, Anthony, (1990) The Cosequences of Modernity, p.19
[95] McLuhan, Marshall, (1964) Understanding Media, p.147-149

With the Third Industrial Revolution of Digital Age, a new notion of simultaneous time started to be used. With the miniaturization of invented objects and with mobilization, the shortening of distances in terms of time has deterritorialize us.

Lynch answers the question of 'Does social change affect the spatial environment?' as:

> It is true that alterations in the visible environment can usually be read as a sign of social change: deteriorations or improvements in structures, changes in the use of land, shifts in the visual clues of clothing or furnishings – these are all indexes of social change for the trained observer.[96]

He claims that, the characteristic properties of an individual, which forms the base for our designs, can be affected by both social and environmental changes. "Neither social nor environmental patterns are good or bad in themselves, apart from their impact on the human being."[97] As he says, if the change is inevitable, we have to be sure that this change is a "humane process" and it does not destroy our characteristic properties. [98]

[96] ibid, p. 217
[97] ibid, p. 223
[98] ibid, p. 242

Figure 2.1 Clock.

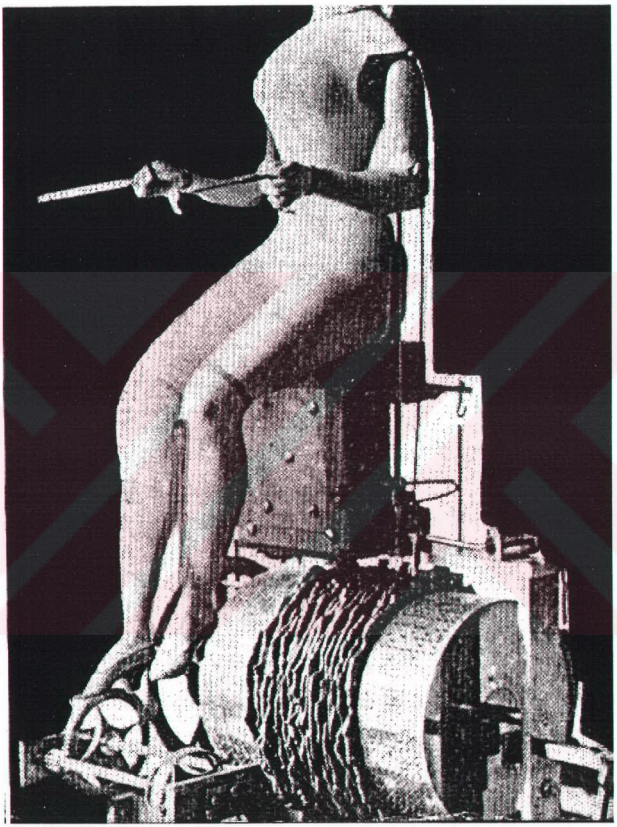

Figure 2.2 Eighteenth century automation or the clockwork Venus: the penultimate step from naturalism to mechanism. The next move is to remove the organic symbol entirely.

CHAPTER 3

INDICATORS OF ABSTRACT TIME

> It is absolutely true that space can be measured in at least two ways: one is with a meter and another is with a clock.[99]

Castells, with a general look on technological inventions, mentions that time and space notions, which are the primary issues of human life, are being transformed by technological developments. The industrial inventions and scientific discoveries in all parts of social life extend the working hours and annihilate spatial distances. For instance, after the invention of electricity, to work at night or at any time of the day became possible. He stresses that the information technology allows a wide spectrum of knowledge and new creativity by offering new experiences with restructuring our societies. [100]

As Giddens mentions, today, sociologists should analyze the interaction of the society with time and space[101]. Mumford touches this point, by saying that the process of measuring time and space, the reduction of distances by speeding transportation and production were being accepted slowly at first, but accelerated in the present. [102]

> Besides its institutional reflexivity, modern social life is characterized by profound processes of the reorganization of time and space, coupled to the expansion of disembedding mechanisms – mechanisms

[99] Virilio, Paul, edited by John Armitage, The Time of the Trajectory, p.59
[100] Castells, Manuel, (1989) The Informational City, p. 1
[101] Giddens, Anthony, (1990) The Consequences of Modernity, p.64
[102] Mumford, Lewis, (1972) The Transformations of Man, p.98

> which prise social relations free from the hold of specific locales, recombining them across wide time-space distances. The reorganization of time and space, plus the disembedding mechanisms, radicalize and globalise pre-established institutional traits of modernity; and they act to transform the content and nature of day-to-day social life.[103]

Sadler quoting from Guy Debord mentions that technological inventions more or less affect the everyday life as we can see in the examples of the telephone, television, the music records, mass air travel, etc.[104]

Debord, giving an example of long-distance mass-communication, which has sprawled all around world, mentions that it is an effective way of keeping a society under control.[105]

At this point, it is appropriate to link these technological developments to capitalism. For Mumford, by supporting the machine, capitalism quickened its velocity, and gave a special motivation to concerns with mechanical improvements.[106] He mentions this environment, which we are exploring, as "new world" and the practices that we had in the "old world" are useless here. [107]

Besides, when we look through the urban development, it is possible to recognize the difference. For Soja, in the cities of today, the centrality is virtual and the solid form of "urban" melts into air.[108] He mentions that, today "History is replaced by geography, stories by maps, memories by scenarios, with everything connected to "topography of computer screens and video monitors."[109]

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[103] Giddens, Anthony, (1991) Modernity and Self Identity, p.2
[104] Sadler, Simon, (1998) The Situationist City, p.16
[105] Debord, Guy, Society of Spectacle, Thesis 172
[106] Mumford, Lewis, (1934) Techniques and Civilization, p. 27
[107] Mumford, Lewis, (1972) The Transformations of Man, p.81
[108] Soja, Edward, W., (1996) Third Space, p. 239
[109] ibid, p. 240

> The postmodern confusion of time and space, in which temporal continuity collapses into a gigantic hologram capable of producing any image within an apparent void. In this process, time and space are transformed into icons of themselves and consequently rendered into scenarios. (Celeste Olalquiaga in Megalapolis, 1992, 19)[110]

Certainly, there is no period of time without change. After clock towers, the watches, newspapers, pocket radios and calculators were the indicators of time.[111] As Cengizkan mentions, today the mobile phones, which make the personal and efficient use of time possible, undertake the role of announcing time, while disconcerting the spheres of private and public.[112]

Clock tower's and mobile phone's effects and reflections on the society and on built space will be our subject to clarify the interaction between time perception and architectural space.

Both the clock tower and the mobile phone, being a tool for time to declare and time to establish, have different technologies and radically different spatial returns. While clock tower has the properties of gathering and communicating between public and private space, today the mobile phone has the properties of dispersing the space and demolishing the public space.[113] But in the final analysis, both have impacts on the re-definition and delimitation of public space.

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[110] Soja, Edward, W., (1996) Third Space, p. 237
[111] Cengizkan, Ali, (1999) "Saat Kuleleri ve Kamusal Mekan", *Arredamento Mimarlık*, p.100
[112] ibid, p.101
[113] ibid

3.1. Clock Tower as an Indicator of Time

As Mumford said, the clock is the appropriate machine to define the modern industrial age, more than the steam engine.[114] The first modern mechanical clock worked by falling weights and probably only a water clock was invented by the monk named Gerbert Pope Sylvester II."[115]

There are specific records of mechanical clocks by the thirteenth century, and by 1370, Heinrich von Wyck built the "modern" clock in Paris. Bell towers and the new clocks had come into existence and after the fourteenth century, "a dial and a hand that translated the movement of time into a movement through space, at all events struck the hours."[116] As it was mentioned in the previous chapters, more than informing time, the clock synchronized the actions of men.

As Elias mentions, the call by the "muezzin" ("ezan") for Moslems to prayer and the sound of bells of the churches were enough to call the pious individuals, at determined times of a day in the past. So, this social need could be solved, but at a rate of more social needs, clock towers undertook these requirements and with more developed possibilities; not only the hours, but also minutes and seconds played their role in the social lives.[117]

Mumford mentions that, after this instrument spread outside the monastery, the regular striking of the bells brought a new regularity into the social life of the towns. The bells of the clock tower almost defined urban existence.[118] They structured the public space and

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[114] Mumford, Lewis, (1934) Techniques and Civilization, p. 14
[115] ibid, p. 13
[116] Mumford, Lewis, (1934) Techniques and Civilization, p. 14
[117] Elias, Norbert, (2000) Zaman Üzerine, p.139
[118] Mumford, Lewis, (1934) Techniques and Civilization, p. 14

ordered the daily life, not only with their visual character, but also with their auditory character, as well.[119]

The town clock symbolized 'secular' time, in contrast to the bells of the churches and monasteries, or "ezan", which measured the time of the religious offices. The urban community became master of its own time with its own particular rhythm. Gurevich mentions that time, with the words of Jacques Le Goff, "the transition from 'biblical time' to 'the time of merchants' began". Mechanical clocks had a wide use in the towns, at time when the significant social groups had become aware of the need to know the exact time.[120]

Clock towers in our country were built in central locations of towns or in amongst commercial and administrative buildings, for the standard understanding of exact time.[121] They could gain the property of "landmark", for being "visual" and "legible"; and becoming a part of the city silhouette.

Certainly, clock towers were not built only in the town square, but to give the relationship between the clock tower and the bazaar, and to clarify the influence of clock tower on public and urban space, this thesis will be dealing just with this type.

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[119] Cengizkan, A., (1999) "Saat Kuleleri ve Kamusal Mekan", *Arredamento Mimarlık*, p.99
[120] ibid
[121] Cengizkan, A., (1999) "Saat Kuleleri ve Kamusal Mekan", *Arredamento Mimarlık*, p.98

Figure 3.1 Town center with a clock tower.

3.1.1. Space Perception with Clock Tower within Town Square

As Madanipour mentions, in pre-modern urban settings, public spaces such as urban squares and market-places played the role of arenas for public communication and these were places where the social interaction of people took place.[122] The squares were fronted by town halls, religious buildings and together with commerce, became natural

[122] Madanipour, Ali, (1996) Design of Urban Space, p. 146

meeting grounds for the populace.[123] These squares are still used as the gathering area of the town population.

For Madanipour, a public space can be defined as space that allows all the people to have contact to it and the activities within it and which is provided, controlled and managed in the public interest.[124]

> ...as formulated by Jurgen Habermas (1989), a public sphere, where interactive discourse takes place independent of the private sphere, is essential for a healthy polity. Its existence in a democracy means that decisions are made through rational-critical debate and intersubjective communication, preferably face to face in an open forum where they can be publicly reviewed.[125]

Public spaces supporting particular types of public life become freely chosen settings for family and group enjoyment and for individual development and discovery. Successful multicultural spaces add to the richness of the city.[126]

In this public setting, the space is filled with life, with energy, and with a sense of the enjoyment of spending time. The public spaces created by societies serve as a mirror of their public and private values.[127]

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[123] Public Space, p.4
[124] Madanipour, Ali, (1996) Design of Urban Space, p. 148
[125] ibid
[126] Public Space, p.10
[127] ibid, p.22

Figure 3.2 Public use of a town center.

As Cengizkan mentions, clock towers defined the boundaries of public space in their period. Usually placed in the town square with çarşı / market place, bazaar, coffee houses and worship places like mosque or church, clock towers structured the communication between this lively public space and the private space of the city. It can be stated that clock towers were built in the center of the town or somewhere dominating the city center to order the daily productions and movements of the bazaar and the daily life.[129]

3.1.2. Attributions of Socio-cultural Structure in the Transformation From Natural to Mechanical Time

> 'As regular as clockwork' became a term of eulogy: the new man regulated his bowels by clock and calendar, with no respect to more organic rhythms.[130]

[129] Cengizkan, A., (1999) "Saat Kuleleri ve Kamusal Mekan", *Arredamento Mimarlık*, p.97
[130] Mumford, Lewis, (1972) The Transformations of Man, p.98

Figure 3.3 Clock tower at the entrance of town center.

As Mumford mentions, in the thirteenth and fourteenth centuries, business was no longer regulated by the sun and powers of the human frame.[131] The concern of measurable space and time was also known in some parts of the ancient world. For instance in Roman Empire, taximeters were used in carriages and also water clocks and clepsydra were widely used,[132] but the introduction of town clocks came to scene after the need for exact time.

> So, too, the regular, orderly life, free from sensuous distractions, inured to a repetitious daily round, had taken form in the monastery: the desire for regularity there spurred the archetypal invention of New World culture, the mechanical clock.[133]

For Mumford, the New World was to be with measurement and calculation, composed of atomic elements, which were rearranged in a machine. Units of weight, measure, time, space, energy, money were the building stones of the New World: "a habitat where in the end men were acceptable only when they took on the attributes of machines,

[131] Mumford, Lewis, (1961) The City in History, p. 414
[132] Mumford, Lewis, (1972) The Transformations of Man, p.97
[133] ibid

where in the foreseeable future machines would be developed to surpass and replace men."[134]

Figure 3.4 The dominance of clock tower at the town center.

[134] ibid, p.99

3.1.3. Urban Structure in the Transformation from Natural to Mechanical Time Perception

> ... the ancient city was first of all a permanent meeting place.[135]

The development of urban spaces, which began with the Greek Market-place called the agora, grew out of a pedestrian oriented culture long before the invention of the automobile.[136] The open space of the agora was widely used. It was a busy place with a variety of activities and functions where people met, talked, and conducted business and civic activities.[137] Early spaces had facilities related to commerce, government and places of assembly.

As population increased in size, commerce created the need for market-places. Medieval towns had winding streets with views directed toward nearby buildings or to landmark elements such as the church tower. There was a feeling of orientation in the medieval town, and because of the landmarks, one rarely got lost. Employing this concept, recent American pedestrian malls and other urban spaces use landmark elements such as clock towers for orientation.[138]

The main church or the cathedral was placed usually near the center of the city, both for practical and symbolic reasons. The main axes of the town were converging here, where the market place was located. Mumford mentions that the market place was not a device for attracting or pumping out fast-moving traffic. In the shadow of the church, the market sometimes used its walls for protection, and the square formed an agora and an acropolis in one. The central position

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[135] Mumford, Lewis, (1961) The City in History, p. 95
[136] Rubenstein, Harvey, (1992) Pedestrian Malls, Streetscapes, And Urban Spaces, p. 1
[137] ibid, p. 2
[138] ibid, p. 4

of the church or cathedral is because of the religious character of the medieval city, viewing the towers, or the shadows they throw, which were visible from every point. "The difference in size between its towering walls and the little houses that huddle at the base is a symbol of the relation between sacred and profane affairs."[138]

As Mumford mentions, the market place grew up by the church because it was there that the citizens most frequently assemble. This decentralization of the essential social functions of the city not merely prevented over-crowding and needless circulation; it kept the whole town in scale.[139]

Figure 3.5 Symbolization of Clock Tower while losing its function.

[138] Mumford, L., (1938) The Cultures of Cities, p. 54
[139] ibid, p. 55

3.2. Mobile Phone as an Indicator of Time

> The word "telephone" came into existence in 1840, before Alexander Graham Bell was born. It was used to describe a device made to convey musical notes through wooden rods... The telephone presumed to offer service to the public in 1877, paralleling wire telegraphy.[140]

As Giddens mentions, one of the most important effects of industrialism has been the transformation of technologies of communication. According to him, mechanized technologies of communication have dramatically influenced all aspects of globalization since the first introduction of mechanical printing into Europe. They form an essential element of the reflexivity of modernity and of the discontinuities, which have torn the modern away from the traditional.[141]

Since the beginning of the 20th century, acceleration is mainly about the increasing speed of information transmission. Transportation has been also speeded up, but as Virilio points out, today, the main development is the increasing speed of information transmission, and the search for the success of real time.[142]

In Lyotard's words: "Contemporary machines can do operations, which used to be called mental operations, like taking in of data in terms of information, storing (memorization), and recalling it, calculations with different programmes, taking account of variables and choices (strategy)."[143] According to him, once machines are transformed into digital form, these data can be synthesized anywhere and anytime;

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[140] McLuhan, Marshall, (1964) Understanding Media, p.269-270
[141] Giddens, Anthony, (1990) The Consequences of Modernity, p.77
[142] Virilio, Paul, edited by John Armitage, From Modernism to Hyper Modernism, p.36
[143] Lyotard, Jean Francois, (1991) The Inhuman-Reflections on Time, p. 49

thus they are rendered independent of place and time, realizable at a spatial and temporal expanse.[144]

Virilio analyses mechanical and media 'vehicles', specifically with reference to their capability to change space and time within the frame of human interaction:[145]

> No longer the monotheism of the Written Word, of the Koran, of the Bible, of the New Testament, but a monotheism of information in the widest sense of the term. And with information monotheism has come into being not simply in a totally independent manner but also free from controversy. It is the outcome of an intelligence without reflection or past. And with information monotheism comes what I think of as the greatest danger of all, the slide into a future without humanity. (Virilio and Kittler, 1999)[146]

Virilio mentions this process as the "Third Revolution". In the realm of speed, the first revolution was that of transportation with the invention of the steam engine, the combustion engine, the electrical motor, the jet engine and the rocket. The second revolution is the revolution of transmission, which can still be observed now in electronics, beginning with Marconi; radio and television. The third revolution, which is closely related to the miniaturization of objects, is the transplantation revolution. With railways, motorways, bridges and large factories, technology spread over the territory, but now it enters the innards of the human body.[147] Today, we are in the realm of mobility and emancipation.[148]

Giving the examples of the predators, of the cavalry, of railways, of ships and maritime power, Virilio reveals that speed is power. But it is

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[144] ibid, p. 50
[145] Virilio, Paul, edited by John Armitage, Paul Virilio: An Introduction, p.17
[146] ibid, p.13
[147] Virilio, Paul, edited by John Armitage, From Modernism to Hyper Modernism, p.49
[148] ibid, p.39

also possible to see the power of speed with the velocity of dispatching information.[150] Living theory of relativity through mobile phones, through 'live' programmes on TV, through the telecommunications media, through Virtual Reality, through cyber space, through video-conferencing, through supersonic, air travel and so on; he mentions that we have become deterritorialized by the shortening of distances in terms of time.[151]

Telecommunications, in dissolving the 'here' and 'now', serve both to break down distance, physical distance, and to create psychological 'distance'. While Virilio seems to prophesy the Internet with his observations that the screen has become the city square, 'the crossroads of all mass media', he equally highlights a new *manner* of communication, where technology introduces both a distance and an anonymity.[152]

Contrary to McLuhan's commentary, "On a planet reduced to village size by new media, cities themselves appear quaint and odd, like archaic forms already overlaid with new patterns of culture.",[153] Virilio emphasizes that, the "global village" Marshall McLuhan hoped for, does not exist.[154]

> ...there is only a *center of inertia* that freezes the present world within each of its inhabitants. A return to the zero point of some originary populating process, one no longer so much concerned with the earth's expanse, the urbanization of the real space of our planet, as with the *urbanization of the real time* of its mere appearances and of the intermittent eclipse of the speaking beings that we are.[155]

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[150] ibid, p.35
[151] Virilio, Paul, edited by John Armitage, From Modernism to Hyper Modernism, p.27
[152] ibid, p.76
[153] McLuhan, Marshall, (1964) Understanding Media, p.149
[154] Virilio, Paul, (2000) A Landscape of Events, p.52
[155] ibid

3.2.1. Space Perception with Mobile Phone

Virilio reveals space as the *prima materia* of the architect, but not materials like bricks, stones and concrete; he finds space under threat. According to him space is being destroyed for being on the verge of becoming virtual space, but it is being rebuilt at the same time. He stresses the point that the geographical difference between 'here' and 'there' is obliterated by the speed of light.[155] There are no dimensions anymore or even they are broken up for Virilio. For the modern architect, there exist three dimensions, and time on top of them. Space is fractured too, from approximately the 1970s, onwards. Newtonian absolute space disappears with this break up, and by Einstein relativity in the first place. The unity of space, which formed the basis of architecture, modern architecture included, is deconstructed, fractionalized.[156]

To Virilio, physical discipline has been replaced by more gaseous systems of control, where the credit card has supplanted the gaze of the foreman. This leads to a situation in which humankind is no longer constrained by physical space, but forever trapped by dept, ensnared in a system of limitless postponement.[157]

John Rachman mentions this process as getting rid of tales and programmes while living sudden circumstances simultaneously in an autonomous reality. He notifies that we are not in the process of Kevin Lynch's pleasant "grammar" or "mapping" of post war world anymore. As Rachman puts out, "today we are witnessing unusual connections between image and city as if "time" turned out to be free from memory".[158]

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[155] Virilio, Paul, edited by John Armitage, Paul Virilio: An Introduction, p.11
[156] Virilio, Paul, edited by John Armitage, From Modernism to Hyper Modernism, p.33
[157] ibid, p.80
[158] Rachman, John, (1998) "Time Out", Any Time

Lyotard quoting from Bernard Stiegler mentions that, as the new technologies are now invading public space and common time in the form of industrial objects of production and consumption, it is what we might call the most 'intimate' space-time, in its most 'elementary' syntheses, which is attacked, hounded and no doubt modified by the present state of technology.[160]

With these on going differences in place perception, in contrast to previous epochs, Virilio stresses the point that a building today is not built to last forever. Just as the vehicle in the course of 'progress' has been continuously gaining speed, the life span of buildings has also shortened, something that is manifest in their early ageing and swift deterioration. A building has ceased to be something lasting, something eternal, as it used to be. As its life span is now limited to fifty or hundred years, it has become something of a movement in time, a three-dimensional image that will vanish before long.[161]

> Movement transfers space into another existence without necessarily destroying it, as Heinrich Heine or Victor Hugo described the effect of railways. This why I understand speed as an environment. It is not a coincidence that I have called myself an urbanist for so long or that I have taught at a school for architecture for over thirty years. For me, speed is an environment, as that word is understood in the natural sciences. Speed is a domain with specific properties. Speed is not simply a matter of time. Speed is also space-time. It is an environment that is defined in equal measure by space and time. In addition, architecture too, whether it is moving or not, is defined by the speed of movements in space.[162]

For Virilio, through the works of the state, which is more or less communal state, we have experienced the development of politics

[160] Lyotard, Jean Francois, (1991) The Inhuman, p.47
[161] Virilio, Paul, edited by John Armitage, The Time of the Trajectory, p.58
[162] ibid, p.61

linked to the territory; always down to earth. In spite of railroads and telephones, we experienced a relationship to a still coherent right. For him, as we saw earlier with the end of time-space and the coming of speed-space, the political man and the city are becoming problematic today.[162]

3.2.2. Attributions of Socio-Cultural Structure in Simultaneity

> ...the phone is a participant form that demands a partner, with all the intensity of electric polarity. It simply will not act as a background instrument like radio.[163]... Many people feel a strong urge to "doodle" while telephoning. This fact is very much related to the characteristic of this medium, namely it demands participation of our senses and faculties.[164]

Everyday life is gaining speed without our control. We are forced to limit time on a work within the means of hours, minutes and seconds. As Virilio points out, with the subject of "time keeping" we return back to the question of sociological transformation. Remembering the hit concepts of 1848s "eight hours work, eight hours rest, eight hours leisure", Virilio touches the point, "Time stolen from death".[165]

For Giddens, modernity can be understood as roughly equivalent to 'the industrialized world', so long as it be recognized that industrialism is not its only institutional dimension. He takes industrialism to refer to the social relations implied in the widespread use of material power and machinery in production processes. As such, it is one institutional axis of modernity. A second dimension is capitalism, where this term

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[162] Virilio, Paul, edited by John Armitage, Speed-Space, p.80
[163] McLuhan, Marshall, (1964) Understanding Media, p.168
[164] ibid, p.267
[165] Helvacıoğlu, Banu, (1998) "An Ankara Cronicle: Fidelity to an Impossibility", Any Time, p. 106

means a system of commodity production involving both competitive product markets and the commodification of labour power.[166]

> Capitalism is a system of commodity production, centered upon the relation between private ownership of capital and propertyless wage labour, this relation forming the main axis of a class system. Capitalist enterprise depends upon production for competitive markets, prices being signals for investors, producers, and consumers alike.[167]

Giddens mentions that, the chief characteristic of industrialism is the use of inanimate sources of material power in the production of goods, coupled to the central role of machinery in the production process. Industrialism presupposes the regularized social organization of production in order to coordinate human activity, machines, and the inputs and outputs of raw materials and goods. For him, industrialism, moreover, affects not only the workplace, but also transportation, communication and domestic life.[168]

While setting the institutional dimensions of modernity, Giddens makes a definition of capitalism – Capital accumulation in the context of competitive labour and product markets; and of industrialism – Transformation of nature: development of the "created environment"[169]

Modernity, it might be said, breaks down the protective framework of the small community and of tradition, replacing these with much larger, impersonal organizations.[170]

Unequal development and poverty on one hand and mass production on the other, modern capitalist movement is increasing its acceleration

[166] Giddens, Anthony, (1991) Modernity and Self-Identity, p.15
[167] Giddens, Anthony, (1990) The Consequences of Modernity, p.55
[168] ibid, p.56
[169] ibid, p.59
[170] Giddens, Anthony, (1991) Modernity and Self-Identity, p.33

day by day. Supported by cyber networks, contemporary capitalism has covered the whole world after the collapse of "Second World" and "Third World".[172]

> On the eve of the greatest industrial revolution in history, no signs and portents were forthcoming. Capitalism arrived unannounced. No one had forecast the development of a machine industry; it came as a complete surprise. (quoted from Polanyi)[173]

For McLuhan, to create a market economy that can handle what comes off the assembly lines presupposes a period of altering perception and sense ratios.[174] Akira Asada refers to this modern time of capitalism as without a final and postponing the negative end forever. Contemporary capitalist society is also determined by an endless structure of time and delays the 'telos' lasting.[175]

Arendt sees this consumer society as a labour society, while only production and labour allows consumption, being nothing more than the two necessities of life. The situation for her is equalizing the necessities and activities of humanity under a common denominator of abundance.[176] Like the employees of Ford earning wealth and purchasing the products individually, industrial society structures the base for consumption. For Arendt, after 'the trouble and annoyance', nothing more than consumption efforts will be left. The ratio between the labour and consumption will end with consumption, which forms the base for a social crisis about leisure time.[177]

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[172] Isozaki, Arata, (1998) "Simulated Origin, Simulated End", Any Time, p. 85
[173] McLuhan, Marshall, (1962) Gutenberg Galaxy, p. 272
[174] ibid, p. 272
[175] Asada, Akira, (1998) "Simulated Origin, Simulated End", Any Time, p. 79
[176] Arendt, Hannah, (1994) İnsanlık Durumu, p.193
[177] ibid, p.199

Quoting from Arendt, Madanipour mentions that in the modern age, however the house keeping and its related activities, problems and organizational devices have risen from the "shadowy interior of the household into the light of the public sphere". The rise of a social realm has led to an interflow of the public and private spheres and to extensive transformation of their meaning and significance. The social realm that has emerged is neither public nor private. "The mass society, with its drive for equality, has conquered the public realm".[177]

Serious apprehensions with culture produce facility, while the consumption of mass culture leaves no lasting trace; it affords a kind of experience, which is not cumulative but regressive.[178] Habermas mentions that this social-psychological transmutation of the original relation between the intimate domain and the literary public sphere was linked sociologically to the structural transformation of the family itself.[179] A pseudo-public sphere of a no longer literary public was patched together to create a sort of super familial zone of familiarity with the mass media.[180]

> Indeed, mass culture has earned its rather dubious name precisely by achieving increased sales by adapting to the need for relaxation and entertainment on the part of consumer strata with relatively little education, rather than through the guidance of an enlarged public toward the appreciation of a culture undamaged in it substance.[181]

To Habermas, the world fashioned by the mass media is a public sphere in appearance only and also the integrity of the private sphere, which they promise to their consumers, is an illusion. The public sphere becomes the sphere for the publicizing of private biographies,

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[177] Madanipour, Ali, (1996) Design of Urban Space, p. 148
[178] Habermas, Jürgen, (1989) The Structural Transformation of the Public Sphere, p.162
[179] ibid, p.161
[180] ibid, p.162
[181] ibid, p.165

so that the accidental fate of the so-called man in the street or that of systematically managed stars attain publicity, while publicly relevant developments and decisions are garbed in private dress and through personalization distorted to the point of unrecognizability.[183]

With the absence of public life and public spaces, individuals become apart from each other, missing the social facilities like help and support. The people are more strained with their work and privatization is promoted by the political systems. Contemporary authors are discussing these issues of private and public life, and the balance between them as they affect the transformation of cities.

> Richard Sennett (1977) in *The Fall of Public Man* documents the social, political and economic factors leading to the "end of public culture", the privatization of people's lives. This development toward an intimate society began, in large measure, in the nineteenth century and has continued, creating in Sennett's view, the "tyrannies of intimacy", "denials of the reality and worth of impersonal life" (p. 340).[184]

McLuhan quoting from G. H. Bantock, mentions that, in a world of increasing socialization, standardization, and uniformity, the aim was to stress uniqueness, the purely personal in experience; in one of 'mechanical' rationality, to assert other modes through which human beings can express themselves, to see life as a series of emotional intensities involving a logic different from that of the rational world and capturable only in dissociated images or stream of consciousness musings.[185]

About the mobilization of human beings in this age, Virilio finds the importance of place – place of origin, place of birth, etc. – as a

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[183] ibid, p.171
[184] Public Space, p.25
[185] McLuhan, Marshall, (1962) The Gutenberg Galaxy, p. 278

mechanism for grounding the self is diminished. Even the home has been redefined as a 'property' exchangeable within the marketplace. In a world dominated, quoting from Marc Auge, Virilio mentions, by 'non-places', individuals now begin to constitute their identity through more transitory phenomena, such as jobs and possessions, including even technological objects, such as cars and computers. All this has undermined the role of place as a mechanism for constituting one's identity.[185]

Today, men no longer go to sleep when the sun goes down, while another day beyond the solar day begins with electric light and television. Exemplifying from the wars of antiquity, Virilio mentions, war was waged starting in March, and then stopped in September-October. The use of new technologies extended war to the totality of time, not only as in the past wars in summer time, but also war in winter time. The new technologies have allowed us to wage war year round. But up until 1914 no one made war at night, they stopped at nightfall. Now, with the new technologies, not only do they make war all seasons, but non-stop, day and night.[186] Modern warfare, Virilio notes, with emphasis on mobility and surprise, depends on speed.

3.2.3. Urban Structure in Simultaneity

In the 1970s and 1980s, the flow of capital, in the form of land and property development, returned to the city, creating entirely new environments superimposed on and juxtaposed to the city, investment concentrated on the re-imaging of the urban environment with a new aesthetic. [187] As Madanipour quotes from Boyer:

[185] Virilio, Paul, edited by John Armitage, From Modernism to Hyper Modernism, p.77-78
[186] Virilio, Paul, edited by John Armitage, Speed-Space, p.74
[187] Madanipour, Ali, (1996) Design of Urban Space, p. 192

> The aesthetic as image, representing fashionable tastes, became indispensable to the economy of serial repetition. Museums became totalized environments selling culture through their shops, restaurants, condominiums, and gigantic extravaganzas. The recycling of old market areas of the city, waterfronts and river fronts, main streets, frontier towns, whatever historic mould could be found-these became the background environments or containers for new shopping malls and food-oriented entertainment zones.[188]

For Boyer, these culture markets produce secondary effects as well. The more money spent by shopping, more money spent for decoration of the luxurious restaurants, boutiques, department stores, ... etc. New professional classes worked for aestheticization of everyday life. The spreading out of designed environments had another effect as well; the further fragmentation and hierarchization of urban space into luxury and non-luxury areas.[189]

Saskia Sassen states this process as rescaling city, without ancient regional, national, international spatiality.[190] Both in electronic space and built space, this "rescaling" brings structural and organizational changes with it.[191]

'Physical constraints, such as city walls, have been superseded by other, more sophisticated methods of control', in Virilio's words. Not only has the development of new technologies reduced the need for physical proximity and therefore precipitated a process of de-urbanization, but also these technologies challenged the very necessity of physical presence. Advances in informational systems and transportational networks have had a significant impact on

[188] Madanipour, Ali, (1996) Design of Urban Space, p. 193
[189] Madanipour, Ali, (996) Design of Urban Space, p. 193
[190] Sassen, Saskia, (1998) "Juxtaposed Temporalities: Producing a New Zone", Any Time, p. 121
[191] Sassen, Saskia, (1998) "Juxtaposed Temporalities: Producing a New Zone", Any Time, p. 120

traditional modes of perception. The development of systems of instantaneous information transfer has come to distort our conception of time, and our perception of place.[192]

Virilio exemplifies this perception of place, as the information sent from New York at the end of the day to be processed overnight by others, say in Africa, operating during the day of their own time zone, so as to deliver the fully processed product back to New York for the following morning. Such strategies have the potential of exploiting not only differential time zones, but also differential labour markets. While the world becomes the potential office, the specific site of the individual workstation emerges as an increasingly important consideration.[193]

> The megalopolises now being talked of are no longer cities, they are phenomena, which go beyond the city and translate the decline of the city as a territorial localization, and also as a place of an assumed right, affirmed by a policy. Here, I am very pessimistic. I feel we are entering into a society without rights, a 'non-rights' society, because we are entering a society of the non-place, and because the political man was connected to the discrimination of a place. The loss of a place is, alas, generally the loss of rights.[194]

Virilio touches the questions of political and urban, for the reason, at present the cities are undone by technology, undone by television and defeated by automobility (the high speed trains, the Concorde). The phenomena of identification and independence are posed in a completely new way. Before proximity, there was territorial continuity by which we were close, and in the same place. Today we are close in the speed-space of the Concorde, of the high-speed train, of telecommunications. Therefore, we do not feel joined to people of our own country, the compatriots of the same people. In the past, we were

[192] Virilio, Paul, edited by John Armitage, From Modernism to Hyper Modernism, p.75
[193] Virilio, Paul, edited by John Armitage, From Modernism to Hyper Modernism, p.79
[194] Virilio, Paul, edited by John Armitage, Speed-Space, p.81

together in the same place, claiming an identity. But today, we are together elsewhere, in high-speed train, in jet-plane, Internet or on TV. For him, there is a power of another nature, which creates distortions. We are no longer in space, but in speed-space.[195]

In the course of history, for Virilio, new materials have lent a new mobility to architecture. The thought of settling in a location for a long period has evaporated, and its place came the campus, the colony. Now, one of the first axioms of urban planning is the durability of a building's location. But today some people think about moving Tokyo to some other location. Durability is no longer something that is taken for granted. Giving an example from the Second World War, Virilio states that, after the terrible air raids on Hamburg, Hitler wanted to have the city rebuilt somewhere else. Le Corbusier had similar plans with Caen, particularly after the Allies destroyed the town after the D-Day offensive. Both projects remained unrealized. However, such architectural projects demonstrated that, today, the city is considered something that can be moved about.[196]

[195] Virilio, Paul, edited by John Armitage, Speed-Space, p.81
[196] Virilio, Paul, edited by John Armitage, The Time of the Trajectory, p.59

Figure 3.6 Mobile phone.

Figure 3.7 Clock Tower with a contemporary communication device.

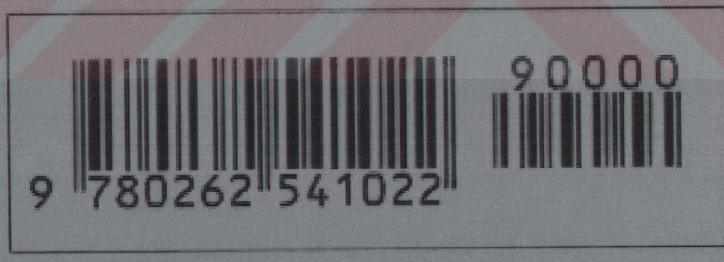

Figure 3.8 Barcode of a product.

Figure 3.9 Credit card examples.

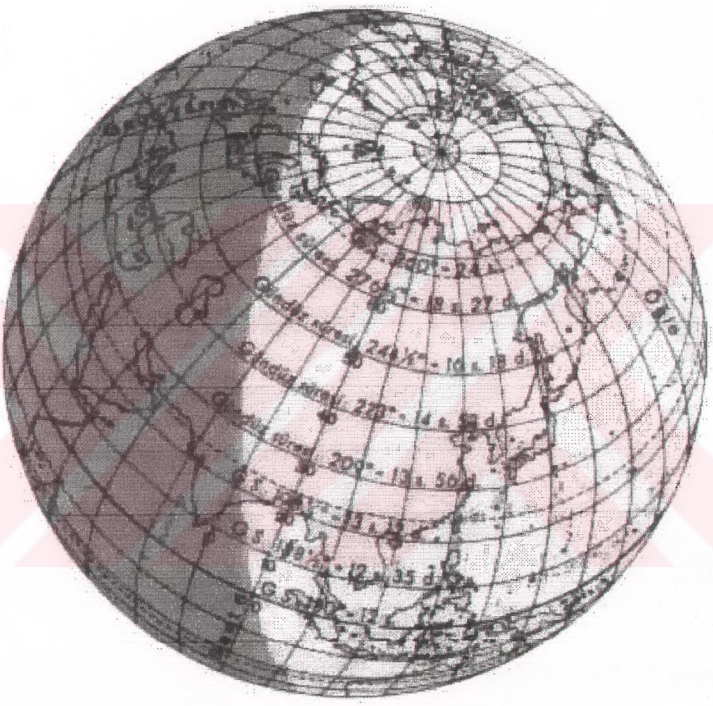

Figure 3.10 Globe.

CHAPTER 4

SPATIAL REFLECTIONS OF TIME INDICATORS

With development of the theories of relativity, the separate concepts of space and time have increasingly been approached as a combined concept of space-time.[197] Quoting from Hermann Minkowski, who suggested the concept in 1908, Madanipour reveals that space-time is a four-dimensional continuum, which unites the three dimensions of space with one of time. Every object, therefore, must not only have length, width and height, but also duration in time. Albert Einstein, who incorporated this concept into his special theory of relativity, contended that, as opposed to the Newtonian theory, a separation of space and time in an absolute way is not possible, but it is relative to a choice of a coordinate system.[198]

After Einstein's theory of relativity, there were parallels to this conception of space-time in art and architecture, by concentrating on *movement* within space. The Cubists used the concept of the fourth dimension by moving round the objects, rather than trying to represent them from a static viewpoint. They offered a new conception of space by enlarging the way space is perceived. By breaking from the Renaissance perspective, which presented objects in three dimensions, the Cubists added a fourth dimension of time. They viewed objects relatively, dissecting them so that the objects could be seen simultaneously from several points of view. In this approach,

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[197] Madanipour, Ali, (1996) Design of Urban Space, p. 20
[198] ibid

according to Gideon, the Cubists introduced a principle that is 'intimately bound up with modern life-simultaneity'.[199]

Futurists, tried to portray the inner life of things, to show how it is connected to its surroundings. They used distortions, interpenetrations, lines of force, and violent contrasts. They broke open the contours of things and showed them in continuous motion; superimposing positions taken at different perspectives and so represented the movement of the observer. They used a sequence of views or different figures to carry out significant actions that in actually would have occurred at different times.[200]

To free the movement patterns within the city and to break with the Renaissance optical perspective, the modernists aimed to eliminate the urban streets. 'Today we must deal with the city from a new aspect, dictated by the advent of the automobile, based on technical considerations, and belonging to the artistic vision born out of our period – space-time'.[201] It resulted with high-rise buildings set within movement networks, allowing people to experience space while moving around the buildings.

Fo the modernists, the concept of space, the relations between interlocking spaces, became accepted as the essence of architecture. Sigfried Gideon (1967) was one of the most influential advocates of modernism and of the concept of space as the essence of architecture. He identified three stages in the conception of space throughout the history of architecture. In the first stage, as exemplified in ancient Egypt, Sumer and Greece, architectural space was created by the interplay of volumes, paying less attention to the interior space.

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[199] Gideon, Sigfried, (1954) Space, Time and Architecture, p.436
[200] Lynch, Kevin, (1972) What Time is this Place?, p.166
[201] Gideon, Sigfried, (1954) Space, Time and Architecture, p.822

In the second stage, which began in the middle of the Roman period, architectural space was synonymous with the hollowed out space of the interior. The third stage started at the beginning of the twentieth century with the abolition of the single view of perspective, which brought about an optical revolution. The profound consequences of this development on our perception of the architectural and urban space were the appreciation of the 'space-emanating qualities of free-standing buildings', and finding an affinity with the first, ancient stage of space conception.[202]

In the past, space and time were interdependent at scales and speeds beyond our limited scope and slow pace of daily experience and beyond our even slower social and historical processes. The way we can meaningfully introduce the fourth dimension of time into space is by concentrating on the process of its evolution and change. Following the way space has been made and transformed will allow us to add a fourth dimension to our spatial understanding. On the one hand, we will need to study space in the context of the political and economic processes that have produced it. On the other hand, by seeing space as an outcome of, and a contributor to, the daily practices that constitute social relations, we can broaden our spatial understanding to incorporate the fourth dimension. The lived experience of space is one in which time is inherent.[203]

Madanipour stresses the point that conception of space arrived at in this way is dynamic: space at all its possible scales, from global space to the micro space of daily routines, are all constantly changing yet embedded in their social context, allowing multiple but interrelated identities.[204]

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[202] Madanipour, Ali, (1996) Design of Urban Space, p. 9
[203] ibid, p. 23
[204] ibid, p. 30

The concept of space has been questioned since the 1970s by post-modernists, who have shown a renewed interest in corporeal mass and its meanings. This reflects the long lasting dilemma between mass and void, between empirical and conceptual, between real and abstract. It is a dilemma between physical space, which can be understood immediately by the senses, and mental space, which needs to be interpreted intellectually.[205]

The relationship between physical and social space, i.e. between form and function in modernist architectural language, has been one of the key themes of the post-modern challenge to modernism. The modernist formula, 'form follows function', related the social and physical space in a rather simplistic and deterministic way. The post-modern challenge, in contrast, has attempted to disengage this relationship and to concentrate on the physical space. However, neither the narrow linear way that social and physical spaces were combined in modernist architecture and planning, nor the political escapism associated with a post-modernist disregard of social space, can be maintained in a socially concerned approach to urban environment. In the meantime, the divorce between physical and social space has widened the gap between architecture and social sciences with their different conceptions of space.[206]

> Soja identifies two concepts of space: the first is the physical space of material nature, under which he (wrongly) classifies the classical debates about absolute versus relative theories (Soja, 1989: 120). The second concept (which is indeed the relational concept) is the mental space of cognition and representation, which includes the attempts to explore the personal meaning and symbolic contents of mental maps and landscape imagery. He then following

[205] Madanipour, Ali, (1996) Design of Urban Space, p. 9
[206] ibid, p. 11

> Lefebvre, introduces a third concept of social space and argues that one of the most formidable challenges to contemporary social theory is to define the interconnections of these three spaces. Soja's analyses, similar to Tschumi's (1990) and partly Dear's (1994), draws upon the powerful analysis of social space by the philosopher Henri Lefebvre, whose work, as outlined in his major work *The Production of Space* (1991), has influenced both modernist and post-modernist interpretations. While Lefebvre offers us ways of bridging the gap between mental and real space, however he introduces another dilemma: between differential and abstract space-a dilemma that lies at the heart of the post-modernism versus modernism debate.[207]

Quoting from Sennett, Madanipour reveals the difference in the city, as old as the city itself, as it was known from the ancient times that, in Aristotle's words, "A city is composed of different men; similar people cannot bring a city into existence.". For him, especially since the nineteenth century and the unprecedented growth of cities, the issue of difference and diversity has become a central feature of urban life. In this theory of urbanism, for example Louis Wirth saw heterogeneity, along with population size and density, as a determining feature of the city. Emphasis on heterogeneity of urban life is evident in the discussions about strangers in the city, which have occupied a prominent place in sociological inquiries, to the extent that city life has been seen as a world of strangers.[208]

The attempt to integrate the social and physical dimensions of space, or in other words to contextualize the physical space in terms of human practices, is an important step in our understanding of space. We cannot identify our environment as an unrelated collection of material objects, as exemplified in the tendency to equate cities with their buildings. On the other hand, we cannot understand our space as merely a container of social relations without a physical dimension.

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[207] Madanipour, Ali, (1996) Design of Urban Space, p.16
[208] ibid, p.19

In their attempts to introduce space into social theory, some geographers seem to have moved towards a concept of nonphysical, mental space, which is merely a by-product of social relations, and which we can understand only through verbal means, denying the non verbal forms of understanding with which we relate to our space. At any point in time, our conceptualization of space will need to focus on both its physical and social dimensions. The physical space that we perceive, create and use is embedded in our daily practices and it is through charting the process of its making that we can understand this environment. Inherent in the notion of making is the relationship of space with time.[209]

4.1. Bazaar as a Spatial Reflection of Clock Tower

Although there are differences between them, market place, agora, "çarşı" and Roman fair, and bazaar more or less had the same functions. They were located in the center of the old city order, where the main roads intersected. The arrangement of commerce for the pedestrian use had a direct part on city planning. While having some differences with different life styles and socio-cultural properties, "bazaar" of the East is taken as the equivalent of Western "market place" in this thesis. There are direct interactions between commerce and culture, as commerce is a style of communication, which is always traveling and carrying products to human beings through geographies and cultures.[210]

[209] Madanipour, Ali, (1996) Design of Urban Space, p.20
[210] İnce, Dilek, (2000), quoting from Uçkan, (1999: 78), Analysis of Shopping Activity and Its Spatial Organization, unpublished master thesis, p.94

Figure 4.1 Social interactions of individuals in bazaar.

Mumford mentions that, the two classic forms of market, bazaar, and the booth or shop-lined street, had possibly found their urban form by 2000 B.C. at least.[212] Between about fifth and tenth centuries, cities ceased to play any significant roles as centers of production and trade.[213] Then around tenth century, the two islands of safety against invaders – the castle and the abbey – increasingly extended their walls to encircle growing settlements, in Europe. The walled town provided the security necessary for the revival of the marketplace – at first, a weekly event just outside the wall.

The cathedral was the central institution in the growing city of the Middle Ages, and the marketplace could often be found in an adjacent space, to take advantage of the constant activity.[214]

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[212] Mumford, Lewis, (1961) The City in History, p. 72
[213] Public Space, p. 53
[214] ibid, p. 54

4.1.1. Time Perception in Commercial Town Square

Before the age of the clock and the time-kept city, there was for tribal man a cosmic clock and a sacred time of the cosmogony itself. When tribal man wanted to build a city or a house, or cure an illness, he wound up the cosmic clock by an elaborate ritual reenactment or recitation of the original process of creation.[214]

> When one thinks of time, not as a sequence of experiences, but as a collection of hours, minutes and seconds, the habits of adding time and saving time come into existence. Time took on the character of an enclosed space: it could be divided, it could be filled up, it could even be expanded by the invention of labor-saving instruments. Abstract time became the new medium of existence. Organic functions themselves were regulated by it: one ate, not upon feeling hungry, but when prompted by the clock: one slept, not when one was tired, but when the clock sanctioned it.[215]

As Mumford mentions, the spread of rapid transformation occasioned a change in the method of time-keeping itself. Sun time, which varies a minute every eight miles as one travels from east to west, could no longer be observed. Instead of a local time based upon the sun, it was necessary to have a conventional time belt, and to change abruptly by a whole hour when one entered the next time belt. This carried to a conclusion that standardization of time that had begun with the foundation of the Greenwich observatory. The entire planet was now divided off into a series of time-belts.[216]

> ... the tempo of almost everything in life was speeded, the span was contracted, and the limits were arbitrarily clipped, not in terms of the function and activity, but in terms of a mechanical system of time accountancy. Mechanical periodicity took the place of organic and functional periodicity in every development of life...[217]

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[214] McLuhan, Marshall, (1964) Understanding Media, p. 155- 156
[215] Mumford, Lewis, (1934) Techniques and Civilization, p. 17
[216] ibid, p. 198
[217] ibid, p. 197

4.1.2. Spatiality of Commerce in Town Square

As Madanipour mentions, the speed of change is slower in villages and peripheral regions, so it is not possible to see the dynamism of the metropolis.[218] For him, the slow pace of change in the peripheral regions means a more stable relationship between people and space and more fixed identities; and a slower pace of identity change and a more coherent set of relations between social and physical space.[219]

Societies developed public spaces for their various needs of religious, communication and commerce, in time. These public spaces reflected the cultures and habits of the societies to which they belonged. Having a specific place in people's lives, the market has long played a role in communicating local news, providing a context for political behavior. Public places have enabled the social exchange of a widely ranging nature covering individual as well as communal issues. They also provide the grounds for demanding personal and political rights. Although there are vast differences in the forms of communal life across societies, public life has been an integral part of the formation and continuation of social groups.[220]

Sennett mentions that the whole medieval town except the church was a market. The commerce was all in open spaces, in streets, houses and everywhere. The market-places were rarely designed; these were the spaces, which the commerce was little more than the going on commerce and bargaining in open or closed spaces.[221]

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[218] Madanipour, Ali, (1996) Design of Urban Space, p.24
[219] ibid, p.25
[220] Public Space, p. 23
[221] Sennett, Richard, (1999) Gözün Vicdanı, p.33

Figure 4.2 Bazaar at the town center.

In the small town of the Middle Ages, the town market was a valuable asset with its closed economy. The town's main income was the market tolls taken from nonresident users, which prevented open-ended immigration and growth. Within the town, the artisans' and shopkeepers' livelihood depended on their nearness to the marketplace. The area around the market was the most prized; and after that, the streets leading to the town gates. The most advantageous layout from the shopkeeper's and artisan's point of view was the wheel – several streets radiating from the market out toward the city gates.[222]

Mumford mentions that, the new attitude toward time and space infected the workshop and the counting house, the army and the city. The tempo became faster and the magnitudes became greater:

[222] Kostof, Spiro, (1991) The City Shaped, p.48

"conceptually, modern culture launched itself into space and gave itself over the movement."[224]

4.1.3. Activity of Consumption in Bazaar / Market Place

Davis stresses the point that the pattern of shopping in the middle ages reveals an attitude to living that is in many ways the exact opposite of our own. Today, we think of a personal standard of living as a matter of getting an income and spending it, whereas, then, people thought primarily of what they could grow and make for themselves, and only incidentally of what they could buy with money. For though they were no less interested in worldly goods, the things that money could buy were few in kind and limited in quantity, while virtually everyone lived in close touch with the immediate source of all wealth, the land itself. For her, there were very few people indeed who did not either own land or work on it; the vast majority of the population were peasants.[225]

According to Davis, trade belonged mainly to the occupants of towns, but they too, were only a small minority of the whole country. The peasant's dream of perfection was not a chest full of coins to spend, but to farm wide acres in order always to have grain in store and malt to brew ale; to have cows and sheep, pigs and poultry among the village herds and flocks, so as to eat meat in abundance, so that butter and cheese were plentiful and there was an unfailing supply of tallow for candles and leather for a hundred purposes; to have the freedom of woods for hunting and for fuel and to see wool always waiting for the busy distaffs of his wife and daughters. In other words, he did not work simply for money; he worked so as to avoid as far as possible the need for money.[226]

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[224] Mumford, Lewis, (1934) Techniques and Civilization, p. 22
[225] Davis, Dorothy, (1966) A History of Shopping, p. 3
[226] ibid, p. 4

Davis mentions that, there were some things peasants could not produce and needed to buy. This meant selling what he could spare in the local market. By the fourteenth century, there was a market of some sort within a day's journey. "The size and importance of market towns grew steadily throughout the middle ages, yet for many centuries after regular marketing had become common place for the whole population, the trade in markets remained poor and crude."[227]

> The narrow streets in which the markets were held were lined with tall, narrow houses, oversailing above and open-fronted at street level for they were house, warehouse, workroom and shop in one. Business was done with the customer standing in the street and dealing over the dressing board or counter which at night was pulled up and fastened to act as a shutter. It was tempting to make this board as wide as possible, but in Coventry and no doubt elsewhere it was supposed to be narrow enough not to project beyond the eaves of the house.[228]

According to Mumford, the special market day lingered on in rural neighborhoods; but in the commercial town every day tended to be market day. Buying and selling became not merely an incidental traffic in the conveyance of goods from producer to consumer; it became one of the principal preoccupations of all classes. ""Marketing" rested on the basis of domestic needs: "shopping" was a less urgent, a more frivolous, occupation."[229]

> But the final result of capitalism was to introduce the modes of the marketplace, in a universal form, into every quarter of the city: no part of it was immune to change, if this could be brought about a profit. This change began in the medieval city, with the growth of long- distance trade.[230]

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[227] Davis, Dorothy, (1966) A History of Shopping, p. 4
[228] ibid, p. 20
[229] Mumford, Lewis, (1938) The Cultures of Cities, p. 99
[230] Mumford, Lewis, (1961) The City in History, p. 411

4.2. Shopping Malls as a Spatial Reflection of Mobile Phone

The center of a world city is often a fast moving place, with a multiplicity of identities and a potential for plurality and therefore fragmentation of social relations.[230] In modern city, for Sennett, the crowded spaces are either the consumption places for shopping or the places limited with tourism.[231]

To study the changing relationship between the public and private in urban space, it would be appropriate to look at the new additions to urban areas. The population shift brought to prominence a significant new forum for public life – the shopping mall – and also greatly altered the shape of center cities.[232] As large-scale schemes constitute a large proportion of new urban fabrics, shopping malls can be chosen as an example with their scale of competing the city center.

Open and publicly accessible places where people go for group or individual activities can be defined as public spaces.[233] While public spaces can take many forms and may assume various names such as plazas, malls and playgrounds, they all share common ingredients; each of these results in a place that accommodates people for specific purposes and becomes overtime, a site that people rely on to meet, relax, protest or market.

> Public space is the stage upon which the drama of communal life unfolds. The streets, squares and parks of a city give form to the ebb and flow of human exchange. These dynamic spaces are essential counterpart to the more settled places and routines of work and home life, providing the channels for

[230] Madanipour, Ali, (1996) Design of Urban Space, p. 24
[231] Sennett, Richard, (1999) Gözün Vicdanı, p.14
[232] Public Space, p.68
[233] ibid, p.50

> movement, the nodes of communication, and the common grounds for play and relaxation.[235]

Carr et al. regard public space as 'the common ground where people carry out the functional and ritual activities that bind a community, whether in the normal routines of daily life or in periodic festivities.' It is 'the stage upon which the drama of communal life unfolds'. For Walzer, 'Public space is space we share with strangers, people who aren't our relatives, friends or work associates. It is space for politics, religion, commerce, sport; space for peaceful coexistence and impersonal encounter'. The character of public space 'expresses and also conditions our public life, civic culture, everyday discourse'. Francis Tibbald saw the public realm as, " all the parts of the urban fabric to which the public have physical and visual access. Thus, it extends from the streets, parks and squares of a town or city into the buildings which enclose and line them'. The public realm is, therefore, 'the most important part of our towns and cities. It is where the greatest amount of human contact and interaction takes place'.[236]

As Madanipour mentions, public space has played a considerable role as a meeting point and a container for social movements; where social interaction and daily experience of urban life take place. Public urban space is space that is not controlled by private individuals or organizations, and hence is open to the general public. This space is characterized by the possibility of allowing different groups of people, regardless of their class, ethnicity, gender and age, to intermingle. This is distinctive from the private and semi-private space that is controlled by one group, keeping other groups at a distance. Wherever political and economic developments have led to the segregation of

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[235] Public Space, p.3
[236] Madanipour, Ali, (1996) Design of Urban Space, p. 147

social groups, spatial development has followed this trend and has contributed to that segregation.[236]

In considering the public – private spheres of people's lives, the origins of public spaces and their changes over time, physical, social, and political factors come into play.[237]

The changing nature of companies and the entry of the finance industry into production and management of built environment have partly led to the privatization of space. What has emerged is an urban space increasingly large sections of which are managed by private companies, as distinctive from those controlled by public authorities. Madanipour exemplifies these fragmented and privatized spaces as gated neighborhoods, shopping malls, and city center walkways, under heavy private surveillance and separated from the public realm by controlled access and clear boundaries. With the ongoing change of balance between the public and the private in cities, social and physical urban environments are being radically transformed.[238]

4.2.1. Time Perception in Fragmented City

In our day, through the single market, through globalization, through the convergence of time towards a single time, a world time, a time which comes to dominate local time, and the stuff of history, what emerges – through cyberspace, through the big telecommunications conglomerates, is a new totalitarianism and that is what Virilio calls globalitarianism. Now, with advent of globalization, it is everywhere that one can be under control and surveillance.[239]

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[236] Madanipour, Ali, (1996) Design of Urban Space, p. 145
[237] Public Space, p.26
[238] Madanipour, Ali, (1996) Design of Urban Space, p. 144
[239] Virilio, Paul, edited by John Armitage, From Modernism to Hyper Modernism, p.38

In the modern era, the level of time-space distanciation is much higher than any previous period, and the relations between local and distant social forms and events become correspondingly "stretched". Globalization refers essentially to that stretching process, in so far as the modes of connection between different social contexts or regions become networked across the earth's surface as a whole. Globalization can thus be defined as the intensification of worldwide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa.[240]

Surely, these transformations appeared with every new technological development. Still, the acceleration, which these developments gained with partially globalism and partially some peculiarities of new technologies, like connectivity and simultaneity, determined this century and transformed the concepts of both time and temporality.[241]

As Harvey mentions, time is a vital magnitude under capitalism, because social labor is the measure of value and surplus social labor time lies at the origin of profit. Furthermore, the turnover time of capital is significant because *speed-up* is a powerful competitive means for individual capitalists to augment profits.[242]

According to Lynch, where separation from the normal rhythm is prolonged, these artificial settings may occasionally even be used to modify time, by changing its cycle or rate. Nor are our clues solely natural ones – great cities have rhythms of sound, light and visible activity which convey time and season to the experienced observer as vividly as does the sun.

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[240] Giddens, Anthony, (1990) The Consequences of Modernity, p.64
[241] Sassen, Saskia, (1998) "Juxtaposed Temporalities: Producing a New Zone", Any Time, p. 118
[242] Harvey, David, (1989) The Condition of Postmodernity

Lynch makes a discussion of place as an emblem of past, present and future time. There is a special poignancy in the moment of transition, which has its analogue in the pleasure of lingering in a doorway, the transition between spaces. He emphasizes that, the coming of the Midwestern spring, the setting of the sun, the turning of the leaves in New England, the arrival of the first heavy snow, all heighten the sense of the passage of time.[243]

These clues might also be amplified and sharpened. We want to coordinate our activity with the activities of others, and objective time is only a means for doing this. For him, a satisfying public environment will also indicate the timing of publicly accessible activities.[244]

As we spend more of our lives in interior environments, we are deprived of many natural clues to the passage of day and season.[245] Office and factory building long corridors and subways are timeless environments, like caves or the deep sea. Like in them, in shopping malls also, light, climate and visible form are invariant. Customers are simultaneously both in the city and also in the broken time of the mall. As technical advances separate us from these natural clues, we may be forced to some ingenious simulations. The notions of space and place are dispersed and time does not flow but becomes abundant.

4.2.2. Spatiality of Commerce in Super Blocks

The spread of the suburbs and the proliferation of the suburban shopping mall have greatly affected the shape of public spaces in the second half of the twentieth century. The suburban mall, typically set in the midst of a large parking area, and building is set backwards,

[243] Lynch, Kevin, (1972) What Time is This Place?, p. 86
[244] Lynch, Kevin, (1972) What Time is This Place?, p. 69
[245] ibid

bears no such relationship with its surroundings. For its perception from the street, billboards and symbols are used, and the malls are built in an attractive bigness and in attractive colors. As Venturi mentions, even the parking lots are ritualized and given a ceremonial function.[246]

Rubenstein defines "mall" as "an area usually lined with shade trees and used as a public walk or promenade. As used today, "mall" denotes a new kind of street or plaza in central city business areas oriented toward pedestrians and served by transit." For him closing a street, partially or completely for vehicular traffic, is "shopping mall", but this definition will not be used in this thesis. [247]

The widespread development of shopping centers did not occur until the construction of super highways and the explosion of suburbia.[248] Once it was enclosed, the mall became "a major source of attraction in its own right, rather than simply a gap between stores", and could host a wide variety of informal eating areas, exhibitions and special events. Many downtown shopping districts were losing much of their business to suburban shopping malls.

Even more separated from the street is what William H. Whyte calls the "megastructure" – a "huge multipurpose complex combining offices, stores, restaurants, and garages, and enclosed in a great carapace of concrete and glass." The large complexes provide little more than a blank wall to the street, and offer suburbanites and individuals the opportunity to visit downtown without being aware of the city's streets and inhabitants.[249]

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[246] Venturi, R., (1977) Learning From Las Vegas, , pp.77
[247] Rubenstein, H. M., (1992) Pedestrian Malls, Streetscapes, and Urban Spaces, p.21
[248] Public Space, p.71
[249] ibid, p.74

Shopping Malls have competed with city centers by taking away their social and economic livelihood as shopping and leisure complex. The scale of these buildings helps to create the image of a city. By seeing space as a social product, as 'constituted out of relations', the spatial becomes social relations 'stretched out'. There is however a dynamism in social relations, which need to be extended to spatial analysis.[250]

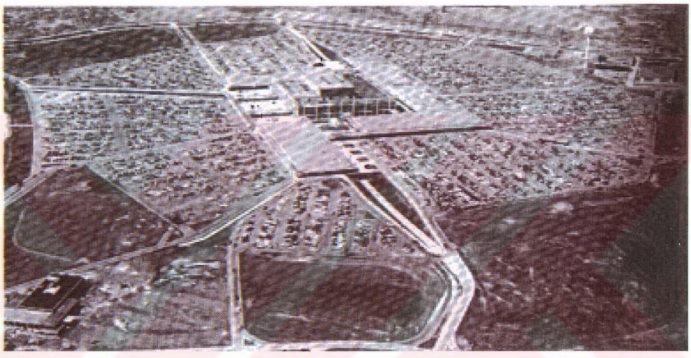

Figure 4.3 A large department store is in the center, ringed by a transportation area and parking area.

The scale and desire claim to compete with the city center, which makes it in some sense comparable to the whole of the city center rather than to some of its parts. When compared with the more traditional city centers, however this public space would rate as semi-public due to its limitations. In a city center, the ranges of use and of users are wider. It is true that the predominance of shopping in the city center has reduced its diversity, which brings it close to shopping centers. But there are still other activities in the city center that make it functionally more diverse. If the city center space is heavily monitored

[250] Madanipour, Ali, (1996) Design of Urban Space, p. 22

through security cameras, it still can afford to be a site for a wide range of more spontaneous activities and events, where street vendors can be seen side by side with political campaigners. The same diversity can be observed with the type of visitors. By definition, the town center is a focal point for townspeople from a variety of age, gender and social groups. If some parts of the city center favour the more affluent groups, there are other parts that cater for the less affluent.[251]

As Madanipour mentions, the city center offers a wider range of possibilities to a larger part of the public and hence is a more democratic space. The result is that urban public space is increasingly contested by semi-public, totally managed environments created for some social groups and excluding others, as caused by, and causing further, social and spatial segregation.[252]

The public space in these malls may appear to be similar to a high street or a town square populated by promenading and relaxing people. They provide a kind of "town square" which establishes not only strategic positions for vertical transportation between various levels, but also creates natural meeting places and give an opportunity for the arrangement of public events, such as concerts, exhibits, fashion shows, etc. This is a 'public space' with a clear functional role: it is owned by private companies, allowing private individuals to use it for certain purposes. They are used by private individuals, going there for shopping or leisure. Public space here has a leisure function associated with shopping, rather than contributing to an active social function such as intersubjective communication.[253]

[251] Madanipour, Ali, (1996) Design of Urban Space, p.152-153
[252] Madanipour, Ali, (1996) Design of Urban Space, p.153
[253] ibid, p.150

Users can be seen as private individuals entering a trading space where leisure functions essentially serve trading interests. Its qualities of a well-managed, climatically protected, secure shopping environment correspond to, and invite those social, gender and age groups who use it for predetermined purposes. The value of the consumption object is lost behind the packing or the mark of it.

There has been a move towards standardization of design and privatization of space. In these huge malls, the entrances and exits are controlled. The security guards at the entrance check the customers with detectors and hidden cameras, which make the sense of spectacle inside. Within a semi-privatized planning environment, they have their own security team. Along with globalization of the property industry, these changes have had far-reaching impacts on urban landscapes and on the process, which produce them.[254]

Contrary to the grocer's few amount of goods arranged in a primitive order, these malls exhibit their products in an advanced way, in huge containers. Trademarks, which can be found at any place of the world at any time, are sold in these introverted spaces, which have determined boundaries. Individuals are in pursuit of not the products, but the standard of it and the pleasure of shopping.

4.2.3. Activity of Consumption in Simultaneity

> As a rule, the economic system was absorbed in the social system, and whatever principle of behavior predominated in the economy, the presence of the market pattern was found to be compatible with it. The principle of barter or exchange, which underlies this pattern, revealed no tendency to expand at the expense of the rest. Where markets were most highly developed, as under the mercantile system, they throve under the control of a centralized

[254] Madanipour, Ali, (1996) Design of Urban Space, p.154

> administration, which fostered autarchy both in the households of the peasantry and in respect to national life. Regulation and markets, in effect, grew up together. The self-regulating market was unknown; indeed the emergence of the idea of self-regulation was a complete reversal of the trend of development. (quoted from Polanyi)[255]

To Victor Gruen, shopping is more than buying something. Buying is the result of a predetermined and exactly defined aim. The activity of shopping is approached with a certain degree of aimlessness and usually with a generous supply of free time and a flexible amount of funds. It is typical of an affluent society and of a life pattern in which people have leisure time on their hands. The activity of shopping becomes a substitute for cultural, social and spiritual experiences.[256]

The public spaces of a shopping center are utilized by the shopper for activities similar to those which one could once experience in organically city centers before they were invaded by motorized traffic; like the activities of walking, promenading, ambling, strolling, which imply leisurely propulsion, having a social chat, sitting for a few minutes in order to watch others walking by.[257]

> So-called leisure behavior, once it had become part of the cycle of production and consumption, was already apolitical, if for no other reason than its incapacity to constitute a world emancipated from the immediate constraints of survival needs. When leisure was nothing but a complement to time spent on the job, it could be no more than a different arena for the pursuit of private business affairs that were not transformed into a public communication between private people. To be sure, the individuated satisfaction of needs might be achieved in a public fashion, namely, in the company of many others; but a public sphere itself did not emerge from such a situation.[258]

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[255] McLuhan, Marshall, (1962) The Gutenberg Galaxy, p.270
[256] Gruen, Victor, (1973) Centers For the Urban Environment, pp.69
[257] ibid, pp.82
[258] Habermas, Jürgen, (1989) The Structural Transformation of the Public Sphere, p.160

These too assumed fixed forms of informal sociability, Habermas mentions, yet they lacked that specific institutional power that had once ensured the interconnectedness of sociable contacts as the substratum of public communication-no public was formed around "group activities". The characteristic relationship of a privacy oriented toward an audience was also no longer present when people went to the movies together, listened to the radio, or watched TV. The communication of the public that debated critically about culture remained dependent on reading pursued in the closed-off privacy of the home. The leisure activities of the culture-consuming public, on the contrary, take place within a social climate, and they do not require any further discussions.[259]

> Under the common denominator of so-called human interest emerges the *mixtum compositum* of a pleasant and at the same time convenient subject for entertainment that, instead of doing justice to reality, has a tendency to present a substitute more palatable for consumption and more likely to give rise to an impersonal indulgence in stimulating relaxation than to a public use of reason.[260]

Large numbers of visitors, who create a public space with dynamics of their own, visit these shopping malls. It may not cater for the diversity and needs of all social groups. But that it is used by millions of people each year gives it a considerable public dimension. It may not be designed for intersubjective communication, but the presence of the people in these spaces renders it a site for such actions. Besides, it appears that its public spaces are, in legal terms, considered public and the restrictions of ownership or access would not prevent them from being so.[261]

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[259] Habermas, Jürgen, (1989) The Structural Transformation of the Public Sphere, p.163
[260] ibid, p.170
[261] Madanipour, Ali, (1996) Design of Urban Space, p.151-152

appears that its public spaces are, in legal terms, considered public and the restrictions of ownership or access would not prevent them from being so.[262]

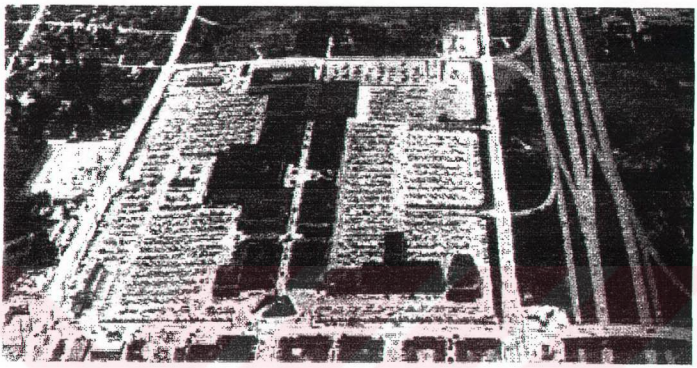

Figure 4.4 Example of the striplike arrangement typical of early regional shopping centers.

[262] Madanipour, Ali, (1996) Design of Urban Space, p.151-152

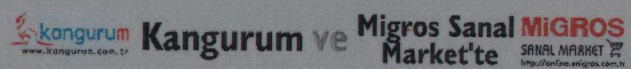

Figure 4.5 Virtual shopping.

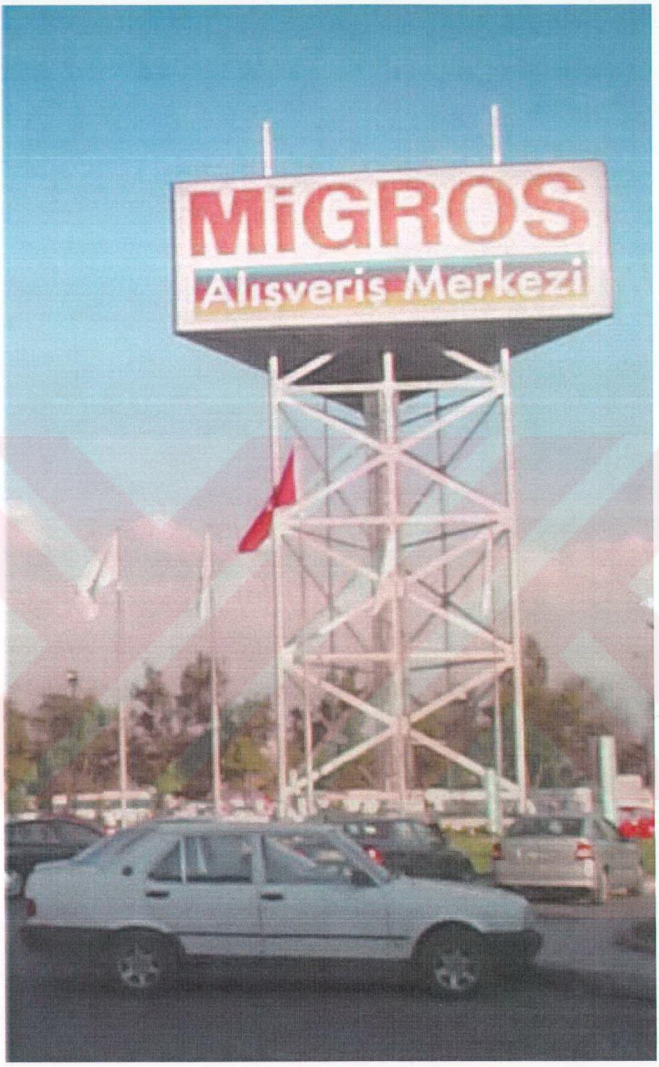

Figure 4.6 Sign of a shopping center.

Figure 4.7 Snapshots from shopping mall examples.

CHAPTER 5

REFLECTIONS OF NEW TIME PERCEPTION ON NEW ARCHITECTURE

> King Sun no longer orchestrated time in town; sunrise and sunset lost their purpose. In the Age of Enlightenment, the rhythmic duality that is at the beginning of everything found itself eliminated from our physiology and our consciousness.[263]

It was seen that perception of time determines the socio-cultural characteristics of societies and creates a new environment peculiar to it. In other words, the perception of time transformed and defined structures of cities by imposing changes on everyday life. It means that altering the time establishment affects the building types and the built environment. Architectural culture is also in a process of transformation with all these transforming dynamics.

In this thesis, these transformations were exemplified with symbolic cases; the clock tower, in the sense of a rupture in the perception of time, to clarify the alteration from natural time to mechanical time; and by the introduction of the mobile phone, to shed light on the transformations in our daily lives. And to illuminate the transformation of space, examples were chosen from commerce, which is one of the factors that have conditioned the size of cities, the extent of their growth, the type of order manifested in street plan and in building, the composition of their economic and social classes, their physical manner of existence and their cultural style, hoping to shed a light on

[263] Virilio, Paul, (2000) A Landscape of Events, p. 2

further works of architects. The question of this thesis was not "how did people do their shopping in the past?"[264] in conveying the story of transformation of shopping over eight centuries.

With the invention of the mechanical clock, a transformation of time perception from natural time to mechanical time took place. Being an indicator of time, clock tower witnessed this transformation of time perception, taking the obligation of time to declare and time to establish[265], from the bell towers of churches or minarets of mosques of that period. Clock towers were usually built at the town center, structuring the space with their visual and audial character.[266] They had a property of announcing the time to the society as a whole (not to a single individual like the mobile phone does today). Like the clock tower, bazaar / market place took place in the town center, in the center of daily movements, where individuals meet.

> ... the first manifestation of the new order took place in the general picture of the world: during the first seven centuries of the machine's existence, categories of time and space underwent an extraordinary change, and no aspect of life was left untouched by this transformation. The application of quantitative methods of thought to the study of nature had its first manifestation in the regular measurement of time...[267]

The hour, minutes and seconds applied their rhythms on daily life. Mumford quoting from Franklin mentions that, "Time is money". Becoming "as regular as clock-work"[268], the increasing tempo of civilization led to a demand for greater power, and in turn, power quickened the tempo. He adds that the regimentation of time, which had been irregular in the past, started to influence the entire Western

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[264] There are also unpublished master thesis in the Faculty of Architecture which studied this subject, i.e. İnce, D., Devellioğlu, Z. and Kansu, S., Ö.
[265] Cengizkan, A. (1999) "Saat Kuleleri ve Kamusal Mekan", *Arrademento Mimarlık,* p. 97
[266] ibid, p. 99
[267] Mumford, Lewis, (1934) Technics and Civilization, p.12
[268] ibid, p.16

World. That was mostly because of the mass production of cheap watches, which were first produced in Switzerland, in the eighteen-fifties.[269]

Today, as every individual has a mobile phone, people mostly do not need to carry a wristwatch. This intelligent invention has the properties of clock, time schedule, organizer, alarm, and calculator, other than its main function of communication. Unlike the clock tower, mobile phone informs about time to a single individual only. About its property of communication, also it is found appropriate to exemplify this tool for demolishing the public space with its personal use.

> We are in the epoch of simultaneity: we are in the epoch of juxtaposition, the epoch of the near and far, of the side-by-side, of the dispersed. We are at a moment, I believe when our experience of the world is less that of a long life developing through time than that of a network that connects points and intersects with its own skein. One could perhaps say that certain ideological conflicts animating present-day polemics oppose the pious descendants of time and the determined inhabitants of space. (Foucault, 1986, 22)[270]

Announcing the time to regularize it for the society, the clock tower's property of being bounded by place and structuring the space; bazaar, which is connected with it, has a light, temporary spatiality. On the contrary, mobile phone, announcing time to the individual alone, has a special property independent from place, and thus dispersing the place. Shopping mall has a heavy, permanent spatiality on the other hand. With their hugeness, shopping malls not only contain shopping activity, but also any other activities which take place in a city center; like coffees, hairdressers, cinema complexes, drycleaners, and so on. Therefore, they act like a city center and become a focus of attraction.

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[269] ibid, p.197
[270] Soja, Edward, W., (1996) quoting from Foucault, Postmodern Geographies, p.10

While the town center of ancient cities formed the public space, the public uses of these malls are discussed today.

Although there has been much discussion of the apparent decline in public life, we suggest that the recent public space is simply taking new forms. The expansion in the number and types of public places seen today, including new commercial spaces, shows how changes in the ways we live together continue to shape the design and management of places. It would be appropriate here to summarize some of the aspects, with an attempt to classify the new-coming transformation.

5.1. Transformations in Urban Scale

> Cities are a product of time... In the city, time becomes visible: buildings and monuments and public ways, more open than the written record, more subject to the gaze of many men than the scattered artifacts of the countryside, leave an imprint upon the minds even of the ignorant or the indifferent ... Layer upon layer, past times preserve themselves in the city until life itself is finally threatened with suffocation... Cities arise out of man's social needs and multiply both their modes and their methods of expression ... the city records the attitude of a culture and an epoch to the fundamental facts of its existence.[271]

Today, our relations with cities have changed as well.[272] Elements of the past and the present are situated simultaneously in today's city. 'There are many cities at the same time and other cities in the city every time'.[273] As Virilio and Eisenman pointed out, to understand complexities of the city, we must depart from a "static urbanism" and view the city instead in terms of the movement, rhythm, speed, in a

[271] Mumford, Lewis, (1938) The Culture of Cities, p. 4-5
[272] Please see Simmel, Georg, "Metropolis and Mental Life"
[273] Rajchman, John, (1998) "Time Out", Any Time, p. 163

word the "time-spaces"[274], that the various modes of transport and transmission make possible.

Transportation

Transport and transmission have performed a key role in transforming the urban space. The railroad, which was both the most characteristic and the most efficient form of techniques, was the first to use electricity; and the telegraph made possible a long distance signaling system. "It was in the railroad that the routing through of production and the timing and inter-relationship of the various parts of production took place more than a generation before similar tables and schedules and forecasts made their way into industry as a whole." [275]

The birth of the suburb gained speed with the development of railway transportation in the nineteenth century. The railway caused a rupture from the city center but the new settlements were ordered towards the railway and massed around the stations.[276]

Automobile did not show its effects on the society and the city until the cheap and mass production of motorcar by Henri Ford in 1910s. By the widespread use of motorcars, main highways cut through the center of towns other than the uneasiness of congestion, noise, and the dangers they brought with. [277]

> Tschumi has been concerned to establish a new architecture for a new age ... His interests began to shift from spatial considerations to spatio-temporal ones. Out of a theory of movement through architecture there began to emerge a theory of architecture in an age of movement. He works on 'dromology' which is 'the study and analysis of the impact of increasing

[274] Rajchman, John, (1998) Constructions, p. 28
[275] Mumford, Lewis, (1934) Technics and Civilization, p. 199
[276] Tekeli, İ., Okyay, T., (1981) Dolmuşun Öyküsü, p.67
[277] ibid, p. 236-237

> speed of transport and communications on the development of land-use'. . . He analyzes the effect of speed within the contemporary city, which is read as a machine whose streets act as channels for rapid communications.[278]

Bigness

Commerce also usually takes place in oasis around the city, which is invaded by the automobiles and highways. Built on an area of nearly a city citadel, shopping malls formed super blocks, competing the city center even it was ethical or not. The environments of cities are more hygienic in these compact spaces.

Therefore, road networks in cities were meant to ease the vehicular movement to reach these super blocks, covering the whole city. The roads are exchanged for "channels" (like the subway system), which work as "veins" in the city. In the future, the huge size of these malls may determine the scale of new designs, which the togetherness may form the city without a designed unity.

As Sassen stresses, the previous local – regional – national – international space is not valid today, there is the new scale with ads and worldwide codes.[279]

Mass Culture

The rapid transformation of our environment is both affected by our life styles and also affects our everyday lives. We can feel this transformation not only in our built environment but also in every part of our lives. In these days, we are all watching the advertisements of "office mobile", which is a kind of mobile phone using system with the necessaries of an office, like fax, computer and also visual properties.

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[278] Virilio, From Modernism to Hypermodernism, p.74
[279] Sassen, Saskia, (1998) "Juxtaposed Temporalities: Producing a New Zone", Any Time, p. 121

Consumption is to be one of the basic characters of "specular moment of modernity".[280] Visual character of the product is the most important issue for the sale, "providing the consumer with an endless supply of images that can be understood as either detached from the real world of real things". [281]

> The new cities are laboratories of this stifling society . . . Simultaneously, the disappearance of the "urban jungle" that corresponded to free market capitalism – in all its lack of comfort, its luxuries, and its adventures – continues apace. The center of Paris is radically restructed by the organization of automobile traffic: the quays transformed into highways, Place Dauphine into an underground parking garage.[282]

Communication

The industrial inventions and scientific discoveries in all parts of social life enlarge the working hours and annihilate spatial distances. In today's simultaneous time perception, with telecommunications and "electronic cottages" [283] it is possible to work anywhere. The locations of the firms are not important anymore and operations are freer with the flexible information systems and by the speed of transportation systems as it is easier to reach the images, sounds and any knowledge with these interactive communications. While these telecommunication systems are "superseding the need for cities"[284] space is fragmented and the settlements are repressed towards the outer regions.

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[280] Shopping, Place and Identity, quoted from Guy Debord, 1966, *The Society of Spectacle*, Detroit: Black and Red, p. 3
[281] ibid
[282] Sadler, Simon, (1998) The Situationist City, p. 55
[283] Castells, Manuel, (1989) The Informational City, p. 1
[284] ibid

Mobile phones can be mentioned as one of the other factors for fragmenting the city. In our country, which is one of the most mobile phone consuming countries, the shopping malls were started to be built in the midst of 1980's, in a period of governmental deficiency.

Baudrillard sees shopping malls as "homogeneous consumer machines, creating consumer homogeneity". For him, the consumer is crushed by the vast number of products in the mall.[285]

> We have reached the point where 'consumption' has grasped the whole of life, where all activities are squeezed in the same combinatorial mode; where the schedule of gratification is outlined in advance, one hour at a time; and where the 'environment' is complete, completely climatised, finished and culturised ... work, leisure, nature, and culture all previously dispersed, separate, and more or less irreducible entities that produced anxiety and complexity in our real life, and in our 'anarchic and archaic' cities, have finally become mixed, massaged, climate-controlled, and domesticated into the single activity of perpetual shopping.[286]

Movements

The speed of the city increases through automobile traffic and also through telecommunications.[287] Human beings do not seem to be the dynamics of architecture anymore, but the products of architects tend to determine the living styles and movements of the users. Since the human vision is not adequate anymore; cameras are used for totalitarian control.

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[285] Shopping, Place and Identity, quoted from Baudrillard, J., 1988, Consumer Society, in M. Poster (ed.) *Jean Baudrillard. Selected Writings*, Cambridge: Polity Press, 26-43, p.31
[286] ibid, p.33-34
[287] Virilio, Paul, edited by John Armitage, The Time of the Trajectory, p.63

5.2. Transformations in Building Form

Building types, forms, façades, materials, techniques, applications and interpretation of building programs of today's cities do also change with the changing economy, ideology, technology, scientific inventions, therefore transportation, communication, mass culture and activities.

> And so, for architects, what is at stake can no longer be to reclaim the slowness of the past, however they conceive it, but to learn to handle real time...Up to the present day, architects have only worked with real spaces. From there stemmed the importance of geometry, structure and materials. But in the future, architects will also have to deal with real time. The virtual and the real city will exist side by side. The task ahead, however, is to make them truly co-habit.[287]

New Building Types

Tschumi summarizes Paul Virilio's thesis as "time has finally overcome space as our main mode of perception."[288] Virilio mentions that the established notations like plan, section and elevation have lost their general validity.[289]

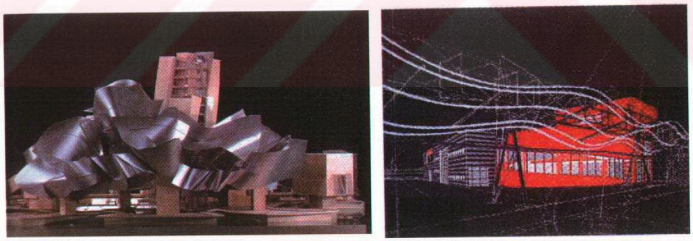

Figure 5.1 Computer aided designs.

They were the explanation style with the tools of drawing (with drawing tables and etc...), but with computer programs of our time it is easier

[287] Virilio, Paul, edited by John Armitage, The Time of the Trajectory, p.64-65
[288] Virilio, Paul, (2000) A Landscape of Events, P.ix
[289] Virilio, From Modernism to Hypermodernism p. 74

to work with models. "One should search for a time based notation system that would permit us to factor in the time of the built environment."[290]

Like Virilio, Bernard Tschumi has been concerned to establish a new architecture for this new age, working on the concepts such as rectilinearity, order, symmetry and compositional hierarchy, which are some of the basic principles of traditional architecture.

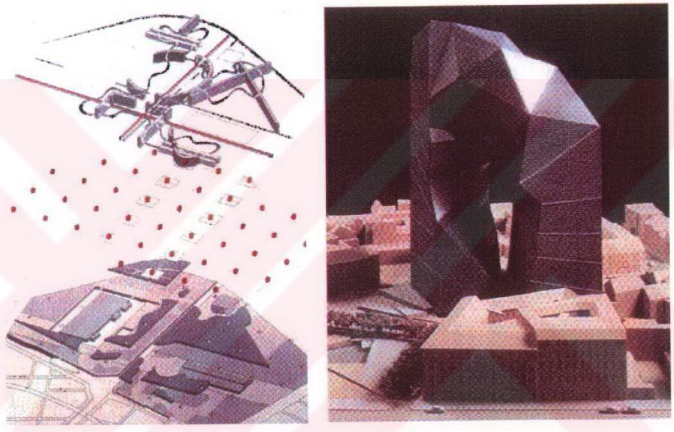

Figure 5.2 Computer aided presentations.

> Today we are entering an era of *intensive* time: that is to say that new technologies lead us to discover the equivalent of the infinitely small in time...We are living in both the extensive time of the cities of stories, of memories, or archives, or writing, and the intensive time of the new technologies.[291]

As the change is inevitable, both the new inventions, which adjoin our life styles, like the mobile phone and new building types, like shopping

[290] Virilio Live: Selected Interviews
[291] Virilio Live: Selected Interviews; Speed-Space, p.71

center, are a part of this process. Like the pyramids of Egypt or agoras of Greece or Eiffel Tower of France, shopping malls and other new building types of this era will be the architectural indicators of the socio-cultural life of this period.

New Building Programs

> Within the worldwide megalopolis, new programs are placed in new urban situations. The process has gone full circle: it started by deconstructing the city, today it explores new codes of *assemblage*.[293]

As we have seen before, building types are changed with the transforming dynamics, so that space. Similar to the expressions of Tschumi, Virilio comments this period as the 'program of absence', which he means how we program our definitive absence. For him the new space is a speed-space, where time is manipulated in the means of machine's time.[294]

Not only the building types, but also the use of many buildings are changed according to contemporary needs of human beings. Many of these buildings, such as factories, terminals, stations, etc. are being left for the alteration of their use. Most of the flats and houses in the city center are also abandoned while leaving the city center for better standards of living in suburbs, and now being used for different sorts of labor.

While the ancient factories, stations are reused for cultural activities, schools, concert halls, and so on, the dwellings left in the city center are now used as offices, game centers, restaurants, coffees, or anything else. But mostly, the new uses of these buildings do not go

[293] Tschumi, Bernard, (1994) Architecture and Disjunction, p.149
[294] Armitage, Virilio Live: Selected Interviews, p.71

beyond tyranny, as the new activities pushed inside do not suit the form.

This means that architecture is in a process of transformation and formation.[295] The buildings are left as wastes when their internal functions are changed and their programs may also have been transformed in the alternation process. So, it may be possible to say that it is not valid to give a program for the frozen time of any building for a fixed use.[296]

New Understanding of Façades

As the communication to these buildings is with automobiles in general, it is mostly probable to reach them from the garage and the façades are not important anymore. They are not ornamented as it was done before, but simplified just for the building's perception from the motorcar. Shopwindows are replaced with "trademarks".

Virilio mentions that, even the facades of buildings have been turned into time-based images. Giving an example from Rem Koolhaas's designs, he says that the reason for not designing facades any more is because of his belief of they will be modified in the coming ten years.

As the image is important in our day, changing the facades in ten years time is not a surprising situation. Virilio mentions that Koolhaas deals with the interior space more. [297]

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[295] Tschumi, Bernard, (1994) Architecture and Disjunction, p. 132
[296] Please see the essay "Bina Olarak Mimarlık ve Mimar, Bina Olmayarak Mimarlık ve Antimimar" of Murat Uluğ, in *Mimarlık,* 272, p.16-19
[297] ibid, p.64-65

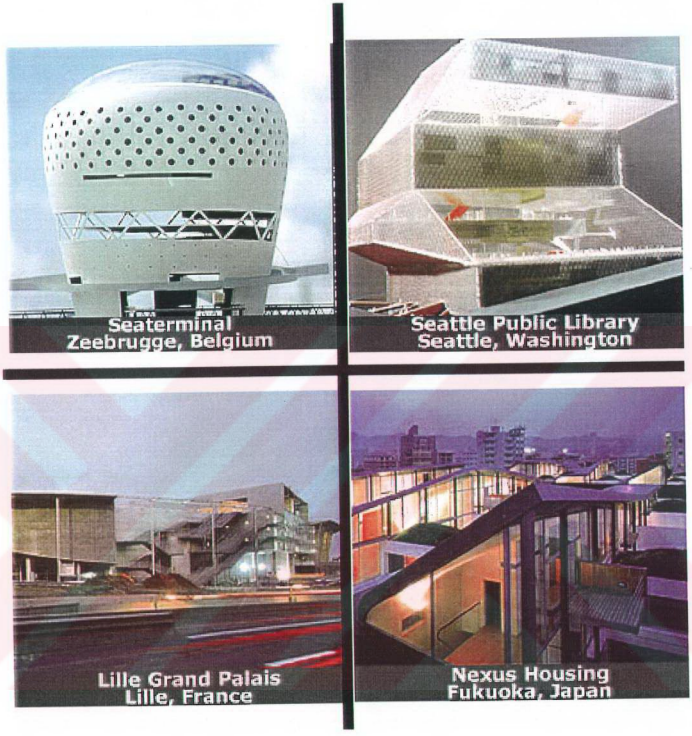

Figure 5.3 Designs of Rem Koolhaas.

New and Innovative Materials

Architecture is not the same as it was eight centuries before. It is more collective than it was in any time. Any materials from any where of the world can be used for the building process, as it is easy to order. The importance of local materials is not valid anymore.

Figure 5.4 Bilbao Guggenheim Museum, Frank O. Gehry

For Virilio, contemporary architecture is formed of an abstraction system of materials, which in most cases does not go beyond more than formalism.

Recent Anonymity

Time and space lose their importance in this process of evolution. At any time and in any place, activities of men may take place gradually. Also the activities of men are started to be more digital than physical.

Banks, libraries, commercial managements, etc. have taken place with all their information in the virtual environment of Internet. Internet allows a kind of space for any time. The user's identity, personality or physical characters are not necessary anymore. Without these knowledges, individuals act more freely when communicating with each other. The sense of reality is blurred.

Also the units of grocery, florist, cinema, dry cleaning, hairdresser and other items of everyday life, took their place in the virtual environment

today. The physical properties of any thing are less important with the use of Internet and virtuality. One possibility is the wide use of these virtual environments and the spaces designed for shopping activities to be out of service. In such a condition, the architectural products built for commerce will may be left as artifacts in the future.

New Trends of Flexibility

Lynch reveals that, "Change and recurrence are the sense of being alive . . . we reach out that world to preserve or to change it and so to make visible our desire."[298] As Virilio also mentions, every time there is a gain, there is a loss too. By losing the slow velocity of the revelation of things, we have lost one sense of time in favour of another. Giving an example of mechanical lift, he mentions that with the invention of this device, the use of staircase lost its importance, and was no longer the magnificent grand staircase of old. Mechanical lift allows our communication to target point, but the act of experiencing is lost, as it can also be observed in the examples of road and subway, city center and shopping mall, and many others. "But we gained in speed – as is always the case."[299]

It is possible to see this process in architecture also. The tools of architects changed in this age. We do not have to use our drawing tables anymore. Firstly the computers and now the laptops took the place of our drawing tables. Today it is possible to work in any place and at any time. The importance of office is not valid any more. As architects, we are living this process of timeless and spaceless period.

Like casinos or cinemas, shopping malls, which act like the city center, are designed timeless today. These show us that; spaces will be built mostly timeless and flexible in the future also.

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[298] Lynch, Kevin, (1972) What Time is This Place?, p. 1
[299] Virilio, Paul, edited by John Armitage, From Modernism to Hyper Modernism, p.42

Recent Applications of Technology

If it is appropriate to say it once more, our time has gained a new property with the developments of knowledge and communication. Architects and designers from different countries can work on a common project at the moment. Also the materials, workers, and the building areas can be chosen from different points of the world. There is not a problem of details, as they are solved and collected for any use. Building forms are spread on all over the world and there are markets for them. There is no importance of the regional.

> The city is the form and symbol of an integrated social relationship: it is the seat of the temple, the market, the hall of justice, the academy of learning... here is where human experience is transformed into viable signs, symbols, patterns of conduct, systems of order.[300]

World is witnessing some dramatical changes also in politics, economics and cultural lives. Authorities are waiting for the marriage between Marxism and Liberalism today. The wealth of Bill Gates is given as the first example of the condition, in which man can become rich with the power of his intelligence, other than the work power and capital of the Industrial Revolution. This shows individualism where human mind comes first, but not the work and worker.

[300] Mumford, Lewis, (1938) The Culture of Cities, p. 3

Figure 5.5 Roads are exchanged for "channels", which work as "veins" in the city. They allow the communication to target point but the act of experiencing is lost.

Figure 5.6 The 'environment' is complete, completely climatised, finished and culturised.

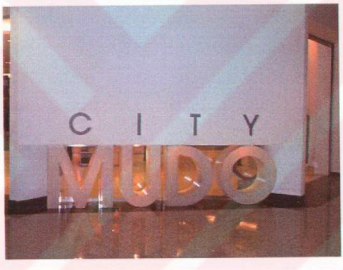

Figure 5.7 Shopwindows are replaced with trademarks.

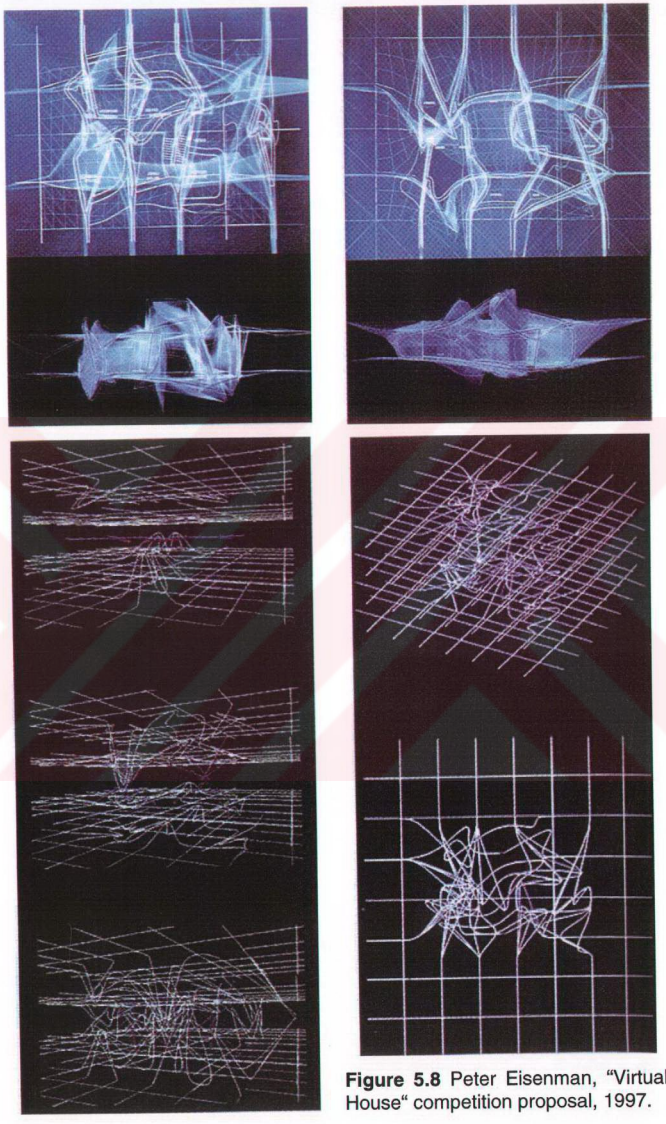

Figure 5.8 Peter Eisenman, "Virtual House" competition proposal, 1997.

Figure 5.9 Eisenman Architects, Memorial for the Murdered Jews of Europe, 1997

CHAPTER 6
HOW TO CONCLUDE?

This thesis is about the notions of time and space, which are closely related with each other and constitute the basic themes, when they are in relation with architecture. They affect the way we understand the world to be and provide a reference system by means of which we locate ourselves with respect to that world.

The transformations of socio-cultural characteristics of societies and the built environment are affected by the way of constructing time, while it defines the structures of cities by imposing changes on everyday life; altering time perception, influencing the building types and the built environment.

Time and space are simultaneously affected by each other and here it is mentioned that the way of constructing time changes with mechanical and digital understanding of time and understanding of space. And in this study, time is considered with firstly cosmic, then public and lastly personal properties.

Our time has gained a new property with the developments achieved in knowledge and communication. From the years that mechanical clock was invented on, the speed has increased throughout each following era. With effects of technological inventions of life, time perceptions and related with that, socio-cultural structures of societies change, so it is a conclusion that the spatial properties also change.

Especially with the developments in computer technology, modern societies are more universal today. Architectural culture is not apart from these tendencies. There is no importance of the regional in our age. Existing discourses are reargued and a search for new standards and values is lasting. Individualism and human mind took the place of the previous work and worker.

Here we have to remember Einstein's Relativity Theory of "nothing seems real until it is measured", for structuring the basis for contemporary philosophy. The most important subjects in our time are the light speed and the notions of space – time, for the reason that the universe does not have a stable point. Thus, in space, the directions and the boundaries are indefinite. Only the speed of light, which goes through the universe, is constant. Again, here we see that the way of living changes with new technologies, with new scientific inventions, economic developments, cultural transformation and thus with the new perception of time.

These bring the process of transformation and formation also to architecture. With simultaneity, architecture is more collective than it was at any time. At any time and in any place, it is possible to maintain daily activities. Also technical inventions allowed our communication to target point without experiencing, as it can be observed in many examples. While time and space lose their importance in this process of evolution, it is possible to speculate about the enhancement of timeless spaces in near future.

If this is a part of the evolution of civilizations or a result of technological works, there should be more ordered public works for planning and the substructures of cities should be prepared for these

transformations, in order not to damage the existing city. The authorities and actors in city planning and politics should be determined more specifically and whatever done for architecture or for city planning should be suitable for psychological or physical character of human beings, in the power of qualified technical teams. Architects always have to integrate new experiences in a system of previous experiences.

As this process is not a completed process, it is still promising and it is not possible to write a concrete conclusion here. And, this thesis says that new understanding and experiencing time bring new spaces, or vice versa, and our time needs our spaces.

So to conclude, the main purpose of the thesis may be considered to be achieved: To create an interface for architects, searching for qualified spaces for the coming future and for the correlated new philosophies, who will become the genius members of the innovative and the creative team of the future. To design spaces and architectural objects of higher quality is the responsibility of both architects and planners today. In any case, architects more than any one, should be aware of the dynamics which force the society and the city for a transformation, and their mission should still be to increase the life standards and space qualities of societies by offering qualified and well-designed spaces.

SELECTED BIBLIOGRAPHY

Arendt, H. 1994, *İnsanlık Durumu*, İletişim Yayınları, İstanbul.

Aristoteles, Augustinus, Heidegger, 1996, *Zaman Kavramı*, translated by Saffet Babür, İmge Kitabevi Yayınları.

Armitage, J., (ed.), 2000, *Paul Virilio: From Modernism To Hypermodernism And Beyond,* Sage Publications, London, Thousand Oaks, California, London.

Armitage, J., (ed.), 2001, *Virilio Live: Selected Interviews*, Sage Publications, London, Thousand Oaks, New Delhi.

Banham, R. 1960, *Theory and Design in the First Machine Age*, The MIT Press, Cambridge, Massachusetts.

Baudrillard, J. 1975, *The Mirror of Production*, translated by Mark Poster, Telos Press, St. Louis.

Baudrillard, J. 1995, *The Gulf War Did Not Take Place*, translated by Paul Patton, Indiana University Press, Bloomington, Indianapolis.

Baudrillard, J. 1996, *The System of Objects*, translated by James Benedict, Verso, London, New York.

Carr, S., Francis, M., Rivlin, L. G., Stone, A. M., *Public Space,* Cambridge University Press, Cambridge, New York.

Castells, M. 1989, *The Informational City*, Basil Blackwell Ltd., New York.

Cengizkan, A., "Saat Kuleleri Ve Kamusal Mekan", *Arredamento Mimarlık 100+14 Mayıs 1999,* pp. 96-103.

Cogito, (2000 Güz), Oto-mobil: Bir Röntgen Denemesi, Yapı Kredi Yayınları, İstanbul.

Davidson, Cynthia, C. (ed.), *Anytime Konferans Bildirileri Kitabı* (1998), Mimarlar Derneği 1927, Ankara.

Davis, D. 1966, *A History Of Shopping*, Routledge & Kegan Paul Ltd., London.

Elias, N., 2000, *Zaman Üzerine*, Ayrıntı Yayınları, İstanbul.

Fraser, J.T., 1978, *Time As Conflict,* Birkhauser Press, Basel.

Gane, M. (ed.), 1993, *Baudrillard Live: Selected Interviews*, Routledge, London, New York.

Giddens, A. 1990, *The Consequences Of Modernity*, T. J. Press Ltd., Padstow, Cornwall.

Giddens, A. 1991, *Modernity And Self-Identity*, Polity Press, Great Britain.

Giedion, S. 1954, *Space, Time and Architecture*, Harvard University Press, Cambridge.

Giedion, S. 1958, *Architecture, You and Me*, Harvard University Press, Cambridge, Massachusetts.

Habermas, J. 1989, *The Structural Transformation Of The Public Sphere,* Polity Press, Massachusetts Institute of Technology.

Harvey, D. 1989, *The Condition Of Postmodernity,* Oxford, Blackwell.

Heidegger, M. 1996, *Being and Time*, State University of New York, Albany.

Heidegger, M. "Building, Dwelling, Thinking", *Rethinking Architecture.*

İnce, D. 2000, *Analysis Of Shopping Activity And Its Spatial Organization,* Unpublished Master's Thesis, Ankara.

Kostof, S. 1991, *The City Shaped,* Bulfinch Press, Boston, Toronto, London.

L. Gardet, A. J. Gurevich, A. Kagame, C. Larre, G.E.R. Lloyd, A. Neher, R. Panikkar, G. Pattaro, P. Picoeur, 1976, *Cultures And Time*, The Unesco Press, Paris.

Le Corbusier, 1970, *Towards A New Architecture,* Praeger, New York.

Lefebvre, H. 1996, *Modern Dünyada Gündelik Hayat*, Metis, İstanbul.

Lynch, K. 1972, *What Time Is This Place?*, The MIT Press, Cambridge, Massachusetts and London, England.

Lyotard, J. F. 1991, *The Inhuman: Reflections On Time*, Translated by Goffrey Bennington and Rachel Bowlby, Stanford University Press.

Madanipour, A. 1996, *Design Of Urban Space: An Inquiry Into A Socio-Spatial Process*, University of New Castle, Newcastle upon Tyne, UK.

McLuhan, M. 1962, *The Gutenberg Galaxy*, Routledge & Kegan Paul, London.

McLuhan, M. 1964, *Understanding Media*, McGraw-Hill Book Company, New York, Toronto, London.

Mensch, J. R. 1996, *After Modernity*, State University of New York Press.

Miller, D., Jackson, P., Thrift, N., Holbrook, B. and Rowlands, M. 1999, *Shopping, Place And Identity*, Routledge, London and New York.

Mimari Akımlar 2 (1996), Yapı Endüstri Merkezi, İstanbul.

Morley, D., Robins, K. 1997, *Kimlik Mekanları, Yeni Medya Yeni Olasılıklar,* Ayrıntı Yayınları, İstanbul.

Mumford, L. 1934, *Technics And Civilization*, Harcourt, Brace and Company, New York.

Mumford, L. 1938, *The Culture Of Cities*, Harcourt, Brace and Company, New York.

Mumford, L. 1961, *The City In History*, Harcourt Brace Jovanovich, Inc., New York.

Mumford, L. 1972, *The Transformations Of Man*, Harper Torchbooks, New York, Evanston, San Francisco, London.

Nadolny, S. 1992, *Yavaşlığın Keşfi*

Newton, W. H. – Smith, 1980, *The Structure Of Time*, Routledge & Kegan Paul.

Norberg-Schulz, C. 1965, *Intentions In Architecture*, M.I.T. Press, Cambridge, Massachusetts.

Norberg-Schulz, C. 1985, *The Concept Of Dwelling*, Rizzoli International Publications, Inc., New York.

Norberg-Schulz, C. 1988, *Architecture: Meaning And Place*, Rizzoli International Publications, Inc., New York.

Pelletier, L., Perez – Gomez, A. 1994, *Architecture, Ethics, And Technology*, McGill-Queen's University Press, Canada.

Peters, P. 1977, *Fussgangerstadt*, Callwey Press, München.

Pirsig, R. M. 2001, *Zen Ve Motorsiklet Bakım Sanatı*, Ayrıntı Yayınları, İstanbul.

Rajchman, J. 1998, *Constructions*, The MIT Press Cambridge, Massachusetts London, England.

Ray, C. 1991, *Time, Space And Philosophy*, Routledge London and New York.

Rubenstein, Harvey M. 1992, *Pedestrian Malls, Streetscapes, And Urban Spaces*, John Wiley & Sons Inc., New York.

Sadler, S. 1998, *The Situationist City*, The MIT Press Cambridge, Massachusetts, London, England.

Schoenauer, N. 1994, *Cities, Suburbs, Dwellings*, School of Architecture McGill University, Canada.

Sennett, R. 1999, *Gözün Vicdanı*, Ayrıntı Yayınları, İstanbul.

Simmel, G., "Metropolis And The Mental Life", *Rethinking Architecture*.

Soja, Edward W. 1989, *Postmodern Geographies*, Verso, London, New York.

Soja, Edward W. 1996, *Third Space*, Blackwell Publishers Ltd, Cambridge, Massachusetts.

Tarkovsky, A. 2000, *Mühürlenmiş Zaman*, AFA, İstanbul.

Tekeli, İ., Okyay, T. 1981, *Dolmuşun Öyküsü,* ODTÜ Mimarlık Fakültesi Yayını, Ankara.

Tschumi, B. 1994, *Architecture And Disjunction,* The MIT Press, Cambridge, Massachusetts.

Urry, J. 1999, *Mekanları Tüketmek,* Ayrıntı, İstanbul.

Venturi, R., Brown, D. S., Izenour, S. 1977, *Learning From Las Vegas,* The MIT Press, Cambridge, Massachusetts, and London, England.

Virilio, P. 1986, *Speed And Politics,* Colombia University Press, New York.

Virilio, P. 2000, *A Landscape of Events,* MIT Press, Cambridge, Massachusetts, London, England.

Wigley, M. 1995, *White Walls, Designer Dresses,* MIT Press, Cambridge, Massachusetts.

YAPI 171 (1996), February, Yapı Endüstri Merkezi, İstanbul.

Yavuz, A. (ed.), 2000, *Tarih İçinde Ankara Seminer Bildirileri,* T.B.M.M. Basımevi, Ankara.

The New Grolier Webster International Dictionary of the English Language.

http://www.geocities.com/m_l_perez/SmarandacheHypothesis/Sm-Hyp.htm

http://www.newscientist.com/hottopics/quantum/fromheretothere.jsp

http://www.groups.dcs.stand.ac.uk/~history/HistTopics/The_Quantum_age_begins.html

http://www.greatbuildings.com