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The Identity of Place ... and Memory of Time ... Define Space-Time of Human Architecture

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1 ABSTRACT

Problems of modernization and authentication in contemporary architectural experiments in the world and Arabic-Islamic countries, and manifestations of alienation in contemporary urbanism and debate among many intellectuals architectural theses. As these problems were raised in numerous conferences and symposiums which tried to shed light on the impact of new sciences and culture on heritage and urban civilization. As other, Arabic arts and Islamic architecture came under successive waves of Western cultural interruption and progress of scientific theories in the twentieth and twenty one centuries. It also changed the architecture features and urbanism, cross-cultural trend was cut with the past intellectual creations, informative literature, art and architecture.

The identity of the place is one of the important vocabulary which linking human, architecture with built environment containing it, so the strength and the weakness of the link generated by several elements, discussed several theories and intellectual urban studies through physic sciences ,psychology, sociology, and poetic of space studies where the spirit and Genius Loci of space emerge throw places, as viable place had physical and metaphysical characters effected and affected with human impact manufacturer and inhabitant.

Returning to the city and their connotations and links to the urban environment of the Arabic Islamic city in old era, and in the European medieval cities, where (human enclosure, the stimulus of streets and open spaces with response of memories, sensations and feelings), make the place an integral part of city life and their inhabitants, by overlapping times and products within masses and spaces of the city.

At present the sense of city components are less than past, and weakened its association with city spaces, and more weakness is the new design for the architecture of the city in particular within the city centre.

The place is not abstract location but real things component, possesses by material, moral entity, pro forma, sensory properties and symbolism give specific environmental identification, which are the essence of the place. The strongest place emerge when connecting time to space (space-time as in Relativity theory) in documenting events.

The architecture one of documenting events make place is a product of many forces including social, natural, historical and a spatial property create human environment satisfactory (including event in Folding Architecture), and that's what we see in some European experiences in preserving historical city centers such as (Venice, Prague, Rome, ...Etc) using laws and legislation concerning conservation strategies like (Venice Charter, Washington Charter, Zimbabwe Charter, Nara document of authenticity...Etc) and other conservation methods that can be adopted in the heritage of Arabic-Islamic cities, which give continuity of Identity of places, to connect ancient civilizations places with current time.

2 INTRODUCTION

Architecture is a thing of art, a phenomenon of the emotions, lying outside questions of construction and beyond them. The purpose of construction is to make things hold together; of architecture to move us. Architectural emotion exists when the work rings within us in tune with a universe whose laws we obey, recognize and respect. When certain harmonies have been attained, the work captures us. Architecture is a matter of "harmonies," it is a "pure creation of the spirit." Le Corbusier. (Vogler, 2006, p. 8)

In the few past decades, many cities are losing their characters and getting more and more ambiguous. As planners began to pay more attention on the categories of beauty and function, they failed to catch the essence and the humanity of place. Also, many traditional sites and heritages are destroyed which make cities lose the continuity and identification. While people call those as "loss of place", the research wants to avoid the losing and rebuilding our living places, so should first understand from the concept of "existence". And according to this, the research could catch the essence of place which exists in the locality.

The research also describes the progress that has been made recently in correspondences between apparently different theories of physics. These correspondences are a strong indication that there is a complete unified

theory of physics, but they also suggest that it may not be possible to express this theory in a single fundamental formulation. (Hawking, 2001, P. 1). Einstein's General Theory of Relativity seems to offer the possibility that we could create and maintain wormholes, little tubes that connect different regions of space-time.

Human experience of physical space and places is a complex phenomenon that includes architectural and sensorial, as well as more social and interpersonal dimensions. The research investigate theoretical insights from computing research and environmental psychology on space and place to determine the different dimensions of the experience of physical space. The research indicates dimensions that encompass the different ways of apprehending our environment, as well as the emotional relationships develop toward it, through personal and interpersonal experiences-in-place. Theoretical science and technology should be examined in terms of its potentiality for supporting rich experiences of and in physical space. Assuming that the identified dimensions can serve as basis for the development tools to be used in that perspective.

Sociological studies sensitive to the issue of place. So, How do spaces come to be places, and how do places come to be the way they are, and how do places matter for social practices and historical change? The research discusses how to make a harmonious place with nature, keeping the spirit of place which we call "Genius Loci", and using phenomenological analysis to understand the meaning of place through its structure. Symbolization and concretion are also discussed as they are used to transform nature to architecture; orientation and identification are used to prove the existence (Yiran, 2009, p. 2). This research also connects place to man's image with social and cultural aspects, and seeks a way to keep continuity in history. Therefore a humanistic place should have agreements with essence of place, human demand, and historic continuity.

The research concludes by providing glimpses of what awaits us in the 21st century. So work represent the cultural and social contexts as well as natural environment. this should be a way for contemporary planners and architects to understand humanity and harmony of place.

3 MEMORY OF TIME

Every civilization has been fascinated by notions of Space (the Heavens) and Time (the Beginning, the Change and the End). The space had three dimensional continuum which envelops us. Also time as flowing serenely, all by itself, unaffected by forces in the physical universe. Together, they provide a stage on which the drama of interactions unfolds. The actors are everything else in the universe. (Ashtekar, 2005).

3.1 From antiquity to Einstein

Early Muslim philosopher Al-Kindi (Alkindus), and Muslim theologian Al-Ghazali (Algazel), used logical arguments against an infinite past, being the "argument from the impossibility of the existence of an actual infinite", (Al Jabri, 2002, p. 280-284)

On the other hand, there existed a school of thought that differed with Al-Ghazali and Al-Razi and other intellectuals of that period. The pioneer of that school of thought was the philosopher Ibn-Rushd (1126-1198 AD), known in the Western culture as Averros. Many historians argued that the writings of the philosopher Ibn-Rushd had a major effect on the development of the Western philosophy from the 13th century AD onwards and its struggle for the differentiation between philosophy and theology. However, the Ibn-Rushd school of thought (Averros) acts as an example of the containment process that was evident throughout the development of Arab/Islamic philosophy and ways of thinking. (Al-Hokail, 2004, P 8)

In the early 11th century, the Muslim physicist Ibn al-Haytham (Alhazen) discussed space perception and its epistemological implications in his Book of Optics (1021). His experimental proof of the intromission model of vision led to changes in the understanding of the visual perception of space, contrary to the previous emission theory of vision supported by Euclid and Ptolemy. In "tying the visual perception of space to prior bodily experience, al-Haytham unequivocally rejected the intuitiveness of spatial perception and, therefore, the autonomy of vision. Without tangible notions of distance and size for correlation, sight can tell us next to nothing about such things." (Al Jabri, 2002, p. 344-350)

In modern terms one can say that in Aristotle's paradigm, there was absolute time, absolute space and an absolute rest frame, provided by earth. This was the reigning world-view, Isaac Newton was exposed to, as a student at Cambridge in the years 1661-65. Twenty years later, Newton toppled this centuries old dogma.

Through his Principia, first published in 1686, he provided a new paradigm. Time was sill represented by a 1-dimensional continuum and was absolute, the same for all observers. All simultaneous events constituted the 3-dimensional spatial continuum. But there was no absolute rest frame. Galilean relativity was made mathematically precise and all inertial observers were put on the same physical footing. The Principia also shattered Aristotelian orthodoxy by abolishing the distinction between heaven and earth. (Ashtekar, 2005)

Both Aristotle and Newton believed in absolute time. That is, they believed that one could unambiguously measure the interval of time between two events, and that this time would be the same whoever measured it, provided they used a good clock. (Hawking, 2001, ch. 2, P. 2) Time was completely separate from and independent of space.

An absolute speed blatantly contradicted Galilean relativity, a cornerstone on which the Newtonian model of space-time rested. By then most physicists had developed deep trust in the Newtonian world and therefore concluded that Maxwell's equations can only hold in a specific reference frame, called the ether. But by doing so, they reverted back to the Aristotelian view that Nature specifies an absolute rest frame. A state of confusion remained for some 50 years. (Ashtekar, 2005).

3.2 Human build architecture in order to achieve civilization

The concept of space and time connect with civilization, this relationship emerge through outlook absolute terms flowing space / time in each asset. In the theory of relativity emerge association between space / time, one depends on the other (Einstein). But after the relativity, the relationship between space and time seem more complex for more than one direction, and isn't separated from the event.

3.3 Relativity Theory (Einstein)

At the beginning of the 20th century, Einstein revolutionized the notions of space and time, first through special relativity and then, a decade later, through general relativity. Conceptual ideas underlying general relativity are explained and its physical ramifications summarized in general terms, without recourse to advanced mathematics. This theory is perhaps the most sublime creation of the human mind. Nonetheless, it has become increasingly clear that it too has serious limitations which can be overcome only through another dramatic revision of our notions of space and time. (Ashtekar, 2005)

Einstein's theory of relativity, which showed the interconnection between time, space and matter, exposed the limitations of Newtonian- Cartesian physics, even though Einstein himself remained a recalcitrant Cartesian as his historic debate with Bohr in the 1920s demonstrated.

3.3.1 Spacial theory of Relativity 1905

Einstein's theory based on the idea that the laws of science should be the same for all observers, no matter how they are moving, in the absence of gravitational phenomena. (Hawking, 2001, ch. 10, P. 5). Time lost its absolute standing. Only the 4-dimensional space-time continuum had an absolute meaning. Space-time distances between events are well defined but time intervals or spatial distances between them depend on the state of motion of the observer, i.e., of the choice of a reference frame. The new paradigm came with dramatic predictions that were hard to swallow. (Ashtekar, 2005).

3.3.2 General theory of Relativity 1916

In this theory, space and time fuse to form a 4-dimensional continuum. The geometry of this continuum is curved and the amount of curvature in a region encodes the strength of the gravitational field there. Space-time is not an inert entity. It acts on matter and can be acted upon. (Ashtekar, 2005). Einstein's general theory of relativity, on its own, predicted that space-time began at the big bang singularity and would come to an end either at the big crunch singularity (if the whole universe re collapsed), or at a singularity inside a black hole (if a local region, such as a star, were to collapse). (Hawking, 2001, ch. 8, P. 7).

3.4 Spacetime

In physics, spacetime is any mathematical model that combines space and time into a single continuum. Spacetime is usually interpreted with space as existing in three dimensions and time playing the role of a fourth dimension that is of a different sort from the spatial dimensions. From a Euclidean space perspective,

the universe has three dimensions of space and one of time. By combining space and time into a single manifold, physicists have significantly simplified a large number of physical theories.

In non-relativistic classical mechanics, the use of Euclidean space instead of spacetime is appropriate, as time is treated as universal and constant, being independent of the state of motion of an observer. In relativistic contexts, time cannot be separated from the three dimensions of space, because the observed rate at which time passes for an object depends on the object's velocity relative to the observer and also on the strength of gravitational fields, which can slow the passage of time. We can only say that Euclidean geometry deals with things called "straight lines," to each of which is ascribed the property of being uniquely determined by two points situated on it. (Einstein, 1920, p. 2)

Since space-time is also omnipresent and the same for all physical systems, Einstein was led to regard gravity not as a force but a manifestation of space-time geometry. Space-time of general relativity is supple and can be visualized as a rubber sheet, bent by massive bodies. (Ashtekar, 2005). This latter statement need not of necessity hold a priori; it is not contained in the conceptions of "motion" and "reference body" and derivable from them; only experience can decide as to its correctness or incorrectness. (Einstein, 1920, p. 71)

In accordance with the special theory of relativity, certain co-ordinate systems are given preference for the description of the four-dimensional, space-time continuum. We called these "Galilean co-ordinate systems." For these systems, the four co-ordinates x, y, z, t, which determine an event or—in other words —a point of the four-dimensional continuum, are defined physically in a simple manner. (Eins

- - Which had spatial dimension: Any of the three dimensions that are space like – that is, any except the time dimension. (Hawking, 2001, ch. 10, P. 5). The fundamental postulate of the theory of relativity, as it was called, was that the laws of science should be the same for all freely moving observers, no matter what their speed. This was true for Newton's laws of motion, but now the idea was extended to include Maxwell's theory and the speed of light. (Hawking, 2001, ch. 2, P. 2)

In other words, the theory of relativity put an end to the idea of absolute time! It appeared that each observer must have his own measure of time, as recorded by a clock carried with him, and that identical clocks carried by different observers would not necessarily agree. (Hawking, 2001, ch. 2, P. 3). We were able to make use of space-time co-ordinates which allowed of a simple and direct physical interpretation, and which, can be regarded as four-dimensional Cartesian co-ordinates. This was possible on the basis of the law of the constancy of the velocity of light. But according to the general theory of relativity cannot retain this law. (Einstein, 1920, p. 111).

3.5 Sigfried Giedion's "Space, Time and Architecture"

The perspective was invented in the Renaissance period, around the fifteenth century –firstly used in a drawing by Masaccio, then adapted to architecture by Brunelleschi, and written down by Alberti. Almost five centuries later a new space conception – space-time as Giedion calls- was invented and appeared in the works of cubists. Both conceptions simultaneously grew with the developments in physics and brought about 74 revolutionary changes in art and architecture to their period and the following periods. (Giedion, 1971, p. 42). The terraces in the Piazza Del Popolo designed by Valadier in Rome (Fig. 1) –showing the hovering effect with the change in the horizontal and vertical surfaces. (Giedion, 1971, p. 153)

In addition, Giedion construes Cubism and Futurism in a way that they dwelled their arguments on one of the constituent facts –a new space conception- and helped the fact to progress. The last three constituent facts seem to be far from a direct contact with artistic production; they rather are the consequences of the developments in industry and technology in the nineteenth century, in which the spirit of the age was revealed from the sphere of thinking, but not from the sphere of feeling. (Giedion, 1971, p. 13-14)

The American architect Frank Lloyd Wright exposed the plain wall and the human-nature relationship more easily than his colleagues. (Giedion, 1971, p. 396-400). Architecture strongly influenced by that era these concepts, either through analogy or cognitive theme of architectural subject, specially mechanics waveform, that clear in the work of Wright, which called for organic forms refer to the origin of nature through mechanics waveform, and can be seen in the Guggenheim museum project in New York 1943-1959 (Fig. 2), with spiral form like wave which gave another dimension to the architectural form. Waves and twisted forms

influenced by nature, variable interaction with any object exists and private changing waves in nonlinear layer are important and ubiquitous presence of space – time for each one of them in nature.

Constituent facts should and could only be scrutinized within the framework of dialectic materialism in consideration of the content and the approach towards. This suggestion and the involvement of Space, Time and Architecture with dialectic materialism will be discussed. (Giedion, 1971, p. 400)

In order to produce a new tradition, Giedion asserts, introducing new methods has a vital importance. For Giedion, who did not believe in the notion of style, sought for another explanation to elucidate the discrepancies among the taste of different periods, acknowledging the reader as "… the links and associations between periods –the constituent facts- are more important to us than self-enclosed entities such as styles." (Giedion, 1971, p. 21) He found the remedy in asserting the constituent and transitory facts, under the very pioneering of the spirit of the age –namely, Zeitgeist-, which he became devoted to while he was writing his dissertation under the supervision of Wölfflin. (Boring, 1955, p. 2).

3.6 Zeitgeist

The term Zeitgeist was –most probably- first used by Goethe in 1827, which is very much involved with the concept of the spirit of time, the spirit of the age, namely the Zeitgeist. Everything happens for a reason, and it happens because the spirit of the age permits it to be. The formation of the constituent facts, and later their reawakening are in fact the consequences of the spirit of the age. (Boring, 1955, p. 102)

The spirit of the age is responsible for the construction of the interrelationships among various fields, such as science –including physics, mathematics, technology, philosophy, art, architecture, town planning, and naturally, history. Most evidently, "a common spirit" can be recognized in Baroque period, as Giedion puts forth. The simplest example Giedion gives about one of the circumstances that the spirit of the age gives rise to be how the development in mathematics and physics in Baroque period – the discovery of integral calculus- found its counterpart in the space conception of Baroque art and architecture as the impression of infinity. (Boring, 1955, p. 109). On the other hand, whilst the mathematician Herman Minkowski was working on the proof of a fourth dimension, the artists in various parts of Europe as being either cubist or futurist were developing the space-time notion in their works. (Boring, 1955, p. 14). For Giedion, these facts are all because of the existence of a spirit that runs through the age, and that affects the outcomes of the age. Throughout the book, that spirit is also referred to "the universal laws of Nature", that within the twentieth century, both modern art and modern science have found the common and parallel results by following the intuitions of the artists and scientists. (Boring, 1955, p. 460-461)

The most important aspect of the spirit of the age can be accepted as the demonstrability of the close relationship among new materials, new methods and the human needs. Along with some other protagonists of the era, Le Corbusier was the perfect model, who achieved to build relationships such as the one between ferroconcrete construction and the human needs. (Giedion, 1971, p. 542) (Fig. 3)

That Giedion"s Space, Time and Architecture was "more ambitious in its scope" than the other early historians of the Modern Movement because of the fact that went back further as to Rome of Pope Sixtus V (Fig. 4), and including the technical developments as well as urban planning. (Giedion, 1982, p. 82). However, forget to mention that he posited the developments in modern physics and mathematics in a more important level than the social change, which showed his strong formalist attitude. Giedion mentions, the immense developments in science in the nineteenth century could catch the spirit of the age, whilst the architecture could not.

4 THE IDENTITY OF PLACE

Architecture is the style of human life, therefore it is a tool to be our identities and our differences, and framing our knowledge of the world. Architectural Identity is one of the phenomena of public identity of the communities. The privacy defined in architecture, as reality containing qualities core. Architecture is actually within the dimensions of time, space and the impact of humanitarian axis (community / civilization) and clarified as a reflection of the life of society as evolved and reached a positive phase.

4.1 Space & Place

In popular discourse, space and place are often regarded as synonymous with terms including region, area and landscape. However, these twin terms have provided the building blocks of an intellectual and disciplinary enterprise that stretches back many centuries. Yet, as Livingstone intimates, the theoretical specification of space and place has remained a matter of some dispute, being transformed as new ways of 'thinking' have developed. Likewise, until the 1970s, most human researchers considered space to be a neutral container, a blank canvas that is filled in by human activity.

This work alerted researchers to the sensual, aesthetic and emotional dimensions of space. The humanistic tradition that these thinkers developed conceptualized place as subjectively defined. As such, what constituted a place was seen to be largely individualistic. Although attachments and meanings were often shared. Simply put, a place meant different things to different people.

4.1.1 Space

Space is a central concept in architecture, used in the form of absolute, relative and relational (cognitive) space (Table 1):

- Absolute space is an understanding of space as a distinct, physical and imminently real or empirical entity. Traditional regional studies the empirical entities, dependencies or vertical connections between humanity and the environment within the 'container space' of a particular region.
- Relative space has the location of, and distance between, different phenomena (horizontal connections) as the focus of architecture inquiry. Distance as measured in terms of transport costs, travel time and the mileage within a network, as well perceived distance, is given explanatory power. (Holt, 1999, p. 216-227).
- The meaning of relational (cognitive) space is that space and place are intrinsic parts of our being in the world – defined and measured in terms of the nature and degree of people's values, feelings, beliefs, and perceptions about locations, districts, and regions. Relate to other people and the physical environment. Thus relational space is consciously or unconsciously embedded in our intentions and actions. (Knox, 2004, p. 505).

4.1.2 Place

Space is organized into places often thought of as bounded settings in which social relations and identity are constituted. Such places may be officially recognized perceptual entities or more informally organized sites of intersecting social relations, meanings and collective memory. The concept of place, the uniqueness of particular places and place-based identities are hotly contested concepts in the contemporary context of increasing globalization and the perceived threat of placelessness.

Place was seen by positivists as more subjectively defined, existential and particular, while space was thought to be more universal, more abstract phenomenon, subject to scientific law. The humanistic concept of place, largely drawn from phenomenology, was concerned with individuals' attachments to particular places and the symbolic quality of popular concepts of place which link events, attitudes, and places and create a fused whole. It was concerned with meaning and contrasted the experienced richness of the idea of place with the detached sterility of the concept of space. Idea is that place is an emotional bounded area, often the dwelling-place, to which an individual or a group has a strong emotional relationship. People can even derive their personal identity from it. So Place is a portion of urban space, sometimes defined as 'territories of meaning' (Holt, 1999, p. 224)

Outside this place starts the immeasurable space, of which the individual or group has some knowledge but does not feel at home at or have any affectionate feelings towards. The way in which people identify with a place is very different from individual to individual. Humanistic studies show that people alternately associated place with safety and security (feeling at home) but also to imprisonment and isolation. The place where one lives, with its social pressure, and forced solidarity, can be perceived as suffocating. Space compared to the latter can be perceived as free and dissolute. In such a situation the dangers and threats of an unknown space are not so important.

4.2 Transformation from space to place

Environmental character is created by the relationship between things. Norberg-Schulz emphasized phenomenology, which he called "return to things" in his book Genius Loci to explain place. What factors make up a place? For example, location, landscape, climate, seasons, day-night, livings, buildings, even human activities. Generally, the research can classify them as natural things and man-made things.

These can be further subdivided as "objects", "temporal field", "spatial field". While Norberg-Schulz liked to classify them as "thing", "order" and "time", there is an easy way which is to put "time" into "order", so that "thing" and "order" could be two classifications. "Thing" contains natural things such as landscape, life-form, man-made things like building, city, human behavior. These all have their special characters and have certain contact with each other. "Order", we can understand through explaining "X axis", "Y axis" and "Z axis". Place is a structured space with the given character, cardinal points is the main orientation and identification of one place, we can call it "X axis", then, the hosts of heaven-the sun, the moon and stars, and the change of sky, can call it "Y axis". Basically, cardinal points and hosts of heaven could be collectively called "cosmic order", in a few words, earth and sky. Finally, time, which gives place continuity and variability could be thought as the variable of cosmic order, so it can be seen as "Z axis" which makes space from a plane to be stereoscopic. (Yiran, 2009, p. 7)

The interaction between space and place here is a crucial one. Equally vital is that while we must distinguish between these different realms if we are to apprehend place construction and transformation, we must simultaneously capture how they are in fact forged together in a dialectical unity. When dimensions are understood as mere components of the grid system, rather than physical attributes of space, it is easier to understand the alternate dimensional views as being simply the result of coordinate transformations.

Places are worked by people: we make places and probably invest as much effort in making the supposedly pristine places of Nature as in cities or buildings. Social processes (difference, power, inequality, collective action) happen through the material forms that we design, build, use, and protest. (Gieryn, 2000, p. 465). Norberg-Schulz (1980) pointed out: "'Thing' and 'character' are dimensions of the earth, whereas 'order' and 'light' are determined by the sky. Time, finally, is the dimension of constancy and change, and makes space and character parts of a living reality…" Therefore place exists between earth and sky, and living with time. (Yiran, 2009, p. 8).

4.2.1 Design space and create place

There are many different between space and place such as:

- Place is not space—which is more properly conceived as abstract geometries (distance, direction, size, shape, volume) detached from material form and cultural interpretation as thoughts of Hillier & Hanson 1984. Space is what place becomes when the unique gathering of things, meanings, and values are sucked out.
- Place is space filled up by people, practices, objects, and representations. In particular, place should not be confused with the use of architecture metaphors (boundaries, territories) that define conceptual or analytical spaces. (Table 1)
- Place is not just a setting, backdrop, stage, or context for something else that becomes the focus of sociological attention, nor is it a proxy for demographic, structural, economic, or behavior variables.
- Place is not merely a setting or backdrop, but an agentic player in the game—a force with detectable and independent effects on social life. place becomes a stand-in for clusters of variables located in spaces chosen for their analytic utility but generally denuded of architecture, landscape, and actors' own narrations. (Gieryn, 2000, p.466-467)

So we cannot understand social life without understanding the arrangements of particular social actor's in particular social times and places… Social facts are located. (Logan, 2011). Place stands in a recursive relation to other social and cultural entities: places are made through human practices and institutions even as they help to make those practices and institutions. Place mediates social life; it is something more than just another independent variable. (Gieryn, 2000, p.468)

A spot in the universe, with a gathering of physical stuff there, becomes a place only when it ensconces history or utopia, danger or security, identity or memory. In spite of its relatively enduring and imposing

materiality, the meaning or value of the same place is labile—flexible in the hands of different people or cultures, malleable over time, and inevitably contested. (Gieryn, 2000, p. 465). Place should not be confused with the use of cognitive maps (boundaries, territories) such as Jean Piaget Schemas that define conceptual and analytical spaces.

4.2.2 Active Place

A concrete term for environment is place. It is common usage to say that acts and occurrences take place. When things have characters and build the environment with phenomena, we call it "place". The meaning of phenomenon is revealed by "taking place", any tiny movement or happening make place to be lively and active, and under these circumstances, place does make sense. The research can also see it from the phrase "take place", it means something or some acts happening; the occurrence would "take" in certain "place", it cannot occurred without "place", the same, "place" is based on these occurrences. (Yiran, 2009, p. 6)

Therefore, place is a totality made up of certain things with their active characters and special atmospheres. No two such places are the same. Every place has its own attribute, or we can call it "environmental character". The character of place is presented by characters of the parts, which explained the "atmosphere" of things, or a "total phenomenon". (Yiran, 2009, p. 7).

4.3 Identity

The forces of new technologies, globalization and 'time-space-compression' have sought to represent localized identities as historical, regressive characteristics, and have worked to undermine the old allegiances of place and community. But the burgeoning of identity politics, and now nationalism, reveal a clear resistance to such universal strategies. If places are no longer the clear supports of our identity, they nonetheless play a potentially important part in the symbolic and physical dimension of our identifications. It is not spaces which ground identifications, but places!

National Identity refers to a group of people who share particular historical-cultural characteristics or imagine themselves to do so. Nationality refers to the condition of belonging to a nation. At its most basic, nationality can be seen as a mechanism of social classification. There are two components of national identity, according to Verdery:

- Collective identity which refers to national characteristics and so-called national traits and may include such things as language and style of dress. This is an identity which is shared by the members of the national community.
- National identity is the individual member's sense of self as a national. An individual's feeling and self-identification as 'Iraqi', 'Italy', 'Dutch', 'German' or 'French' is an important component in their self-perception. It refers to a feeling of belonging to a nation.

Therefore national identity as composed of five key elements:

- Psychological: consciousness of forming a community.
- Cultural: sharing a common culture.
- Territorial: attachment to a clearly demarcated territory.
- Historical: possessing a common past.
- Political: claiming the right to rule itself.

Obviously these five characteristics are closely interlinked. Within this milieu elements such as language, religion and social mores may take on particular significance. Many nations are seen to possess their own language, while in some the majority of members adhere to a particular religion. In these cases language or religion may be the key defining the characteristic of the nation. National identity is not some much a rational thing; as it is an emotional thing, it is hard measuring this objectively. A nation is more a mental construct than a concrete reality. Identity can be defined as the sense that people make of themselves through their subjective feelings based on their everyday experiences and wider social relations. (Knox, 2004, p. 508)

So, identity seeks in the similarities that gather a group of communities with similar characteristics (relations, elements), (Genotype, Phenotype). While Privacy seeking in differences that characterize a society has an identity, from other communities that have or may not have the identity itself, at the same time to achieve

privacy must be achieved similarity between (relations and elements) in the properties that varies the society from other communities that have or may not have the identity itself. (Al Jabri, 2002, p. 346)

To achieve the identity and privacy in the architecture of human societies it represents the idea of the bind everything followed to achieve differentiation, particularly with respect to its past, present and future with its ties to the temporal and spatial. Temporal relations are most relevant to the privacy of the place, and a sense of identity, as can be achieved acting time in architecture by translating temporal structures to spatial properties. (Schulz, 1980, p.54) Space is created for the temporal sequence of sensations, and the time is enriched through experience space. (Lynch, 1972, p.76-77).

5 THE GENIUS LOCI OF SPACE

The term genius loci were used in the ancient world to underline the idea that every place has its own character. (Verschuure, 2009). In Roman mythology a Genius loci was the protective spirit of a place. In contemporary usage, "genius loci" usually refers to a location's distinctive atmosphere, or a "spirit of place". The concept of "genius loci" has been discussed in modern architecture, but still is much underestimated. When it comes to extreme environment, the situation is even worse. The problem of sensory deprivation in extreme environments should even result in putting more emphasis on the concept of genius loci. An important part of the 'spirits' of a place is the environmental energies. In space habitats the 'Life Support System' becomes an intrinsic part of the 'atmosphere' of the habitat. On Earth, the use of these energies, not only to make buildings self-sufficient, should enhance the quality of the architecture and our built environment. Humans differently than the other entities of life on our planet are capable to force large scale devastative change on the environment. The need to save our environment for future generations is one of the greatest challenges that humankind must address today. (Vogler, 2006, p. 2)

About a design theory on the Genius of the Place 'To build, to plant, whatever you intend, To rear the Column, or the Arch to bend, In all, let Nature never be forgot. Consult the genius of the place in all.' (Verschuure, 2009). Nowadays, many architects base their work to this line. Although new designs in urban design or urban planning are necessary, the spirit of the place should be respected.

5.1 Spirit of the Place

In 1980 the term Genius loci was used again in the book of the Norwegian architect Christian Norberg-Schulz (Genius Loci- Toward a Phenomenology in Architecture), where he stated that 'every place is a space with its own character'. He stressed that this line is still valid for many new designs. By respecting the 'local spirit' a counter movement could be set in to the unheimich feeling Modernistic architecture can give. (Verschuure, 2009). But what elements are we talking about in the genius loci?

The research study the Genius Loci by Norberg-Schulz, Where He made lots of great arguments in this book, about "thing", "existential space", "natural and man-made place" and also his explaining of "Genius Loci" which applied to Rome, Prague, and Khartoum (Yiran, 2009, p. 3) (Fig. 4).

5.2 Create Place

Human culture is very strongly linked to places. Indeed, the inseparableness of the human being and the world, at least from the human being's point of view, has been one of the main discussions of philosophy. In Being and Time, Heidegger (1962) argued that, in conventional philosophy and psychology, the relationship between person and world has been reduced to either an idealist or realist perspective. In an idealist view, the world is a function of a person who acts on the world through consciousness and, therefore, actively knows and shapes his or her world. In contrast, a realist view sees the person as a function of the world in that the world acts on the person and he or she reacts. Heidegger claimed that both perspectives are out of touch with the nature of human life because they assume a separation and directional relationship between person and world that does not exist in the world of actual lived experience. (Vogler, 2006, p. 8)

Architecture has an eminent role as a key interface and definition of our being-in-the-world. Where natural environment is more and more lost, architecture takes a key role in creating places and in the best case a 'genius loci'. With the dawn of rationalism, this spiritual meaning of a place has been more and more negated. The modern movement in architecture tried to analyses the site based on scientific parameters and their optimization like sun angles and circulation distances. The fast growth of cities in the last century,

which is still continuing today, and the application of the ‚modern formula' quickly resulted in sterile and faceless neighborhoods.

6 EVENT COVERING SPACE-TIME

The term spacetime has taken on a generalized meaning beyond treating spacetime events with the normal 3+1 dimensions. It is really the combination of space and time. Other proposed spacetime theories include additional dimensions—normally spatial but there exist some speculative theories that include additional temporal dimensions and even some that include dimensions that are neither temporal nor spatial (e.g. superspace).

6.1 Event in scientific theories

In cosmology, the concept of spacetime combines space and time to a single abstract universe. Mathematically it is a manifold consisting of "events" which are described by some type of coordinate system. Typically three spatial dimensions (length, width, height), and one temporal dimension (time) are required. Dimensions are independent components of a coordinate grid needed to locate a point in a certain defined "space". For example, on the globe the latitude and longitude are two independent coordinates which together uniquely determine a location. In spacetime, a coordinate grid that spans the 3+1 dimensions locates events (rather than just points in space), time is added as another dimension to the coordinate grid. This way the coordinates specify where and when events occur.

The theory of relativity does, however, force us to change fundamentally our ideas of space and time. We must accept that time is not completely separate from and independent of space, but is combined with it to form an object called space-time. (Hawking, 2001, ch. 2, P. 4). Similarly, the light spreading out from an event forms a (three-dimensional) cone in (the four-dimensional) space-time. This cone is called the future light cone of the event. In the same way we can draw another cone, called the past light cone, which is the set of events from which a pulse of light is able to reach the given event (Hawking, 2001, ch. 2, P. 7) (Fig. 5).

The special theory of relativity was very successful in explaining that the speed of light appears the same to all observers. (Hawking, 2001, ch. 2, P. 10). The situation, however, is quite different in the general theory of relativity. Space and time are now dynamic quantities: when a body moves, or a force acts, it affects the curvature of space and time – and in turn the structure of space-time affects the way in which bodies move and forces act. Space and time not only affect but also are affected by everything that happens in the universe. Just as one cannot talk about events in the universe without the notions of space and time, so in general relativity it became meaningless to talk about space and time outside the limits of the universe. In the following decades this new understanding of space and time was to revolutionize our view of the universe. The old idea of an essentially unchanging universe that could have existed, and could continue to exist, forever was replaced by the notion of a dynamic, expanding universe that seemed to have begun a finite time ago, and that might end at a finite time in the future. (Hawking, 2001, ch. 2, P. 11).

6.2 Event in Folding Architecture

Folding is a transformation technique using in Digital signal processing architecture implementation for minimizing the number of functional blocks in synthesizing Digital signal processing architecture. Folding was first developed by Keshab K Parhi and his students in 1992. Its concept is contrary to unfolding. Folding transforms and operation from a unit-time processing to N unit-times processing where N is called folding factor. Thus, in N unit-times, a functional block in transformed system could be reused to perform N operations in original system. While the folding transformation reduces the number of functional units in the architecture, it needs more memory element to store the temporary data.

Folding is the art of seeing something invisible. Something that does not exist now. So, the fold represent space, mass at one time. The idea of folding is a time- event, when place left it is Spatial Situation. The place is temporal and spatial boundaries, and became non place and non time (timeless), and fold trying to restore time and space. So, The fabric of space-time is ruptured. Continuum physics rooted in this fabric stops. But the quantum threads are still meaningful. (Ashtekar, 2005).

6.3 The User as part of Places

The position of space in-between implies a middle location between two events and opposed spaces, the first space of origin or departure to the second space of arrival.(Luz, 2004, p. 155). The aim is to shift from the previous spatial narratives of preset planning into a more social-based approach, which identifies the user as the creative element in the construction of the transient situation. Contrarily to fixed spatial syntax analyses, recent studies sustain that the user is the most productive element and thus the co-author or co-producer of our production of spaces and places. Based on the user's capability to adapt to different situations, spatial behavior should be considered as an invariant variable, open to chance rather fixed in predictions. (Luz, 2004, p. 158)

A design possibility, By embracing the recent reclaims of urban space and street movements, the design of place-making should adopt new 'techniques' and methodologies for urban exploration based on everyday occupying practices. This entire urban buzz means that city dwellers are reclaiming their 'place in space'. they are moving away from the fixed preconceived idea of the Greek agora and the public life confined to the city central squares of political, economical and social powers. (Luz, 2004, p. 159) the opportunity provided by the spaces of transition, the leftover places and other uncertainty spaces suggests the development of new 'clever' designs, where experiencing the urban space could be more than seeing or passing by, but instead occupying, co-producing, touching, tasting and listening to different textures and sounds. (Luz, 2004, p. 159).

6.4 The Transformation

Transition is a change of state; a change from one thing to another, 'a passing or passage from one condition, action, or (rarely) place, to another; change;' 'the passage from an earlier to a later stage of development or formation;' 'a style of intermediate or mixed character'. While Transformation is a change of state, a more whole and complete change than in transition. 'The action of changing in form, shape, or appearance; metamorphosis;' 'a complete change in character, condition, etc.;' In physics 'Change of form of a substance from solid to liquid, from liquid or solid to gaseous, or the reverse' (Repenning, 2003, p. 12)

In this system, any one of the events along it, the program is dominant over the character of any one single space. The transformational sequence is based on rules and discrete architectural elements. Passage through this sequence becomes its own theoretical object. The process must become the result, with the sum of transformations being at least as powerful as the ultimate transformation. Transformational devices, or rules of transformation, include compression, rotation, insertion, and transference. They may show "particular sets of variations, multiplications, fusions, repetitions, substitutions, metamorphoses, anamorphoses, dissolutions."

These intermediate stages apply to each phase of separation, transition, and reincorporation. That is, a transformation is a more intricate journey than a here-and there set of steps. A transformation is a progression and the importance is the actual occurrence of the evolution. (Repenning, 2003, p. 20).

6.4.1 Transformation from space to event

The space between spaces and the time between times exhibits a distinct energy. Characterizing this energy of transition is essential to creating powerful and compelling spaces whose integral focus is transition. These spaces include Churches, Theaters, Museums, Transportation Facilities, Parks, Health Care Facilities, Educational Facilities, (Repenning, 2003, p. 9)

An event is something that happens at a particular point in space and at a particular time. So, one can specify it by four numbers or coordinates. (Hawking, 2001, ch. 2, P. 5). So, Ritual is A sequence of events, or states, specifically arranged to bring about a realized transformation; as standard cultural or religious observance (Repenning, 2003, p. 12). Also the historical experiences produce the autonomous culture of any human group. These historical experiences are called traditions and they constitute the heritage of any cultural grouping. (Al-Hokail, 2004. P 10).

In "Sequences," architect and theorist Bernard Tschumi categorizes sequences themselves into three groups:

- The transformational sequence is a device or procedure used for laying out spaces.
- The spatial sequence is the method of grouping the spaces and is founded on typological precedents and their morphological variations.

- The programmatic sequence is the usage and the occurrence of events planned for the spaces.

Tschumi views ritual as a framework held in place by its spatial and event sequences as in the La Villette Park in Paris (Fig. 6). For Tschumi, ritual calls for a highly structured program that orders movements, events, and spaces into a progression. Design connected to ritual sequence disregards the significance of the individual steps in the journey. (Repenning, 2003, p. 46).

"The linearity of sequences orders events, movements, and spaces into a single progression that either combines or parallels divergent concerns." Not all architecture is linear or made of clearly-defined parts. Some fragmentary experiences without beginnings or ends, produce a jumble, where meaning is derived from the order of experience, rather than from the composition as a whole. Order of experience refers to time, chronology, and repetition. (Repenning, 2003, p. 48)

Tschumi states explicitly, "A ritual implies a near-frozen relationship between space and event. It institutes a new order against the disorder it aims to avoid. When it becomes necessary to mediate the tension between events and spaces and fix it by custom, then no single fragment must escape attention. Nothing strange or unexpected must happen. Control must be absolute." (Repenning, 2003, p. 49).

6.4.2 Transformation from place to context

In urban studies, the liminal space is a major characteristic of the city. The term of 'cyberspace' was coined by cyberpunk writer William Gibson and used for the first time in his story "Burning Chrome" (1982). The principle of cyberspace is similar to Michel Foucault's heterotopias. The terms, concepts, notions and theories that reflect on this composite and indistinct spatiality of the contemporary world proliferate. (Bădulescu, 2011)

New perceptions of space are reflected in such conceptual perspectives as Foucault's 'heterotopias,' Which is refers to spaces of otherness, and are neither here nor there, simultaneously physical and mental. The French philosopher distinguishes between utopias, which are sites with no real place, and heterotopias, which are places absolutely different from all the sites that they reflect and speak about. However, between utopias and heterotopias there is what Foucault calls "a sort of mixed, joint experience," which is the mirror. (Bădulescu, 2011)

The globalization effected by the internet is a new major source of dynamism. In the first place, it reorders and compresses time and space. Secondly, communications and information technology facilitate action at a distance and are deeply bound up with the intensification of globalization. Instantaneous global electronic communication has profoundly altered the relationships of reciprocity and interdependency: we now live in a 'global society' in which we can no longer avoid other individuals and alternative ways of life. New communication networks increase the possibility of global scrutiny and global visibility, and also the possibility of mutual interrogation. We no longer merely exist 'side by side' with other cultures and other people but interact with them in many different and ever-changing ways. However, contemporary globalization raises feelings of anxiety and frustration. As global communication networks reorder time and space, they also facilitate shifts in the global flows of symbolic goods and in the concentrations of symbolic power. Given the complexity of the structured character and patterns of transmission, it is unlikely that our understanding of these features will ever be more than partial. (Bădulescu, 2011)

Ritual as a model displays the period of liminality as a critical phase for transformation and renewal. Additionally, activities and policies within the period of liminality are distinct from regular experiences and time constraints of customary society. (Repenning, 2003, p. 18) and looks like zeitgeist.

The reuse of buildings, urban structures or landscape architectural plans will be important in new design strategies in the 21st century. To understand architectural design, landscape architectural or urban designs, not only the plan or design itself should be examined, but also the surrounding or the context should be taken into account. And how the design is anchored to its context- to the genius loci?

Nowadays, rapid urbanization is swallowing the surrounding of these buildings. Understanding the context or the spirit of the place and the way the design was anchored to the location of these buildings will help to maintain or give a direction to reuse it, without harming the original design and giving room to new developments. (Verschuure, 2009)

In this time of growing globalization, greater movement of people, urban planners and architects seem to make more and more the same sort of plans, not taking in the specifics of the community, city or landscape they were made for. This can be seen in the objects of building itself, but also in the way a design is placed in its surroundings. The specifics of the surrounding, the context of architectural, urban or landscape architectural designs, is not always taken into account. This leads to uniformity of new plans and loss of identity, but also to designs not being anchored to the context they were made for. Especially for existing buildings and monument, this leads to unwanted situations. A building or structure is not a stand-alone element, but it is anchored to other buildings, structures or to the underlying landscape, which forms the context of the design. To add new developments to existing designs, the specific characteristics and the context should be examined, according to (Venice Charter, Washington Charter, Zimbabwe Charter, Nara document of authenticity...Etc). These specific characteristics determine the identity of the area & era – such as the genius loci of Rome (Fig. 4).

Absolute Space: *Mathematical Space*	**Relative Space:** *Socioeconomic Space*	**Relative Space:** *Experiential/Cultural Space*	**Cognitive Space:** *Behavioral Space*
Points	Sites	Places	Landmarks
Lines	Situations	Ways	Paths
Areas	Routes	Territories	Districts
Planes	Regions	Domains	Environments
Configurations	Distributions	Worlds	Spatial Layouts

Table 1: Different Kinds of Analyzed Spaces.

7 CONCLUSION

- Architecture influenced by new open philosophy of science and new sciences, beside positive achievement from these effects, but it spawned some of the negatives in the emergence of new intellectual references instead of human reference, which led to the violation of human rights and their associated relationships with the surrounding urban environment.
- The research indicates that architecture had many dimensions beside the normal 3 (space) +1(time) there are many additional dimensions like (Emotional, Spirit, Genius loci, Zeitgeist, Events, Intuition and Prediction).
- Sense of place not belonging to a certain architectural trends, or a specific environment, but emerges from the background of simple living for a long time as a liaison to the social interactions around the fixed parameters of significant importance to the occupants.
- When we combine quantum mechanics with general relativity, there seems to be a new possibility that did not arise before: that space and time together might form a finite, four-dimensional space without singularities or boundaries, like the surface of the folding architecture but with more dimensions.
- The modern movement in architecture tried to analyses the site based on scientific parameters. The fast growth of cities in the last century, which is still continuing today, and the application of the ’modern formula’ quickly resulted in sterile and faceless neighborhoods.
- In place the research finds a rational way to integrate nature, human and continuity where man can lives harmoniously, humanly and poetically. So, to solve the problems of modern cities including Arab- Islamic cities, the environmental issues may at least bring people closer to live more in harmony with their natural environment.
- There are divisions of the elements of place with “space”, “time” and “order”, the structure of place could be seen as enclosure, expansion, foci, axis, boundary and domain while Kevin Lynch pointed them to five elements: paths, edges, districts, nodes and landmarks, and added later identity, structure, and meaning. These elements give the identity of the city.

- Norberg-Schulz make little attention on human's aspects and influence to nature made his theory trend to environmental determinism, while Kevin Lynch used man's subjective mental image of the city (mental map), and Jean Piaget use Schemas as (cognitive maps).
- To design something new is probably an approach to generate new meaningful places. Places are complex systems and we are still very weak in understanding and dealing with complex systems and their phenomena.
- Any object, event, situation or experience, there are a phenomenology of (light, color, architecture, place, home, travel, seeing, learning, change, relationship, economy, sociability) and so forth. All of these things are phenomena because human beings can experience, encounter, or live through them in some way.
- The design of place-making should adopt new 'techniques' and methodologies for urban exploration based on everyday occupying practices.
- Not all architecture is linear system or made of clearly-defined parts. Some are non linearity systems according fragmentary experiences without beginnings or ends; produce a jumble, where meaning is derived from the order of experience, rather than from the composition as a whole. Order of experience refers to time, chronology, and repetition.
- For plazas of the city, how can the genius loci – the spirit of place – been found and created today? The architect has to take into account the multitude of these phenomena to be able to create architecture with meaning. Architecture can neither be only an aesthetical exercise nor a technological construction to be able to create genius loci'.
- Nowadays in many cities especially Arab – Islamic cities, rapid urbanization is swallowing the surrounding of the historical and heritage buildings. Understanding the context or the spirit of the place and the way of design was anchored to the location of these buildings will help to maintain or give a direction to reuse it, without harming the original design.
- To add new developments to existing designs, the specific characteristics and the context should be examined, according to (Venice Charter, Washington Charter, Zimbabwe Charter, Nara document of authenticity...Etc). These specific characteristics determine the identity of the area & era- such as the genius loci of Rome.
- The research vision for future, that building should be one system within the natural environment and context. The research believe that designs with limited resources in extreme environments leads to a much higher respect of nature and the human being and thus is generating a strong drive to improve life on Earth. About a design theory on the Genius of the Place, let Nature never be forgot, and the spirit of the place should be respected.

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Fig. 1 Piazza Del Popolo designed by Valadier in Rome (Bacon, 1978, pp.154-155) (Author, 2010)

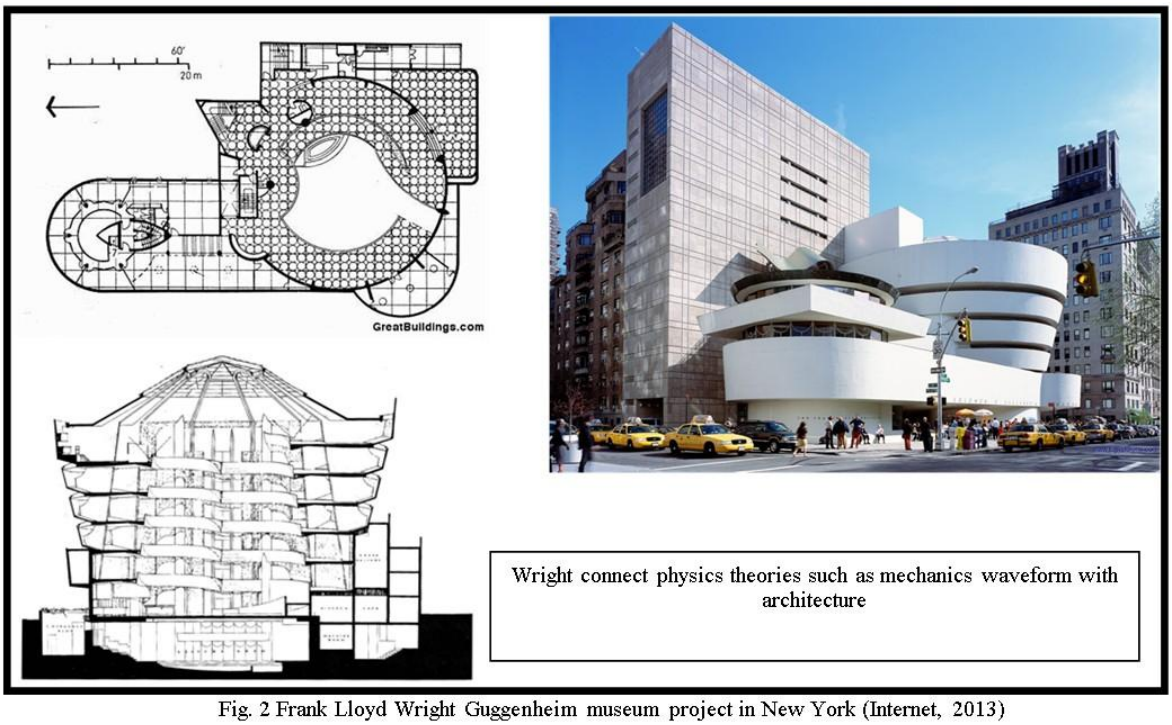

Fig. 2 Frank Lloyd Wright Guggenheim museum project in New York (Internet, 2013)

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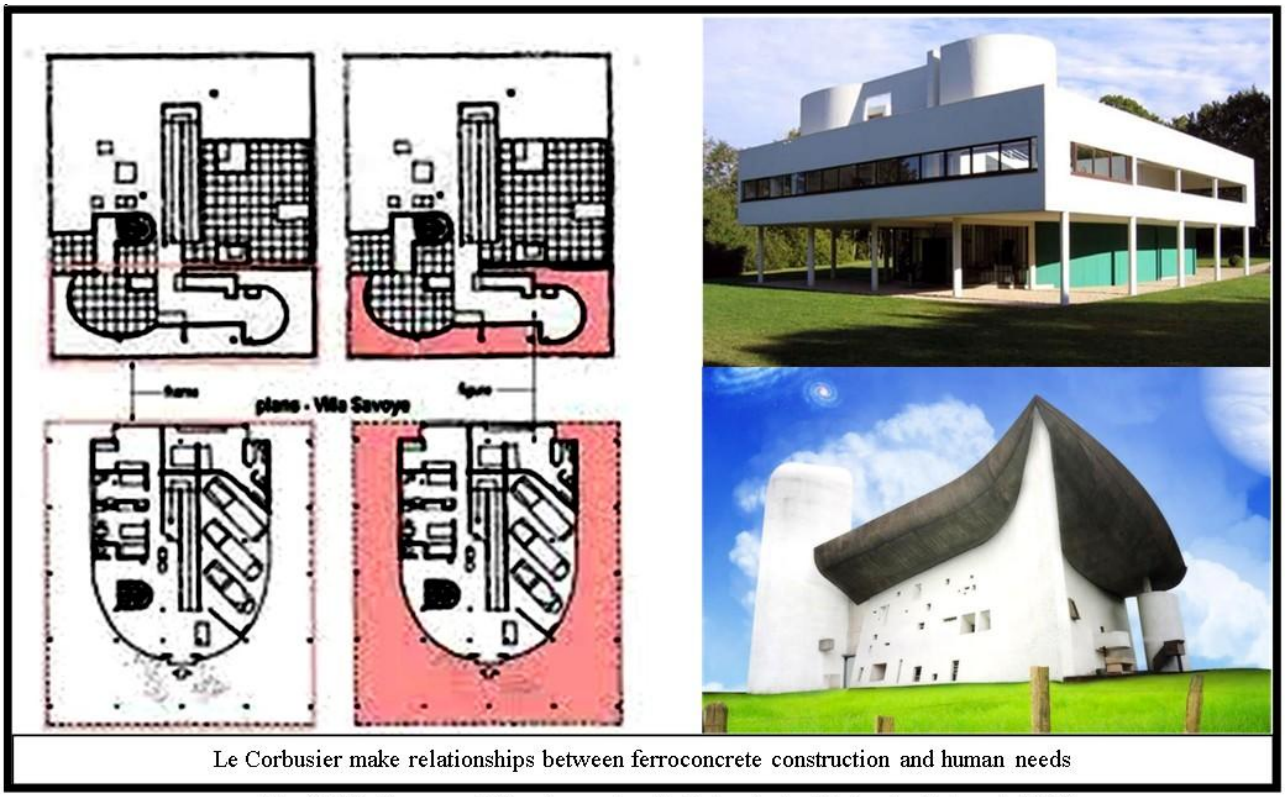

Fig. 3 Villa Savoy and Ronchamp church design by Le Corbusier (Internet, 2013)

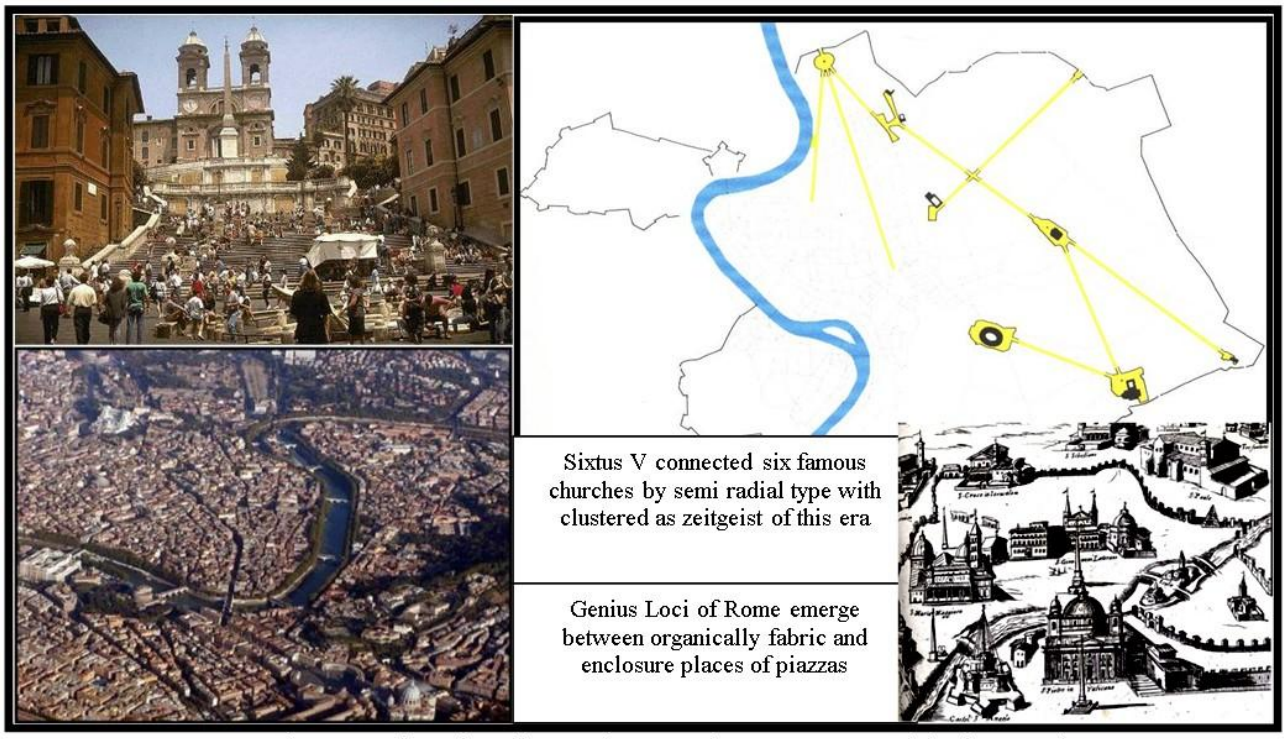

Fig. 4: Transformation of Rome city center (Bacon, 1978, p.142) (Author, 2010)

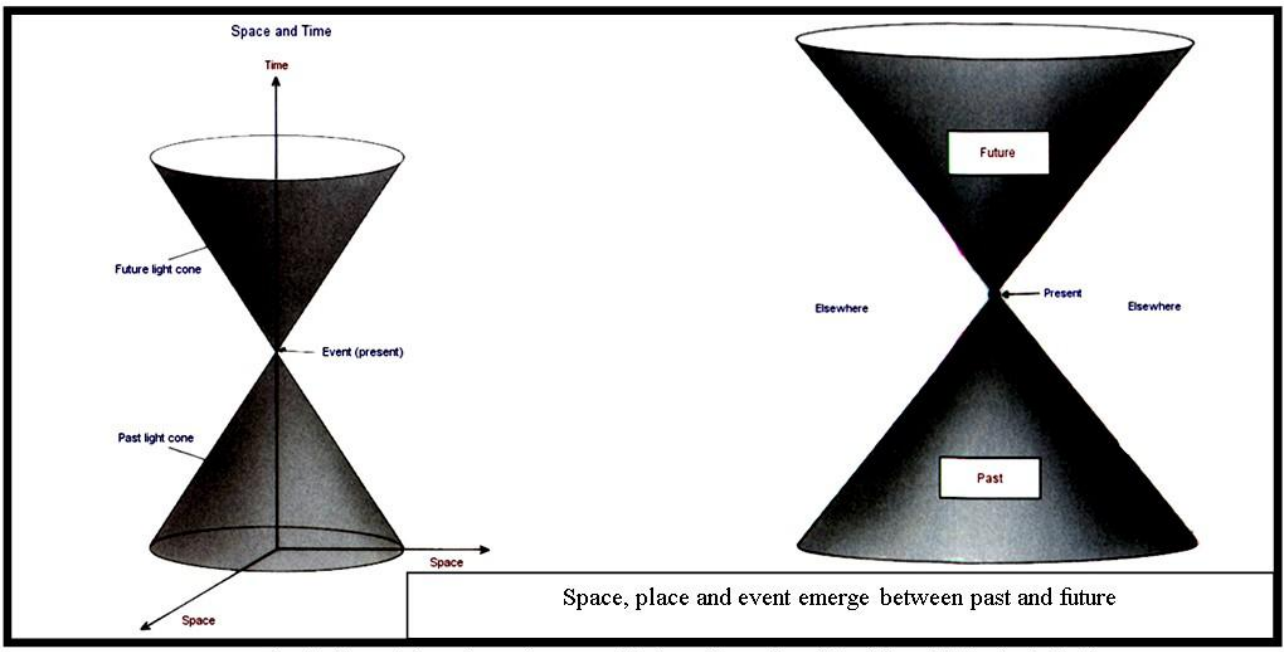

Fig. 5 Space-Time through cone with four-dimension (Hawking, 2001, ch. 2, P. 7)

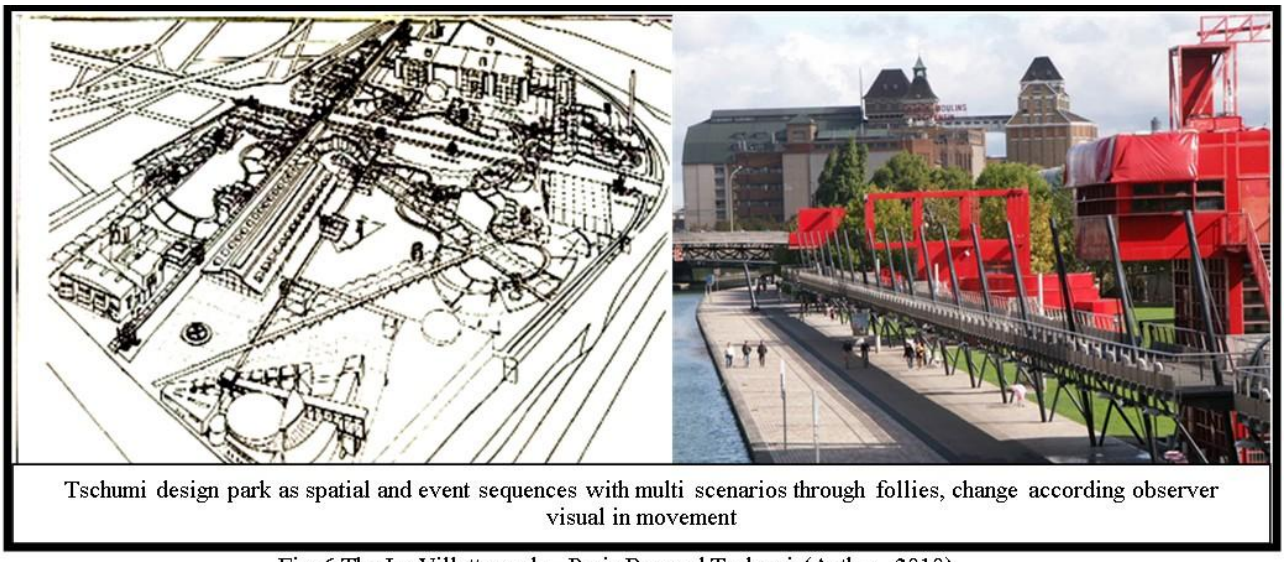

Fig. 6 The La Villette park – Paris Bernard Tschumi (Author, 2010)

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