The Effect of Fourth Dimension on the Behavior of Urban Dwellers

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1 ABSTRACT

Although it seems that urban design is limited to three dimensions but in fact the factor of "Time" as a fourth dimension should not be ignored.

As Kevin Lynch said in urban spaces people feel passing time by two items; first, an organized repetition and second, estimated activities and Irreversible changes (instead of repeating).

We live in the places which have time in. Patrick Geddes mentioned that city is more than a place, but it's a show in time.

The first way of feeling passing time is to consider about environmental events repetition such as seasons or days and nights. The main life cycle is based on natural cycles. The effect of these natural cycles on human activities should be considered in urban design process. In different time of days and nights the urban spaces will be different either.

On the other hand, today the men's life cycle is not just depended on natural cycle .Sunshine and sunsets are not the point of start and ending. In parallel with breaking place limitation- with electronic communications- Krietzman believed that the past time limitations are now going to break. He also mentioned that it is not far to call these days society"24 hours society" and it is an introduction of "New World".

By the weakness of time structures, the"24 hours society" has been created, so the usage of timing and activities patterns increase or decrease in different ways . By having the time of night –which cannot be possible without electrical devices- we don't create more time but we can use the time more effectively.

breaking time limitation have been reached more freedom. If the differences between days and nights, work days and weekends disappear, what changes will be appear in the peoples life? More freedom and more diversity will be found which are confusing at first. In one "24hours society" the activities patterns and using urban spaces create based on demands and priorities of urban dwellers and it cannot be predictable easily.

The disadvantage of" 24hours society" is that it reduces people communications, so it leads the society to Individualism and reduces social connections which was formed in public places.

The urban designers should know the behavior patterns and activities. They should know how to increase some activities which occur in the specific time and recognized how to use some events in order to increase some specific activities.

Although many lines and political boundries has divided human society into different groups with their own nationality and culture , but the human nature is still similar.So it can say that most of the mens reactions in urban spaces might be predictable. Sice that the most of reactions rise from emotions and human nature.such as feeling fears, happieness,greif,tendency to be among the other people and communication.

But what will happen to them in "24hour city"? It is clear that multifunctional buildings, appropriate lighting and people appereance in urban spaces can be the structures of this society.

In this article we want to find out the effect of urban design on people behavior in 24 hours. We try to find normal and obnormal behaviors and propose some recommendation in order to avoid abnormal activities and increase the normal ones.

So to reach that, we analysis three public spaces in different times of 24 hours of one day and compare people behaviors in them and the reasons of their differences. It should be mentioned that in this article the emphasis is on urban users not only the spaces but finally according to the results, the new form for that urban space will be suggested and say that if the concept of 24 hour city is responsive for that area and if it can improve it or not. What happened after midnight? What about the first hours of the day?

Is it a good idea to encourage people to come out or just like the fairy tales after midnight there is no sign of living in the city? Should people conquer their fears and go out of their shelters or its better to keep their solitude?

2   THE DESCRIPTION OF BEHAVIOR

The method of doing an activity is called "behavior". The human behavior is an outcome from his needs and motivations, the environment potentials, the image of the world which caused by his perception and the meaning of this image (Lang, 1987). So an activity when effected by one of those iems will cause different behaviors. moreover behavior is strongly caused by culture and society (pakzad ,2009).

2.1 The effect of space on behavior

The environment is something which surrounds the people. The part that men reflect to, is called" behavior environment" (Lang, 1987).

The environment can be the source of perception, knowing, effectiveness, and spatial behavior. Two last items are completely influenced by the moral patterns .These pattern, have interaction with needs and human motivations. There are two viewpoints about the amount of environmental effect on the behaviors: first the opportunities of the environment (it means that people can choose among verified opportunities) and second one the existence of possibility in it (in a specific area, the possibility of some reactions than the other ones increase) (bell & the others,1990, portiens 1977).

The space as a physical part of environment can effect on the behaviors and control it .but about the activities the environment can just increase or decrease the possibility of doing some activities so the effect of environment on behaviors are stronger than activities. Its why that in design process,instead of activities , behaviors should be considered (pakzad ,2009).

Montgomery says that the soft infrastructures such as programs, activities, and verified festivals are as important as hard infrastructures (e.g. buildings and spaces). To encourage people for appearance in public spaces it is must to create attractive, functional and secure places instead of just increasing urban facilities (Montgomery, 1999).

As it mentioned above, the environment and users have mutual effect on each other. So it's obvious that the items which organized to create a 24hours urban space might be different by the others usual item. At least there would be some instruction for them. Therefore these items have their own effect on the space users. They can force some behaviors and activities. They can permit the user sit, or walk. Stay calm or play with a loud voice. Feel safe or walking fast to get away from that scary place. Besides the users have their own effect on the environment. Their cultures, traditions, their habits and hobbies can be effective on the form of urban space and sometimes the policy of government or the tendency of client for designing a specific area will change the design path.

### 2.2 The Public Urban Space design and its impact on behavior

Kolkohn(1989) have two description for urban space: Social space and artificial(constructed)space. The artificial space is more about physical space, so what architects consider is "morphology of space". (The way that space effect on our perception and the meaning which can be found out) (Madanipour, 2008)

In a conference hall which the furniture have been placed formally there will be rarely conversation between people, while if the decoration changes, the result will be change either. This instance shows that design is an important item in space creating, but it is not the only effective item, since what happens in the spaces is mostly related to the users. Gans(1968) believes that there are differences between the spaces which have potential themselves and offer a spectrum of opportunities and the spaces which are created by usage and function of people.

The urban designers create the environment with potential in , while people create real environment. The urban designer is not the one who determine a specific activity and behavior ,but he is the person who provides the possibility of doing some behaviors and actions(Carmona, Matthew, 1996).

Public Space no. 1: Shiraz,Iran, Shahrdary Square Photographer:Anahita Mahmoudi, 2012
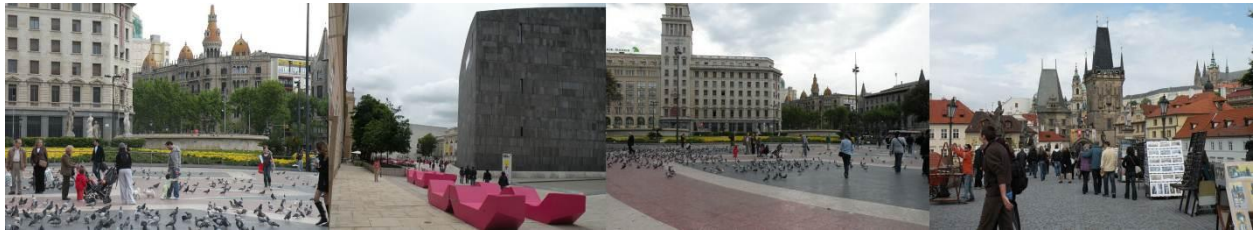
Public Space no. 2: Arranged right to left: Praha (Czech Republic), Barcelona (Spain) ,Bratislava(Slovakia), Vienna (Austria).
Photographer: Anahita Mahmoudi, 2009, 2010.

Pubic Space no. 3: right to left: Praha (Czech Republic), Barcelona (Spain) ,Bratislava(Slovakia), Vienna (Austria), Istanbul
(Turkey). Photographer: Anahita Mahmoudi, 2009, 2010, 2012.

Public spaces	Ledge design	Surrounding by buildings	Form	Lighting	Furniture	Perspective	Car passing
Public space no.1	no	No limitation, in the same level with street	line	adequate	Just one or two seat benches with long distance from each other	open	Motorcycles and biking in the side walk area
Public space no.2	no	yes	Square and rectangle	adequate	adequate	open	no (just tram and emergency cars)
Public space no.3	Multifunctional buildings, designed facades,	yes	Square, rectangle and line	adequate	adequate	open	no (just tram and emergency cars)

Public Space	fountains	Multi media	Integrated ** with third place	Possibility of public meeting	vegetation	Shopping area
Public space no.1	no	No (just some LCDs for advertisements)	no	yes	Seasonal trees	no
Public space no.2	no	no	yes	yes	no	yes
Public space no.3	no	no	yes	yes	no	yes

Aldenburg in his book (a good excellent place) mentions that third place is a friendly and informal public space where people gathers, far from work and home(1999). Third places are intermediate places between people and their society. Frequently these places are cultural and amusement, such as the cafes beside Paris street, or coffee shops in Wien, etc. (Carmona, Matthew, 1996).

3 SPACE AND TIME

By passing time, spaces are formed as the living place and the quality of passing time gives meaning to the spaces. Space and time are dependent together.

At the same time both the "change and stability of environment" are important. The urban designer should know how the environment change and find out which items stay calm and which ones change.

They should consider the effect of day-night cycle and seasons on men's activities. In the different times of days and nights the perception and usage of the urban space is different either. It means that in different time of a day-or generally a year- the users and the way of their activities in urban space are different. for example in weekends one space specialized to kids and employment women and in the other days it's a place for elderly and housewives. Of course there is no written low to limit the function of space for specific group or specific time, but its people which decide to use it in their own style. So it is reasonable that according to the time, the users change – in both aspects of amount and sort - and so do the activities (Carmona, Matthew, 1996).

One of the reasons that the "multifunctional" buildings and spaces suggested is the effect of them on creating more active and dynamic urban spaces. The key point is focus on putting different functions in one place.

Krietzmen knows the "one- functional buildings and spaces" as "one time spaces". He mentioned about the spaces which are used in specific times of the day. He believes that in one 24 hours society the urban spaces should live 24 hours a day either (Krietzmen, 1999).

Among all thse 13 items which mentioned above, in authors opinion the factors of "lighting" and " surrounding" are more important than the others,since good and enough lighting makes the users fell safe and secure . places with enough lighting prevent the criminal activities or at least decrease them.

It seems that the public spaces which are just some straight lines decrease the communications and lead the users to individualism. especially when there are some seats in the place, people will sit down there and looking directly to the streets or the shops (depends on the side of seat) and usually not interested in new conversation with strangers, while on the other hand, in some places with the form of square or a closed loop people feels more comfortable, and the increasing of eye contact can make people close together or creates possibility of new communications.

Also the factor of surrounding area makes an important role to give the users the sense of place, since when people found themselves in an area which is closed by some buildings, some attractive functions, and beautiful view and landscape, inside, he feels belonging to place. By arrange some simple programs by urban managements in the public spaces strangers will know each other and so gradually the unpleasant sense of "strangers are scary" disappear. (like some common activities (playing in a team , singing a song together, doing some matches like kite running, or feeding animals, etc.). All of these activities can be some effected motivations to encourage people to appear in public places and act according to society accepted rules. Moreover the tangible and subtle control of polices and their appearance in public spaces make the environment safe.

These arrangements can make a pleasant evening and day for people. But what about nights? Two items make nights scary. First the lack of enough light (that increase the possibility of crimes) and second the lack of people. Except lighting which mentioned before, the 24hours functions make the place dynamic and alive during night time. Some functions such as super markets, hotels, restaurants, cinema and theatres, dancing clubs, are the places which most of the times have customer. Also some terminals (bus, metro, taxi, and airport) work until midnight and the appearance of passengers and the users help to make the area safe. It should consider that the dream of 24hours public spaces just limited into some places and not all the urban spaces. However they can design in an appropriate distance from the other regions and have this ability to provide facilities for their neighbourhood. It will be better if city divided in to some region. Each region has its own 24hours public space with its specific functions and facilities. Someway it will be the beating heart of the region. But it would be dangerous if all the consideration and designing just centralised in one place and besides the layers behind these ledges and out of this centre, everything drown in darkness and silence. Therefore its better that the major streets lead to somewhere near this centre (it increases the escape ways in a case of dangers), also an adequate lighting is not only for centre but also for all parts of the region is recommended.

4   CONCLUSION

It's clear that not only people effect on its surrounded area but also the evvironment has its own impact on people. This impact sometimes caused by social factors such as culture , government policy , traditions or sometimes it just caused by design of some place and the concept of designer in order to make people do some specific activities.besides some design points , the factor of time is considerable.

Most of the urban spaces during day hours are active and dynamic, but in the night time there are going to be some scary place and sometimes full of homeless, beggers and criminals. Some scences like that prevent the appereance of urban dwellers in night. To reduce these views, the exictance of some 24hours activity are necessary. In the weekends and summer nights, the people are in the street and public spaces over midnight but in winter and during work days, these appereance come down. Providing some facilities which are always entertaing and attractive for people improve the urban space. Also settlei down some functions which are 24hours open and service to users, such as terminals , stations, hotels , bars,clubs etc. Moreover its better that each region all around the city has its own 24hour public space that depended to the area of region the number of them can be different (between 1 -4).These spaces with reasonable distances by each other will be the beating heart of the region and make the area always active and safe. There are thirteen important items (such as ledge, form, multi media, lighting, furniture…) that considrating about them in urban design process make the urban space more pleasant and satisfied for the urban dwellers.

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