IMPROVING SOCIAL SECURITY OF PUBLIC SPACE BY EMPHASIZING TO LIGHT FACTOR (CASE STUDY- HISTORICAL FABRIC OF YAZD, IRAN)

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ABSTRACT*: Yazd city is the first adobe and the second historical city in the world. Placement of valuable historical texture of this city in a circle of worn out context has caused the Gradual burial of social, economic, skeletal and functional life especially in the public spaces of historical core of town. In addition, the expansion of urban crime and increasing social vulnerability in the region reduced the high value of this texture and has faced the valuable historical public spaces with matters like security reduction, street harassment and reputation of insecurity that makes the most attractive tourist area of Yazd not to have a worthy attention especially to the citizens. One of the fundamental objectives of the public spaces of the city design, maintain security and tranquility that is achieved through the expansion of a physical security system. On this basis we must make these spaces in a way that contains sufficient capacity of security for the presence of all social groups. Within the scope of the historical areas that are valuable heritage of the past, the design should be conducted very cautiously. So this research in a manner of descriptive -analysis examine the impact of skeletal features of public spaces to create the local security and Environmental comfort. And address with a definition of secure spaces and its position in city of Yazd and exciting crimes in the historical core Centre of it (Fahadan neighborhood). And among the physical environmental factors it considers the impact of light factor in preventing the urban crimes and examines the rate of its dependency with security and insecurity. Finally, in order to increase security, and using the obtained data, some solutions are offered in accordance with special historical and value features of Fahadan.*

KEYWORDS*:* Security, Secure urban space, urban crime, skeletal physical features, Fahadan-Yazd

INTRODUCTION

Today, the phenomenon of crime and social damage is considered as an inseparable part of anonymous and enormous urban spaces. The most worrying matter is the convert of past secure spaces to cozy corners As a result of the passage of time and practical usage changing. What is glaring among these is the lack of compliance between the form and skeletal of the past with today's needs and living conditions.

What is indisputable is that, functional resurgence and renovation activity is considered as one of the most effective ways of keeping alive the valuable historical context and what is being seen in Fahadan neighborhood these days confirms this matter too. But the forgotten point of this renovation is the change in habits and behavior of residents and audience of textures and urban spaces. so that narrow and hard faced alleys, that once with intense supervision of residents were safe places of commuting for all classes of society even for women and

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children, nowadays with protecting the skeleton and changing the conditions in to the museum usage it has become a frightening place even for juvenile and men. Regarding this matter, in some circumstances that people have to pass these paths they choose the shortest possible way very cautiously. This is while these contexts commemorate within itself the precious treasures of old monuments such as Ziaiyeh School, Jame Mosque, twelve Imam Shrine and many other old precious monuments that all of the tourists who travel to Yazd are very keen to visit them. What seems essential at first to this context is maintaining the skeleton and structural features of existing monuments. Beside this matter the preservation of urban life is of high importance to protect the social values of texture. Among the physical factors affecting the environmental quality, light is of those factors that without any need to physical fundamental changes and damaging the valuable background of context greatly increase the environmental compatibility and the whole collection of skeleton with today's conditions and needs.

In this research within an exact definition of what we know about the security of these areas in protecting our functionality as a cultural and social heritage, with a simple systematic design of the beautiful role of light we try to get the balanced condition that while it fulfills the need of security it doesn't reduce the values of context and be compatible with social renovation condition. The data used in this research is obtained from preparing the questionnaires from three groups of residents, passers and supervisors that tourists are in the group of supervisors.

THEORETICAL BASIS

Security

John lang in human basic needs model examines hierarchy and the relationships between the needs in categories that include physiological needs, security dependence, , dignity and self-confidence, the realization of himself and aesthetic and put the security as one of the basic needs in the second rank of this category. Eric Forum, John Ashton, Leonard dohel, have introduced the security in order, the person's mental health in society, anon-alternative quality in a healthy society ' and a basic need for urban space.

In the category of needs, security is introduced after the physiological needs (water, food, etc.)As the most important and most fundamental needs. IN this classification that is done by mazlu, the most important need in terms of Spiritual need is security that is considered as the most important goal of life and the essence of the mental health .Security in society is considered in three levels. From the individual to the family, the village, the town, the national level and the global system and at every level, the matter of security is considered in a variety of ways:

- Individual security and family Security
-Rural and urban security
-National and global security

The designers of the urban environment as decision makers of living environment mostly involve the two first levels of classification in their work. It is obvious that the existence of a secure individual and family system ensure the existence of a society with a high security coefficient. IN every level of this classification four basic dimensions of security can be considered: financial security; safety security, social security, intellectual security.

Crime

So the category of security as a result of establishing the order is accounted as the most fundamental and the most extensive pillar in the life of every person and society so that all sociologists and theorists believe that the most sublime perfection of society can be found in the unity of security and order. What threatens this perfection is the existence of anomie and insecurity that based on the vulnerability is divided into three categories:

-Crimes against people: battering, murder, rape, addiction, prostitution and other acts against the moral
-Crimes against property: theft, drug trafficking, gambling, and smuggling, vandalism.
-Crimes against the Government: demonstration, political corruption, tax fraud, etc.
So every behavior or characteristic that is in contrast with accepted and expected values and norms of society and a lot of people appraise it as negative and rejected behavior is considered to be a deviation.
There are a lot of reasons for deviation and insecurity but in urban environment we should pay more attention to the following factors:
-The possibility of the safe presence of offender in the crime scene due to the lack of fear to be recognized.
-The presence of the offenders' stimulus attractive and vulnerable targets.
-The presence of more crime facilitator agents than preventive factors.
Generally in order to clarify the subject we can categorize the factors affecting the rise of crime and insecurity in society into four categories: social factors, economic factors, cultural factors and environmental factors.
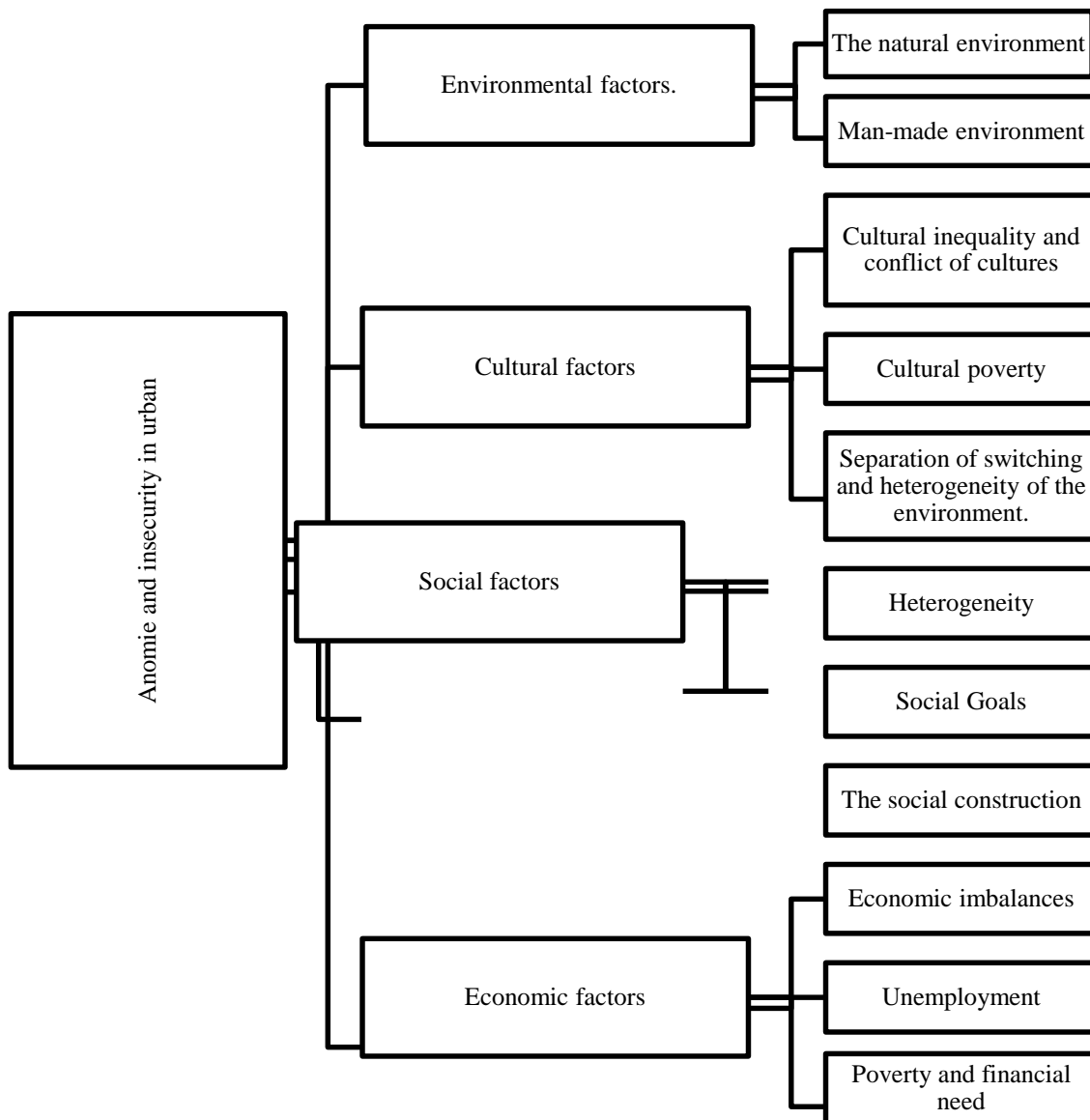
Figure 1: effective factors on increasing urban crime
Source: researcher

The part of this diagram that has been considered in this research is the affection of environmental factors in rise of security and in preventing the anomie. According to the needs, values and their goals humans transform the environment and mutually get impressed by the transformed environment, on the basis of the efforts and results of the studies, the theories outlined in this field emphasis on two significant parts:

1. Regarding the natural environment factors (weather, wind, temp, sea, mountains, Plains, latitude) and their impact on human behavior
2. Paying attention to the affection of manmade environment especially urban environments, on human behavior.

In spite of the theory of determinism and the impact of conclusive factors and no tangible natural environment, crime is a manmade phenomenon and is affected by the circumstance of the manmade environment of society and the place of crime. The arrangement of the form of city and its social order cannot separate from each other; equally they develop and mutually shape each other.

EFECTIVE ENVIRONMENT FACTORS ON URBAN SECURITY

There are a lot of factors affecting the rise of urban insecurity and crime but to mention   all of them is not of the question of this article, what is of interest here, is the environmental factors affecting the creation of criminal behavior and abnormalities that based on the feature of cities are included as:

1. The rapid transformation of the urban environment that doesn't allow the compliance with the environment to the human.
2. Thenew unknown neighborhoods and buildings that with attracting the newcomers greatly reduce the spontaneous supervision.
3. The reductionof mass control that is outcome of going away of the doctrinal beliefs and reduction of necessity to be committed to the beliefs and communicational commitments.
These factors are divided in another form in the skeleton of city:
1. the size of the neighborhood: the big scales, unplanned accumulation, separation of neighbors ties causes the development of abnormality and loosening of social relations and monitoring and thus degrade the level of security and increases the urban crime.
2. Spatial structure of neighborhoods: in urban neighborhoods the physical quality of units is compatible with social behaviors. Hence each neighborhood has its own features apart from other neighborhoods. Behavioral patterns of neighborhoods especially in youth ages has great impact that in the case of overcoming the environment anomic features, the increase of crime in the area is expected.
3. The distribution of public services and facilities: the division of appropriate services in the area prevents the rise of objectionable behaviors and vandalism.
4. The quantity and quality of the activities
5. The type and the shape of the dwellings: buildings with poor design can have a significant role in spreading the disease in poor health, physical isolation and depression syndrome,.

Moreover environmental structure can convey the violence, the complex situation of the residential areas in the cities, facilitate the street crimes such as bag-picking. Pick pocketing.
In the past, the old texture of Iran had certain physical features and spatial structure, so that this type of structure and features, such as the existence of roads, gates, mosques, baths, and Neighborhood Center... caused the distinction one neighborhood from others. The consequence of this spatial cohesion was social cohesion and security and the prevention of anomalous behaviors in each of the localities.

Light
Light is the first requirement for any kind of visual perception. In absolute darkness, we neither see the space, nor the form and color. But it is not the only physical necessity and its psychological value is one of the most important human life factors in   all of the fields. In addition to its applied usage light has always had the symbolic value. Light has been a

component of the essence of life. IN many   cultures light or Sun, as the source of light, has been considered as a divine element and it has been respected by the people.

When you don't see a shape due to the dismal the first step toward a vulnerable space is taken. This feature will attract the people who need dismal places for meeting their needs. This is that the frequency of crime happening is of a great difference in day and night and light factor intensifies the crime happening condition of the place. One of the most characteristic of natural light is its, sequence and its transformation during the day that makes its moving and changing in different hours. Light is used in the building as an independent and obvious element apart from other elements and concepts So that its dims are obviously visible inside a dark and dismal skeleton. Light is the most transparent, the softest, the easiest and the cheapest structural materials in the production of the qualities and required objects in human environment. Light is the thing that provides the possibility of personalization and gives meaning to everyday activities and reflect the life in imaginations and provides the variable mental states. IN harsh and dull space light can welcome the audience such as soft refuge. For this reason the light is most suitable structural material that is able to give form, beauty, pleasure and convenience to our everyday activities. Light is able to offer us the possibility to create the smart and compatible environmental systems in reconstruction of the artificial environment.

Knowing the process of taking advantage of the Sun as much as the process of the formation of different materials or different underlying shapes is necessary to design a building, but the usage of light at night due to the lack of natural Sunlight is of high importance. Crimes and especially financial crimes generally occur at night and darkness and undoubtedly one of the reasons of occurring the crimes is the dismal and being away from the spotlight of people. So missing the space in darkness will provide appropriate situation for creating anomie.
paying attention to the condition that provide proper vision from inside of buildings with better lighting in an effective way can increase the natural passages care, streets and privacy around homes and buildings and reduce the amount of crime. Spaces that some reasons other than physical reasons has converted them to the no defense's spaces, with supplying proper lighting are capable of becoming spaces with no problem and in this way we can prevent their vulnerability.

Color in light

Colors have always surrounded the human and have dominated them, ((the world that we see is made of two important visual elements: form and color that are interdependent for each other.)Color is a visible reflection that is obtained by the passage or publishes or reflection by the objects. Colors are important not only in terms of their beauty but also because of the emotional and psychological effects that have on people.
In most cities, there are not even compiled principles in urban spaces how about light and color to organize along other urban issues. Depending on the environment, climate and culture and based on the principles of color design, we should be able to guide the managers, designers, and even the people in the choice of colors of light.
Psychologically the type of combination of color used in the light of living environment, work place and urban space subconsciously affects the mental condition of people. For example the usage of deep colors in spaces for audience group with high intention will increase the rate of anger and aggression and deviant behaviors a lot.

In addition, since the color of lights can make deep space and even create the space, and make the objects understandable and legible and show their performance, create a sense of unity, induce continuity and regularity, indicate the important monuments and has caused the paths and streets to be seen by the people they are greatly important.

Studied Area

One of the oldest neighborhood of Yazd city, is Fahadan. that is located alongside the Bazarno neighborhood, Shah Abolghasem and Koshkenov This neighborhood that is the heart of Yazd city before the rise of Islam. From North to Fahadanstreet, from South to the bazarno neighborhoods and vaght o saat, from West to the Koshkenovand Shah Abolghasem, from East to Imam Khomeini Ave. «Fahd» means Prominent and wise because in the past this neighborhood was the place of Lords, elders and Prominent. In the early fifth century A.H Fahadan quarter has been created and from the oldest monuments of this neighborhood we can refer to the tomb of Sheikh Fahadan, Fahadan mosque, Ghadamgah mosque and Ziaiyeh School (prison of Eskandar).

Mentioned area is under the supervision of municipality in particular, any construction and changing in the buildings is strongly prohibited. Due to , many of the old residents have abandoned the area and most of the current residents are immigrants with mixed and heterogeneous cultures. Hence the sense of belonging to this area greatly has reduced and the rate of spontaneous monitoring in this area is very low. Another reason of this inappropriate replacement is the reduction of Rental prices by the center of switching location of this area in the city. Such a condition by the residence status of the colonies has faced this quarter with social problems and urban crimes especially theft, addiction and drug trafficking. Although the inhabitants of this area distinctly are highly religious believers but the rate of crime in this area shows that their living environment is prone to crime. Furthermore, residency of people who have grown up in a different place apart from this space, has caused them to encounter an environment that is not able to fulfill their needs. Therefore, since the motivation of the second generation of this area is not formed correctly such areas are exposed to a variety of social threats and move the environmental neighborhood toward instability.

FINDING

Regarding this presupposition we examine this subject from the resident's perspective.

Table1: percentage of crimes in studied area

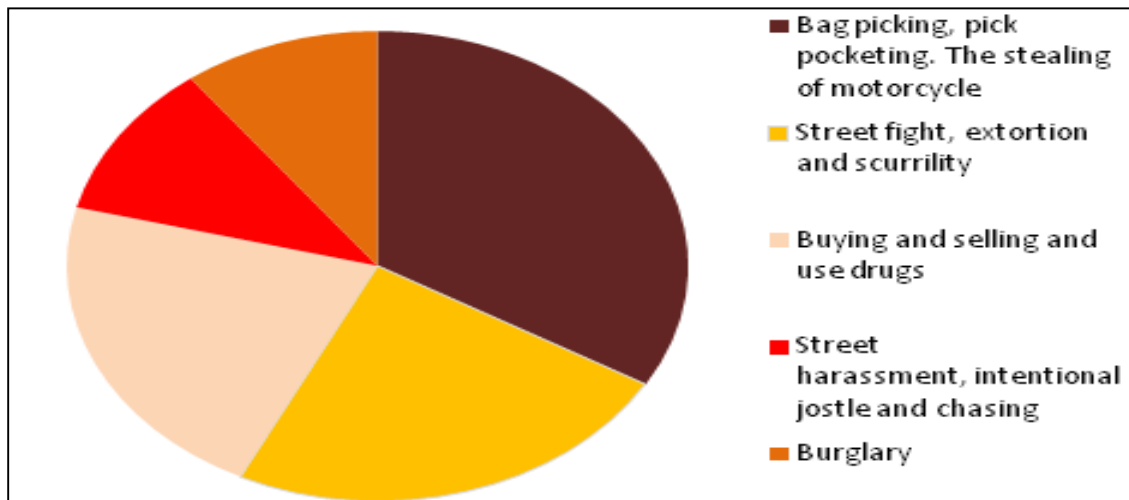| Type of crimes	percentage
Bag picking, pick pocketing. The stealing of motorcycle	33.4
Street fight, extortion and scurrility	23.9
Buying and selling and use drugs	21.7
Street harassment, intentional jostle and chasing	10.7
Burglary	10.3

Figure 2: crimes in studied area

The results of 50 surveys in Fahadan neighborhood as it show in table1 and figure 2. It specifies the priority of the existing crimes in studied area.
As previously mentioned, the existence of preventing agents is accounted as one of the contributing factors in reducing urban crime occurrence. So the rate of police presence from the residents view is asked and its results are shown in table 2 and figure 3.

Table2: the presence of the police in terms of residents

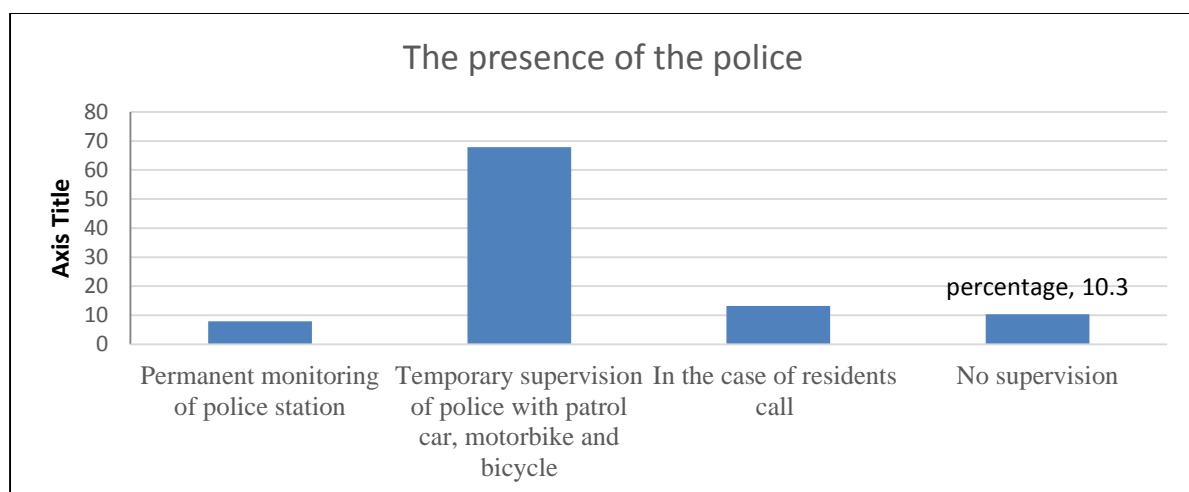| The presence of the police	percentage
Permanent monitoring of police station	7.9
Temporary supervision of police with patrol car, motorbike and bicycle	67.9
In the case of residents call	13.2
No supervision	10.3

Figure 3: the presence of the police in terms of residents

As the above table shows, the main supervision of police is limited to temporary patrol and request of people. This factor on the side of being a cozy environment and the existence of dark and labyrinth spaces has prone the environment greatly to crime occurrence. In Figure 5 the position of fabric and the sample of lighting in day and night is depicted.

Figure4: Fahadan visual expression, before sunset, dusk, and after Sunset.

As previously mentioned, the change of Fahadan from a residential neighborhood to a neighborhood of tourism, has caused the majority of area to become empty of native citizens, such a matter motivated us to ask three groups questions about daylight and the rate of its affection on it, the results achieved can be express as follows.

Table 3: Hours and tendency rate presence in the fabric

Hours and tendency rate of traffic by the residents in the mentioned fabric	Percentage
All hours of the day with full consent and confidence pedestrian and riding	10.1
Just before sunset, the lack of difference between pedestrian and riding	46.5
Just before sunset, riding preferred	8.9
Prefer not to pass the texture on foot	34.8

Hours and tendency rate of presence in the texture by the pedestrian and supervisors	Percentage
All hours of the day with full consent and confidence	23.5
Just before sunset with consent	45.7
Just before sunset under compulsion	10.3
Prefer not to pass the fabric	18.6

In the studies on Fahadan quarter its security problems were examined and recognized that in general we can summarize it in the following cases:

• Lack of adequate supervision by the police force
• Complex and disparate social groups
• The traffic of strangers and removing the borders dating and neighborhood
• Lack of adequate lighting, especially in pavements and places prone to crime
• Lack of monitoring and protecting the lighting equipment's and as a result of social damage they go away
•Removing the lighting scope by creating the obstacles like shrubs and panels
•The limitation of sight from inside to outside in the passages by changing the applied utilization
• The existence of dark corners in the path of pedestrians
• The existence of broken light bulb in lighting system

The best place of committing crime for offenders is the place that cannot be accurately monitored and is far from the view sight of others. Also regarding the conditions that cause appropriate view inside the buildings with better lighting, in an effective way increase the natural care of pathways and streets and spaces around houses and buildings and decrease the crime rate. Undoubtedly lightening is the basic factor in getting the desirable environment as well as providing the welfare and safety and scenic beauty of day and night in manmade environment. Different being of lighting rate in terms of location is significant in lighting design, based on this a selection of criteria and standards in accordance with condition of Fahadan quarter is mentioned in the following summary:

• In the spaces used by the tourists at the time other than open sight, the radiation of light should be in a way that no other elements prevent the light to illuminate the space.
• To choose Safe paths and provide their illumination for pedestrian to come and go after sunset.

•By the use of special bulb and Cap for the street light prevent the destruction of lighting fixtures and occurrence of vandalism.

•To use the bright light in dangerous paths regarding the matter that such light doesn'tcreate a shadow of darkness beyond itself and disturb the pedestrians.

•To provide adequate light for places along the way that needs to be oriented.

• Reduction of contrast between light and shadow, especially along the way of corridors and hallways

• Taking advantage of a couple of light instead of a light in order to provide a coherent coordination of the lighting level.

• Ensure the compliance with the type of light and its color and with culture and environment of area and its residents.

• The use of lighting in order to identify the paths especially for the movement of tourists and to secure the dark pathways with high potential of crime occurrence.

CONCLUSION

Every space gets two dimensions with light, day and night with changing the amount of light they will link together. Light is a subject that in any specific period of time, has given special emotion and concept to architecture and life. Light is used for reaching different goals and concepts, for instance, to create an aperture and leading the light to a subject causes the emphasis on that subject or using a soft and moderate motion of light induces a spiritual sense to the space that entering such a space a human feels a sense of respect and distinction. This feature is also used in the dome part of Ziaiyeh School that with heightening of construction and lighting on its roof has expressed the construction a typical of splendid monument. And the other case of using the light in basic design of this historical texture has been the use of windows in hall way sand their special lighting that has caused the motion or in vestibule the pause. This concept would be effective with the sequence of human motion in these spaces and creation of varieties in the paths

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