

# Identifying Urban Indefensible Spaces and Proposing a Design-Oriented Solution using the Principles of the Approach (CPTED); Case Study on Bagh Shater Neighborhood of Tehran, Iran

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**ABSTRACT:** Today, with the increasing trend of urbanization, city expansion followed by social troubles has led to an emphasis on issues such as citizens' security in urban space with respect to urban planning and design. To this end, the discussions in the form of new theories, the physical characteristics of space and its effect on crime rate have been always challenged. In this regard, we can refer to the approach CPTED which seeks to reduce the rate of crime in space by proposing a solution in the field of design. The aim of the study is to identify urban unsafe and indefensible spaces as well as proposing a design-oriented solution in order to reduce the problems within the area of Bagh Shater Neighborhood as the case study. The method of doing the research is a synthesized one; that is to say, having reviewed the views of the theorists of Urban Science and Urban Sociology, e.g. Oskar Newman, Jean Jacobs et al, the design-focused approach, CPTED, was selected. Then the factors and the mentioned elements of the approach were served to how to recognize insecure and indefensible spaces; namely natural surveillance, access, natural areas, etc. The identification of indefensible sites has been made given the mentioned principles of the selected approach using an expert interpretation and questionnaire completion on the part of the residents of Bagh Shater. After extracting the causes of insecurities and presenting unsafe sites, the spaces have been shown on the map GIS of the neighborhood. In the end, the design-focused suggestions are to be proposed in order to make the space defensible and reduce insecurity in the form of a design-oriented solution using CPTED approach (the principle governing urban design and planning with a view to preventing crime, i.e. Crime Prevention Through Environmental Design).

**Keywords:** Indefensible Space, Security, CPTED Principle

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## INTRODUCTION

As the most important reason, security has always played a pivotal role in the dynamic and survival of urban space. In as much as we can consider a space as functional where citizens can live and work without any concern and can feel safe, most unsafe spaces in cities are havens for criminals who are with high potentials for committing a variety of crime. That is to say, citizens feel frightened to live there and stay away. Therefore, the interest in the matter of security in urban spaces takes on great significance, in a sense that urban managers should take an action to ensure security largely in society by adopting appropriate solutions. These actions can be raised in social, economic, and physical arena. Regarding the actions related to the physical dimension, we can refer to CPTED approach with the aim of preventing crime through environmental design. It provides suggestions about urban design; by employing them and properly design urban space on purpose, we can raise public surveillance and, which follows that a reduction in the rate of crime in urban environment happen.

The research is essential because it directs us to use the environmental potentials with a view to reducing crime by proposing solutions. It proved to be sustainable greater than other methods and make urban management system incur less expenses. On the contrary, observing the trend of urban space design over time, it was continually

seen that there was little attention to the problem of security in the areas and that is why many of these sites have become ineffective with high percentage of social troubles due to the absence of such attention.

As a result of this, there has to be further interest in the matter of security as one of the most important factors in building safe city more than ever.

### The concepts and theoretical approaches

Security: Moen Dictionary define security as follows: to be safe, have no fear and be fearless (Moen, 2008: 354). Larousse Dictionary also defines security as follows: confidence, mental and psychological relief, it is an idea based on which risk, fear, panic and loss are meaningless and it is equivalent to the lack of precariousness (Sumpf, 1973). After all, this, the matter of security, as mentioned in the Universal Declaration of Human Rights is not today a need but a right instead. Security is synonymous with freedom, all the members of society recognize it a right and take advantage of it (Body, G, 2000).

Urban security: it is kind of a sense of relief and internal comfort which arise from the components of environment and after mentally perceived, it brings about kind of a sense of safety in urban space (Mahmoudi Nejad, 2008).

Urban insecurity: it can be calculated quantitatively in terms of statistics, namely the number of aggression

cases, aggression sites, nature, gender and age of victims. On the other side of urban insecurity is the mental approach of the phenomena as a sense of insecurity. The symbolic and cultural dimension is conceived in times of crisis, particularly in the era of super industry. As for such circumstances, some places become more developed than other places and almost bring about insecure symbols in the subway, city parks, major collections, neighbourhoods, etc.

Today, the matter of insecurity in cities is an indication of the lack of socialization on the part of the

groups of citizens, which give rise to many crimes in urban environment (Rabbani, 2002).

### The urban security-related theories

Given the significance of security in urban spaces as well as the connection between city and urban security, it has led urban theorists, in order to reduce damages and repercussions of it, to develop theories and ideas concerning the current issues for the security of urban environment. In the following table, some of the theories are briefly dealt with:

**Table 1.** The track record of the views of scholars concerning security/ authors' collection

The track record of urban scholars' theories		
Emphasis on the capacities of urban space in bringing peace and security, order, assistance and cooperation, emotion reinforcement along with a symbolic beauty for growing human potential forces and personifying civilization and culture (Choay, 2005).	Lewis Mumford, human civilization historian and specialist in age of machine	1890s
The formation of the theoretical basis of criminology discussion for the first time ever in this school Reviewing urban crimes with respect to the economic, social, and physical characteristics of urban environments and their effect on regional crime hotspot (Shokui, 2006).	Chicago school (urban ecology school)	1920s
Yet with an unprecedented increase in crime in the late 60s and early 70 in the U.S and officials and policy makers and social scientists' stress on finding a practical and immediate solution to crime crisis, designers and urban environment engineers came up with solutions. The theoretical basis of the solution was completely simple ((i.e. bringing change in the structure of physical environment and exerting an effect on how people use environment can prevent crime from occurring)		
Stressing the need for safe streets in separate city and identifying public and private sites Diversity of applications and their mix in the area of city Praising vibrant and attractive pedestrianism with the aim of increasing the number of eyes presenting on streets Social monitoring on streets through the presence of neighbouring buildings on the streets (Choay, 2005).	Jane Jacobs, author of the <i>Death and Life of American Cities</i>	1960s
Stressing on the two concepts, legibility and visibility, and their roles in understanding and creating a clear picture of city (the mental image of a majority of residents), a sense of security and citizen's relief and increasing a sense of belongingness (Lynch, 2002).	Kevin Lynch, the author of <i>City Appearance</i>	
The development of criminology theory and the prevention of crime through environmental design	Ray Jeffry, the author of the book "preventing urban crimes or environmental design"	1970s
Improving building façade from residents' standpoint Creating communal spaces and consequently increasing the possibility of monitoring residents Appropriate design in order to delete the spaces hidden from resident's view	Elizabeth Wood "raising the quality of living for residents Raising the beauty of residential environment	
Determine the limits of land ownership Reduce or increase the access to neighbourhood Monitor and protect citizens and police	Shlomo Angel, emphasis on the significance of physical environment for crime prevention	
The principles of defensible space 1) territoriality: delineating and preserving the borders of an environment and increasing a sense of belongingness among residents 2) natural surveillance: increasing the visibility of buildings and applications 3) image: proper landscaping and eliminating disorganizations and physical irregularities in appearance, thereby reducing crime rate 4) land application: planning and proper design of applications and encouraging citizens to get to public spaces	Oscar Newman, developer of defensible space theory in residential complexes "stop strangers so as to be safe from crime" People's willingness to report and confront crimes (Newman, 2008).	
The appearance disorganizations of abandoned building environment,	George Kelling and James Wilson, proposers of the theory of broken windows	1980s
The development of the concepts such as social welfare and the quality of life by the UN and an emphasis on the component of social security in this regard (Mahdizadeh, 2003) Emphasis on collaboration and cooperation between folk and the private and public organizations in the prevention of crime in urban environment (Imani Jajarmi, 2009).		1990s
International Training CPTED Program chief Tim Crow in his book "crime prevention through environmental design" (Raffiean, 2008). The acceptance of CPTED strategy among most international societies in 2004 and consensus on legislating for implementing their goals) The formation of an international association called ICA (International CPTED association) in 2004 in order to develop the idea of creating a secure environment and the improvement of the quality of life through environmental design (www.cpted.co.za)		2000

### The concept of CPTED

It is an idea of methodology, based on which the application of appropriate and purposeful design of a man-made environment, architects and urban planners can reduce the possibility of a fear from crime and improve the quality of life (Atlas, 1999). In this preventive method, crime is taken as a prediction, recognition and evaluation of crime threat and the commencement of the steps in deleting or reducing it. CPTED takes one step ahead and strive for developing society through appropriate environment design and consequently an increase in urban space (City of Virginia Beach municipal center, 2000).

The present approach can be regarded as a functional design and an optimal application of all the available elements in an artificial environment with the aim of reducing city crimes, which directly or indirectly impacts on the promotion of the quality of life and the increase in citizen's satisfaction and the improvement of welfare and social capital. The international association of CPTED defines it as the smart use of the constructed space in preventing crimes within the process of the artificial environment design and planning (Gronland, 2000).

International Bank also holds the belief that such design method provides an opportunity by which citizens can be the key representatives of ensuring their own security benefitting from social cooperation for crime prevention and reduction (Poyner, 1983).

### The major principles of the CPTED approach

A) Natural surveillance: in fact, it is the concept of environmental design that keeps intruders and security trespasser under surveillance through directly raising the visibility. Providing an appropriate connection between commercial and residential units of public environments, as in streets, public spaces, parks, sidewalks, parking lots, and alleys, as well as proper design of windows and LED lighting can be regarded as big steps in this respect. According to this, building non-observable regions, so-called blind regions, has been stopped.

B) Access control: using the principle, we can reduce the level of access to the regions in a city where there is a possibility of crime occurrence for potential criminals. The first and major principle in this respect is to get better understanding of criminals' action and the aim of committing crime; in this respect we can use physical and mechanical tools for controlling the access, such as locks, barriers, alarms and natural tools as in vegetation. Moreover, avoiding public site location in remote urban areas, clearly defining the gateway and exit of residential buildings in urban sites and how to provide lighting in urban spaces would greatly help to reduce the potential to get access to the regions for crime hotspot (City of Virginia Beach municipal center, 2000).

C) Territorial reinforcement: in this respect enhancing a sense of ownership and separating private from public spaces are considered as the most important reasons. According to this, the presence of outsiders and intruders takes on importance to residents and they have no right to trespass. In designing an environment, we need to apply elements as the limits of public and private spaces are clearly discernible. In this case, we can use different pavements on sidewalks and indoors, displaying

signs such as (no entrance) and so forth (City of Virginia Beach municipal center, 2000).

D) Sponsoring social activities (activity support): for this course of action, an attempt is made to make kind of empowerment in social activities, and in fact in urban regions and particularly the regions where the possibility of doing crime is greater, social activities, presence of individuals and the extent to which human surveillance is underway will be included. Since many of the urban crimes are occurred in the regions where either there is little surveillance or no human's physical presence.

E) Maintenance: by properly maintaining urban furniture and urban boards and signs and street lamps and landscaping, we can stop the increase in the capacity of regions concerning crime occurrence, besides optimizing urban expenses (Rafieian, 2008).

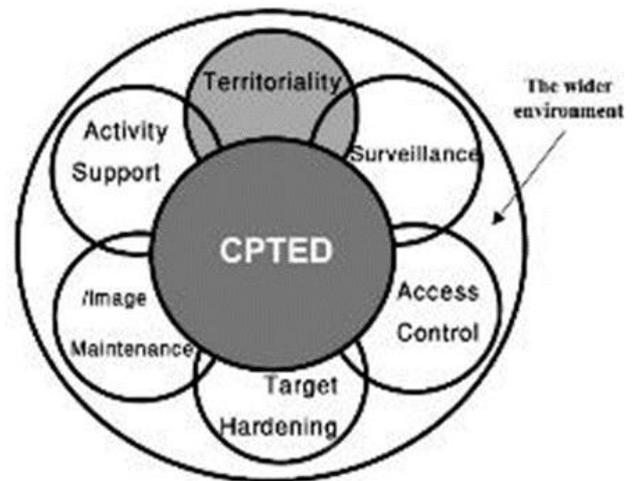


Figure 1. Preventing crime/ Cozens et al. (2005)

Indeed, CPTED is a set of the strategies mentioned earlier, which are seen in figure 1. In this figure, by target hardening, we refer to a set of measures to prevent crime, which aims at increasing the obstacles in the path of criminals (Paul Michael Cozens-Greg Saville-David Hillier, 2005).

### MATERIAL AND METHODS

Public spaces in cities are places where the social life of citizens is underway; for example squares, parks, sidewalks, streets, and central neighborhoods. Such spaces should be located, designed, and managed as people are often encouraged to do proper legitimate activities; as a result of this, there would be an increase in the level of security and peace (Queensland Government, 2007). Until now, a variety of theories about reducing the conditions of crime hotspot in urban spaces have been presented. At this point, considering the entire theories and CPTED principle, the following components and criteria will be approaches with the aim of identifying insecure spaces, which can be seen in figure (2):

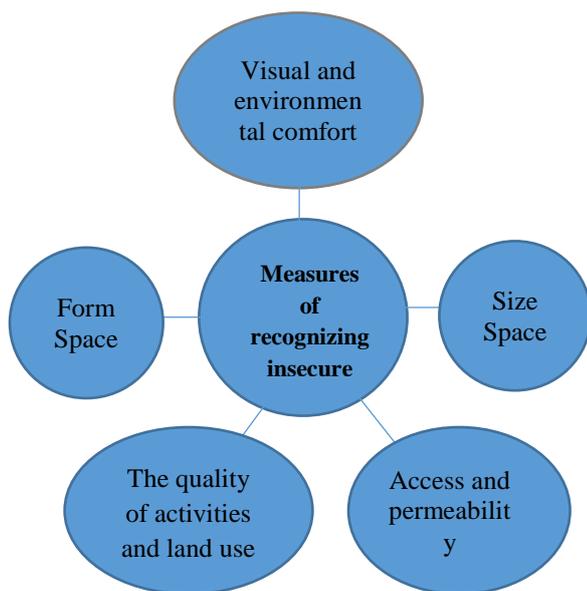
A) The size and form of space: scale, congestion, the visibility of form

b) Visual environmental comfort: symbolic pollution (environmental information), legibility, visual contamination (visual disturbance), color contamination, (improper use of colors in urban spaces), light

contamination (darkness), environmental contamination (solid waste materials in the environment), noise pollution

c) Access and permeability: the status of permeability of territories (private, semi-private and public), access features and communication network

D) The quality of activities and applications Now , the present research is that of field and applied. For the main section of the research, the case study, a survey method was used; the instruments of collecting information were here questionnaire, interview, and field visit. Based on a statistical estimate (statistical uncertain population), 160 questionnaires were calculated for this study and a random sampling was taken from the families of the statistical population. The statistical analysis was conducted in accordance the available methods in descriptive statistics.



**Figure 2.** Indicators and components of the investigation of insecure spaces/ resource: authors' collection

**The recognition of the area of the study (Bagh Shater Neighborhood)**

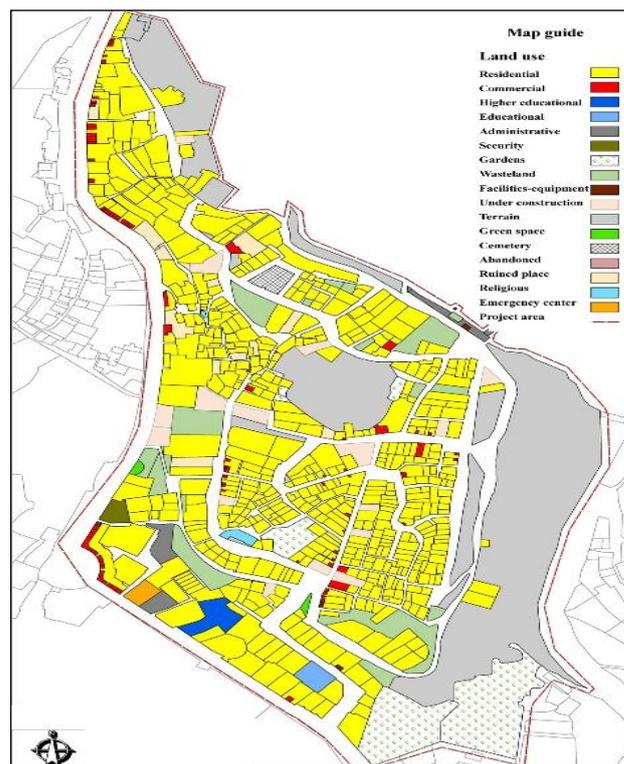
Located in district 1 of Tehran, Bagh Shater Neighborhood, like other mountainous neighborhoods, includes organic or worn texture, while getting access to it is difficult. The position of this neighborhood on a fault and considering the fact that the social fabric of the area mostly consists of the low-income class of the city, making the subject matter more sensitive than it looks. Situating between Golab-Dareh River and Darband and in the vicinity of the neighborhoods of Imam Zadeh Qasem and Darband, the neighborhood covers an area of 24 hectare and a population of about 4000 people, which are dominantly designated for residential lots.

**The analysis of data and the recognition of insecure spaces**

As mentioned earlier, the recognition of insecure spaces rests upon a few questions that were asked from the people in relation to the components and measures raised, the results of which are as follows.

Concerning the component of space size and form, the indicators such as scale, visibility of form were discussed; Scale: in the space of Bagh Shater

Neighborhood, most spaces include human scale and there is no open and vast space where it leads people to feel insecurity.



**Figure 3.** The land use map of Bagh Shater Neighborhood/ resource: consultant engineers of fabric and architecture design (2009)

Congestion: about 80 percent of the local people believe that density and overpopulation in the neighborhood, especially on Thursday and Friday, are greater due to the presence of tourists and climbers. With respect to the study of the effect exerting by the people on the security of the neighborhood, the following question is raised, for which the residents expressed their ideas based on a Likert scale of 1 to 5.

The question includes: “To what extent may overpopulation and the presence of strangers make a neighborhood insecure? (Very much, much, to some extent, a little, not at all)

**Table 2.** The effect of strangers on the extent of insecurity in the neighborhood

Very much	Much	To some extent	A little	Not at all
--	3%	13%	25%	60%

As tables suggest, the majority (60%) of the residents believed that the presence of strangers in the neighborhood is useful because they can increase the prosperity and bring life to the neighborhood. However, a group of residents (40%) believes that their presence would give rise to overcrowding and congestion in the neighborhood as causing troubles such as parking space especially for holidays and they disturb the tranquility of the neighborhood. On the contrary, the construction and building which are gaining momentum in the neighborhood is also the cause of overpopulation as people from different parts of Tehran and with different

cultures have settled in the neighborhood, making people hardly know each other as before. This failure has resulted in a few problems for old residents, so that they cease to consider their own neighborhood as an indigenous space.

The visibility of form: as figure (30 suggests, the major part of the neighborhood consists of an organic fabric, so that surface difference and steep slope are viewed as the obvious features of the area. Regularly, a number of the neighborhood spaces, as in maze-like and narrow alleys with steep slope, have gone unnoticed by pedestrians, particularly newcomers, which in turn cause a sense of insecurity. In this respect, we put a question to the residents; the results are presented as follows: “Does the physical form of space allow for a wide view of streets and sidewalks?” (Yes, to some extent, no)

**Table 3.** The view of space

Yes	To some extent	No
60%	30%	10%

60% of people believe that there is a view of public streets, but 30% as to some extent and 10% somehow confirm it. It is because the local people believe that there is a gap or empty space (less visible) in the space and between buildings, in a sense that an invader can hide there and pose threat to the residents, i.e. wastelands and abandoned lands are the instances of such spaces which can be seen around.

As for the visual and environmental comfort, indicators such as symbolic pollution (environmental information) and legibility, visual contamination (visual disturbance), color contamination (improper use of colors in urban spaces), light contamination (darkness), environmental contamination (solid waste materials in the environment) and noise contamination have been discussed:

**Environmental information and legibility:** in this regard, given the steps taken by municipality as to giving name to streets and setting boards, 90% of the local people believe that a single stranger can easily understand the position of his location and find his path with boards and signs situated in the visual angel of people, because they are just installed and endowed with proper quality as there is no sign of scars on them.

**Visual contamination (visual disturbance):** as a whole, in recent years, the level of construction in the neighborhood is growing and most buildings are endowed with beautiful façade well designed. This is the real cause of difference between old buildings with one and sometime two floors and newly constructed buildings with 5 and 6 floors. In this case, 60% of people believe that there are to some extent buildings with dirty and tarnished façade, though they have fallen in numbers in recent years due to new constructions. Surprisingly, the residents of the buildings do not perceive them as annoying as they look as they recognize them as part of the traits of an old neighborhood.

With respect to the quality of streets and the status of urban furniture, it can be said that 95% of the local people didn't consider the position of the neighborhood good, since in cold seasons, particularly winter, problems such as frozen-ground streets and problem with car traffic

and narrow alleys with many stairs are too many for pedestrians.

As for vegetation, 80% of the local people claimed that the neighborhood included lush green vegetation and abundant orchards and trees with more than one hundred years old. Sadly enough, due to the surge of construction in the area and the lack of attention on the part of authorities, particularly municipality, many of these orchards and trees were ruined and turned into residential complex. Another disadvantage of constructing in the area is the increase of waste and construction debris on the streets and the increase of noise pollution, which has made residents very discontented. However, the most important issue in this regard is the status of lighting on the alleys and streets of the neighborhood. In this respect, a question is raised, for which the residents expressed their ideas based on Likert scale of 1 to 6: “Is the lighting good enough on the streets and alleys?” (Very much, much, to some extent, a little, not at all)

**Table 4.** Lighting at night in alleys

Very much	Much	To some extent	A little	Not at all
--	--	10%	20%	70%

70% of the residents considered the status of lighting on streets very poor, believing that it is one of the major factors of insecurity at night. They also believe that some spaces of the neighborhood, as in by-lanes and wasteland and abandoned lots, have become good sites for criminals as there is the lack of proper lighting, so that resident traffic is difficult at night, especially for women and children.

As for the access and permeability, factors such as the features of access, communication network and territories (private, semi-private and public) have been investigated. The results indicate that vehicle traffic is feasible on the streets where they make up the foundation and structure of the neighborhood, particularly in the sections where construction is underway as there is a great width of alleys because of setback. However, in some connecting routes inside fabric, which are stair-shape alleys, the traffic of pedestrian, especially for children and elders, runs into difficulties due to a great number of stairs and steep slopes (figure4).

Moreover, many houses situated amid the walls of the stair-shaped alleys face a lot of difficulties in terms of access to transport vehicles, so that if any incident occurs in the area, the access of fire truck and emergency ambulance to parts of the neighborhood seems almost impossible. Regarding an access from the inside to the outside of the neighborhood and vice versa, 90% of the neighborhood residents believe that it is endowed with appropriate position. As seen on the map, on the west and south edge of the neighborhood the main street of Darband is located. One of the most important entrances to the neighborhood, Asadollahi Street, branches off from it. Likewise, on the east and north parts the entrances to the neighborhood and driving route can be seen in figure 5 and 6.

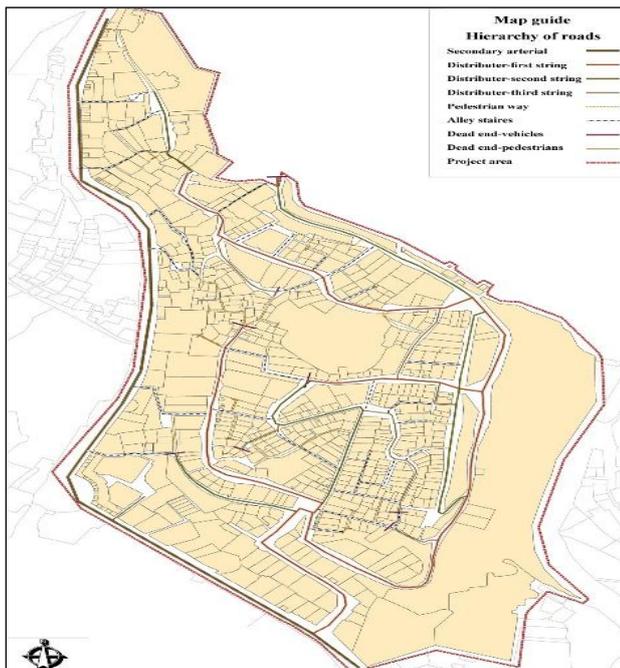
Concerning public transport, there is just taxi on the west edge of the neighborhood (Darband Street) and in the main and central square of the neighborhood (Bagh Shater square). There is no bus station in the neighborhood, which make the residents run into troubles. If we look at

the quality of activities and application in the neighborhood, we can come up with the following results: “What is your neighborhood like in terms of quality development compared to other neighborhoods?” (Very good, good, average, bad, very bad).

**Table 5.** The quality development of the neighborhood compared to other spaces

Very good	Good	Average	Bad	Very bad
--	--	20%	70%	10%

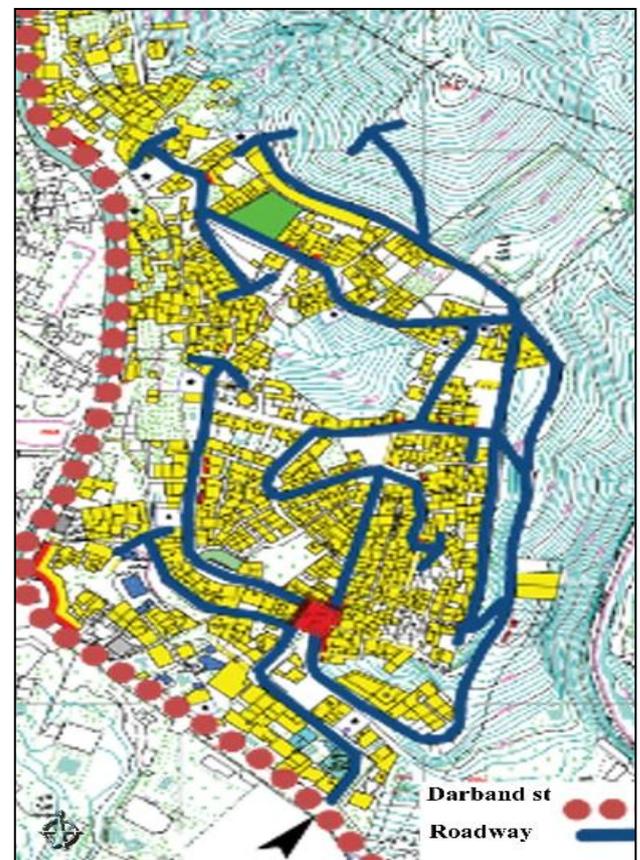
80% of the local people believe that, though it is improved in terms of constructions and the quality of appearance in recent years, the services here are fairly inadequate as against other neighborhoods around such as Abak, Imam Zadeh Ghasem, and Darband. According to resident’s opinions, the foregoing neighborhoods benefit from facilities such as fruit and vegetable sales, clinics, sport clubs, shopping center and commercial complexes. Meanwhile, none of the above services and facilities is made available in Bagh Shater Neighborhood. In this regard, we can only refer to a few supermarkets, bakeries, and taxi stand, which are scattered in the alleys based on local scale. With regard to recreational centers with the aim of spending leisure time and public spaces where people can come together and communicate with each other; the residents are faced with serious shortcomings. However, in recent years, measures such as local parks and Surtmeh Recreational Complex have been taken, though insufficient. These parks include only few sport tools for children and cover limited area, so that they hardly attract different age and sex groups, elders and women. On the other hand, recreational complexes are mostly of benefits to upper-class people and the local people take little advantage of these spaces. As a result, the neighborhood doesn’t seem to have the vim and vigor of a typical community that can keep life going in there at night.



**Figure 4.** the map of the access hierarchy in the Baghe-Shater Neighborhood/consultant engineers of fabric and architecture design (2009)

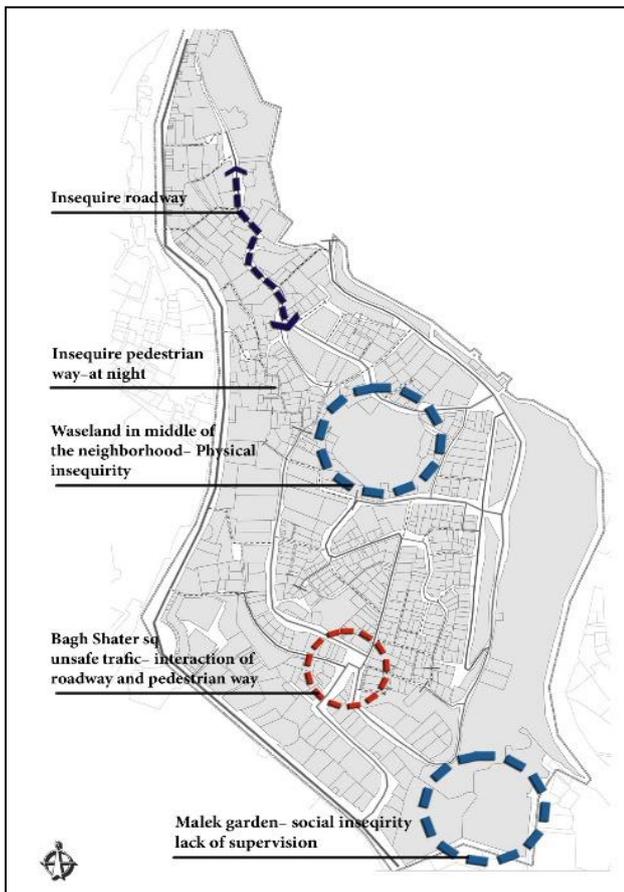


**Figure 5.** the map of the neighborhood entrances (by vehicle and on foot)/ by authors



**Figure 6.** The permeability map of driving passage/ by authors

However, the neighborhood residents also referred to social troubles such as drug addiction, and thievery as the factors reducing security in the neighborhood, although it is undeniable in other urban neighborhoods. Nonetheless, due to a familiarity with one another and a social solidarity on the part of a number of the residents, it can be said that the issues are not as serious as it appears, so the area is not in a bad condition in this respect. The abundance and high diversity of drug distribution and trafficking in Tehran and the growing rate of new drug uses are regarded as emerging issue which has an impact on Bagh Shahr Neighborhood and cannot be denied. According to the residents, the overall space of the neighborhood is not insecure as the major points where there were reports on partially insecure cases which include: the wasteland of the central area (up Hojjat Ibn Alhassan Asgari Mosque and a few meters away from Moslemieh Mosque), parts of Bagh-e Malek in the south part of the area, Bagh-e Arbab Reza in the center of the area and parts of under-construction buildings in the area.



**Figure 7.** Insecure spaces in Bagh Shater/ resource: authors

Additionally, in this respect, some cases, such as drug uses and movement interference in public spaces as in Bagh Shater Square and in the north access, have been reported. Parts of the west streets (i.e. under stone passage, back police station) devoid of lighting at night are among the fairly insecure spaces of the study area. Definitely, paying attention to creating public spaces with the aim of spending leisure time on the part of families and residents within the area and organizing abandoned spaces in the area are among the instances that can play a

crucial role in taking over and reducing social disorder within neighborhood area. Figure 7 and 8 show the major insecure spaces in this area.



**Figure 8.** The abandoned wasteland in the neighborhood/ resource: authors

## RESULTS AND DISCUSSION

The components and criteria contributing to the design of such spaces indeed constitute kind of preventive non-criminal strategy, especially environmental ones. The strategies entail three areas, which include:

- Awareness of environment: it means that spatial structure and the neighborhood access network should be conceivable, which contain visibility and understanding the importance of what is ahead of us and what has been passed, so this is how precarious situations draw to a close
- Clarity from other people's standpoint: it means that due to a relationship between buildings and space a person doesn't feel isolated. This entails visibility.

- Access to aid: it means that one can ask for help from others (Takhti, 2006)

Now, the application of CPTED approach in neighborhood can lead us to a secure environment without the need of using the methods that throws one into sheer panic. In what follows, a number of hints in relation to the area of the study are presented, which are worth applying:

### Natural surveillance

- The site location of recreational spaces and green areas is to choose in the center of the neighborhood, so that streets and neighboring houses can be seen.

- avoiding blind points and not visible spaces in the neighborhood

- building walkway routes benefitting from good lighting at night

### Access control

- restricting rather than completely stopping the access between one section of the neighborhood to the neighboring one

- Designing streets with the aim of reducing the speed and size of traffic at neighboring unit, e.g. using speed slower with a view to slowing down the traffic moving in the neighborhood

- Designing recreational and tourism spaces where the pedestrian access to them is feasible

### Sponsoring social activities

- Building play and sport grounds, social interactions centers, green and open spaces in the center of the neighborhood as a place for the activities of children, young and other people in order to prevent asocial behaviors

- attracting people with different age groups, life styles and economic status living within the neighborhood with a view to reducing crime hotspot

### Maintenance

- Conforming with the current standards in the field of construction and making building façade

- Preserving plants and green spaces, pruning trees and grasslands with a view to creating attractive safe spaces

- Using the lamps with long life time in order to provide lighting on site. Likewise, using kind of lighting system with sensors that make them stop working at sunrise

- Clearing away trash and debris from buildings in the neighborhood

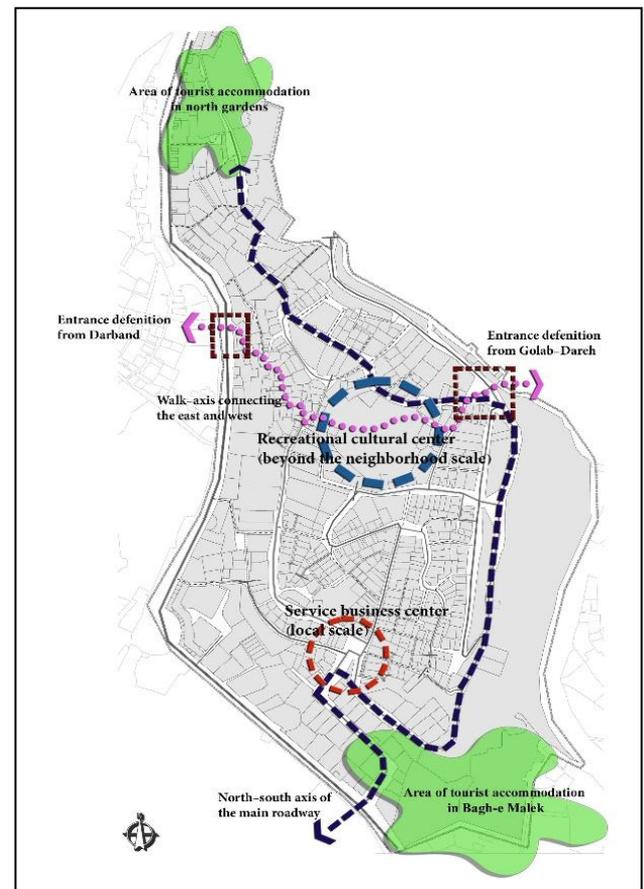
- Drawing up a document in order to comply with the laws and regulations as to the forgoing areas on the part of municipality and local associations. However, the most important concern of the residents of Bagh Shater Neighborhood is about the lands with large scale that have been abandoned. The lands benefit from great potential for providing facilities and offering recreational and leisure services, so that one can use them for defining the function of Bagh Shater Neighborhood; meantime, as against this, they are left on the fringe and turned out to be a place where people who travel back and forth Darband can stay. Having said that, we should bear in mind that Bagh Shater Neighborhood is a residential neighborhood which doesn't have to function as much recreational and tourism or crowded as Darband, yet it can provide the least facilities and excitements for its own local residents. Because of this, we can use CPTED approach with the aim of proposing design-oriented solutions concerning the abandoned lands, so that the security of the neighborhood will be ameliorated by promoting the quality of such spaces. At this point, having reviewed the weak and strong points and opportunities and existing threats in the neighborhood, as in the abandoned wastelands in the center of the area, two alternatives to the concepts of design have been offered which include:

### The Strategy of alternative 1

Paying attention to the north-south axis plotted on the map, as the main focus of the neighborhood where it has the capacity of transferring tourists and guiding them toward the mountains from entering it as far as its end point in a driving fashion. The axis includes a few sequences and abilities to be designed:

- 1- Entering the neighborhood from the south (the ending route from Tajrish Square), meeting the area required to design Bagh-e Malek and Bagh Shater Sport Complex
- 2- Crossing the center of the neighborhood as service part
- 3- Passing through public green space as the east green recreational edge and Takhtgah Manzari toward Golab Dareh
- 4- Crossing the edge of the entertaining and cultural center with meta-neighborhood function
- 5- Passing by the park (former cemetery) and the appointment location and climbers station

6- reaching a tourist residential area, the north orchards, continuing the way on foot and guiding space users toward the mountain



**Figure 9.** Design-oriented solution of integrating alternatives/ by authors

### The strategy of alternative 2

Paying attention to the east-west axis plotted on the map is the main focus of pedestrianism with an attitude toward the neighborhood as retaining the two valleys, Golab-Dareh River and Darband, and connecting them using the pedestrian potential of parts of Bagh Shater (stair-shape alleys) and holding the attractions of the natural ground of the space. The axis involves a few sequences and abilities to be designed:

- 1- Entering the neighborhood from the west (Darband Street) and emphasizing the delineation of the entrance to Bagh Shater Neighborhood in order to let its identity be recognized and encourage an embrace of visitors as much as possible and prevent it from being isolated.
- 2- Passing by the old mosque of the neighborhood (Moslemieh) and the use of its potentials as a hangout for the residents and tourists at specific hours, which follows residents and tourists have an encounter with one another.
- 3- Recreational cultural centrality amidst the neighborhood with meta-neighborhood function, becoming an attractive area for residents and tourists
- 4- Entering pedestrianism route toward Imam-Zadeh Ghasem and delineation of an equipped area in order for the prosperity of the relationship between an active neighborhood

5- Using the potential of stair-shape alleys along the way as the guides of pedestrian axis and presenting the identity and special natural source of the neighborhood.

The integration of both solutions has been suggested as a design-oriented strategy in figure 9.

## CONCLUSION

CPTED approaches, (crime prevention through environmental design), direct us toward a secure society. We are unable to design a space without any insecurity, but we are instead able to reduce crime occurrence in a space using the principles. Hence today CPTED is known as an operational strategy in the development of a society, because by conforming to the principles in a stepwise manner during the design of an urban space, we can avoid exorbitant costs that may be spent with a view to preventing crime in the future.

In the study, it was made clear that Bagh Shater Neighborhood with an organic and limited driving permeability cannot be conceived as an insecure neighborhood overall in terms of residents' views, there are, however, focal points having been completely abandoned and paying an attention to them is largely effective in order to promote the security of the neighborhood. Hence identifying the spaces and residents' interest in the potentials of the neighborhood and fondness for tourist presence in their area have made the research come up with a design-oriented solution with respect to the points. Hence the suggestions are based on CPTED approach and the need of the neighborhood and residents' opinions as how to develop its security. It seems that in case the points mentioned by the residents undergo changes with respect to the principles and design-oriented alternatives, the neighborhood, Bagh Shater, will be vibrant, legible and safe. All such cases will come with promoting the residents' satisfaction with living in the neighborhood, which serves the purpose of every urban expert and manager.

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