Converting Traffic Road to Be Pedestrian One: Contributing to A Better Environment; A Case Study of ST.9 Maadi, And Sheikh Zayed District, Egypt

Indjy M.Shawket

(Architecture Department, Engineering/ Modern Academy, Egypt)

ABSTRACT: *Despite of the importance of walking and the huge number of people who prefers not to ride any vehicles for commuting, there is a huge gap between the roads allocated to pedestrians and those for vehicles especially in some cities in Egypt such as Cairo and Giza. This main issue urged our interest to put a possible solution, which is simply to convert the traffic roads to roads for pedestrians on certain times of the day. This could help on advancing cultural and social life as well as highlighting the importance of pedestrian's paths existence in future planning. This research is a prompt to study through human needs in urban places and list down people's priorities in order to reach a high quality space to serve the needs of pedestrians.*

Keywords: Events, Human needs, Pedestrians, Urban spaces

I. INTRODUCTION

The humanitarian needs are the main control for judging the quality on urban space, and meeting these needs is the shortest way to get a successful urban space. Pedestrian roads are one of the most important outer space that deserves studying; this will help the succession of that kind of space. In this paper, roads for motor vehicles will be studied aiming at converting such places into safe roads for pedestrians through two different case studies. Egypt is chosen for the study case because it is one of the big countries with high population and which also suffers from lack of pedestrians' roads. By monitoring these cases and asking their stakeholders about their experiences in using the space and about the priorities of the elements they need in the space, we will be able to put elements required for a successful urban space in an order to obtain a high quality pedestrians' space even if it is changed occasionally from vehicle road.

II. PLACE MAKING

Urban design has been the subject of many recent studies and has secured its place among established built environment as a key means to address interdisciplinary concerns, where all urban designers, whether 'knowing' or 'unknowing', need a clear understanding of how their various actions and interventions in the built environment combine together in order to create high quality of urban structure [1]. Place making is not just a design; it is a strategic approach of collaborative system of relationships, triple top line thinking that integrates the social, environmental and the economic approach [2]. Urban streets, sidewalks, plazas and squares which are publicly owned, designed and maintained to serve particular kinds of activities and actively overseen by municipal authorities, are usually open to variety of users beyond the ones intended. It is primarily in these spaces that the city exhibits the key features of urbanity: access, freedom of choice, density and the intermixing of different kinds of people and activities. Over recent decades other types of so-called "public spaces" have emerged, including plazas, atria, galleries and festival market places [3].

Walking is the simplest way of movement and is the only mode of transportation that is independent of any tool or device. Streets have always been part of the movement structure in a city. Also, as Lynch expresses, path (streets) are the most important elements of contents of the city image: the paths, the network of habitual or potential lines of movement through the urban complex, are the most potent means by which the whole can be ordered. In brief, pedestrian streets are public places with full-time or part-time restrictions on motor vehicle use and are a major priority for people on foot, riding bikes and pushing carts. While there are different goals for turning a street into a pedestrian area such as accessibility, traffic problems, fixing and strengthening some land uses, and economic issues, it is emphasized that the social aspects of pedestrian streets are the most important functions of these urban spaces [4].

If the space is well-located within the local movement system, then upgrading the space and environmental improvements are likely to have a major impact on the density of its use.

In many cities, for example, vehicular traffic interferes with and reduces the freedom of pedestrian movement. But there are now numerous instances where the special configuration is not changed but streets are closed to car traffic and left open only for pedestrians; the new space is subsequently used more intensively by a greater number of pedestrians [5].

Mainly outdoor –even pedestrians' roads– activities in spaces can be divided into three categories, each of which places different demands on the physical environment:

Necessary activities: in general, everyday tasks such as going to school/work, waiting for a bus, and so on; optional activities: those pursuits where people wish to do some action if time and place make it possible; social activities: these activities that take place only when exterior conditions are favourable, as talking, walking, and standing around enjoying life [6].

Table; 1 Representation of the relationship between the quality of outdoor spaces and the rate of accuracy of outdoor activities

	Quality of the physical environment	
	poor	Good
Necessary activities	⬤	⬤
Optional activities	●	⬤
Social activities	⬤	⬤

Source; Jan Gehl, 2011.p.11

III.   HUMAN NEEDS

Public spaces are important because they express and also condition our life, civic culture, and everyday discourse. The development of urban public space addresses the tensions inherit in the contemporary transformation of the urban public realm and contribute to the emergency of an urbanism that promotes social integration and tolerance [7]. In sustainable cultural development and particularly in the new millennium, it is emphasized that every person is a media, where increase of communications and distraction of information among the persons of a society is considered an important development factor. Whereas walking increases the random conjunctions and as a result causes further social interactions between people, in which individual beliefs are created, and traditions and cultural interchanges increase as well. Furthermore, pedestrian areas are suitable places for performing street theatre, music and artistic exhibitions. Therefore, they have essential role for encouraging and introducing the unknown artists and another important role in the revival of traditional arts - such as passion play and religious ceremonies. Moreover, it has a very eminent role in promotion of the information through banners and ads along the streets. Also pedestrian areas have changed to an educational media of an extensive spectral cover of society people that will be effective for upbringing the future generation and transferring the ecological and oral culture and increasing the face to face communications [8].

A set of criteria for a successful people place: when possible, a people place should be [9];
- Accessible: Located where it is easily accessible to and can be seen by potential users.
- Meaningful: Clearly convey the message that the place is available for use and is meant to be used.
- Good looking: Beautiful and engaging on both the outside and the inside.
- Well furnished: Furnishing to support the most likely and desirable activities.
- Secure: Providing a feeling of security and safety to the users.
- Where appropriate, offer relief from urban stress and enhance the health and emotional well-being of its users.
- Reliable: Geared to the needs of the user group most likely to use the space.
- Encourage use by different subgroups of the likely user population, without any one group's activities disrupting the other's enjoyment.
- Offer an environment that is physiological comfortable at peak use times, in regard to sun and shade, windiness, and the like.
- Accessible for children and disabled people.

- Support the philosophical program espoused by the manager of the space.
- Incorporate components that the users can manipulate or change.
- Allow users the option, either as individual or as a member of a group, of becoming attached to the place and carrying for it.
- Easily and economically maintained within the limits of what is normally expected in a particular type of space.
- Designed with equal attention paid to place as expression of visual art and place as social setting.

Accordingly, some of these points have been transferred into questions in this research (see fig., 6) in order to measure the quality of the space and the priorities of these points to the stakeholder.

IV. EMPIRICAL STUDY

Two case studies are chosen with different backgrounds:
The first study: Steet 9, Maadi, Cairo, Egypt (an old district, full of foreigners, compact streets);
The second study: Sheikh Zayed, Giza- Egypt (a new district, wide streets, on the edge of the town).
The researcher studied these spaces through creating different events on them while closing vehicle streets and changing them into pedestrians' paths. This study passes by visiting sites, sharing activities, reporting and analysing photos, and interviewing stakeholders by questionnaires (from scientific database mentioned previously). From these analysis questionnaires, results are obtained; and then conclusions and outlook are formed.

4.1street (9)
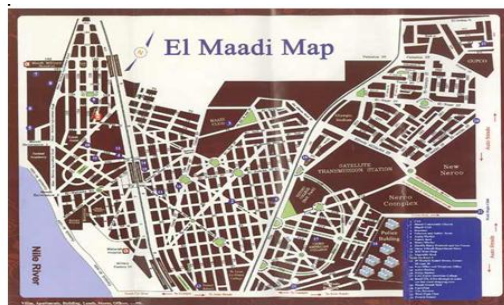This street is located in Maadi, an old district that has compact streets.

Fig. 1; Maadi map
Source; www.betterhomes-eg.net
http://betterhomes-eg.net/site/images/stories/maadi.jpg

Fig. 2; Maadi road in 1950
Source; Samir Raafat "Maadi's road 9: its past is anthor country", Egyptial mail, Nov. 1995.
www.egy.com
http://www.egy.com/maadi/95-11-11.php

On a Friday morning, Street 9 is closed, booths are established on both sides; fun and joy are the main concern of the stakeholders. Cultural interaction is increasing, art in everywhere, noticing a well environmental caring as a domain in different booths. Music is played, children are walking safely, biking is in groups, people are walking with their dogs, and an overall healthy atmosphere is dominant.

Fig. 3; Maadi event
Source; Researcher

4.2 Sheikh Zayed
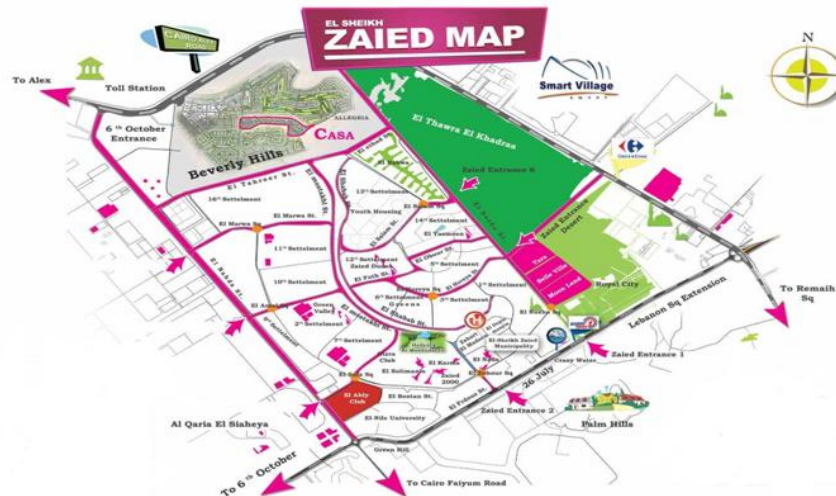It is a new district, wide streets, on the edge of the town, in 6th of October city.

Fig. 4; Sheikh Zayed district map
Source; www.coldwellbanker-eg.com, http://www.coldwellbanker-eg.com/View/img/map-
pics/pic/Zaied%20Map.jpg

The festival (see fig., 5) was held celebrating the 20th anniversary of the district. Many activities were done in this festival such as charity races, singing concerts, ballet show, and colouring and face painting for children.

Fig. 5; Sheikh Zayed event
Source; Researcher

4.3 Questionnaires and results
The questionnaire sheet has a brief description about the study as an introduction for the stakeholder to read before filling up the form. It is distributed over 60 person in the Sheikh Zaied case study, and 50 persons in Maadi case-study, with age categorization between 18 and 55 years old. As well, multi occupancies filled up the questionnaires (e.g. Pedestrians, booths' presenters, shops' owners).
The questionnaire is divided into two parts (as shown in fig., 6): The first is asking about the quality of the space (according to the case study and from the stakeholders' point of view); whereas the second question is asking stakeholders to arrange the priorities of his/her needs in that kind of spaces, according to his experience with the case study.

About the study;
This is an analytical study requesting to assess the quality of an urban space, when it is transferred from a normal street to a space for celebration having only pedestrians on it. In parallel, the study will identify the priorities of the stakeholder's requirements in that kind of space.
Thus, the questionnaire is divided into tow parts. In the first part, you have to answer by yes, no or sometimes (according to the existence of the element in the space under study). In the second part, you have to put the no. Of element inside the brackets descending according to their priority.

INFO.
District;_____
Name;_____
Gender;_____
Age;_____
Nationality;_____
Occupancy;_____
Date;_____
E-mail;_____

Questions (1); IS THE SPACE	YES	Sometimes	NO
1. Easily accessible			
2. Clearly convey the message the place is meant to be used for			
3. Beautiful and engaged			
4. Furnished to support the most likely desirable activities			
5. Providing feeling of security and safety			
6. Offer relief from urban stress			
7. Encourage use by different sub-groups			
8. Physiological comfort			
9. Accessible for children and disabled people			
10. Easily and economically maintained			
11. Designed with equal attention paid to place as expression of visual art and place as social setting			

Questions (2);
Please enter the priorities of the 11 elements according to your interaction with that kind of space;

Priority no;
1 ( )   7 ( )
2 ( )   8 ( )
3 ( )   9 ( )
4 ( )   10 ( )
5 ( )   11 ( )
6 ( )

THANK YOU

4.3.1 Results of the first part on both case studies;

First part; Graphs are obtained out showing the existence of each result on the corresponding case study as follows; x-axis: the element and y-axis: percentage of answers (%)
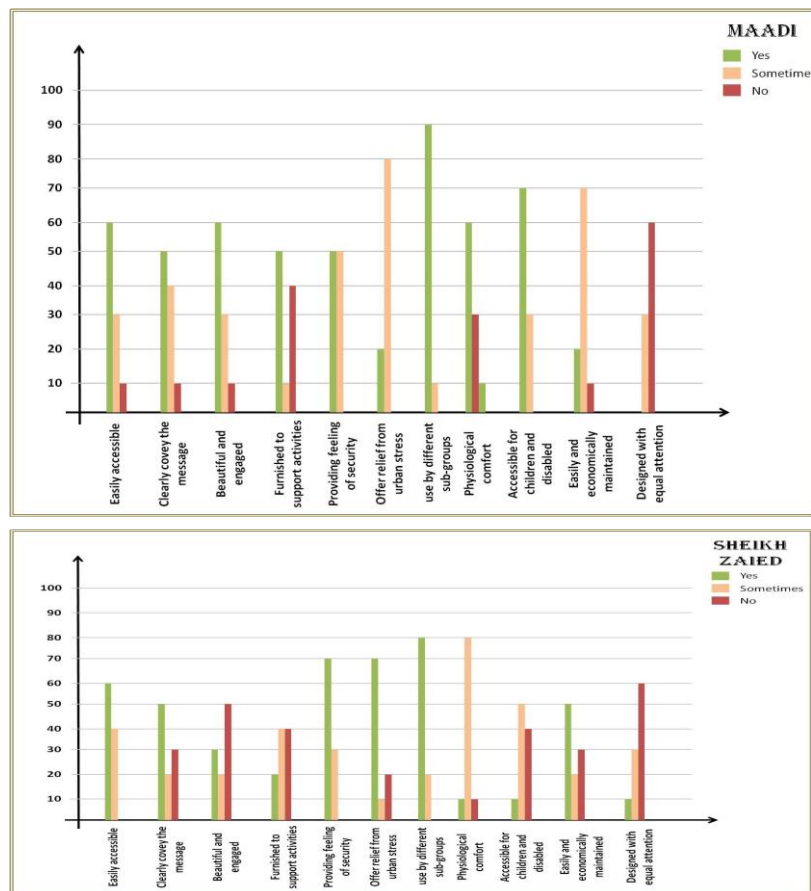

Fig. 7; Analytical chart for questionnaires" answers in each case study
Source; Researcher

The analytical graph for 'Maadi' shows that;
-The major problems are that there is no equal attention payed to both design and function equally, and the furniture of the space is not suitable to support most desirable activities.
- Most successful element in the space that it supports different sub-groups to use it, providing feeling of security, and offering relief from urban stress.

The analytical graph for 'Sheikh Zayed' shows that;
-The major problems are that there is no equal attention payed to both design and function equally, and it is not beautifully engaged.
-Most successful element in the space that it supports different sub-groups to use it, as well it could be easily and safely used by disabled and children.

4.3.2 Results of the second part on both case studies
Second part; after analysing the answers of the second part of both case studies the ordering of the elements according to stakeholders' priorities are as follows:
1. Furnishing to support the most likely and desirable activities.
2. Encouraging use by different subgroups of the likely user population, without any one group's activities disrupting the other's enjoyment.
3. Creating a beautiful and engaging on both the outside and the inside.
4. Finding an easy access location for potential users.
5. Providing a feeling of security and safety to the users.
6. Conveying a clear message that the place is available for use and is meant to be used.
7. Maintaining an easy and economical atmosphere within the limits of what is normally expected in a particular type of space.
8. Designing the place with equal attention paid to place as expression of visual art and place as social setting.
9. Offering an environment that is physiological comfortable at peak use times, in regard to sun and shade, windiness, and the like.
10.   Providing easy access for children and disabled people.
11.   Where appropriate, offering relief from urban stresses and enhances the health and emotional well-being of its users.
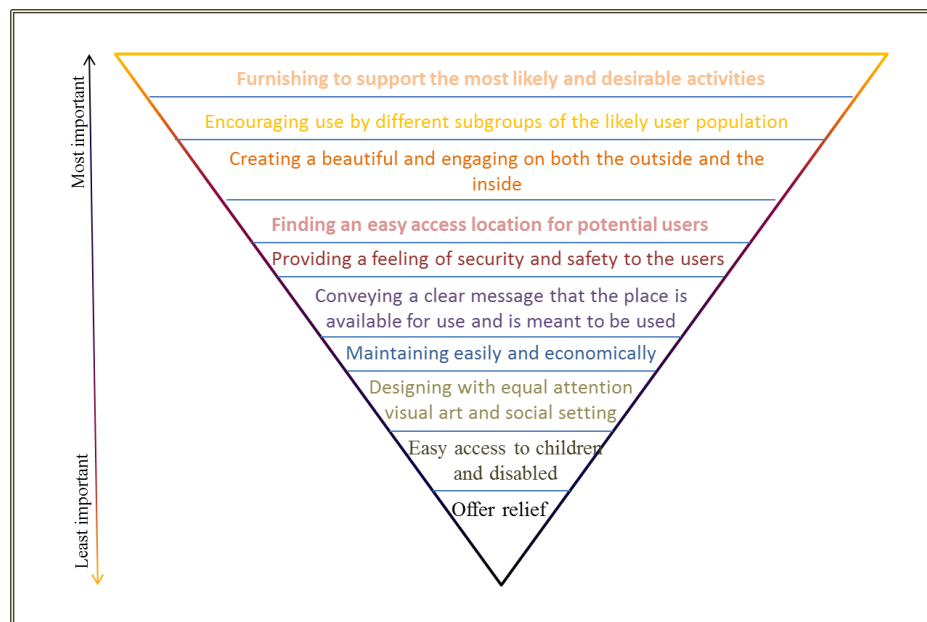
V.   Conclusion
        The conclusion will be divided into three sectors; the first and the second is a deep vision on the two studied cases, and recommendations to improve their spaces' quality, while the third will be an overall conclusion for the study that is obtained from the second part of the questionnaires.
First sector – Maadi, street 9- ;

The main problem in the space is when designing the space there was no equal attention given to the beauty and the function of the space (that what was clearly noticed by the stakeholders; and that is true that when designing street 9 there was no planning to change it occasionally to be a pedestrian road holding special activities in it), thus an attention should be given to the "function" of the space, i.e., the activities that are held in it as stakeholders could see that the space is highly engaged and beautiful.

The second major problem with the space is that the furniture does not support the activities held on the space which negatively affects the stakeholders' feeling of physiological comfort. That means that the responsible sector for arranging these activities should put into consideration that "the road when designed there was no willing to convert it occasionally to a pedestrian road, thus upgrading should be existing to the space from that base".

On the other hand, what encourages people the most is that the pace could be visited by different subgroups and that should be preserved. Easy accessibility for disabled, children, and the space are encouraging points as well for street 9 – occasionally- pedestrian's road.

Second sector –Sheikh Zayed-;

The main problem in that space, as well, is that there is no equal attention given to the beauty and the function of it, where stakeholders complained about the weakness of beauty in the space. Another major point is that the space has a problem with the accessibility of disabled and children. These points should be recovered to raise the quality of the space.

On the other hand, the space encourages different subgroups to visit it as it provides the feeling of security and relief from urban stresses.

From Previous; it is noticeable that the two case studies are totally different starting from their characteristics' and designing purpose, ending up to the elements that should be advanced to raise the quality of the space.

Third sector;

The priorities of human needs in that kind of spaces could be divided into two sectors.

The first one is related to how to encourage people to go to that space, and the second one is related to how experts' role could help on succussing this kind of space.

REFERENCES

[1]. M Carmona, Public places, urban spaces: The dimension of urban design, Routledge, 2010, ix, 207.
[2]. K Franck, and Q Stevens, Loose space: possibility and diversity in urban life, Routledge, 2013, 7.
[3]. J Gehl, Life between buildings: Using public space, Island press, 2011, 9-11.
[4]. K Jou, Pedestrian areas and sustainable development, World academy of science, engineering and technology, Vol.5, 2011, 425, 429.
[5]. K Legge, Cultural Glue: The Secret to Making Great Places, Public Journal, no. 105, 2008, 62-64.
[6]. A Madanipour, whose public space? : International case studies in urban design and development, Routledge, 2013, 13
[7]. C Marcus, and C Francis, People Places: Design guidelines for urban open space, Second edition, John Willey &Sons, Inc., 1998, 9.