

INVESTIGATION OF STREETS AND PEDESTRIAN MALLS AS PUBLIC SPACES

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ABSTRACT

Public spaces are open to use for everyone. As urban public spaces, streets are essential elements that allow circulation of people between urban spaces. This study elaborates on the role of streets among urban open spaces, pedestrianization programs and the role of pedestrianization in physical and commercial downtown revitalization. The form and approach of this study is a review paper. The material section of the paper includes a review of articles and books about pedestrianization. The conclusion reached by the study is that pedestrian malls not only offer visually pleasing and aesthetically rich urban spaces, but also constitute important public spaces in cities that are created by public regulation. Moreover, pedestrian malls play an important role in downtown revitalization.

Keywords: *Public spaces, streets, pedestrian mall, downtown revitalization, 3D visualization.*

YAYALAŞTIRILMIŞ ALIŞVERİŞ CADDELERİ VE SOKAKLARIN KAMUSAL MEKAN OLARAK ARAŞTIRILMASI

ÖZET

Kamusal mekanlar herkesin kullanımına açık mekanlardır. Sokaklar kentsel mekan içinde kamusal mekan olarak insanların kentsel mekanlar arasında dolaşımını sağlayan önemli öğelerdir. Bu çalışmada sokakların kentsel açık mekanlar içinde aldığı rolü, yayalaştırma çalışmalarını, yayalaştırma çalışmalarının kent merkezlerini fiziksel ve ticari açıdan canlandırmasındaki rolü ele alınmıştır. Makalenin ele alınış biçimi ve yaklaşımı tarama makalesidir. Makalenin material bölümünü yayalaştırma ile ilgili makale, kitap taraması oluşturmaktadır. Çalışmada elde edilen sonuç pedestrian malls'lar sadece görsel, estetik açıdan zengin kentsel mekanlar sunmamakta aynı zamanda Pedestrian mall'lar kamu eliyle yapılan bir düzenleme ile kentlerde önemli kamusal mekanların oluşmasını sağlamaktadır. Bununla birlikte pedestrian mall'lar kent merkezlerinin yeniden canlandırılmasını içeren bir öneme sahiptir.

Anahtar Kelimeler: *Kamusal alanlar, sokaklar, şehrin yeniden canlandırılması, yaya alışveriş merkezi, 3 boyutlu görselleştirme.*

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1. INTRODUCTION

As spaces where citizens get together and carry out leisure activities, public spaces are among the most important elements of a city. Streets are public spaces that provide for people's transportation needs as well as being places for socialization and sharing. Streets also offer essential facilities to citizens with their visual richness and aesthetics. "Pedestrian malls" are among the most important examples of the pedestrianization movement and they offer aesthetically pleasing spaces, leisure activities, shopping opportunities and socialization spaces. "The emphasis of streets is on movement between places, the principle lines of communication between different places. However the street is not only means of access but also an arena for social expression" (Moughtin, 2003). As elements that create the urban image and urban space, streets are where citizens perceive the city as well as where they socialize. "For many people, paths (streets) are the predominant elements in their image. People observe the city while moving through it and along the paths the other environmental elements are arranged and related" (Lynch, 1960). Streets are public spaces that serve citizens as important elements of the urban image. As public spaces, streets can be distinct from other spaces or have an identity with the agglomeration of similar functions and/or structures from different or similar architectural periods.

"The term public has a multiplicity of meanings, from a strictly political definition of collective citizenry to the more popular usage of designations everyone and anyone. The meaning of space may seem, on first contact more clear cut: it refers to the physical dimensions of a particular location" (Huat and Edwards, 1992). Public Open Space refers to spaces accessible to everyone (Grose, 2009). "Public space broadly defined encompasses all those parts of the built and natural environment where the public has free access: all the streets, squares and other rights of way; the open spaces and parks; the 'public/private' spaces where public access is relatively unrestricted" (Magalhães and Carmona, 2009; ODPM 2004). Public spaces are where people come together, share things socially, express themselves and carry out social activities; where collective consciousness is manifested. "Public spaces are the places in which private and common requirements appear because the public life in cities have been satisfied and also which alters by times due to the socio-economy and culture of the public" (Türel et. al., 2007). The importance of open spaces to our environment and quality of life is increasingly recognized (Maruani and Cohen, 2007; De Groot, 1992; Naveh, 1997; Ward Thompson, 2002; Chiesura, 2004). Public open spaces are important environmental features that may facilitate physical activity among children and adults (Timperio et al., 2007; Bedimo-Rung et al. 2005), both as a facility where physical activity can take place and as a potential destination to which to walk or cycle (Timperio et al., 2007).

As public spaces, streets provide mobilization within the city as well as being places for public activities. Moreover, street is the most important design element for assuring the readability of the city. This paper aims to examine the physical renewal of the street, which is the design element that allows movement between these

activities, as well as its design together with commerce, leisure activities and rest areas. Pedestrian malls are one of the most important implementation tools that aid these activities and it is elaborated on as the method of this paper.

2. MATERIAL

Pedestrian Malls can be analyzed as an example of pedestrianization, which plays a fundamental role in bringing streets and citizens together. Pedestrian Malls also improve the quality of the physical appearance of the city and contribute to the commercial and leisure activities of the citizens. “Traditionally the word “mall” has meant an area usually lined with shade trees and used as a public walk or promenade. As used today “mall” denotes a new kind of street or plaza in central city business areas oriented toward pedestrians and served by public transit” (Rubenstein, 1992).

“Outdoor pedestrianized streets, known as pedestrian malls in the United States, first appeared in American downtowns as a direct counter-response to the success being experienced by the early suburban shopping malls. The major feature that this downtown strategy borrowed from their suburban counterparts was a pedestrian-friendly environment where pedestrians were physically separated from motor vehicles. A pedestrian mall is a downtown corridor – usually a few linear blocks along the traditional main shopping street – where pedestrian transportation is given highest priority” (Robertson, 1997). “There are many reasons for building one of the pedestrian mall types or streetscapes. The primary one is to revitalize an area of the central business district in a given city in order to increase retail sales, strengthen property values, to compete with suburban shopping centers” (Rubenstein, 1992). “Any examination of downtown retail strategies must begin with a clear understanding of suburban shopping malls, the primary competitor for retail sales. Outdoor pedestrianized streets, known as pedestrian malls in the United States, first appeared in American downtowns as a direct counter-response to the success being experienced by the early suburban shopping malls” (Robertson, 1997). “The literature suggests that downtown malls have two effects on pedestrian behavior: a fortress effect and a distance decay effect. The fortress effect refers to the likelihood of a downtown mall becoming an island of activity segregated from the rest of the central shopping area. The second type of pedestrian movement pattern, the distance decay effect, recognizes the possibility of spill over benefits but suggests that such benefits are distributed unevenly. Central to this hypothesis are the related concepts of least effort and intervening opportunity” (Lorch and Smith, 1993).

One important issue related to street pedestrianization interventions that are limited to physical intervention and built environment is improvement of visual quality. In urban planning the third dimension is the last step before implementation in design, in order to measure visual quality and perceive mass, volume, fullness and voids, urban transitions and routes. The creation of the designed space and people’s aesthetic satisfaction can be tested during the 3D design stage. The visual quality of urban space decides the pleasant degree of human’s mind which is evoked by the vision. In practice, urban designers are concerned with the physical arrangement of

the basic components that make up the built environment at the level of buildings, streets and landscape details (Zhang et al., 2004). 3d visualization is a key method to present visual quality of urban space such as streets so as to animate the imagination of designer. “3D visualization and modelling capabilities can make communication easier for planners and facilitate the study of complex urban environments in their full spatial extent including shape, size, volume and the spatial configuration in all x, y and z dimensions (Yin 2010; Yao et al., 2006). “There is evidence that 3D-visualizations are perceived as more trustworthy and convincing than other, traditional representations” (Lammeren et al., 2010; Sheppard 2001). Pedestrianized street needs a special visualization that shows spatial quality of before pedestrianization and after pedestrianization. A proposal work has been prepared for the Millet Street in Kayseri to show the influence of three-dimensional design on pedestrianization projects. The target of this three-dimensional proposal is to emphasize the potential visual effect of a pedestrianization sample closed to vehicle traffic in the Millet Street which is open to vehicle traffic now and where people will spend their leisure time. The Millet Street is an important centre of trade in the district of Kaleiçi in Kayseri (Citadel of Kayseri). The Vatan, Serdar and Sultanhamam Streets parallel to the Millet Street and the Kızılay and Turan Streets which cut the street vertically have been pedestrianized The point that draws attention in the picture on the left is that citizens directly encounter cars during shopping. At the same time, pedestrians encounter the cars parked on the right and have difficulty while crossing the street. Moreover, the street has a negative profile in terms of its visuality, urban aesthetic and image.

The three-dimensional visualization of a potential pedestrianization project to be carried out on the Millet Street is as it follows: Apart from the visual effect targeted with the design, the pedestrianization project is supported because of the cafes where people will spend their leisure time. In the design, the potential of the citizens to come across a car has been minimized. Also, its negative visual effect has been decreased. Through the landscape designs, there will be more spacious urban and public areas. With this proposed three-dimensional design, there will be positive contributions to the visual profile and aesthetic of the city.



Figure 1. Proposed 3d visualization of Millet Street (Kayseri).

This is a model study that shows the influences of pedestrianization projects and three-dimensional design on pedestrianization projects. A pedestrianization sample applied to support the material part is presented below.

The figure below shows an example of a pedestrian mall. This is a pedestrian mall on Untere Königstrasse Avenue in Stuttgart, Germany. Stuttgart's Untere Königstrasse offers a wide variety of shopping possibilities for pedestrians as well as visual pleasure with its vegetation and street furniture elements. Spaces are created for leisure activities and socialization.



Figure 2. Example of pedestrian mall (Untere Königstrasse/Germany)
Figure taken archive of author.

Untere Königstrasse is a good example for this study. It fulfills an important public role by allowing the downtown area to be used by citizens, offering shopping opportunities and providing leisure activities, as well as with its aesthetically pleasing visually richness well separated from motorized traffic.

3. METHOD

Like any urban typology, the shopping centre has a history of its own. The story begins with the traditional main street pattern in which retail activity is lined up along both sides of the street. The street is a place of intense interaction that accommodates vehicles of all types, as well as pedestrians. Retail activity is highly

visible and accessible along the street (Southworth 2005). “It is important to encourage pedestrian movement to limit the consequences of excessive automobile use in the urban environment. In this respect, knowledge of pedestrian movements is a key element of better urban planning. For several years, urban planners have been paying more attention to the expectations of pedestrians who are more aware of the urban environment” (Foltête and Piombini, 2007). In the public space usage of streets, the character of the urban space and the urban aesthetics of the street are as important as the movement of people between different land uses. Various studies have aimed to identify the direction and magnitude of the relationships between land use and urban form characteristics and the amount of travel by various modes (Clifton et al., 2007). “Urban environments consist of positive and negative elements, which are the structures and the open spaces defined by the structures. Well defined relationships, fluidity of space, well constructed spatial transitions and harmony between these elements determine the quality of urban aesthetics” [Erdoğan, 2006]. Negative spaces lead to lost spaces as well as creating undefined areas in the city. What exactly is lost space and how does it differ from positive urban space, or ‘found’ space? Lost space is the leftover unstructured landscape at the base of high-rise towers or the unused sunken plaza away from the flow of pedestrian activity in the city (Trancik 1986, Cormana and Tiesdell 2007). The “pedestrian mall” method shown in the example is proposed for creating positive spaces. The section of this application is shown below, which illustrates the elements of its definition; spaces that people can move inside, shadowed by trees, integrating the street texture and shopping activity, useful in downtown revitalization. The section shows shopping possibilities, pedestrian walkways, rest and leisure activity areas.

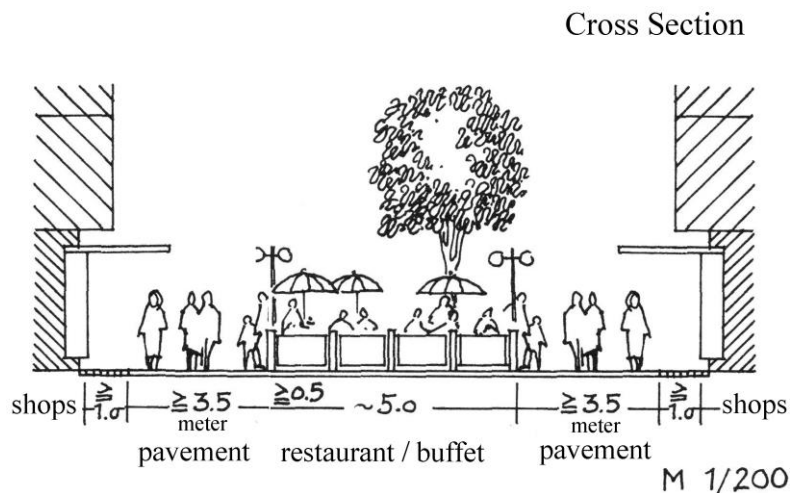
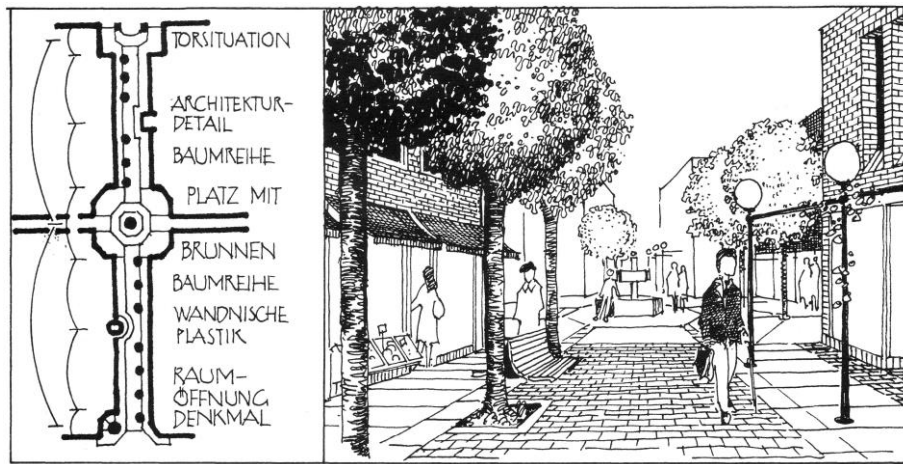


Figure 3. Cross Section of Pedestrian Mall
(Source: Prinz D., 1984).

The essence of the study is a complete system proposal that connects public spaces and includes elements of form, volume, height, fullness and void, meaning and function, creation of positive spaces and integrity of pedestrian roads, which form the identity of the space. The figure below shows the street plan within the system. Dieter Prinz's proposal (1984) offers a design that includes pedestrian road plan and view as well as positive spaces where public spaces meet private ones, which are well defined in terms of design.



**Figure 4. Perspective View of Pedestrian Mall
(Source: Prinz D., 1984).**

The issue that requires most attention in pedestrianization is providing a connection between the downtown area and other districts. The second important aspect is resolving car parking locations for the motorway connections of these pedestrianized roads in the city center while designing these connections and transport routes. Another important issue is participation of possible stakeholders in the project in order to address potential problems that may arise during the implementation of these pedestrianized roads. The figure below shows the stakeholders that are involved in the pedestrianization project and the relationships between them. On the basis of public regulations, pedestrianization projects are analyzed in four main stakeholder categories. These are:

- 1-Infrastructure and car parking
- 2-Management
- 3-Technical
- 4- Land ownership

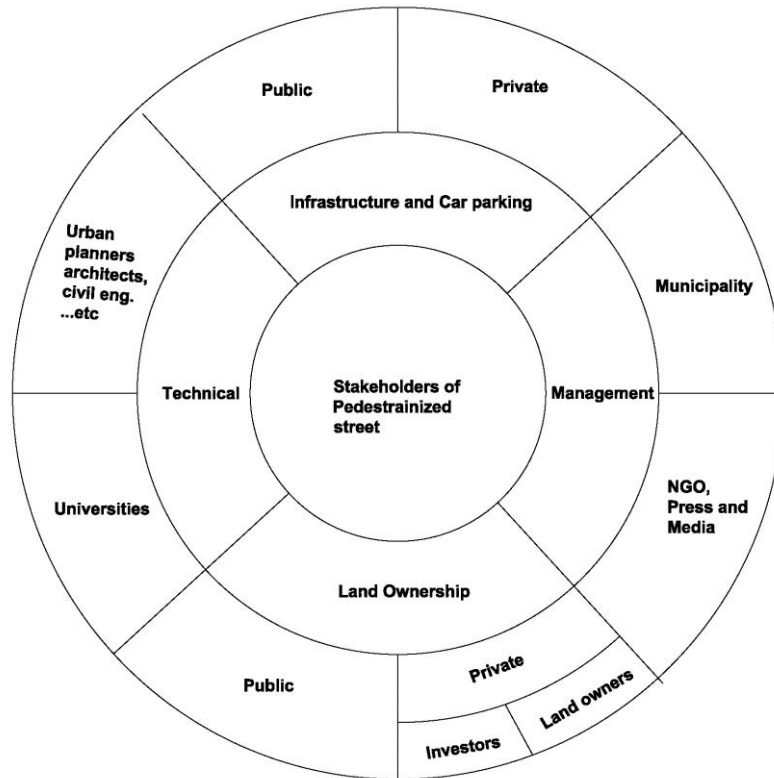


Figure 5. Stakeholders of pedestrianized street.

A more detailed investigation shows that public and private entrepreneurs, universities, city planners, architects and civil engineers, municipalities, NGO's, media, investors and land owners are among the stakeholders that are involved in pedestrianization projects.

4. DISCUSSION: DOES REALLY PEDESTRIAN MALLS PROVIDE ONLY GOOD SPATIAL QUALITY

Pedestrian malls are prime examples that they have included besides physical improvements, special events, central promotion and business development activities (Weisbrod and Pollakowski 1984). The physical quality analysis decides the comfortable degree of the people's sense (Zhang et al., 2004). Far from motor vehicles and close to the downtown area, Pedestrian Mall's are in the position of main arteries of the city. Cars are an important part of everyday life. They are also sources of danger (Lang, 2005). Efforts to calm traffic in walkable environments through street design have demonstrated a reduction in accident severity, accident

frequency, and environmental impact (American Planning Association, 2006). There are number of issues involved in infrastructure design that have been of direct concern in urban design. One has been the separation of pedestrian and vehicular traffic in order to provide a more congenial and safer environment (Lang, 2005). Pedestrian malls seem to not only improve spatial quality but also offer pedestrians safe urban spaces for shopping and leisure activities.

The car oriented design of the modern city, and its destruction of the pre-industrial city, deterioration of pedestrian priority in historical areas, human scale designs in the postmodern city and urban design projects facilitated the rise of pedestrianization projects. The study shows that these conservation and urban design works seem to contribute to the identity, image, competitiveness and physical appearance of the city as well as to economic revitalization of the downtown area.

Pedestrian malls also prevent physical, social and economical deterioration especially observed in the downtown area as well as reducing impacts of shopping malls that are usually located in the outskirts of the city.

5. CONCLUSION

The study shows that pedestrian malls especially have an important role in the revitalization of city centers, which are deteriorating as a result of shopping centers built in suburban areas. Pedestrian malls are found to be improving the physical spatial quality of the downtown area, while economically revitalizing it by forming retail agglomerations and commercial clusters in public access zone. The findings of the study point to the fact that, in addition to contributing to downtown revitalization, pedestrian malls improve urban image, contribute to the public space character of the streets and have positive impact on increasing living standards. The citizens need to be provided with pedestrianized street closed to vehicle traffic in order for pedestrianization projects to amend the living conditions of the city and to enliven the city centre. At the same time, the district needs to be supported with car parks for vehicles and alternative transportation systems.

Teller (2008) indicates that one of the main differences between Pedestrian Malls and Shopping Malls is that shopping malls are managed with a private entrepreneur while pedestrian malls are managed with the support of the municipality and the collaboration of the business owners on that street. The pedestrianization projects are important projects that form the future vision of the city, integrate the citizens, provide the continuity of the urban space and influence the urban character. The pedestrianization process which is collectively managed by public-private sector, technical specialists, universities and the media that advertises the pedestrianization area, is an important strategy for creating public spaces. The discipline of urban planning, which is a public service, integrates public streets with leisure activities and socialization spaces with pedestrian malls that have to be established by the municipality.

Especially, as it can be seen in Figure 1, the example of the Millet Street, pedestrianization projects contribute to the urban aesthetic. Also, the three

dimensional designs produced during the process of project formation are important because they will show the possible results that will arise when the project is applied. Another important point in Figure 1 is that pedestrianization projects increase the spatial quality of public places. Moreover, they will enliven the city centre by increasing the time people spend in places where they can do leisure activities and relax while shopping.

As it can be seen in the study carried out, streets are important components that provide transportation in urban space. Similarly, pedestrianized streets are public places that facilitate access from one place to another for pedestrians. Pedestrianization projects are components that provide ease with movement. Apart from increasing the quality of public places, pedestrianization projects influence urban legibility in a positive way through their contributions to the image of the city. As Kevin Lynch (1960) stated, streets are not merely elements that transport citizens between urban functions; streets are also predominant elements in the image of the city. While people move within the city they perceive environmental elements, urban function, districts and borders through streets. Pedestrian malls are urban spaces that increase the readability of the city.

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