



A COMPARATIVE STUDY ON THE EVALUATION OF URBAN SPACE QUALITIES AND URBAN ACTIVITIES IN THE RELATIONSHIP BETWEEN PUBLIC REALM AND PRIVATE SPACE

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Abstract

Urban Space modelling is a conclusion of the users' interaction, perception, interpretation and behaviours in that physical environment. One of the major elements of Urban Space is the Public Realm. Recent studies on this topic show that the quality of Urban Space depends upon the activities and social interaction within those areas. However, nowadays, the quantity and as well as the quality of Public Realm have a roll-off rate. This tendency herewith emphasizes the quality of Urban Spaces. From this point of view, the density and variety of urban activities and socio-economical status of the users, in addition to the environmental qualities of the space, are the other important facts that determine the quality of the space. In this study, the quality of Public and Private Spaces and the relationship between Urban Activities are analyzed within three Private Properties located on Ankara-Eskisehir Motorway. Main purposes of this study are to investigate the commodified urban spaces without ignoring their social properties and to examine the relationship between the public-private space qualities and the urban activities.

1. INTRODUCTION

Cities and urban spaces are the places where individuals and the society get together and interact with each other. These are the meeting places where different segments of the society with many different characteristics gather together. The individual maintains his/her socio-cultural life at outdoor spaces in the urban environment organization, communication and activities in those spaces. Urban Space consists of physical environments shaped according to the expectations and needs of the society, offering accessible public space life which provides various activity opportunities. This definition, as is aimed in this study, is important in terms of emphasizing the relationship between social structure-urban space and public space.

Communication and social interaction, which are one of the basic needs of human beings, depend upon the space organization that supports outdoor living. But today, in the cities that grow erratically, it is seen that a proper environment has not been created for individuals; building and outdoor space physical properties and open public spaces do not meet user expectations. The unplanned development of the cities and existing building stock has led to the loss of importance of open public spaces and the decline in public space quality within the city.

The aim of this study is to examine the social, cultural and physical formations of open public spaces, where the interaction between individuals and society are supported by the physical environment. For this purpose, the main discussion topics of this study constitutes the reconsideration of the artificial street formations on axis of Ankara Eskisehir Motorway and the location, shaping, importance and mediation for social interaction of these streets within city life. The urban space in the scope has been evaluated through the concepts of architectural environment and determined through the analysis of the relations between public and private spaces. The Analyses on the three private property, i.e. Armada Shopping Mall, Tepe Prime and Mahall, located on the axis of Ankara - Eskisehir Motorway revealed the relationship between the open space qualities and space activities and the public and private spaces. The revelation of the expressions of

semi public/semi private spaces in the altering city life is investigated by how the users define these spaces, purpose of their use, types of interactions and to what extent these spaces allow interactions and socio-spatial activities from the physical point of view. The relationship between urban space activities and space qualities are evaluated as a result of these investigations.

2. PUBLIC / PRIVATE SPACES

Kostof defines the public realm as a common space that connects the society, where the citizens perform functional and ceremonial activities during daily routines [1]. Whereas Madanipour states public space as the most important part of the city covering the streets, squares, parks and all the surrounding structures [2]. For this reason, the quality of the public space, especially the streets and squares, has a very important role in forming the identity of a city. Urban spaces, being places that bring people together, indicate the presence of communication between the individual and the society. Spatial relationships will be achieved, when the relationship between urban occupancies and spaces is defined. The most important feature of open urban spaces is that they create a social life among the buildings. This social life enables more than one person to come together and communicate with each other in a public space.

Gehl focuses on semi private, semi public spaces by defining the life amid the buildings as the urban open spaces. He defines these spaces more easily accessible and more social spaces when compared to the public and private spaces [3]. It is understood from this definition that semi-public / semi-private spaces softened the strict boundaries of public and private space. These areas belong to a certain group of people and also diversify urban space activities as they increase the diversity in urban areas.

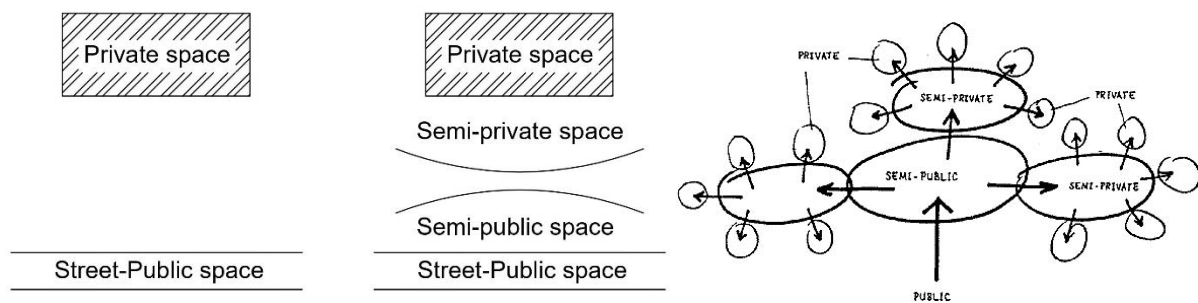


Figure 2.1. Public – private space [4]

Figure 2.2. Public space, Semi public – private space uses [4]

O. Newman puts forward that semi-private semi-public spaces provide the transition in private and public spaces, accordingly, more flexible, more permeable and conformable spaces are formed [5]. Each space affects each other in relation with its unique life and uses. In parallel with Newman's view, Krier emphasizes that the urban space consists of open public, semi-public and private spaces that build the traditional pattern and that these spaces have spatial relationships with each other within a certain hierarchy [6]. From this point of view, it is obvious that semi-public / semi-private spaces provide permeability and circulation in the city.

Today the margin between the public and private spaces is fading away. Organizing the design of the public spaces according to a particular socio-economical group results the loss of the public property of these spaces, causing them to be transformed into semi public/semi private spaces. Studying only due to their physical space properties and commodification of the urban spaces transformed these spaces into non-public domain. This transformation in public spaces resulted a change in the intensity and diversity in the activities. This tendency revealed that the space qualities of public open spaces and their relationship with urban space activities should be analyzed. In this context, the quality of the public and private spaces and the relationship between the urban activities are investigated throughout Armada Shopping Mall, Tepe Prime and Mahall Ankara that are located on Ankara-Eskisehir Motorway and introduce a new concept to open spaces.

3.QUALITY OF OPEN URBAN SPACES

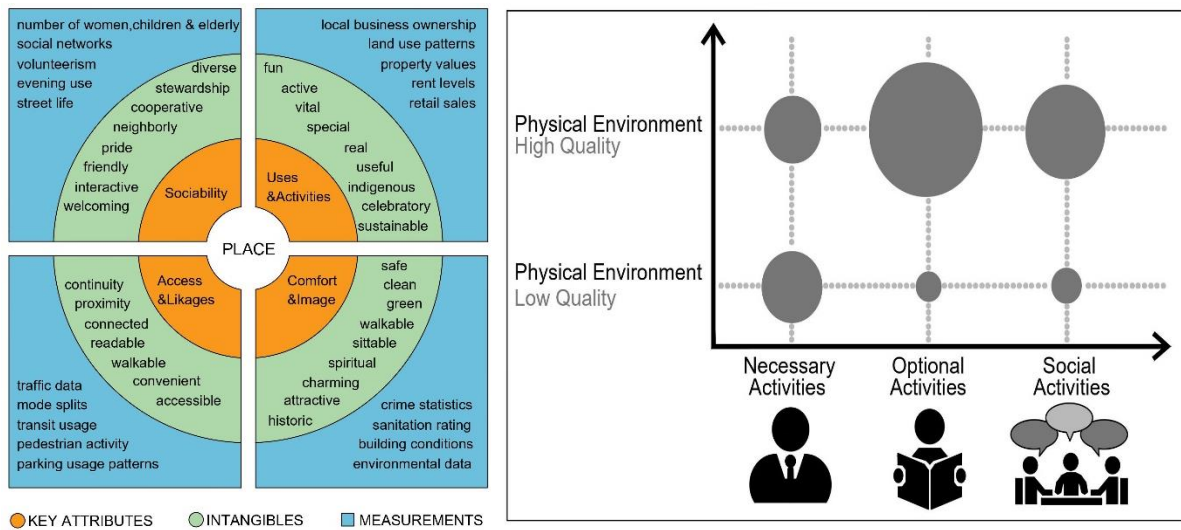
Recent studies on the quality of open urban spaces involve different types of approaches. These approaches are only due to the functional properties, or only due to the physical properties or else due to the socio-morphological properties of the users. Besides different perspectives on the space quality approaches, there are points where these approaches also intersect (Table 1). The success of spatial qualities in public spaces does not only depend on physical inputs. Furthermore, space user profile, purpose, frequency of use and mood are the other factors that have a deep impact on the quality. Recently, it is accepted that high quality in these open urban spaces is the aspect which can meet the requirements of the users totally and equally and make sense for a large part of society.

Table 3.1. Approaches according to space qualities

Space Quality Components	Quality Parameters	Researchers
Social interaction	Available physical environment for social interaction	Whyte, 1985, 2000; Gehl, 2010; PPS 2000
	Contain different activities	Whyte, 2000; Gehl, 2010
	Access to all kinds of social classes	Gehl, 2010
	Suitable areas for recreation	Whyte, 1985; PPS, 2000; Carr,1992
Physical characteristics	Accessible	Lynch, 1984; Danisworo,1989; Carr,1992; Rivlin, 1994; PPS,2000; Whyte, 2000, Gehl, 1987-2011
	Human scale	Shirvani, 1985
	Physiological needs	Rapoport, 1982; Lang, 1994; Whyte, 2000; Gehl, 1987-2011
Physical comfort & safety	Safety and security	Lang, 1994; Gehl, 1987-2011
	Feeling comfortable and free in the space	Gehl, 1987-2011

Open urban space research organization, “Project for Public Spaces” (PPS) suggests that these spaces are generally connected to their surroundings and easily accessible, have good identity and comfort, have different types of utilization and activities where people gather, meet and thus become more sociable. Working on the quality and the quantity of the open spaces, PPS draws attention to the accessibility and connections, comfort and image, utilization and activities and sociability titles, and created a space quality diagram [7].

Gehl analyzed the relationship between physical space quality and urban space activities under three headings: necessary, optional and social activities. He thinks that these activities show different relationships with the physical environment [8]. In his graph, the connection with the quality of the public realm and the activities is figured out. The success of the open space quality increases owing to the optional activities. This is directly proportional to the increase in the social activities. According to Gehl, necessary activities are those which are the results of the necessities in our daily life and are less related to physical activity. Optional activities are the activities that occur in well-designed and analyzed spaces. That is why this activity is closely related with the physical environment. Social activities, on the other hand, are the type of activities that depend on the availability of people, such as interacting, connecting and meeting at public spaces.

Table 3.2. Spatial quality diagram [7]**Table 3.3. Urban space activities and Physical Environment relationship [8]**

4.METHOD

Two methods are used in this study aimed at understanding the relation between the space qualities in semi public/semi private open spaces and urban space activities in the labour areas. First one is the perceptible quality measuring criteria and the second is the survey studies based on the subjective implications of the users. While evaluating the space qualities in the public realm, based on the indicators presented in Table 1, it is addressed within the framework of the approach of Project for Public Space (PPS), which defines important criteria for social activity and interaction, and defines four properties of the space qualities with an integrated approach.

In the survey studies, related users are questioned for 3 types of urban space activities defined by Gehl. In the study, where the axis of Ankara Eskisehir Motorway is selected as the study domain, a survey was carried out with 60 individuals; 20 from each 3 projects Armada Shopping and Business Center, Tepe Prime and Mahall. Participants were randomly selected and survey was carried out on a voluntary basis. In these semi-public / semi-private spaces, the same survey, which aims to compare the spaces on spatial and social basis, is carried out in two stages, both at weekends and on weekdays. The data acquired at the end of the survey was evaluated with SPSS programme.

5.FIELD EVALUATION

Evaluating the urban open spaces according to today's changing conditions and designing them into liveable fields has gained importance in the cities. It is observed that the use of open public spaces in Ankara in general is very limited and inappropriate for use. The study zone focusing on the axis of Ankara Eskisehir Motorway , a region developing rapidly, growing in an unplanned way, involving people from different social and economic groups and having the reflections of this irregular urbanization in the use of open public spaces, reveals the importance of this study.

Along this axis, there exists public buildings, university campuses, shopping malls, hotels and office centers. Heavy traffic congestion is observed due to the increase in the variety of activities at these spaces which are widely preferred by higher income group of people. Traffic - pedestrian related deadlock changed the use of spaces and made it necessary to get to the region by car. Moreover, as a result of the speed corridor created by the road, it is thought that the spaces designed along the road couldn't integrate with the road space and the spaces on the opposite side of the road, and remained as disconnected private/public spaces.



Figure 5.1. Map of the axis of Ankara Eskisehir Motorway

Figure 5.2. Mahall Ankara, Tepe Prime, Armada Shopping and Business Center

The entertainment and social activities of the society affected by the changing social structure are in private property. This situation resulted in the formation of spaces for the use of public. Although the spaces designed are perceived as public, they are the spaces of private property for consumption purposes. These spaces changed the content of public realm. The meaning of public spaces such as street and square has changed because of more conservative preferences of people for socialization, in parallel with the change and redesign of the city life. Globalisation profits and changing and developing technologies began to be used more widely and transformed into new structures in entertainment areas.



Image 5.1. Armada Shopping and Business Center

Image 5.2. Armada Shopping and Business Center Street organization

When the private property projects selected in the study zone were investigated in terms of the construction time and the functions offered to the users, the first phase of the Armada Shopping and Business Center, which includes shopping, food court, cinema activities and a high-rise office tower, was opened in 2002. In 2012, the second phase was constructed with a decision to expand; the two structures were connected with bridges at the upper levels and the shopping activity was expanded. The space between the two buildings on the ground level was included in the design and a food court area was created. The design decisions of this semi-public / semi-private open space were taken after the two buildings were completed, causing problems in terms of space use. Located on the same axis, Tepe Prime Avenue was constructed in

2011. The Complex was designed on street and square format. Activity and liveliness is achieved with the activities in the tower and lower bases which direct and guide the people. The structure, which includes offices, residences, restaurants, cafes and entertainment venues, also involves the activities such as concerts, shows and festivals at its outdoor space.



Image 5.3. Tepe Prime Avenue

Image 5.4. Tepe Prime Avenue open spaces

Located adjacent to the Tepe Prime project, The Mahall Ankara project which includes office towers, restaurants, cafes and residential blocks, was opened in 2017. It has similarities with the other two projects, as it contains activities in the open space in between the blocks.

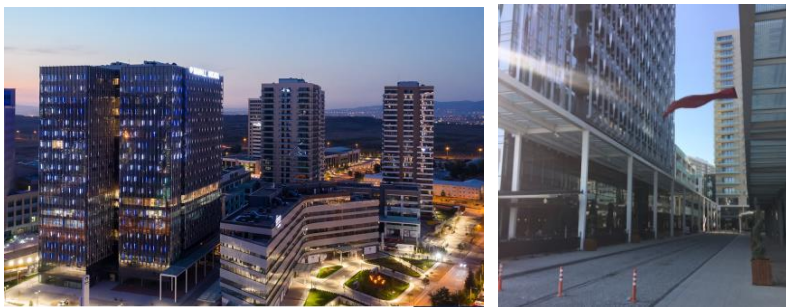


Image 5.5. Mahall Ankara Project [9]

Image 5.6. Mahall Ankara open spaces

6. RESEARCH RESULTS AND EVALUATIONS

When three different semi public/semi private open spaces, Armada Shopping and Business Center, Tepe Prime and Mahall which belong to private property, are analyzed, it is found out that they all have a leading role in social life in terms of the variety of activities offered to the user. The reasons of selection are as follows;

- They are on the same axis and offer an alternative approach to open public space.
- The effort to create street ambiance amid high-rise structures
- The investigation of the decisions taken in the singular zoning scale.

When the semi-public / semi-private open spaces in these three projects are evaluated according to their spatial quality components, the data in Table 6.2 is obtained. Positive and negative factors in all three areas are identified by assigning values to perceptible quality measurement indicators determined for those spaces. A total value is created for each project by adding the values assigned for each criteria. In the table where different criteria are stated under four main spatial qualification criteria components, there is a total of 12 criteria and a maximum of +2 and a minimum of -2 point for each criteria. The difference between maximum and minimum values is divided into five equal parts: "excellent, good, moderate, bad, very bad" to generate a spatial quality standard. The qualification criteria of the spaces are determined with the total score calculated for each space over these value range.

Table 6.1 Quality measurement value range

Excellent	Good	Moderate	Bad	Very Bad
+24	+14.4	+4.8	- 4.8	-14.4
			-14.4	-24

Table 6.2. Spatial Quality Table

Armada Shopping Center, Tepe Prime, Mahall Ankara Reviews by Spatial Quality Components							
Space quality components	Criteria According to Spatial Quality Components		Score	Armada	Tepe Prime	Mahall	
Access & Linkages	Accessible	Pedestrian-Private Vehicle-Public Transportation	(+) 2				
		Pedestrian-Public Transportation	(+) 1				
		Private Vehicle-Public Transportation	(-) 1				
		Only Pedestrian	(-) 2				
	Connected	Connected to more than one street	(+) 2				
		Connected to more than one road	(+) 1				
		No connection	(-) 2				
	Readable (Differentiated on Material Image Sembolig)	In all	(+) 2				
		Three of presence	(+) 1				
		Two of presence	(-) 1				
		One of presence	(-) 2				
	Continuity (with surrounding functions)	Very good	(+) 2				
		Good	(+) 1				
Medium		(-) 1					
Bad		(-) 2					
Uses & Activities	Activity Diversity	Optional, Necessary and Social Activities Together	(+) 2				
		Optional and Social Activities	(+) 1				
		Optional and Necessary Activities	(-) 1				
		Only Necessary Activities	(-) 2				
	Active	Use Any Time of the Day	(+) 2				
		Lunch and Evening Use	(+) 1				
		Morning and Lunch Use	(-) 1				
		Only Lunch Use	(-) 2				
	Use of space with different functions	Shopping, Eating - Drinking, Entertainment	(+) 2				
		Eating - Drinking, Entertainment	(+) 1				
		Eating - Drinking	(-) 1				
		None	(-) 2				
	Sociability	Suitability of Space for Social Activities	Suitable for social activities	(+) 2			
Partially Suitable for Social Activities			(+) 1				
Space only			(-) 1				
None			(-) 2				
Welcoming (Child, old, woman)		All	(+) 2				
		Two of presence	(+) 1				
		Only One of presence	(-) 1				
		None	(-) 2				
Interactive (Personal/ Group)		Very Suitable	(+) 2				
		Suitable	(+) 1				
		Little Suitable	(-) 1				
		Not suitable	(-) 2				
Comfort & Image		Attractive, charming, vitality, scale	All	(+) 2			
	Three of presence		(+) 1				
	Two of presence		(-) 1				
	One of presence		(-) 2				
	Building conditions (Maizeme, Teknoloji, Isclilik)	All	(+) 2				
		Two of presence	(+) 1				
		One of presence	(-) 1				
		None	(-) 2				
		Total Score			19	15	-5

According to the perceptible qualification measurement indicators that constitute the first method of the field study; Armada got +19, while Tepe Prime +15 and Mahall -5 in the Table 6.2. The spatial quality level of Armada and Tepe Prime is determined as excellent while Mahall as bad. The semi-public / semi-private open space of Mahall received the lowest score (-5) from the “usage and activities” of the four spatial quality components.

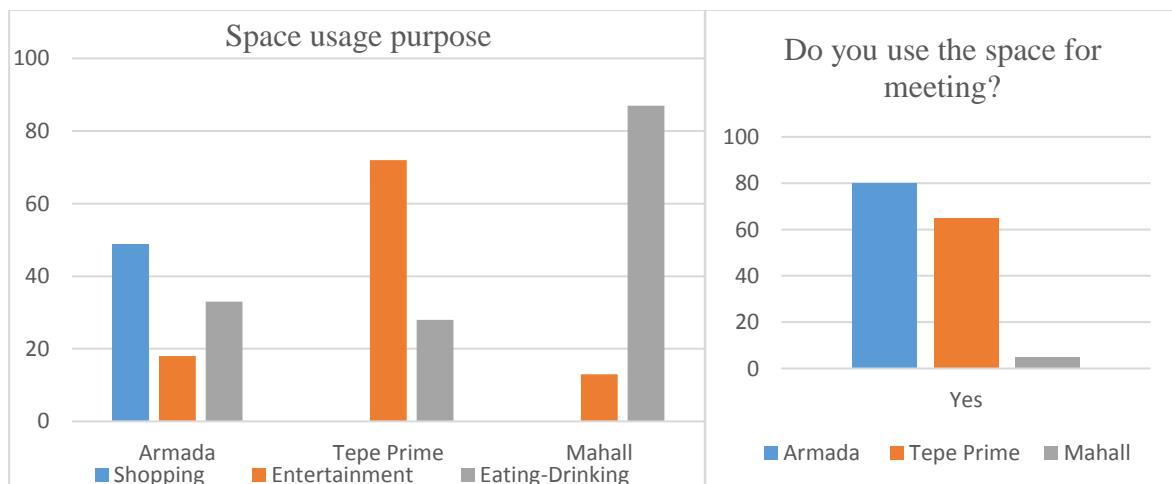
Semi-public / semi-private open spaces of Armada Shopping and Business Center increase their values in the “usage and activities” component thanks to the diversity and intensity of their shopping activity. It also received the highest score in the “access and connections” component owing to its relationship with the city center. Since it interacts with different functions and gathers people from different age groups and backgrounds, it is an important source of data as it reveals the relationship between the space qualities and space activities. Tepe Prime stands out in terms of the suitability of the semi-public / semi-private outdoor space for different social activities and the liveliness of midday and evening hours. The existence of the same interactions at the weekends shows that the sociality of the spatial qualities has come into prominence positively.

Survey studies, which constitute the second step of the field study and are based on the subjective implications of the users, were carried out based on three types of urban space activity approaches defined by Gehl. Questions put to the users evaluated the purpose of use, whether they use these spaces for meeting purposes and how they feel themselves at these open spaces. In order to determine the socio-economic data of the users; age group, residence addresses, income levels were also investigated.

In the answers given by the users to the survey questions for the purpose of evaluating for which activities does the semi public/semi private open space spatially and socially establish a ground, following percentages are obtained from the Armada Shopping and Business Center users: 49% for shopping, 33% for dining and 18% for entertainment. 82% of the users utilise the space for the essential activities, according to Gehl’s classification. 18% use it for entertainment purposes which are optional activities. Tepe Prime users responded as follows to the same question: 72% for entertainment purposes and 28% for dining purposes. According to the data derived here, it was analyzed that the purpose of use of the area is for the optional activities by 72% . As a result of the binding effect of the optional activities on the people, Tepe Prime became a center of attraction. The percentages from Mahall users for the same questions are; 87% for dining, 13% for entertainment. Based on these results, it is concluded that the space was used for necessary activities by 87% while it is used for optional activities by 13%. People from surrounding public institutions use this space generally on the weekdays and especially at lunchtime for dining purpose as an essential activity (Table 6.3).

Table 6.3. Purpose of Space usage

Table 6.4. Meeting space



The limited use of this space for optional activities is an evidence of lack of attraction both socially and physically. An other question asked to the users is whether they use the spaces for meeting purposes. Armada users use the area for meeting purposes by 80%, Tepe Prime users by 65% and Mahall users by 5% As Mahall is used for essential activities, people therefore don't use this space for meeting purposes (Table 6.4).

Table 6.5. Psychological effect of the space on the individual

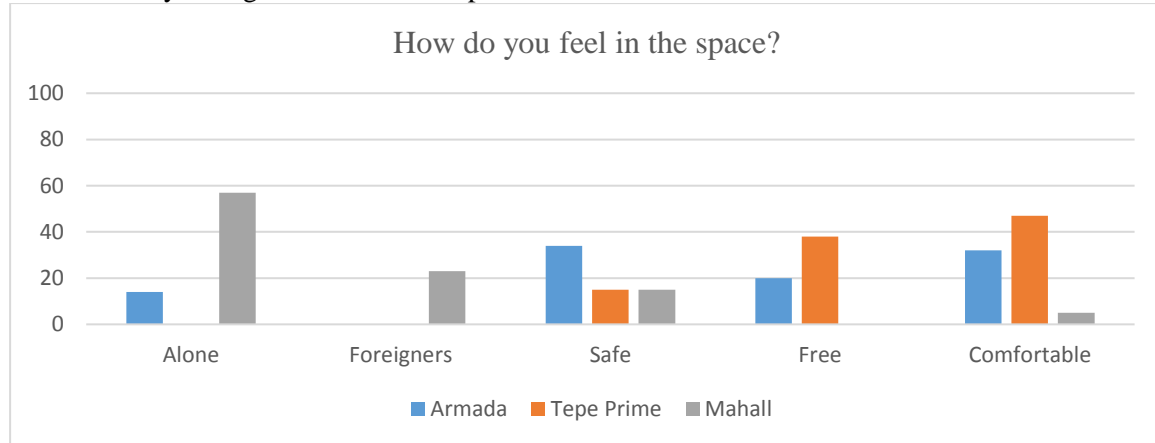


Table 6.6. Survey study results

Evaluation Criteria		Armada	Tepe Prime	Mahall
User age range		Young %27 (16-30) Middle age %63 (30-50) Old %10 (50-above)	Young %16 (16-30) Middle age %84 (30-50)	Young %8 (16-30) Middle age %92 (30-50)
User domicile		Çankaya %62 Etimesgut %12 Yenimahalle %26	Çankaya %76 Yenimahalle %24	Çankaya %72 Yenimahalle %28
Income levels		Medium income %78 (4.000-7.000 TL) High income %22 (7.000TL - above)	High income %67 (7.000TL - above) Medium income %33 (4.000-7.000 TL)	High income %71 (7.000TL - above) Medium income %29 (4.000-7.000 TL)
Space usage purpose	Necessary activities	82%	28%	87%
	Optional activities	18%	72%	13%
	Social activities	18%	72%	13%
Space usage for dating		80%	65%	5%
Psychological effect of space on the user	Alone	0	0	57%
	Foreigner	14%	0	23%
	Safe	34%	15%	15%
	Free	20%	38%	0
	Comfortable	32%	47%	5%
Defects in the semi public/private open spaces		The void and green space between the buildings are insufficient. No qualified children's playground Insufficient sunlight in the open space	Negative impact of wind on open space Lack of green space	The void between dense high-rise structures was insufficient Lack of green space

The spatial qualities of the public spaces in the city also affect the users physiologically and this situation determines the diversity of the activities in that space. For this reason, the users are asked how they feel themselves at these spaces. Armada users feel themselves safe by 34%, free by 20%, comfortable by 32% and strangers by 14% only at the space. Tepe Prime users had different answers. 47% of users feel comfortable, 38% feel free and 15% feel safe. Comfort and freedom variables of users are thought to be correlated with the selection of space for entertainment purposes. Meanwhile, 57% of Mahall users feel lonely, 23% as strangers, 15% safe and only 5% comfortable. The higher rate of feeling lonely and stranger variables draws attention to the relationship between the individuation and communication borders with the physical environment. It is concluded that the protected area amid the high-rising and densely designed structures describes a distant and isolated life far from the socialization activity (Table 6.5).

When users are asked to make comments on the defects in the open space, Armada Shopping and Business Center users stated that the free and green space between the two buildings is insufficient. Also, they suggested that they cannot get sunlight in the open space and there isn't any qualified playground for the children. Tepe Prime users focused intensely on the lack of green space and negative impact of the wind on open space. Mahall users expressed that the free space between dense high-rise structures was insufficient and there is no green spaces. The results of the survey study considering the Gehl's definition of the three urban spatial activities are given in the Table 6.6. Spatial and organizational defects defined by users are thought to play an important role in the selection of the spaces.

6. CONCLUSIONS

It has been observed that the use of public spaces has been redesigned, the social structure could not be established in artificial street formations, and therefore a common identity has not been created. Based on the perceptible indicators in the evaluations, it has been determined that, in the formation of an architectural form, it would be required to take note not only of the structure and the space it covers, but also of the environment and the main spatial space on which the structure is situated. Once the proportion and the relation between the spaces and occupancies are solved completely, the spatial relationships will be managed.

The decisions taken for the urban spaces shall include restrictions and rules related with both the surrounding structures and the city itself. The common spaces and usage of the buildings within each other shall possess the functions, such as the formation, direction and organization, to be a part of the city and involve the citizens. The transition between the public and private space and the borders forming this transition in an integrated approach are important for achieving the relationship between social structure and urban space. Urban spaces that consisted of the buildings and the spaces in among these buildings shall be designed in a certain discipline and in a way to support the necessary social facilities for human life. Semi-public / semi-private spaces that are created should be supported by the designs that smoothen the boundary between the public, private domain and increase the diversity and space activities at urban spaces.

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