

Study of Physical, Social and Functional Structures in Bagdat Street (Istanbul) as Public Space

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Abstract The increased population density, technological advances and modern communication tools have affected urban design, planning and architecture in urban centers. On the other hand, the disproportionate population growth has caused urban managers not to pay much attention to non-physical aspects of cities and to ignore the mental impacts of urban sprawl on citizens. The street has undergone a variety of changes historically and functionally over time; hence this study aims to assess the physical-functional characteristics and their effect on social relationships on Bagdat Street. This study is an applied research in terms of its objectives and employs a descriptive-analytical methodology. The information is collected through field research (observation, interview and questionnaire). The field data is obtained by distributing the questionnaires. According to the research on green spaces, numerous coastal walking spaces, cafes and shopping malls have had a great influence upon people's social relationships on Bagdat Street, but these social spaces profoundly have affected the relationships of residents in terms of furniture, performance at urban level and physical changes of the street throughout history and even led to problems, which are properly investigated in this study.

Keywords Bagdat Street, Public Space, Physical, Social, Functional

1. Introduction

Cities are sociocultural constructed phenomena that emerge out of sociocultural practices that are often the reflections of political, economic, social and spatial changes in the society [15]. A city, which is a lively and dynamic place, plays an important role in the mental well-being of individuals. Individuals living in the cities need safe, public spaces to get rest from the overwhelming

heavy traffic and have fun. Therefore, public spaces are of great importance to urban residents and urban life [19]. Undoubtedly, these urban changes in Istanbul do not only originate from the functions that the city has undertaken [11]. The question on how urban transformation affects the daily lives of those living in the neighborhoods of Bagdat Street is important. Generally, the residents of this street are average and high earners with high literacy.

Bagdat Street is one of the most important streets in Istanbul, which has faced different changes throughout history. Therefore, it is so important to study the social factors in different spaces of this street and its function at urban level. There are various studies about Bagdat Street. Yazicioglu (2012) studied human-environment effect, behavior and its impact on walkable urban and investigated Bagdat Street. Koylan (2018) wrote a thesis on its history and changes through different periods. Erdonmez and Aki (2005) and Berkmen and Turgut (2019) studied the impact of social factors on Bagdat Street and the changes occurred on Bagdat Road. Lotfata (2014) wrote about the impact of changes in urban spaces on socio-cultural relationships, in which Bagdat Street was assessed. There have been already numerous studies on Bagdat Street, but there is no extensive research on the impact of physical factors and functional elements on social relationships, which is the main reason for this study. The research question is about the effect of physical factors and land use on the residents' social relationships in terms of different factors. To carry out this study, the street is initially assessed in terms of importance, concepts of urban spaces and role of beaches. In the second section, the role of these factors in people's social relationships on Bagdat Street is then investigated.

2. Urban Spaces

A city is a social – spatial context that we as an individual or group enter into it, and interact with it in order to use or modify it. Architecture and urbanism scientists

believe that urban space is beyond its physical and geometric components [3]. According to Cullen, urban space is the most important place to show up and emphasize the social events [7], Jane Jacobs also emphasizes on the role of urban spaces in creating social interactions and participation [20]. Urban spaces can be considered as a part of open and public urban spaces which reflect the social life. Urban spaces are the realm of human interaction and greatly affect the collective life of human beings. Humans can act in urban spaces; this breaks social boundaries and leads to unpredicted encounters. Francis considered urban spaces as a part of urban fabric which is physically and visually available to the public [6]. Therefore, it is possible to define the task of public spaces as follows:

- (1) tools for social relationships
- (2) places for citizen encounters
- (3) citizen management and coordination.

3. Street

Street, as an element which forms the largest portion of public spaces in a city, is of great importance. Since their

formation, the streets have been the center of the social, cultural and economic life of cities [13]. The streets have become prominent with communication facilities and social life since the second half of the 20th century to the present day. The highways that serve only vehicle traffic have gained importance as areas that allow people to socialize and bring people together, unlike service roads or any connecting roads [19]. The street is the external space where the urbanite achieves external social and business encounters and changes in the easiest way. The first and most important places of social life are streets [27].

According to Velioglu, urban space is the “urban physical environment fiction” in which people live and the outer spaces in this fiction and their experiences and activities in these fields. The use of the urban space of the city is determined through actions such as movement, shopping, recreation, leisure time and sports activities. However, the most important feature of the urban space is that it reflects social and cultural features [25]. In Table 1 the Meaning of the Street and the Parameters was analyzed:

Table 1. The Meaning of the Street and the Parameters Affecting It

Descriptions	Parameter
The street is a narrow or wide linear element, mainly used for circulation, sometimes supported by different activities, surrounded by buildings in residential areas [21].	Supported by different activities
In all civilizations, streets have been the most widely used public space, with neighborhood commercial streets and bazaars being the most popular [27]	public spaces of the city
Streets are elements that have an important role in the landscape of everyday life. People use the street as a social place for transportation, travel, shopping or interaction with other people [17].	transportation, travel, shopping, social
The streets have a more important feature than their physical location in the city, their binding or functional features. It is the people-oriented approach of streets that determines the reason why these streets are preferred by people [10].	Physical and functional properties

4. Coastal Zone

Coastal zones always command people's attention because of their natural features. Coasts are facing construction and environmental problems arising from the development of areas such as urbanization, industrialization, tourism, trade, natural resources, waste disposal and food [12]. Harbors, one of the important elements of economic mobility in Coastal zone, constitute the most important infrastructure of maritime trade. Parallel to the increase in maritime trade and ship sizes, the functions of the ports have also been diversified. The commercial ports in this diversity form a most important part and element of world trade today. The good exchange in the world occurs through these harbors [12]. It requires that each coastal place should be used in the balance of protection and usage by emphasizing its characteristics [4].

Coasts remain dynamic structures under the influence of natural forces. The threat of storms, hurricanes and artificial life threatens coastal settlements. The storms in the coastal, regions coastal soils and vegetation due to

erosion caused by increased wave energy and saltwater flow to the inner wetlands as a result of sea swell [9]. Although coasts are used in various ways by societies, their broadest use is for purposes like maritime trade, tourism and fishing. Ships and small boats (yachts, fishing boats, etc.) used to carry out these activities to look for areas protected against the effects of the waves and current [12].

5. Research Area

To illustrate work, Bagdat Street of Istanbul was chosen. It was restructured based on its historical, social activities as a street. Bagdat Street is the most important of the main transportation axes starting from Kiziltoprak to Maltepe within the borders of Kadikoy District on the Anatolian Side. In the west, it connects from Kiziltoprak to the Bosphorus Bridge, and in the east, the street that runs parallel to the beach to Bostanci, crosses the railroad and passes to the north of the railway to Maltepe (Figure 1).



Figure 1. Bagdat Street Location

5.1. Methodology

In this research, data have been collected through documentation and surveying using questionnaires. Data were analyzed using descriptive and inferential statistics. Data collection first started with observations; what the users did when they came to the street, why they came to the street and the hours and days the street was busier were observed. Also, photos of Bagdat Street were taken on different days and times and a survey was conducted with users around Bagdat Street. During the survey, 250 individuals were interviewed one by one on different days and periods (Table 2).

Table 2. Distribution of Respondents for Sample Area

Background	Number of participants	Total number of participants
Gender:		
Female	163	250
Male	87	
Age:		
Less than 18	-	250
18-24	64	
24-60	127	
above 60	59	

6. Result

6.1. Physical Properties of Bagdat Street

While examining the physical properties of Bagdat Street, the maps and aerial photographs on different dates were investigated firstly. Based on the historical approach, it was concluded that not only the physical traces of the Street were sufficient to investigate but also the processes of Bagdat Street. As in other districts of Istanbul, the period of the urbanization process with regards to the changes we have mentioned as the cause of physical changes on Bagdat Street and its vicinity was the fastest with the addition of the Bosphorus Bridge in the first half of the 1970s. The bridge, which is shown as a solution to traffic and Bosphorus crossings, has affected the entire life and social structure of the Anatolian Side. Two-floor houses and pavilions in green areas were demolished and apartment buildings were built in their places, while 4.5-floor apartments were turned into 12-13-floor blocks [11]. In Table 3 and Figure2, the historical process of Bagdat Street was analyzed:

Table 3. Bagdat Street Historical Development Timeline (Arı, 1994., Tekeli, 1994., Pekşen, 2015., Yazıcıoğlu, 2010, Berkmen & Turgut, 2019)

History	
1873	With the commissioning of the railway, it is seen that settlements around the stations located in the north of Bagdat Street and the neighborhoods began to form with the emergence of commercial cores.
1930	Mustafa Guler has had Suadiye Beach built, and with the formation of these new beaches on the coast, the shores of the Anatolian side have turned into a summer resort for families from big cities such as Ankara and Izmir.
1935	Tramlines have been passed on both sides of the street. While these tramlines initially had separate roads, after 1940, the rails were lowered to the street level and the traffic road was made more spacious to expand Bagdat Street. The plots on both sides of the street were divided into small parcels after 1935 and two-floor small villas were built.
1950	It is seen that two important developments affected the life and appearance of Kadıköy in the 1950s. The first is the formation of slums caused by the rapid urbanization process in Turkey; the second one is the Menderes operations. After 1950, large mansions and villas were demolished and stone buildings with gardens were built instead.
1958	As the tramlines were completely removed, the street was closed to traffic for months and then expanded again.
1970	These geometrical layouts were made to increase the diversity of the façade and the search for different textures is almost like reflections of the basic design discipline.
1980 - 1990	With the economic policies and practices between the years, the income level increased, and the foreign chain stores and the additional functions they brought together, the buildings lost their residential properties and the ground and first floors became shops, stores, offices. Moving the trade to the ground and first floors brought up billboards, which caused visual pollution.
1999	After the earthquake, closed housing areas started to form on the Anatolian side north of Bagdat Street, parallel to FSM Bridge connection roads.
2000	Increased construction (bars and local restaurants)
2012	Rapid Urban Expansion and population growth
2017	increase of land prices, high-rise construction and introduction of new laws on the region's urban development

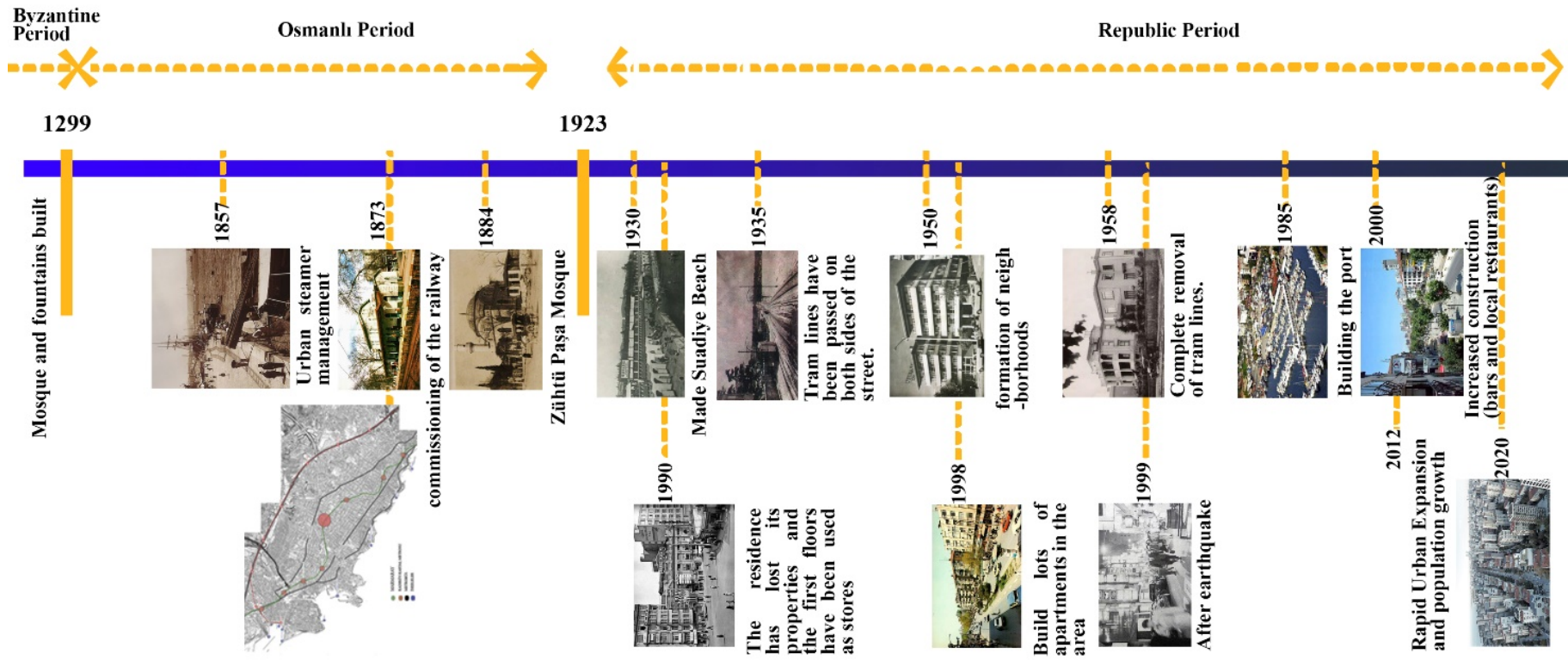


Figure 2. Bagdat Street Time line

In the questionnaire, the answers provided with the question "What kind of physical purposes do people use Bagdat Street for?" were in general;

- I shop on Bađdat Street
- I visit Bađdat Street for general purposes (market, transportation, work, school, health facilities, law offices, etc.).
- I go to Bađdat Street for sightseeing.
- I commute through Bađdat Street.

According to the survey results, 81% of women and 76.2%

of men shop on Bađdat Street, 75% of women and 65.2% of men visit for general purpose, 48% of women and 53.6% of men go for sightseeing and 62.5% of women and 72% of men commute through it; thus, women use the street more for shopping. The primary reason for this is the presence of famous major brands in the region (Figure 3).

Respondents answered the question of "How do people find the visual quality of Bagdat Street?"

- Bagdat Street is clean and well-maintained.
- Visual quality of Bagdat Street is impressive.









Figure 3. Which purposes do people use Bagdat Street for?



Figure 4. About the Form of the Buildings in Bagdat Street and Analysis of Visual Quality

According to the results of the survey, 84.2% of men and 72.4% of women find the street clean and well-maintained. 72.4% of men and 62.8% of women like its appearance (Figure 4). Though, the types of materials and store signs used on the facades seem to reduce its visual quality. Other parameters of the street are analyzed as in the table below:

parameters	Sub parameters	Photo	Analysis
Form of buildings	Buildings With Stores on the Ground Floor		In the area, apartments are often used for commercial businesses. Sometimes buildings are used for commercial, residential or commercial + residential purposes. Shops are on the ground floor as they portray the commercial image of the street and influence people's perception.
	Height and Volume		Other buildings around the street are 4-5 floors high, but the buildings on the street are higher than 5 stories. Since these buildings are behind, they do not affect the view of the street from, however, from afar, the view is so bad that people may perceive the street as unsafe due to difference in heights of the building and their hideousness.
	Retail Display		The open and closed showcases give the street an interesting view and make people window-shop.
	Roof Shapes or Sections		In this area, the roofs are sloped or flat. These roofs also determine the form of buildings on the street.
Street appearance	Street Trees		There are trees on the street. While the green areas encourage people to walk, it also provides fresh air during the hot seasons. The variety of colors of the trees make the street look fascinating and simultaneously cover some of the unsuitable facades of the buildings.
	Other Items		The presence of cafe-restaurants, market, school, health facilities, law offices, Administrative, social areas etc. and people using the street at different times according to their needs; make the street always alive and dynamic.

6.2. Functional Features of Bagdat Street

The streets, one of the most important parts of public space, affect our lives both at the functional level, and how we reach one another and public authorities [27]. In addition to the technical requirements necessary to make urban space functional, public space is expected to be attractive, safe and well-maintained. Financial resources and good organization are needed to achieve this. In daily life activities, the cleanliness, accessibility, attractiveness, comfort, vitality, functionality, safety and design elements of the space are questioned [27].

- Privacy
- Transportation
- Social Relationship

6.2.1. Privacy:

Cities are places where communities and individuals

come to interact with one another, which take the role of a meeting place for different sections of the society, where people from all walks of life come together [8]. Take a look at the building structures on Bagdat Street today, it is seen that there are residential, residential/commercial and commercial land uses. In line with the changing living conditions and consumption habits, it is remarkable that the buildings have turned into business. Newman divides urban spaces into public and private spaces. While public spaces are spaces belonging to the common use of society, private spaces are spaces for individual use [18]. There are areas where public and private outdoor spaces overlap and intersect each other. These intersections are usually semi-public and semi-private areas. In the following section, there are public, semi-public, private and semi-private areas on Bagdat Street (Figure 5, 6).

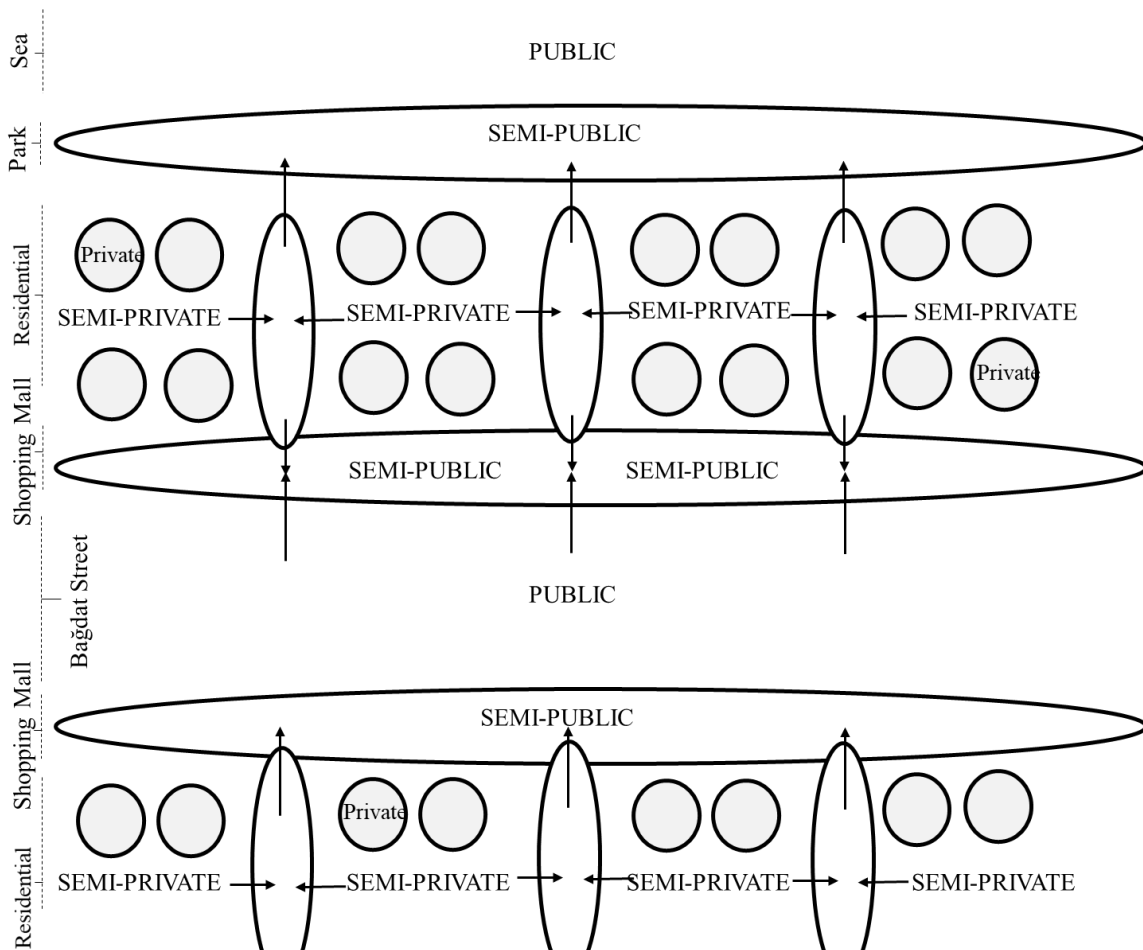


Figure 5. Privacy of Bagdat Street

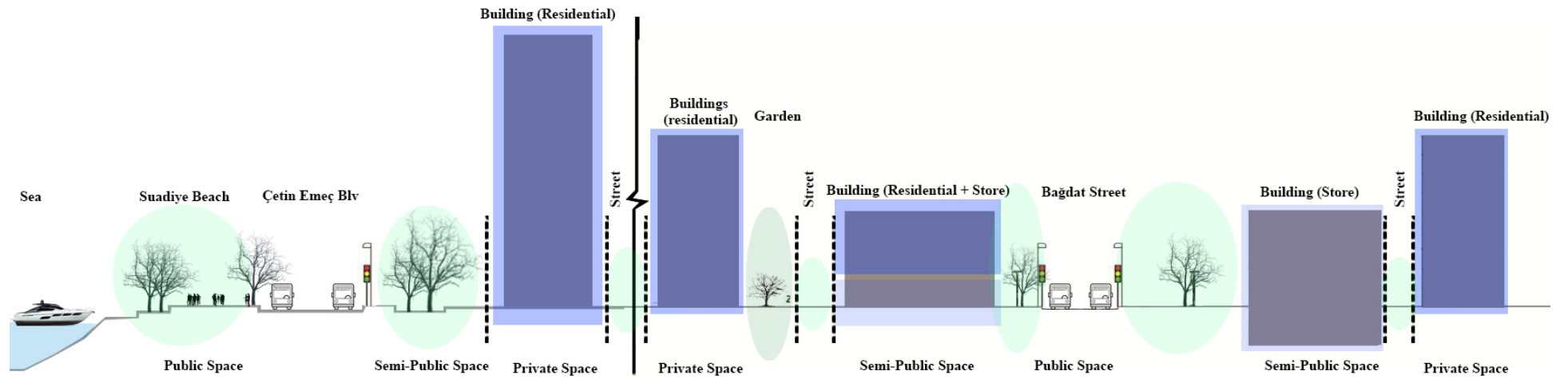


Figure 6. Cross Section of Bagdat Street

6.2.2. Transportation

In this survey, the suitability of this region for children, pregnant women, the elderly and the disabled was investigated. According to the result, Bagdat Street should be more suitable for the groups using this place.



Figure 7. The Suitability of Street for Different Group of People

The sidewalks are high and narrow and the slope of the ramps is not suitable. For the use of strollers, 70% of women and 64% of men face problem (Figure 7).

6.2.3. Social Relationship:

When asked "What purposes do users use Bagdat Street for?" answers provided include

- Bagdat Street is used to organize cultural events.
- Bagdat Street is used for physical activities (sports, walking)
- Bagdat Street is used for social activities (Figure 8).



Figure 8. Which Purposes the Bagdat Street Is Used for? [28,29,30,31]



Figure 9. Accessibility of Bagdat Street

In the questionnaire, 4 responses were provided with the question "How do the users reach Bagdat Street?";

- by public transport.
- by private vehicle (automobile, motorcycle).
- by foot.
- by other vehicles (bicycles, scooters, etc.).

In addition to private vehicles, many public transport such as metro and bus are preferred to reach the Bagdat Street, while the metro is more preferred because there are no traffic problems. According to the results of the survey, 62.8% of men and 58.8% of women use public transport, 48% of women and 52% of men use private vehicles, 30% of women and 41.8% of men use other vehicles (bicycles, scooters etc.). When not preferring transportation, 74.2% of women and 62.2% of men prefer to go on foot because of the ease of access (Figure 9).

7. Conclusions

Bagdat Street is one of the most important streets in the Asian part of Istanbul, where there have been physical and functional changes throughout history. This article examined the parameters of the region and analyzed its

results. This article addressed the Suadiye region of Bagdat Street, according to the data obtained in the field research, each building and store has its own unique facade and appearance in their unique architecture. The fact that the buildings are very close to each other complicates the view of the street. A variety of decorations applied on facades to attract attentions, resulted in a visual chaos are shown in Figure 10.

According to the survey results, Bagdat Street has undergone many physical changes throughout history. Due to the physical change occurring in this region, the locals who have lived here for ages no longer feel that they belong to this place or have been completely alienated here. The Suadiye region is used not only by the locals of the region, but also by outsiders who come to the region for various purposes, such as shopping and social interactions. The fact that the green areas in the region are high and that there are beautiful areas to walk on the beach makes the region attractive to visitors. At the same time, ease of access and public transport are other factors that make the region attractive. Adequate lighting, vast number of shops and crowded roads make this region perceived to be safe. The streets, on the other hand, give the feeling that the area is unsafe due to the high buildings, and desolation.



Figure 10. Facades on Bagdat Street

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