

**THE ROLE OF SOCIO-SPATIAL FEATURES ON THE PERCEPTION  
OF PUBLICNESS: THE CASE OF URBAN TRANSIT SPACES**

**A Master's Thesis**

**by**

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**September 2014**

THE ROLE OF SOCIO-SPATIAL FEATURES ON THE PERCEPTION OF  
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Graduate School of Economics and Social Sciences  
of  
İhsan Doğramacı Bilkent University

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in

THE DEPARTMENT OF  
INTERIOR ARCHITECTURE AND ENVIRONMENTAL DESIGN  
İHSAN DOĞRAMACI BILKENT UNIVERSITY  
ANKARA

September 2014

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Interior Architecture and Environmental Design.

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## ABSTRACT

### **THE ROLE OF SOCIO-SPATIAL FEATURES ON THE PERCEPTION OF PUBLICNESS: THE CASE OF URBAN TRANSIT SPACES**

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Publicness is the characteristic of a space segment indicating its ability to relate to public. Perception of publicness depends on various components of spaces such as ownership pattern, management model and spatial features. Socio-spatial features are taken as observable social, spatial and physical characteristics of public spaces, answering to the needs of the public. This study aims to investigate the relationship between spatial features of the built environment and their contribution to the perception of publicness through the case of urban transit spaces. Do socio-spatial features affect the perception of publicness, and if so, how do their effects vary for different user groups are the main research questions. The field survey was conducted in Ankara Intercity Bus Station (ASTI) as an urban transit space. Findings indicate that socio-spatial features involving facilities and inclusiveness of the space are the main factors which seem to affect the overall perception of publicness; although none of the characteristics of user groups such as age, gender and frequency of use of that space was found to have a direct effect on it.

**Key words:** public space, perception of publicness, social and spatial features, transit spaces

## ÖZET

### SOSYO-MEKANSAL ÖĞELERİN KAMUSALLIK ALGISI ÜZERİNE ETKİLERİ: KENTSEL ULAŞIM ALANLARI

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Yüksek Lisans, İç Mimarlık ve Çevre Tasarımı Bölümü  
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Kamusallık, mekanın, mekan kullanıcısıyla ilişkisinden doğan özelliklerinden biridir. Mekanın kullanıcısı üzerinde oluşturduğu kamusallık algısı, mülk sahipliğinin örgütlenme tipleri, yönetim modelleri ve mekansal öğeler gibi sosyal ve mekansal bileşenlere dayanır. Sosyo-mekansal öğeler, sosyal ve fiziksel anlamda kullanıcının talep ve gereksinimlerine yanıt verebilecek, gözlemlenebilir öğeler olarak tanımlanır. Bu çalışmanın amacı, sosyo-mekansal öğelerin kamusallık algısı üzerindeki etkilerini kentsel ulaşım mekanları örneği üzerinden araştırmaktır. Kamusal mekanın, sosyal ve fiziksel olarak, hangi öğeler aracılığıyla ve hangi koşullarda kullanıcı tarafından kamusal olarak algılandığını anlamak çalışmanın odak noktasıdır. Alan araştırması, AŞTİ Ankara Şehirlerarası Terminal İşletmesi'nde gerçekleştirilmiştir. Çalışma sonuçları, tuvalet, oturma ve dinlenme alanları gibi kullanımlara ve mekanın kapsayıcılığına ilişkin sosyo-mekansal öğelerin, genel kamusallık algısı üzerinde etkisi olduğunu ve bu genel algının yaş, cinsiyet kullanım sıklığı gibi kullanıcı grubuna ait özelliklerden etkilenmediğini ortaya koymuştur.

**Anahtar Sözcükler:** kamusal alan, kamusallık algısı, sosyal – mekansal öğeler, AŞTİ

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# CHAPTER I

## INTRODUCTION

Recent debates on public spaces mostly focused around the struggle between private and public sectors for ownership and management of public spaces or loss of publicness and loss of actual public spaces due to increased fear of crime and increased restrictions as preventative solutions such as surveillance cameras, gates and security guards. Erkip (2005) draws attention to the recent attitude of mass media towards the issue of crime. Media's attempt to make crime a popular issue causes an increase in the fear of crime particularly in public spaces although number of urban crimes does not necessarily increase in number (Erkip, 2005). At the same time, these developments become potential problem sources, as they lead to exclusion of groups of people as inclusiveness and tolerance are perceived as two important components of public spaces (Németh & Schmidt, 2010; Van Melik, Van Aalst and Van Weesep, 2007; Young, 2000).

Factors such as ownership patterns, laws and regulations binding public space users and management affect publicness and perception of publicness. Public spaces are

analyzed in relation to their historical context, however the relation between spatial features, the physical configuration of a public space and the perception of publicness is more extensively addressed in the literature (Staeheli & Mitchell, 2007). Thus, this study aims at questioning the socio-spatial features that affect the level of publicness and perception of publicness.

### **1.1. Aim of the Study**

Physical space with its components, referred as the spatial features as a whole is seen as a bridge between the complex, abstract notion of publicness and the actual public spaces where people perceive public, feel and claim public spaces for their use.

Through spatial features of a space someone feels he/she can claim it or not. It might be more observable when people see a fence around a space than the abstract information about the ownership of that space. It is not simply the question of whom the space belongs to anymore. Private and public property understanding as it was half a decade ago might not be sufficient to define publicness of space and perception of publicness for today (Kohn, 2004; Madanipour, 2004; Schmidt & Németh, 2010). Ownership, management and other factors become inconclusive with various examples of privately owned and publicly used spaces so the spatial features and of the public space become even more important to pay attention and to work on. Spatial features, their role on perception of publicness as a bridge to connect abstract notions to real world, is also crucial to relate other debates of control, restrictions and security or public-private struggles mentioned at the beginning.

The study aims to investigate the relationship between the socio-spatial features of built environment and public use and their contribution to the perception of

publicness for the users of those public spaces. Socio-spatial features mentioned within the scope of this study are structural, physical components of public space together with management, maintenance and user aspects of physical space. Landscaping elements, seating units, restrooms and signs for wayfinding as well as security personnel and surveillance cameras are some examples of these socio-spatial features defined in the study. Socio-spatial features underline the spatial nature of public space as an important factor affecting the publicness and the perception of publicness in the eye of users.

## **1.2. Structure of the Study**

Core concepts such as public space, publicness, perception of publicness and spatial features within the built environment are all multidimensional concepts thus making it a necessity to define each of them as it will be handled throughout the study, as a starting point. In Chapter 2 public space, publicness and related concepts will be discussed and defined in the historical perspective as well as in the context of this study. Importance and types of public spaces are given in this section as the foundation of the study. At the end of this chapter, the connections among public space, publicness and perception of publicness are provided with the help of the measurement models for publicness introduced.

In Chapter 3, methods and findings of the site observation are revealed. Socio-spatial features of Ankara intercity bus terminal (ASTI) introduced. Hypotheses are also given. The methodology for the research is defined. The detailed description of the work conducted, data collected and the analysis made are given. Findings are also discussed in this chapter.

In the conclusion, the findings from the case study and the literature compared and synthesized. The limitations and weaknesses of the study were highlighted together with the suggestions for further studies.

## **CHAPTER II**

### **PUBLICNESS AND PUBLIC SPACE**

Public space, public realm and public sphere are related terms which are close in terms of their use, however they need clarification as Varna & Tiesdell (2010) suggest. One important distinction is noted as ‘the term public realm bridges public space and public sphere: among development actors it is often used as the synonym for public space and for synonym for public sphere among social scientists’ (Varna & Tiesdell, 2010). Public sphere in that sense is more related with political and social aspects in a more abstract manner, where public space is taken as the physical version of those abstract manners with spatial attributes added to those two; at the point they coincide positions the public realm as a common domain for both (Low & Smith, 2006).

Each concept has different focus when it comes to the position of public spaces in today’s context. Varna & Tiesdell (2010) point out that each day numerous scholars think that public realm had never been more prioritized in the field and had never been denser, more diverse or more democratic as it is now seen when they refer to

Loukaitou-Sideris and Banerjee (1998). Urban designers mostly handle the subject in a more optimistic way as they create new forms of public life with new forms of public spaces (Varna & Tiesdell, 2010).

Public spaces are the containers of human contact. They are places accessible to everyone and the users do not have to satisfy any other additional conditions in order to be a part of them. Public spaces are open to everyone and in this way they are the places pampering communication with their tolerance and openness to new ideas. Today, this container includes both material and virtual spaces created. Human contact is no more dependent on the physical environment. However, as Mitchell (2003) defines, it is accustomed to be for most people; public spaces are the material locations where social interactions and activities of all members of public occur. Personal identities and collective identities are formed within those activities and bundle of interactions as a natural extension of the idea of public space. Notion of I and others are also the results from successive experiences taking place in the public spaces throughout individuals' lives; sometimes relating to and sometimes alienating the identity of their own from others, in numerous different instances, to drive conclusions for different circumstances (Rogers, 1998).

Since public space is a difficult topic to be analyzed due to its multi-dimensional nature, emphasizing layered dimensions might help to achieve a definition. Staeheli and Mitchell (2007, p.797) listed and categorized the related concepts that literature comes up with, as the following;

“Physical definitions (parks, streets, etc.), meeting place or place of interaction, sites of negotiation/contest/protest, public sphere with no physical form, opposite of private space, sites of

display, public ownership/property, places of contact with strangers, sites of danger/violence, places of exchange relations, space of community, space of surveillance, places of open access/few limits, places lacking control by individuals, places governed by open forum, idealized space no physical form”

Depending on the main focus of the research, some or all of these concepts might be included in the definition of public space.

What makes public space important is also multilayered and based on the aspect that a particular study focused on, similar to its definitions. Staeheli & Mitchell (2007, p.798) claim that public spaces are important due to;

“function (walking, gathering, etc.), socialization/behavior modification/discipline, democracy/politics/social movements, sites of contest, sites of identity formation, places for fun/vitality/urbanity/spirit of city, building community or social cohesion, sites of identity affirmation, living space (for homeless)”

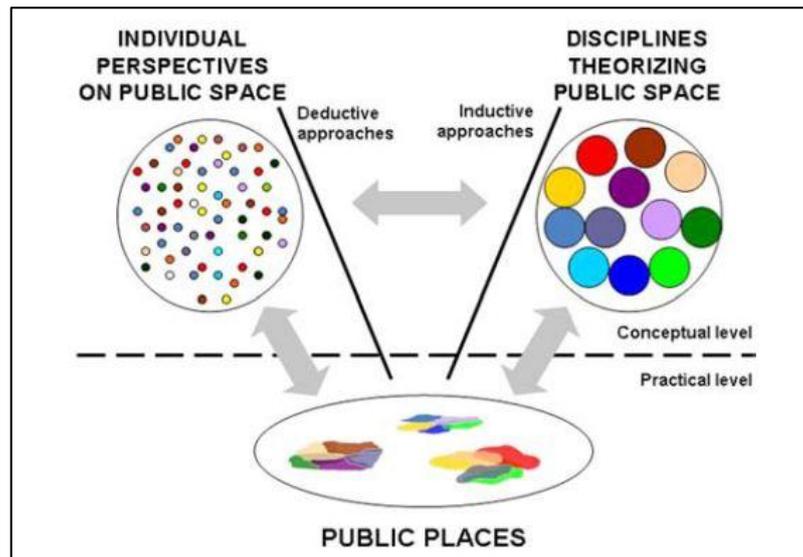
Among those, social issues, community formation, democracy and politics take the attention of researchers more dominantly (Staeheli & Mitchell, 2007).

The concept, public space, as handled in this study is the area available for the use of public or communes (Watson & Kessler, 2013). This broad definition mostly includes streets, parks, squares and other similar open areas as well as service buildings such as schools, hospitals and community centers. Examples of public spaces have a great range varying with specific classifications. Although new types of public spaces were added to the traditional ones which previously had been planned to serve public, owned and operated by public sector itself. Today, with variations in the provision methods, public spaces can be classified according to ownership model; such as privately owned or publicly owned or similarly according

to its managerial means; such as managed by private or public sector. Activity types, management, operation and ownership models, accessibility and the scale of the space and the location are all important criteria for classification and definitions processes related to the concept of public space. Despite the distinctions due to their types, all involve in the idea of publicly accessible areas within their definition and those areas are seen as the crucial elements for the sustainability of a lively urban atmosphere (Németh, 2009).

Publicness is the characteristic of a space, an indicator of space for its ability to relate to public. De Magalhães (2010) sees publicness as the complete ontological attributes giving the key qualities and specificity to public spaces. For the publicness of a space two levels can be considered: conceptual level and practical level (Varna & Tiesdell, 2010). Conceptual level appears to be dealing with the individual understanding of publicness and how to interpret those individualities in the scope of science and academic practices; where practical level concerns with the physical creation of space and perception of that space by the public utilizing it (Varna & Tiesdell, 2010). These two levels of publicness can also be explained by two approaches relating them. First approach is deductive, also named as interpretivist approach, finding its basis through individual perspectives and constitutes its system employing them (see Figure 1). For the deductive approach, key idea can be summarized as ‘if people think that’s a public space then it is a public space’ (Varna & Tiesdell, 2010, p.578). While deductive approaches supporting the idea that “publicness is in the eye of the beholder” the second approach -the inductive approach- which combines the levels of publicness, focuses more on the public spaces as entities defined as external and to be axiomatically accepted as something

“out-there” without the intervention of public or individuals (Tiesdell & Varna, 2010). This study adopts deductive approaches rather than inductive ones at the observation and analysis parts of the case study, as a way of conceptualizing the experience and perception of publicness.



**Figure 1: Inductive and deductive approaches to the publicness of space (Source: Varna & Tiesdell, 2010)**

Among different levels of publicness and different approaches for reaching them, different scholars had given emphasis to different components of the notion of publicness and conceptualizing itself (Németh & Schmidt, 2010). They most frequently focus on attributes such as accessibility, inclusiveness, ownership, management and therefore control and claim of the public spaces. These concepts connect people to people, people to power, people to physical environment and physical environment to mental worlds of individuals with a feedback mechanism.

For one approach, determination of who uses a space and how they use it, is the idea behind the measure of publicness. It is directly related to management of that space, thus changing through time with new approaches and understandings introduced to the broader concept of public sphere (Nemeth, 2009). One might exemplify that situation with the simple yet immaterialized version of a public space, which is an internet community. Where the moderator of the site manages the public space and controls who can subscribe and continue to be a part of that community and who cannot; this process of formulating and reformulating of the rules for that very public, also defines the inclusiveness of the public defined by the moderator.

This hypothetical instance is the abstraction of the public space of today's urban environment. This is why management and inclusiveness are major means considering the concept of publicness of any public space and strongly connected to each other. In other words, a space can be as public as its ability to include all members of public and it can be as inclusive as it is allowed to be thorough its management. Németh (2009) draws attention to these two components while referring to publicness. These kinds of conflicts make defining public space and public difficult since they are multi-layered, multi-dimensional and subjective concepts.

## **2.1. The Evolution of the Concept of Public Space**

The politics starts with the emergence of the city, -the polis- how households and how towns coming together to create the city, the state, in the Book I, where Aristotle defines virtue in citizenry as he sees city and city-state as political partnership (Aristotle, 384-322 B. C./1992). Citizenship as defined in Book III and

etymologically the city and citizenship for that manner are related to the Greek word of polis, meaning city or city-state. At the same time, the origin of the words such as policy and politics is found in it (Aristotle, 384-322 B. C./1992, p.53).

Madanipour (2004) describes ancient cities as the meeting points of varying populations that were located around the central place of the cities. Agora is the first public space in history, where activities of market, ceremonies and discussions taking place. Those central public spaces in ancient settlements match all the political, economic and cultural needs that society asked them to match.

In modern city, the public space lost its importance and at some point public spaces were abandoned and became either parking lots, nodes for traffic flow or for the best possible cases, spaces only engaged with activities of commerce or tourism which include human interaction (Madanipour, 2004). The design and management of public space perceived as an issue with less importance when compared to other tasks covered by those governance institutions, especially for local governments (Carr, S., Francis, M., Rivlin M.G., & Stone A.M., 1992). “Due to the financial difficulties of the authorities in the 1970’s and 1980’s public spaces suffered from lack of attention and neglect ... generally being unkempt and unsafe” (Madanipour & Townshend, 2008, p.318). However, large investments for the city centers especially in European cities highlighted the importance of the old-school city center, combining historic background of the city with the adaptability to future and its modernity. Public spaces -the square, the planes and the plazas- gain their importance back, they became the tool for social bondage and interaction again (Madanipour, 2004).

Starting from the mid-20<sup>th</sup> century, number of users of public spaces became to be recognized as the main indicator of success of public spaces. The number of users serves in a way where it shows preferability as well as higher security and safety levels. As the number of lookers and passersby increases, it is natural to feel safer and more secure. Here, one important criticism starts with Jacobs' (1961) work supporting the idea that crowdedness of public space with many 'eyes on street' is the key to reduce crime and fear of crime. However, it is important to underline that success cannot be only depending on the preferability or the crowdedness of any space, since every public space, according to their scale and activities involved, may need to provide different ambience. For example, it is difficult to classify a silent urban park or greenery as an unsuccessful one, thinking that the exact reason for that area is to offer tranquility and calmness within urban life being away from it at the same time with those qualifications. So, there must be other components working simultaneously, to be able to measure the success of any public space. On this issue, literature focuses on the balance between restrictions assumed to serve for the security of the space and civil liberties of the users of that space (Low & Smith, 2006; Németh, 2012)

Major argument is about the sacrifices made in terms of civil liberties, for the sake of security and similar social concerns. In a globalized world, because of terrorist attacks and especially after September 11<sup>th</sup>, 2001 attack, security in public spaces became a concern at a whole new level (Schmidt & Németh, 2010). Shared trust towards others takes a hit with every terror related incident where fear of crime and fear of others becomes a major issue affecting the behavior patterns of individuals

and groups in public spaces. Poverty, social exclusion and spatial segregation can be the reasons behind the changing types and motives of urban crimes (Erkip, 2005). Managers cannot just believe in good faith for the sake of supporting inclusiveness of public spaces and choose to do nothing while facing with problem of that magnitude, so they have to take precautions to make the public space secure again in both physical world and in minds of users. This factor creates another problem related with the initial conflict of balance between civil liberties and restrictions of public space. This new conflict involves inclusiveness. The question is who to welcome and who to leave outside.

Controlling and deciding who should be in and who should be out of the public space for the sake of equality or security, is by definition subjective and paradoxical although the practice tells the opposite. During this process of decision, there are tools that are categorized in two main groups which managements turn to and use. These tools are measures of controls for a public space and can be stated as restrictions. Two groups for measures of control are hard or active and soft or passive, as defined by Loukaitou-Sideris and Banerjee (1998). Hard controls like laws and regulations or surveillance and policing play more active and direct roles. On the other hand, soft controls are more indirect tools such as design, image and ambiance or territoriality.

Both measures of control are considered in this study. Physical elements of design, surveillance and rules are also analyzed and their influence on the perception of publicness for users is investigated.

## **2.2. Types of Public Space**

Variations on the definitions of public spaces and publicness exist for the types of public spaces as well. Carmona's (2010a; 2010b) work on contemporary public spaces serves as an important source on this issue. According to his perspective, urban spaces can be classified under twenty different space types. He (2010a; 2010b) analyzed spaces in general and derived a classification from that analysis. Referring to this contemporary public spaces can be classified under the titles such as; neglected spaces, lost spaces, invaded spaces, exclusionary spaces, disabling spaces, segregated spaces, scary spaces and over-managed spaces. He (2010b) also collected those twenty space types under the heading of four major distinguishing characteristics which are positive spaces, negative spaces, ambiguous spaces and private spaces (Carmona, 2010b). Francis (2003) defines urban open spaces as public spaces in a similar manner with sub-typologies such as public parks, plazas and squares, markets, streets and so on.

Within this comprehensive classification, the types of public spaces specifically important for this study are urban public spaces related with urban transportation areas are movement spaces, service spaces and interchange spaces. Movement spaces are defined as spaces especially reserved for urban movement needs, largely for motorized urban transportation, main roads, motorways, railways, underpasses and so on (Carmona, 2010b; Francis, 2003). Service spaces are "dominated by modern servicing needs" such as car parks and service yards (Carmona, 2010b, p.169). The last type in this study is named as the interchange spaces. Subway stations, any kind of railways and stops for busses are all included in this type of urban public space and they can be interchanges open-air or closed (Carmona, 2010b).

Although, Carmona (2010a; 2010b) and Francis (2003) prefer defining the types of public space on concrete practical examples from daily world, some scholars prefer more theoretical approach for the classification of different types of public space. Gaffikin, McEldowney and Sterrett (2010) draw attention to the difficult nature of defining public spaces and separating them directly from private spaces by looking some criteria, it is not the ideal case of the world. Hillier (2005) is one of those scholars who adopt the theoretical aspects of space in order to define the types of public space. Hillier (2005) with his theoretical approach on space and built environment works by distinguishing the two ways of understanding space in general; the physical forms of space people built and the actual being of space with its usage and experiences of people. This kind of classification for types of public space sees physical being and cognitive being of public space as two different types of space existence. Hillier's (2005) way of interpretation is closer to the following section of the study where values and components of abstract or theoretical being of public space is defined as well as the physical existence of the space in real world.

### **2.3. Values/Components of Public Space**

The first value of public space is defined by Varna & Tiesdell (2010) as the value equal to what is lost if publicness is lacking or is reduced. Its definition is based on the notion of opportunity cost, since the value of the presence of public space is defined by its absence. Public space, is important and valuable since it acts as the spatial reflection of public sphere, through public realm (Low & Smith, 2006; Varna & Tiesdell, 2010).

Spontaneous encounters like unplanned transfer of ideas through discussions are rooted in publicly accessible spaces as mentioned by Németh (2009). With this vision public spaces are expected to be the home of the right to protest, collective decision making processes, free speech and gathering; instead contemporary public spaces are driven solely by the activity of consumption. This shift in its definition brings the shift in the understanding of the public also, who must be seen as only the users of public space; without any other requirement to match, without an obligation to be the potential customer at the same time.

However, apart from the change in the understanding of the public and public space, there is a more crucial contradiction within the ideal definition with respect to the equity of rights of use. Public spaces are assumed to be including, welcoming the public. Everyone has same amount of right of being there, in an idealized world. At that point, the term everyone and rights to claim that space start to differ between idealized cases and in real world examples. Homeless person is an important actor in the literature; as idealized public space is defined as the places, where homeless people feel like home. Németh (2012) here draws attention to this contradiction; while homeless people feel like home, this level of civil liberty for them, might result in unintentional and indirect restriction of the others using that same public space not as comfortably as they might be using without the presence of them. There are also cases where homeless people are excluded for the sake of others (Schmidt, Németh & Botsford 2011; Németh 2012). This is equally important as the exclusion is not part of public space regardless of the nature of exclusion.

Frick (2007) discusses synergy and supportiveness of spatial organization, as components or values of public space. For him, (2007) spatial synergy means the presence of the condition where a locality can be perceived as a singular and distinguishable entity and at the same time perceived as a part of city with its representative power. Spatial synergy or dysergy is defined as the relation between all components of the urban fabric or simply any spatial configuration for environment. Synergy supports the creation of “places” and locality on the contrary, dysergy for creation of “non-places” and lack of locality (Rapoport, 1990; Frick, 2007).

Frick’s (2007) work is particularly important and related to the purpose of this study since it investigates how physical configuration of object or spaces of all scales, produces spatial synergy or dysergy. Referring to space syntax and how physical configuration and its functioning models for a space segment are measurable and interpretable. Frick (2007) emphasizes the transition from perception of public space to actual space. How socio-spatial features and physical organization affect the public use patterns and publicness of any space can be analyzed by this method. Two categories of values and components of public space are important to mention and described in detail which are Behavioral/Activity and Socio-cultural ones.

### **2.3.1. Behavioral/Activity values and components**

Behavioral values, activity values and components of public space are based on the determinism approach in architecture. ‘Architectural determinism can be defined as the belief that architectural design affects human behavior in some way that it acts as an independent variable in a describable process of cause and effect’ (Hillier,

Burdett, Peponis & Penn, 1987, p.233). Similar to Hillier et al. (1987) scholars like “Kevin Lynch (1960), Jane Jacobs (1961) and Gordon Cullen (1961) supported [that] urban environment shapes our behavior, knowledge and disposition” (Németh & Schmidt, 2010, p.453) adopting deterministic approach claiming the relation between built environment and the way of behavior/activity of people experiencing that space.

Gehl (2010) draws attention to the design with self-implying usage in relation to behavioral and activity components of public spaces. Proving the argument with betterment in conditions of public space, the public space attracts more users. The pedestrian systems and cycling networks of Copenhagen can be considered as the solid example of this argument of betterment of design implying people to use more and create a vibrant public atmosphere (Gehl, 2010). He gives Venice as an example of how public space network controls and guides people’s way of acting, roaming and behaving in built environment and force people to keep the city as a pedestrian city. Hillier (2002) relates this guiding nature of public spaces both in behaviors and in activity. Defining the pattern of public space system as urban grid Hillier (2002) posits urban grid as one of the key factors of natural movement and movement economy, which is parallel to the deterministic argument proposed for the behavioral and activity values and component of public spaces.

### **2.3.2. Socio-cultural values and components**

Public spaces provide a political stage, an opportunity to gather and possess political representation through being there. This is defined as the political and democratic value of public space which refers also to the history via the ultimate public space of the ‘forum’ (Varna & Tiesdell, 2010). Ideally, public space has a political value due

to its characteristics to be open-to-all, with a neutral nature to whole different views, without a dominance of any specific one to claim that territory. This value is related to the issues of inclusiveness, tolerance, pluralism and other similar attributes of publicness and public space to be discussed later.

Social value is another value for public space to be highlighted, as they are the places where strangers meet, interchange of ideas occur randomly, interaction between social groups is enabled via those spaces in urban life. Communication, development of tolerance and the atmosphere for understanding can be created naturally in public spaces if publicness provided. The ideal just societies can be achieved by this development of universally inclusive spaces embracing diversities (Varna & Tiesdell, 2010; Young, 2000).

Symbolic value is defined as the singular and collective value of a public space through time for that urban area and for the users through time and memory. Public space has a representative power and a symbolic value for individuals and societies that are shaped with numerous events of numerous scales, coming together to create a new identity (Varna & Tiesdell, 2010).

#### **2.4. Attributes of Physical Space Affecting the Publicness**

Construction of iconic architectural marvels and the race in order to become the host of the global cultural or sports events are contributors of the image building process of today's cities to attract more business activities and tourism. Public spaces of good quality also add value to the city's image and citizens' actual lifestyle (Van Melik, Van Aalst & Van Weesep, 2009). This good quality of public space and attributes of

physical space also enable the publicness of the space. These attributes are investigated and categorized into four main groups.

#### **2.4.1. Accessibility/Physical Configuration/Animation**

Attributes of public space investigating the physical nature of space itself can be categorized under this topic. Hillier (1999) qualifies these types of attributes more related to the real space as ‘configurational’. These three attributes –accessibility, physical configuration and animation- are related to the physical space and the spatial nature that users actually experience in real world. As Berney (2010) mentions accessibility as a tool for ‘improvement of equity by equalizing accessibility to public spaces’ here the concept is used as the potential of physical access to a place.

Accessibility has physical and legal components (Langstraat & Van Melik, 2013). There can be visual accessibility, entrance accessibility or orientation accessibility (Langstraat & Van Melik, 2013; Németh & Schmidt, 2011). The relation of accessibility and perception of publicness is given by Langstraat and Van Melik (2013) as the physical being of the public space that becomes free of obstacles and any kind of physical barriers. The mental barriers also disappear parallel to that so public space gets closer to the ideal case. A geographical location easily reached by many user groups is also an important attribute of public spaces in terms of accessibility (Langstraat & Van Melik, 2013).

“Physical configuration rather focuses on the design of a place than on the consequences of this design” as Langstraat and Van Melik (2013, p.437) defines. It is

studied together with the attribute of animation. These two attributes; physical configuration and animation, similar to accessibility, are design oriented attributes affecting publicness. Socio-spatial features which are relevant for this study can be categorized under ‘configurational’ attributes.

Varna and Tiesdell (2010) claim that there are two different scales when design oriented attributes are concerned. Macro-design scale refers to “public spaces relation to its hinterlands, including routes to it and its connections with its surroundings” where micro-design scale refers to ‘the design of public space itself’ (Varna & Tiesdell, 2010). At this point, this distinction is based on the scale of public space also brings the distinction between physical configuration attributes of public spaces. Physical configuration is preferred for macro-design while animation attribute is preferred for micro-design (Varna & Tiesdell, 2010).

Varna and Tiesdell (2010) explain physical configuration as a factor controlling how people can enter the space and how people has to spend to reach there, to be there referring to the ‘movement economy’. Fences, barriers and any kind of tool to control usage of the physical space are categorized under physical configuration attribute of space, which is very close to accessibility.

Animation is the general activities offered for people in a public space through its physical setting (Varna & Tiesdell, 2010). This attribute of micro-design scale is directly related to the ‘presences of people’ (Varna & Tiesdell, 2010) thus constituting an important bridge between socio-spatial features of public spaces and the perception of publicness for users.

Animation attribute is the main attribute covering the socio-spatial features affecting perception of publicness which are the subjects of this study. Seating areas, consumption and retailing areas, restrooms, availability of lighting at night are some examples of those spatial features covered within the animation attribute. As Carr et al. (1992) claim animation is an attribute of public space which should be matched with the needs of users. Passive and active engagements are sub-topics of this relation of animation with human needs. People-watching or standing can be an example for passive engagement, while active engagement points to a more direct contact with physical space, for example sitting and resting at the benches, or indulging in the visual enhancement elements of the public space (Varna & Tiesdell, 2010; Carr et al., 1992).

Animation is an important attribute for this study as mentioned since it is design oriented and embraces the socio-spatial features defined in the study.

#### **2.4.2. Management/Control/Security**

Management is a process that involves the maintenance and control of spaces in which the owners define the acceptable utilities, activities, behaviors and users for that space segment (Németh & Schmidt, 2011). For management dimension, the techniques refer to two opposite ends; the techniques encouraging freedom of use and the techniques discouraging use through hard or soft measures of control (Loukaitou-Sideris & Banerjee, 1998; Németh & Schmidt, 2007).

Management can be interpreted as the decision who can have access to the space and who cannot, which activities are allowed and which are not. This dimension leads researchers to the issue of control. The people who are in charge of deciding the allowed and banned activities or which group of users are allowed in the space, are in total control of that space as well. Managers, in that sense, are important mediators between owners and users of the public space (Frank & Paxson (1989) as cited in Németh & Schmidt, 2011).

Control is another managerial attribute of publicness. It refers to the presence of an explicit tool of control or entity. According to Loukaitou-Sideris and Banerjee (1998) control is an attribute which can be identified with two distinct managerial tools, hard and soft controls. Hard controls are the laws, regulations, powerful security personnel, surveillance cameras and any strict prohibition on certain activities or behaviors, whereas soft controls are the ones related to the design and layout of the space orienting people toward certain activities or certain type of behavior, indirectly, with more symbolic restrictions (Loukaitou-Sideris & Banerjee, 1998).

Some analogies are made as ‘Big Father’ that is the circumstance for a more public space, it is the policed state, with just presence of police; whereas ‘Big Brother’ refers to a less public circumstance when it comes to control dimension when it is the police state, with total control of police rather than just the reassuring the presence of them (Tiesdell & Varna, 2010). For CCTV systems used as control tools, the security and civil liberties opposition emerges, the balance is hard to reach and subjective and circumstantial.

### **2.4.3. Inclusiveness/Tolerance/Civility**

Management and control affect the security in a public space on one hand where on the other limit the inclusiveness. The decision of who can be there and who cannot is presented as a question of control and security, but at the same time it involves who to exclude and on what grounds. According to Day (1999), scholars draw attention to the movement towards privatized public life and new managerial approaches in acquisition of public space promoting the exclusion and segregation. Németh and Schmidt's (2007) work shows this relation between inclusiveness and management model, varying at a range between most inclusive and open public spaces to the most exclusive and closed public spaces. Inclusiveness, tolerance and civility are concepts merging under the same title and focused around the same question of deciding who to be excluded or included.

Amin (2002) claims 'that most of public spaces are places of transit those offer little meaningful or durable contact between strangers' (as cited in Gaffikin et al. 2010, p.497). This contact with strangers, the idea of the variety of 'strangers' using the same public space has the corresponding attribute, inclusiveness. It 'is about the degree a place meets the demands of different individuals and groups' (Langstraat & Van Melik, 2013). Inclusiveness is defined as a soft factor by Langstraat and Van Melik (2013) since it is relatively ambiguous and not easily measurable. Langstraat and Van Melik (2013, p.436) take inclusiveness as a concept covering "diversity of uses, users, facilities with a welcoming ambience". Heterogeneity and interrelation of user groups are claimed to be the tools of social integration promoted by public spaces and inclusive nature of them (Gaffikin et al., 2010; Madanipour, 2004). The range for public spaces Langstraat and Van Melik (2013) use is from fully private

spaces to fully public spaces, a part of their study of OMAI model, as they give emphasis to the spatial reflection of inclusive characteristic of public spaces. Ideal public spaces are defined as the spaces matching the demands of a wide variety of users in an official policy goal, whereas spaces with more dominant private characteristics operate with restrictive policies with visible evidences such as eliminating the usage of street furniture or making the resting areas uncomfortable intentionally to exclude particular users like non-consuming users (Langstraat & Van Melik, 2013).

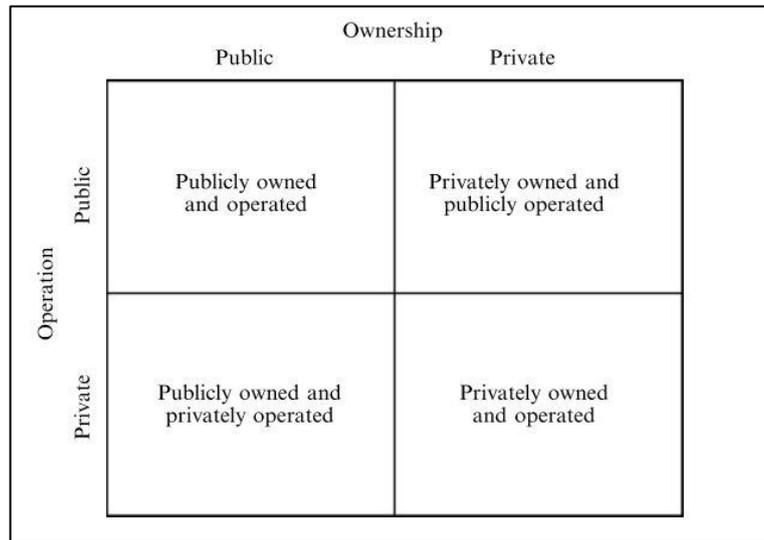
The concept of civility under this topic ‘refers to how public place is managed and maintained and involves cultivation of a positive and welcoming ambiance’ as Varna and Tiesdell (2010) defines. Here, welcoming appears as a common denominator. However, slight distinction comes from the fact that civility includes the managerial aspect of the welcoming atmosphere more when compared to inclusiveness. Inclusiveness is more abstract, though the concept of civility works in a practical manner in relation to laws and regulation. This property brings civility to include or exclude not only users but also the activities. For example, the decision of defining “harmful and harmless activities” (Lynch & Carr (1979) as cited in Varna & Tiesdell, 2010, p. 582) in a public space is directly related to civility. Allen (2006, p.453) claims that by “making public spaces attractive to certain users but not others...an established notion of ‘civility’ is expressed through the redesigned layout and amenities, with carefully selected attractions on offer, so that they will appeal to ‘normal’ users rather than the decidedly troublesome and less civil ones”.

Civility involves the freedom of activity, thus it directly links to tolerance (Carr et al. 1992; Varna & Tiesdell, 2010). Civility is an attribute of public space requiring the awareness of and respect for other users and tolerance as a concept. Recognition and awareness of others within the public space, relating to them without necessarily demanding the disappearance of differences between users, but embracing them with tolerance is the ideal behind relation of attributes civility and tolerance (Brain 2005, cited in Varna & Tiesdell, 2010).

#### **2.4.4. Ownership//Operation/Function**

Ownership is one attribute of physical space affecting publicness of it, the space can be owned by public, a government body or by a private entity similarly it can be owned by an individual or a corporation (Németh & Schmidt, 2011). Ownership was directly related to the operation of the space, especially until mid-1990s. Generally publicly owned spaces were operated by the state or local government administration, whereas privately owned spaces were operated privately by the private sector (Németh & Schmidt, 2011). Through contemporary ownership, hybridization of the two operation sectors is observed (Kohn, 2004). Law (2002) also addresses the conflict that developing new operation and ownership models and implying to the existing public space structure of the city. For example the new provision methods conducted by developers endanger the public space to lose its previous characteristics and level of publicness. Looking to the operation and ownership options, one may talk about four possible combinations as four different models. These are publicly owned publicly operated spaces, publicly owned privately operated spaces, privately owned publicly operated spaces and privately owned and privately operated spaces (Németh & Schmidt, 2011). It should be noted

that all four combinations define different models for ownership and operation however the common denominator is that all those spaces are for public spaces in use (see Figure 2).



**Figure 2: Ownership and Operation Combinations**  
(Source: Németh & Schmidt, 2011)

According to Varna & Tiesdell (2010) ownership refers to the legal status of a place. They cite Marcuse's (2005) work for six different levels of legal ownership regarding the aspects such as operation, function and use at the same time. The levels introduced by Marcuse (2005) starts from the most public one possible to the private at the extreme;

- Public ownership/public function/public use (e.g. street, square)
- Public ownership/public function/administrative use (e.g. municipal buildings)
- Public ownership/public function/private use (e.g. space leased to commercial establishments, café terrace)
- Private ownership/public function/public use (e.g. airports, bus stations)

- Private ownership/private function/public use (e.g. shops, cafes, bars, restaurants)
- Private ownership/private use (e.g. home)

(Marcuse (2005) as cited in Varna & Tiesdell, 2010). Here what is added to Németh and Schmidt's (2011) definition is the use and function together with operation, aside the ownership patterns.

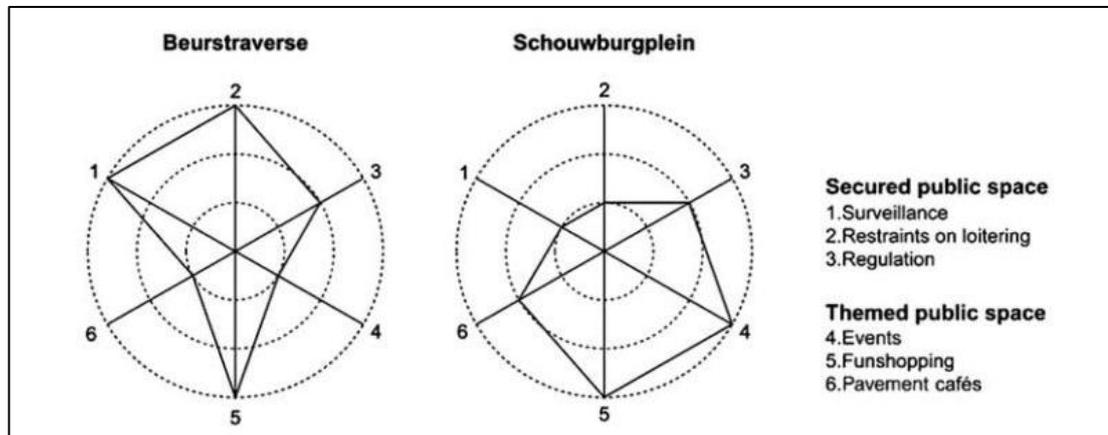
## **2.5. Measurement Models for Publicness**

When it comes to the measurement of publicness level, there are four models to focus on and utilize. These models are based on different variables and how those affect the publicness in different circumstances. Those models are the Cobweb Model, Tri-axial Model, Star Model and lastly OMAI Model.

### **2.5.1 The Cobweb model**

Cobweb Model which is developed by Van Melik et al., (2007) visually represents differences between two selected public spaces. It has indicators such as surveillance, restraints and loitering, regulations, events, funshopping and pavement cafés. A secured public space and a themed public space as the two major urban public spaces are selected. For visual representation of control over public space, the model uses those six characteristics, three for secured and three for themed type of urban public space, and score them accordingly causing the dimensions with higher scores, shown with larger parts on the web plot. Thus, the deformed shape of the cobweb for a particular public space give an idea about strengths and weaknesses of that space in

terms of its publicness (see Figure 3 for two different examples public spaces; Beurstraverse and Schouwburgplein from Holland).



**Figure 3: Six-dimensional profiles of the Beurstraverse and Schouwburgplein as secured (upper half) or themed (lower half) public space (Source: Van Melik et al., 2007)**

This early model has some limitations as it depends on the interpretation of the researcher, the level of subjectivity in the scoring process that should be identified with different set of rules. After that general limitation, another one is pointed out by Varna & Tiesdell (2010) since the sequence of six indicators affecting the pictorial appearance of the cobweb. This induction of one dimension to another may cause different forms for the final web figure if indicators change place on the web, causing arbitrarily distribution to some extent (Langstraat & Van Melik, 2013).

Cobweb Model is important because of its technique rather than its relation to the content of the following studies (Varna & Tiesdell, 2010). This model does not focus on the publicness of a wide range of public spaces; it mainly focuses on the control over public spaces of two types as secured and themed public spaces. However, it

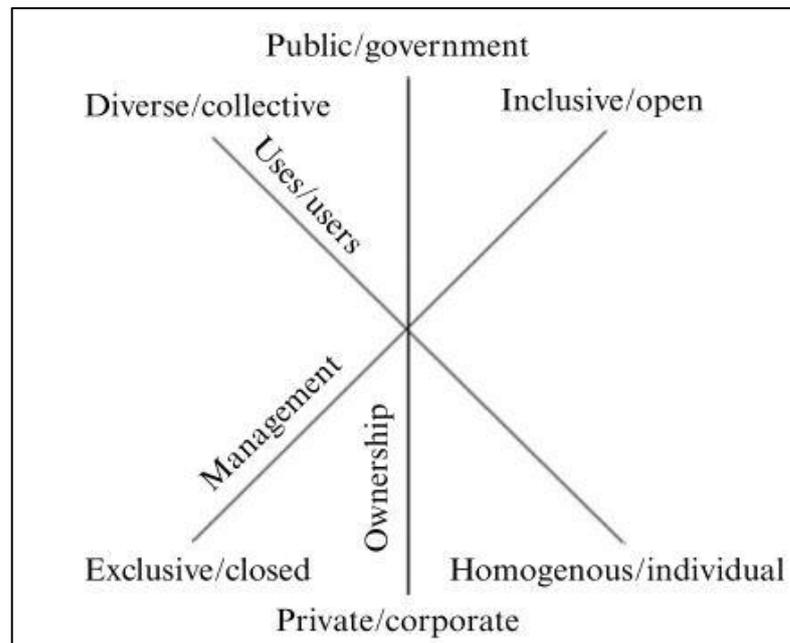
introduces a new way to illustrate and interpret multi-dimensional nature of spatial analysis regarding different spaces with common denominators (Varna & Tiesdell, 2010).

### **2.5.2. The Tri-axial model**

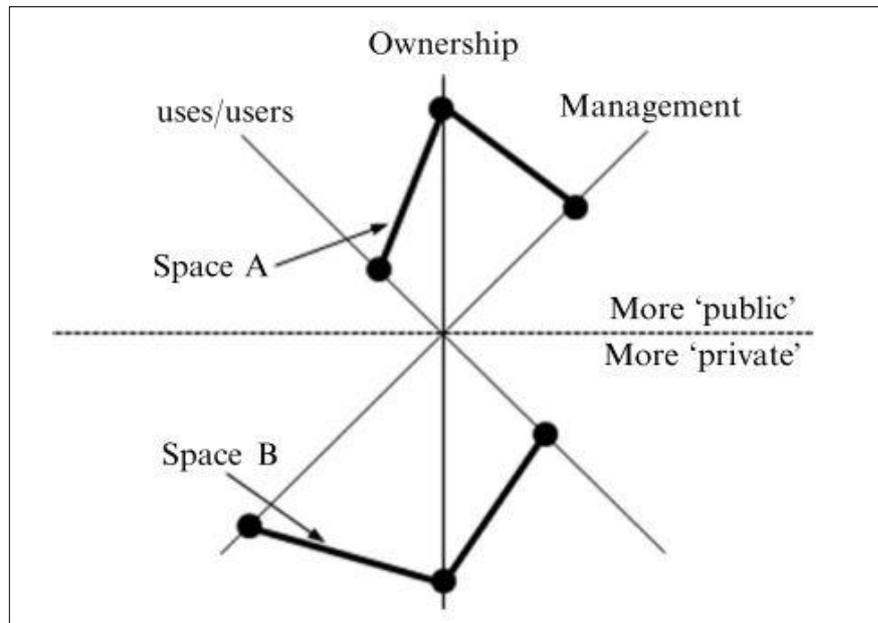
The second model is the Tri-axial Model proposed by Németh and Schmidt (2007). Tri-axial Model is a model focusing on three important characteristics of a public space which are the ownership pattern, the management and the users of the space. According to this model, for example a space can be owned by public, privately managed and used by public. This example is one of many variations where the investigated 'public spaces' fit within the scope of this tri-axial system. Using ownership, management and user patterns of the space, they determine a scale of publicness for each public space (see Figure 4).

This model is rooted in the previous works of Madanipour (1999) and Benn & Gauss (1983, as cited by Németh & Schmidt, 2011). The initial work that they later remodeled defines three dimensions for publicness; access, agency and interest where; "access is defined as access to a place as well as the activities within it. Agency refers to the locus of control and decision-making present, and 'interest refers to the targeted beneficiaries of actions impacting the space' (Madanipour 1999, as cited in Németh & Schmidt, 2011, p.10). Kohn (2004) defines dimensions as; ownership, accessibility and intersubjectivity, meaning, the interactions and activities that the space initiates and enables (Kohn, 2004). Regarding the criteria defined by those scholars, a new model for assessing publicness was introduced taking three dimensions of ownership, management and users to specify. These three

dimensions intersect each other and show values of any space according to their scores for each dimension separately. Németh and Schmidt (2011) draw attention to their method which is working along one dimension where some other components of dimensions are kept constant (see Figure 4).



**Figure 4: Dimensions of publicness as basis of Tri-axial Model**  
(Source: Németh & Schmidt, 2011)



**Figure 5: Hypothetical plotting of publicness of two different spaces (Space A and B) according to Tri-axial Model (Source: Németh & Schmidt, 2011)**

Langstraat and Van Melik (2013) point out that when it is compared to the cobweb model tri-axial model has indicators of a more general character; however, the same problem of where to locate the axes is a weakness also for this model. Tri-axial Model has an index that is created by observing numerous public spaces of New York City (Németh & Schmidt, 2007) (see Figure 5). The index has two major factors: encouraging use and limiting use. The variables of feature encouraging and discouraging use are listed as the following.

Encouraging features;

- “-Sign announcing public space
- Public ownership or management
- Restrooms available
- Diversity of seating types
- Various climates
- Lighting to encourage nighttime use
- Small-scale food vendors
- Art, cultural or visual enhancement

- Entrance accessibility
- Orientation accessibility

Discouraging features;

- Visible set of rules
- Subjective judgment rules posted
- In Business improvement district (BID)
- Security cameras
- Security personnel
- Secondary security personnel
- Design implying appropriate use
- Presence of advertisements
- Areas of restricted or conditional pass or use
- Constrained hours of operation” (Németh & Schmidt, 2007)

Németh and Schmidt (2007) created an index to measure management techniques, in other words measures of control, by visiting numerous publicly accessible spaces of New York City. Publicly accessible spaces defined as any ‘physical setting from side-walks to outdoor cafés to urban plazas’ (Németh, 2009). They created this tool by focusing and categorizing every attribute of a publicly accessible space from hard controls to soft controls. Four main categories that the index based on are laws and rules, surveillance and policing, design and image and access and territoriality. These four approaches bring hard control and soft control measures together (Németh & Schmidt, 2007).

Based on their visits to selected sites, 20 variables were defined, 10 for encouraging free use and 10 for limiting or discouraging free use. This index and the attempt to numerically evaluate factors encouraging and discouraging use are important since the perception of space, publicness and public use is subjective (Németh & Schmidt, 2007). To overcome the effect of subjectivity, they defined variables which can be

evaluated by the researcher based on the presence of that criteria, without the need to comment on it (Németh & Schmidt, 2007). These variables chosen as observable indicators and the scores depend on the presence or the intensity of those indicators. Varying with each indicator, the space can score 0, 1 or 2 for factors encouraging use, on the other hand, it can score -2, -1 and 0 for the factors discouraging use (Németh & Schmidt, 2007).

The overall score for any defined publicly accessible space is calculated through the summation of all 20 points including both factors encouraging and discouraging use. The overall scores vary in the range between -20 for most controlled spaces and 20 for least controlled spaces, where score zero indicates the perfectly neutral space in terms of the use of management techniques and measures of control (Németh & Schmidt, 2007). With this numeric scoring a ranking between different spaces can be done by focusing on their overall availability for the usage of measures of control and publicness. As Németh (2009) highlights the index was validated by a panel of experts in public space design and planning, with a group of practitioners and academicians.

Tri-axial Model of publicness is important for this study and the indicators and the index for socio-spatial features restricting or encouraging public use are adopted from it.

### **2.5.3. The Star model**

The third model is the Star Model of publicness developed by Varna & Tiesdell (2010). This model has five dimensions for the evaluation of publicness of a space.

The visual representation for this model shows five dimensions of a space as five limbs of a star. Those limbs represent control, ownership, civility, animation and physical configuration (see Figure 6a-6b). As the space is more public for any of those five dimensions, the limb of the star representing that dimension becomes larger at the overall plot.

Star model is more helpful when showing how different dimensions are more public for a space rather than showing the publicness of different dimensions and their contribution to the overall publicness. One weakness of the model is that star limbs show continuous values making the comparison harder and more subjective (Langstraat & Van Melik, 2013). Star model has five axes which are depicted as star limbs where they originated from the common core or nucleus, indicating the zero level of publicness and the highest points of the limbs, the edges, are indicating the highest possible level of publicness for that specific meta-dimension (Tiesdell & Varna, 2010).

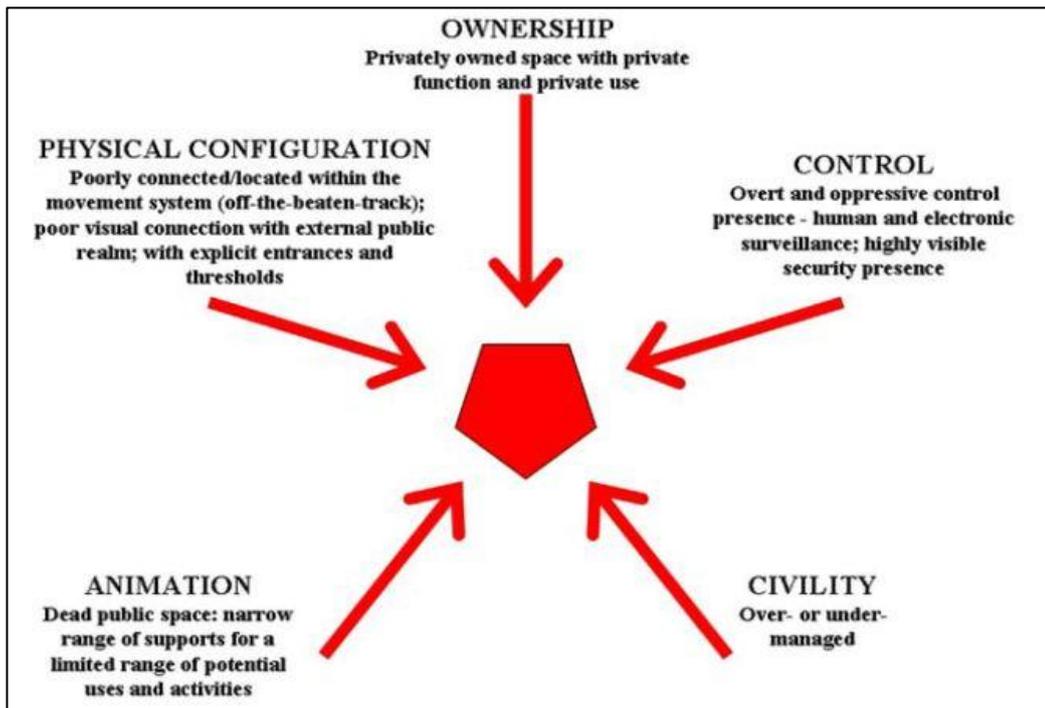
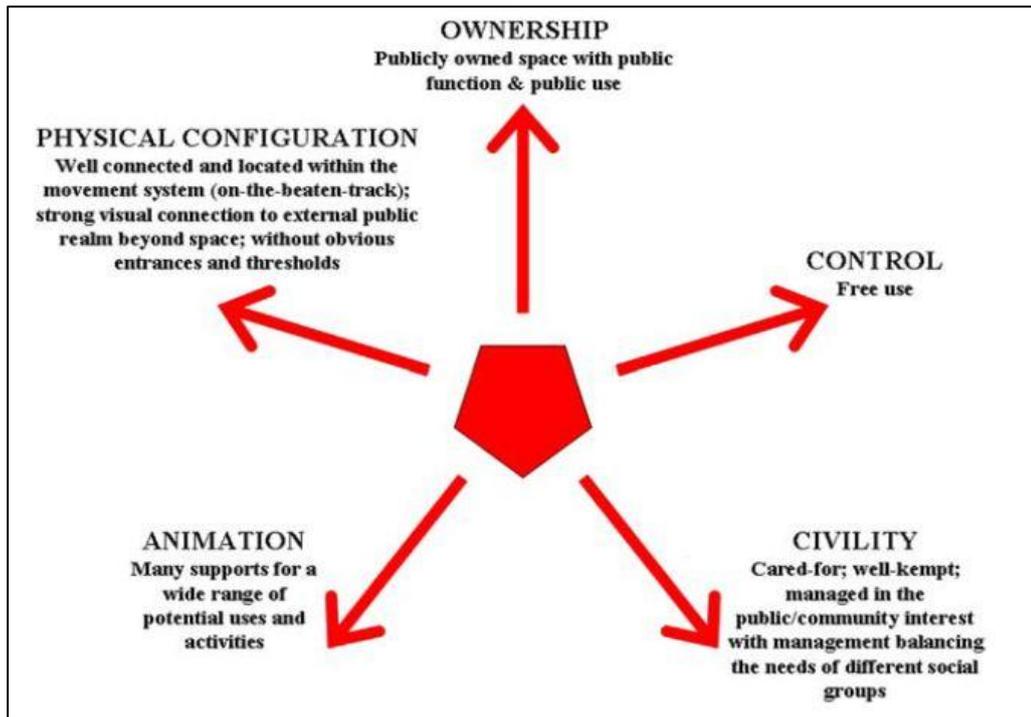
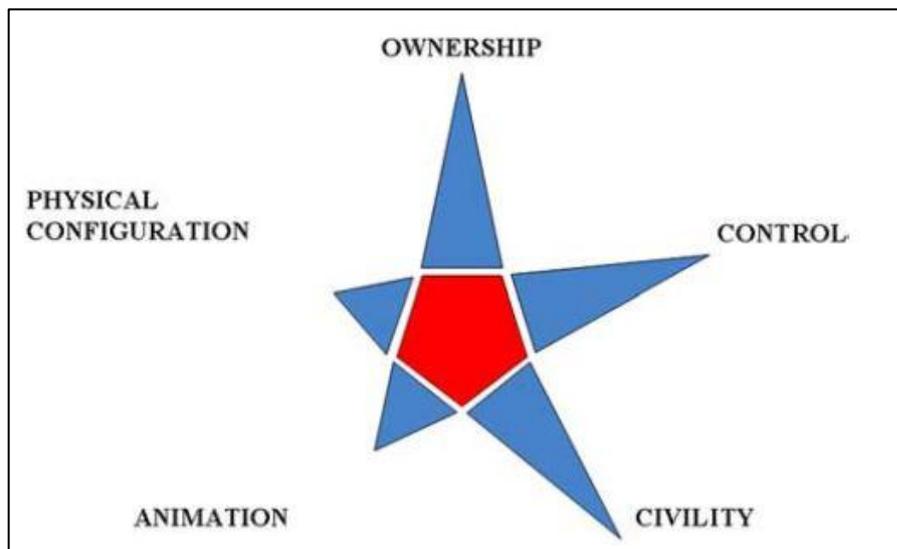
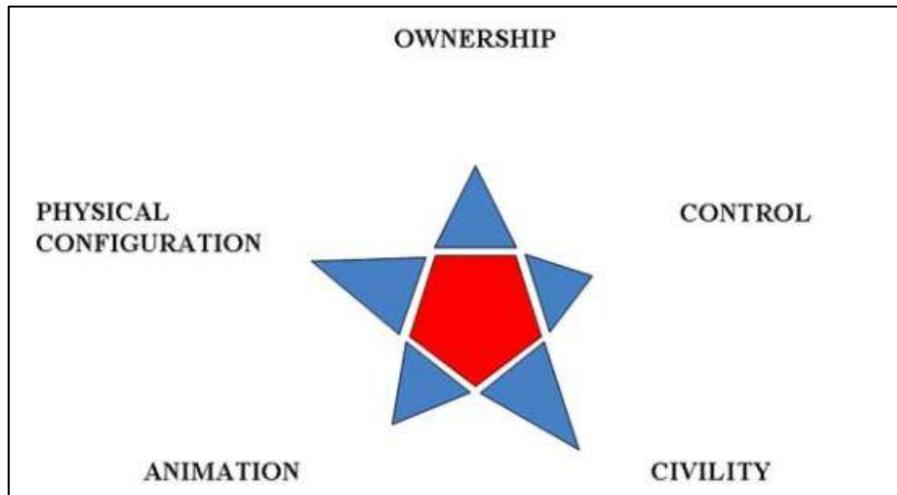


Figure 6a-6b: Characteristic attributes of ‘more public’ places and ‘less public’ places according to Star Model of Publicness (Source: Varna & Tiedell, 2010)

Here each meta-dimension can get scores varying from one to five, where one is referring to less public and five is referring to more public. Meta-dimensions are

defined in detail to avoid subjectivity in scoring and evaluation; for instance for ownership, if space is owned publicly it scores 5, if it is owned by public-private partnership then it scores 3, if it is totally owned privately, it scores 1 (Varna & Tiesdell, 2010).

Similarly, for every meta-dimension, one can find appropriate guidance for evaluating and scoring the publicness level, within the table of indicators of publicness for meta-dimensions (Varna & Tiesdell, 2010). For hypothetical spaces different plots of publicness is drawn by using Star Model. Figure 7a shows the one where design of the public space is a more dominant indicator, where Figure 7b shows the case where the management aspect is more dominant (Varna & Tiesdell, 2010).

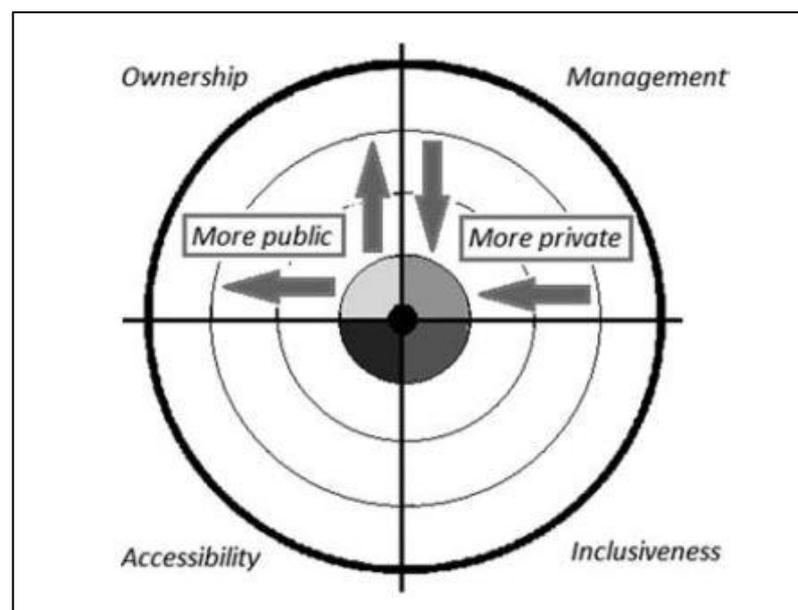


**Figure 7a-7b: Hypothetical public places scoring according to Star Model of publicness; first more highly on design criteria where second is scoring more highly on managerial criteria (Source: Varna & Tiesdell, 2010)**

#### **2.5.4. The OMAI model**

The last model is the OMAI Model developed by Langstraat & Van Melik (2013). It focuses on the ownership, management, accessibility and inclusiveness as dimensions of publicness and uses a pie chart for plotting the dimensions.

Langstraat and Van Melik (2013) created this model, focusing on four dimensions of publicness; ownership, management, accessibility and inclusiveness (see Figure 8). OMAI Model uses these dimensions to investigate whether the much talked ‘end of public space’ argument is valid for contemporary world or not and it concludes that end of the public space is not the case (Langstraat & Van Melik, 2013). It is intriguing that although it is defined by many researchers, accessibility is a major dimension only in this model, apart from Kohn (2004). Similarly inclusiveness is referred through civility, tolerance and openness, but only this model names it as an important dimension.



**Figure 8: The OMAI model of publicness**  
(Source: Langstraat & Van Melik, 2013)

The OMAI Model uses scores from 1 to 4; where 1 indicates fully private and 4 indicates fully public components. Apart from its similarities with previously developed models, OMAI gain importance due to its representational power of the

relation between ownership and management, at the upper half of the scheme (Langstraat & Van Melik, 2013). The plot of publicness is figured by using OMAI model shows that when values moving out of the core of the concentric circles, the publicness character of the space increases. For lower part of the scheme, for accessibility and inclusiveness the idea is similar, as the plot indicated the higher levels of publicness as one moves from the core towards outer circles (Langstraat & Van Melik, 2013). From 1 to 4 according to the score that the public space gets the slices at the plot gets hatched; results the public spaces with bigger and fuller circles to illustrate their higher capability for publicness (See Figure 8).

## **CHAPTER III**

### **FIELD SURVEY**

Publicness of space can be tested with different tools and scales. Different types of public space are described in Section 2.2. Among the types defined by Carmona (2010b) the spaces for movement and interchange are selected for this particular study. Urban transit spaces as the case for a combination of these two criteria seems appropriate. There are two major reasons for the selection of urban transit spaces; firstly, it has not been worked on sufficiently formerly. Secondly, the nature of transit spaces involves characteristics such as being the medium of temporary interactions with a limited claim on the space, enabling everyone with the right to be there as users, allowing no specific group of users to dominate the space. For these reasons, intercity transit stations are selected as the subject of this study since they serve for a larger urban area with a variety of users, with relatively higher amounts of time spent compared to intracity transit stations.

### **3.1. Site Analysis: Transit Spaces in Ankara**

Ankara has transit spaces limited in number with central stations available for each mode of transportation; a bus station, a train station and an airport. Various user groups regarding age, gender and social background utilize their particular transit spaces according to the mode of transportation they prefer.

In this study, Ankara Intercity Bus Terminal (ASTİ - Ankara Şehirlerarası Terminal İşletmesi) is chosen as the case for the field survey among other possible options; train station and airport. The reason of this choice is to cover a wider range of user groups with different socio-economic backgrounds.

#### **3.1.1. ASTI (Ankara Intercity Bus Terminal) as a transit space**

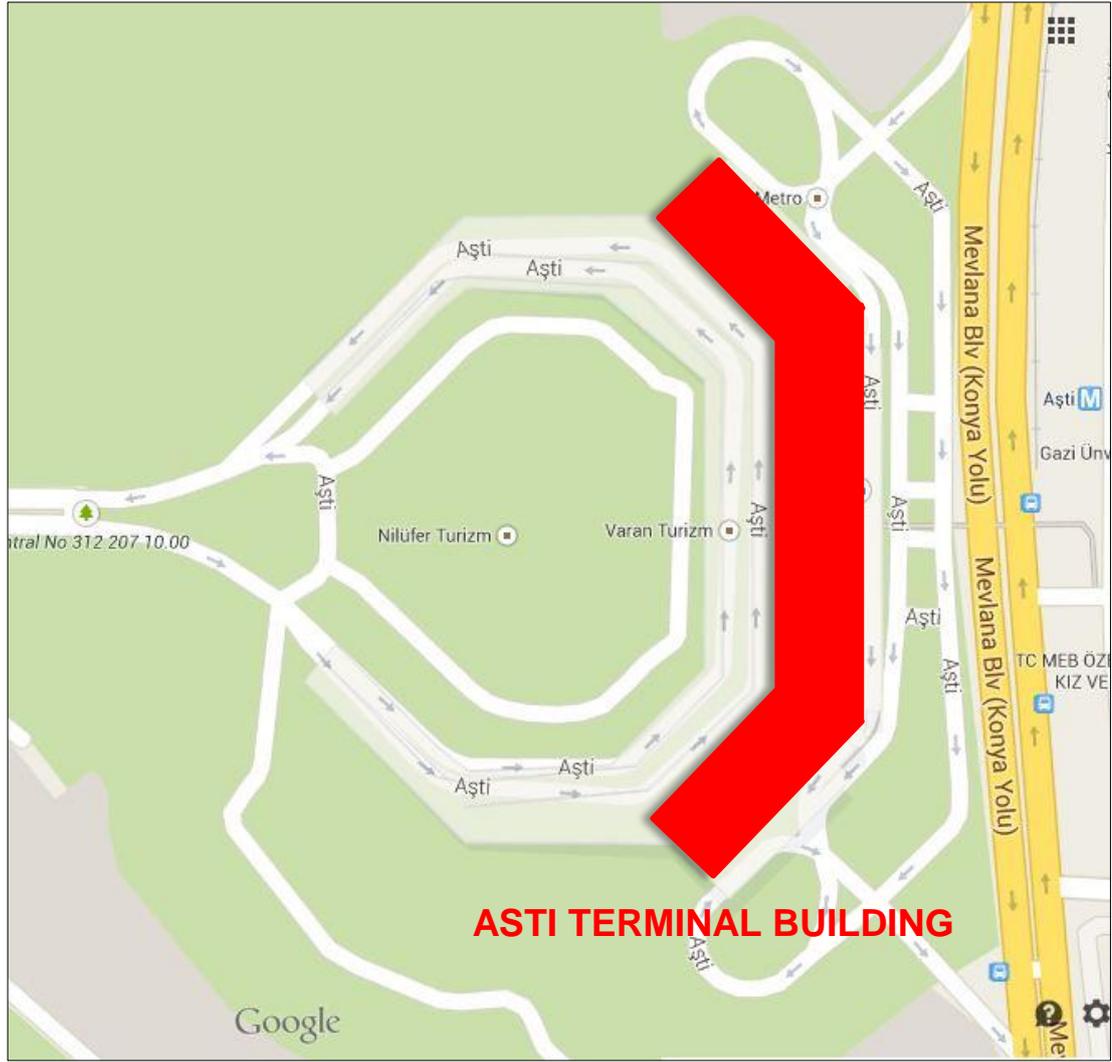
Ankara Intercity Bus Terminal project competition is organized in 1985 and construction started in 1987 (Arkiv, 2008). The selected project was designed by architect Davran Eşkinat and the site started serving the province of Ankara on March 31, 1995 (ASTI, n.d.). Terminal complex is located in Söğütözü region of Ankara, West of the city center; at the junction of two important transit axes of the city, Eskişehir and Konya Highways (For the location of ASTI, see Figure 9).

Passenger traffic depends on this connection to Konya Highway rather than Eskişehir Highway, which is used for bus traffic (see Figure 10).



**Figure 9: ASTI Terminal Location and Major Road Connections; Eskişehir and Konya Highways (Source: Google Maps, Retrieved June 05, 2014)**

ASTI Terminal Complex has 228.520 m<sup>2</sup> total floor area with 128.520 m<sup>2</sup> occupied by the terminal building and 100.000 m<sup>2</sup> open air area for roads, bus parks and similar functions (ASTI Bilgi Sistemi, n.d.) (see Appendix A – Figures 1, 2, 3)



**Figure 10: ASTI Terminal Building and Traffic Around the Building**  
(Source: Google Maps, Retrieved June 05, 2014)

The Terminal Building has four floors. Parking spaces, gas station, pool and other landscape elements are located on the ground floor. On the second floor arrival platforms are located as well as restaurants and baggage claim. A connection to the subway system of the city, Ankaray is provided via tubular junction to the subway station. At the third floor, departure platforms are located with ticket offices for bus firms, an information desk, ATMs, waiting areas for passengers, small shops such as newsstands, bookstores or souvenir shops (see Appendix A – Figure 6). Finally, at the uppermost floor managerial offices are located (Alan, 2011 as cited in Uslu,

2013). There are 64 platforms for departures and 47 for arrivals and it is stated in official web page that terminal has capacity of 3000 buses per day (ASTI Bilgi Sistemi, n.d.). Especially during holiday seasons, the capacity of the terminal is claimed as 500,000 passengers per day, where on an average weekday it is claimed to be around 150,000 passengers per day (ASTI, n.d.). There are approximately 5000 employees working at the terminal building, including the small commercial spaces and ticket offices (see Appendix A – Figure 4). Conference hall, a post office, dry cleaning, tailor, hair salon, car-renting, insurance company, jewelry shop, praying area and a convenience store are the examples of services provided (Ankara Enstitüsü Vakfı, n.d.; Ankara Şehirlerarası Terminal İşletmesi, 2013). Building has 9 restrooms, 106 bathroom stalls in total and they are charged with a fee, two in each floor and one at the mezzanine; for the use of both passengers and employees (ASTI Bilgi Sistemi, n.d.; BUGSAŞ, 2011). Terminal building has 28 entrances with 59 gates, controlled by security personnel and x-ray machines (see Appendix A - Figures 5-7). For security purposes, private security personnel serve together with police and municipal officers in charge. Also one doctor is in charge in the complex for emergencies (BUGSAŞ, 2011).

### **3.1.2. Management and ownership patterns in ASTI**

In terms of ownership pattern and management models, ASTI started as an entity subordinate of the Greater Municipality of Ankara, where municipality owns the complex and responsible for its management. In 1997, the management of ASTI was transferred to a private firm Başkent Ulaşım ve Doğalgaz Hizmetleri Proje Tah. San. A.Ş. (BUGSAŞ - Capital City Transportation and Natural Gas Distribution

Corporation) affiliated with Greater Municipality. Today, the complex has a joint model of public ownership and semi-private management since Greater Municipality of Ankara is a stakeholder of this private firm, BUGSAŞ (EGO, n.d.).

### **3.2. Research Questions and Hypotheses**

The study aims to shed light on the relation between socio-spatial features and the perception of publicness. The research questions are given accordingly as follows;

- Do socio-spatial features affect the perception of publicness of users?
- How do socio-spatial features affect the perception of publicness for different user groups regarding age, gender and frequency of use patterns of users?
- Do particular socio-spatial features affect particular user groups and their perception of publicness more than others?

Hence, the hypotheses of the study are shaped as;

- Socio-spatial features affect the perception of publicness for users.
- Socio-spatial features affect different user groups differently, regarding age, gender and frequency of use background of users.
- Particular socio-spatial features affect particular user groups and their perception of publicness more than others.

### **3.3. Methodology**

In this study, data collection relies on two main methods: on-site questionnaire and semi-structured interviews. The index by Németh & Schmidt (2011) introduced in

section 2.5.2. as a part of the tri-axial model is adopted and used for the pilot study. It is derived to see the relation between factors, especially the ones focusing on design and spatial features and the perception of publicness. It is important for the study to observe encouraging and discouraging factors as the starting point of the research on site, so a pilot study was done before starting the survey. The questionnaire and interviews adopt those observations on site (see Table 1).

**Table 1: Features encouraging and discouraging use from Tri-axial model for publicness.**

Visible set of rules posted	-2	-1	0
Subjective rules posted	-2	-1	0
In business improvement district	-2	-1	0
Security cameras	-2	-1	0
Security personnel	-2	-1	0
Secondary security personnel	-2	-1	0
Design implying appropriate use	-2	-1	0
Presence of advertisement	-2	-1	0
Areas of restricted use	-2	-1	0
Constrained hours of operation	-2	-1	0

Sign announcing 'public space'	0	1	2
At a commercial building	0	1	2
Restrooms available	0	1	2
Diversity of seating types	0	1	2
Various microclimates	0	1	2
Lighting to encourage night use	0	1	2
Small-scale food consumption	0	1	2
Art/Visual Enhancement	0	1	2
Entrance Accessibility	0	1	2
Orientation Accessibility	0	1	2

This observation data obtained from the pilot visit to the site. Together with the tri-axial model inputs were used as a guide to design the questionnaire and interviews.

During the survey ASTI was visited several times and questionnaire was conducted only with short term users of site (passengers), while the interviews were conducted with employee groups such as security personnel, management officers, retailers who are more familiar to the site and spend more time there due to their occupation.

### **3.3.1. Questionnaire**

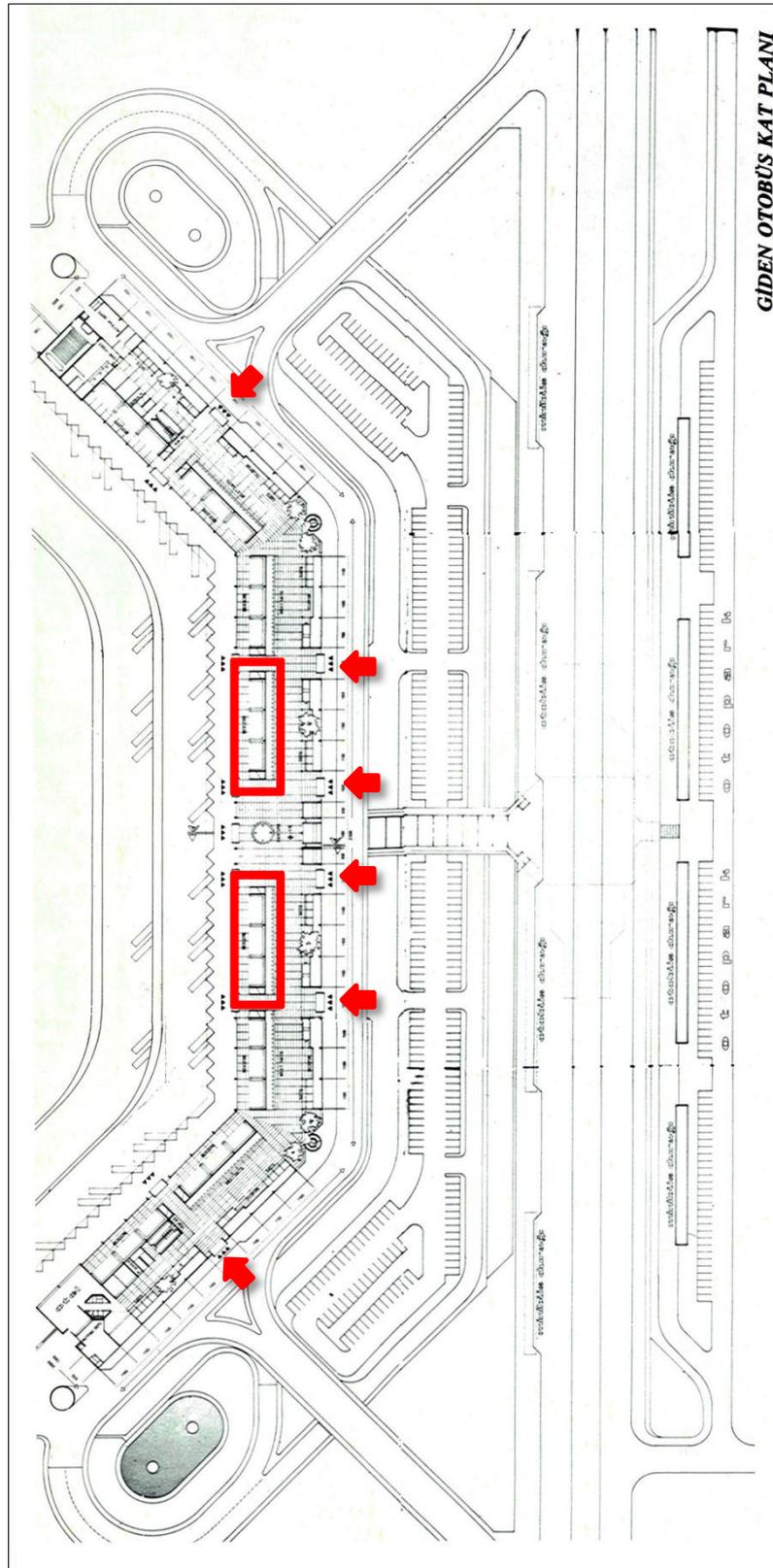
In order to investigate the research questions and hypotheses defined within the scope of the study; to figure out the relation between the socio-spatial features and the perception of publicness and whether different groups are affected differently or not, a questionnaire was used (see Appendix B: Table 1 – 2). The data collection through questionnaire enables to understand the perception of publicness and the relation between characteristics of user groups and the change in the perception of publicness in relation to same spatial feature. There were 20 questions in the questionnaire which can be categorized under four headings: questions on accessibility, on inclusiveness, on security and on facilities. The last question was about the overall perception of publicness of the site, whether users perceive the space as a public space or not and reasons for the answer to this question were also asked to the participants.

The questionnaire was held in total of four days on-site and questions were asked the participants by researcher who noted the answers on the questionnaire sheets prepared one for each participant. There are also questions about the demographic

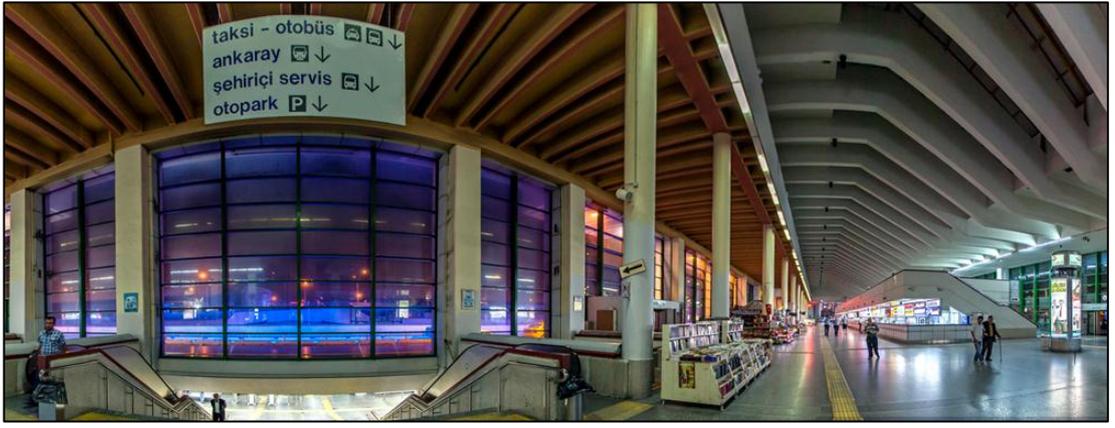
characteristics of the sample group. Age, gender, purpose of use and frequency of use were recorded at the beginning of the survey and the density of the site at the time of the questionnaire was also observed and noted. Questions were asked in Turkish (see Appendix B: Table 1 and 2 for the original and the English version).

The departures floor of ASTI was selected since people spend more time waiting for their bus rides. Therefore, the waiting hall near the gates of departing buses seemed to be appropriate for conducting the questionnaire (see Figure 11, Figure 12a-12b). In each visit, about 25 participants were asked to respond to the questions.

Convenience sampling was used and people waiting, sitting at the resting area which are illustrated in Figure 14, were asked whether they want to participate or not. They were assured that their personal information would be kept anonymous, name or address data were not collected. In general, people were enthusiastic about participation and no hostile attitudes detected.



**Figure 11: Plan of departures floor of ASTI depicting entrances and the area in which questionnaire is conducted**  
 (Source: <http://dergi.mo.org.tr/dergiler/4/535/7889.pdf>)



**Figure 12a-12b. Interior Panorama for ASTI Departures Floor**  
(Source: [http://www.asti.com.tr/yonet/pictures/9853\\_3.jpg](http://www.asti.com.tr/yonet/pictures/9853_3.jpg),  
[http://www.asti.com.tr/yonet/pictures/1346\\_4.jpg](http://www.asti.com.tr/yonet/pictures/1346_4.jpg))

### 3.3.2. Interviews

Interviews aimed to grasp the general atmosphere of the site. In order to develop the general understanding and familiarity to the site, complementary knowledge on site was gathered through semi-structured interviews with employees working in ASTI building on a daily basis. Interviews vary in the time scale between 5-10 minutes. Retailers, security personnel and employees of the bus firms located at the terminal building were chosen for this purpose and convenience sampling were used (see Figure 13 for the site of interviews). Interviewees are given keywords and requested to comment on them. Their opinions in general and their knowledge about the site

were noted without asking direct questions on the publicness level. Opinions that arose from the questionnaire were also used, to understand the view of the employees on some topics.



**Figure 13: The Atrium and Mezzanine of the Departures Floor depicting security cameras**  
(Source: [http://www.ankara.bel.tr/files/2013/7542/9967/guvenlik\\_02082013\\_1.jpg](http://www.ankara.bel.tr/files/2013/7542/9967/guvenlik_02082013_1.jpg))

Interviews bring up two main points to be focused about publicness. First one is the security and the perception of a secure space that is achieved through developed surveillance systems. Second one is the homeless people living in the building.

The issue of security (both employees who are spending more time on site and passengers) was mentioned. Users of ASTI building tend to feel insecure because of other users. A participant particularly mentioned: “I feel safe in the building and

perceive the building as a solid and stable building but I feel insecure due to other users, fear of thievery in particular”.

Management of ASTI preferred to make observable surveillance systems, so that this easily detectable system can act as a pre-emptive solution to possible crime committing. There are also security personnel. Scanning for luggage and entrances, security personnel located at gates and surveillance cameras and control center for surveillance tools are the indicators of security measures in the building (see Figure 14 and 15).



**Figure 14: Ankara Subway Entrance of ASTI Building showing people entering the building through the connecting tube and the X-Ray Machines and Security Personnel**  
(Source: [http://www.ankara.bel.tr/files/3713/7542/9971/guvenlik\\_02082013\\_DNR\\_6030.jpg](http://www.ankara.bel.tr/files/3713/7542/9971/guvenlik_02082013_DNR_6030.jpg))



**Figure 15: ASTI Security Control Room**

(Source: [http://www.ankara.bel.tr/files/8613/7542/9969/guvenlik\\_02082013\\_DNR\\_5992.jpg](http://www.ankara.bel.tr/files/8613/7542/9969/guvenlik_02082013_DNR_5992.jpg))

The second issue that interviewees mentioned frequently is the homeless people living in the building. ASTI terminal building is a large building with different publicness levels at different parts of the building. For instance the mezzanine floor of the departures level has seating areas which can be considered as semi-public due to its location, where homeless people settle for long periods of time (see Figure 16). It serves as a shelter for homeless people of Ankara, which makes the case interesting since “homelessness” is a distant term for the city of Ankara when it is compared to other capitals or metropolis of the western world. ASTI seems to be free of all those attempts. Seating areas are joined and can easily be used for sleeping purposes. Also semi-private, less crowded parts are available within the building, suitable for homeless people to be used as a shelter (see Figure 16).



**Figure 16: Mezzanine of Departures Floor of ASTI**  
(Source: <http://www.ulastirmadunyasi.com/wp-content/uploads/2013/07/asti-ramazan.jpg>)

### **3.4. Analyses and Discussion of Findings**

Data obtained from the questionnaire is presented and processed to reach statistical results to test the hypotheses (see Appendix C for the statistical analyses). For all statistical analyses, SPSS Statistics 19 program was used.

#### **3.4.1. Data analysis and results**

The questionnaire was used for the collection of quantitative data. It was conducted in four different days in two weeks to see the difference at density levels. Balance between genders and between density levels of the area was considered in the data collection process.

The quantitative data was obtained through statistical analyses. For statistical analyses T-tests, ANOVA and correlations are used. In order to test the relation of

responses to the questions, varying with age ANOVA and varying with gender T-tests are conducted. The relations between responses to two different questions are studied with correlations and crosstabs. The relation between responses to each question and frequency of use and density are also examined by correlations.

Questionnaire involves positive or negative answers for each question asked. However, for some questions, participants responded as “I do not know” or “I have not realized”. In that case, those answers were noted. Only if “no answer” distribution differs dramatically between different groups in the sample, it was included in the analysis and otherwise such responses were disregarded.

To understand the characteristics of the user group, gender, age and the frequency of use were recorded. The density, the crowdedness of the area at the time of survey was also noted. For density of the site, the initial assumption was made that weekdays are less dense whereas weekends are denser, before the site visits. Gender is an important factor for this analysis so the numbers of female and male participants were kept equal. There are 106 participants in total, 50 of them are females where 56 of them are males (47.2% and 52.8% respectively). The same consideration is valid for the numbers of participants for dense and less dense days. Questionnaire was addressed to 48 participants in weekdays (low density) and 58 in weekends (high density) (45.3% and 54.7% respectively). Data also showed that frequent users are (61.3%) 65 users whereas less frequent users are 38.7%. Here, frequent users are defined as participants using the terminal at least once in every 3 months.

Distribution of age is another important factor to be focused on the relation of spatial features and perception of publicness. Variety in the perception of publicness according to age groups is an important question to focus on. The users of ASTI in the sample group were categorized into four groups regarding the age range. All participants were above 18 and only one participant was 70 years old. Majority of users -45 participants- are in the group of young adults –in the age range of 18 to 25 with a percentage of 42.5% in total (see Table 1 for the age distribution).

**Table 2: Age distribution of participants**

	Frequency	Percent
18-25	45	42,5
26-39	29	27,4
40-55	20	18,9
55+	12	11,3
Total	106	100,0

At this point, the case indicates the general characteristic of the population of ASTI; with 65.1% of users saying that they perceive ASTI as a public space (See Table 2). They also prefer surveillance and they find surveillance cameras necessary when frequencies are taken into account. As the correlation between necessity of surveillance cameras and density of space shows; people tend to become cautious about other users of the public space. As space gets crowded this cautions becomes visible and they want external intervention with surveillance systems. This attitude is also visible at the findings of questions: “Can anyone enter building?” and “Should anyone enter the building?”. Percentages showed majority of participants think anyone can enter the building of ASTI however again majority thinks they should not be able to (see Table 3 – 4). These questions about whether anyone enter the building

and should anyone enter building also parallel to the information obtained from the interviews especially on the issue of homeless people sheltered in ASTI.

Interviewees and comments from the open ended questions obtained during the questionnaire, show that participants perceive the building as a public space but cautious about the other users of the building; especially about some specific groups such as homeless people.

**Table 3: Frequencies for the overall perception of publicness: Do you perceive this building/this area as a public space?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I_DO	69	65,1	65,1	65,1
	I_DO_NOT	31	29,2	29,2	94,3
	NO ANSWER	6	5,7	5,7	100,0
	Total	106	100,0	100,0	

**Table 4: Frequencies for question: Do you think anyone can enter the building?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I_DO	102	96,2	96,2	96,2
	I_DO_NOT	4	3,8	3,8	100,0
	Total	106	100,0	100,0	

Correlations were used for the questions related with security, with inclusiveness, with facilities and lastly with accessibility, orientation and wayfinding. There are two crucial questions for the perception of publicness, which are Q3 “Do you think the

*building is secure?*” and Q20 *“Do you perceive this building/this area as a public space?”* These two questions were tested against all other questions.

The questionnaire has four questions involving security. These questions are about overall feeling of security, surveillance cameras and security personnel. *“Question 2: Do you think the building is secure?”* and others are correlated accordingly. Answers to this question are correlated negatively with *“Do you think anyone can enter the building?”* ( $r = -0.21$ ,  $df = 101$ ,  $p = 0.034$ ) (see Appendix C-1 Table 1) and positively with *“Should anyone enter the building?”* ( $r = 0.21$ ,  $df = 101$ ,  $p = 0.031$ ) (see Appendix C-1 Table 2). This indicates that people think anyone can enter the building but this cause their perception of the building security to decrease. Similarly people think that anyone should not enter the building and this has direct relation to the perception of security in the building. The issues of accessibility and security are correlated regarding this data. Q2 is also positively correlated with *“Do you think restrooms and baby-care facilities are sufficient?”* ( $r = 0.20$ ,  $df = 104$ ,  $p = 0.036$ ) (see Appendix C-1 Table 3). This means that people tend to find restrooms and baby-care facilities sufficient as they think the building is secure, with direct relation.

The perception of publicness was asked by Q20 *“Do you perceive this building/this area as a public space?”* which is providing the critical data for relation between particular spatial features and perception of publicness. Data analysis show perception of publicness is positively correlated with questions *“Do you find commercial use in the building sufficient?”* ( $r = 0.24$ ,  $df = 104$ ,  $p = 0.014$ ) (see Appendix C-1 Table 4), *“Do you think anyone can enter the building?”* ( $r = 0.20$ ,  $df = 104$ ,  $p = 0.042$ ) (see Appendix C-1 Table 5) and *“Do you think usage of visual*

*and artistic elements are sufficient?*” ( $r = 0.21$ ,  $df = 104$ ,  $p = 0.029$ ) (see Appendix C-1 Table 6). This addresses to the relations between perception of publicness and inclusiveness and facilities that public spaces provide for users.

Németh and Schmidt (2007) claim that night-time usage is an important factor of perception of publicness. Study addresses this issue with the questions “*Can you use the building whenever you want?*” and “*Do you think lighting at night-time is sufficient?*” which are positively correlated ( $r = 0.68$ ,  $df = 104$ ,  $p < 0.001$ ) (see Appendix C-1 Table 7). Therefore the sufficiency of lighting at nighttime directly cause peoples pattern of usage, time wise.

Another topic is accessibility where the questions “*Can you access the building with ease?*” and “*Can you access all parts of the building with ease?*” are to be investigated. Responses to these two questions were positively correlated with each other ( $r = 0.21$ ,  $df = 104$ ,  $p = 0.030$ ) (see Appendix C-1 Table 8). In addition to that entrance accessibility is also positively correlated with “*Can you find your way with ease?*” question ( $r = 0.21$ ,  $df = 104$ ,  $p = 0.030$ ) (see Appendix C-1 Table 9). This indicates that people tend to perceive wayfinding and orientation accessibility easier as they enter the building with ease.

Frequency of use is the segment which investigates whether familiarity is a factor to affect perception of publicness. According to results, frequency of use is negatively correlated with the questions “*Do you find commercial use in the building sufficient?*” ( $r = -0.20$ ,  $df = 104$ ,  $p = 0.045$ ) (see Appendix C-1 Table 10) and “*Do you think it is right to allow advertisements in building?*” ( $r = -0.25$ ,  $df = 84$ ,  $p =$

0.017) (see Appendix C-1 Table 11). Meaning that frequent users tend to find commercial users in the building insufficient and also as familiarity increases with frequency of use the users tend to become more sensitive about the usage of advertisements and think it is not right to allow them in the building.

Density is the external factor for which data is collected, as low density days and high density days of the ASTI building. This characteristic aims to answer whether it makes a difference on how users perceive publicness of the building as more people using it and as they need to share the place with more people. Negative correlations are shown for each question group and questions “*Do you realize any restricted areas?*” ( $r = -0.28$ ,  $df = 104$ ,  $p = 0.005$ ) (see Appendix C-1 Table 12), “*Can you find your way easily in the building?*” ( $r = -0.20$ ,  $df = 104$ ,  $p = 0.042$ ) (see Appendix C-1 Table 13), “*Do you think surveillance cameras are necessary?*” ( $r = -0.24$ ,  $df = 98$ ,  $p = 0.016$ ) (see Appendix C-1 Table 14) and positive correlation is given for “*Do you think surveillance cameras are sufficient?*” ( $r = 0.23$ ,  $df = 90$ ,  $p = 0.025$ ) (see Appendix C-1 Table 15 is correlated with density of the place at the time of questionnaire). This means that as the space becomes crowded people tend to become more sensitive about the surroundings and the awareness of the environment tends to increase. As density of space increases people start to find wayfinding difficult, they think some surveillance systems are not sufficient and they become aware of any restricted areas.

Entrance accessibility of the terminal building is positively correlated with questions “*Do you think usage of artistic and visual elements are sufficient?*” ( $r = 0.20$ ,  $df = 104$ ,  $p = 0.039$ ) (see Appendix C-1 Table 16) and “*Do you think it is right to use*

*advertisements in the building?*” ( $r = 0.26$ ,  $df = 104$ ,  $p = 0.008$ ) (see Appendix C-1 Table 17) and this indicated the relation between accessibility and usage of elements such as advertisements or visual enhancement elements such as sculptures.

T-test for Independent Samples is conducted in order to see whether there is a significant difference between male and female participants regarding questionnaire points. Results show that female and male participants have significant difference regarding the questions on security such as “*Do you think surveillance cameras are necessary?*” ( $t = 2.18$ ,  $df = 104$ , two-tailed,  $p = 0.031$ ) ( $M_{\text{Female}} = 1.26$ ,  $SD_{\text{Female}} = 0.664$ ) ( $M_{\text{Male}} = 1.05$ ,  $SD_{\text{Male}} = 0.227$ ) (see Appendix C-2 Table 1), “*Do you think surveillance cameras are sufficient?*” ( $t = 2.53$ ,  $df = 104$ , two-tailed,  $p = 0.013$ ) ( $M_{\text{Female}} = 1.90$ ,  $SD_{\text{Female}} = 0.763$ ) ( $M_{\text{Male}} = 1.57$ ,  $SD_{\text{Male}} = 0.568$ ) (see Appendix C-2 Table 2), “*Do you think security personnel are sufficient?*” ( $t = 2.63$ ,  $df = 104$ , two-tailed,  $p = 0.010$ ) ( $M_{\text{Female}} = 2.10$ ,  $SD_{\text{Female}} = 0.463$ ) ( $M_{\text{Male}} = 1.86$ ,  $SD_{\text{Male}} = 0.483$ ) (see Appendix C-2 Table 3) and “*Do you think usage of visual and artistic elements are sufficient?*” ( $t = 2.45$ ,  $df = 104$ , two-tailed,  $p = 0.016$ ) ( $M_{\text{Female}} = 2.30$ ,  $SD_{\text{Female}} = 0.763$ ) ( $M_{\text{Male}} = 1.93$ ,  $SD_{\text{Male}} = 0.724$ ) (see Appendix C-2 Table 4).

Gender difference exists for questions on the facilities also which are “*Can you use the building whenever you want? (daytime/night)*” ( $t = 2.98$ ,  $df = 102$ , two-tailed,  $p = 0.004$ ) ( $M_{\text{Female}} = 1.40$ ,  $SD_{\text{Female}} = 0.495$ ) ( $M_{\text{Male}} = 1.15$ ,  $SD_{\text{Male}} = 0.359$ ) (see Appendix C-2 Table 5) and “*Do you think restrooms are sufficient?*” ( $t = 2.54$ ,  $df = 81$ , two-tailed,  $p = 0.013$ ) ( $M_{\text{Female}} = 1.82$ ,  $SD_{\text{Female}} = 0.389$ ) ( $M_{\text{Male}} = 1.57$ ,  $SD_{\text{Male}} = 0.501$ ) (see Appendix C-2 Table 6) as t-test for independent variables addresses.

Female users are more sensitive about the security and surveillance, they think surveillance cameras are necessary and they do not think surveillance personnel and

surveillance cameras are sufficient, when compared to male users' responses. Parallel to that female users do not think facilities like restrooms are sufficient compared to male users. Open-ended question responses in the questionnaire from male users also supported this, as male users commonly declared that they prefer not to use restrooms in general. However, female users especially mothers with toddlers, declare during open-ended questions, they do not find the baby care stations and restrooms easy-to-use and clean enough. Also they think the number of available restrooms in the floor is insufficient.

At the final part of data analysis, age is the parameter to be looked and age values of participants are grouped into four groups (see Table 1). These grouped age values are used in the Analysis of Variance Test (ANOVA) in order to bring out how age groups response to differences in socio-spatial features and spatial organization of public spaces. One way ANOVA results show that different age groups tend to think and perceive differently about inclusiveness and overall feel of security of space. This significant difference among age groups on the security and inclusiveness can be observed with the cross-tabulations (see Table 5 – 6).

**Table 5: Frequencies for question: Should anyone enter the building?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	THEY_SHOULD	42	39,6	39,6	39,6
	THEY_SHOULD_NOT	64	60,4	60,4	100,0
	Total	106	100,0	100,0	

**Table 6: Cross-tabulation for age group and answers to question  
Do you think the building is secure?**

		Do you think the building is secure?			Total
		SECURE	NOT_SECURE	NO ANSWER	
Age group	18-25	13	31	1	45
	26-39	10	19	0	29
	40-55	12	7	1	20
	55+	7	4	1	12
Total		42	61	3	106

**Table 7: Cross-tabulation for age group and question  
Do you think anyone can enter the building?**

		Do you think anyone can enter the building?		Total
		I_DO	I_DO_NOT	
Age group	18-25	45	0	45
	26-39	29	0	29
	40-55	17	3	20
	55+	11	1	12
Total		102	4	106

One-way ANOVA is used and results show that there is significant difference between age groups in seven different points of the questionnaire (see Appendix C-3). “Do you find commercial use in the building sufficient?” (F = 3.784, p = 0.13) (see Appendix C-3 Table 1), “Do you think anyone can enter the building?” (F = 3.750, p = 0.13) (see Appendix C-3 Table 2) and “Do you think it is right to allow advertisements in building?” (F = 4.036, p = 0.009) (see Appendix C-3 Table 3) are the questions which are about the security and inclusiveness and visual elements affecting perception of the space age groups are behaving significantly different while answering, “Do you think restrooms are sufficient?” (F = 3.212, p = 0.026) (see Appendix C-3 Table 4), “Do you find seating and resting areas sufficient?” (F =

3.694,  $p = 0.014$ ) (see Appendix C-3 Table 5), “Do you think the building is secure?” ( $F = 3.196$ ,  $p = 0.027$ ) (see Appendix C-3 Table 6) and “Do you think usage of visual and artistic elements are sufficient?” ( $F = 6.145$ ,  $p = 0.01$ ) (see Appendix C-3 Table 7) are also the questions which the age groups show significant difference. Statistical data shows that as age increase, users tend to expect more from the public space especially regarding the facilities of the space; such as restrooms, resting areas, visual enhancement and artistic elements.

ANOVA shows age groups tend to act differently while perceiving sufficiency of facilities of public space (see Appendix C-3 Table 1 – 4 – 5). Age groups behave differently on commercial area of public space, sufficiency of restrooms and baby-care areas and sufficiency of seating and resting areas. These differences are also suitable to the expected results as older age groups tend to expect more from facilities of public spaces. Availability of facilities becomes important to older age groups while many participants of the questionnaire from younger age groups added they are not usually using the restrooms or seating areas, at the commentary part (see Table 7 – 8 – 9).

**Table 8: Cross-tabulation for age group and question  
Do you find commercial use in the building sufficient?**

	Do you find commercial use in the building sufficient?			Total
	SUFFICIENT	NOT_SUFFICIENT	3	
Age group 18-25	27	16	2	45
26-39	17	9	3	29
40-55	7	9	4	20
55+	4	3	5	12
Total	55	37	14	106

**Table 9: Cross-tabulation for age group and question  
Do you think restrooms are sufficient?**

	Do you think restrooms are sufficient?			Total
	SUFFICIENT	NOT_SUFFICIENT	3	
Age group 18-25	9	22	14	45
26-39	8	17	4	29
40-55	2	14	4	20
55+	7	4	1	12
Total	26	57	23	106

**Table 10: Cross-tabulation for age group and question  
Do you find seating and resting areas sufficient?**

	Do you find seating and resting areas sufficient?			Total
	SUFFICIENT	NOT_SUFFICIENT	3	
Age group 18-25	11	33	1	45
26-39	13	16	0	29
40-55	8	10	2	20
55+	9	3	0	12
Total	41	62	3	106

**Table 11: Cross-tabulation for age group and question  
Do you think usage of visual and artistic elements are sufficient?**

	Do you think usage of visual and artistic elements are sufficient?			Total
	SUFFICIENT	NOT_SUFFICIENT	NO_ANSWER	
Age group 18-25	11	21	13	45
26-39	7	11	11	29
40-55	1	12	7	20
55+	6	0	6	12
Total	25	44	37	106

**Table 12: Cross-tabulation for age group and question  
Do you think it is right to allow advertisements in building?**

	Do you think it is right to allow advertisements in building?			Total
	I_DO	I_DO_NOT	NO_ANSWER	
Age group 18-25	32	9	4	45
26-39	18	5	6	29
40-55	5	9	6	20
55+	6	2	4	12
Total	61	25	20	106

The components came out as significantly correlated with the overall perception of publicness; such as sufficiency of the commercial use and retail stores, opinion of who can enter the building and lastly related to the sufficiency of usage of visual enhancements and artistic elements -such as sculptures, exhibitions and interactive media artworks presented within the public space- are all significantly differing with age parameter as ANOVA results show, with the addition of the opinion on the usage of advertisements within public space (see Tables 10 – 11).

The final component is the gender differences of the user groups as a characteristic and T-test for independent variables shows that statistically gender groups acts differently with their opinion on surveillance cameras, security personnel and the time they are able to use the building, whether they are able to use the building whenever they want or not (both at nighttime and daytime).

### **3.4.2. Discussion**

At the end of field survey after the completion of questionnaire and interviews, the relevant data are collected and processed. The results are to be discussed with respect

to the findings from literature, whether they are close to expected or not with possible reasons for the obtained results.

Starting with questionnaire the findings provide four main branches of information. First branch is the gender differences and perception of publicness relations, second branch is the frequency of use distinctions pointing to the familiarity factor and the relation of it to the perception of publicness, third one is on the age groups and its effect on perception of publicness and finally fourth is the density of the public space and its effect on the perception of publicness of the users at that time. The questionnaire results shows the interrelations of the particular issues with the correlations of particular questions taken and processed two by two, during statistical analysis part. With this method of analysis each particular socio-spatial feature and its role on the overall perception of publicness of the participants of the questionnaire is captured.

Interrelations of the questions show that perception of security is related with the opinion of who can and who should enter the building together with the availability of the facilities such as restrooms and baby care stations. These significant findings are parallel to the assumptions of Németh and Schmidt (2007).

The perception of publicness in general is related to the sufficiency of the commercial use and retail stores, opinion of who can enter the building and lastly related to the sufficiency of usage of visual enhancements and artistic elements such as sculptures, periodic exhibitions and so on. Findings in the field survey addresses

to the relations between perception of publicness and inclusiveness and facilities that public spaces offer for users.

Accessibility segment of the questionnaire shows the entrance accessibility referring to the ease at accessing the building from outermost surroundings and orientation accessibility referring to the ease at accessing all innermost parts of the building is related with each other. People tend to perceive if they can enter the building with ease they can also access any part of the interiors of the building with ease and the same is valid for the opposite with this correlation. Orientation accessibility appears to be correlated with the usage of visual enhancements and artistic elements, the usage of advertisements within building and how easily people can find their way within the building. This correlation makes sense since users are creating abstract connections with the available visual elements and their cognitive map for the space. At this point although perception of publicness and the usage of advertisements expected to have a negative relation, findings shows that particularly for orientation accessibility it is possible that people use these units of advertising as a supporting system of signage and use as a way-finding tool.

Night-time usage is an important factor of perception of publicness and 24 hours constant lighting is an important factor of the nighttime usage (Németh and Schmidt, 2007). The findings of the questionnaire are supporting the argument from literature that nighttime usage and sufficiency of lighting at night correlated. Nighttime usage is found significantly different for male and female users of the building. These differences are important as they give hints about the general perception and gender roles in public also reflected to the perception of publicness. Genders act differently

on facilities as female participants' awareness is relatively higher when compared to male participants' and results are significantly different on the sufficiency of artistic and visual enhancement elements and the availability of restrooms and baby care stations.

The correlations mentioned above are the findings which can be compared and commented on their relation to the existing literature of publicness, where the following part draws attention to the relation of perception of publicness and the spatial features with a specific focus on to the user group differences.

Frequency of use as a characteristic for user group is one of these components. Bi-varied correlations show that sufficiency of commercial areas and retail stores and the usage of advertisements in the building are related to frequency of use. Frequent users tend to use more of the commercial facilities and the relation is expected, due to familiarity affects the perception and the use of space, for this case, commercial facilities comes up as the dominating utilities.

The density of the space at the time of questionnaire correlates with rather scattered topics of questions than others and relatively un-expected when compared to other components. Density is an external factor but it can also have influence on the decisions of users and their perception of publicness, as the questionnaire takes place on-site and the time of visit differs. The conditions and perception of users can be affected by the density. Correlations show as crowdedness of space increases people's tendency to observe the restricted areas also increases. Awareness of restricted areas is an important factor which is affecting the perception of publicness

(Németh and Schmidt, 2007; Németh, 2009). Way-finding is also correlated to the density of space as space gets crowded people tend to have difficulty in way-finding in comparison with less dense periods of time. The last spatial element that is correlated with the density of space is the existence of surveillance cameras; in terms of both sufficiency and necessity. Sufficiency of surveillance cameras has a negative correlation with the density of space; as place becomes crowded people tend to find surveillance cameras insufficient.

One important outcome of the study is the issue of homeless people living in public spaces. ASTI is the example for the public space in this study and the comments from the open ended questions of the questionnaire and responses to the interview underlined this conflict. According to the questionnaire results, people perceive that anyone can enter and stay as long as they want at the building since it is a “public space” especially referring to the homeless people; on the contrary, many of them find this situation inappropriate and claim that there should be rules for people to obey while entering and using the building. According to interviewees’ opinion, no one could be able to use the building as they want. In the literature, homeless people are regarded as indicators of publicness of many public spaces and defined as the ideal highest possible level of publicness as homeless people feel like their living in their own living spaces however this can cause disturbance for other users as they can feel insecure by the presence of homeless people as they perceive them (Németh, 2012). Similar contradictions appear in ASTI, as a public space.

Users tend to perceive these people as beggars instead of seeing them as solely homeless people. Users tend to complain about the fact that management or security

personnel “do nothing” about the situation. This incident of homeless people locating in ASTI building and security personnel not involving in this invasion makes the case, the perception of publicness more interesting.

This recent issue of “homeless” people of Ankara living in ASTI appeared to be at the agenda of the Parliament also. In 2010, The Grand National Assembly of Turkey (*TBMM – Türkiye Büyük Millet Meclisi*) Human Rights Inquiry Committee (*İnsan Hakları İnceleme Komisyonu*) prepared an inquiry report in response to the application by a homeless person from ASTI. According to the declaration, homeless people in ASTI face battery and harassment (*TBMM İnsan Hakları İnceleme Komisyonu*, 2010). However, when compared to other countries trying to find a solution to homelessness and to keep homeless people away from public spaces with design tools and spatial implementations; such as seating units with partitions or inclined surfaces to prevent homeless sleeping on the seating area; referred as ‘sadistic’ street furniture by Davis (1998 as cited in Van Melik et al., 2007), these efforts look quite soft. According to the report of Human Rights Inquiry Committee, security personnel of ASTI are tolerant to homeless people as well as the physical configuration and the design of the site themselves. However, the key conflict lies in the relation among homeless people themselves most of the time and their arguments and sometimes battery cause other users of ASTI disturbed. This situation makes homeless people in ASTI more alienated as observed by the committee (*TBMM İnsan Hakları İnceleme Komisyonu*, 2010). The field study and analyses results as discussed draw attention to publicness and related topics such as homeless people and bring perspective from the users’ point of view.

## **CHAPTER IV**

### **CONCLUSION**

Public space is a notion with multiple dimensions and multiple definitions. Its contribution to everyday life of citizens and city life is more than its physical being as a void at the center of the city. Management, ownership and user components as Németh and Schmidt (2007) defined are important parts to be investigated.

The user component is the core of this study which aims to understand how publicness is perceived by users of public spaces since they are keys to the assessment of publicness. Public spaces, the direct relation between socio-spatial features constituting them and the perception of publicness are widely addressed in literature (Staeheli & Mitchell, 2007).

The previous models developed in order to measure and assess levels of publicness are acted as guides for this study and the index developed by Németh and Schmidt (2007; 2011) is adopted. ASTI intercity bus terminal was selected as the location of field survey and two major methods were used, questionnaire and short interviews.

Security, inclusiveness, accessibility-orientation and facilities were four main topics of the questions from questionnaire. Gender, age, frequency of use and the density of the space are the factors to be considered with respect to the research questions and hypotheses stated. This study aims at questioning the spatial nature of publicness and perception of publicness affected by it as indicated.

At the end of discussion part one important result is, user groups differ significantly for particular components of publicness and perception of publicness. However, when overall perception of publicness is taken into account the results do not come out changing significantly with the main characteristics of the user groups, defined at the beginning of the research; such as age, gender, frequency of use and density of space at the time of use.

Statistical tests show that none of these characteristics of user groups has direct relation to the overall perception of publicness. However, for particular components of publicness they seemed to be important and affected user groups differently. Facilities, accessibility-orientation, inclusiveness and security were found to be important factors obtained with the correlations to the overall perception of publicness as expected.

Age, gender, frequency of use and users from different time segments with varying densities of space; these four components and how they affect the perception of publicness is the distinctive contribution of the study to the field. Parallel to variety of user profile, the study provided information on the relation between socio-spatial features and perception of publicness and how their effects change according to the

differing demographic characteristics of user groups. Although none of the characteristics of user groups such as age, gender and frequency of use of the space appeared to have a direct effect on the overall perception of publicness; study showed the relation of each different characteristic to particular socio-spatial features grouped previously; focusing on security, inclusiveness, accessibility-orientation and facilities. Effects of socio-spatial features involving the facilities -such as availability of seating areas or restrooms- change with age group of users and frequency of use of the space by user. While socio-spatial features focusing on the security in addition to the ones involving the facilities, shows difference as gender of user differs. Socio-spatial features involving accessibility of the physical space together with the ones focusing on the security appeared to be changing due to the density of the space at the time of use of public spaces.

As to the limitations of the study, questionnaire covers limited personal information to find out difference among user groups. More detailed information about the sample group would be more informative on the differing role of socio-spatial features on perception of publicness for different user groups.

This study fits in the literature with its properties to focus on user perspective and socio-spatial features particularly, to a place where no previous studies held in a transit space as a public space. For future implication of the study development can be possible with the introduction of new methods to cooperate. Especially the introduction of the methods to analyze the spatial configuration of the space with more in-depth tools, will be crucial part to strengthen the initial structure of the relation for public spaces, its spatial structure and perception of publicness for users.

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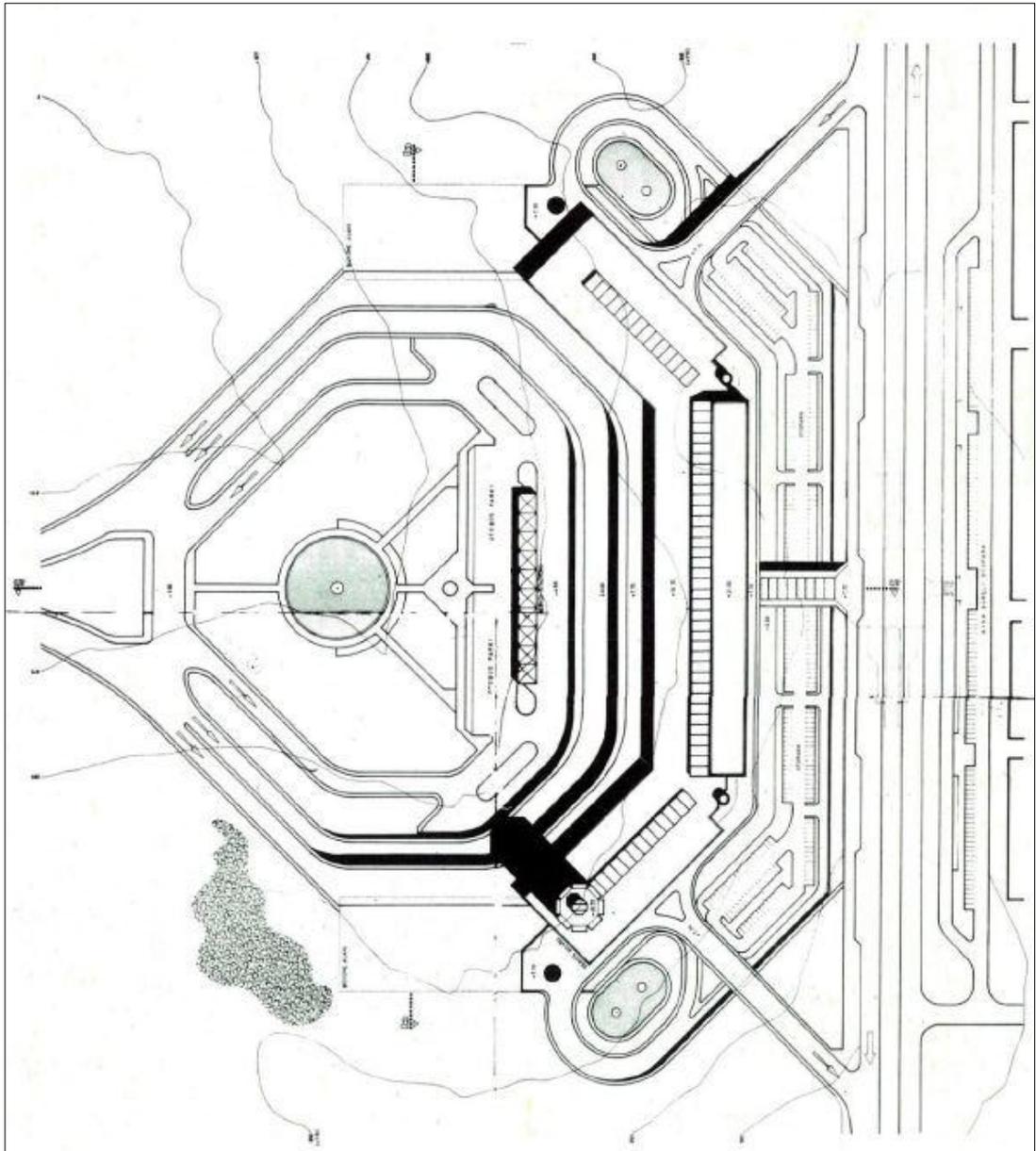
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## **APPENDICES**

## APPENDIX A



**Figure 1: ASTI Site Plan**  
(Source: <http://dergi.mo.org.tr/dergiler/4/535/7889.pdf>)



**Figure 2: ASTI Terminal Complex Aerial View**  
(Source: <http://www.1yenimesajinizvar.com/wp-content/uploads/2012/10/kusbakisi-asti.jpg>)



**Figure 3: ASTI Model of building and surroundings; depicting traffic connections for passengers, car-parking areas and the connection tube to the subway system *Ankara***  
(Source: <http://dergi.mo.org.tr/dergiler/4/535/7889.pdf>)



**Figure 4: Departures Floor in ASTI depicting atrium with cubicles for bus firms and mezzanine on the left**

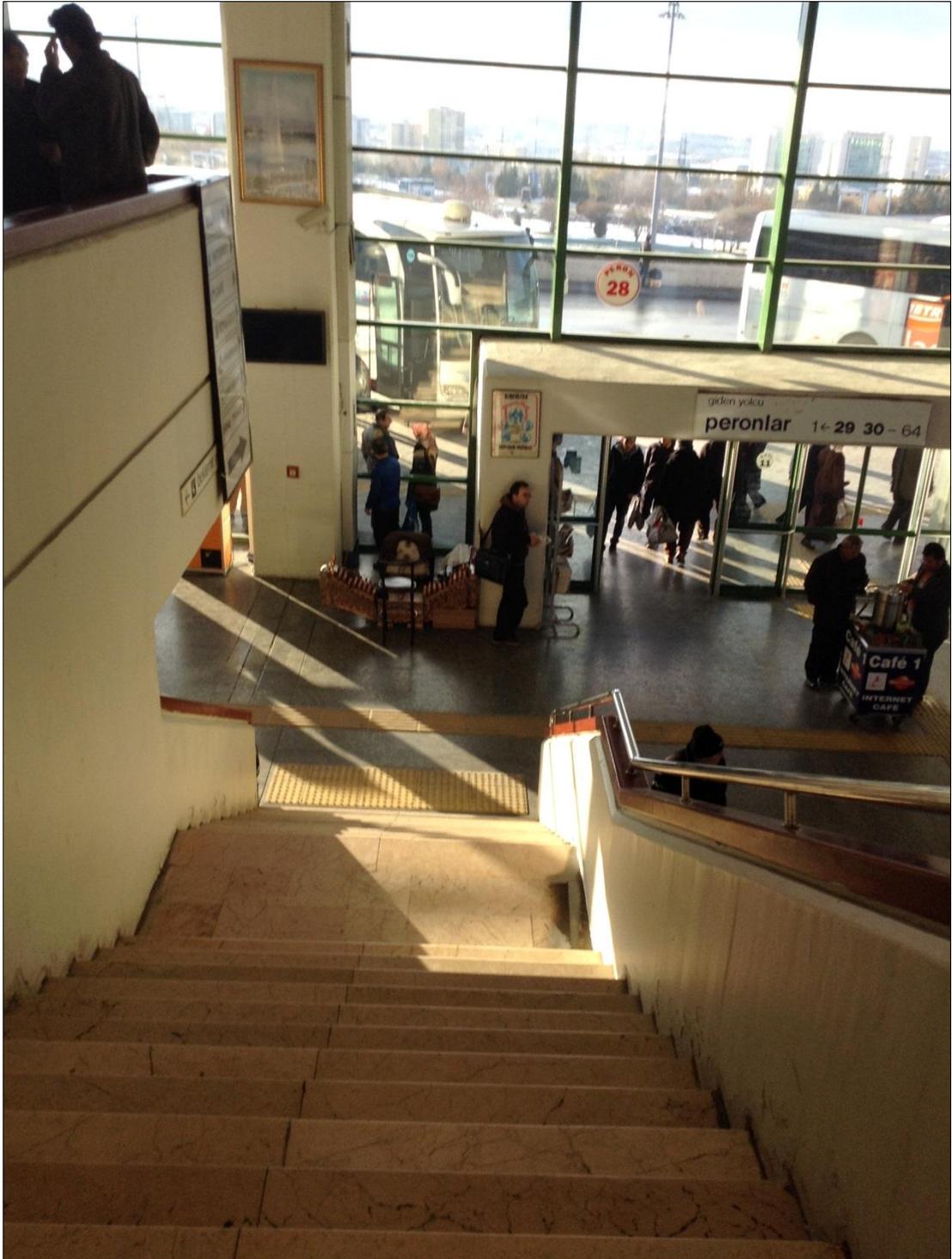
(Source: <http://www.ekominsaat.com/projegaleri/buyuk/20.jpg>)



**Figure 5: From the mezzanine, depicting patrolling security personnel and an entrance gate  
(Source: Personal Archive)**



**Figure 6: From the mezzanine, depicting information desk on the right  
(Source: Personal Archive)**



**Figure 7: From the mezzanine, depicting the departure floor gates to platforms where buses park**  
(Source: Personal Archive)

## APPENDIX B

Table 1: Sample Questionnaire Sheet

Katılıma No.	Kullanım Amacı	Yaş		Cinsiyet		Kullanım sıklığı			
		Erkek	Kadın	Yılda 1 veya daha az	Yılda 3-4	2 Ayda 1 kez	Ayda 1 veya daha sık		
	ASŞTİ binası ve çevresindeki kullanım alanlarını düşünererek, Bina içinde ticari alanlar (Yiyecek tüketim/satış alanları)								
	Bina güvenliği	Yeterli buluyorum, Neden:		Yeterli bulmuyorum, Neden:		Fikrim yok			
	Güvenlik kameraları	Gerekli buluyorum		Gerekli bulmuyorum					
	Güvenlik kameraları	Yeterli buluyorum		Yeterli bulmuyorum					
	Güvenlik Personeli	Yeterli buluyorum		Yeterli bulmuyorum					
	Kullanım saatleri	Her saatte kullanabiliyorum, Hangi saatlerde:		Her saatte kullanamıyorum, Hangi saatlerde:		Gece kullanımında Aydınlatma Yeterli <input type="checkbox"/> Yeterli bulmuyorum <input type="checkbox"/>			
	Kullanımı kısıtlı alanlar	Kullanımı kısıtlı alanlar var		Kullanımı kısıtlı alanlar yok		Hangi Alanlar:			
	Binaya herkes girebiliyor mu?	Binaya herkes girebiliyor		Binaya herkes giremiyor					
	Binaya herkes girebilmeli mi?	Binaya herkes girebilmeli		Binaya herkes girememeli, Örneğin:					
	Bina içinde Reklamların varlığı	Doğru buluyorum		Doğru bulmuyorum		Fikrim yok			
	Bina içinde dolaşım/yönlendirme	Yönümü rahatlıkla bulabiliyorum		Yönümü rahat bulamıyorum					
	Yönlendirme işaretleri/tafelaları	Yeterli buluyorum		Yeterli bulmuyorum					
	Tuvalet/Bebek Bakım odası gibi kullanımlar	Yeterli buluyorum		Yeterli bulmuyorum					
	Farklı oturma/dinlenme alanlarını	Yeterli buluyorum		Yeterli bulmuyorum					
	Görsel öğelerin Tablo/Heykel/ vs. kullanımını	Yeterli buluyorum		Yeterli bulmuyorum		Fikrim yok			
	Binaya erişim	Rahatlıkla erişim sağlayabiliyorum		Rahatlıkla erişim sağlayamıyorum					
	Bina içi erişim	Rahatlıkla erişim sağlayabiliyorum		Rahatlıkla erişim sağlayamıyorum					
	ASŞTİ Binası ve çevresini	Kamusal alan olarak algılıyorum		Kamusal alan olarak algılamıyorum		Nedeni:			

**Table 2: English version of sample questionnaire sheet**

No.	Question	I do	I do not	No answer	Additional Comments
1	Do you think regulations for usage of this space are clear?				
2	Do you think retail areas in the building are sufficient?				
3	Do you think building is secure?				
4	Do you think surveillance cameras are necessary?				
5	Do you think surveillance cameras are sufficient?				
6	Do you think security personnel are sufficient?				
7	Can you use the building whenever you want? (Daytime/night)				
8	Do you think lighting for night time is sufficient?				
9	Do you realize any restricted areas?				
10	Do you think anyone can enter the building?				
11	Should anyone enter the building?				
12	Do you think it is right to allow advertisements in building?				
13	Can you find your way easily in the building?				
14	Do you think wayfinding tools and signage are sufficient for the building?				
15	Do you think facilities such as restrooms/baby care are sufficient?				
16	Do you find seating and resting areas sufficient?				
17	Do you think usage of visual and artistic elements are sufficient?				
18	Can you access the building with ease?				
19	Can you access any parts of the building easily?				
20	Do you perceive this building/this area as a public space?				

## APPENDIX C-1

**Table 1: Correlation of questions: *Do you think the building is secure?* and *Do you think anyone can enter the building?***

		Do you think the building is secure?	Do you think anyone can enter the building?
Do you think the building is secure?	Pearson Correlation Sig. (2-tailed) N	1  103	-,209*  103
Do you think anyone can enter the building?	Pearson Correlation Sig. (2-tailed) N	-,209*  103	1  103

\*. Correlation is significant at the 0.05 level (2-tailed).

**Table 2: Correlation of questions: *Do you think the building is secure?* and *Should anyone enter the building?***

		Do you think the building is secure?	Should anyone enter the building?
Do you think the building is secure?	Pearson Correlation	1	,213 <sup>*</sup>
	Sig. (2-tailed)		,031
	N	103	103
Should anyone enter the building?	Pearson Correlation	,213 <sup>*</sup>	1
	Sig. (2-tailed)	,031	
	N	103	103

\*. Correlation is significant at the 0.05 level (2-tailed).

**Table 3: Correlation of questions: *Do you think the building is secure?* and *Do you think restrooms are sufficient?***

		Do you think the building is secure?	Do you think restrooms are sufficient?
Do you think the building is secure?	Pearson Correlation	1	,204 <sup>*</sup>
	Sig. (2-tailed)		,036
	N	106	106
Do you think restrooms are sufficient?	Pearson Correlation	,204 <sup>*</sup>	1
	Sig. (2-tailed)	,036	
	N	106	106

\*. Correlation is significant at the 0.05 level (2-tailed).

**Table 4: Correlation of questions: *Do you perceive this building/this area as a public space?* and *Do you find commercial use in the building sufficient?***

		Do you perceive this building/this area as a public space?	Do you find commercial use in the building sufficient?
Do you perceive this building/this area as a public space?	Pearson Correlation Sig. (2-tailed) N	1  106	,238*  106 <b>,014</b>
Do you find commercial use in the building sufficient?	Pearson Correlation Sig. (2-tailed) N	,238*  106	1  106 <b>,014</b>

\*. Correlation is significant at the 0.05 level (2-tailed).

**Table 5: Correlation of questions: *Do you perceive this building/this area as a public space?* and *Do you think anyone can enter the building?***

		Do you perceive this building/this area as a public space?	Do you think anyone can enter the building?
Do you perceive this building/this area as a public space?	Pearson Correlation Sig. (2-tailed) N	1  106	,198*  106 <b>,042</b>
Do you think anyone can enter the building?	Pearson Correlation Sig. (2-tailed) N	,198*  106	1  106 <b>,042</b>

\*. Correlation is significant at the 0.05 level (2-tailed).

**Table 6: Correlation of questions: *Do you perceive this building/this area as a public space?* and *Do you think usage of visual and artistic elements are sufficient?***

		Do you perceive this building/this area as a public space?	Do you think usage of visual and artistic elements are sufficient?
Do you perceive this building/this area as a public space?	Pearson Correlation Sig. (2-tailed) N	1  106	,212*  106
Do you think usage of visual and artistic elements are sufficient?	Pearson Correlation Sig. (2-tailed) N	,212*  106	1  106

\*. Correlation is significant at the 0.05 level (2-tailed).

**Table 7: Correlation of questions: *Can you use the building whenever you want? (daytime/night)* and *Do you think lighting for night time is sufficient?***

		Can you use the building whenever you want? (daytime/night)	Do you think lighting for night time is sufficient?
Can you use the building whenever you want? (daytime/night)	Pearson Correlation Sig. (2-tailed) N	1  106	,682**  106
Do you think lighting for night time is sufficient?	Pearson Correlation Sig. (2-tailed) N	,682**  106	1  106

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Table 8: Correlation of questions: *Can you access the building with ease?* and *Can you access any parts of the building easily?***

		Can you access the building with ease?	Can you access any parts of the building easily?
Can you access the building with ease?	Pearson Correlation Sig. (2-tailed) N	1  106	,211*  106 <b>,030</b>
Can you access any parts of the building easily?	Pearson Correlation Sig. (2-tailed) N	,211*  106 <b>,030</b>	1  106

\*. Correlation is significant at the 0.05 level (2-tailed).

**Table 9: Correlation of questions: *Can you access the building with ease?* and *Can you find your way easily in the building?***

		Can you access the building with ease?	Can you find your way easily in the building?
Can you access the building with ease?	Pearson Correlation Sig. (2-tailed) N	1  106	,211*  106 <b>,030</b>
Can you find your way easily in the building?	Pearson Correlation Sig. (2-tailed) N	,211*  106 <b>,030</b>	1  106

\*. Correlation is significant at the 0.05 level (2-tailed).

**Table 10: Correlation of frequency of use and question: *Do you find commercial use in the building sufficient?***

		Frequency of use	Do you find commercial use in the building sufficient?
Frequency of use	Pearson Correlation	1	-,195*
	Sig. (2-tailed)		,045
	N	106	106
Do you find commercial use in the building sufficient?	Pearson Correlation	-,195*	1
	Sig. (2-tailed)	,045	
	N	106	106

\*. Correlation is significant at the 0.05 level (2-tailed).

**Table 11: Correlation of frequency of use and question: *Do you think it is right to allow advertisements in building?***

		Frequency of use	Do you think it is right to allow advertisements in building?
Frequency of use	Pearson Correlation	1	-,256*
	Sig. (2-tailed)		,017
	N	86	86
Do you think it is right to allow advertisements in building?	Pearson Correlation	-,256*	1
	Sig. (2-tailed)	,017	
	N	86	86

\*. Correlation is significant at the 0.05 level (2-tailed).

**Table 12: Correlation of density and question: *Do you realize any restricted areas?***

		density	Do you realize any restricted areas?
density	Pearson Correlation	1	-,273**
	Sig. (2-tailed)		,005
	N	106	106
Do you realize any restricted areas?	Pearson Correlation	-,273**	1
	Sig. (2-tailed)	,005	
	N	106	106

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Table 13: Correlation of density and question: *Can you find your way easily in the building?***

		density	Can you find your way easily in the building?
density	Pearson Correlation	1	-,198*
	Sig. (2-tailed)		,042
	N	106	106
Can you find your way easily in the building?	Pearson Correlation	-,198*	1
	Sig. (2-tailed)	,042	
	N	106	106

\* . Correlation is significant at the 0.05 level (2-tailed).

**Table 14: Correlation of density and question: *Do you think surveillance cameras are necessary?***

		density	Do you think surveillance cameras are necessary?
density	Pearson Correlation	1	-,240 <sup>*</sup>
	Sig. (2-tailed)		,016
	N	100	100
Do you think surveillance cameras are necessary?	Pearson Correlation	-,240 <sup>*</sup>	1
	Sig. (2-tailed)	,016	
	N	100	100

\*. Correlation is significant at the 0.05 level (2-tailed).

**Table 15: Correlation of density and question: *Do you think surveillance cameras are sufficient?***

		density	Do you think surveillance cameras are sufficient?
density	Pearson Correlation	1	,233 <sup>*</sup>
	Sig. (2-tailed)		,025
	N	92	92
Do you think surveillance cameras are sufficient?	Pearson Correlation	,233 <sup>*</sup>	1
	Sig. (2-tailed)	,025	
	N	92	92

\*. Correlation is significant at the 0.05 level (2-tailed).

**Table 16: Correlation of questions *Can you access the building with ease?* and *Do you think usage of visual and artistic elements are sufficient?***

		Can you access the building with ease?	Do you think usage of visual and artistic elements are sufficient?
Can you access the building with ease?	Pearson Correlation Sig. (2-tailed) N	1  106	,201*  106
Do you think usage of visual and artistic elements are sufficient?	Pearson Correlation Sig. (2-tailed) N	,201*  106	1  106

\*. Correlation is significant at the 0.05 level (2-tailed).

**Table 17: Correlation of questions *Can you access the building with ease?* and *Do you think it is right to allow advertisements in building?***

		Can you access the building with ease?	
Can you access the building with ease?	Pearson Correlation Sig. (2-tailed) N	1  106	,257**  106
Do you think it is right to allow advertisements in building?	Pearson Correlation Sig. (2-tailed) N	,257**  106	1  106

\*\* . Correlation is significant at the 0.01 level (2-tailed).

## APPENDIX C-2

**Table 1: Independent Samples T-test for question *Do you think surveillance cameras are necessary?***

	gender	N	Mean	Std. Deviation	Std. Error Mean
Do you think surveillance cameras are necessary?	FEMALE	50	1,26	,664	,094
	MALE	56	1,05	,227	,030

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Do you think surveillance cameras are necessary?	Equal variances assumed	23,660	,000	2,188	104	<b>,031</b>	,206	,094	,019	,394
	Equal variances not assumed			2,091	59,197	,041	,206	,099	,009	,404

**Table 2: Independent Samples T-test for question *Do you think surveillance cameras are sufficient?***

	gender	N	Mean	Std. Deviation	Std. Error Mean
Do you think surveillance cameras are sufficient?	FEMALE	50	1,90	,763	,108
	MALE	56	1,57	,568	,076

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Do you think surveillance cameras are sufficient?	Equal variances assumed	1,553	,216	2,533	104	,013	,329	,130	,071	,586
	Equal variances not assumed			2,492	89,861	,015	,329	,132	,067	,591

**Table 3: Independent Samples T-test for question *Do you think security personnel are sufficient?***

	gender	N	Mean	Std. Deviation	Std. Error Mean
Do you think security personnel are sufficient?	FEMALE	50	2,10	,463	,065
	MALE	56	1,86	,483	,065

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Do you think security personnel are sufficient?	Equal variances assumed	,507	,478	2,634	104	,010	,243	,092	,060	,426
	Equal variances not assumed			2,640	103,479	,010	,243	,092	,060	,425

**Table 4: Independent Samples T-test for question *Do you think usage of visual and artistic elements are sufficient?***

	gender	N	Mean	Std. Deviation	Std. Error Mean
Do you think usage of visual and artistic elements are sufficient?	FEMALE	50	2,30	,763	,108
	MALE	56	1,95	,724	,097

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Do you think usage of visual and artistic elements are sufficient?	Equal variances assumed	2,572	,112	2,447	104	,016	,354	,144	,067	,640
	Equal variances not assumed			2,440	101,209	,016	,354	,145	,066	,641

**Table 5: Independent Samples T-test for question *Can you use the building whenever you want? (daytime/night)***

	gender	N	Mean	Std. Deviation	Std. Error Mean
Can you use the building whenever you want? (daytime/night)	FEMALE	50	1,40	,495	,070
	MALE	54	1,15	,359	,049

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Can you use the building whenever you want? (daytime/night)	Equal variances assumed	35,586	,000	2,988	102	,004	,252	,084	,085	,419
	Equal variances not assumed			2,952	88,817	,004	,252	,085	,082	,421

**Table 6: Independent Samples T-test for question *Do you think restrooms are sufficient?***

	gender	N	Mean	Std. Deviation	Std. Error Mean
Do you think restrooms are sufficient?	FEMALE	39	1,82	,389	,062
	MALE	44	1,57	,501	,076

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Do you think restrooms are sufficient?	Equal variances assumed	25,163	,000	2,539	81	,013	,252	,099	,055	,450
	Equal variances not assumed			2,578	79,663	,012	,252	,098	,058	,447

## APPENDIX C-3

**Table 1: ANOVA for age groups for question *Do you find commercial use in the building sufficient?***

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5,322	3	1,774	3,784	,013
Within Groups	47,819	102	,469		
Total	53,142	105			

**Table 2: ANOVA for age groups for question *Do you think anyone can enter the building?***

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,382	3	,127	3,750	,013
Within Groups	3,467	102	,034		
Total	3,849	105			

**Table 3: ANOVA for age groups for question *Do you think it is right to allow advertisements in building?***

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6,913	3	2,304	4,036	,009
Within Groups	58,229	102	,571		
Total	65,142	105			

**Table 4: ANOVA for age groups for question *Do you think restrooms are sufficient?***

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4,222	3	1,407	3,212	,026
Within Groups	44,693	102	,438		
Total	48,915	105			

**Table 5: ANOVA for age groups for question *Do you find seating and resting areas sufficient?***

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2,977	3	,992	3,694	,014
Within Groups	27,400	102	,269		
Total	30,377	105			

**Table 6: ANOVA for age groups for question *Do you think the building is secure?***

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2,196	3	,732	3,196	,027
Within Groups	22,677	99	,229		
Total	24,874	102			

**Table 7: ANOVA for age groups for question *Do you think usage of visual and artistic elements are sufficient?***

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3,522	3	1,174	6,145	,001
Within Groups	12,420	65	,191		
Total	15,942	68			