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Chapter 6

Urban Green Areas and Design Principles

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INTRODUCTION

The importance of cities has increased significantly over the centuries; however, the transition from rural life to urban civilization led both social and environmental impacts (Woolley, 2003). This situation has caused urban landscape to be in a constant state of change and transformation. Roger et al. (1999) described the important factors which influence the change of urban landscape by the following three factors (cited in Thompson, 2002):

- The technical revolution, focused on information technology and changed from global to local networks connecting people;
- The ecological threat, with its implications for the importance of sustainable development;
- The social transformation, with life patterns reflecting increasing life expectancy and new lifestyle choices.

The growth of urban populations and associated industrialization has resulted in a range of detrimental and often negative outcomes for mankind (Woolley, 2003). The environmental problems caused by the change of urban landscape are summarized as air and water pollution, waste materials, noise, the consumption of natural areas for urban development, deterioration in the quality of urban life and the decrease in the urban landscape (Woolley, 2003).

Urban green areas are highly valued by urban and landscape designers for their contribution to the quality of life in cities. In many aspects, nature plays a crucial role in everyday life of people. Natural environments fascinate human beings (Kaplan, 1983; Kaplan, 1977; Kaplan & Talbot, 1983). “Access to natural open spaces is a central value in modern society”. Moreover, urban green areas are associated with personal and social meanings. They provide a context for social interaction; serve as tangible reminders of childhood and memories of community life, and offer “gateways” or opportunities for people to escape for a while from the stress of urban life (Burgess et al., 1988).

At the preliminary stage of this interaction, urban green areas that are close to the city-dwellers come on the scene. Urban green areas provide affordances for urban people to become closer to nature and enable them to contact with nature, these areas provide the sense for exploring of human nature (Kaplan & Kaplan, 1978). Consequently, urban green areas are one of the most important urban components that change the urban silhouette and affect the physical and psychological quality of life of

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the city-dweller. Therefore, their formation and the values they include have been differentiated and renovated according to the changing needs of the society. These spatial changes in urban green areas affect the mission and functions of the cities and the urban silhouette. Thus, the answers to the questions of what the meanings and values assumed by the urban green areas are and how they will be designed are important.

Urban Green Areas

Industrial Revolution and the widespread urbanization in the 19th century resulted in the loss of natural areas from the cities and losing the place of nature in daily life. The need for allocating more spaces to natural areas in cities has begun to be supported by this change, and the concept of "urban green area" has emerged as an important element of the cities (Özgüner, 2003). The first definition of urban green areas was made by American landscape architect Frederick Law Olmsted who was affected by the public-open space movement in England by the Boston Park System that was formed in the 19th century. Olmsted defined the approach of introducing the nature that begins with Central and Prospect Parks in New York City as the "lungs of the city" (Francis et al., 1984). In particular, the open spaces that could not respond to the recreational needs of the people living in the community buildings that were created after the Second World War led to make mention of urban green areas. After this period, in the 1970s, urban open spaces came to the forefront with green space features and led to the comprehensive definition of urban green areas by creating the landscape framework of the cities.

Figure 1. Urban green areas

Today, urban green areas are the areas that contribute to people from physical and mental aspects, where recreational needs are met, the community identity is strengthened and which are developed and organized by being considered along with the structure masses. Urban green areas are an important indicator of the quality of life of a city, and the green spaces designed in urban spaces characterized by social and spatial differences have an important potential as an equalizer (Wright Wendel et al., 2012). With these features, green spaces are one of the most important components of the whole constituting the urban areas for the continuation of the urban quality of life and ecological and social sustainability. Because green areas' structure the people's welfare, provide ecosystem services (climate regulation, preventing environmental pollutants, regulating the surface flows), create appropriate places for a healthy life where neighbours meet and the spirit of being community is strengthened, and promote resting and thinking about the nature (Chiesura, 2004; Lee & Maheswaran, 2011; Carrus et al., 2015;. Urban green areas have been included in various typologies with

these comprehensive features they include. Green spaces can be classified in different ways according to usage patterns (active green spaces and passive green spaces), ecological function (historic gardens, greenbelts surrounding the city, agricultural areas and buffer greens)and recreational functions (parks, thematic parks and gardens, sports fields, playgrounds, natural and semi-natural areas, corridors) (Aydemir, 2004). This study includes the following typology which was developed by Dunnett, et al. (2002) and consisted of the combination of all classifications, and this typology is explained with examples in Table 1;

1. Recreational green areas: These kinds of green spaces are primarily designed for access to both visual comfort and recreational comfort. In particular, they consist of public places but also include private lands.

Figure 2. Recreational green areas

2. Functional green spaces: Some of these green spaces could be allocated for recreation and serve for city-dwellers for this purpose, however, their principal purpose is the function. The purpose of their use by the city-dwellers is the functions they have. Their basic functions include use for agriculture, horticulture, cemeteries, education and for other institutions.

3. Semi-natural green spaces: These kinds of green spaces consist of semi-natural living spaces. These living spaces are created by their transformation into new living spaces along with the improvement of the rural areas prior to being included in urban green areas and of the abandoned or degraded areas. All these habitats may or may not be accessible to the public, but they make a vital contribution to the urban landscape.

Table 1. Typology of urban green areas

MAIN TYPES OF GREEN AREAS			
ALL URBAN GREEN AREAS	Amenity green areas	**Recreation Green Area**	Parks and Gardens Informal Recreation Areas Outdoor Sports Areas Play Areas
		Incidental Green Area Space	Housing Green Space Other Incidental Space
		Private Green Area	Domestic Gardens
	Functional green area	**Productive Green Area**	Remnant Farmland City Farms Allotments
		Burial Grounds	Cemeteries Churchyards
		Institutional Grounds	School Grounds Other Institutional Grounds
	Semi-natural habitats	**Wetland**	Open/Running Water Marsh, Fen
		Woodland	Deciduous woodland Coniferous woodland Mixed woodland
		Other Habitats	Moor/Heath Grassland Disturbed Ground
	Linear Green Areas		River and Canal Banks Transport Corridors (road, rail, cycleways and walking routes) Other linear features (e.g. cliffs)

4. Linear green spaces: These green spaces are defined by their linear features; including rivers and streams as well as transportation routes (roads, railways). Although significant portions of linear green spaces are planned for the recreational purpose and nature conservation, some of them are also planned to include both features.

Urban green areas serve for common purposes although they are defined by different types. They provide users shadow physical comfort such as clean air and resting places, and formal or informal social interactions such as a combination of different social groups and traditions and opportunities regarding the cultural experience in urban areas (Lawton, 2007). Urban green areas are the places where community life is taken place. In these places celebrations takes place, children develop skills, seasons are recognized and the cultures are merged. In these places friends meet each other and the social and economic exchanges take place (Project for Public Space, 2000). These roles, played by urban green areas, provide various benefits to the life of city-dwellers and the also to sustainability of cities. These benefits are classified as:

- The benefits to mental (Grahn & Stigsdotter, 2010; Mackay and Neill, 2010;

Barton and Pretty, 2010) and physical health (De Vries and Verheij, 2003; Mackay and Neill, 2010)

- Economical benefits (Jim and Chen, 2006; Tajima, 2003)
- Social benefits (Dwyer et al., 1991; Jim & Chen, 2009; Kamierczak, 2013)
- Environmental benefits (Chiesura, 2004; Gidlöf-Gunnarsson and Öhrström, 2007; Niemelä, 2014).

Benefits of Urban Green Areas

Along with the ongoing urbanization movement, urban spaces are expanded without thinking the green space development, and rural lands are transformed into built up areas (Kabisch et al., 2015). Therefore, while urban green areas were recreative and symbolic places where people provide their food (Groening & Bulmahn, 1989) in the past, today they are considered as a way to ensure the individual's relation with the nature, to bring the natural life into the city and to make cities more livable. Urban green areas have been the most important components of the city that mean a lot as spaces where people have existed in every moment of life by transforming sometimes into landscapes which are just watched for the city-dwellers, sometimes into parks where the life is shared and people get rid of the stress of daily life, sometimes into shelter for children, and into playgrounds. This situation has made the benefits provided by urban green areas to city-dwellers an important issue, and the benefits provided by green areas have been explained by various classifications. Mostyn (1979) defined the benefits of being in nature for people as *emotional* (the comfort felt by being away from the city, opportunities to identify with the nature, the feeling of freedom, a peaceful shelter to compensate emotions, self-esteem and the sense of achievement), *intellectual* (investigating the nature, obtaining information about the vegetation cover and animal diversity, learning the local history and gaining new skills), *social* (better recognition of people, enjoying the team and community spirit, becoming more responsible citizens) and *physical* (it appeals to the senses, feeling energetic, a safe place to do exercises and play games) benefits (Özgüner, 2004; Kendle & Forbes 1997; Beer, 1990). Dunnett et al. (2002) defined the benefits of urban green areas as *social* (healthy life, education and socialization), *environmental* (contribution to biodiversity, contribution to landscape and cultural heritage, reduction noise level, improvement of the air quality and climate) and *economical* (attracting the inward investment, protecting the businesses, supporting tourism to create employment opportunities and increasing value of the surrounding property) benefits. Byrne & Sipe 2010) defined the benefits of urban green areas as *ecological* (protecting biodiversity and living spaces, regulating temperature, noise reduction and air filtration), *social* (improving the physiological and psychological health, contribution to child development, providing social interaction) and *economical* (promoting to tourism, contribution to the economy by lowering the temperature and reducing pollution) benefits. Within the scope of this study, the benefits of urban green areas for people are grouped as the following;

1. Health benefits

Urban green areas create a feeling of satisfaction in the individual along with escaping from the difficulties of the living environments and the active participation into nature by ensuring people working in a busy schedule to get rid of their daily fatigue and noise of the city. To touch, see, hear and smell the elements that constitute

the natural world can make people get rid of their thoughts, refresh people, and provide them with a sense of peace and calmness (Kaplan, 1983). Therefore, the presence of urban green areas is an important element for the quality of life of the city-dweller. They serve for their users as "*green sports facilities*" (Orr et al., 2014), and the activities they contain are grouped as free activity (walking, exercising in natural areas) and organized activity (more formal, regular physical activities, organized sports) (Wheater et al., 2007).

Along with their physical activity opportunities, urban green areas positively affect the physiological and psychological health of the city-dwellers. Because going to natural areas improves the general health perception of the individual (Byrne & Sipe, 2010), increases the physical activity levels (Gidlöf- Gunnarsson & Öhrström, 2007; Bertrama & Rehdanz, 2015) and also contributes to the individual's future health by the physical activity opportunities (Orr et al., 2014). Otherwise, poor quality urban areas lacking green areas indirectly affect the physical health of the individuals of city-dwellers; and the negative emotions caused by mental stress lead to cardiovascular diseases by increasing the blood pressure of the individual and negatively affect the mental health of the individual due to asthma, cancer and metabolic disorders (Lawton, 2007).

Benefits of urban green areas to physiological health:

- Accelerate recovering from various types of cancer (Byrne & Sipe, 2010),
- Decrease the chronic health risks such as nervous system damage and heavy metal poisoning (Wright, 2011),
- Allow people to fight against obesity and heart disease caused by sedentary lifestyle (Byrne & Sipe, 2010),
- Improve the general state of health (De Vries et al., 2003; Maas et al., 2006),
- Prolong the life span (Takano et al., 2002; Schipperijn et al.,2010) and
- Lower the blood pressure (Qin et al., 2013).

Benefits of urban green areas to psychological health:

The effects of urban green areas on psychological health can be classified under five main headings (Rohde & Kendle, 1994):

- Emotional; they decrease the stress, increase individual's positive feelings about himself (Ulrich et al., 1991; Grahn & Stigsdotter, 2003; Ulrich, 2006; Nielsen & Hansen, 2007; Byrne & Sipe, 2010), positively affect the individual's experiences that renew and offer health (Hartig et al., 2003; Van den Berg et al., 2010).
- Cognitive; they reduce mental fatigue and refresh the attention (Kaplan & Kaplan, 1989),
- Developmental; they support children's healthy development by encouraging a higher level of mental activity in them (Özgüner, 2003).
- Behavioral; they increase the exploratory and adventurous attitude supporting or forming the self-esteem.
- Social; they facilitate natural environment interaction, promote communication between social boundaries and even provide a wider social responsibility in some cases.

2. Economical benefits

Benefits of urban green areas to the city;

- Creation of job opportunities, providing services to local, regional people and

tourists in green areas, employment of people responsible for the maintenance of these areas (Dunnett et al., 2002; Wright, 2011),

- Creation of general economic impacts; green areas attract investments by increasing the quality of the areas where they exist, increase the values of those areas in particular, increase the values of the real estates in their surroundings and support the local economies (Woolley, 2003; Byrne & Sipe, 2010; Wright, 2011; Jim & Chen, 2006; Kabisch et al., 2015),
- The well planned and designed green areas that increase attractiveness of the city contribute to tourism and thus economy (Dunnett et al., 2002; Byrne & Sipe, 2010),
- The presence of green areas decreases the heating and cooling costs of the buildings by their climate balancing features and reduces the negative effects caused by them (Byrne & Sipe, 2010).

3. Social benefits

Green areas have two functions in terms of social life: green areas provide people with the opportunity to feel the comfort outside their living spaces and thus make them feel that they are associated with a greater social system. These areas allow an individual to be alone as well as allowing him to share life with many people; and even they sometimes include places that will allow an individual to be alone in the crowds (Thompson, 2002; Jim & Chen, 2009; Byrne & Sipe, 2010). Secondly, green areas serve as the gathering place for people to communicate with each other; people become acquainted with others, young people get rid of the heavy responsibilities even just for a while (Burgess et al., 1988). The studies carried out indicate that the relationships with people, spaces and events contribute to the feelings of being familiar with the community and belonging to the community. The spaces that help to shape community's attitudes and to develop the identity of the community and that provide continuity from the past to present become important for neighbors and obtain a social value and meaning (Chang, 2002; Mehta, 2007; Project for Public Space, 2000). They strengthen the sense of belonging, the sense of being a community and the neighborhoods by gathering together all sections of the community in urban green areas regardless of social status (Bertram & Rehdanz, 2015; Kabisch, 2015; Barrera et al., 2016). Thus, urban green areas can also be useful for social welfare by increasing the sense of social cohesion and identity (Bertram & Rehdanz, 2015).

Urban green areas are shared with strangers, and thus people with different religions, cultural and political values are existed together. Along with all these features, green areas serve a function which is important for the self-definition of the community.

Social benefits provided by the urban green areas:

- They play a "social solidarity-enhancing" role by creating a kind of living space for all sections of the community (Wheater et al., 2007).
- Green areas structure the social participation because they are free of charge and accessible to everyone (Byrne & Sipe, 2010), and they increase the social interactions and values by supporting the interpersonal communication and interaction (Özgüner, 2004) through removing the boundaries between social classes (Jim & Chen, 2009).
- Green areas provide a neutral ground which is available to all sections of the

community and can become the focus of community spirit by numerous and various possibilities offered for social interaction (Byrne & Sipe, 2010; Bertram & Rehdanz, 2015; Kabisch, 2015; Barrera et al., 2016)

- Green areas strengthen the integration of the community and the neighborhoods (Barrera et al., 2016)
- Green areas structure the child development by providing children with the opportunity to have energetic playgrounds based on imagination with the facilities in the outer space, and ensure that children interact with adults (Woolley, 2003). This situation positively affects the children's social and cognitive development, teaches them the social values and coping with difficulties, and gives them physical and mental health (Wheater et al., 2007). Consequently, urban green areas allow children to be included in the community as individuals who can establish healthy and social relationships.

Figure 3. Socialization affordances of urban green areas

4. Environmental benefits

The environmental benefits of urban green areas are associated with features of climate and environmental improvement (Woolley, 2003), providing opportunities for habitats (Woolley, 2003), improving aesthetic appearance (McCormack et al., 2010; Sugiyama et al., 2010), improving the urban landscape and the city's livability.

Climate and environmental improvement:

- They play a role in improving the urban air quality, improving the urban climate and decreasing the noise level (Gidlöf- Gunnarsson & Öhrström, 2007).
- Urban green areas create cool urban spaces and mitigate the urban heat island effect (Lawton, 2007).
- The plants that constitute the urban green areas reduce the air pollution by seizing the particles, absorbing the heavy metals and polluting gasses and assuming the task of filtering air (Dunnett et al., 2002; Lawton, 2007).

- They reduce the negative effect of urban area on natural water sources by ensuring the absorption and retention of rain waters, and they control the water regime (Chiesura, 2004; Niemelä, 2014).

Providing opportunities for habitats:

- Green areas play an important role in the protection of natural habitats with the natural life corridors and urban forests they create. Thus, urban green areas ensure the continuity of the species and the continuity of the city's biodiversity by creating a habitat for the presence of natural plants and animals (De La Barreraa et al., 2016; Dunnett et al., 2002).

Improving aesthetic appearance:

The aesthetic quality of an environment may affect the experience-welfare in this environment, and the sense of well-being (Nasar, 1988). Therefore, the sensations and visual information that the individual receives from the environment are extremely important for aesthetic evaluations. The rapid urban development has resulted in urban appearances consisting of many building blocks. The cold and ugly effects caused by these buildings are embellished with the natural elements (tree, water, landform, grass surfaces...) that the green areas contain. Urban green areas arouse a sense of mystery in watchers by an enriched landscape pattern that is created with natural elements they contain (Kaplan & Kaplan, 1989). Consequently, the perceptual information obtained from the surrounding is also enriched by enriching the watcher's field of view. Well planned green areas ensure individuals experience both a large space and a space that contains a depth. The damages to the aesthetic perception by the mass development in our day (Nohl, 2001) can be improved by successfully designed urban green areas.

Figure 4. Natural areas in urban green spaces

Aesthetic contributions provided by urban green areas to the city:

They create a sense of space and perspective around the buildings (Wheater, 2007).

- Green areas increase the aesthetic quality of the urban environment with their physical functions such as the regulation of the urban texture and the stabilization of density, and the natural landscape components they contain (Dunnet et al., 2002).
- They bring identity and character to the city (Aydemir, 2004).
- Green areas soften the monotonous structure of the city. They balance the measurement contrast between nature and human (Aydemir, 2004) and contribute to the urban aesthetics and the psychology of the city-dwellers.

Improving the urban landscape and the city's livability:

- Urban green areas can provide the sustainability of the aesthetics and naturalness of the urban landscape by softening the city's large firm ground.
- The fact that the crowded cities full of high-rise buildings are dark and shadowy deprives the city of air and light. This situation not only affects the quality of social life but also the atmosphere and livability of the city as a whole (Chang, 2002). Urban green areas allow cities to breathe and make them livable by creating definable spaces in cities.
- The trees, which are the vertical elements of urban green areas, give color to urban landscape by their seasonal changes and add texture by their leaves, and they also bring a depth and sense of wonder to the urban space by creating vistas. Therefore, the urban parks and urban green areas which are included in the formation of green areas in cities have a great importance for the quality of life of the urbanized community. Studies have shown that the presence of natural values (urban parks, forests, and green bands etc.) and the components of these (water, plants etc.) contribute to the quality of life in cities (Chiesura, 2004).
- Urban green areas provide people living in the city with social and physical activity opportunities by the open spaces created by them in the city (Wan & Shen, 2015). These areas that bring people together for walking, resting, playing and watching the environment (Halprin, 1981; Wright Wendel et al., 2012) increase the city's livability (Woolley 2003).
- The landmarks and historical places which are the important elements of the urban identity disappear among the high-rise buildings that define the urban silhouette. Urban green areas create environmental images for individuals and strengthen the spatial perception by providing the perception of the landmarks and historical places. They ensure the transfer of historical experiences in those spaces to people, improve the users' mental images related to that space, create the feeling of confidence and familiarity related to that space in people, and therefore make the city more livable for the city-dwellers (Yılmaz, 2009).

Design of Urban Green Areas

Nasar (1988) reported that people pay attention to the visual quality of their surroundings, and designers will more successfully design environments which are in better conformity with the preferences and activities of users by knowing the features of the relationship between human emotion and visual environment. This will also contribute to the development of the quality of life over time because the aesthetic quality of an environment may affect the experience-welfare in this environment, and the sense of well-being. This situation indicates that people will be drawn into an environment they like, and they will stay away from an unsatisfactory environment (Nasar, 1988). Kaplan (1987) made a similar remark regarding the preference and defined the preference as the tendency to make choices that keep individuals out of unsuitable environments and direct them to the desired one. So, it is very important to create urban green areas with high levels of use that are preferred by the people and offer a vivacious appearance by various events and users. This is the only way to design satisfactory green areas that attract people. The urban green areas the physical, psychological and economic contributions of which are extremely important for the city and city-dwellers will lose all these contributions and their values if they do not

function successfully. In this context, the answers to the questions of "why do they show a tendency to prefer some urban green areas to others" and how do people make a distinction between urban green areas" are very important. This answer is implicit in revealing how people experience urban green areas and why they prefer them. Consequently, how the design of green areas preferred by people will be completed and will be included in this process is also very important.

Figure 5. Aesthetical contributions of urban green areas to cityscape

Which urban green areas are preferred by people?

Multidirectional investigations addressing issues such as what criteria for the design of urban green areas should be, and the types of users and usages have been carried out, an attempt to determine the features of the preferred spaces, the interactions with the environment and the relationships of the people in those spaces have been made, and new design proposals have been developed in accordance with the findings. Regarding the studies in which how the use and thus the preference of urban green areas are increased is revealed;

- Beer (1994) reported the important characters that define the environments preferred by people as complexity-diversity, mystery, legibility and coherence.
- Naturalness is a feature that positively affects the preference in the environmental preference and evaluation literature (Hartig, 1993; Kaplan & Kaplan, 1989; Herzog, 1989; Schroeder, 1987; Ulrich, 1983; Ode et al., 2009).
- Depth is a dominant feature that affects the preference decision of the landscapes (Ulrich, 1983).
- The general principles to guide decisions related to preference were investigated in the studies of psychological theory and environmental aesthetics, and four characteristics that affect preference were suggested: naturalness, complexity, order and legibility (Nasar, 1994; Kaplan & Kaplan, 1989; Kaplan & Kaplan, 1982).
- Landscape preference is characterized by four variables: complexity (Hagerhall et al., 2004), mystery (Herzog & Bryce, 2007; Nasar & Cubukcu 2011), legibility (Herzog & Leverich, 2003) and coherence. (Kaplan & Kaplan 1989; Kaplan et al., 1998; Kaplan et al., 1972).
- Diversity positively affects the landscape preference (De La Fuente De Val et al., 2006).

When the results of studies in the literature are evaluated, "naturalness, mystery,

legibility, complexity (diversity), coherence (order) and depth" can be evaluated as the features that will increase the preference of urban green areas. These features are defined as follows (Table 2):

This information obtained from the literature has shown that the features of "naturalness, mystery, legibility, complexity, coherence and depth" are very important in increasing the preference of urban green areas around us. These features are also extremely important to generate urban green areas with high levels of preference that evoke a positive psychological effect on the individual. Therefore, the study is built on how the features of "naturalness, mystery, depth" will be projected to design.

Table 2. Features defining the preference (Kaplan & Kaplan, 1989; Kaplan et al., 1998; Herzog & Leverich, 2003; Yılmaz, 2008)

Legibility	Legibility is the ease of classifying and processing the elements that constitute a view or individual's ease of discovering the environment without getting lost. The legibility of the space is associated with the sense of order and clarity it contains.
Complexity	Complexity is the diversity of elements that constitute a view and having enough knowledge that will keep individual interested and concerned. Diversity stimulates the urge to discover.
Mystery	The mystery is a view's potential to provide new information or degree to arouse curiosity and provide more information. It is necessary to create fragmental shadings or hidden areas to arouse the individual's curiosity for an area to create a sense of mysteriousness.
Coherence	Coherence is the orderliness or organization level of the elements that constitute a view because the organization of a coherent space is clear. The different areas that constitute the space should be perceived explicitly and clearly. People can easily distinguish these different areas, and this also paves the way for understanding or making sense of the space.
Naturalness	Naturalness is related to human-made elements, naturalness increases as the human-made elements decrease. Plants and the continuity in topography strengthen the naturalness.
Depth	Depth is a variable which is associated with visual perception measurements in the landscape. In a view, the transparency provided by overlapping forms and the perception of the element that covers behind the element that is covered on the front ensure the in depth-perception of the space.

How to design urban green areas?

How can the features of "naturalness, mystery, depth" obtained from preference studies be projected to the design of urban green areas? By what combination of rules with space components (plants, topography and water) can a designer make the feel of the impact that he wants to evoke? In this chapter, answers to these questions were sought and the following features were obtained by carrying out evaluations for the design of urban green areas. They were evaluated by subheadings (Table 3).

Table 3. Characteristics regarding the features defining the preference

Features defining the preference	Characteristics
Mystery	• Curved roads • Partial closeness • Depth
Naturalness	• Continuity in the formation of the area plastics • Continuity in plant texture
Depth	• Transparency (transparency provided by the green texture) • Covering (overlapping forms in green texture and area plastics)

It was aimed to give clues to designers to strengthen the designs for increasing the "feature of mystery, naturalness and depth", and the following design decisions were achieved with the help of the relevant literature (Table 4);

Table 4. Design decisions regarding the features defining the preference

Feature	Design Decisions
Spatial factors that positively affect the space's "feature of naturalness" (Figure 6)	1. Plants will be green and green tone 2. The more natural perception of the space is provided by the colors, forms and sizes of the plants and the harmonic relations in the formation of the area plastics. 3. Creation of texture unity on the plant and ground surface 4. Circular and curved forms 5. Naturalness increases as the human-made elements decrease (Zube et al., 1983)
Spatial factors that positively affect the space's "feature of mystery" (Figure 7)	1. The ground surfaces; changeable and rough textures disrupt the depth continuity of surfaces and decrease the preference level of spaces. Therefore, homogeneous and soft textures were used on ground surfaces because this gives a sense of mystery to spaces and increases the preference level as it provides the observer with the opportunity of discovering and moving (Hartig, 1993). 2. Obtaining a mystery in an environment is strengthened by the features such as curved roads, partial closeness created by the leaves, linear perspective and width (Kent, 1993; Kaplan & Kaplan, 1989).
Spatial factors that positively affect the space's "feature of depth" (Figure 8)	1. The covering between the surfaces strengthens the feature of depth in the space when it is performed by making use of textural gradation of the surfaces (Gibson, 1986; Ulrich, 1983). 2. Plants and topography cover each other without impairing the perception of their forms, 3. Ensuring the visibility of the background using light-textured plants, and 4. The use of dark and hard-textured plants in the foreground and the use of light-colored and light-textured plants in the background strengthen the depth feature.

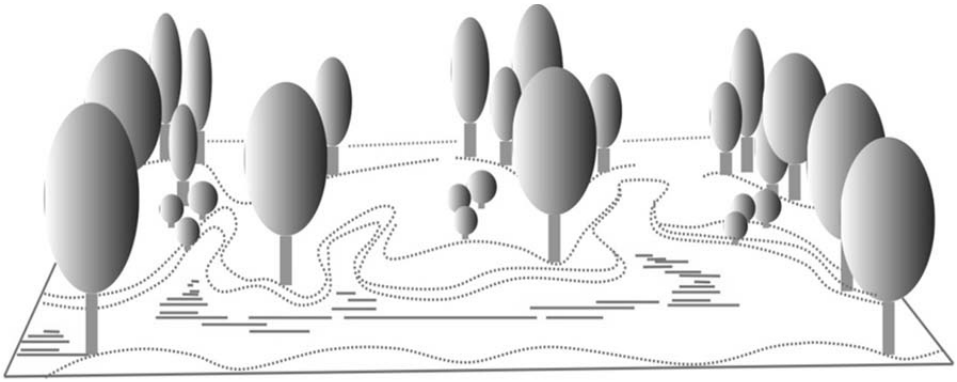

Figure 6. Schematic representation of naturalness of space

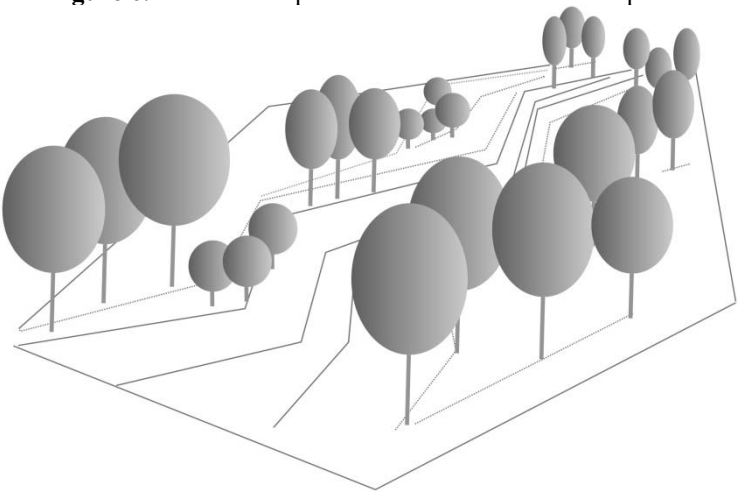

Figure 7. Schematic representation of mysteriousness of space

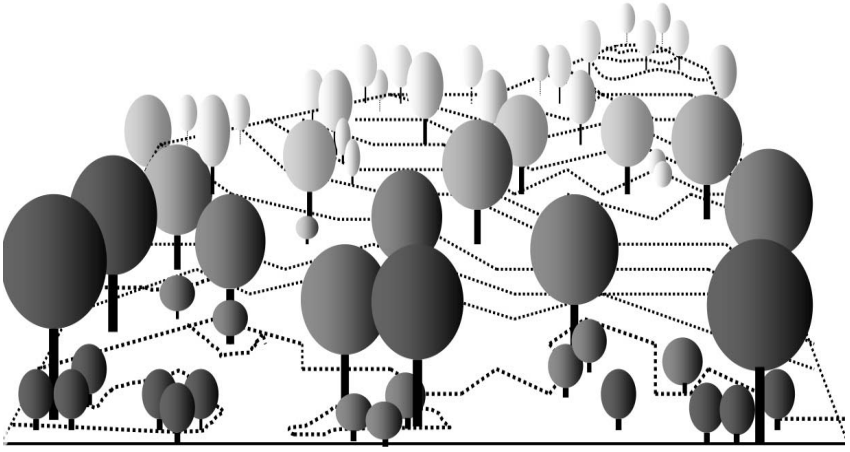

Figure 8. Schematic representation of depth of space

CONCLUSION

Urban green areas provide numerous benefits for those living in the city; they clear the air as the city's lungs, and they mean water and soil for the natural areas in the city (Gupta et al., 2012). They are the areas where the community sense of being is developed by establishing a connection between the different parts of the city (Thompson, 2002), where people ensure the social integration (Dwyer et al., 1991; Kamierczak, 2013), and where the opportunities for mental healing, knowledge acquisition, physical exercise, and comfort are provided (Kaplan & Kaplan 1982). In other words, they are important as the social focal points where social needs are met such as the fact that people from different cultures and socioeconomic classes come together, become acquainted with each other and share the life, and as the places where those living in the city merge with nature.

In order to increase the quality of life for the people living and working under stress in cities, urban green areas are needed. Urban green areas are significant for daily lives of everyone including old people, children, workers and unemployed people living in the city because these people make use of these places and give meaning to them in different times and for different purposes. Urban green areas sometimes become the places where we come together with our friends, sometimes become playgrounds in which children can run and play, and sometimes become a scene where we can look from our house or office. However, they certainly have a meaning and function for us. Whereas, these urban green areas which become more important day by day up to now, are the places that are essential for us especially in our country. In order to bring nature and natural places that are ignored because of Industrial Revolution back to the city, models related to design approaches of open urban spaces should be produced by the planners and designers. Otherwise, urban spaces that are not designed well will turn into the places which citizens do not use, thus causing economical loss and communication and social interaction break down as they cannot meet the needs of people.

Therefore, within the scope of this study, some design proposals that are intended to be a guide for the designers of urban green areas have been suggested. Thus, it has been aimed to give clues of creating a preferable and livable urban space for the city-dweller where they gain satisfaction experience. With the help of these clues, "the feeling of integrating with nature" can be provided in urban green areas which are replete with trees and flowers which cannot otherwise be felt among buildings.

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