EVOLUTION OF URBAN GREEN
THROUGH SOCIAL INTERACTION

A THESIS
SUBMITTED TO THE DEPARTMENT OF ARCHITECTURE
AND THE GRADUATE SCHOOL OF ENGINEERING AND
SCIENCE OF ABDULLAH GUL UNIVERSITY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
MASTERS

By
Aslıhan Atılgan
September 2023

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I hereby declare that all information in this document has been obtained in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all materials and results that are not original to this work.

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ABSTRACT

EVOLUTION OF URBAN GREEN THROUGH SOCIAL INTERACTION

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September 2023

Urban green spaces, which are vital venues for social interaction, have altered substantially over time, from antiquity to the present-day. Contemporary urban green spaces are intended as full and flexible locations rather than depending on a specific physical arrangement with functional limits.

Urban green spaces are nowadays not solely utilized for recreational pursuits that put constraints on users (such as sports facilities, child-friendly play areas, sitting places, etc.); rather, they generate dynamic, adaptable landscapes that give opportunity for a range of activities. Thanks to varied activities citizens in the urban might have chance to gather and engage each other. This supplying the urban offers flexible spaces and functions for individuals with varied background. As a consequence, contemporary green spaces draw in a range of individuals, providing everyone the possibility to pick activities they prefer and spend their spare time.

In order to comprehend how people, engage socially in urban green spaces, this study analyzes how urban green spaces have altered historically from ancient to present times. Three parks in the contemporary world are investigated through activities owing to the concepts of Jane Jacobs and Jan Gehl. The study also gives projections and design proposals for green areas of the future.

Keywords: Activities, Social Interaction, Urban Green, Gathering Space

ÖZET

KENTSEL YEŞİL ALANIN SOSYAL ETKİLEŞİM ÜZERİNDEN DÖNÜŞÜMÜ

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Eylül 2023

Sosyal etkileşim için yaşamsal öneme sahip olan kentsel yeşil alanlar, antik çağlardan günümüze kadar zaman içinde önemli ölçüde değişime uğramıştır. Günümüzün kentsel yeşil alanları, işlevsel sınırları olan belirli bir fiziksel düzenlemeye bağlı olmaktan ziyade, bütüncül ve esnek mekânlar olarak tasarlanmaktadır.

Kentsel yeşil alanlar günümüzde yalnızca kullanıcılara kısıtlamalar getiren rekreasyonel uğraşlar için kullanılmamakta (spor tesisleri, çocuk dostu oyun alanları, oturma yerleri gibi); bunun yerine çeşitli yelpazedeki aktivitelere fırsat veren dinamik, adaptif peyzajlar oluşturmaktadır. Çeşitli etkinlikler vasıtasıyla kent sakinleri bir araya gelme ve birbirleriyle etkileşim kurma şansına sahip olabilmektedirler. Bu sayede kent, farklı geçmişlere sahip bireyler için esnek alanlar ve fonksiyonlar sunar. Sonuç olarak, çağdaş yeşil alanlar çeşitli bireyleri kendine çekerek herkese tercih ettikleri aktiviteleri seçme ve boş zamanlarını değerlendirme imkanı sunar.

Bu çalışma, insanların kentsel yeşil alanlara sosyal olarak nasıl katıldıklarını anlamak için, kentsel yeşil alanların tarihsel olarak antik çağlardan günümüze nasıl değiştiğini analiz etmektedir. Günümüz dünyasındaki üç park, Jane Jacobs ve Jan Gehl'in kavramları üzerinden etkinlikler aracılığıyla incelenmektedir. Çalışma aynı zamanda geleceğin yeşil alanları için öngörüler ve tasarım önerileri sunmaktadır.

Anahtar kelimeler: Aktiviteler, Sosyal Etkileşim, Yeşil Alanlar, Buluşma Mekanları

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To my beloved family

Chapter 1

Introduction

Throughout history, urban green spaces have seen a continuous transformation and have developed as habitats that fulfill many functional and aesthetic roles. These venues have the capacity to foster social integration among persons from diverse socioeconomic backgrounds and cater to a broad spectrum of requirements. Urban green spaces have been widely acknowledged as areas that facilitate social interaction. In addition to affording chances for leisure and relaxation, these spaces also serve as a conducive environment for social meetings. The transformation of urban green areas has transpired because of urban growth and shifting societal demands. Hence, it is reasonable to see urban green analyses as areas that are in the process of transforming from gardens into parks.

The present study is motivated by a comprehensive research inquiry that seeks to analyze representations of the many phases in the development of urban green spaces, namely from gardens to urban parks. The primary objective of this research was to investigate the development of the notion of social gathering and interaction within green areas, as well as to examine how this notion may potentially influence the design of forthcoming urban parks. This thesis aims to understand the temporal development of urban green areas and their impact on development social interaction. In order to accomplish this objective, the research employs a historical analysis and investigates the notion of social gathering. The objective of this research is to conduct a thorough examination of the progression of urban green spaces throughout history, with a specific emphasis on the characteristics of their design, spatial purposes, and component aspects that contribute to the promotion of social cohesion.

The study conducted by the journalist and theorist Jane Jacobs, together with architect Jan Gehl, was used to gain insights into the evolution of green spaces within

the framework of social interaction throughout history. In "The Death and Life of Great American Cities" by Jane Jacobs, it is evident that the composition and elements comprising a city extend beyond mere physical structure and spatial utilization. Rather, the effectiveness of urban design hinges upon the active engagement and communal interaction fostered within a given space. Jane Jacobs places significant emphasis on the concept of "contact" and the convergence of individuals within urban environments. According to Jacobs (year), neighborhood parks are characterized as desolate spaces that gradually become neglected, only used by certain groups during specific time periods, and left unattended without any security measures for the remainder of the time. Furthermore, she underscores the need of avoiding the design of parks just to compensate for the deficiencies resulting from specific parcel constraints and architectural structures. The author asserts that an ideal urban environment should exhibit a sense of coherence and seamless integration within its green spaces, hence obfuscating any discernible boundaries. Simultaneously, the incorporation of various activity areas inside green spaces must be accompanied by thoughtful design considerations that account for the surrounding environment, while also fostering accessibility and seamless integration with the adjacent roadway.

It is well acknowledged that the mere presence of several services and activities inside green spaces does not guarantee the success or active use of a park. In accordance with Jane Jacobs' perspective, it is essential to consider the interrelationship between the functions of green spaces and their environmental context while undertaking their design. This approach aims to enhance the duration of use, promote prolonged human presence inside the space, and facilitate interpersonal interactions.

The books "Cities for People" and "Life Between Buildings" authored by Jan Gehl delve into the subject of social interaction, exploring themes such as the classification of individuals based on their activities and the convergence of people in urban environments. According to Jan Gehl, activities within urban environments may be classified into three distinct categories: required, voluntary, and social activities.

The concept of compulsory activities refers to tasks or actions that individuals are required to engage in, often because of legal or institutional. Jan Gehl's expression

on the essential necessary activities in urban settings, highlighting the actions individuals do to sustain their daily routines and fulfill their fundamental requirements. These activities include engaging in employment, engaging in retail transactions, or engaging in educational pursuits. Gehl posits that the physical fabric of a city may be influenced and molded by vital activities, hence impacting the way people perceive and use urban spaces. Ensuring the fluidity and accessibility of such activities is crucial in order to provide ease of movement for individuals.

Optional activities are activities that people engage in according to their own interests and choices. These activities include a diverse array of pursuits, including engagement in athletic endeavors, involvement in cultural events, and indulgence in recreational pastimes. According to Jan Gehl, it is essential for urban environments to provide a diverse range of options in order to facilitate various activities. It is essential that spaces, such as parks, cafés, art galleries, and similar venues, provide conducive surroundings that facilitate individuals' engagement in various activities and foster social connections. Nevertheless, a crucial need for engaging in such endeavors is the presence of meteorological conditions that are conducive for urban residents to partake in those activities. In this context, several voluntary and discretionary activities may occur under ideal weather circumstances. Consequently, it is essential for the urban designer to have thoroughly analyzed these situations in order to appropriately plan the city.

The topic of social activities is of great significance in the realm of human interaction and community engagement. Jan Gehl argues that the presence of social activities has a significant role in determining the vibrancy and quality of life inside urban areas. The establishment of public areas that facilitate social interaction has the potential to enhance the cohesion of communities. Social activities, such as public squares, outdoor recreational activities, and community gatherings, provide individuals with opportunities to engage in interpersonal interactions, engage in dialogue, and exchange ideas with one another. Gehl's method places emphasis on the architecture of urban environments in order to foster social connections.

Within this setting, Jan Gehl places significant emphasis on the significance of necessary activities, optional activities, and social activities as crucial components of

urban life. Gehl argues that the design of various activities necessitates the careful arrangement of urban areas in order to effectively cater to the different requirements and preferences of individuals. This approach underscores the notion that cities include not just tangible infrastructures, but also serve as vibrant environments where human interactions and communal relationships thrive. Within this theoretical framework, the historical progression of green spaces provides a significant vantage point from which to examine the influence of urban environments on social dynamics.

The examination of urban green areas from a historical perspective provides valuable insights into their evolutionary trajectory and their impact on social groups. Throughout history, green areas have served as venues for various religious, cultural, and social gatherings, fostering communal interactions and facilitating societal unity. This trend has persisted from ancient civilizations to the contemporary day. Over the course of time, societal conventions and advancements in technology have had an impact on the use of green areas, leading to their organization for diverse objectives. In contemporary times, these places have evolved into versatile environments that facilitate the convergence of persons from many backgrounds, fostering opportunities for social interaction and the cultivation of interpersonal connections. The evolutionary process serves as a significant illustration of how urban environments may influence social dynamics, aligning with the human-centered design approach advocated by Jan Gehl.

Upon analysis of the historical trajectory, it becomes evident that urban green spaces have seen a notable shift from an exclusive garden culture, distinguished by restricted access limited to certain social classes or groups, to the establishment of public parks available to all individuals. The objective of this research is to provide a comprehensive analysis of the use of green areas across different historical periods, ranging from ancient times to the present day. Based on historical documentation, throughout ancient, classical, and medieval eras, people would congregate for the purpose of engaging in religious rituals or participating in community agricultural activities. During the Renaissance, Baroque, English, and Romantic eras, the advent of recreational spaces gave rise to a multitude of festivals, gatherings, and celebrations that put significant importance on the aesthetic enjoyment of beauty.

During the Victorian period, there was a notable shift in the perception of green spaces, as they transitioned from being exclusively associated with private gardens to being the foundation of public green spaces, often known as parks in contemporary times. In the subsequent era characterized by modernity and post-war developments, cities have endeavored to establish physically conducive environments in response to the burgeoning technological advancements and the collective pursuit of affluence among individuals. Within this environment, parks have been established as inclusive and non-discriminatory spaces that foster a sense of unity among urban dwellers, therefore belonging to all individuals within the general public.

In contemporary times, there is a growing trend towards the development and design of green spaces, particularly parks, that adhere to creative and sustainable principles. Currently, there is a growing trend in the design of parks that aim to tackle ecologically sustainable global concerns and enhance public awareness. Furthermore, in addition to the points, parks have evolved to include a diverse range of activities, each distinct in its content, while also serving as designated areas that cater to persons from many social backgrounds and age cohorts. Furthermore, it has been noted that the establishment of versatile places that are not limited to a single purpose or undertaking might foster enhanced social cohesiveness among people.

Throughout history, persons belonging to various socioeconomic strata have used urban green areas in a manner that aligns with their respective social hierarchies, therefore impacting the nature and quality of their social interactions. In contemporary society, urban green areas have become more accessible to citizens across all socioeconomic strata, hence facilitating the fulfillment of their respective needs and aspirations.

Within this framework, the examination of the parks' historical interpretations, the dynamic transformations seen within the parks throughout time, and the contemporary role of parks as venues for social gatherings and interactions in urban settings have facilitated an exploration of the social dynamics inherent in these spaces. In this context, extensive research was conducted on the phenomena discovered by journalist and theorist Jane Jacobs and architect Jan Gehl on the use of green spaces by urban users. In her book "The Death and Life of Great American Cities," Jane

Jacobs discusses the notion of "contact" as it pertains to individuals' sense of security when navigating urban environments, and the need of designing spaces that are consistently and actively used. These insights provide valuable guidance for the future design of parks.

Urban parks have undergone transformation in tandem with the overall evolution of the city throughout its historical trajectory. The designation of open spaces next to residential and commercial structures as green zones or parks does not always facilitate their use by individuals. Contemporary urban parks must address the multifaceted requirements of urban residents, including both their bodily and spiritual well-being, while also offering solutions to global challenges. Due to this rationale, the efficacy of activities and social engagement inside urban parks is contingent upon the implementation of designs that cater to these diverse requirements.

Chapter on **Social Interaction in the Urban Scale** highlights the relevance of urban public spaces, green spaces and parks in particular, in fostering social cohesiveness and interpersonal contact in cities. It underlines how these areas function as centers for numerous activities and social interactions, contributing to community identity and relationships amongst inhabitants. It also highlights the value of well-designed and maintained public spaces in fostering social relationships, supporting a broad variety of activities, and appealing to diverse demographic groups. Overall, it stresses the relevance of urban green spaces in fostering both physical and social enrichment and emphasizes the necessity for careful design in metropolitan areas to accommodate various requirements and encourage social inclusion.

In the **From Private Garden to Public Park** chapter, the green space is analyzed through a retro perspective reading and the transformation of the urban green space from ancient times to the contemporary period is examined. In this context, a classification was made based on the functions of urban green space discussed in the previous chapter and the main and common functions that bring people together. This classification is grouped under 4 main headings. In line with the research conducted in the ancient, classical, and medieval periods, meditation and agricultural activities come to the fore. For this reason, these three periods are called "Agricultural & Spiritual Growth". In the Renaissance, Baroque, English and Romantic periods, on

the other hand, beauty and aesthetic concerns are more prominent, ornaments are used extensively, and entertainment comes to the fore. For this reason, these 4 periods are also discussed under the title of "Aesthetics, Beauty, and Entertainment". In the Victorian and Modern period, the foundation of today's parks was laid for the first time and the step from private gardens to public parks was taken. For this reason, these two periods are analyzed under the title of "Public and Incorporative". Finally, the Post-war and Contemporary periods constitute today's parks designed with the concepts of innovative and sustainability and inclusive as well as publicness, and in this context, they are discussed under the title of "Public & Innovative".

The chapter on **Innovative and Sustainable Parks** explores the use and conception of environmentally conscious areas, as shown by current parks and the changing urban needs of today. In the present study, three modern parks have been chosen and subjected to analysis within the theoretical framework expounded upon in Chapter 2. The parks that have been chosen are designated areas of vegetation that contribute to the creation of beneficial conditions for the study of ecology, ecosystems, and other habitats. These parks are intentionally designed with a focus on innovation and sustainability, aligning with contemporary principles in environmental planning. In the present context, the chosen sites include Millennium Park, High Line Park, and Gardens by the Bay. The comparative analysis of these parks was conducted with reference to Jan Gehl's conceptual framework, which emphasizes the correlation between activities and social interaction, and Jane Jacobs' set of criteria for evaluating the effectiveness of park design, with a particular focus on the park's ability to create an attractive atmosphere.

This thesis uncovers the efficacy of urban green spaces, particularly parks, in fostering social cohesiveness within cities and facilitating the gathering of urban residents, irrespective of socioeconomic disparities. In order to foster peace and interaction, it is essential to ensure that the diverse range of activities, the evolving natural growth of the parks, and the requirements of the users are adequately addressed. Furthermore, it is crucial for these parks to continually update themselves and adapt to the changing demands of the times.

Chapter 2

Social Interaction in Urban Scale

This section aims to understand the importance of the city to its residents and the interpretations given to the way persons use the city's public areas. In this context, literature readings have been used to gain a deeper comprehension of the way people interact with the public spaces comprising the city and foster social cohesion among urban dwellers. Additionally, these readings shed light on the interplay between various discrepancies in these interactions and their potential for harmonization. The acquisition of knowledge on people's behaviors in relation to spending time and using green spaces has been facilitated by the research conducted by Jane Jacobs and Jan Gehl. The biggest factor in my referencing Jane Jacobs and Jan Gehl in my research is that they both have a contemporary and human scale perspective on the city. In more specific terms, both argue that while evaluating the city through urbanites, designs are individual and activities that increase social interaction through the user and bring people together beyond shaping are the factors that affect the design in the city and especially in green spaces. In this context, both of their perspectives on the city have been utilized in this thesis. The following portion of the text offers comprehensive explanations about urban, public places, green spaces, specifically parks, and human interactions as discussed in the literature.

Cities are acknowledged as intricate systems in which humans congregate to facilitate the flow of ideas, participate in commercial activities, or just unwind and enjoy leisurely pursuits. The urban environments of these cities include a range of public areas, including streets, squares, and parks, which serve as venues for diverse activities. According to Madanipour (2001), public spaces possess the capacity to foster community cohesion and serve as a platform for promoting and enabling social engagements.

In the public spaces of urban, social interactions thrive organically among people within communal environments. These encounters emerge because of individuals' inclination to establish connections via diverse means. Scholars like Lofland (1998) have identified many manifestations of these interactions, including engaging in conversations, exchanging personal anecdotes, or briefly experiencing sentiments of camaraderie.

Public spaces have a pivotal role as the fundamental building blocks of intricate urban networks, serving as central hubs for many social activities and interactions. The urban open spaces include more than just physical infrastructure; they function as arenas for social interaction, cultural exchange, and personal engagement.

According to Alexander et al. (1977) and Peters, Elands, and Buijs (2010), public areas provide a distinct opportunity for individuals to participate in social interactions. Green spaces have a crucial role in facilitating social cohesion, particularly in regions characterized by high levels of unemployment and low income (Germann-Chiari & Seeland, 2004). According to Völker, Flap, and Lindenberg (2007), the provision of both passive and active activities inside these spaces has the potential to enhance social cohesion and facilitate the development of community identity.

The above-mentioned notion of social coherence is further associated with social interaction. The desire of urban individuals to engage with designs that adapt to their needs and preferences in public areas also plays a role in fostering social interaction, as it facilitates encounters with individuals from diverse backgrounds.

Moreover, regular and repetitive interactions have the potential to strengthen social bonds and promote a sense of solidarity (Henning and Lieberg, 1996). Furthermore, the dynamics of ownership and sharing within city settings have a significant impact on individuals' sense of inclusion or exclusion (Newman, 1972).

Public spaces include a diverse array of areas, which may be categorized into indoor and outdoor places. These designated zones, referred to as single-minded and open-minded, have been purposefully created and used for distinct objectives. Single-

minded places are specifically created to enhance and expedite certain activities, while open-minded spaces cater to a diverse range of activities (Walzer, 1986,).

As we can understand that Walzer (1986), the notions of single-mindedness and open-mindedness suggest that urban parks need to resist the limitations of responding only to a certain user or purpose, such as a children's playground or a sports field. Instead, these parks should be designed as versatile environments that accommodate the diverse needs and preferences of a wide range of users.

Nevertheless, it is important to acknowledge some limits and restrictions when idealizing public areas. Semi-public locations have been purposefully built to cater to certain groups, hence restricting interactions between unfamiliar individuals inside these regions. According to Goffman's (1963) observations, individuals tend to refrain from engaging in social contact, a phenomenon he refers to as civic inattention. The phenomenon is sometimes influenced by cultural inclinations or established norms of conduct, serving the purpose of inclusion or exclusion of different social collectives (Amin and Thrift, 2002).

Public spaces are an integral component of urban environments and have a significant influence on interpersonal relationships. They enhance the societal structure by offering chances to study one's environment, engage in communication with others, and reinforce social connections. Public spaces provide a holistic perspective of locations that are collectively used by a sizable population, alongside private areas that have restricted access and usage.

Space classifications are a valuable tool for comprehending the use of various places, including public, semi-public, semi-private, and private open spaces. Public spaces are often used by extensive populations, while private open spaces are indicative of privatized areas, such as individualized gardens. The categories play a pivotal role in establishing the ownership and distribution of a given area, hence influencing the way people establish relationships and undergo experiences inside this space. Within this framework, public spaces serve as a reflection of the multifaceted social and cultural composition of urban areas, facilitating and fostering social interactions and relationships.

Public open spaces are of utmost importance in facilitating social interaction and fostering the formation of interpersonal connections among community members. Within these environments, the level of interactions becomes more heightened, allowing people with diverse backgrounds to exchange a variety of experiences (Huang, 2006; Völker et al., 2007; Cattell, Dines, Gesler, & Curtis, 2008).

Furthermore, there are straightforward avenues to sustain current interpersonal connections. Informal encounters with neighbors or coworkers in daily life serve a crucial function in sustaining social connections and professional networks. Spontaneous social activities and gatherings serve to strengthen interpersonal communication and foster more intimate encounters. Occasionally, these contacts may provide difficulties in terms of coordinating social events, although they have significant importance in cultivating interpersonal connections and community networks. Within this framework, the establishment of intimate connections between various age groups may be facilitated using low-intensity interaction, as highlighted by More (1988).

Additionally, public spaces facilitate social connection among diverse populations, whilst interstitial spaces between buildings provide people with possibilities for organic and uncomplicated engagement. The use of low-intensity touch is a crucial mechanism for preserving and nurturing established relationships, while also providing a foundation for several additional modes of engagement. Within this framework, the presence of varied expansive areas that facilitate and enhance the exchange of information among individuals assumes paramount importance in fortifying interpersonal connections and fostering a society characterized by tolerance.

The book "Life between buildings" by Jan Gehl, as mentioned that the urban is provide individuals with the chance to engage in social interactions with others in a casual and unhurried manner. Basic activities, such as engaging in sedentary behavior on a seating structure or engaging in ambulation, assist individuals in achieving a harmonious equilibrium between feelings of isolation and opportunities for social engagement. These activities provide people the opportunity to see and listen to others, while also enabling them to actively engage in their own personal experiences.

The establishment of first, less intense contact seems to serve as the foundation for subsequent encounters that are more profound and intricate. This kind of interaction often originates from impromptu and unanticipated circumstances. Games, particularly those involving youngsters, serve as instances of low-intensity interactions. These interactions might manifest as concise dialogues, succinct exchanges, or impromptu conversations. These encounters of modest intensity have the potential to evolve into more profound and intricate relationships.

Moreover, it is important to acknowledge that open spaces play a pivotal role in the urban landscape of cities and are intricately linked to architectural aesthetics, as underscored by the Council of Europe. These rooms possess considerable richness, including not just their physical dimensions but also their functional and emotional aspects. According to the Council of Europe (1986), they assume significant functions across several domains, including education, ecological equilibrium, social engagement, and economic advancement. Hence, it is essential to approach the function and contribution of open spaces in urban planning and design processes with utmost attention.

Nevertheless, it is important to use prudence while formulating broad assertions about the many facets and merits of these environments. Urban parks provide a diverse range of activities, while green places tend to attract a larger number of people and foster more social interaction (Sullivan, Kuo, & De Pooter, 2004). According to the Department for Transport, Local Government, and the Regions (2001), community gardens have the capacity to enhance social cohesion among neighborhoods, foster environmental enhancements, particularly in densely populated metropolitan regions, and provide a platform for investment in aging localities.

Nevertheless, to get these advantages, it is imperative that parks be meticulously planned and consistently kept. According to Gobster (1998), locations that are not adequately kept tend to generate a negative perception, while parks that are well-managed and welcoming have a greater appeal to tourists. In addition, it has been argued by Huang (2006) that children's playgrounds have the potential to enhance social connections, benefiting not just children but also their parents.

The contemporary era is characterized by the phenomenon of accelerated urbanization and evolving lifestyles, which have resulted in a gradual erosion of interpersonal connections within local communities. Green areas have the potential to foster interethnic contact and enhance social cohesion (Lofland, 1973; Sennett, 1990). According to Rishbeth (2004) and Buijs et al. (2009), these venues possess the capacity to surpass anonymity and foster social cohesion.

In summary, urban parks and green areas have a significant impact on enhancing urban life and fostering social cohesion. These places have the potential to foster both tangible and intangible connections, including not just physical but also emotional and social ties. Hence, it is essential to implement design and maintenance procedures that are suitable for the diverse requirements of different social cohorts.

2.1 Conceptual Framework of Urban Park

Gehl (1987) argues that individuals engage in a wide range of activities depending on the qualities of green spaces. These activities can be broadly classified into three main categories: basic activities, discretionary activities, and interpersonal activities. Each category satisfies many needs of individuals, including both basic aspects of daily existence and desirable opportunities for leisure and rejuvenation.

Furthermore, Gehl (1987) posits that urban areas serve as a convergence point for required, voluntary, and social activities, so showcasing the vibrant tapestry of urban life. (Figure 2.1). **Necessary Activities**: This classification encompasses activities that individuals are practically compelled to do. While the physical environment is often linked to ordinary everyday activities like school and work, the use of space design may contribute to enhancing the effectiveness and enjoyment of these activities. **Optional activities**, also known as discretionary activities, are actions that people engage in based on their own preferences and availability of time. Engaging in activities such as strolling, sitting, or sunbathing outside is contingent upon the prevailing weather conditions and the perceived appeal of the environment. The architecture of the space has a significant role in shaping these activities, since they are integral to leisure pursuits. **Social activities** include a range of interactive

engagements that are contingent upon the presence and participation of other persons. Activities such as children's games, interpersonal dialogues, and collaborative endeavors foster social cohesion and interpersonal engagement. The configuration of the physical environment has the capacity to influence the potential possibilities for various activities and manifest distinct characteristics in different locations.
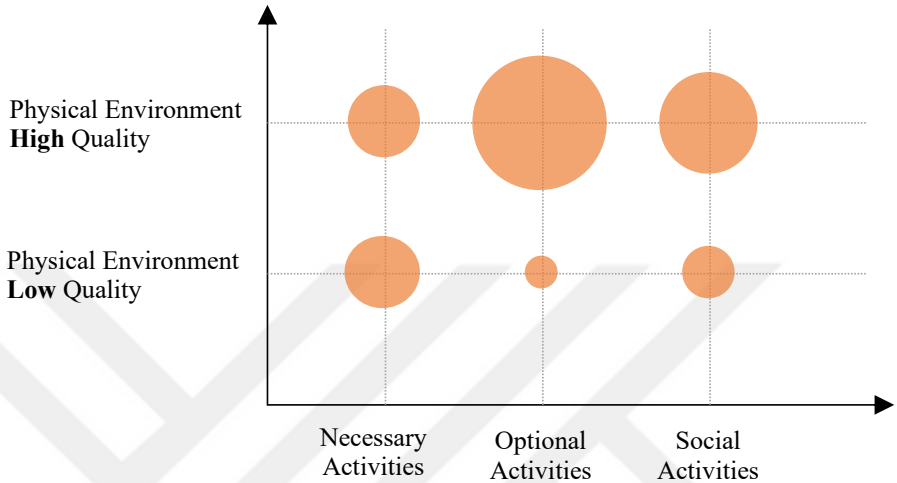
Figure 2.1 Activities defined by Jan Gehl (Gehl, 2010)

In the following analysis, Jan Gehl's categorization of urban activities is considered in the context of green spaces and historical perspectives, as described in the previous paragraphs. In the historical context, the activities that should be important as primary activities in parks are considered. Therefore, each period is evaluated within the framework of the primary function of the green space's existence.

Jan Gehl emphasizes the importance of seasonal conditions and the use of leisure time in the implementation of discretionary activities. It can be inferred from this activity that discretionary activities have social characteristics with some constraints. For this reason, in the historical literature, these activities have been seen as restricted or less interactive when evaluating green spaces. Social activities may be defined as collective endeavors that include the participation of several individuals and are conducted within a community setting.

2.2 Use of Urban Form

This section discusses the impact of themes emphasized by Jane Jacobs in her book "The Death and Life of Great American Cities" on designing the parks, particularly the influence of parks on social interaction.

Parks that achieve success are characterized by their ability to accommodate the multifaceted nature of urban life and facilitate the integration of diverse activities. Parks enhance the value of their environs by the integration of diverse recreational pursuits. They demonstrate social variety by establishing an environment that caters to the varying requirements of the many communities in its vicinity (Jacobs, 2016).

There exists a strong correlation between engagement in outdoor activities and the quality of open spaces. Low-quality locations are limited to basic activities, while high-quality regions provide a broader range of activities that are more varied and enduring. A meticulously planned and thoughtfully crafted setting creates an inviting atmosphere that encourages individuals to actively participate in a variety of activities (Jacobs, 2016).

Nevertheless, instead of prioritizing a certain category of activity, it is essential for local parks to appeal to a diverse range of functional users. Spaces serve as communal areas where people convene to engage in social interactions and partake in a diverse range of activities. So, these spaces serve as focal points for social interactions (Jacobs, 2016).

Outdoor activities include many classifications of activities, including essential, discretionary, and communal. Frequently, individuals amalgamate these activities, so demonstrating the complex and layered nature of outdoor pursuits. Parks and green areas facilitate social connections by catering to a wide range of demands within the community. If the presence of parks leads to an increase in social contacts, there exists a considerable potential for the enhancement of social bonds within the local community (Jacobs, 2016).

Consequently, green spaces serve as not just tangible areas, but also as catalysts for social engagement, fostering the cohesion and interconnectedness of local communities. The correlation between engagement in outdoor activities, the presence of well-maintained open spaces, and opportunities for social interactions has significant significance within the realm of urban planning and design methodologies. Within this particular environment, it becomes evident that green areas serve a dual purpose by contributing to both physical and social enrichment (Jacobs, 2016).

According to Beckley (1994), social cohesiveness is established by the presence of shared ideals, cooperative efforts, and interpersonal connection. This factor defines the extent or level of communal engagement within a certain social group or population. Social capital plays a crucial role in facilitating and sustaining these connections and interactions, so serving as a foundation for social cohesiveness. Daily contacts among persons from different ethnic backgrounds serve as a means of fostering communal cohesiveness. Public spaces serve as environments where diverse populations could engage with one another, fostering the development of social capital. However, to maintain these relationships and ensure the vitality of public places, it is essential for multiple lifestreams to converge. This factor should also be considered in the strategic development of local parks inside residential areas. Parks designed to cater to a wide range of communities are indicative of the various nature of urban areas and serve to foster social harmony (Jacobs, 2016).

Within metropolitan environments and city streets, social interactions often exhibit a tendency towards superficiality, characterized by a predominance of passive engagements. A significant portion of this endeavor involves various forms of social engagement, including visual and auditory encounters with unfamiliar individuals. However, even this very basic kind of engagement may possess considerable appeal. The coexistence of two individuals inside a shared physical environment may be seen as a kind of social engagement. Visual and auditory perception of one another is a fundamental mode of interpersonal connection, serving as a foundational element for initiating social encounters, which in turn provide the groundwork for more intricate and multifaceted kinds of social engagement (Jacobs, 2016).

The influence of physical planning extends to the quality and intensity of social interactions as well. Architects and planners facilitate social interactions by offering conducive circumstances and arrangements that enhance the ease with which individuals may congregate, watch, and engage in auditory exchanges. This enhances the efficacy and sociocultural cohesion of public areas (Jacobs, 2016).

When considering parks, it is important to give careful thought to their design and use, ensuring that they provide a range of options and adaptability to support a variety of activities. The design of a community park should be oriented towards the goal of attracting and accommodating individuals with diverse needs and interests. This enables the park to dynamically adjust and accommodate a variety of activities (Jacobs, 2016).

Therefore, it is imperative that the design and use of parks strive to provide versatile and heterogeneous environments that accommodate a variety of activities. A ideal park designs should be designed with the intention of accommodating diverse requirements and fostering social cohesion among various demographic segments. Green areas are widely acknowledged for their significance in fostering social cohesion through promoting social interactions among individuals. The engagement in outdoor activities has a substantial influence on the functioning and social inclusivity of public places.

According to Jane Jacobs, the creation of the ideal interactive park should include characteristics like as **intricacy, centrality, exposure to sunshine, and enclosure** in order to enable a diverse array of activities. The consideration of these factors in the design is of paramount importance, as it enables the park to be used throughout various time periods and for diverse reasons. Parks that are intentionally constructed to cater to the diverse demands of different population segments play a significant role in fostering social interactions and nurturing social relationships within metropolitan communities (Jacobs, 2016).

Intricacy refers to the diverse range of methods used by a park to attract people. Park visitors may choose to frequent a park at various times throughout the day and for a multitude of reasons. These motivations may include seeking respite from

fatigue, engaging in recreational activities, or observing others partake in them, engaging in quiet activities such as reading or working, enjoying fresh air, fostering romantic connections, attending scheduled appointments, encountering familiar acquaintances, connecting with the natural environment, and frequently, observing and interacting with fellow individuals. When a park exhibits a high degree of visual homogeneity and lacks distinctiveness in its many components, it may lead to a repetitive experience for visitors, hence diminishing the incentive for repeated visits.

Despite the first perception of parks as mundane and standardized in design, it is important to recognize that the incorporation of elements such as eye-level mobility, diverse groupings of trees at varying heights, and the presence of varied apertures may contribute to the complexity and aesthetic appeal of a park. In summary, the presence of diverse elements inside parks contributes to their success by enhancing use rates and creating an impression of intricacy.

Centering is another crucial aspect to consider while designing parks. In the context of a well-conceived little park, the identification of a central location or focal point is facilitated by the park's thoughtful design. This location may serve as a point of cessation, a point of temporary pause, or a point of convergence. Individuals endeavor to establish a central facility inside a park; but, on some occasions, this objective proves unattainable. The absence of visual differentiating factors within a park, as discussed in the context of complexity, renders the notion of a central point indefinable. The central point of a park does not always coincide with its geometric midway. The center may be constituted by a wall of certain dimensions, a fountain pool that is simply identified, or the perimeter of a sculpture. However, the most prominent focal points inside parks are the activity hubs that attract large gatherings of people. The scene is filled with individuals engaged in various activities, including guitar players, singers, toddlers energetically running around, spontaneous dancers, individuals basking in the sun, conversationalists, individuals seeking attention, photographers capturing moments, visitors exploring, and the surrounding audience observing these interactions.

A park that exhibits effective design principles in harmony with the **movement of the sun** is considered a successful park. The presence of unobstructed sunlight during winter and the provision of shade by trees or structures during summer are indicative of a well-designed park.

While there is a prevailing belief that tall structures obstructing sunlight should be avoided, **the enclosure** of buildings around the park has significance as they serve as an enticing factor for park visitation. The park's overall shape is influenced by the surrounding structures, which significantly contributes to the park's visual impact on the cityscape. The impact of the park extends beyond its physical structures since the surrounding environment plays a crucial role in shaping its use. Simultaneously, the park itself influences its immediate vicinity.

In accordance with the previously perspectives, it may be argued that social contact plays a vital role in determining the effectiveness of park design, as highlighted by both Jacobs and Gehl in their respective analyses of urban environments and human behavior. This interpretation suggests that a park should provide a wide range of activities, indicating a need for variety. However, this diversity should not be uniform; instead, it should be seen within linked places.

Chapter 3

From Private Garden to Public Park

The notion of "urban green" has garnered noteworthy consideration in the realm of urban planning and environmental dialogue in recent times. The concept of urban green pertains to the incorporation of natural features, including but not limited to parks, gardens, and green spaces, into the constructed landscape of urban areas. Urban green spaces are crucial elements in improving the standard of living in urban environments.

The benefits provided by them encompass a wide range of advantages, spanning ecological, social, and psychological domains. From an ecological perspective, the presence of green spaces within urban areas has been found to make significant contributions to the conservation of biodiversity, purification of air, and regulation of temperature. These benefits serve to mitigate the negative impacts of climate change (Kabisch & Haase, 2013; Thompson et al., 2012; Van den Berg et al., 2015).

From a social perspective, these spaces provide opportunities for leisure, exercise, and communal involvement, thereby promoting social unity and enhancing the welfare of inhabitants (White et al., 2019). In addition, research has demonstrated that the presence of green spaces in urban areas can have a positive impact on mental well-being through stress reduction, cognitive enhancement, and the provision of opportunities for relaxation and contemplation (Van den Berg et al., 2015). Incorporating urban green spaces into urban planning strategies is essential for establishing sustainable and habitable cities that foster the physical and mental health of their residents (James et al., 2015; Roe et al., 2013).

The evolution of urban green space throughout history has been a fluid phenomenon that has been shaped by various factors such as cultural norms, urbanization habits, and urban planning principles. Across time, urban green spaces

have experienced substantial transformations in their function, layout, and availability. The incorporation of green spaces within urban areas has been a fundamental aspect of modern civilizations, adapting to respond to transforming social norms, urban planning approaches and environmental consciousness. Throughout the course of history, these areas have functioned as crucial frameworks for individuals to engage with the natural environment, cultivate social unity, and enhance their overall state of health and wellness. The significance of urban green spaces in fostering sustainable, equitable, and habitable communities that prioritize both social interaction and environmental conservation remains pivotal, particularly as cities expand and encounter novel obstacles. Urban green spaces are crucial in facilitating social interaction and promoting community engagement in urban settings. These areas function as gathering places, fostering social interactions, and promoting cross-cultural connections among individuals from varying backgrounds. Urban green spaces facilitate social interactions among individuals, fostering opportunities for networking, socializing, and relationship-building by offering a communal public area.

The utilization of parks, gardens, and green spaces for recreational activities, picnics, sports, and cultural events fosters social unity and a sense of community belonging among individuals. Moreover, urban green spaces can function as venues for community endeavors, including farmers' markets, gardening associations, or open-air concerts, which additionally foster social engagement and involvement. The previously mentioned social interactions not only serve to strengthen social ties but also make a significant contribution to the vitality and dynamism of urban localities. Consequently, the existence of appropriately planned and easily reachable green spaces in urban areas is crucial in promoting social engagement, reinforcing communal bonds, and establishing a feeling of belonging in such settings.

Over the past few years, there has been an increasing focus on urban green spaces that are environmentally friendly and inclusive, with a priority on ecological restoration, biodiversity conservation, and community engagement. The evolution of urban green spaces throughout history is indicative of the changing societal priorities and values. This underscores the significance of modifying green spaces to cater to the requirements of current and future urban inhabitants (Ahern, 1995; Marcotullio et

al., 2014; Tzoulas et al., 2007).Throughout history, urban green areas, such as parks, have served as crucial spaces for individuals to engage with nature and one another. The development of these verdant areas has undergone a transformation over the years, mirroring shifts in societal norms, urban design methodologies, and ecological consciousness.

Over the past few decades, urban green spaces have undergone modifications to cater to the changing requirements of local populations. There has been a changing emphasis towards the promotion of healthier lives, festivals, and a variety of recreational activities. Contemporary parks have integrated various facilities, including athletic fields, recreational areas for children, pedestrian pathways, and open-air venues for artistic presentations. Social involvement has emerged as a pivotal element, wherein inhabitants are involved in the design, programming, and upkeep of parks, thereby promoting a sense of belonging and social interaction (Mohammadi Tahroodi & Ujang, 2022; Xu et al., 2019; Loughran, 2014a). The idea that urban green spaces should be open to the public has a significant influence on these areas, significantly influencing the way they are planned and used, as well as the overall effect they have on the surrounding urban environment. The term "publicness" refers to the ease with which these locations may be entered by members of the public, as well as their capacity to welcome and include all members of the community. The creation and maintenance of urban green spaces with an emphasis on public accessibility can promote a sense of inclusivity, encourage social interaction, facilitate community involvement, and engender a feeling of connectedness (Kohout & Kopp, 2020; Saldivar-Tanaka & Krasny, 2004).

Publicness encourages inclusion and removes obstacles to participation by guaranteeing equal access to urban green areas for people of different ages, socioeconomic backgrounds, and levels of physical ability. Publicness, on the other hand, influences the programming and activities that take place inside urban green spaces. This has the effect of fostering a vast array of recreational, cultural, and educational possibilities that are designed to appeal to a variety of interests and preferences. In addition, the presence of public spaces within urban green areas promotes the development of unplanned social interactions, which in turn enhances social ties and reinforces communal relationships. The phenomenon promotes social

interaction, exchange of experiences, and participation in events that enhance the vitality and dynamism of metropolitan communities. In general, placing emphasis on the public nature of urban green spaces in their design and administration amplifies their capacity to function as democratic, easily accessible, and captivating settings that augment the urban encounter for all inhabitants.

3.1 Agricultural & Spiritual Growth

This section provides an overview of green areas throughout the Ancient, Classical, and Medieval periods. The green areas have been categorized based on the primary activities that took place throughout each respective historical period. Throughout three separate historical time periods, agriculture served as the primary form of agricultural, while green spaces were intentionally included in the vicinity of religious sites. A hierarchical structure may be seen in the use of green spaces over these three distinct time periods.

3.1.1 Antique Period (3000 BCE – 500 BCE)

Throughout the course of human history, one of the distinguishing characteristics of civilized human society has been the complex interplay that exists between urban settlements and the natural environment. During ancient times, urban centers aimed to incorporate natural elements into their cityscape by establishing verdant gardens and parks. The urban green areas in ancient societies were not only utilized as areas of relaxation and aesthetic pleasure, but also held notable cultural, social, and symbolic significance.

Upon its initial settlement, **Mesopotamia** consisted of both marshy regions abundant in vegetation and arid, level expanses. The denizens of the area-initiated irrigation initiatives to farm arid terrain and drain marshy areas, thereby establishing optimal circumstances for both agricultural pursuits and human habitation. The fecund wetlands not only furnished supplementary means of sustenance but also functioned as sources of fuel. Although hunting originated as a means of subsistence, it subsequently transformed into a regal pastime (Bowe, 2015).

The existence of hunting parks in ancient Mesopotamia is predominantly attested through carved reliefs and historical documents that chronicle the valorous exploits of their proprietors. Regrettably, there is a dearth of plans or archaeological artifacts pertaining to these parks. During the initial millennium BC, Assyrian monarchs established expansive hunting reserves in the vicinity of their urban centers. King Tiglath-pileser I, who reigned from 1115 to 1077 BC, claimed to have procured trees from the lands he subjugated and transplanted them in the parks of Assyria, thereby demonstrating the nascent beginnings of botanical and zoological gardens. During the reign of King Ashurnasirpal (833-859 BC), he facilitated the provision of plant and animal collections for the reconstructed city of Kalakh. Similarly, King Sargon II of Assyria (721-705 BC) established parks in collaboration with the development of his new capital at Khorsabad.(Turner, 2005).

The examination of literary and archaeological documentation pertaining to ancient Mesopotamian cities has revealed that the arrangement of structures was centered on internal courtyards. The presence of tree pits has been detected both inside and in the vicinity of the temple dedicated to the deity Ashur, which was erected during the reign of Sennacherib (705-681 BC). Modest dwellings commonly featured diminutive courtyards, whereas grandiose palatial structures exhibited expansive courtyards. The cities of Sumer were distinguished by the prevalence of religious temples as the primary architectural feature, whereas the cities of Assyria were centered around royal palaces. During the second millennium BC, palatial structures underwent fortification measures that involved the construction of defensive walls encompassing diverse chambers and open spaces. Certain courtyards served as venues for formal events, whereas others showcased decorative fountains and floral arrangements designed for the pleasure of women and children. Gardens oriented towards the exterior were also erected. The Hanging Gardens of Babylon are widely recognized as the most distinguished palace gardens of their kind (Dalley, 1993; Reade, 2000).

As per historical records, the Hanging Gardens were architecturally planned as a quadrilateral edifice, featuring a measurement of four hundred feet on each of its sides. The structure in question was enveloped by a series of consecutive tiers of

curved vaults that were constructed atop cuboid containers. The soil-filled hollow boxes facilitated the growth of the largest trees(O'Connor, 2000). The construction of the floors, vaults, and arches was executed through the utilization of baked brick and bitumen. The rooftop was accessed by stairs and spiral screws. Water was conveyed to the rooftop through the implementation of rotating screws and wooden pipes, which drew water from the Euphrates River in a continuous manner. The Hanging Gardens were positioned on the incline of an acropolis and were encompassed by a barrier while being upheld by arched vaults. The enclosed area is comprised of various elements including pavilions, steps, trees, flowers, vegetables, and flowing water channels. The gardens were primarily designed for recreational strolls or relaxation in gazebos to appreciate the ambiance and scenery. In contrast to the palace courtyards that were utilized as open-air areas for culinary activities and meal consumption, the gardens were intentionally created to facilitate repose and introspection. Various types of fruits and vegetables were cultivated in the gardens, with a preference for specific fruits over others. The Hanging Gardens of Babylon bore resemblance to the notion of the Garden of Eden and were distinguishable from the urban gardens of ancient Egypt (Fallahi et al., 2020a). In Persian paradise gardens, pavilions subsequently emerged as pivotal elements. The Mesopotamian traditions of utilizing open areas for hunting and gathering of flora and fauna, cultivation of preferred fruits, and arranging processions have endured into contemporary times (Bowe, 2016; Dalley, 1993; Fallahi et al., 2020b).

During ancient times, the populace held a significant regard for urban green spaces and gardens. These were meticulously nurtured areas that facilitated a link to the environment amidst the busy urban hubs. Urban green spaces, such as the Hanging Gardens of Babylon and the gardens of Pompeii, were intentionally created to showcase the advanced capabilities and allure of ancient civilizations (Faghih & Sadeghy, 2012; Mahmoudi Farahani et al., 2016).

During the ancient Greek era, public gardens such as the Academy in Athens and the Minoan gardens of Knossos served as venues for intellectuals, scholars, and citizens to convene and participate in intellectual activities, discourse, and recreational strolls. The gardens in question possessed not only visual appeal but also functioned as spaces for communal engagement and intellectual discourse. The symbols were

representative of the peaceful and mutually beneficial cohabitation of humans and the environment, which exemplified the profound admiration that the ancient Greeks held for the natural realm (Bowe, 2004, 2010). Likewise, during the era of ancient Rome, the presence of gardens and parks played a significant role in the urban lifestyle. The Villa d'Este located in Tivoli is a prime example of the Roman culture's admiration for intricate green areas, featuring multi-level gardens, ornate fountains, and sculptures. The gardens served not only as areas for leisure and introspection, but also as locations for communal assemblies, festivities, and governmental functions. These locations provided a means for individuals to retreat from the bustling city environment and reestablish a connection with the natural world, promoting a feeling of contentment and peacefulness (Bowe, 2004; Turner, 2005)

The notion of the "paradise garden" thrived during the era of ancient Persia. Enclosed gardens, commonly situated in palace complexes, were intricately planned, and decorated with abundant flora, aquatic features, and structural components. The gardens of paradise were emblematic of a terrestrial manifestation of paradise, eliciting a feeling of concord and tranquility. These locations served as sanctuaries and sources of enjoyment, providing respite for leaders and aristocrats who sought comfort in the splendor of the natural world (Faghih & Sadeghy, 2012).

The green spaces and gardens in ancient urban areas served a purpose beyond aesthetic embellishment, as they held significant cultural and symbolic connotations. The artifacts exhibited the principles, convictions, and ambitions of past societies, showcasing the inclination to incorporate the natural environment into the urban landscape. The green spaces offered both visual enjoyment and functioned as areas for communal engagement, cognitive endeavors, and the fostering of a communal identity. In order to comprehensively examine the historical importance, design tenets, and societal functions of urban green spaces and gardens in antiquity, it is necessary to investigate their assimilation into the urban landscape of ancient cities, the customary practices and events that took place within them, and their lasting impact on the development of urban design and planning. Through an analysis of the historical import of urban green spaces and gardens in past civilizations and their lasting influence on present-day urban environments, our objective is to reveal their effect on the advancement of ancient societies and the progression of these areas.

In **Egypt**, while human settlements with green spaces resembling gardens have been documented as early as 6000 BC, the first recorded instances of intentionally designed gardens can be dated back to 2000 BC. Upon analysis of Egyptian gardens, it can be observed that the progression of garden development began with household gardens, followed by palace gardens and temple gardens. The initial extensive gardens were under the ownership of monarchs. The utilization of mats and vines to provide shading and the incorporation of water features in the middle of the garden were common practices in designing open spaces. A significant number of gardens were equipped with wells, and the inclusion of water features served a dual purpose of enhancing the visual appeal of the garden while also providing a practical function of irrigating the plants and reducing the ambient temperature. The gardens of Egyptian houses bore a resemblance to contemporary courtyard gardens that are prevalent in modern times (Parodi, 2010; Ruggles, 2008; Turner, 2005).

The gardens of palaces were comparatively more extensive than those of residential areas, yet they served analogous purposes. These spaces functioned as locations for formal gatherings, social events, and personal accommodations. The temples were embellished with parade grounds that were decorated with pools and flower beds. The peripheries of temple complexes were also subject to landscaping as venues for festivals, offering a glimpse into the origins of contemporary streets and urban spaces. The precincts of temples were encompassed by a variety of horticultural features such as orchards, vegetable gardens, vineyards, ornamental gardens, and water bodies. Animals that held symbolic significance were also housed within the gardens of temples and palaces. The garden entrances were observed to have live lions that were restricted within cages, whereas animal sculptures were strategically placed in different sections of the garden. Palace gardens were known to house a variety of fauna, including but not limited to monkeys, elephants, and giraffes (Akkerman, 2019; Turner, 2005). The ancient Egyptian garden tradition underwent a development that spanned over 3000 years and encompassed a range of features. These included sacred lakes and groves, ceremonial paths, peristyle courtyards adorned with fresco decorations, columns that drew inspiration from plant forms, terracing, rectangular pools, walled plant beds, the symbolic utilization of plants, stone, and terracotta vessels, hanging pergolas, as well as plant and animal gardens (E. Clark, 2010; Jani et al., 2015).

During ancient times, parks served various purposes and were crucial in shaping the social, cultural, and recreational aspects of past civilizations. The verdant areas, frequently situated in or near metropolitan areas, functioned as crucial communal spaces, providing a variety of recreational pursuits and promoting social connections among individuals of varying origins.

The incorporation of gymnasiums, or public spaces for physical exercise and training, was a crucial aspect of urban design in ancient Greece. An exemplary instance is the Lyceum located in Athens, Greece, where people would participate in bodily activities, philosophical dialogues, and communal interactions (Bowe, 2009, 2010). The gymnasiums were designed to accommodate various physical activities such as running, wrestling, and discus throwing. Additionally, they were equipped with shaded walkways and seating areas to facilitate intellectual conversations and social gatherings. These areas facilitated bodily wellness, cognitive endeavors, and social cohesion (SYMES, 2016).

In the same way, the ancient city of Rome featured vast green spaces referred to as "horti," which functioned as hubs for leisure and amusement. The Horti Sallustiani, exemplified an exquisite landscape architecture, comprising of aesthetically pleasing gardens, walkways, and edifices, catering to diverse leisure pursuits. The parks served as a venue for citizens to partake in leisurely activities such as walking amidst the verdant surroundings, participating in intellectual discourse, and relishing in various forms of entertainment. Horticultural spaces served as a platform for social interaction and frequently functioned as venues for political and cultural gatherings, underscoring the significance of parks as centers of communal involvement (Bowe, 2009; Turner, 2005).

The notion of the "paradise garden" held a notable position in urban planning during the era of ancient Persia. The Gardens of Babylon represent a noteworthy illustration of the enclosed parks that are commonly situated within palace complexes (Dalley, 1993; Reade, 2000). The gardens were meticulously designed, incorporating intricate irrigation systems, fruit-bearing trees, and fragrant floral arrangements (Stevenson, 1992). The gardens of paradise served as areas for recreational activities, reflection, and social engagement. Historically, rulers have organized elegant dinner parties and festivals within the confines of these parks, gathering members of the

aristocracy, intellectuals, and creatives to partake in merriment and discourse, thereby fostering social unity and intellectual exchange. In addition to their social and recreational functions, parks during ancient times frequently served as sites of religious and ceremonial importance. The temple complexes of ancient Egypt frequently comprised of extensive courtyard gardens that functioned as sanctified areas for religious ceremonies and congregations. The Temple of Karnak located in Luxor is an exemplary illustration of a sacred space where individuals congregated for the purposes of religious devotion, contemplation, and collective rituals (Turner, 2005). The gardens offered a serene atmosphere conducive to fostering spiritual connections, thereby augmenting the religious encounter and strengthening the social cohesion of the historic Egyptian populace.

The Epic of Gilgamesh, an ancient Akkadian literary work, contains allusions to gardens and groves, attesting to their historical significance. The epic narrative chronicles the tale of Gilgamesh, a monarch of martial prowess who dwelt in a metropolis where a substantial expanse of the terrain was allocated for horticulture and arboriculture. The gardens were comprised of courtyards in close proximity to residential structures or enclosed spaces situated at the periphery of the settlement (Kluckert, 2000).

In the epic narrative, Gilgamesh forges a companionship with Enkidu, and jointly they undertake a mission to challenge Humbaba, the custodian of the cedar woodland. The forest is characterized by linear thoroughfares and meticulously constructed walkways (Turner, 2005). This grove bears resemblance to the sacred groves and shrines that were present in ancient civilizations such as Egypt, Greece, and Rome (Fallahi et al., 2020a).

To summarize, parks during ancient times were versatile areas that fulfilled various purposes and promoted social interactions among members of historic communities. Throughout history, various green spaces such as the gymnasiums of ancient Greece, the horti of ancient Rome, and the paradise gardens of Persia have served as venues for a range of activities including physical exercise, intellectual discourse, cultural events, and religious practices. Historically, parks served as communal spaces where individuals from diverse backgrounds could convene,

partake in a range of recreational pursuits, and establish interpersonal relationships, thereby strengthening communal bonds and augmenting the dynamic social tapestry of antiquated urban centers.

The **Alhambra Gardens**, situated in the city of Granada, Spain, are widely recognized for their exceptional architectural layout and significant historical value. The gardens that constitute a fundamental component of the Alhambra palace complex have undergone transformations throughout the ages, manifesting the impact of diverse civilizations and fulfilling diverse purposes. The objective of this study is to investigate the design, arrangement, purposes, and components of the Alhambra Gardens, with a specific emphasis on their contribution to enabling communal engagement throughout history until the present day (Hussain, 2014; Makhzoumi, 2002). The Alhambra Gardens display a purposeful and thorough arrangement, demonstrating the complex organization and precision that are typical of Islamic architecture. The botanical gardens are compartmentalized into discrete sections, with each segment fulfilling a particular function. The Generalife, renowned for its botanical and architectural features, comprises a series of interconnected walkways, courtyards, pavilions, fountains, and terraces (Ruggles, 2021). The Generalife boasts a prominent central feature known as the Patio de la Acequia, which is a lengthy rectangular courtyard that comprises a canal bordered by flowerbeds and cypress trees. The garden's design integrates a network of water channels that fulfill utilitarian and ornamental objectives, generating a calming and invigorating ambiance (Makhzoumi, 2002).

The Alhambra Gardens have served various functions over time, adapting to the changing needs and preferences of the inhabitants of the palace complex throughout history. The gardens were originally conceptualized as a sanctuary and location for relaxation intended for the Nasrid leaders of the Emirate of Granada (Hussain, 2014; Satoh, n.d.). These areas functioned as secluded spaces intended for the purposes of unwinding, introspection, and leisure. The gardens served as a significant means of demonstrating the authority and affluence of the ruling family, exhibiting their lavishness and magnificence. Furthermore, the gardens fulfilled agricultural functions by supplying sustenance to the inhabitants of the palace through the presence of

orchards and cultivation zones (Carbonero & Fernández Nieto, 2021a; Ruggles, 2008; Smith & Bugni, 2006).

The Alhambra Gardens were thoughtfully planned to promote social engagement and enable collective pursuits. The incorporation of expansive courtyards, exemplified by the Court of the Lions, facilitated social gatherings and occasions, furnishing a platform for cultural exhibitions, musical performances, and poetic recitations (Abdul Latiff & Mohd Yaman, 2017; Rostami et al., 2016; Ruggles, 2006). These areas facilitated social relationships, academic discourse, and the establishment of partnerships among leaders, academics, and creatives. The water features present in the gardens, such as fountains and pools, provided a revitalizing ambiance for relaxed walks, promoting social interaction and companionship. The deliberate arrangement of pathways and walkways facilitated mobility and socialization, establishing links between various sections of the botanical gardens and enabling guests to investigate and interact with their environment.

Presently, the Alhambra Gardens persist in enchanting tourists hailing from various parts of the globe, providing a window into the opulent past and cultural legacy of the locality. These areas continue to be regarded as aesthetically pleasing and serene, drawing the attention of both visitors and residents. The gardens offer a chance for communal engagement and intercultural communication, as individuals from varying backgrounds convene to admire the impressive structural design, verdant foliage, and creative components. The gardens function as a medium for cultivating cross-cultural comprehension and discourse, as well as aiding in the safeguarding and advancement of collective heritage, by means of supervised excursions, instructional initiatives, and communal gatherings.

The Alhambra Gardens serve as a demonstration of the adept artistry and deliberate design principles employed by their makers. The intricate plan, spatial organization, and functional elements of various structures have been instrumental in enabling social interaction over the course of history. Beginning as a secluded haven for monarchs, gardens have evolved into a place of great cultural import, where people can come together to foster connections, acquire knowledge, and admire the aesthetic splendor of earlier times (Åsen, 2021; Hussain, 2014). Historically, the Alhambra

Gardens were predominantly conceptualized as a sanctuary and emblem of authority for the Nasrid monarchs. These spaces functioned as secluded areas for repose and introspection, offering a peaceful retreat amidst the lively palace compound. The gardens exhibited the lavishness and magnificence of the governing dynasty, accentuating their position and power (Ruggles, 2006).

Currently, the Alhambra Gardens have undergone a transformation into a cultural heritage site that has garnered significant attention from tourists. The gardens currently function as a public space, providing visitors with an opportunity to explore and appreciate their historical significance and aesthetic appeal, while still maintaining a tranquil atmosphere. These sites have evolved into a space where individuals from diverse cultural backgrounds convene to partake in and gain knowledge of the opulent Islamic architectural and horticultural customs (Carbonero & Fernández Nieto, 2021a).

The Alhambra Gardens have historically served as a pivotal space for fostering social engagement and aristocratic culture. The provision of ample courtyards, exemplified by the Court of the Lions, served as a space for congregations, cultural exhibitions, and scholarly discourse. The opulent lifestyle of the ruling class was complemented by the indispensable presence of gardens as a scenic setting (Satoh, n.d.). Presently, the Alhambra Gardens serve as a venue for social interaction, albeit in a distinct milieu. The gardens serve as areas for communal involvement and intercultural interaction. The Alhambra complex offers visitors the opportunity to engage in educational programs, guided tours, and community events, which facilitate learning about its history, art, and architecture. The gardens have evolved into arenas for fostering intercultural comprehension, where individuals from diverse backgrounds can congregate and acknowledge their common legacy (Francis & Hester, 1990; Lane, 2020).Historically, the Alhambra Gardens fulfilled utilitarian purposes by providing space for cultivation and nourishment. The cultivation of fruits, vegetables, and other agricultural products was facilitated by orchards, cultivation areas, and water channels, which served as sources of sustenance for the palace residents (Hussain, 2014). Although the utilitarian purposes of the Alhambra Gardens have waned over the years, they continue to exhibit a high standard of horticultural prowess. The gardens are upheld with great attention to detail, ensuring the

conservation of the plant species and design elements that hold historical significance. Presently, the focus is on preserving the authentic arrangement and guaranteeing the durability of the gardens for forthcoming cohorts to value and relish (Hussain, 2014).

Ultimately, the spatial characteristics of the Alhambra Gardens have undergone a transformation from a historically exclusive sanctuary and emblem of authority to a contemporary communal legacy and destination for visitors. There has been a transition from exclusive courtly assemblies to inclusive community involvement, which has fostered cultural interchange and intercultural comprehension. The utilitarian aspects pertaining to agriculture have been supplanted by the pursuit of horticultural proficiency and endeavors towards preservation. Over the time, the Alhambra Gardens have undergone modifications and transformations, yet have managed to retain their significance and appeal as revered areas that persist in fascinating and motivating their guests. The Alhambra Gardens possess considerable cultural and historical importance, alluring tourists who are fascinated by their distinctive architectural and botanical characteristics. Consequently, the social exchange within these gardens frequently centers on the admiration and discourse of the location's legacy, cultivating communication and communal encounters that are deeply entrenched in the past.

Contemporary parks primarily prioritize the provision of recreational areas for the neighboring community, although some may possess historical significance. The parks offer a variety of social interactions, which span from informal gatherings and picnics to structured events and activities, such as musical performances or athletic competitions. The emphasis is primarily on contemporary leisure activities and communal involvement, rather than the appreciation of historical aspects. The Alhambra Gardens have gained significant popularity as a favored tourist spot, drawing in a diverse range of visitors from various parts of the globe. The gardens facilitate social interaction among visitors, who engage in cultural exchange by sharing their experiences with one another. While there may be some level of community involvement, many interactions are shaped by the transient nature of tourism.

In contrast, modern parks typically experience higher visitation rates from nearby inhabitants. The parks serve as a hub for social interaction, where individuals engage in community bonding, recreational pursuits, and establish connections with their neighbors, fostering the development of relationships. The establishment of a sense of belonging and familiarity within the local community has the potential to augment social interactions and foster a more enduring social fabric.

Guided tours and educational programs are integral components of social interaction at the Alhambra Gardens. Guided tours led by well-informed guides are available for visitors, offering prospects for education, involvement, and collective deliberations. The organized experiences provided by the institution promote social engagement among visitors who possess similar interests.

Modern parks frequently provide limited guided experiences, yet they may still provide educational programs or workshops that focus on subjects. In such settings, social interaction is often characterized by a greater degree of self-direction, as visitors tend to participate in activities or form groups based on shared hobbies or interests.

The influence of technological advancements on social interaction can be observed in both the Alhambra Gardens and modern-day parks. In contemporary times, it is commonplace for individuals to disseminate their personal encounters through various social media channels, including but not limited to uploading images or broadcasting live events. The utilization of digital connectivity has the potential to expand social interaction beyond the confines of physical space, enabling virtual conversations, shared experiences, and the establishment of online communities.

In general, despite divergent historical backgrounds and objectives, the Alhambra Gardens and modern parks afford prospects for communal engagement. The Alhambra Gardens provide a distinctive amalgamation of cultural recognition, legacy, and tourism-oriented engagements, while modern parks prioritize regional involvement, communal development, and recreational pursuits. Both environments derive advantages from the progressive impact of technology, which facilitates improved connectivity and the possibility of social interaction to surpass geographical limitations.

3.1.2 Classical Period (500 BCE – 500 CE)

During this time, as towns grew, a greater concern for security arose, prompting nobility to build palaces beyond the city walls. The early structure of European towns was built around these palace complexes, which were surrounded by residences on the periphery, along with gardens, farms, and nearby groves or woods. Palace courtyards functioned as outdoor areas connected to the residences, whilst the countryside beyond the city limits was lush territory used for producing fruits, vegetables, and flowers. Men preferred hunting in forests and hilly areas, while ladies preferred to spend their time in indoor gardens and courtyards. The significance of sacred forests, altars, graves, caverns, and water sources was immense.

Various unique characteristics arise within the framework of traditional gardens. Springs and caverns were highly esteemed for their rejuvenating, clear, and stimulating waters, which were considered a crucial aspect of admiration. The aqueous element possessed a distinct allure and was frequently regarded as having a mystical essence. Open-air altars functioned as areas designated for the purpose of offering, where individuals would present their offerings. In order to ensure the preservation of the valuable gifts that were bestowed, treasuries and statues were constructed as a means of safeguarding these precious tokens. The need for safeguarding sculptures led to their placement in enclosed areas, thereby leading to the emergence of temples. In order to augment security measures, physical barriers were erected along the borders, thereby strengthening the demarcation lines. Outside the perimeters of fortified settlements, arboreal specimens of religious significance underwent a metamorphosis into serene sanctuaries for leisure and corporeal exertion. The appeal of these gardens extended beyond their tangible characteristics, as they served as meeting points for intellectuals and academics who sought refuge in the embrace of nature while contemplating the complexities of the natural world.

This development took place when the Homeric Age gave way to the Classical Age. The English landscape garden, which served as the inspiration for contemporary nature reserves and national parks, replaced the idea of the holy grove more than two millennia later(Kluckert, 2000).

Sacred groves resembled contemporary athletic fields or academic buildings. Within the groves, wrestling schools were created, and competitions were held. Along with shelters, bathrooms, and private courtyards, stadiums were constructed for these races. Open colonnades provide shade in the summer and exercise possibilities in the winter. These gyms functioned as training grounds for both moral and physical growth.

People wanted to link their fields and gardens with city temples and gymnasium areas throughout the Hellenistic era when the art of garden craft started to evolve. This kind of home design strongly inspired the Romans, who used it over their whole empire. The Hellenistic world saw the rise of large towns with gardens, such as Byzantium, Syracuse, Naples, Marseilles, Pergamon, Alexandria, and Antioch(Haynes, 2013; Turner, 2005).

Garden design was made into a pan-European art form by Roman culture. The famous Roman thoroughfares aided in the dissemination of knowledge across the Empire. Roads around the city were bordered with what looked like holy groves of graves. In every location where they were in charge, Roman emperors-built gardens. There are three types of Roman gardens: city gardens, villa gardens, and palace gardens (P. Clark et al., 2017; Parsons & Schuyler, 2002).

Palace complexes were characterized by their tight ties between the home and grounds. Large open courtyards with fountains and flowerbeds functioned as outdoor halls, while porticoes and columns linked them to the rooms. In order to create a "imaginary landscape garden" that suggested the countryside inside an urban context, these royal gardens included lakes, open landscapes, trees, sculptures, and other buildings .

The emperors had rural residences that resembled specialized Greek temples and gymnasiums, and villa gardens were prevalent. Even though it has been robbed throughout the years, Hadrian's Villa at Tivoli still serves as a magnificent example. It had a sizable entertainment complex with a museum building, a sculpture park, a sports field, a dining hall, and a religious grotto with water elements. The nobles, not the military or the peasants, occupied these costly and opulent places. Villa gardens

were categorized according to their purpose rather than their location, with urban villas providing exquisite gardens and spacious living quarters while country villas offered(Bowe, 2004).

In ancient cultures, parks and gardens were very important because they provided venues for a variety of activities and promoted social interaction. These well planned and thoughtfully positioned green spaces inside urban centers were crucial to the cultural, recreational, and social components of ancient civilizations. The Academy in Athens, Greece, is a renowned illustration of a park from the Classical Era. The Academy, which Plato founded, had a garden where people might gather to exchange ideas and socialize in addition to being a place for study. For academics and students, the garden offered a peaceful and reflective atmosphere where they could pursue their intellectual interests, share ideas, and test one another's perspectives. It promoted a feeling of community and friendship among people who congregated in its serene surroundings.

The Villa Borghese Gardens in ancient Rome are a shining illustration of the recreational and cultural purposes of parks. These gardens have sizable green areas, statues, fountains, and architectural elements. They were developed during the Renaissance era but were influenced by classical concepts. The Villa Borghese Gardens attracted people from all socioeconomic strata as a location for leisurely strolls, outdoor concerts, and social events. The park served as a venue for cultural engagement, social connection, and the enjoyment of art and nature, raising the standard of living in ancient Rome (O'Quinn, 1999; Platt & Morgan, 1993).

Another outstanding illustration may be found at the ancient Persian metropolis of Persepolis. The Persian civilization's artistic talent and architectural skill were on display at the Terrace Gardens, which were part of the royal complex. These gardens created a breathtaking setting with their well-planned terraces, water channels, and carefully selected vegetation. The Terrace Gardens were used for royal events, feasts, and social gatherings in addition to being a representation of grandeur and authority. They provided chances for the elite to socialize, celebrate, and participate in cultural exchange, which helped to firmly establish social structures and the links that bound the Persian empire.

Parks typically had religious purposes in the Classical Period in addition to their recreational and cultural purposes. This relationship between parks and spirituality is best shown by the Hanging Gardens of Babylon, one of the Seven Wonders of the Ancient World. The Hanging Gardens were said to have been a lush, verdant sanctuary, but its precise nature is still up for discussion. These gardens, which were intended to inspire awe and devotion, were seen as an homage to the gods. They provided a feeling of interconnectedness between the heavenly and earthly worlds by acting as locations for rituals, worship, and spiritual reflection.

In conclusion, parks served a variety of purposes throughout the Classical Period, from leisure and religious rites to education and cultural involvement. Examples of how parks and gardens were essential to the social fabric of ancient cultures include the Academy in Athens, the Villa Borghese Gardens in Rome, the Terrace Gardens in Persepolis, and the Hanging Gardens of Babylon. The vitality and richness of ancient civilizations were aided by these green spaces, which also allowed for social interactions, cultural festivities, and spiritual connections.

3.1.3 Medieval Period (500 – 1500)

During the medieval period, gardens and parks played a crucial role as fundamental constituents of society, serving as key contributors to its social, cultural, and economic structure. The green areas in question had diverse applications, serving not only utilitarian objectives like sustenance generation and the growth of therapeutic flora but also affording chances for leisure, communal engagement, and emblematic demonstrations of power. The medieval environment was significantly shaped by the presence of individuals, which fostered interactions and had a profound impact on daily life.

In the European Middle Ages, a time characterized by a degree of stability and economic growth, there was a growing trend towards the creation of magnificent gardens. These gardens were situated in both urban and rural environments, as well as within the fortified perimeters of castles (Skinner & Tyers, 2021). The objects in question were imbued with profound religious connotations, as they were perceived

to mirror the ethereal splendor of the celestial realm. Gardens imbued with Christian motifs were notably conspicuous, functioning as designated areas for reflection and self-examination. The design frequently conformed to geometric patterns, with a specific focus on square forms and mathematical accuracy. The intentional methodology highlighted the perceived correlation between the small-scale environment of the garden and the vast expanse of the universe.

In addition to the spiritual connotations associated with them, gardens in medieval times performed crucial utilitarian tasks as well. They functioned as productive grounds for raising a range of plants, including fruits, vegetables, and medicinal herbs, in order to meet the essential requirements of the community for nourishment and medical treatment. Individuals were able to relax and find peace of mind among the splendor of nature thanks to the fact that these green spaces offered a place of refuge as well as opportunity for recreation. The gardens evolved into settings for social interaction, acting as catalysts for get-togethers and providing a fertile ground for the development of connections between individuals hailing from a variety of different backgrounds.

Moreover, gardens possessed emblematic importance, particularly concerning governance and hegemonic structures. These objects functioned as symbolic depictions of affluence and status, exhibiting the opulence of castle proprietors, aristocratic lineages, and ecclesiastical establishments. The gardens were meticulously designed, and the elements were carefully arranged, which served as a reflection of the owners' status and influence. This practice reinforced social hierarchies and strengthened connections within the medieval aristocracy.

To summarize, during the medieval period, gardens and parks held significant importance in society, influencing its social interactions, cultural customs, and economic prosperity. The spaces in question were designed to incorporate religious symbolism, practical functionality, and impressive visual aesthetics, resulting in an atmosphere that facilitated introspection, nourishment, recreation, and social interaction. The medieval landscape was significantly influenced by the presence of individuals, which not only enhanced their daily lives but also reflected the values, aspirations, and ideologies of that era.

The gardens in medieval religious institutions, such as monasteries, served a variety of purposes, including practical and spiritual dimensions. The Cloister Garden situated in the French abbey of Mont Saint-Michel serves as a noteworthy demonstration of this concept (Åsen, 2021). The primary function of monastic gardens was to cultivate necessary sustenance, encompassing a diverse range of fruits, vegetables, and medicinal plants, to cater to the dietary and medicinal requirements of the monastic community (Taylor, 2000). Nevertheless, these gardens possessed a more profound connotation as areas for self-reflection and religious comfort for the monastic community. The serene ambiance of the monastic gardens offered a favorable setting for introspection, mindfulness, and finding comfort in the arms of the natural world. Monastic gardens were often designed to improve the atmosphere of sacred spaces. This was achieved by incorporating decorative elements such as fountains, sculptures, and carefully designed walkways. The overall effect was to create a peaceful and tranquil environment that was conducive to meditation and prayer. The presence of gardens in religious establishments during the medieval period was a crucial component of the overall scenery, serving as a manifestation of the interdependent practical and spiritual facets of monastic existence.

The castle gardens had a twofold function, serving as a serene refuge within the fortified enclosure while also fulfilling practical objectives. The proliferation of castle construction across Europe necessitated the inclusion of gardens as a fundamental constituent of the castle premises. The gardens were embellished with a multitude of elements, such as rose arbors, trellis work, ponds, and verdant lawns. The gardens were embellished with a variety of vivid flowers, including violets, columbines, lilies, roses, and iris, as well as fragrant herbs such as sage and basil. Strategic positioning of arboreal and climbing flora was meticulously implemented to offer shelter from the sun and establish an inviting ambiance. The gardens provided a welcoming environment for individuals to relax and admire the beauty of nature, with its vast green spaces and comfortable seating arrangements.

During the medieval period in Europe, the notion of enclosed gardens was widely adopted by castles and manor houses, which were commonly known as "pleasure gardens" or "paradise gardens" (Akkerman, 2019). The intentional design of these gardens aims to elicit a sense of aesthetic enjoyment and encourage a state of

relaxation, reminiscent of the gardens commonly found at Villandry in France. The exhibition displayed various hydrological elements, decorative flora, and complex geometric designs (Skinner & Tyers, 2021). Pleasure gardens functioned as venues for socialization, intellectual exchange, and courtly activities among the nobility and their companions. The aforementioned activities served to bolster social stratification and enhance interpersonal bonds within the medieval nobility. The arrangement of gardens during the medieval period followed a simple yet elegant design, which complemented the dominant architectural style of the time. Despite their seemingly unassuming appearance as grassy expanses, these gardens were imbued with opulence and grandeur, evocative of the adjacent medieval structures. The incorporation of geometry was pivotal in influencing their design, imbuing it with a systematic uniformity and structure. The botanical gardens exhibit a wide range of floral species and fragrant vegetation, thereby augmenting the visual and olfactory atmosphere of the surroundings. The main aim was to engage the sensory faculties of individuals and create a peaceful sanctuary within the medieval terrain.

During the medieval period, gardens and parks served various functions and held considerable significance as communal spaces. Plants fulfilled diverse functions, ranging from catering to basic nutritional and medicinal needs to providing ornamental value, leisure, and chances for communal engagement. Gardens at castles often consisted of expansive areas of fruit and vegetable fields located outside the walls of the castle, while gardens inside fortified grounds were typically designated for the cultivation of medicinal plants. The woodland areas in close proximity to castles were utilized as outdoor recreational areas for the purposes of amusement and hunting. Pavilions were established within the confines of these parks to provide women with the opportunity to observe hunting, fishing, and combat pursuits. Pleasure gardens served as venues for banquets that facilitated social interactions between individuals of varying economic backgrounds.

Historically, hunting parks were exclusive domains of the aristocracy, comprising of demarcated wooded regions or forests that were utilized for activities such as hunting, fishing, and military training. The monarch-imposed restrictions on entry to these areas, however, the utilization of fallen timber was allowed and grazing of livestock was authorized. The gardens of the Generalife, which are part of the

Alhambra complex in Granada, Spain, are an excellent example of a medieval park. The gardens of the Generalife were part of the Alhambra and were constructed during the time of the Moors. These gardens served both practical and artistic purposes (Carbonero & Fernández Nieto, 2021b; Hussain, 2014; Koch, 1997). The provision of nourishment was facilitated by fruit orchards and herb gardens, whereas solace and aesthetic appeal were provided by fountains, courtyards, and carefully designed landscapes. The Generalife was a meeting area for people to get together, have conversations, and experience the tranquility of nature. This reflected the Islamic concept in providing calm surroundings to nurture both the body and the soul.

The gardens of monasteries, which bear resemblance to the sacred temples of antiquity, functioned as both practical and meditative areas within the monastic society. The gardens served the essential requirements of the monastery by offering various amenities such as water sources, mills, workshops, and a wide array of flora. Flowers were planted at the monastery for their symbolic value, and exquisite fruits were produced there for recreational reasons. Herbs and vegetables were grown there to feed the monastery's kitchen and infirmary with the food they needed.

Monastery gardens were designed in accordance with Platonic principles and integrated geometric shapes, wherein the golden ratio was employed in the erection of columns, arches, and buttresses. The gardens were partitioned into discrete segments, each fulfilling particular functions, such as burial gardens amalgamating sepulchers with fruit orchards, and verdant regions offering grassy zones and recreational areas (Taylor, 2000).

In medieval society, parks and gardens played a significant role as essential communal spaces, exerting a profound influence on the civilization. Whether they were the gardens of the Generalife, the pleasure grounds of royal estates, the gardens of monasteries, or the gardens of castles and manor mansions, these stretches of greenery offered chances for nourishment, beauty, rest, and social contact. Their impact on the medieval landscape and the societies that dwelled within it was enduring, as they facilitated the gathering of people, cultural pursuits, oral traditions, and comfort found in the natural world.

The monastery assigned individual gardens, commonly known as obedient gardens, to its esteemed officials, providing them with secluded spaces for personal seclusion. Subterranean gardens were utilized for cultivating a diverse range of fruits, vegetables, and medicinal plants. Following that, these underground spaces were reutilized as locations for the trading of farming commodities. Herbers are small-scale indoor gardens that showcase herbaceous plants and grasses. Their function is to incorporate a natural element into confined areas, thus generating a revitalizing ambiance. The endeavor of growing vineyards was also pursued, with the objective of procuring a potential source of grapes that could be utilized for the creation of wine or for immediate consumption. The practice of cultivating edible crops and medicinal herbs in kitchen gardens was primarily aimed at providing sustenance for the monastic community.

The botanical spaces within urban settlements during the medieval period showcased a range of variations that were influenced by the dominant societal and financial circumstances. In rural settlements, it was customary to enclose gardens with a variety of physical barriers, including but not limited to embankments, hedges, ditches, walls, or fences. Conversely, it has been documented that secluded societies had access to enclosed gardens which incorporated rectangular containers for the purpose of growing a diverse range of crops such as vegetables, decorative herbs, and blossoms. Covered walkways and gazebos were constructed to offer shaded paths and dining spaces. Physical boundaries such as walls or fences were utilized to embellish urban gardens, while natural features such as rivers, pools, fountains, and fish ponds were integrated to augment their visual allure. Dovecotes were multifunctional structures that served both utilitarian and aesthetic purposes, as they functioned as a means of sustenance.

The medieval gardens were distinguished by their amalgamation of visual allure, functionality, and religious connotation, which were accomplished by the assimilation of diverse components such as mathematical precision, allegorical representation, and utility. The aforementioned spaces were representative of certain aesthetic, introspective, and nurturing attributes that were reflective of the cultural and ideological principles of the medieval period.

During the later medieval period in England, the concept of the "pleasure ground" emerged. The establishment of these parks was primarily intended for recreational purposes and frequently associated with the properties of monarchs or nobles. There is an existed expansive recreational areas, such as Richmond Park situated in London, that provided opportunities for activities such as hunting, falconry, and other leisurely pursuits. In addition to their primary function, these locations served as venues for communal gatherings, including but not limited to competitions, banquets, and celebrations, which were attended by the aristocracy. The pleasure grounds functioned as sites of conviviality and sociability, while simultaneously serving as symbols of the power and status of the ruling elite.

3.2 Aesthetics, Beauty, & Entertainment

The chapter covers the Renaissance, Baroque, English, and Romantic eras. Upon examination and analysis of the literature pertaining to these four eras, it becomes evident that the primary development endeavors concerning green spaces during these centuries were influenced by aesthetic ideals, notions of beauty, and various forms of amusement. These eras have evolved throughout history, including not only the development of green regions and landscapes, but also other aspects of art, architecture, and lifestyle, all of which contribute to the manifestation of these ideals. Consequently, the recreational amenities inside these natural spaces mostly revolve on rest, leisure, and rejuvenation. Once again, throughout these time periods, there exists a socioeconomic stratification in the use of green areas. Green spaces mostly consist of privately owned land that is often associated with royal or aristocratic estates, hence restricting public access.

3.2.1 Renaissance Period (1400-1600)

Throughout the Renaissance period, there were notable transformations in the design and cultural significance of parks and gardens, resulting in their emergence as integral components of urban planning and cultural representation. The multifaceted functions and diverse social engagements of these entities were indicative of the intellectual and artistic revival that characterized the historical period.

The Boboli Gardens in Florence, Italy, are a superb example of a park designed in the Renaissance style. These gardens, which are located behind the Pitti Palace, were used as a model for typical Italian gardens throughout this period. The Boboli Gardens were known for its terraces, sculptures, fountains, and intricate geometric designs, all of which were designed to work in concert with the natural environment. These gardens were employed for a variety of activities in addition to its aesthetic appeal, including social meetings, formal events, and leisurely strolls. The Florentine elite made use of them as a forum for discussion and the exchange of ideas, as well as a venue for showcasing their money and cultural competence (McHarg, 1992).

The Versailles Gardens located in France are a prime example of the grandeur and magnificence of Renaissance-style Park design. The gardens, which were created under the auspices of King Louis XIV, featured meticulously groomed lawns, precise geometric patterns, grandiose water features, and ornate sculptures (Ayomide & Aina, n.d.; Brabec, 2004; Turkan & Köksaldı, 2021). The structures functioned as a tangible expansion of the royal residence and symbolized the monarch's authority and supremacy. The Versailles Gardens were utilized as venues for opulent social occasions, including masquerades and musical performances, where French aristocrats and international visitors could intermingle, engage in courtly traditions, and luxuriate in the grandeur of the monarchy.

During the Renaissance era, large estates and palaces were not the only kind of buildings that had parks; during this period, public parks were also developed to provide city dwellers easy access to green space. One shining example is the Villa Doria Pamphilj in Rome, which is in Italy. It was formerly a private estate, but over time it was converted into a public park that now provides a serene setting for a variety of recreational activities (Milić, 2007; Platt & Morgan, 1993). It encouraged citizens to get more involved in their communities and to develop a deeper appreciation for the natural world by becoming a popular spot for locals to go for strolls, picnics, and other social gatherings.

Apart from their visual appeal, Renaissance gardens underwent significant modifications in terms of their layout and characteristics. The area underwent a transformation and became vast lawns that were embellished with lemon and orange

trees, lively flowers, and areas that provided shade. Water was a prominent feature in the setting, as evidenced by the presence of canals, the use of sculptures to channel water, and the incorporation of mills. The development of these gardens was significantly impacted by the flourishing arts and culture of Florence. Wealthy families constructed country residences on wooded hillsides to exhibit their art collections and sculptures.

During the Renaissance era, gardens were closely intertwined with various fields such as the arts, sciences, health, and the environment, serving as a reflection of the era's intellectual and cultural progress. The fusion of art, science, and architecture was exemplified by them, with a notable emphasis on masculine hegemony. This stands in contrast to medieval gardens, which were primarily influenced by religious ideas.

Gardens were influenced by the tenets of the Renaissance philosophy, which advocated eschewing irrational faith in favor of rational inquiry and the quest for the truth. The Neoplatonic concept of art that was inspired by nature rose to popularity during this period, while mathematics played an important part in how things were seen, represented, and designed. Painting and architecture underwent a revolutionary transformation during this period due to the introduction of linear perspective. During this time, people had the idea that nature was mathematically structured, which reflected the concept that God is the ultimate mathematician. The study of Vitruvius and the translation of Euclid's books both had a significant impact on the development of geometry as an intrinsic part of design. This included the Golden Section, circles, squares, proportions, and geometric patterns. During this time, buildings and gardens began to blend together more seamlessly via the use of perspective methods.

During the Renaissance period, the development of villages outside urban centers was observed, characterized by the presence of residences with front gardens. Additionally, hunting parks were established within the confines of towns. Research and archaeological investigations of gardens during the Roman era were conducted, and botanical collections served as a means of connecting artistic and scholarly pursuits. The investigation of Euclid's works led to a surge in curiosity towards the

field of geometry, which subsequently resulted in the development of accurate cartographic representations of various European municipalities.

To summarize, the gardens of the Renaissance era served significant social functions by enabling convivial interactions, fostering creative output, and promoting intercultural communication. During the Renaissance era, various green spaces such as the Boboli Gardens, Versailles Gardens, and Villa Doria Pamphilj, played a significant role in shaping the environment. These spaces ranged from grand estates to public parks. Renaissance gardens were emblematic of the intellectual and cultural achievements of the period, as they facilitated the exchange of ideas, promoted a sense of community, and showcased the aesthetic and intellectual pursuits of the time. These gardens effectively intertwined the domains of art, science, and nature.

3.2.2 Baroque Period (1600 – 1700)

Parks and gardens experienced a metamorphosis throughout the Baroque era marked by elaborate designs, grandiosity, and a focus on theatricality. These green areas had a variety of purposes, including acting as a venue for opulent social events and as a reflection of the riches and power of the ruling class. The intention was to build places that inspire awe and generate a feeling of grandeur, and this intention affected interactions inside these parks.

The Gardens of the Palace of Versailles in France are a stunning example of a Baroque landscape. These vast gardens, which King Louis XIV commissioned, personify the luxury and beauty of the Baroque period. The gardens included intricate sculptures, elegant fountains, and grass that had been painstakingly kept up. They served as the setting for lavish court occasions such outdoor performances, masquerades, and royal processions. The Gardens at Versailles were not only places for relaxation; they were created to impress and demonstrate the king's dominance while serving as a venue for social gatherings between the French nobles and guests from other countries (Kluckert, 2000).

The Schönbrunn Palace Gardens in Vienna, Austria, are another outstanding illustration of Baroque Park architecture. The Schönbrunn Palace Gardens were influenced by French garden aesthetics and included terraces, flowing fountains, and neatly manicured hedges. The gardens were designed to provide a feeling of beauty and harmony. They served as locations for aristocratic social contacts and meetings by offering areas for leisurely strolls, musical performances, and cultural activities. The gardens also provided lovely views of the palace, resulting in a seamless and cohesive visual experience (P. Clark et al., 2017).

Public parks also started to appear during this era, thus baroque parks were not only found in opulent estates and palaces. The late Renaissance-designed, later-developed in the Baroque style Boboli Gardens in Florence, Italy, became a model for public parks. Terraces, grottos, and great stairs in the gardens added drama and theatricality. The Boboli Gardens offered areas for the neighborhood's residents to mingle, take part in outdoor events, and have fun. They acted as democratic gathering places for individuals of all socioeconomic strata, encouraging interaction and a feeling of community (Friedman, 1989; Hunt, 2016a).

Baroque Park design also used a lot of symbolism. One famous instance is the Garden of the Palais des Nations in Geneva, Switzerland. The well-planned flowerbeds, hedges, and water features in the garden stand in for international harmony, peace, and unity. The park acts as a gathering area for diplomats, offering a calm setting for conversation and interaction as well as functioning as a physical illustration of global collaboration.

In conclusion, the Baroque era was marked by the grandiose designs, theatricality, and symbolic significance of parks. These green areas, which ranged from the Versailles Gardens to the Schönbrunn Palace Gardens and public parks like the Boboli Gardens, served as locations for social gatherings, artistic expressions, and demonstrations of wealth and power. They served as venues for entertainment, socializing, and recreation for both the aristocracy and commoners, reflecting the richness of the Baroque period.

3.2.3 English Gardens Period (1700 – 1800)

During the 18th and 19th centuries, a dramatic change in garden design was brought about by the English Garden era, often known as the Landscape Garden movement. During this time, landscapes were created using a more realistic approach, simulating untamed nature and promoting harmony and peace. During this time, parks and gardens served a variety of purposes, fostered exchanges, and offered places for solace, reflection, and social contact.

The Stourhead Garden in Wiltshire, England, is a well-known example of an English Garden. Henry Hoare II created the landscape at Stourhead, which combines the beauty of nature with thoughtfully designed elements to create a gorgeous and romantic ideal (O'Quinn, 1999; Turner, 2005). A lake, antique temples, follies, and ornamental plants are all present in the park. Stourhead offered areas for tranquil strolls, picnics, and quiet periods of reflection, giving tourists a feeling of retreat from the city. The garden promoted encounters with nature, enabling people to take in the calm atmosphere and establish connections with the natural world.

In Oxfordshire, England, Blenheim Palace Park is another noteworthy English Garden. This park, which Capability Brown designed, is an excellent example of the Landscape Garden movement's tenets. Sweeping lawns, flowing water features, meticulously planted trees, and well-planned views may be found at Blenheim Palace Park(Skinner & Tyers, 2021; Vronskaya, 2006). The park gave guests the chance to take leisurely strolls, engage in outdoor activities, and have social meetings while also evoking a feeling of space and calm. The nobility used it as a background for large gatherings, picnics, and social exchanges, demonstrating how social interaction and natural beauty can coexist.

The English Garden movement, which placed a strong emphasis on fusing architecture and nature, led to the development of several follies and buildings in parks. Temples, grottos, and bridges are just a few examples of the buildings that not only improved the landscape's aesthetic appeal but also served as meeting places and hubs for social interaction. These features gave the gardens a feeling of surprise and joy while also providing areas for gatherings, picnics, and cultural events.

In conclusion, the English Garden Era saw a change in garden design, concentrating on naturalistic landscapes that encouraged interactions with nature and a calm atmosphere. This approach is exemplified by parks like Stourhead and Blenheim Palace Park, which provide areas for recreation, introspection, and social interaction. People were able to leave the urban environment and connect with the beauty of nature thanks to the inclusion of natural materials, the usage of follies and other constructions, and the incorporation of the ha-ha border. Today's landscape architecture is still greatly impacted by the English Garden era's contributions to garden design.

3.2.4. Romantic Period (1800 – 1840)

The Romantic period, spanning the late 18th and early 19th centuries, witnessed a profound shift in the perception of nature and its role in human life. Parks and gardens during this period took on new meanings, serving as spaces for introspection, emotional connection, and artistic inspiration. The emphasis shifted from the formal and structured designs of previous eras to a more untamed and picturesque aesthetic, celebrating the beauty and power of nature. One notable example of a Romantic-era Park is the English Garden in Munich, Germany. Designed by Friedrich Ludwig von Sckell, the English Garden embraced the principles of naturalistic landscape design (Hunt, 2016b). It featured meandering paths, gentle hills, and carefully positioned trees and plants. The park provided an escape from the urban environment, offering individuals a place to reconnect with nature and experience a sense of freedom and tranquility. It became a haven for poets, artists, and thinkers, who sought inspiration and solitude within its picturesque landscapes. The English Garden encouraged interactions with nature, allowing visitors to explore its winding paths, enjoy leisurely walks, and find solace amidst the natural beauty.

Another prominent example is the Parc des Buttes-Chaumont in Paris, France. Designed by Jean-Charles Alphand, this park embodied the Romantic ideals of untamed nature within an urban setting. The park featured rugged cliffs, a man-made lake, cascading waterfalls, and lush vegetation. It provided a respite from the bustling city and offered spaces for contemplation, leisure activities, and social interactions.

The Parc des Buttes-Chaumont became a popular destination for Parisians seeking refuge in the midst of nature, engaging in conversations, enjoying picnics, and immersing themselves in the beauty of the landscape (Littlewood, 1979; Munro, 2002). In the Romantic period, parks and gardens often incorporated architectural elements that blended harmoniously with the natural surroundings. Follies, ruins, and structures reminiscent of ancient times were incorporated to create a sense of mystery and nostalgia. These architectural features provided focal points for contemplation and served as gathering places for individuals to connect with both nature and each other. The Stourhead Gardens in Wiltshire, England, exemplify this approach with its temples, grottos, and artificial ruins, all strategically placed within the landscape to evoke a sense of wonder and invite contemplative interactions (Hunt, 2016b).

Furthermore, the Romantic period saw the rise of the "sublime" as a concept in garden design. Parks such as the Drottningholm Palace Gardens in Stockholm, Sweden, embraced this idea by creating dramatic landscapes that evoked awe and awe-inspiring experiences. Steep cliffs, towering trees, and rugged terrain were carefully incorporated to elicit a sense of grandeur and overpowering natural beauty. These landscapes aimed to evoke powerful emotions and inspire a deep connection with the natural world.

In summary, parks and gardens in the Romantic period served as spaces for personal reflection, emotional connection, and artistic inspiration. The English Garden in Munich, the Parc des Buttes-Chaumont in Paris, and the Stourhead Gardens in Wiltshire are notable examples that reflect the Romantic ideals of untamed nature, contemplation, and interaction with the landscape. The incorporation of architectural features and the creation of sublime landscapes further enhanced the immersive and transformative experiences within these parks. The Romantic period brought about a profound shift in the perception of nature, leaving a lasting impact on garden design and our understanding of the relationship between humans and the natural world.

3.3 Public & Incorporative

This section of the thesis examines the presence and characteristics of green areas throughout the Victorian, Modern, and Post-War periods. During these time periods, a significant and transformative measure was implemented to enhance the development and preservation of green areas. During this era, the first green areas intended for public use were established, which eventually evolved into the parks we have today. The primary uniting factor among the green spaces throughout this era is the eradication of social stratification within these areas, as well as the development of integrated and all-encompassing public green spaces.

3.3.1 Victorian Period (1837 – 1900)

During the Victorian era, which spanned the 19th century, urbanization and industry significantly increased. As cities evolved, parks and gardens emerged as crucial components of urban design, providing a haven from the busy streets and fostering social interaction, leisure, and health. Parks offered locations for leisure activities, cultural events, and the advancement of public health throughout this time.

America's Central Park is a well-known example of a park from the Victorian period. Central Park, which was created by Frederick Law Olmsted and Calvert Vaux, is a pioneering example of urban park design (Heckscher, 2008). Its large open areas, winding trails, lakes, and architectural elements offered a respite from the city's growing urbanization. In addition to providing areas for strolling, picnics, and outdoor enjoyment, Central Park functioned as a haven for New Yorkers. It evolved into a democratic setting where individuals from different backgrounds could congregate, promoting interpersonal relationships and civic involvement.

The Victoria Park in London is a recognizable example of a Victorian park in England. It was one among the earliest public parks in the nation when it opened in 1845. Victoria Park had ponds, gardens, and a lake for boating (Brenwall & Filler, 2019; Meynell, G., 1980). The park provided a location where the working class could get away from the busy city, enjoy outdoor activity, and breathe fresh air. It developed into a well-liked location for social gatherings, fairs, and events, presenting chances

for encounters and neighborhood solidarity. Victorian parks often had formal layouts, elaborate gazebos, bandstands, and floral exhibits as design features that represented the ideals of the time. A prime example of this design is Crystal Palace Park in London. The park included broad lawns, sculptures, and a lot of plants since it was built to display the Crystal Palace, which was an amazing piece of architecture at the time. It functioned as a location for cultural activities including concerts, exhibits, and cultural events, drawing people from all walks of life. Crystal Palace Park offered areas for recreation, instruction, and entertainment while promoting social interaction. In addition, Victorian parks were essential in fostering both physical and mental health. During this time, the notion of "improving" public health was common, and parks were considered as places where people may engage in beneficial activities. For instance, playgrounds, boating lakes, and cricket fields were all included in Joseph Paxton's design for Birkenhead Park in Wirral, England. The park sought to encourage physical activity and enhance the community's wellbeing.

Botanical gardens were also created throughout the Victorian era, including Kew Gardens in London. These gardens functioned as locations for teaching, research, and science. They offered areas where people could learn about various plant types and take part in horticultural pursuits. Kew Gardens encouraged connections between scientists, garden enthusiasts, and the public in order to develop a greater understanding of nature and its preservation (Kabisch & Haase, 2013).

In conclusion, parks and gardens played a significant role in Victorian leisure, neighborhood interaction, and public health advancement. Examples of significant parks from the Victorian period that demonstrate the variety of activities and interactions inside them include Central Park, Victoria Park, Crystal Palace Park, and Birkenhead Park. These natural areas provided a haven from the bustle of the city, stimulated social contact, and enhanced both physical and mental health. Victorian parks contributed significantly to the development of urban landscapes, leaving behind a lasting legacy of open, lively public areas.

3.3.2 Modernist Period (1900 – 1940)

A new approach to park design was introduced during the Modernist era, which appeared in the late 19th and early 20th centuries. This method was inspired by modernist ideas and the shifting urban environment. During this time, parks served a variety of purposes and offered areas for social interaction, leisure, and artistic experimentation. They adopted innovation, utility, and simplicity as a part of the era's ideals and objectives.

Parc Güell, created by famous architect Antoni Gaud in Barcelona, Spain, is a prime example of a Modernist Park. The Parc Guell complex in Barcelona is a prime example of the modernist ideal of bringing together natural and man-made structures while also incorporating art into the surrounding environment. The park has unusual architectural characteristics, absurd sculptures, and colorful mosaic tile work. It offers guests a spot for introspection, leisurely strolls, and admiration of Gaud's original design. The lines between art, architecture, and nature were muddled by Parc Güell's encouragement of interactions with the constructed environment (Carmona, 2019; Heckscher, 2008; Tate, 2013).

Modernist parks often used clean, simple lines and minimalist design ideas. For instance, the Erik Bryggman-designed Tapiola Central Park in Espoo, Finland, exemplifies a Modernist approach to park design. There are wide open lawns, geometric designs, and well positioned trees. The park offers areas for outdoor sports, entertainment, and cultural events, highlighting the value of the outdoors and fostering a sense of community. In addition, modernist parks aimed to combine industry and technology with the outdoors. A prime example of this confluence is the Expo '70 Commemorative Park in Osaka, Japan, which was created by the architect Kenzo Tange. The park includes avant-garde installations, creative architectural designs, and sculptural components. It provides a selection of leisure facilities including playgrounds, sports fields, and event venues. A dynamic setting is created by the Expo '70 Commemorative Park to promote interactions with the environment, art, and technology.

In addition, modernist parks sought to address the social and environmental issues of the day. For instance, Cecilio Rodriguez's Parque del Oeste in Madrid, Spain, aimed to enhance public health and wellbeing by including green areas, playgrounds, and sports facilities. The park emphasized living active lives, becoming involved in the community, and being in tune with nature.

In conclusion, 20th-century Modernist parks embraced innovation, simplicity, and practicality while departing from conventional designs. Parc Güell, Tapiola Garden city, Expo '70 Commemorative Park, and Parque del Oeste are notable examples of parks from the Modernist period that represent the many interactions and purposes found there. These parks used modernist ideals, fusing art, technology, and nature to provide areas for recreation, interaction with others, and experimentation. They represented the aims and ideals of the modernist era while expressing the evolving urban environment.

3.3.3 Post-War Period (1940 – 1960)

After World War II's destruction, there was a renewed emphasis on urban planning, community reconstruction, and the development of public places that promoted recovery, social contact, and a feeling of normality (Byrne, 2017; Ernwein, 2020; Thompson, 2002a). Parks were essential to this strategy because they represented resiliency, leisure, and community involvement. They offered locations for social gatherings, cultural activities, and chances for people to interact and start again in their lives(Johnson & Glover, 2013; Leal Filho et al., 2020; Shuib et al., 2015). Hiroshima Peace Memorial Park in Hiroshima, Japan, is a noteworthy illustration of a post-war park. The park, which is devoted to remembering the World War II atomic blast, is home to the recognizable Atomic Bomb Dome as well as other monuments and memorials. It serves as a venue for memorialization, introspection, and support of world peace. Visitors are encouraged to connect with one another at the Hiroshima Peace Memorial Park, where they are also invited to learn about the terrible past and have conversations about the negative effects of war.

Parks built after World War II often included natural, artistic, and symbolic aspects. The Bernard Tschumi-designed Parc de la Villette in Paris, France, is one project that exemplifies this strategy. The park offers chances for recreation, cultural activities, and discovery thanks to its large green areas, architectural follies, and sculptures. The Parc de la Villette promotes active lifestyles, fosters contact with modern art, and offers locations for social meetings and neighborhood events.

Additionally, post-war parks prioritized accessibility and inclusion, reflecting the era's shifting social relations. The Queen Elizabeth Olympic Park in London, United Kingdom, underwent transformation to become an urban park that is always open. It has many recreational amenities, abundant green space, and sustainable design concepts. For individuals of all ages and abilities, the park aspires to create inclusive and accessible areas that promote social interaction and community integration.

In conclusion, post-war parks became emblems of rebirth, healing, and civic participation. Examples of post-war urban parks that reflect the purposes and relationships inside them include Hiroshima Peace Memorial Park, Parc de la Villette, and Queen Elizabeth Olympic Park. By providing areas for recreation, venues for cultural events, and chances for people to interact and reconstruct their lives, these parks acted as catalysts for urban redevelopment. A feeling of normality was restored, community cohesiveness was fostered, and inclusive and accessible public places were provided for future generations thanks in large part to post-war parks.

3.4 Retro perspective Review on Urban Green

The shift from restricted regal areas to communal parks and gardens represented a noteworthy achievement in urban advancement and the equalization of recreational opportunities. The act of making these areas accessible to the public has facilitated a heightened sense of egalitarianism and accessibility, thereby enabling individuals from diverse backgrounds to partake in the advantages of outdoor recreation and natural surroundings. Ultimately, the chronicle of gardens serves as evidence of human ingenuity and the dynamic interplay between humanity and the natural world.

Throughout history, gardens have fulfilled utilitarian, artistic, and societal functions, spanning from early civilizations to modern-day design. Every historical era has made distinctive contributions and introduced various styles that have played a significant role in shaping the gardens that we currently appreciate.

The features and components of gardens have undergone an alteration throughout time from the prehistoric time to the contemporary world, as evidenced by their historical evolution. The concept of gardens has undergone a transformation from rudimentary functional areas to intricate and diverse surroundings that cater to a range of objectives such as visual appeal, leisure, societal representation, and environmental preservation.

Particular attention was paid to the fact that gardens were first connected with royal families, but later were open to all public (Cranz, 1982). The transformation from private to public spaces was predominantly motivated by the notion of publicity and the evolving urban planning regulations of that era. Historically, gardens and green spaces were exclusively designated for the pleasure and leisure of the aristocracy and upper echelons of society. The emergence of the industrial revolution gave rise to a novel movement aimed at rendering these areas more readily available to the whole public, specifically the laboring class.

Gardens and parks were emblematic of affluence and dominance in antiquated societies, such as Ancient Rome and Persia, and were meticulously crafted to exhibit opulence and extravagance. Throughout the medieval era, there was a proliferation of religious landscapes and royal hunting areas, which were predominantly utilized for religious and aristocratic objectives (Bowe, 2009, 2010).

During the ancient era, gardens were designed largely to serve functional purposes. Gardens were originally laid out for agricultural reasons in ancient civilizations including Mesopotamia, Egypt, and Persia. These gardens served as a source of food and other resources for the surrounding populations. These gardens included terraces, irrigation systems, and meticulously grown plants that were necessary for food production. They were also quite beautiful (Stevenson, 1992).

The manifestation of publicness in ancient societies, such as Ancient Greece and Rome, was evidenced by the establishment of urban green spaces that were open and accessible to the public. These spaces, including agoras and public parks, served as venues for social, political, and cultural activities, where individuals congregated. The aforementioned areas functioned as the central hub of the urban settlement, promoting communal communication, dialogue, and involvement in public affairs. In the medieval era, the concept of publicness in urban green spaces was frequently linked to religious and communal assemblies that took place in churchyards, town squares, and gardens (Kohout & Kopp, 2020; Leal Filho et al., 2020).

During the ancient Greek era, communal spaces such as the Agora and the Academy of Athens functioned as venues for citizens to congregate, fostering opportunities for both social and intellectual engagement (Turner, 2005). As cultures developed, gardens gradually came to play more of an aesthetic and symbolic significance in their communities. Gardens in ancient Greece served as places for introspection, relaxation, and philosophical discourse. These gardens were an essential component of the architectural complexes that were built there. The attempt to achieve harmony and equilibrium in both nature and human civilization was mirrored in the symmetry and orderliness of Greek gardens (Bowe, 2010). During ancient times in Greece, leisure time was considered significant for both intellectual and physical growth. Activities such as philosophy, sports, and artistic pursuits were held in high esteem. During the medieval era, leisure activities were closely associated with religious customs. Carnivals, pilgrimages, and societal festivities were occasions that facilitated leisure and social engagement (Johnson & Glover, 2013; Stamps & Stamps, 1985).

During the Renaissance era, there was a resurgence of fascination with the natural world, which led to the establishment of structured gardens and parks that prioritized organization, balance, and mathematical patterns (Åsen, 2021; Hunt, 2016a). The emergence of Renaissance humanism led to the conceptualization of gardens as an expansion of human ingenuity and cultural manifestation. The Italian Renaissance gardens, such as the Boboli Gardens located in Florence, were characterized by the integration of architecture, sculpture, and horticulture, resulting in a cohesive and unified entity. The gardens exhibited an idealized portrayal of the

interplay between humankind and the natural world, incorporating a fusion of classical and Christian iconography (Fischer et al., 2016). During the Renaissance era, there was a notable rise in the popularity of formal gardens and parks, which can be attributed to a shift in societal values towards the importance of aesthetics and leisure activities. The enclosure of green spaces, which restricted public access and interaction, was a consequence of the Industrial Revolution and the subsequent rapid urbanization. During the late 19th and early 20th centuries, public parks and green spaces emerged as a response to the negative impacts of urbanization (Barbosa et al., 2007; Kohout & Kopp, 2020; Thompson, 2002b). These areas were intended to serve as inclusive public domains, where individuals from diverse backgrounds could engage in leisurely pursuits and socialize freely.

In the medieval period, European monastic gardens functioned as havens for introspection and communion with the natural world. During the Renaissance era, there was a resurgence of attention towards urban planning and landscape design. Notable instances comprise of the Boboli Gardens situated in Florence and the Palace of Versailles in France. These sites amalgamated impressive architectural designs with meticulously crafted gardens to establish areas that served the purpose of both leisurely pursuits and social interactions (P. Clark et al., 2017; Hunt, 2016a; Kabisch & Haase, 2013; Taylor, 2000).

Monastic gardens were utilized as areas for reflection by monks and served as a means of establishing a link with the natural world throughout the medieval era. Enclosed gardens frequently showcased symmetrical arrangements, medicinal flora, and aquatic elements, promoting engagement between individuals and their surroundings (Skinner & Tyers, 2021).

The gardens of Classical Greece and Rome were characterized by a harmonious combination of utilitarian and ornamental features, with the Hellenistic era in particular showcasing this fusion of form and function. There was a garden at the Academy of Athens where academicians could converse and accompanied by environment. During the period of classical Rome, gardens were transformed into extravagant displays of affluence and dominance. The Gardens of Sallust and Villa Livia are prominent instances. Pavilions, colonnades, and decorative ponds were

common examples of the ornate architectural features that were often seen in Roman gardens. In addition, a diverse range of botanical specimens such as flowers, fruit-bearing trees, and non-native species were integrated into the landscape (P. Clark, 2009; P. Clark et al., 2017).

During the Roman Empire, gardens evolved into opulent manifestations of affluence and authority. The gardens of Roman villas, exemplified by those discovered in Pompeii, were characterized by their meticulous planning, featuring formal arrangements, sculptures, water features, and intricate horticultural designs. The gardens functioned as an indication of the proprietor's societal standing and intellectual sophistication (Haynes, 2013).

Regent's Park, which was the initial public park to be officially recognized, was made accessible to the public for a limited period of two days per week, courtesy of King George IV. The area offered a verdant expanse that afforded individuals the opportunity to engage in recreational activities and encounter a feeling of liberation amidst the urban environment. The commencement of enabling regions for communal utilization served as the inception of a more extensive tendency (Meynell, G., 1980; Tate, 2013).

The Industrial Revolution facilitated swift urbanization, which resulted in the deterioration of urban settings and the depletion of verdant areas (Cranz, 1982). During the late 19th and beginning of the twentieth centuries, public parks and urban green spaces emerged as an attempt in order to mitigate the adverse impacts of industrialization, enhance public health, and offer recreational opportunities for urban populations. During the mid-20th century, the modernist movement had a significant impact on urban planning, resulting in the development of expansive parks and green corridor that sought to improve the practicality and visual appeal of cities (Edwards, 2018; Kabisch & Haase, 2013). The advent of the industrial revolution resulted in notable alterations in the fabric of society, which encompassed the provision of leisure time for laborers (Thompson, 2002b). With the growing significance of leisure time, there emerged a necessity for venues that could accommodate the recreational needs of laborers. This resulted in the need to make private or royal spaces accessible to the public, thus affording laborers the chance to avail themselves of these leisure areas

(Johnson & Glover, 2013; Rosenzweig, 1994). The advent of the Industrial Revolution and the consequent urbanization of societies during the 18th and 19th centuries brought about a significant transformation in the nature of leisure. This was due to the increasing accessibility of the concept of free time to the burgeoning middle class. New methods of amusement and relaxation came into existence with the start of the 20th century because to developments in technology and an increase in people's available free time as a result of labor reforms. These included the birth of the cinema, various sports, and activities that took place outside (Johnson & Glover, 2013; Rosenzweig, 1994; Wong, 2009).

The effect that the Industrial Revolution had on society, as well as the rise of a more prominent leisure culture, was a major factor that contributed to the gradual expansion of public access to green spaces and gardens. The significance of these public spaces lies in their ability to offer laborers avenues for leisure, amusement, and interpersonal interaction (Rosenzweig, 1994; Stamps & Stamps, 1985).

During the 19th century, public parks became a fundamental component of urban planning. Parks such as Central Park in New York City and Hyde Park in London were created with the intention of offering easily accessible green spaces to individuals of all social strata, drawing inspiration from the English landscape garden movement. The parks evolved into democratic spaces that provided individuals with an opportunity to retreat from the stressors of city living and participate in leisurely pursuits, all while promoting communal unity (Edwards, 2018; Heckscher, 2008; Walls, 2009).

Joseph Paxton, an architect, and horticulturist designed the first intentionally planned public park in 1843. This park was situated in Birkenhead, near Liverpool. The progress served as a precursor to the subsequent conception of Central Park in Manhattan, New York City in 1857, which was executed by the landscape architect Frederick Law Olmstead and the architect Calvert Vaux. Central Park was influenced by Birkenhead Park and played a crucial role in the advancement of communal park spaces.The establishment of public parks was significantly influenced by the First Industrial Revolution. As a result of the revolution, affluent individuals were able to acquire residences that featured yards, whereas public parks were established to offer

spaces for relaxation and recreation for the broader populace (Akkerman, 2019). Gardens possess a significant historical background that has extended throughout various civilizations and geographical regions, with each era imparting its distinct influence on the layout and characteristics of these areas.

The emergence of public parks during the 19th century represented a pivotal moment in the evolution of urban parks, as they became increasingly accessible to individuals from all social strata. Influenced by the English landscape garden movement, urban areas began to prioritize the establishment of verdant areas for communal recreation. The urban park known as Central Park, located in New York City, was designed by Frederick Law Olmsted and Calvert Vaux and is widely regarded as a pioneering example of a large-scale urban park. The location served as a sanctuary from the swift urbanization and industrialization of the metropolis, affording prospects for relaxation, pastime, and communal engagement among heterogeneous populations (Brenwall & Filler, 2019; Heckscher, 2008)

During the latter part of the 19th and early 20th centuries, the City Beautiful movement emerged with the objective of enhancing the visual and practical aspects of urban areas. Parks were perceived as essential constituents of urban planning and societal improvement. Parks such as Fairmount Park located in Philadelphia and Golden Gate Park situated in San Francisco were intentionally planned with elaborate entrances, structured landscaping, and cultural facilities. The provision of opportunities for leisure, civic engagement, and cultural activities has been observed to facilitate social interaction and promote community cohesion (Beevers, 1988; Parsons & Schuyler, 2002).

During the early 20th century, there was a notable change in the intended function of green spaces within urban areas. The perception of parks has evolved to encompass not only recreational purposes, but also to serve as a means of advancing public health and social reform. Urban parks were conceptualized as picturesque environments that featured structured leisure pursuits, in response to the City Beautiful movement. This was done to address issues of overpopulation, encourage physical activity, and augment the standard of living in swiftly expanding urban areas (Akkerman, 2019; Beevers, 1988; Parsons & Schuyler, 2002).

The expanding environmental awareness during the latter part of the 20th century resulted in an increased recognition of the multifaceted role of urban green spaces, extending beyond their traditional function as areas for human interaction. The significance of parks and green spaces has been acknowledged in addressing environmental concerns, facilitating wildlife habitats, enhancing air quality, and alleviating the urban heat island phenomenon. The emergence of urban parks, community gardens, and roof gardens has facilitated the active involvement of individuals in the preservation of the natural environment and restoration of ecological systems (Ahern, 1999; Ernwein, 2020).

In the 21st century, green spaces have undergone modifications to cater to ecological considerations and evolving societal demands. Metropolitan parks, exemplified by Central Park in New York City and Hyde Park in London, offer verdant areas for leisure activities and communal assemblies. In modern times, gardens tend to give precedence to environmental responsibility by integrating elements such as irrigation infrastructure, indigenous flora, and ecosystems for animals. The design also places emphasis on perceptions of senses, incorporating characteristics such as aromatic flora, aquatic displays, and open-air artistic exhibits (Tate, 2013). In the 21st century, gardens have broadened their scope to tackle urgent ecological issues. The increasing recognition of climate change and urbanization has led to the recognition of the significance of gardens in promoting sustainable development and preserving biodiversity. The increasing recognition of urban parks, rooftop terraces, and community gardens has elevated their significance in promoting environmental responsibility, offering leisure areas, and cultivating social engagement among communities.

The inception of urban parks can be attributed to early societies, wherein unenclosed areas were employed as communal spaces for social, cultural, and political events. During ancient times in Greece, public squares such as the Agora played a pivotal role as a central hub for citizens to engage in democratic processes, exchange ideas, and interact with one another. Likewise, in ancient Rome and Greece, public spaces such as forums and gymnasiums were designed to incorporate verdant areas that served to promote communal interaction and bodily exercise (Bowe, 2010).

Throughout history, urban parks have undergone significant evolution in response to the evolving needs and aspirations of communities. Throughout history, green spaces have served as essential venues for social interaction, leisure activities, and community involvement, ranging from traditional gathering spots to contemporary interactive environments. As urban areas undergo further development, urban parks will assume a pivotal function in establishing all-encompassing, sustainable, and dynamic urban settings. They will facilitate social interaction among individuals and enhance the general welfare and standard of living for residents.

Throughout history, urban parks have served as important areas for community involvement, leisure activities, and social interaction. Urban green spaces have undergone a transformation over the years, mirroring the alterations in societal norms, urban planning strategies, and community requirements. The significance of urban parks goes well beyond the value that they provide for leisure activities; in addition to this, they additionally serve an essential part in improving the standard of urban ecosystems. Parks play a significant role in enhancing air quality through their capacity to sequester carbon, assimilate contaminants, and emit oxygen. Urban biodiversity is supported by the provision of habitats for diverse plant and animal species. Urban parks are known to have a beneficial influence on the general welfare and health of urban residents. They provide avenues for physical activity, stress alleviation, and social engagement. Urban parks not only benefit to the ecological sustainability and livability of urban areas by helping to create green lungs within the urban environment, but they also help to improve the visual aesthetics of cities by making cities seem more beautiful on the outside.

Urban Parks occupy an essential place within the domain of urban green spaces owing to their multifarious significance. Urban parks are intentionally planned and constructed regions within metropolitan areas that offer urban dwellers recreational, visually pleasing, and ecological advantages. Urban parks serve as verdant sanctuaries among the urban landscape, providing relief from the frenetic pace of urban existence. These locations function as peaceful havens where people may find comfort in the natural environment, participate in physical pursuits, or unwind. Parks have emerged as locations for environmental education, offering a range of activities such as workshops, guided tours, and ecological restoration initiatives, aimed at promoting

people's interaction with nature and fostering their responsibility towards the environment (Carmona, 2010b, 2010a; Cranz & Boland, 2004; Ernwein, 2020).Contemporary tendencies and interplay over the past few decades, urban parks have undergone modifications to accommodate the changing requirements and preferences of societies. Contemporary parks have integrated a variety of amenities and features that foster engagement and communal involvement. The provision of playgrounds, sports fields, and fitness equipment has been shown to encourage physical activity and social interaction across various age groups. The provision of outdoor performance spaces and cultural events presents avenues for the manifestation of artistic creativity and the fostering of communal cohesion. In addition, community gardens and farmers markets serve as venues for cooperative efforts and exchange of information (Byrne, 2017; Loughran, 2014a; Walls, 2009).
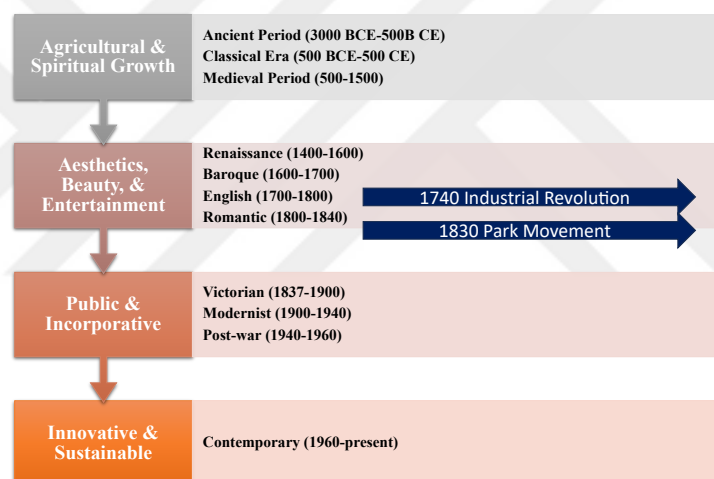

Figure 3.1 Urban Green Categories by Period

A comprehensive literature analysis has been conducted to examine the elements that contribute to the construction of contemporary parks and the dynamics of human interactions inside green spaces. This study aims to gain insights into the effective components and the overarching framework that have shaped parks throughout history, spanning from ancient times to contemporary times.
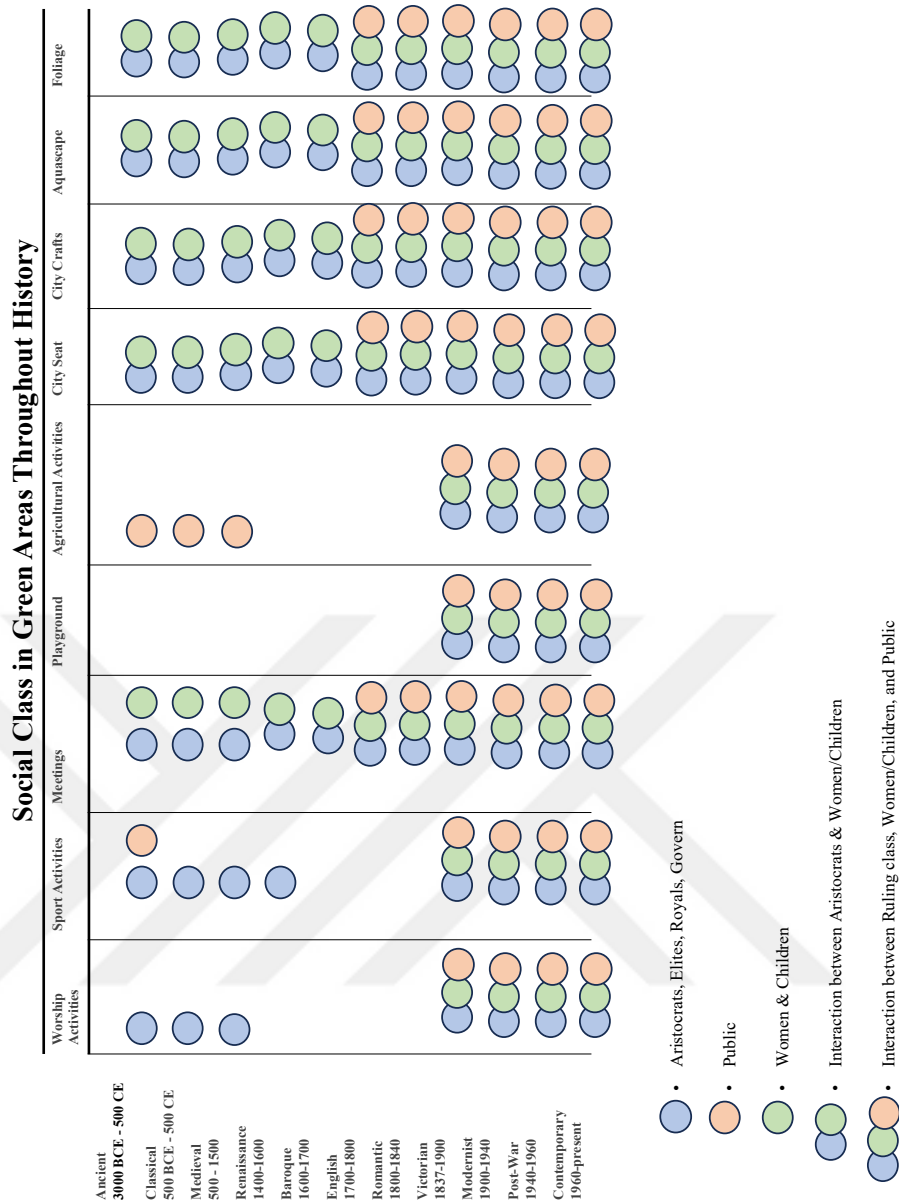
Figure 2.2 Social Class in Green Area Throughout History

The examination of retro perspective readings in this particular context has garnered considerable interest in the prevalence of social class disparities in the process of converting private gardens into public parks, as well as the subsequent changes in activities within this setting. **Figure 3.2** examines the class change and the temporal progression of social contact by means of diverse activities. Simultaneously, the periods are categorized based on their primary and shared activities (Figure 3.1 & Figure 3.3).
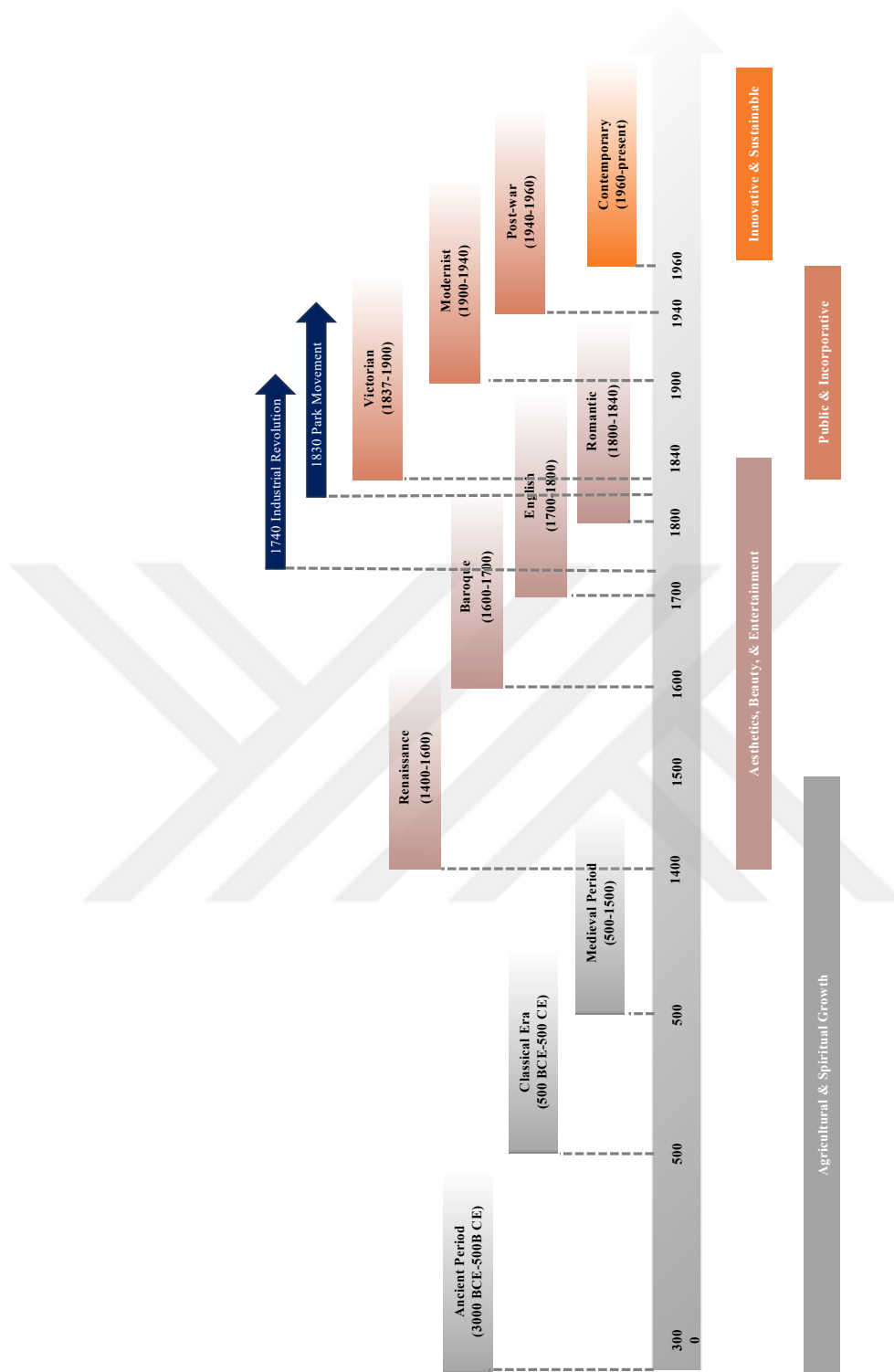
Figure 3.3 Timeline of Urban Green

Chapter 4

Innovative & Sustainable Parks

This section of the thesis discusses the current stage of development that the green spaces analyzed in previous chapters have attained within the historical context. The historical growth of green spaces, transitioning from private gardens to public parks, has been significantly influenced by two pivotal events: the industrial revolution and the park movement. These milestones have played a crucial role in shaping green spaces into inclusive environments that offer to a wide range of activities, accessible to all individuals.

The growth of user profiles and activities has not only enhanced the geographical and demographic aspects of parks but has also contributed to an improvement in their overall quality. In our contemporary society, parks have emerged as spaces that address global issues and foster public consciousness. In the present setting, characterized by advancements in technology, parks exhibit novel configurations that were absent in other eras. The given entity encompasses areas that cater to the holistic requirements of individuals, including not only their bodily well-being but also their spiritual and mental dimensions.

In this contemporary era, parks have undergone a transformation to mirror the shifting societal needs and values. Public spaces have evolved into versatile environments that facilitate various activities, promote eco-friendly behaviors, and cultivate significant engagements among people and societies (Carmona, 2010a, 2010b; Costello, 2002; Thompson, 2002b). Modern parks place emphasis on ecological responsibility, encourage physical and mental health, and offer equitable areas for leisure, artistic representation, and societal involvement.

Within this particular context, three parks have been chosen from a collection of parks established in the 21st century. These parks were picked based on their creative architectural techniques and their incorporation of sustainability principles. The parks in question are Millennium Park, High Line Park, and Gardens by the Bay. The development of these three parks has been facilitated via the collaborative efforts of several disciplines throughout the design phase. In addition, the aforementioned principles include the notions of effective social analysis, repurposing of underused places, and fostering social consciousness. Every park has conducted a thorough analysis and effectively addressed its unique societal requirements, therefore offering distinct perspectives on contemporary park design and management. Due to this rationale, a comprehensive examination was conducted on the aforementioned trio of parks.

4.1 Millennium Park

The Millennium Park is located in the heart of downtown Chicago in the United States. It is 10 hectares, and built in 2004 by designers; Gehry Partners, Renzo Piano Building Workshop, SOM, Harley Ellis Devereaux (HED) (Figure 4.1).
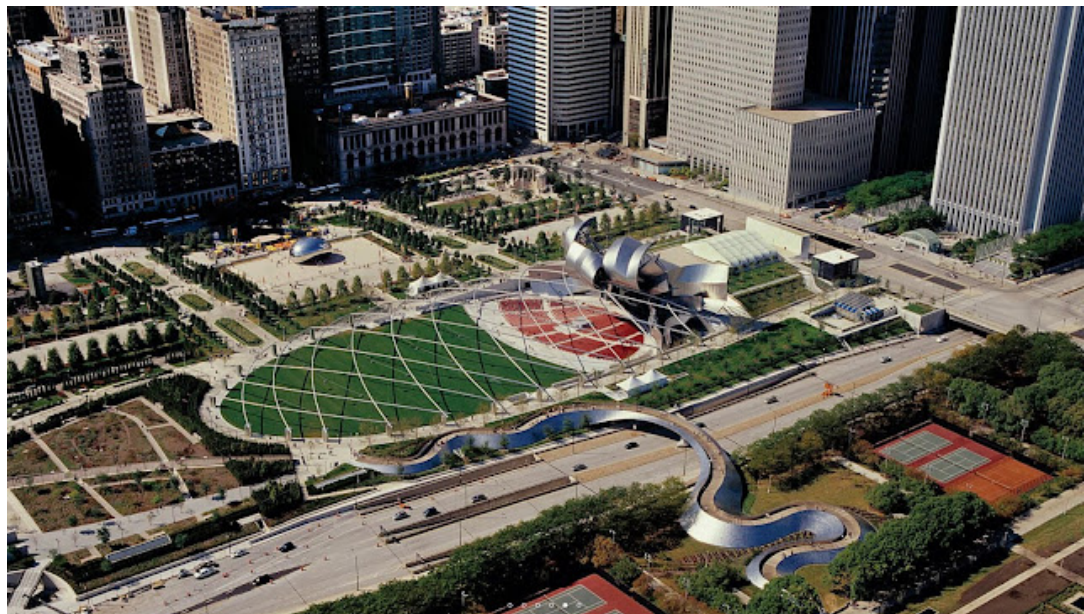

Figure 4.1 Millennium Park Photo

(http://www.connectingthewindycity.com/2018/07/july-20-1984-millennium-park-before.html)

The train rails, which were under the ownership of the Illinois Central train (Figure 4.2) from 1852 until 1997, had deteriorated significantly. In the year 1997, Mayor Richard M. Daley formulated a concept to convert the deteriorated location into a novel urban park and communal area intended for the use and pleasure of the residents of Chicago. In pursuit of this objective, he collaborated with the philanthropic community in Chicago to establish the Millennium Park Foundation (MPF) (Fairmont Chicago,2023).

Figure 4.2. Illinois Central train yard Before High Line Construction

http://www.connectingthewindycity.com/2018/07/july-20-1984-millennium-park-before.html

The establishment of the park took place on the premises formerly occupied by the Illinois Central train yard and a designated area for parking vehicles (Figure 4.3). The construction of Millennium Park began in 1998, culminating in its grand opening in 2004. Millennium Park effectively repurposed a total area of 16.5 acres, formerly occupied by train tracks, surface parking lots, and a deteriorated subterranean garage. This redevelopment initiative successfully converted eight acres of neglected wilderness into a distinctive open-air cultural space.

The park has been recognized and honored for its exceptional accessibility and environmentally conscious design. Admission to Millennium Park is free and encompasses a variety of notable features, including the Jay Pritzker Pavilion, Cloud Gate, Crown Fountain, and Lurie Garden. Situated atop parking lots, the commuter

rail Millennium Station, and train lines, the park has emerged as one of the most expansive public rooftop landscapes in the United States (Conard, 2008; Metin, 2006).

Figure 4.3 Parking Lot in Illinois Central

https://interactive.wttw.com/playlist/2019/07/16/millennium-park-15

Through significant dedication and cooperation from the private sector, including the active participation of esteemed architect Frank Gehry, the project underwent a transformation into a more modern and ambitious endeavor. This evolution garnered the attention and involvement of a distinguished group of internationally acclaimed artists, architects, planners, landscape architects, and designers. Established in the year 2004, the park serves as a prominent municipal hub, spanning an area of 9.9 hectares in the northwestern region of Grant Park, next to the shores of Lake Michigan inside the city. The park has a diverse array of public art installations, open areas, and designated locations, with its boundaries defined by Michigan Avenue, Randolph Street, Columbus Drive, and East Monroe Drive (Figure 4.4).

The park is represented by a rectangular map with a width that is about 1.5 times greater than its length. The Pritzker Pavilion and the Great Lawn are the prominent features that dominate the top portion. The bottom portion of the area is partitioned into three almost equivalent areas, namely Wrigley Square, McCormick Tribune Plaza, and Crown Fountain. Millennium Park, a component of the expansive 129.1 hectare (Hongxing, 2015).
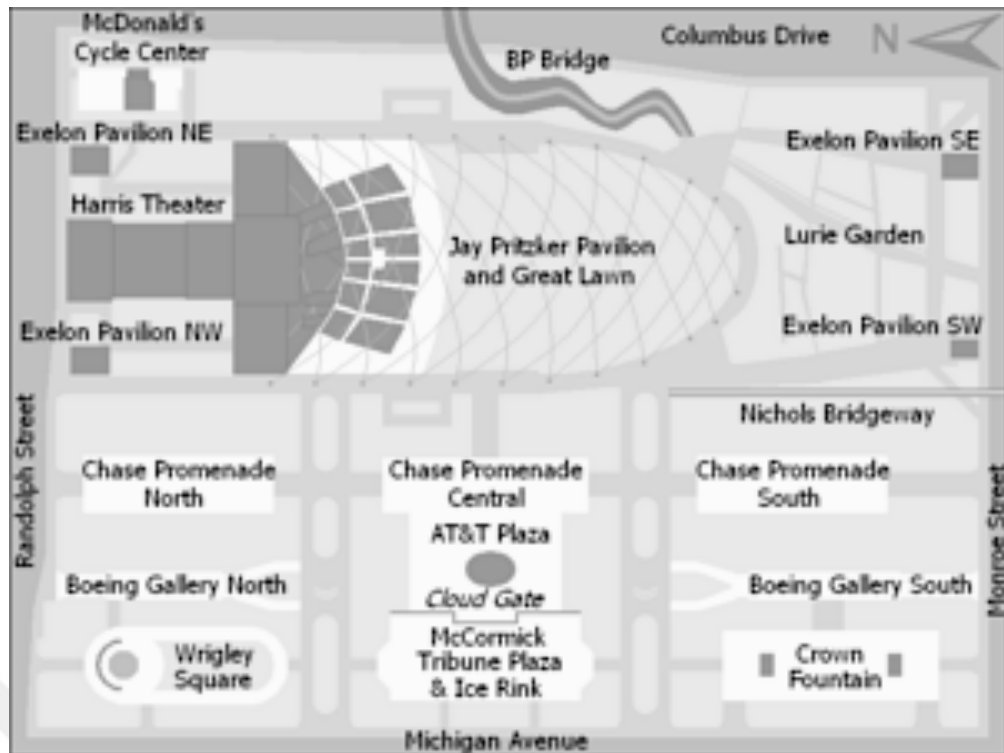
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Figure 4.4 Millennium Park Plan

Grant Park is widely recognized as the central public space in downtown Chicago. This urban park has four prominent creative installations, including the Jay Pritzker Pavilion (Figure 4.5), Cloud Gate (Figure 4.6), Crown Fountain (Figure 4.7), and Lurie Garden (Figure 4.8). Millennium Park effectively functions as a public art venue, in part owing to the substantial size of each artwork and the expansive areas designated for exhibition.

The park has a collection of modernist architectural structures, such as the McCormick Tribune Ice Rink (Figure 4.9 & Figure 4.10), BP Pedestrian Bridge (Figure 4.11), Joan W. and Irving B. Harris Music and Dance Theater (Figure 4.12), Wrigley Square (Figure 4.13), McDonald's Cycle Center (Figure 4.14), Exelon Pavilions (Figure 4.15), AT&T Plaza (Figure 4.16), Boeing Galleries (Figure 4.17), Chase Promenade (Figure 4.18), and Nichols Bridgeway (Figure 4.19).
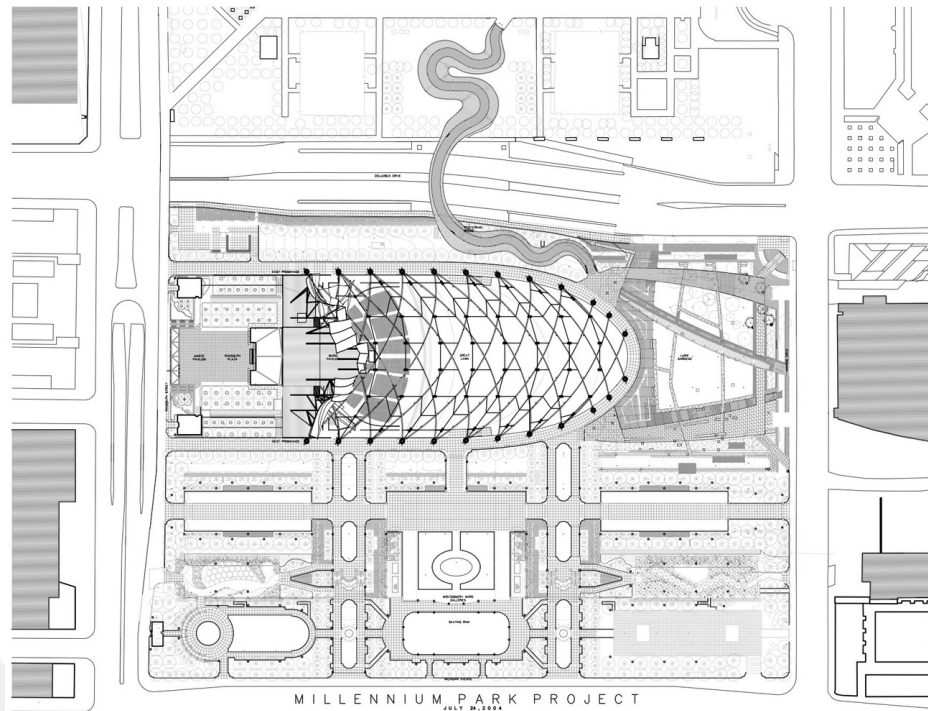
Figure 4.5 Pritzket Plan in the Millennium Park

(https://www.architectmagazine.com/project-gallery/the-joan-w-and-irving-b-harris-theater-for-music-and-dance_o)

Figure 4.6 "Cloud Gate" created by the artist Anish Kapoor

https://www.choosechicago.com/articles/tours-and-attractions/the-bean-chicago/

Figure 4.7 "The Crown" Fountain by Jaume Plensa

https://jaumeplensa.com/works-and-projects/public-space/the-crown-fountain-2004

Figure 4.8 Lurie Garden

https://landscapenotes.com/20 19/07/12/the-lurie-garden-in-millennium-park-chicago/

Figure 4.9 McCormick Tribune Plaza usage during summer

https://millenniumparkfoundation.org/art-architecture/mccormick-tribune-plaza/

Figure 4.10 McCormick Tribune Plaza / Ice Rink during winter

https://upload.wikimedia.org/wikipedia/commons/3/34/Millennium_Park_Ice_

Skating.jpg

Figure 4.11 BP Pedestrian Bridge

https://upload.wikimedia.org/wikipedia/commons/thumb/f/f0/Bp_bridge.JPG/

500px-Bp_bridge.JPG

Figure 4.12 Joan W. and Irving B. Harris Music and Dance Theater

https://upload.wikimedia.org/wikipedia/commons/thumb/f/f0/Bp_bridge.JPG/

500px-Bp_bridge.JPG

Figure 4.133. Wrigley Square

https://millenniumparkfoundation.org/art-architecture/millennium-monument-

wrigley-square/

Figure 4.14 McDonald's Cycle Center

https://millenniumparkfoundation.org/art-architecture/mcdonalds-cycle-center/

Figure 4.15 Exelon Pavilions

https://en.wikipedia.org/wiki/Exelon_Pavilions#/media/File:Northwest_Pavili

on.jpg

Figure 4.16. AT&T Plaza

https://www.flickr.com/photos/twiga_swala/26941267173

Figure 4.17 Boeing Galleries

https://millenniumparkfoundation.org/art-architecture/boeing-galleries/

Figure 4.18 Chase Promenade

https://en.wikipedia.org/wiki/Chase_Promenade#/media/File:Revealing_Chicago.jpg

Figure 4.19 Nichols Bridgeway

https://en.wikipedia.org/wiki/Nichols_Bridgeway#/media/File:Nichols_Bridgeway_090516.JPG

Millennium Park has a dynamic atmosphere during both day and night, attracting a multitude of people who actively engage with the many facets of the park's expansive grounds. The Jay Pritzker Pavilion, designed by renowned architect Frank Gehry, serves as the focal point of the park and functions as a contemporary open-air music facility. It has a seating capacity of 4,000 people, complemented by an additional 7,000 seats available on the expansive Great Lawn (Figure 4.20).

The distinctive architectural designs and public artworks are the result of the creative contributions made by highly imaginative individuals within the art community. McDonough Associates, Gehry Partners, Hammond Beeby Rupert Ainge, Renzo Piano Building Workshop, GGN, OWP/P, SOM, Terry Guen Design, Harley Ellis Devereaux, Muller and Muller, along with several other architects, landscape architects, and artists, together had a significant role in the development of this newly established iconic structure in Chicago. The public has shown exceptional appreciation for the two artworks situated in Millennium Park due to their ability to provide a profoundly engaging communal encounter.

The park's most renowned characteristic is the contemporary artwork entitled "Cloud Gate," created by the esteemed artist Anish Kapoor. Often known as "The Bean," this sculpture's sleek surface provides tourists with a unique vantage point to see Chicago. The Crown Fountain, an architectural creation by Jaume Plensa, employs many elements such as water, light, video, and glass to construct a reflective basin including two towers that project the visages of 1,000 individuals from the city of Chicago.

Situated in the bustling downtown area of Chicago, Millennium Park functions as a pivotal communal area that can be conveniently accessed via many means of public transit. The park is conveniently accessible by many prominent bus routes that traverse the city, in addition to the renowned L train lines and extensive heavy rail network that reaches into the suburbs of Chicago. The McDonald's Cycle Center provides a range of amenities aimed at promoting bicycle commuting, including 300 monitored bicycle parking places, lockers, and shower facilities. The introduction of additional bike sharing stations located both inside and in close proximity to the park serves to enhance the range of mobility alternatives available.

Figure 4.20 An event photo in the Pritzker Pavilion.

https://upload.wikimedia.org/wikipedia/commons/8/80/20090814_Pritzker_Pa

vilion_on_Beethoven%27s_9th_Day_%282%29.JPG

Millennium Park serves as a venue for a plethora of events, including more than 60 performances held on several nights throughout the summer season in Pritzker Pavilion. These events include a diverse range of artistic disciplines, such as film screenings, symphony concerts, musical performances, dance showcases, opera productions, Broadway shows, and various other forms of entertainment. Additionally, the facility offers free summer exercise sessions, including yoga and pilates. The Jazz Festival is being arranged. The location in question offers a variety of amenities and attractions, including but not limited to 80 prominent open-air musical performances annually, expansive gardens, ice skating facilities, dining establishments, cultural celebrations, exhibitions, water displays, and interactive installations of public artwork. Notably, all of these offerings are accessible to both residents of Chicago and visitors without any associated fees.

4.2 High Line Park

The High Line project refers to a meticulously reimagined and aesthetically enhanced park situated in the borough of Manhattan, New York City, which occupies a raised railway track (Figure 4.21). It is roughly 2.3 km length and designed by a collaboration between James Corner Field Operations (Project Lead), Diller Scofidio + Renfro, and planting designer Piet Oudolf (David & Hammond, 2011). The High Line was constructed and opened in stages. The first section, from Gansevoort St. to 20th St., opened in June 2009. The park extended to 30th St. in 2011, and the High Line at the Rail Yards opened in 2014 (David & Hammond, 2011).

Constructed during the 1930s to accommodate the transportation of freight trains, the steel infrastructure spans a length of 1.45 miles and stands at an elevation of 9 meters above the ground. The building had a partial deconstruction due to a decrease in train use during the period of 1960-1970, ultimately becoming obsolete by 1980. In 1999, the railroad underwent partial destruction, resulting in the emergence of a self-sustaining ecosystem characterized by the proliferation of indigenous plant species (Figure 4.22). Subsequently, the then-Mayor Giuliani issued an order for the complete demolition of the railroad (Loughran, 2014b, 2020).

Figure 4.21 High Line Park Photo

(https://calebbrackney.com/high-line-analysis)

Figure 4.22 Before & After Photos from High Line Park

https://i.pinimg.com/originals/6a9/b1/7c/69b17c4503e1d7c65401cc24c1497f6

b.jpg

The 720 submissions included a wide spectrum of ideas, ranging from the unfeasible to the non-feasible, including proposals such as a pool spanning a distance of one mile and the development of a novel High Line. In the year 2004, a collaborative effort by Friends of the High Line and people of New York City was undertaken to conduct an invitational design competition with the purpose of selecting the design team for the High Line project. The competition attracted a participation of 52 teams, which included renowned entities such as Zaha Hadid Architect and Steven Holl, landscape architecture company James Corner Field Operations, design studio Diller Scofidio + Renfro, and planting designer Piet Oudolf. The process of renovating the High Line Park began in 2006, and its subsequent opening to the public occurred in three distinct stages spanning till 2014.

The winning concept used a pavement technology that promotes natural vegetation development, drawing inspiration from the takeover of the High Line by weeds subsequent to the railroad's abandonment. The presence of sometimes ambiguous areas inside the park provides everyone with the opportunity to engage with the space according to their own preferences. The sidewalks next to the line exhibit a dynamic and mutable nature, characterized by a diverse array of components including verdant zones, aquatic elements, designated sitting and relaxation places, as well as spaces designed for performances.

In 2009, the initial phase of the project was inaugurated, focusing on the reintroduction of the iron colonnaded structure into the urban landscape as a public park and an urban promenade. This endeavor was driven by the recognition, spanning from citizens to administrators, of the historical significance of this substantial iron structure within the city. The new identity of this tower has brought to light several distinctive industrial history characteristics, which are considered to be among Manhattan's most notable. The wooden benches, which extend forth from the parking lot surface, are strategically integrated with the existing track texture and formed in accordance with the preexisting characteristics. Additionally, the intended asphalt and plants are intricately entwined with these elements.

Figure 4.23 High Line Park Plan

(https://calebbrackney.com/high-line-analysis)

The urban promenade has the potential to transform into an urban corridor (Figure 4.23) as it penetrates the buildings, while also expanding into a versatile spine that can support various activities due to the presence of city squares. Elevating oneself to a height of 9 meters above ground level and engaging in the act of watching the urban environment from this vantage point elicits a distinct connection with the city, offering varied viewpoints and panoramic panoramas. Additionally, it evokes a feeling of separation and seclusion from the bustling urban milieu.

Presently, the High Line, spanning a length of 2.3 km, accommodates an extensive array of over 500 plant and tree species. It serves as a venue for a diverse range of public and community initiatives, artistic displays, and live performances that are accessible to the general public. This urban oasis provides a captivating retreat from the bustling streets of New York City, affording uninterrupted vistas of the Hudson River and the city's skyline from an elevated vantage point.

4.3 Gardens by the Bay, Singapore

The Gardens by the Bay is totally 101 hectares and located in close proximity to the central business district of Singapore, next to the harbor (Figure 4.24). It is designed by Wilkinson Eyre Architects and Grant Associates teams, and it is opened to public in 2012. The concept for the Gardens by the Bay project was conceived by former Prime Minister Lee Kuan Yew, who envisioned the development of a metropolis that seamlessly incorporates tropical green spaces, thereby transforming the city into a garden (Seng, n.d.).

Gardens by the Bay represents a significant endeavor in the realm of expansive garden initiatives, with a scale that is unparalleled on a global scale. The aggregate land area of 101 hectares has three separate botanical gardens, namely Bay South (54 hectares), Bay East (32 hectares), and Bay Central (15 hectares). The decision to develop the Marina as a green space rather than a commercial sector has several benefits, including enhanced tourism and real estate value in the immediate vicinity. Additionally, this approach fosters public awareness of environmental sustainability and contributes to an improved quality of life for residents in Singapore. The proposed

design entails the implementation of an extensive green matrix that spans throughout the whole of the island. This matrix would include a comprehensive network, spanning over 200 kilometers, which will interconnect various green areas such as parks, gardens, and street greens across the island. The development of Marina Bay served as Singapore's emerging urban hub (Siong et al., 2013).

Figure 4.24 Gardens by the Bay Photo

(https://www.archdaily.com/254471/gardens-by-the-bay-grant-associates)

In January 2006, a worldwide design competition was convened with the objective of identifying the most exceptional design concepts for the park's development. A total of 70 submissions were received from 170 firms from 24 nations worldwide. Ultimately, only two teams were selected to be given the master plan design for Bay South and Bay East Gardens. The completion of the Gardens by the Bay project occurred in three distinct phases. The first phase included the construction of Bay South Gardens, followed by the subsequent development of Bay East Gardens in the second phase. Finally, the project was completed with the establishment of Bay Central Garden in the third and final phase (Flannery et al., 2015).

After an international design competition, the master plan for the Bay South Garden was developed by a team headed by Grant Associates, a landscape architectural company. This garden is the first and biggest of the three gardens that were planned at Gardens by the Bay by the Singapore National Parks Board in 2006. The design team responsible for Bay South, with Grant Associates, consisted of Wilkinson Eyre (architects), Atelier Ten (environmental design consultants), Atelier One (structural engineers), Land Design Studio (museum and visitor center designers), and Thomas Matthews (communications designers) (Davey, 2011). The gardens have gained popularity as a tourist destination in addition to being accessible to all Singaporeans. In addition to providing opportunities for leisure and enjoyment, the parks also provide educational programs focused on horticulture. Therefore, it has a design that will have a significant impact on the advancement of sustainable development (Figure 4.25).
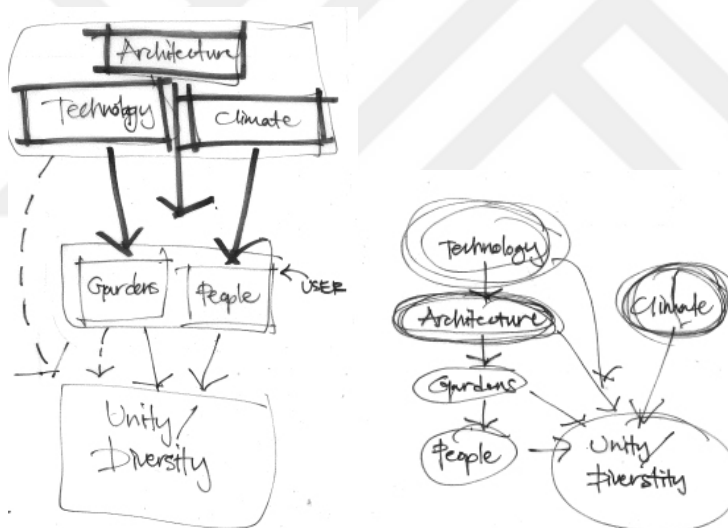

Figure 4.25 Design Program of the Gardens by the Bay

https://boucherplantusgardensbythebay.wordpress.com/2015/09/

The master design draws inspiration from Singapore's national flower, the orchid, and seeks to embody the aesthetic appeal of orchid blossoms via the creation of exotic gardens. Additionally, it aims to reflect the intricate physiology of orchids by including advanced infrastructure systems for electricity, water, and waste management. Grant Associates' master design is a synthesis of nature, technology, and environmental management, drawing inspiration from the elegant structure of the orchid (Davey, 2011).

Singapore, located on the Equator, is characterized by a continuous summer climate and abundant precipitation. Indeed, this phenomenon serves as a deterrent for potential visitors to these gardens situated in a region characterized by high temperatures, humidity, and a tropical environment. Gardens by the Bay addresses these challenges by incorporating a diverse range of plant species that offer visitors a sense of solace, while also integrating design concepts that serve both aesthetic and ecological purposes within the tropical ecosystem. Additionally, these initiatives foster socio-economic connections with various cultural communities in Singapore. In the given environment, the Gardens by the Bay initiative has established round-the-clock accessible areas that serve as educational platforms, imparting knowledge and fostering learning opportunities pertaining to plant material and horticulture (Bellew et al., 2015).

Figure 4.26. **Gardens by the Bay Plan**
(https://www.archdaily.com/254471/gardens-by-the-bay-grant-associates)

The master plan draws inspiration from the orchid, a symbol of Singapore that conjures thoughts of the tropical environment. The Gardens' development on reclaimed ground is further shown by its epiphytic nature and its need on a developing substrate to facilitate its upward growth towards the light source. This is evident in the master plan as shown below: The Orchid plant establishes its roots in close proximity to the water's edge, which is the designated site for the future construction of the Conservatories and a Center. The integration of leaves (landforms), branches (pathways, roads, and linking roads), and secondary roots (water, energy, and communication lines) results in the formation of a cohesive network with aesthetically pleasing blooms (Theme Gardens and Super Trees) strategically located at significant junctions.

The master plan design idea is grounded on principles of environmental sustainability, specifically focusing on water and energy considerations. From the beginning, there has been a deliberate endeavor to strategize and develop sustainable systems for the use of water and energy resources. This encompasses the establishment of a resilient network that also integrates a wide range of floral and faunal species diversity. Nevertheless, the objective is not to establish a fully autonomous system, but rather a practical goal of demonstrating interrelated and sustained processes.

The site has an impressive array of architectural buildings that seamlessly integrate with diverse horticultural displays. Additionally, visitors may enjoy daily light and sound performances, serene lakes, lush woodlands, versatile event spaces, and an assortment of food and shopping options. The comprehensive strategy encompasses an intelligent environmental infrastructure that facilitates the flourishing of endangered plant species in Singapore, which would often face challenges in their growth. This initiative serves to provide both educational and recreational benefits to the population.

The objective of the Bay South Gardens plan is to generate linkages between the Gardens and the adjacent development environment. The master plan design incorporates many crucial pedestrian and vehicular links that link neighboring complexes and public transportation hubs. These connections include the seaside

promenade, pedestrian bridge and underpass, and the major road (Marina Gardens Drive) that runs along the perimeter of the Gardens. Additionally, the design has provisions to facilitate connections by water taxis via the Marina Reservoir. The objective is to facilitate guests' access to the Gardens using public transportation, so reducing the need of driving to the Gardens. This practice effectively decreases the environmental impact of parking structures. This design feature facilitates a smooth integration between the Gardens and the adjacent natural environment (Davey, 2011).

As an example, the Marina Gardens Path will be adorned with a diverse array of trees and shrubs, carefully arranged in stratified layers, exhibiting a captivating palette of autumnal hues. The arboreal canopy will extend into the Gardens, so creating apertures from the adjacent road into the Gardens. The beachfront has a spacious promenade, while the water's edge is characterized by a gently sloping, terraced boundary adorned with abundant vegetation. The gardens are encompassed by lakes, namely (lake names), which are seamlessly connected to the marina. These lakes have a dual purpose: they contribute to the visual appeal of the surroundings and work as a natural ecological filtration system. The lakes effectively absorb water from the marina, allowing it to undergo filtration via the presence of aquatic plants (Bellew et al., 2015; Davey, 2011; Seng, n.d.).
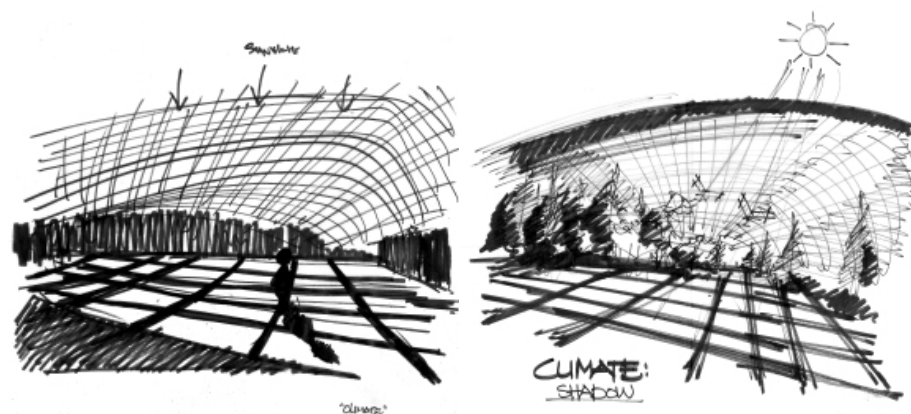
Figure 4.27 Sun/Shadow Sketches in the Greenhouse
https://boucherplantusgardensbythebay.wordpress.com/2015/09/

Grant Associates included environmental considerations, including insolation, wind, and humidity, into the design process of the masterplan. The greenhouses were designed with consideration for all relevant factors, including the need for enough

light for plant development. There are two distinct greenhouses, each with unique characteristics, created by Wilkinson Eyre. The first greenhouse showcases an assortment of flowers originating from the Mediterranean area. In contrast, the second greenhouse is home to tropical plants and has an artificial waterfall as a prominent feature. In order to account for the shadows, cast by nearby buildings, solarization maps of the gardens were generated and used in the design process of the greenhouses (Bellew et al., 2015; Davey, 2011, 2011; GARDEN, n.d.; Siong et al., 2013) (Figure 13).

The two expansive biomes, namely the Flower Dome spanning 1.2 hectares and the Cloud Forest Dome covering 0.8 hectares, were skillfully crafted by Wilkinson Eyre Architects. These remarkable structures serve as exhibition spaces for an array of plants and flowers originating from Mediterranean-type climate zones and Tropical Montane (Cloud Forest) environments. Additionally, they offer a versatile "edutainment" area that can be enjoyed regardless of weather conditions, enhancing the overall experience within the Gardens (Davey, 2011)

Figure 4.28 Photo from Greenhouses
https://boucherplantusgardensbythebay.wordpress.com/2015/09/

Situated inside a tropical climate, Singapore has elevated levels of humidity, which might be less conducive to optimal human comfort. Nevertheless, throughout the conceptualization of the gardens, careful consideration was given to the prevailing wind direction to optimize the outside environment for individuals by mitigating excessive humidity levels. Therefore, the implementation of tree planting, the

establishment of plant cages, and the provision of shade canopies were devised within this framework with the aim of mitigating humidity levels and establishing pleasant environments. The design of the gardens took into consideration not just aesthetic considerations. Simultaneously, the establishment of themed parks has contributed to the proliferation of diverse plant species, therefore enhancing individuals' botanical understanding. The gardens have the capacity to establish an independent ecological system, therefore fostering a heightened sense of world consciousness.

The 18 Super Trees, which were created by Grant Associates, are renowned vertical gardens that vary in height from 25 to 50 meters. These structures are characterized by their incorporation of tropical flowering vines, epiphytes, and ferns. The vein-like covers of the eighteen 50-meter-high 'Super Tree' constructions support a diverse array of plant species, numbering in the thousands. The Super Trees, an impressive architectural concept, have a size that makes it visible from many vantage points within the vicinity. In addition, the tree structure is equipped with its own elevator and spiral staircase, as well as a restaurant situated atop the tree. The structures are linked with bridges that reach a height of 20 meters, with the highest bridge including a bar at its summit. Each structure is equipped with rainwater collection tanks and pumps that provide cooling for both the adjacent huge greenhouses (Flannery et al., 2015, 2015) (Figure 15 & Figure 16).

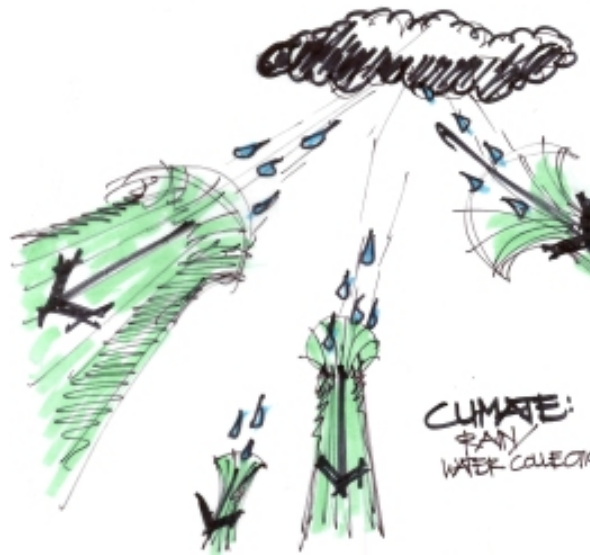**Figure 4.29 Photo from Super Trees**

https://boucherplantusgardensbythebay.wordpress.com/2015/09/

Figure 4.30 Super Trees and collecting rainwater

https://boucherplantusgardensbythebay.wordpress.com/2015/09/

Gardens by the Bay serves as a notable illustration of how the realm of garden design extends beyond the domains of landscape architecture and horticulture. The phenomenon signifies the emergence of interdisciplinary collaboration in several fields, including disciplines such as architecture, structural engineering, and environmental engineering, which has been more prevalent in recent years. In addition to providing aesthetic and recreational amenities, this approach prioritizes the integration of physical urban and environmental ecologies from the beginning.
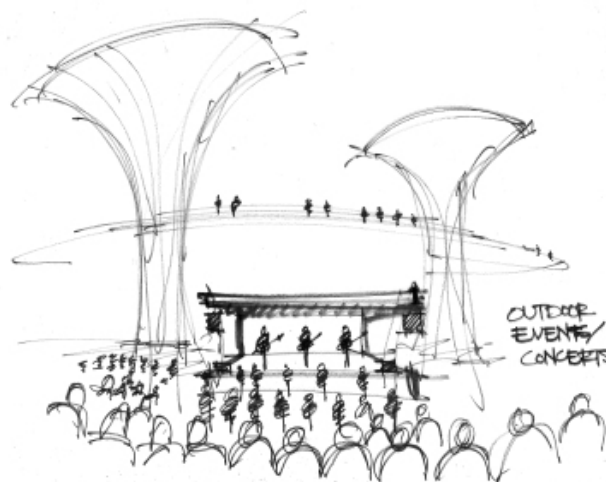

Figure 4.31 Sketch of Recreational Activities in the Super Trees Region

https://boucherplantusgardensbythebay.wordpress.com/2015/09/

In addition to the amenities, the botanical park has several themed gardens, a serene lake, picturesque tree-lined paths, a recreational playground, and a versatile event area (Figure 17). During nighttime, the canopies become animated with the use of lights and projected media. The Super Trees possess sustainable energy and water technologies that play a crucial role in the chilling process of the Refrigerated Conservatories. The Flower Dome offers a controlled indoor setting that accommodates plant species originating from Mediterranean climates, whilst the Cloud Forest serves as a habitat for endangered flora and fauna found in tropical mountain cloud forests. The gardens, which were established in 2012, draw an annual influx of over 12 million people who come to partake in the garden's offerings. In addition to accommodating both Singaporean residents and visitors, the gardens also serve as a habitat for a flourishing biodiversity, including various avian species, dragonflies, insects, and the captivating Smooth-coated otters.

4.4 Chapter Review

This chapter focuses on the selection of three parks from the 21st century that demonstrate contemporary, creative, and sustainable design approaches. These parks are Millennium Park, High Line Park, and Gardens by the Bay. The evaluation of these parks was conducted using the theoretical frameworks proposed by Jan Gehl and Jane Jacobs, as discussed in Chapter 2.

In the previous chapters, a concise overview is provided on each park, followed by an elucidation of the criteria that were considered throughout the park development procedures. Lastly, the activities available inside the parks are delineated. Within this setting, the parks were first assessed according to the four criteria delineated by Jane Jacobs in order to ascertain their level of success. The factors of **intricacy, centrality, exposure to sunlight, and enclosure**, as identified by Jane Jacobs, contribute to the use and social interaction inside a park, hence enhancing its success.

Based on the analysis shown in **Table 1**, it is evident that the parks exhibit a high level of complexity. This is attributed to the diverse range of activities offered inside each park, resulting in a densely used space and encouraging repeated visits by those seeking many recreational opportunities. Hence, it may be argued that any park has the potential to enhance social interaction by virtue of its complexity. (Table 1)

Table 4.1 Comparison Parks According to Jane Jacobs

	Intricacy	Centering	Sun	Enclosure
Millennium Park	• film screenings, • symphony concerts, • musical performances, • dance showcases, • opera productions, • exercise sessions, • yoga and pilates, • festival • open-air musical performances • ice skating • dining establishments, • cultural celebrations, • exhibitions, • water displays, and • interactive installations of public artwork	• "cloud gate," created by the esteemed Artist Anish Kapoor • "the crown fountain", an architectural creation by Jaume Plensa • "agora" by designed by Polish artist Magdalena Abakanowicz • activity stages	• it is mostly used in summer • it is also used in short time in winter for taking photos in front of the sculptures or any other art installations by mostly tourists.	• it is surrounded by the hotels and towers and plazas for companies • also, it has a framed trees and • surrounded by the highway and • ocean near
High Line Park	• 3 different parts • sidewalks • green areas • aquatic elements • sitting and relaxation places • performance areas	• it has 3 different parts and • they are unique by itself • some parts are wider than others so it could be centered • Also, some performance are could be recognized area to meet or gather for people.	• it is elevated 9 meters from ground level, so it always takes sun lights during the days and people use lounge chairs it the park for sunbathing.	• it is surrounded by the lots of buildings and plazas • it is very accessible area for public transportation stops
Gardens by the Bay	• three separate botanical gardens (bay south, bay east, and bay central) • daily light • sound performances, • serene lakes, • lush woodlands, • versatile event spaces, • an assortment of food • shopping options • super trees • greenhouses	• all shows are centered by itself	• the sun movement is very important because it has botanical gardens greenhouses and habitats for flora and fauna	• harbor

The prominence and spontaneity of meeting, gathering, and congregating locations within parks may be seen via the lens of centrality. This phenomenon is particularly evident in Millennium Park, where the presence of famous sculptures and surrounding buildings providing directional cues contribute to the prominence and spontaneity of these social spaces. As an illustration, the "Cloud Gate," colloquially referred to as the bean sculpture, crafted by the esteemed artist Anish Kapoor, alongside the "Crown Fountain," conceptualized by Jaume Plensa, and the "Agora" sculptures, exclusively composed of feet, envisioned by the Polish artist Magdalena Abakanowicz, serve as prominent landmarks that individuals readily recognize as central gathering spaces.

The High Line Park was deemed deficient in this regard. The linear composition of the park is characterized by the presence of recurring axes and design features. Furthermore, despite the presence of many pockets and widths designated for pedestrian routes and waiting places, the site lacks a sufficient number of clearly delineated and readily identifiable zones. However, it is worth noting that the park consists of three distinct portions and can be accessible from ground level. While these aspects may serve as focal points, they are believed to contribute to a limited amount of engagement.

When analyzing Garden by the Bay from a centroid perspective, one can see the presence of famous orchid-shaped trees, known as "Super Trees," as well as the inclusion of greenhouses and day-to-night light displays. These elements all contribute to the formation of a centroid. The Super Trees, in particular, are readily noticeable owing to their significant dimensions, and their aesthetically pleasing structures are regarded as spaces that captivate individuals by evoking a feeling of inquisitiveness and facilitating social engagement.

The assessment of parks in terms of solar exposure highlights the significance of sunlight in park use, particularly in the case of Millennium Park situated in Chicago, a city known for its severe winter conditions. The majority of recreational activities inside the park are often conducted during favorable weather conditions in the summer. However, it is important to acknowledge that the use of the park during the winter season is very substantial and should not be disregarded.

The park experiences a continuous flow of activity and engagement due to the presence of plazas, residences, and hotels in its vicinity. Throughout the day, various individuals contribute to this dynamic atmosphere, including employees who capture photographs and videos during their lunch and coffee breaks, mothers and children who frequent the park at noon, and tourists who visit the park at different times, irrespective of seasonal variations. Notably, these visitors are particularly drawn to the sculptures that have come to represent the park's identity.

Among these three parks, High Line Park stands out as the park that derives the most advantage from solar radiation, as determined via study. Due to its elevated position of 9 meters above ground level, the park remains unobstructed by the surrounding buildings, making it an ideal location for sunbathing among several New Yorkers. This preference is further facilitated by the park's provision of sun loungers, which are arranged in a long and horizontal configuration, enhancing the urban amenities available for relaxation and sunbathing purposes. Simultaneously, the presence of pockets and openings inside the route facilitates the use of camping chairs, yoga mats, or blankets by individuals in these designated spaces. Furthermore, these locations tend to see an increase in occupancy after twilight hours. Within this particular setting, it facilitates the opportunity for engagement and exchange.

In contrast, Gardens by the Bay achieves a harmonious interplay of light and shadow via its distinctive architectural composition. Among the three parks under evaluation, the park design exhibits the highest degree of consideration towards biodiversity, including flora, wildlife, and climatic data. This emphasis is attributed to its alignment with principles of energy sustainability within the realm of park development. Due to this rationale, the structure has a proficient design in terms of optimizing solar exposure and generating shadow in accordance with varying diurnal and seasonal periods. By using this approach, it harnesses the inherent shading properties of vegetation and the distinctive features of the renowned "Super Trees".

In considering the notion of enclosure, it is evident that the presence of high-rise structures around the Millennium Park serves to provide a distinct border, so delineating and defining the park. Additionally, they establish a certain kind of entrances for the park. Furthermore, the presence of the water and the highway inside

the park serves as additional factors that contribute to the process of orientation, influencing the determination of walking directions and delineating the boundaries of the space.

The High Line Park is surrounded by several tall structures, creating a notable urban landscape. Its advantageous location in close proximity to public transit terminals facilitates convenient access and engagement with the park.

Gardens by the Bay is encompassed by maritime ports and is mostly characterized by verdant spaces. Currently, the structure exhibits a harmonious relationship with its environment in terms of its organic composition, however its demarcations remain elusive and indeterminate. Conversely, it creates a sense of coherence with the urban environment; nonetheless, there is an absence of delineated demarcations that guide people towards the park.

Among the three parks assessed based on the principles espoused by Jane Jacobs, Millennium Park emerges as the most influential in fostering social engagement. This park design is widely regarded as successful due to its inclusion of iconic sculptures and its ability to attract visitors from diverse backgrounds throughout various times of the day and year.

In Chapter 2, the work of Jan Gehl was also discussed, when he conducted an examination of cities based on their activities. Gehl's perspective is that in environments characterized by high-quality attributes, individuals engage in activities and foster interpersonal interactions. Based on Gehl's concept, a comparative analysis of the three parks is made. As shown in Table 2 and Table 3, it is evident that when the park environment exhibits good quality, individuals are presented with a wide range of opportunities to engage in various activities. However, as shown in Table 2, when the space quality is bad, there is a fall in activity numbers, which therefore leads to a decrease in the use of parks.

Gehl classifies activities into three distinct categories, namely required, voluntary, and social activities. Compulsory activities refer to those that are inherent to one's daily routine, including tasks such as traveling to work or school. The quality

of the place, particularly the seasonal circumstances, has a significant impact on the selection of optional activities. In the event of favorable weather conditions, individuals have the opportunity to allocate a greater portion of their time engaging in outdoor pursuits and executing various activities. When faced with poor weather circumstances, individuals exhibit less willingness to engage in various activities. In the present setting, an assessment was conducted on three parks that belong to the modern time. The circumstances remain unaltered for obligatory undertakings under optimal environmental settings. Interaction mostly consists of concise exchanges and quick interactions. In the context of optional activities, favorable circumstances prevail, hence facilitating the execution of several outdoor activities. According to the data shown in Table 1.

Millennium Park offers a wide range of outdoor activities in favorable climatic circumstances. However, the availability of these activities diminishes in the presence of adverse environmental elements due to the geographical location of Millennium Park in Chicago, which is renowned for its frigid climate. Furthermore, the nature of social activities is contingent upon the presence of optional activities since all optional activities inherently include social characteristics.

It might be said that High Line Park does not provide any obligatory activity choices. Due to its non-ground level positioning and lack of proximity to transit hubs or thoroughfares, individuals use it only for designated activities. Within this setting, it may be posited that optional activities have a greater degree of prominence, hence rendering the park as a conducive environment for fostering social contact.

As a kind of communal engagement, it may be argued that any discretionary activity has the potential to foster social cohesion and facilitate interpersonal contact, particularly when it involves individuals who are unfamiliar with one another. The High Line Park serves as a venue for a diverse range of performances and activities, hence fostering social interaction within its surroundings.

Table 4.2 High Quality Activities

High Quality	Necessary Activities	Optional Activities	Social Activities
Millennium Park	• Intensive commuting activities It is surrounded lots of plazas, hotels, accommodations, and transportation stops.	• film screenings, • symphony concerts, • musical performances, • dance showcases, • opera productions, • exercise sessions, • yoga and pilates, • festival • open-air musical performances • ice skating • dining establishments, • cultural celebrations, • exhibitions, • water displays, • interactive installations of public artwork	• interactive installations of public artwork • dining establishments,
High Line Park	There **is no necessary activities** in the park because it is elevated 9 meter from ground level and there is no forces to use this area as a passage.	• sidewalks • green areas • aquatic elements • sitting and relaxation places • performance areas • sunbathing • flexible usage	• sidewalks • sitting and relaxation places • flexible usage
Gardens by the Bay	**No necessary activities**	• three separate botanical gardens (bay south, bay east, and bay central) • sound performances, • lakes, • lush woodlands, • versatile event spaces, • an assortment of food • shopping options • super trees • greenhouses	• an assortment of food • shopping options • greenhouses

In contrast, Garden by the Bay does not impose obligatory activities since it does not function as a transit hub or a refuge. Despite being bordered by commercial structures, the periphery of the area exhibits a more organic environment. The design of this park and the prevailing climatic conditions in the present location do not exhibit any characteristics that might give rise to adverse circumstances. Table 2 and Table 3 represents a comprehensive overview of the many activities taking place inside the park, indicating that the environmental conditions do not have any discernible influence.
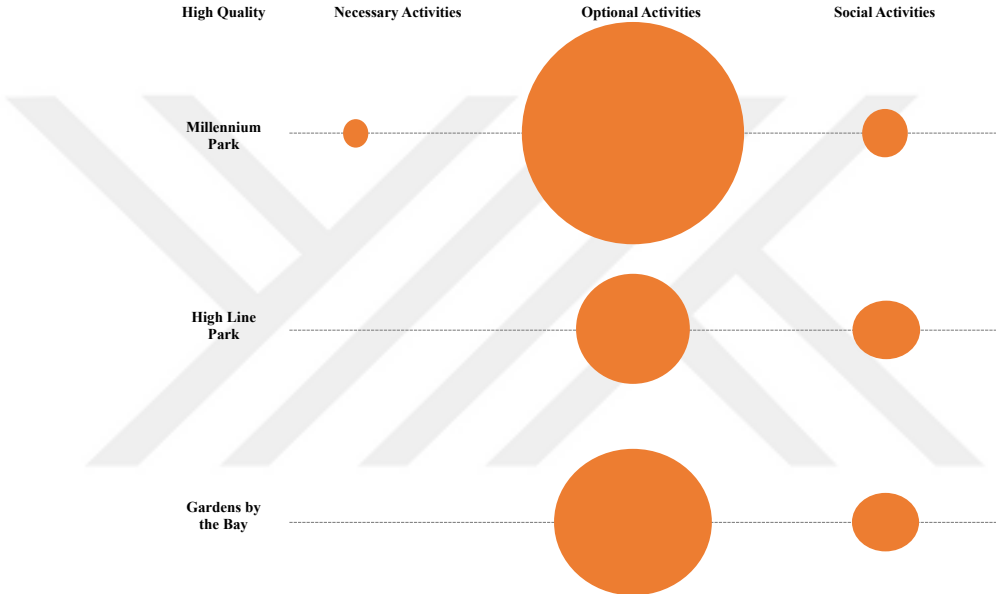
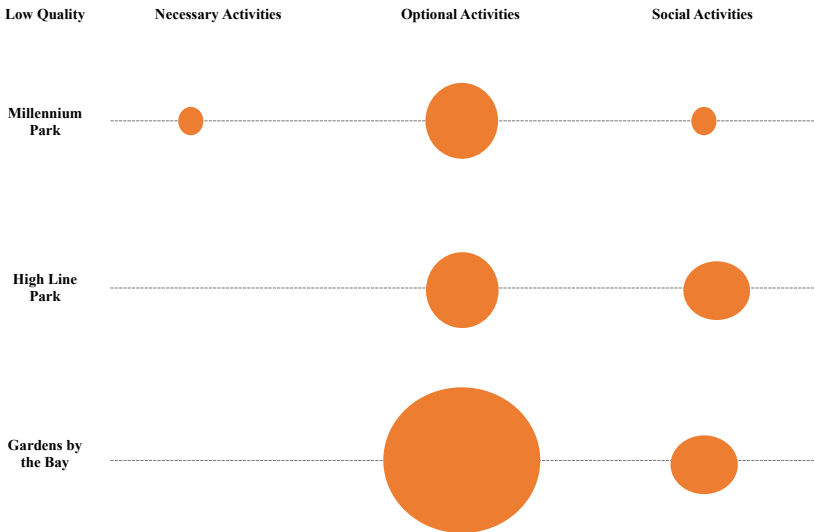**Figure 4.32 Social Interaction in the Parks / High Quality of Environment**

Figure 4.33 Social Interaction in the Parks / Low Quality of Environment

Table 4.3 Low Quality Activities

Low Quality	Necessary Activities	Optional Activities	Social Activities
Millennium Park	• Intensive commuting activities It is surrounded lots of plazas, hotels, accommodations, and transportation stops.	• ice skating • dining establishments, • exhibitions, • interactive installations of public artwork	• interactive installations of public artwork • dining establishments,
High Line Park	There **is no necessary activities** in the park because it is elevated 9 meter from ground level and there is no forces to use this area as a passage.	• sidewalks • green areas • sitting and relaxation places • flexible usage	• sidewalks • sitting and relaxation places • flexible usage
Gardens by the Bay	**No necessary activities**	• three separate botanical gardens (bay south, bay east, and bay central) • sound performances, • lakes, • lush woodlands, • versatile event spaces, • an assortment of food • shopping options • super trees • greenhouses	• an assortment of food • shopping options • greenhouses

In summary, the analysis of parks based on different degrees of environmental quality offers valuable insights into the influence of human activities on interpersonal engagements. The dimensions of the circles shown in Figure 12 and Figure 13 were determined based on the word counts obtained from Table 2 and Table 3. Figures 12 and 13 were generated by the process of delineating circular shapes inside the individual cells that include the textual content shown in Tables 2 and 3, respectively. The magnitude of the interactions is indicated by the dimensions of the circles. Millennium Park experiences optimal levels of engagement when the surrounding environment demonstrates a superior degree of excellence. Subsequently, Gardens by the Bay appears as the subsequent park in relation to its level of engagement, while High Line Park concludes the roster as the last competitor.

Chapter 5

Conclusions and Future Prospects

5.1 Conclusions

This thesis employs a retrospective analysis to examine the historical evolution of green spaces, with a particular focus on parks, from their inception to the current day. This study aims to investigate the manner in which green areas facilitate social cohesion via various activities, as well as the dynamics of social interaction within society. This study examines parks from ancient to current periods within the given setting.

In Chapter 2, the definitions provided by Jan Gehl and Jane Jacobs are used within this particular setting to gain insights into the principles underlying social interaction. Jan Gehl categorizes social interaction based on open space activities, while Jane Jacobs evaluates the effective design of parks by considering factors such as the variety of activities available, the provision of areas for sunbathing, the creation of central focal points, and the integration of holistic principles. The evaluation of these parks also includes the assessment of their use and occupancy patterns throughout various times of the day and during different seasons.

Based on the aforementioned criteria, the green spaces have been subjected to a retrospective analysis and are compiled in Chapter 3, titled "From Private Garden to Public Park." The presence of green spaces has been identified as significant markers in the transition from private to public domains, particularly during the periods of the industrial revolution and the park movement. During the Ancient, Classical, and Medieval eras, parks were primarily associated with spiritual and religious practices. In contrast, the English, Baroque, Renaissance, and Romantic periods saw a shift in the perception of green spaces, when they became venues for activities centered on aesthetic appreciation, beauty, and amusement. Subsequently, during the era of the

industrial revolution and the emergence of the park movement, pivotal periods in the march towards publicness, green spaces underwent a transformation, assuming the form of public spaces. Within the given setting, namely the Victorian era, the Modern period, and the pre-war period, the first foundations of contemporary green areas were established. The concluding section of that chapter elucidated the existence of social stratification inside parks, both in terms of use patterns and social interactions. To facilitate comprehension of this phenomenon, a tabular representation was devised, aiming to explore the dynamics of interaction across temporal dimensions.

Chapter 4 of the study focuses on the selection of three parks from the present-day collection of parks, with a shared trait of being inventive, modern, and sustainable. The aforementioned parks include Millennium Park, High Line Park, and Gardens by the Bay. A concise overview of the objective and methodology of construction, the architect responsible for design, and the inaugural year of each park is provided. To gain insight into the dynamics of social interaction inside these parks, further artworks and sculptures were created, drawing inspiration from the conceptual frameworks developed by Jan Gehl and Jane Jacobs.

The assessment of these many aspects leads to the conclusion that in order to promote social cohesion and interaction in parks, it is important to study and evaluate sociological data, including socio-demographic and socio-economic structure, as well as social categorization. Examining the societal requirements and expectations inherent within the urban population provides insight into the conceptualization of the spatial design. The active use of the space will be enhanced via the establishment of a contextual relationship between the design elements and the urban population. Due to this rationale, the diverse population of green space users inside the city will also use the area in a heterogeneous manner, while maintaining a sense of harmony. This will facilitate the development of a socially cohesive urban environment, therefore promoting the overall health and well-being of the city's residents. In the process of park design, the consideration of lines and axes is important, but the primary focus is on the urbanite. Within this framework, the park area must be designed to adequately fulfill the expectations of the urban resident. Indeed, it is essential to develop urban parks that cater not just to urban residents but also to include diverse plant, animal species, and several ecosystems.

In accordance with contemporary principles of sustainability and innovation in park design, it is essential to construct designs that can be adapted and enhanced via technology advancements to effectively respond to changing needs and circumstances. The desirability of a park should extend beyond its function as a one-time visit or mere passageway, instead emphasizing its capacity to attract and engage visitors. Additionally, the implementation of this project will result in the establishment of an educational environment, facilitated by its ecosystem framework and incorporation of various ecological components.

Based on the previously mentioned information and conclusions, it can be deduced that the sustainability of an urban green space is contingent upon the active involvement of its users. This objective may be accomplished by enhancing the probability of individuals making several visits to the park within a single day or using the park for diverse purposes. Within the present framework, the parks envisioned for the future, as first discussed in this thesis, represent the inception of contemporary parks that would evolve into inclusive places encompassing socio-cultural and socio-economic disparities, fostering harmonious coexistence among diverse societal groups. The presence of a wide range of activities and the intricate nature of urban parks serve as evidence. Therefore, the inclusion of the data discussed in the review of Chapter 4 guarantees that future urban parks will possess greater intricacy and exhibit consideration towards the entire ecological system, thereby fostering societal awareness and ensuring a state of tranquility and harmony between the city and its inhabitants.

5.2 Societal Impact and Contribution to Global Sustainability

This thesis has the potential to make a significant contribution to global sustainability and have a positive impact on society. It is aligned with various Sustainable Development Goals (SDGs). This study makes a contribution to the attainment of Goal 11, which pertains to the establishment of sustainable cities and communities. Through an examination of the progression of urban green spaces and their impact on social engagement, valuable perspectives can be gained regarding the

potential for sustainable design and development of cities. Urban green spaces are integral constituents of sustainable urban areas, as they augment communal welfare, foster inclusiveness, and establish venues for social unity. Comprehending the historical progression of these areas provides valuable insights for urban planners and policymakers regarding the significance of incorporating green spaces into urban environments. This facilitates their availability to all members of society and promotes the development of more dynamic and sustainable communities.

Furthermore, the subject matter is in accordance with Goal 3 of the United Nations' Sustainable Development Goals, which pertains to promoting good health and well-being. The presence of green spaces in urban areas has been found to have a beneficial effect on the health of the general public. This is due to the fact that such spaces offer opportunities for engaging in physical activity, as well as for reducing stress levels and promoting relaxation. The investigation into the development of these areas has the potential to provide insight into how their architecture, availability, and features impact communal engagements and, consequently, the welfare of individuals. The thesis underscores the importance of establishing healthy environments that foster physical and mental well-being by emphasizing the correlation between urban green spaces and social interaction. This contributes to the attainment of SDG 3.

Moreover, the subject matter pertains to Sustainable Development Goal 15, which focuses on the preservation and restoration of terrestrial ecosystems and biodiversity. The preservation and enhancement of biodiversity in urban environments is significantly influenced by the presence of urban green spaces. The examination of the development of urban green spaces can yield significant knowledge regarding the historical incorporation of natural elements into urban environments and the progression of these areas in promoting the preservation of biodiversity. This information can be utilized to guide forthcoming urban planning and design methodologies, with the aim of safeguarding and augmenting green spaces, thereby advancing sustainable development and bolstering the attainment of SDG 15.

The investigation into the development of urban green spaces and its impact on social interaction is a valuable contribution to the promotion of global sustainability and societal impact, as it pertains to the achievement of Sustainable Development

Goals (SDGs) 11, 3, and 15. This study underscores the significance of these areas in promoting sustainable urban growth, enhancing community welfare, and preserving biodiversity. It provides guidance to urban planners, policymakers, and communities in their efforts to establish cities that are more habitable, equitable, and environmentally aware. In conclusion, the incorporation of green spaces within urban areas as communal gathering places fosters a more sustainable and interconnected societal framework.

5.3 Future Prospects

Within the scope of this thesis, it is understood that the contribution of green spaces to social interaction depends on open space activities, quality of space and characteristics of the space. Parks have been historically analyzed and categorized. With this study, a number of assumptions have been made about the social interaction and social cohesion of parks in the future. These are the diversity of activities and the environmental quality of the designed park to realize these activities.

In this context, it is emphasized that the society should be well analyzed while creating activities for the parks to be designed in the future and that not only formal designs, but also sociological analysis should be made.

As a result, it is emphasized that the parks of the future are not only geometric forms created with the axes taken from their surroundings and that social data are important as well as the physical data of the region where they will be designed. In today's contemporary world, parks also address ecological issues such as ecology, sustainability, habitat, biodiversity and renew themselves against the climate crisis. In this way, they also raise awareness of the society. In this context, the activities change and transform, and the designed parks take responsibility for the city. In this context, this thesis suggests that parks should keep pace with social and global changes in the design process.

In urban areas, structures may be categorized as either privately owned or possessing a semi-private/semi-public nature. These buildings serve many purposes, including residential, commercial, and public services. Access to these structures may

be limited to certain individuals or communities, and in some cases, restricted to certain time periods. Nevertheless, urban parks are public areas that are available to anyone at all times, operating on a 24/7 basis. User profiles may be seen in urban parks, irrespective of demographic factors such as age, gender, ethnicity, language, and religion. Therefore, although individuals with common attributes tend to congregate inside buildings, urban parks provide individuals the opportunity to encounter others who possess dissimilar qualities.

Within the present setting, contemporary cities experience both domestic and international migration. Urban green areas play a crucial role in fostering harmonious coexistence and facilitating contact between local residents and immigrants. Hence, in the context of urban park design, it is essential to include elements that foster communal cohesion and harmony. This does not imply a rise in the quantity of activity inside the park. According to Jan Gehl, social connection is very significant in the context of activities. However, the qualitative attributes of these activities have more importance compared to their quantitative measurements. The success of a park in terms of social interaction may be attributed to its thorough analysis of its residents and its ability to provide activities that cater to the requirements of the community. Furthermore, Jane Jacobs identifies several physical attributes that are expected to enhance the use of urban parks, including both functional and material aspects.

In summary, urban parks serve as primary urban places that foster social interaction and exemplify the notion of publicness. Therefore, it is imperative that parks encompass a diverse range of activities, undergo thorough assessment of climatic and global data to ensure sustainability, establish self-sustaining ecosystems, foster social consciousness within their surroundings, and promote repeated visits for educational and experiential purposes, thereby facilitating social interaction.

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SELECTED PUBLICATIONS AND PRESENTATIONS

C1) A. Atilgan, Investigation of the Effect of Social Class Control Over Time and the Use of Urban Parks, International Conference on Sustainable Cities and Urban Landscapes (ICSULA 2022), (Oct. 2022).

C2) A. Atilgan, E. Turkarslan, Dijitalleşen Tasarım Eğitiminde; Giyilebilir Teknolojiler Üzerine Bir İnceleme, 5th International Symposium on Art and Design Education, Sustainability in Art and Design, (Apr. 2023).