ISTANBUL TECHNICAL UNIVERSITY ★ GRADUATE SCHOOL OF SCIENCE ENGINEERING AND TECHNOLOGY

CHANGING VISIONS OF THE CITY PARK DESIGNS AND ANALYSIS OF DESIGN APPROACHES AND PRINCIPLES

M.Sc. THESIS

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Department of Landscape Architecture

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JUNE 2018

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ISTANBUL TEKNİK ÜNİVERSİTESİ ★ FEN BİLİMLERİ ENSTİTÜSÜ

KENT PARKI TASARIMLARININ DEĞİŞEN VİZYONLARI VE TASARIM İLKELERİ

YÜKSEK LİSANS TEZİ

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Melike KARALİ, a M.Sc. student of ITU Graduate School of Science Engineering and Technology student ID 502151605, successfully defended the thesis/dissertation entitled "CHANGING VISIONS OF THE CITY PARK DESIGNS AND ANALYSIS OF DESIGN APPROACHES AND PRINCIPLES", which she prepared after fulfilling the requirements specified in the associated legislations, before the jury whose signatures are below.

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To my beloved mother,

FOREWORD

The author would like to express her thanks to her advisor Prof. Dr. Mehmet OCAKÇI for his guidance during the thesis study.

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The author sincerely wishes to state her love and gratitude to her dear mother, brother and father.

Finally, the author would also like to thank all dreamers expanding the imagination with their inspirational works including paintings, novels, poetries, movies and designs.

Landscape is formed by both man-made and natural process on the earth and this knowledge should create a sensitivity to designing landscapes considering all time layers formed by culture and nature.

June 2018   Melike KARALİ
                                                                        (Landscape Architect)

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ABBREVIATIONS

WWI   : World War I

WWII   : World War II

TCDD   : The State Railways of the Turkish Republic

IBA   : International Building Exhibition

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CHANGING VISIONS OF THE CITY PARK DESIGNS AND ANALYSIS OF DESIGN APPROACHES AND PRINCIPLES

SUMMARY

Public spaces have crucial significance on the collective memory and urban identity in the cities. They form the identity of the city and reflect the collective memory of society. Urban parks are one of the important public spaces and they are cultural heritage of the cities. Park designs bridge from past to future, so they introduce evolutionary process of past and create visions for the future. The representative exemplars of the city park designs form the iconic image of the cities. These democratic public spaces gather urban inhabitants and visitors and contribute to the collective memory. In addition, city parks are the main components of the urban green infrastructure system. They provide natural habitats for urban fauna and space for recreational activities, reduce urban heat island effect and clean the air, can help to manage storm water. Furthermore, urban parks enhance public health and maintain sustainable environments for cities. City parks locates in the intersection area of the sustainability that has environmental, social and economic dimensions.

From past to present, the visions of the city park designs have been evolved through changing philosophical worldviews, needs of eras, art movements and scientific and technological innovations. Practices of urban park designs from past to present enable to analyze visions of different time periods clarifying relations with art and science and understand transformation of paradigms during the process. The focus of landscape architecture has evolved from 19th century to present, so it can be claimed that these changes have also influenced the design philosophies and approaches of the city park designs. City parks are the identity elements of the cities in terms of the expression and representation of periodic differences. The representative exemplars form a basis for understanding past conditions and approaches, and developing new visions and strategies for the future.

The purpose of the research is to review changing visions of the city park designs based on the design approaches and principles that have evolved from past to present and analyze their design characteristics, strategies and main symbolic elements. In order to achieve this aim, the research is handled in the intersection of art history and scientific & technological innovations during the study to enlighten their influences on the city park designs.

The city parks, which are considered as iconic representations of each era, are the significant exemplars for today's park designs. The general question of the research: How the representative exemplars of the city park designs will introduce an approach to form the future urban park designs? The hypothesis of the thesis is "The city park designs will be crucial exemplars for understanding applied practices and developing new visions. Complex park designs will emerge by adding new innovations into the design approaches and strategies of these iconic exemplars throughout new inventions and changing needs of the era. New strategies with technological development will shape the future park designs. As well as each park design represents the characteristics

of their eras, they also refer to other periods. In the light of these facts, it can be said that this point is related to evolutionary process. The representative exemplars of the city park designs that have evolved from past to present will play a role in shaping the future visions of the urban park designs"

Industrial Revolution is the starting point of the research based on the timeline of the evolutionary process in history. The basic scientific and technological developments were addressed considering Industrial Revolution, modern biology, ecology, invention of computer and internet that have important influences on the city park designs. Meanwhile, art-historical classification was started to use for explanation of changing city park visions from romantic period to present. Art history was classified as romantic, modern, postmodern and post-postmodern eras and this classification formed the main structure of the study. Changes and developments in the historical process considering characteristics of the eras, art, architecture, city planning and landscape architecture disciplines were elucidated in theoretical framework. Literature was reviewed about these developments in the evolutionary process from books, articles, magazines, journals and web sources.

Then, twenty-four city park designs, which were designed and implemented after Industrial Revolution, were selected in the first phase considering strong representative exemplars of historical, iconic, and large scale urban parks of the cities based on the values ranging from 2.7 to 1000 hectares. After that, twelve of these urban public parks were selected to investigate in the second phase considering each of three are belongs to Romantic, Modern, Postmodern and Post-postmodern periods. Finally, eight urban public parks, which are strong representative exemplars of historical, iconic and large scale parks considering the periods, were selected for comparative analysis. Each two of them represent respectively romantic, modern, postmodern and post-postmodern periods. Because the city park designs are a case study to understand previous projects and develop new visions, the suggested format for case studies is used for describing evolution of the city park designs and the method is organized by project type 'urban parks' in order to compare and review. In order to determine the iconic images of the representative exemplars of the city park designs through particular characteristics, five symbolic elements were adapted to study including edges, districts, landmarks, nodes and paths. Project facts, characteristics of eras, design philosophies, approaches, concepts, main symbolic elements and architectural and landscape elements of these exemplars clarify periodic differences and some similarities and form the matrix.

Outcomes of the research were formed by visualization of data in each chapter. They comprised timeline that demonstrates city park designs in the evolutionary process of art and science involving thresholds, which are scientific discoveries and technological innovations, art movements, world wars, economic crisis, environmental problems, conferences, books that change theoretical framework and the matrix that introduces the profile information of the park designs, characteristics of each era, design philosophies, approaches and concepts of park designs, main symbolic elements, architectural and landscape elements.

The representative exemplars of city park designs, which are the iconic representations of each era, are an important base for today's park designs. As a result of the thesis study, it has been proven that these representative exemplars will play a critical role in shaping the future city park designs. Analyzing the applied projects is important in order to understand the urban park designs that have evolved in the intersection of art and science throughout the historical process, form a basis for developing new visions

with changing needs of the era and progressive science and technology. The research has demonstrated that each park design represents its own periodic characteristics and approaches, as well as forms the basis of the next design projects. It is anticipated that complex park designs will emerge by adding innovations to the design approaches and strategies of these representative exemplars. Especially technological developments will contribute to the theoretical framework of these urban park designs and will expand the solutions for the environmental problems. The representative exemplars of urban park designs that evolve from the past to the present will play a role in shaping the future visions of the city park designs.

KENT PARKI TASARIMLARININ DEĞİŞEN VİZYONLARI VE TASARIM İLKELERİ

ÖZET

Kamusal alanlar, şehirlerdeki kolektif hafıza ve kentsel kimlik üzerinde çok büyük öneme sahiptir. Kentin kimliğini oluştururlar ve toplumun kolektif hafızasını yansıtırlar. Kent parkları önemli kamusal alanlardan biridir ve şehirlerin kültürel mirasıdır. Park tasarımları geçmişten geleceğe köprü kurarak geçmişin gelişen sürecini tanıtırlar ve gelecek için vizyon oluştururlar. Kent parkı tasarımlarının temsili örnekleri kentlerin ikonik imgesini oluşturmaktadır. Bu demokratik kamusal alanlar, şehir sakinlerini ve ziyaretçilerini toplayarak kolektif belleğe katkıda bulunmaktadır. Aynı zamanda kent parkları, kentsel yeşil altyapı sisteminin ana bileşenleridir. Kentsel fauna için doğal yaşam alanları ve rekreasyon aktiviteleri için alan sağlar, kentsel ısı adası etkisini azaltır ve havayı temizler, yağmur suyunu yönetmeye yardımcı olabilirler. Çevresel, sosyal ve ekonomik boyutlara sahip olan sürdürülebilirliğin kesişme alanında yer alan kent parkları, şehirler için sürdürülebilir çevrelerin devamlılığını sağlamaktadır.

Geçmişten günümüze kent parkı tasarımlarının vizyonları değişen felsefi dünya görüşleri, çağların ihtiyaçları, sanat akımları ve bilimsel ve teknolojik yenilikler doğrultusunda gelişmiştir. Geçmişten günümüze kent parkı tasarımlarının uygulamaları, sanat ve bilim ile ilişkileri açıklığa kavuşturmak ve süreç boyunca paradigmaların dönüşümünü anlamak için farklı zaman aralıklarındaki vizyonları analiz etmeyi mümkün kılmaktadır. Peyzaj mimarlığının odağı, 19. yüzyıldan günümüze evrilmiştir, bu nedenle bu değişikliklerin tasarım felsefelerini ve şehir parkı tasarımlarının yaklaşımlarını da etkilediği söylenebilir. Kent parkları, dönemsel farklılıkların ifadesi ve temsili açısından kentlerin kimlik unsurlarıdır. Temsili örnekler, geçmiş koşulları ve yaklaşımları anlamak ve gelecek için yeni vizyonlar ve stratejiler geliştirmek için bir temel oluşturmaktadır.

Araştırmanın amacı kent parkı tasarımlarının değişen vizyonlarını tasarım yaklaşımları ve ilkelerini temel alarak incelemek ve geçmişten günümüze evrilen tasarım özelliklerini, stratejilerini ve ana sembolik öğelerini analiz etmektir. Bu amaca ulaşmak için tez çalışması, şehir parkı tasarımları üzerindeki etkilerini aydınlatmak için sanat tarihi ve bilimsel ve teknolojik yeniliklerin arakesitinde ele alınmıştır.

Her dönemin ikonik temsili olarak göz önünde bulundurulan şehir parkları, bugünün park tasarımları için önemli örneklerdir. Araştırmanın genel sorusu: Şehir parkı tasarımlarının temsil gücü yüksek örnekleri geleceğin kent parkı tasarımlarını şekillendirmek için nasıl bir yaklaşım ortaya koyacaktır? Tezin hipotezi "Şehir parkı tasarımları, uygulanmış pratikleri anlamak ve yeni vizyonlar geliştirmek için çok önemli örneklerdir. Yeni buluşlar ve çağın değişen ihtiyaçları boyunca bu ikonik örneklerin tasarım yaklaşımları ve stratejilerine yenilikler eklenerek kompleks park tasarımları ortaya çıkacaktır. Teknolojik gelişme ile yeni stratejiler gelecekteki park tasarımlarını şekillendirecektir. Her park tasarımı kendi döneminin karakteristik

özelliklerini temsil ettiği gibi diğer dönemlere de referans vermektedir. Bu gerçekler ışığında, konunun evrimsel süreçle ilgili olduğu söylenebilir. Geçmişten günümüze evrilen kent parkı tasarımlarının temsil gücü yüksek örnekleri şehir parkı tasarımlarının gelecekteki vizyonlarını şekillendirmede rol oynayacaktır."

Peyzaj sanat ve bilimin kesişim alanında yer alır. Kentsel peyzaj tasarımının ana bileşeni olarak araştırmada şehir parkı tasarımları analiz edilmiştir. Kent parkı tasarımlarının temsil gücü yüksek örneklerinin tasarım yaklaşımları ve ilkeleri, tarihsel süreç boyunca sanat tarihi ve bilimsel ve teknolojik yeniliklerin arakesitinde tanımlanmıştır.

Sanayi Devrimi, tarih içindeki evrilen sürecin zaman çizelgesine dayanan araştırmanın başlangıç noktasıdır. Kent parkı tasarımları üzerinde çok önemli etkilere sahip olan temel bilimsel ve teknolojik gelişmeler, Sanayi Devrimi, modern biyoloji, ekoloji, bilgisayar ve internetin keşfi göz önünde bulundurularak ele alındı. Bu arada, romantik dönemden günümüze değişen şehir parkı vizyonlarının açıklanması için sanat-tarihsel sınıflandırma kullanılmaya başlandı. Sanat tarihi romantik, modern, postmodern ve post-postmodern dönemler olarak sınıflandırılmış ve bu sınıflandırma çalışmanın ana yapısını oluşturmuştur. Tarihsel süreç içerisindeki değişimler ve gelişmeler, dönemlerin özellikleri, sanat, mimarlık, kent planlaması ve peyzaj mimarlığı disiplinlerini dikkate alarak teorik çerçevede açıklanmıştır. Bu evrilen süreç içerisindeki gelişmeler hakkında kitap, makale, dergi ve internet kaynaklarından literatür taraması yapıldı.

Ardından, sırasıyla yirmi dörtten on ikiye ve sonra da sekize inen şehir parkı tasarımlarının seçim süreci başladı. İlk aşamada Sanayi Devrimi'nden sonra tasarlanan ve uygulanan yirmi dört şehir parkı tasarımı, 2.7 ile 1000 hektar arasında değişen değerlere dayanan, kentlerin tarihi, ikonik ve büyük ölçekli kent parklarının temsil gücü yüksek örneklerini dikkate alarak seçilmiştir. Daha sonra, bu kent parklarının her bir üçü Romantik, Modern, Postmodern ve Postmodern dönemlere ait olan on iki tanesi ikinci aşamada araştırılmak üzere seçilmiştir. Son olarak, tarihsel, ikonik ve büyük ölçekli parkların güçlü temsil örneklerinden olan sekiz kentsel kamu parkı karşılaştırmalı analiz için seçilmiştir. Bu sekiz örneğin her ikisi sırasıyla romantik, modern, postmodern ve post-postmodern dönemleri temsil etmektedir. Kent parkı tasarımları, önceki projeleri anlamak ve yeni vizyonlar geliştirmek için birer vaka çalışmaları olduğundan, şehir parkı tasarımlarının evrimini tanımlamak için vaka çalışmaları için önerilen format kullanılmıştır ve yöntem, karşılaştırma ve inceleme yapmak amacıyla 'kent parkları' proje türüne göre düzenlenmiştir. Kent parkı tasarımlarının temsil örneklerinin belirli özelliklerle ikonik imgelerini belirlemek için, beş sembolik eleman; sınırlar, bölgeler, işaret öğeleri, düğümler ve yollar dahil olmak üzere çalışmaya adapte edilmiştir. Bu örneklerin proje bilgileri, dönemlerin özellikleri, tasarım felsefeleri, yaklaşımları, kavramları, temel sembolik öğeleri ve mimari ve peyzaj elemanları periyodik farklılıkları ve bazı benzerlikleri açığa çıkarmakta ve matrisi oluşturmaktadır.

Araştırmanın sonuçları her bölüm içindeki verilerin görselleştirilmesi ile oluşturuldu. Bu çıktılar bilimsel keşifler ve teknolojik yenilikler, sanat akımları, dünya savaşları, ekonomik kriz, çevre sorunları, teorik çerçeveyi değiştiren kitaplar gibi eşikleri içeren sanat ve bilimin evrimsel süreci içindeki kent parkı tasarımlarını gösteren zaman çizelgesi ve park tasarımlarının profil bilgilerini, her dönemin özelliklerini, tasarım felsefelerini, park tasarımlarının yaklaşımları ve kavramlarını, temel sembolik öğelerini, mimari ve peyzaj elemanlarını tanıtan matristen oluşmaktadır.

Tüm bu kentsel dönüşüme dayalı tasarımların tarihsel süreç içinde farklılaşan tasarım felsefeleri, yaklaşımları ve stratejileri olsa da alanları iyileştirmek ve kentsel kullanıma dahil etmek için hedefledikleri nokta ortaktır. Matris tablosu ile oluşan çıkarımlar dikkate alındığında tüm bu park tasarımlarının tasarım felsefeleri, yaklaşımları, stratejileri ve kavramları arasında bir bağlantı olduğu ve bazı benzerliklerin ortaya çıktığı görülmektedir. Süreç içerisinde geçmişten günümüze gelişerek gelen kent parkı tasarımları yaklaşım ve ilke olarak bir sonraki tasarımlara örnek olmuş ve temel oluşturmuştur. Sanat ve bilim alanlarında meydana gelen gelişmeler kent parkı tasarımları üzerinde etkili olmuş, tasarım yaklaşımları ve stratejileri tarihsel süreç içerisinde yeni buluşlar ve akımlar ile gelişmiştir.

Temsil gücü yüksek olan bu kent parkı tasarımları her dönemin ikonik temsilleri olmaktadır ve bugünün park tasarımları için önemli altlık oluşturmaktadırlar. Tez çalışmasının sonucu olarak bu temsil örneklerinin gelecekteki kent parkı tasarımlarını şekillendirmede kritik bir rol oynayacağı doğrulanmıştır. Uygulanmış projeleri analiz etmek, tarihsel süreç içinde günümüze sanat ve bilim arakesitinde evrilerek bir birikim halinde gelen kent parkı tasarımlarının çağın değişen ihtiyaçları ve gelişen bilim ve teknolojisi ile yeni vizyonlar geliştirmek için çok önemli birer altlık oluşturduklarının anlaşılması adına önem taşımaktadır. Araştırma, her bir park tasarımının kendi periyodik özelliklerini ve yaklaşımlarını temsil etmesinin yanı sıra bir sonraki tasarım projelerinin temelini oluşturduğunu göstermiştir. Bu temsil örneklerinin tasarım yaklaşımları ve stratejilerine yenileri eklenerek kompleks park tasarımlarının ortaya çıkacağı öngörülmüştür. Özellikle teknolojik gelişmeler bu kent parkı tasarımlarının teorik çerçevesine katkıda bulunacak ve çevresel sorunlar için çözüm yöntemlerini genişletecektir. Geçmişten günümüze evrilen şehir parkı tasarımlarının temsil gücü yüksek örnekleri, kent parkı tasarımlarının gelecek vizyonlarını şekillendirmede rol oynayacaktır.

1. INTRODUCTION

Public spaces in the cities are important areas for the collective memory and urban identity. They form the identity of the city and reflect the collective memory of the society. Urban parks are one of the significant public spaces and they are cultural heritage of the cities. Park designs bridge from past to future, so they introduce the evolutionary process of the past and create visions for the future. The representative exemplars of the city park designs form the iconic image of the cities. These democratic public spaces gather urban inhabitants and visitors and contribute to the collective memory.

In addition, the importance of their roles in our future is increasing day by day. City parks as public spaces gather nature and urban dwellers and form breathing centers in the city. They provide natural habitats for urban fauna and space for recreational activities, reduce urban heat island effect and clean the air, can help to manage storm water with trees and grasses. Hence, their environmental benefits and social meanings concentrate both ecology and culture.

Besides city parks are the components that generate urban green infrastructure in the cities, they have been formed by social and cultural changes. From past to present, visions of the city park designs have been evolved through changing philosophical worldviews, needs of eras, art movements and scientific and technological innovations. Practices of urban park designs from past to present enable to analyze visions of different time periods clarifying relations with art and science and understand transformation of paradigms during the process. The focus of landscape architecture has evolved from 19th century to present, so it can be expressed as 19th century designs were visual, 20th century designs were ecological, and 21st century designs are sustainable (Holden and Liversedge, 2014). Changes in focus of landscape architecture also influenced design philosophies of the parks. Taking this into consideration, it can be concluded that social and cultural changes with scientific and technological developments affect design philosophies and principles of the park

designs, so their reflections on the design approaches can be seen clearly throughout the evolutionary process.

As a result, city parks are the identity elements of the cities in terms of the expression and representation of periodic differences. The representative exemplars form a basis for understanding past conditions and approaches, and developing new visions and strategies for the future.

1.1 Purpose of Thesis

The purpose of the research is to review changing visions of the city park designs based on the design approaches and principles that have evolved from past to present and analyze their design characteristics, strategies and the main symbolic elements.

In order to achieve this aim, the intersection point of art history and scientific & technological innovations is handled during the study to enlighten their influences on the city park designs. Based on the art history section, landscape architecture is one of the fields of art and design approaches of the city park designs is analyzed considering four main eras that are Romantic, Modern, Postmodern, and Post-Postmodern periods, which are the art-historical classification is used to address historical development and changing contexts in landscape design. A timeline is produced to demonstrate thresholds, which are scientific discoveries and technological innovations, art movements, world wars, economic crisis, environmental problems, conferences, books that change theoretical framework, influenced urban park designs in historical process. A matrix table is formed by selected eight city park designs that are representative exemplars of four eras and each two practices demonstrate the periodic differences. The keywords of matrix table for each section show that the similar and different concepts throughout the historical process.

City parks as cultural heritage reflect their time periods based on the design approaches, concepts and meanings and have a role on the future park designs. The selected park designs in the research are important representations of each era and they introduce general design approaches and perspectives of each period. Futhermore, the research explores the significant thresholds and developments throughout the process. It explains and presents changes in theoretical framework of the park designs and other developments that play significant roles on the design process considering both art and

science. It clarifies identity of each park design by their characteristics and symbolic elements based on historical, iconic and large scale exemplars from all around the world. Analyzing and introducing the city park designs that represent their periods will indicate the evolutionary process and enable to have an idea about the future park designs.

1.2 Hypothesis

The environmental, economic, socio-cultural and political events, scientific and technological developments affect widespread all around the world and they have played a critical role on the urban park designs which are the significant components of the public space. From past to present, depending on the requirements and needs of the era, city park designs have evolved in the context of theme and meaning. The city parks, which are considered as iconic representations of the eras, are the significant exemplars for today's park designs. The world is developing in terms of scientific and technological innovations but it faces to face environmental problems such as climate change and global warming, pollutions, overpopulation, natural resource depletion, waste disposal, loss of biodiversity, ozone layer depletion and acid rains. Therefore, the importance of urban public park designs is increasing from the point of the identity elements of the cities and environmental benefits.

The city parks, which are considered as iconic representations of each era, are the significant exemplars for today's park designs. The general question of the research: How the representative exemplars of the city park designs will introduce an approach to form the future urban park designs?

The hypothesis of the thesis is "The city park designs will be crucial exemplars for understanding applied practices and developing new visions. Complex park designs will emerge by adding new innovations into the design approaches and strategies of these iconic exemplars throughout new inventions and changing needs of the era. New strategies with technological development will shape the future park designs. As well as each park design represents the characteristics of their eras, they also refer to other periods. In the light of these facts, it can be said that this point is related to evolutionary process. The representative exemplars of the city park designs that have evolved from past to present will play a role in shaping the future visions of the city park designs."

1.3 Method

Landscape locates in the intersection area of art and science. City park designs are analyzed in the research as the main components of urban landscape design. Design approaches and principles of the representative exemplars of the city park designs are described in the intersection of art history and scientific & technological innovations throughout the historical process.

The topic of changing visions of city park designs have been decided to analyze for demonstrating the evolutionary process. City parks are one of the components of landscape design; thus, they can be examined in the intersection of art and science.

Firstly, Industrial Revolution is the starting point of the research based on the timeline of the evolutionary process in history. The basic scientific and technological developments were addressed considering Industrial Revolution, modern biology, ecology, invention of computer and internet that have important influences on the city park designs. Meanwhile, art-historical classification was started to use for explanation of changing city park visions from romantic period to present. Art history was classified as romantic, modern, postmodern and post-postmodern eras and this classification formed the main structure of the study. Changes and developments in the historical process considering characteristics of the eras, art, architecture, city planning and landscape architecture disciplines were elucidated in theoretical framework. Literature was reviewed about these developments in the evolutionary process from books, articles, magazines, journals and web sources.

Secondly, twenty-four city park designs, which were designed and implemented after Industrial Revolution, were selected in the first phase considering strong representative exemplars of historical, iconic, and large scale urban parks of the cities based on the values ranging from 2.7 to 1000 hectares.

Then, twelve of these urban public parks were selected to investigate in the second phase considering each of three are belongs to Romantic, Modern, Postmodern and Post-postmodern periods.

After, eight urban public parks, which are strong representative exemplars of historical, iconic and large scale parks considering the periods, were selected for comparative analysis. Each two of them represent respectively romantic, modern, postmodern and post-postmodern periods. The evaluation of characteristics of these

urban public parks that reflect expression and representation of periodic differences will indicate approaches and main symbolic elements of the park designs in periods and form the matrix. City park designs are a case study to understand previous projects and develop new visions. Therefore, the case study method enables to analyze and criticize the case studies in many professions including landscape architecture. Case study, which is the particular analysis of the process, decision making and outcomes of a project, is a way to construct the critical theory and to extend the impressiveness of landscape architecture. Case studies in landscape architecture is used for the description and evaluation of a project or process (Francis, 2001). In thesis study, the suggested format for case studies is used in chapter of evolution of city park designs that the method is organized by project type 'urban parks' in order to compare and review. The format consists of the project facts, project background and significance, context, design approaches and elements, site plans and photographs. In addition, these representative exemplars have particular characteristics and their iconic images can be determine using the symbolic elements. As emphasized in the book "The Image of the City", the elements of a city consist of edges, districts, nodes, landmarks and paths based on a practical experience (Lynch, 2015). These elements can take place in ranging scales including large city parks. This method was adapted to the representative exemplars of the city park designs and the distinctive elements were graded in three levels (Table 1.1). For districts, the blue color represents the water bodies, the dark grey symbolizes forests, woodlands and the light grey presents meadows, lawns and prairies. The image maps are based on the perceptual outcome impressions resulting from literature review. This study is not an on-site research and in the study of image maps focused on the boundaries of the park designs.

Table 1.1 : Legend for figures (Karali, 2018).

EDGES	DISTRICTS	LANDMARKS	NODES	PATHS
▮▮▮▮▮	🔵	★	◉	▬▬
●●●●	⚫	▼	◯	▬▬
•••••	⚪	▾	●	──

Project facts, characteristics of eras, design philosophies, approaches, concepts, main symbolic elements and architectural and landscape elements of these exemplars clarify periodic differences and form the matrix. Books, articles, journals, magazines and web sources were used to describe the park designs.

Finally, outcomes of the research were formed by visualization of data in each chapter. They comprised timeline that demonstrates city park designs in the evolutionary process of art and science involving thresholds, which are scientific discoveries and technological innovations, art movements, world wars, economic crisis, environmental problems, conferences, books that change theoretical framework and the matrix that introduces the profile information of park designs, characteristics of each era, design philosophies, approaches and concepts of park designs, main symbolic elements, architectural and landscape elements in relation demonstrating the evolution from abstract concepts (left) to design concepts (right). Moreover, the vertical column of each section shows the similar concepts. Therefore, the matrix table provides reading by correlating with both horizontal and vertical plane. In addition to this, four colors were determined to symbolize art-historical categories which are 'purple' for Romantic, 'blue' for Modern, 'brown' for Postmodern, and 'green' for Post-postmodern periods. Table 1.2 shows list of selection process of the city park designs and their land sizes and Figure 1.1 illustrates the flow chart of the research.

1.4 Scope and Limitations

The research describes how the city park designs have evolved from past to present based on the representative exemplars. The design philosophies, approaches and strategies of the urban park designs are analyzed to illuminate changing visions during the process. The perspectives of art movements and innovations via scientific discoveries and technological inventions causes changes in theoretical framework of the city park designs. The study shows changing visions of the city park designs and highlights their general design approaches and characteristics without entering design criteria details, other disadvantages of large scale urban parks such as eco-gentrification and management and usage details. What is the language of the park design? What gives as a message? and How park visions were evolved in the intersection of art and science? questions form the scope and the limitations of the research.

The first section of the study explains purpose of thesis, hypothesis, method and scope and limititations. Table of list of the selected city park designs and figure of the flow chart of the research was produced to describe the method.

The second section of the study focuses on changes and developments in determined four main eras -Romantic, Modern, Post-modern, and Post-postmodern eras- based on theoretical framework including art, architecture, city planning and landscape architecture. Especially, the relations between them were handled and described to indicate influences and reflections through art movements and scientific & technological developments.

The third section of the study describes case studies of these four eras. Selected eight city park design practices are analyzed based on design philosophies, design approaches, main symbolic elements, and architectural and landscape elements. Central Park in New York and Parc des Buttes Chaumont in Paris are discussed in romantic era practices. Amsterdam Bos Park in Amsterdam and Gençlik Parkı in Ankara are handled in modern era practices. Parc de la Villette in Paris and Landschaftspark in Duisburg are addressed in postmodern era practices. Fresh Kills Park in New York and Queen Elizabeth Olympic Park in London are examined in post-postmodern era practices.

The final section of the study summarizes the role of art movements, science and technology, and philosophy in the design approaches of the city park designs that have evolved from past to nowadays through theoretical framework and case studies. Urban parks are the significant heritage of the cities and the representative exemplars, which have particular identity elements, manifest periodic differences. The roles of these exemplars in the future visions of the park designs are discussed in the final stage of the research.

Table 1.2 : List of the selected city park designs (Karali, 2018).

24	12	8

24

Amsterdamse Bos, Amsterdam, Netherlands **1000 hectares**
Birkenhead Park, Liverpool, UK **58 hectares**
Bois de Boulogne, Paris, France **845 hectares**
Central Park, New York, USA **341 hectares**
Emerald Necklace, Boston, USA **445 hectares**
Englischer Garten, Munich, Germany **370 hectares**
Fresh Kills Park, New York, USA **890 hectares**
Gardens By The Bay, Singapore, Malaysia **54 hectares**
Gas Works Park, Seattle, USA **8.3 hectares**
Gençlik Parkı, Ankara, Turkey **28 hectares**
Golden Gate Park, San Francisco, USA **412 hectares**
Grober Tiergarten, Berlin, Germany **220 hectares**
High Line, New York, USA **2.7 hectares**
Ibirapuera Park, Sao Paulo, Brazil **158 hectares**
Landschaftspark Duisburg-Nord, Duisburg, Germany **180 hectares**
Parc De La Villette, Paris, France **55 hectares**
Parc Des Buttes Chaumont, Paris, France **24.7 hectares**
Park Güell, Barcelona, Spain **17 hectares**
Prospect Park, New York, USA **237 hectares**
Queen Elizabeth Olympic Park, London, UK **102 hectares**
Stadtpark, Hamburg, Germany **151 hectares**
Stanley Park, Vancouver, Canada **405 hectares**
Ueno Park, Tokyo, Japan **53.85 hectares**
Zhongshan Shipyard Park, Zhongshan, China **11 hectares**

12

Amsterdamse Bos, Amsterdam, Netherlands
Central Park, New York, USA
Englischer Garten, Munich, Germany
Fresh Kills Park, New York, USA
Gardens By The Bay, Singapore, Malaysia
Gas Works Park, Seattle, USA
Gençlik Parkı, Ankara, Turkey
Ibirapuera Park, Sao Paulo, Brazil
Landschaftspark Duisburg-Nord, Duisburg, Germany
Parc De La Villette, Paris, France
Parc Des Buttes Chaumont, Paris, France
Queen Elizabeth Olympic Park, London, UK

8

Amsterdamse Bos, Amsterdam, Netherlands
Central Park, New York, USA
Fresh Kills Park, New York, USA
Gençlik Parkı, Ankara, Turkey
Landschaftspark Duisburg-Nord, Duisburg, Germany
Parc De La Villette, Paris, France
Parc Des Buttes Chaumont, Paris, France
Queen Elizabeth Olympic Park, London, UK

TIMELINE

OUTCOMES
Visualization of data

MATRIX

Art   Landscape   Science

24
12
8

Analysis of
City Park
Designs

Romatic Era Practices

Modern Era Practices

Postmodern Era Practices

Post-postmodern Era Practices

CONCLUSION

Comparative Analysis of
Design Approaches and Principles
of the City Park Designs

LITERATURE REVIEW
Art, architecture, city planning, landscape architecture
Books, articles, magazines,
journals, web sources

LITERATURE REVIEW
Selected eight city park designs
Books, articles, magazines,
journals, web sources

Figure 1.1 : The flow chart of the research (Karali, 2018).

2. FROM LANDSCAPE GARDENS TO LANDSCAPE PARKS

Industrial Revolution leaded to technological, cultural and socioeconomic changes in the mid-18th century. Use of new materials and new energy sources, inventions of new machines, developments in transportation and communication can be exemplified among the important changes. Besides developments in science and technology, there are significant changes in social life throughout the historical process.

Changes in philosophical worldviews with the contributions of scientific and technological developments affected literature, visual arts, music and architectural and landscape designs. Considering landscape design, garden designs and then park designs illustrates characteristics of periodical differences during the process. The important changes started in the second half of the 19th century by the first publicly funded designed public park. The research focuses on the era after Industrial Revolution including transition from landscape gardens to landscape parks and changing approaches until present.

Romantic, Modern, Postmodern and Post-postmodern philosophies is emphasized throughout the theoretical framework. Design approaches of romantic gardens and landscape parks of Romantic era, urban parks of Modern era, post-industrial parks of Postmodern era, and ecological parks of Post-postmodern era are addressed in this chapter. Changes in design perspectives and other developments are highlighted including city planning, architecture, art and landscape architecture. Figure 2.1 informs about the art-historical classification and scientific-technological innovations that are mentioned during the thesis study.
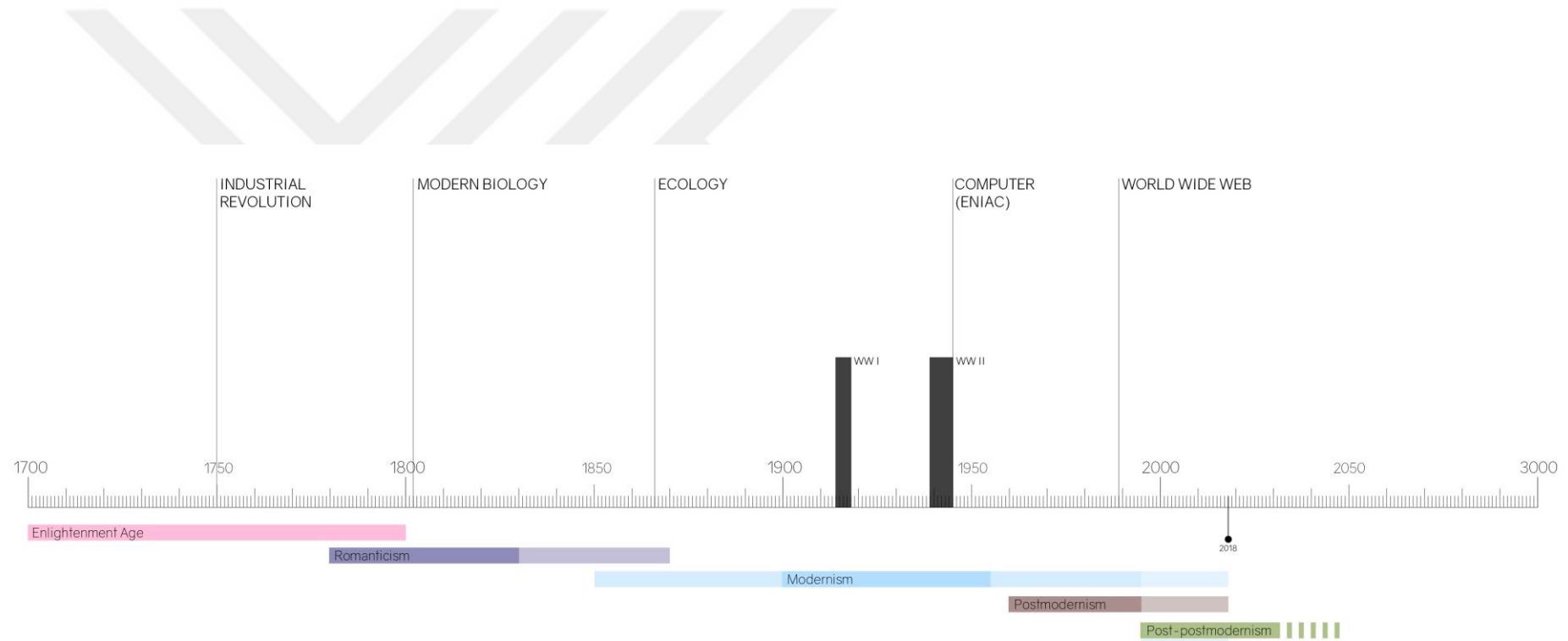
Figure 2.1 : The process between art and science (Karali, 2018).

2.1 Romantic Era

In the 18th century, art in England was not used for increasing forces of kings unlike baroque[1] style. Hence, magnificent baroque style of Palace of Versailles disfavored early 18th century, so imaginary aristocratic world has begun to lose its importance (Gombrich, 1997, Chapter 23). This makes it clear that representations of architectural and landscape designs were affected by changes in art themes.

The ideal of 18th century was cottages not palaces in England. The book was written by Andrea Palladio, who architect of Italian Renaissance and analyze the ruins of the classical structures with a scientific approach, was accepted as an important resource in England. Chiswick House is one of the Palladian style villas that was designed by Lord Burlington and ornamented by William Kent[2] (Gombrich, 1997, Chapter 23) (Figure 2.2). Figure 2.3 demonstrates the villa of 18th century and its classical landscape.

Figure 2.2 : Chiswick House (Url-1).

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[1] A term meaning extravagant, complex; applied to a style in art and architecture developed in Europe from the early seventeenth to mid-eighteenth century, emphasizing dramatic, often strained effect and typified by bold, curving forms, elaborate ornamentation, and overall balance of disparate parts (Url-57).
[2] William Kent (1685-1748), trained as a coach painter, became an artist and designer working in many areas, including garden design. His taste was formed during a series of Grand Tours with his patrons. In the 1720s he worked with Lord Burlington on Chiswick House (Url-58).
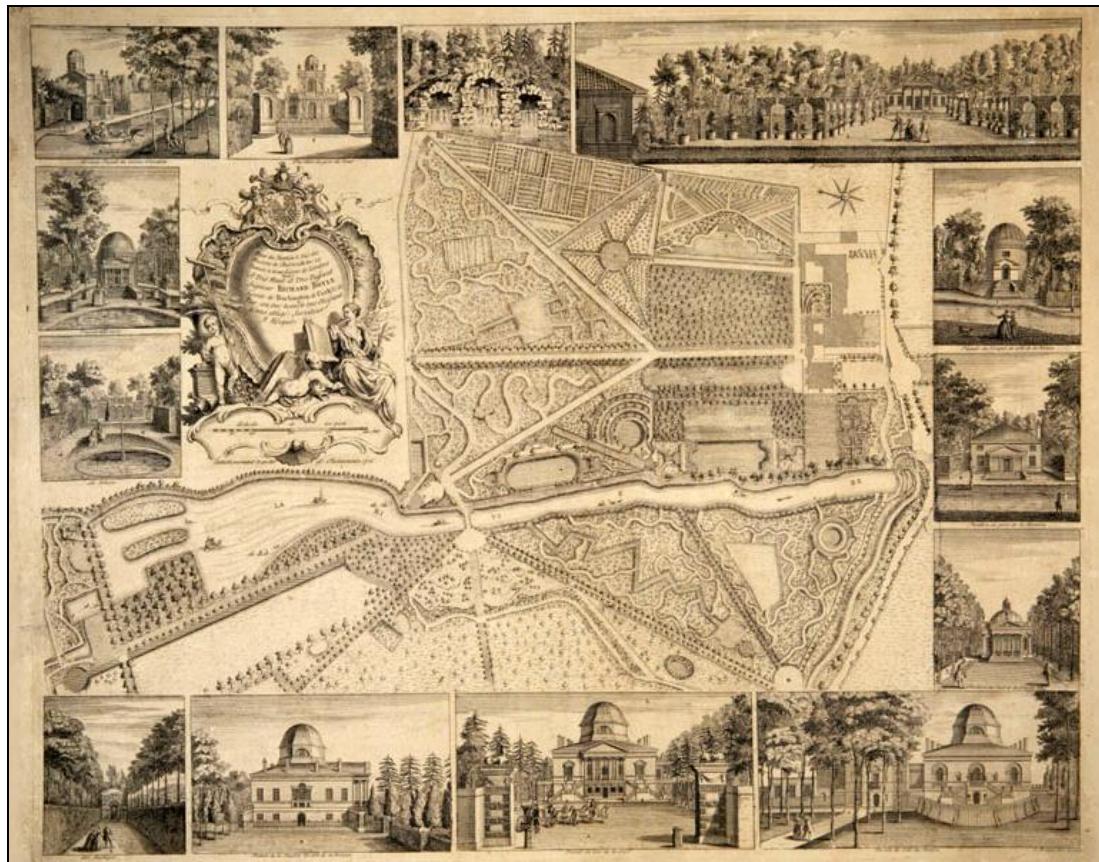
Figure 2.3 : The classical landscape of Chiswick House (Url-2).

Rational and pleasure rules of 18th century England asserted that a garden or a park should reflect beauties of nature against fantasies of Baroque designs. Thus, English landscape gardens were designed as ideal environment of Palladian style villas. The design ideas were formed by paintings of Claude Lorrain[3]. When the view of Stourhead land in Wiltshire was compared with works of Palladio and Lorrain, it can be seen the influences of these styles including lake, bridge and Roman structures on the design (Gombrich, 1997, Chapter 23). Figure 2.4 demonstrates the similarities between the style of art work and design.

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[3] Claude Lorrain (1604/5-1682). The painter, draftsman, and printmaker Claude Gellée was born in a village in the Vosges region of northeastern France in the often contested duchy of Lorraine (Url-59).

Figure 2.4 : Landscape with Nymph and Satyr Dancing by Claude Lorrain and Stourhead Garden (Url-3) (Url-4).

In addition, the sketches of Thomas Gainsborough, who is English painter of the 18th century, illustrates that 18th century is the age of garden architects depicting English countryside as a picturesque scenery with regular trees and hills in order to picture a pleasure designing landscape compositions (Gombrich, 1997, Chapter 23). Then, interests in picturesque views of landscapes in England spread to France. The depiction of Villa d'Este in Tivoli by Jean Honore Fragonard represents the glory of the landscape (Gombrich, 1997, Chapter 23). Figure 2.5 illustrates one of his landscape sketches.

Figure 2.5 : Wooded River Landscape with Shepherd and Sheep, 1785 by Thomas Gainsborough (Url-5).

In the late 18th century, many ideas that have been supposed as true for hundred years were ended by French Revolution in 1789, so the real modern era has been reached. The origins of the French Revolution are based on the Enlightenment[4] age and the roots of changing ideas of people about art is also based on the age of reason (Gombrich, 1997, Chapter 24).

Artists had not gone beyond the limitations of narrow topics until mid-18th century; however, this situation had changed during French Revolution. They became free to choose the art themes whatever they want such as imaginative and interesting topics (Gombrich, 1997, Chapter 24). This clearly demonstrates that evidence of liberation manifested in the field of art. French Revolution played a significant role on break with tradition.

The liberty of artists about selection of art themes contributed to landscape painting that involves cottages, parks and picturesque scenery. Until late 18th century, landscape painting had been handled as a small branch of art, but it changed after this date by effect of Romantic movement (Gombrich, 1997, Chapter 24).

Philosophers of Enlightenment Age developed the concepts of liberty, democracy and human rights and it formed the basis of Romanticism[5]. Beauties of nature is major inspiration for art in romantic period.

The oil paintings of Joseph Mallord William Turner and John Constable demonstrates different representations of landscapes. Another important Romantic artist was Caspar David Friedrich; whose landscape paintings reflect the spirit of Romantic lyrical poems (Gombrich, 1997, Chapter 24). Figure 2.6 shows the representation of landscapes of these three artists.

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[4] A European intellectual movement of the late 17th and 18th centuries emphasizing reason and individualism rather than tradition. It was heavily influenced by 17th-century philosophers such as Descartes, Locke, and Newton, and its prominent figures included Kant, Goethe, Voltaire, Rousseau, and Adam Smith (Url-60).

[5] Term in use by the early nineteenth century to describe the movement in art and literature distinguished by a new interest in human psychology, expression of personal feeling and interest in the natural World (Url-61).

Figure 2.6 : The Bay of Baiae, with Apollo and the Sibyl by Turner, Flatford Mill 'Scene on a Navigable River' by Constable, Rocky Landscape in the Elbe Sandstone Mountains by Friedrich (Url-6) (Url-7) (Url-8).

Romanticism influenced painting, literature, criticism and historiography from in the late 18th century to mid-19th century and it rejected the principles of Classicism and Neoclassicism such as rationality, idealization, harmony, and balance. In addition, Romanticism criticized the Enlightenment due to its failure about accepting the importance of irrational, emotional and spiritual (Little, 2006). The subjects of Romanticism were interested in individual, subjective, irrational, imaginative, spontaneous, emotional, and visionary.

As a result, French Revolution is one of the important social fact that leaded to break with tradition. This enabled to selection of unlimited themes for work of art, so artists could prefer classical topics or represent imaginative styles of Romantic masters.

Furthermore, the essential characteristics of Romanticism can be seen in literature including Romantic poetry and romances. The highlighted terms and concepts can be ordered as dialectics, gothic, imagination, medievalism, poetic form, reform, revolution, reform, and travel (Burwick, 2014).

As influential in visual arts, literature and music, Romantic movement affected the garden design and formed Romantic picturesque garden in the late 18th and early 19th

centuries. Landscape garden movement of 18th century transformed into landscape park movement in the mid-19th century. Romantic gardens and landscape parks chapters handled within Romantic Era.

2.2.1 Romantic gardens

There is a transition from neoclassical art theory to romantic art theory addressing 'Nature' means the world of the universal forms transformed into world of the particulars. Therefore, Romantic movement associates with world of nature. The movement was dominant between 1780-1830 years; it started softly, gradually ascended and descended (Turner, 2005).

The idea of landscape garden started in 18th century and continued to early 19th century including three generations of English landscape gardens. The first generation of these formed by landscape paintings and Grand Tours representing landscape of antiquity. Chiswick, Stowe, Castle Howard, and Stourhead are some of the significant landscapes of Augustan style. They can be called as classical landscapes that have statues, roofed bridges and temples. William Kent, Stephen Switzer and Charles Bridgeman are garden designers; whose influences of Andrea Palladio can be seen clearly on works of these designers. The second generation of these defined as 'serpentine' and deals with more landforms, lakes and woods. Lancelot Brown designed many gardens that have some characteristics such as serpentine tree belts, circular clumps and curvaceous lawns reaching to windows of Palladian villas. The third generation of these explained as 'Picturesque' and it presents a natural scenery for city center parks without temples and follies (Turner, 2005) (Figure 2.7).

Figure 2.7 : Garden of Castle Howard 'Augustan style' and Sheffield Park 'Serpentine style' (Url-9) (Url-10).

Turner (1996) emphasized that "A philosophical movement, empiricism, revolutionized science and had a profound influence on garden design. Rationalists believed that human reason is the ultimate source of certainty in knowledge. Empiricists believed that observation of the external world is ultimate test" (p. 217). In the light of this information, it is clear to said that there is a revolution in garden designs of 1690s from straight lines to irregular lines of natural beauty.

In the 1790s, four generations of authors mentioned that gardens should be imitation of nature, so four generations of garden designers followed this command. Gardens became wilder and more natural (Turner, 1996).

In addition to this, there are two interpretations of 'Picturesque' and 'picturesque'. The Picturesque one of the aesthetic category including The Sublime and The Beautiful. The picturesque is related to organization of garden design as landscape painting involving foreground, middle ground and background (Turner, 1996).

'Picturesque' became one of the stages of organization of garden design and integrated in the transition that involves foreground as a Beautiful including regular shapes, local materials and exotic plants; middle ground as a Picturesque is formed by native tree clusters, curved lines and agriculture; background as a Sublime is expressed as field of wild nature. This 'Landscape Style' was influenced by landscape painting and 18th century design reforms of English landscape movement (Turner, 1996).

The ruins and classical temples was the subject of numerous romantic landscape paintings and they became the characteristic feature of gardens. Romantic elements were used as follies in the English landscape garden and also German gardens.

Englischer Garten is the oldest public park in Munich, which was designed by Friedrich von Sckell and created in 1789. The purpose of the serpentine style park was to enable recreational place for people (Turner, 2005) (Figure 2.8).

Figure 2.8 : Englischer Garten in Germany (Url-11).

2.2.2 Landscape parks

After Industrial Revolution urbanization has been started and life conditions has deteriorated in cities. Migration to urban areas causes serious problems such as overcrowding, poverty and pollution in the industrial cities. Mechanization influenced the planning and design of cities. Park movement, city beautiful movement and garden city movement are important developments against the problems and enable people to live in harmony with nature. The aim of these movements are to improve quality of urban life.

In 1843, Birkenhead Park in Liverpool was designed by Joseph Paxton and opened in 1847 (Jellicoe, 1975). Changes in Liverpool because of Industrial Revolution transformed Birkenhead into an industrial centre and leaded to rapid growth. Population increased and the government approved the establishment of Birkenhead Improvement Commission. Meanwhile, the awareness of the effects of overpopulation and worse living and working conditions in the industrial cities were growing. The idea of public park realized in Birkenhead transforming the marshland into a park (Figure 2.9). Park movement is the milestone as a reform movement in order to provide public open space and support physical activity of city dwellers, psychological welfare and public health.
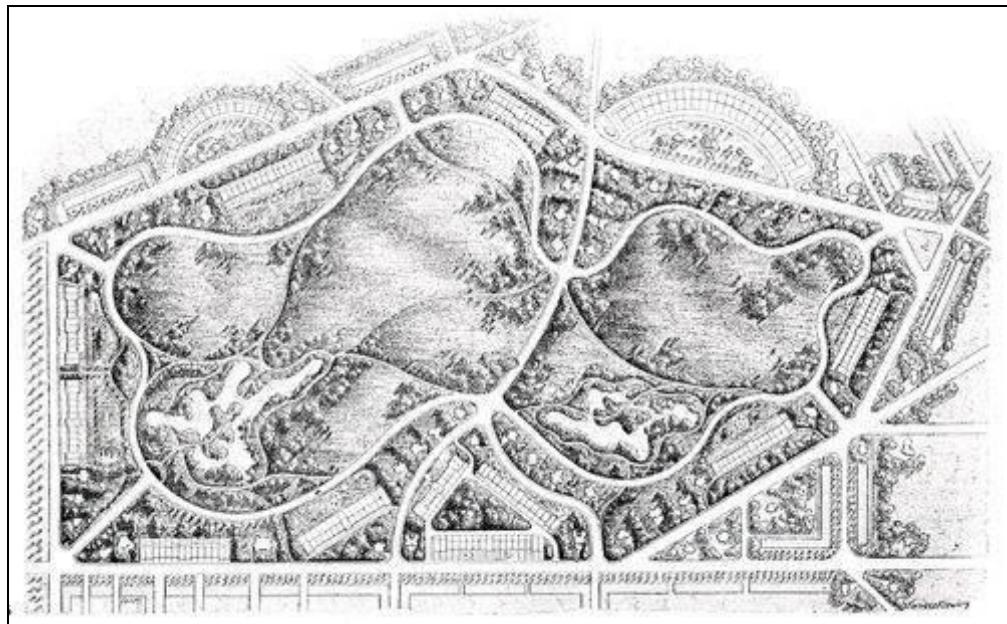
Figure 2.9 : Birkenhead Park in Liverpool (Url-12).

Then, Frederick Law Olmsted visited Birkenhead Park and decided to design pastoral and picturesque style large city parks in the United States. He designed Central Park in Manhattan, New York and promoted the urban park movement in America. Prospect Park (1866) in Brooklyn and Emerald Necklace (1878-1896) in Boston are the other important projects. The long meadow in Prospect Park demonstrates the pastoral style of landscape like other parks of Olmsted. The Ravine was designed to provide a contrast with the Long Meadow and Prospect Lake. With the planting, the abundance formed the picturesque style that was one of the basic design principle of Olmsted (Beveridge, 2015) (Figure 2.10). As a park system Emerald Necklace combined by Franklin Park, Arnol Arboretum, Jamaica Pond, Olmsted Park, The Riverway, Back Bay Fens, Public Garden and Boston Common. By including Muddy River in the park plan, the proposal of Olmsted was to transform marshlands into a public park; therefore, the river corridor was converted a linear park system (Jellicoe, 1975) (Figure 2.11).

Figure 2.10 : Prospect Park in Brooklyn (Url-13).
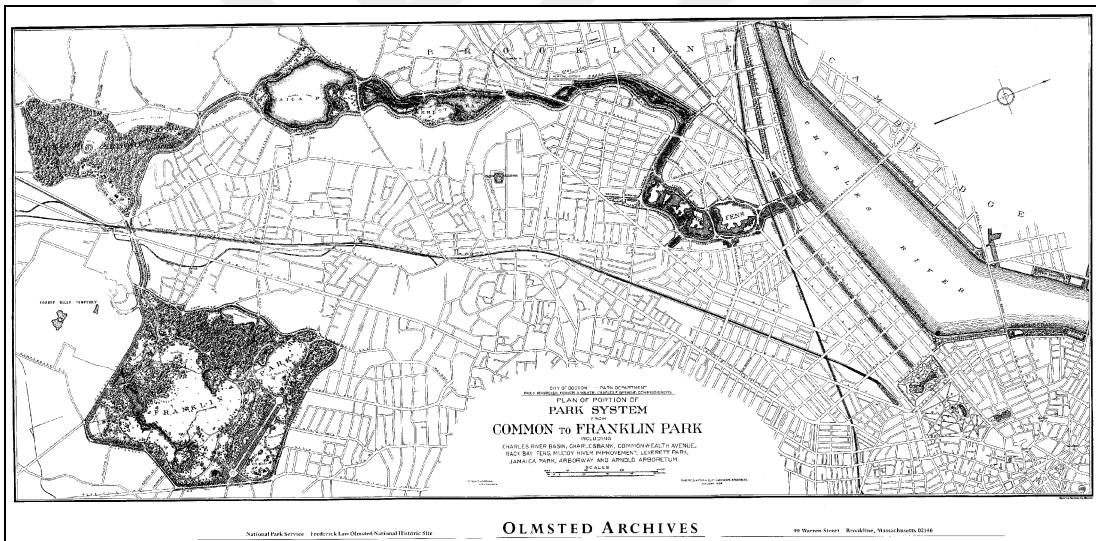
Figure 2.11 : Emerald Necklace in Boston (Url-14).

Considering the use of romantic elements in the park projects, Central Park and Parc des Buttes Chaumont were handled and detailed in terms of design principles and characteristics in the third chapter.

2.2 Modern Era

19th century was associated with a notion which means progress of financial and technological development. There were two opposing views about use of these forces. One of them claimed that the relationship between human and nature were broken and it never would be re-established again. The other idea said that it was an evidence of the generation of a better world. According to this, technology will rise on their destructions, industry will provide financial improvement, so people would understand that they need to each other because after workers would transform the world into a livable space by technological development, international competition would have ceased (Lynton, 2009).

However, major change of direction occurred in the 18th century. As a result of great interests in historical researches in that period, tradition was handled as the whole of contradictory samples. The new vision that art is a self-disclosure issue enabled artists to explore their inner worlds. Romanticism that includes French Revolution and Industrial Revolution and philosophical views of Rousseau[6] about rejection of the values of civilized society were significant developments. The importance of tradition disappeared with Romanticism; therefore, it became one of the many options. After mid-18th century, researches on origins of objects were dominated by historical view. Like Rousseau, who researched the formation of communities, artists started to investigate the first samples of arts and their previous periods. Consequently, compromises seen as indispensable forms and methods were understood as they are beneficial in the formation process of the arts, but they are not valuable all the time (Lynton, 2009).

Modernity[7] is the project of the Enlightenment that is based on human and reason. The Enlightenment states that the reason can comprehend the process of nature and social order and law and rules can be used for happiness of people. On the other hand, it emphasizes that the good things for a human just only can be determined by that person. Modernity project was built on these assumptions and it developed on four

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[6] Jean-Jacques Rousseau (1712-1778). French writer and political theorist of the Enlightenment, Rousseau's work inspired the leaders of the French Revolution and the romantic generation (Url-62).
[7] Modernity is a form of social life or organization that has occurred in Europe since the 17th century (Tekeli, 2001).

fundamental dimensions that are economic, approach to knowledge, art and ethics, individuality and corporate structure (Tekeli, 2009).

The economic dimension is related to the industrialized society, production is based on the fossil fuel energy in capitalist relations. The second dimension mentions that the true representation of social phenomena can be realized; hence, social science, which is objective and universal, can be constructed. The third dimension is formed by the birth of individual that breaks with tradition. The fourth dimension is the developing corporate structure, society formed by individuals present a new form of organization which are nation state and democratic process (Tekeli, 2009).

In addition, according to Berman (1988), "To be modern is to live a life of paradox and contradiction" (p.13). Berman explains the notion of modern[8] in his book:

> There is a mode of vital experience – experience of space and time, of the self and others, of Life's possibilities and perils – that is shared by men and women all over the world today. I will call this body of experience "modernity." To be modern is to find ourselves is an environment that promises us adventure, power, joy, growth, transformation of ourselves and the world – and, at the same time, that threatens to destroy everything we have, everything we know, everything we are. Modern environments and experiences cut across all boundaries of geography and ethnicity, of class and nationality, of religion and ideology: in this sense, modernity can be said to unite all mankind. But it is a paradoxical unity, a unity of disunity: it pours us all into a maelstrom of perpetual disintegration and renewal, of struggle and contradiction, of ambiguity and anguish. To be modern is to be part of a universe in which, as Marx said, "all that is solid melts into air." (Berman, 1988, p. 15).

The history of modernity has been divided into three phases. The first phase is from the beginning of the 16th century to the end of the 18th century; people started to experience modern life. The second phase starts from the end of the 18th century with the French Revolution. A great modern public came to life sharing the feeling of living that has many dimensions such as personal, social and political. The third phase starts from the 20th century, the process of modernization extended all over the world and developed modern world culture accomplishing remarkable victories in art and thought. As modern society expanded, it was fragmented by individuals; therefore, the

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[8] Modern can mean related to current times, but it can also indicate a relationship to a particular set of ideas that, at the time of their development, were new or even experimental (Url-63).

variations of modernism increased losing its unity. Today, this has resulted in an occurrence of a modern era that lost its origins of modernity (Berman, 1988).

In the late 18th and early 19th centuries cities grew and mitigation to urban areas started with rapid development of industrialization. Increase in urban population caused worse living and working conditions; pollution, poverty, overcrowding and diseases were recorded in the works of sociologists who focused on the working class. Urban poor were portrayed in literary fiction by Victor Hugo, Charles Dickens, and Emile Zola. The industrialized world has been addressed and various systems have been proposed by many authors and thinkers (Eaton, 2000). In literature, 'Hard Times' written by Charles Dickens, social and economic conditions of Coketown was criticized and the environment of the industrial city was portrayed in the novel (Dickens, 1995). Another famous historical novel is 'Les Miserables' written by Victor Hugo. Questioning the law; justice, politics, people excluded from society, worse social and economic conditions, and urban design of Paris were elaborated in the novel (Hugo, 2006). Figure 2.12 displays the illustrations related to both two novels.
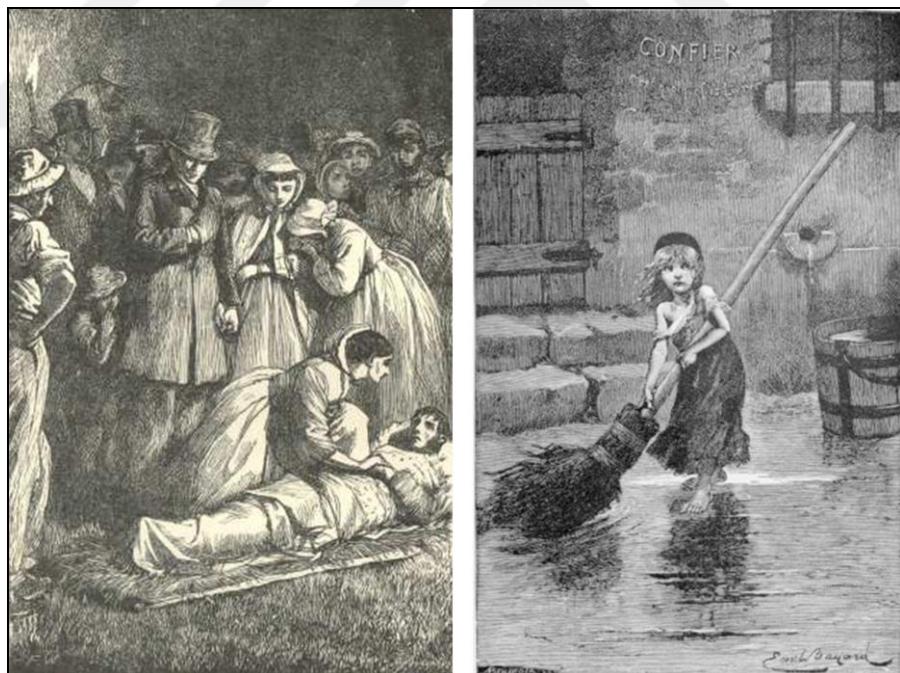
Figure 2.12 : Hard Times, 1854 and Les Miserables, 1862 (Url-15) (Url-16).

Due to deterioration of urban living conditions, utopianism[9] began for forming ideal society and city. To-morrow: A Peaceful Path to Real Reform was written by Ebenezer Howard and published in 1898. Therefore, 'Garden City'[10] movement started in the late 19th century describing people living in harmony with nature. Letchworth Garden City is the first garden city and constructed in 1903. Welwyn Garden City is the second and constructed in 1920 (Figure 2.13). Howard illustrated his ideas about garden city creating Three Magnets diagram (Figure 2.14). He proposed a city planning formed by a greenbelt with agricultural lands and open spaces. Thus, it will work as a buffer zone preventing urban sprawl. Industrial areas were positioned in urban periphery, outside of residential areas (Howard, 1945).
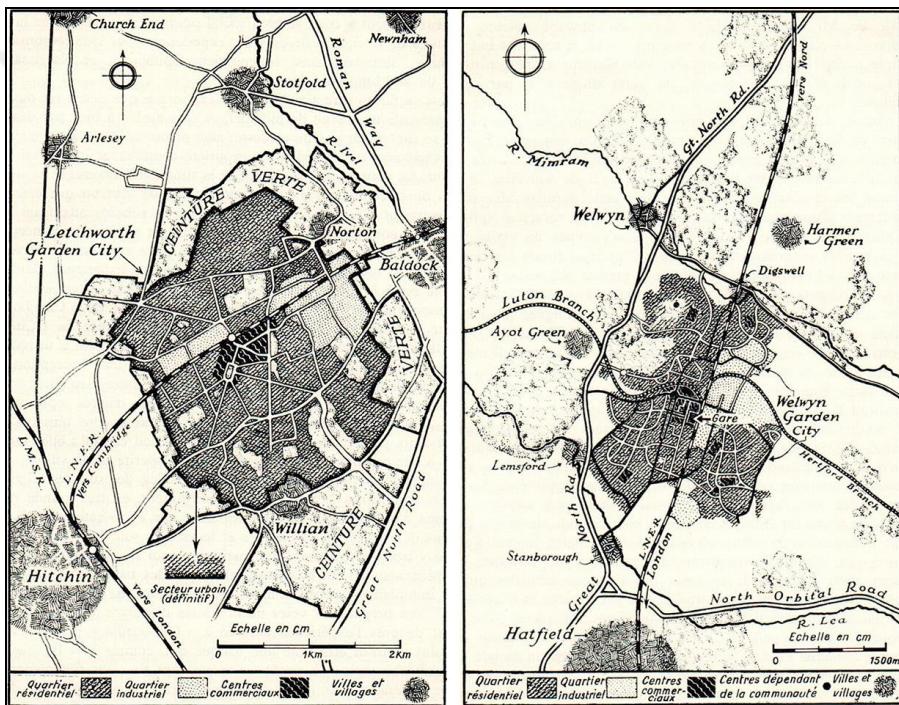
Figure 2.13 : Letchworth and Welwyn Garden Cities (Howard, 1945).

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[9] The belief in or pursuit of a state in which everything is perfect, typically regarded as unrealistic or idealistic (Url-64).

[10] Garden city, the ideal of a planned residential community, as devised by the English town planner Ebenezer Howard and promoted by him in Tomorrow: A Peaceful Path to Social Reform (1898). Howard's plan for garden cities was a response to the need for improvement in the quality of urban life, which had become marred by overcrowding and congestion due to uncontrolled growth since the Industrial Revolution (Url-65).
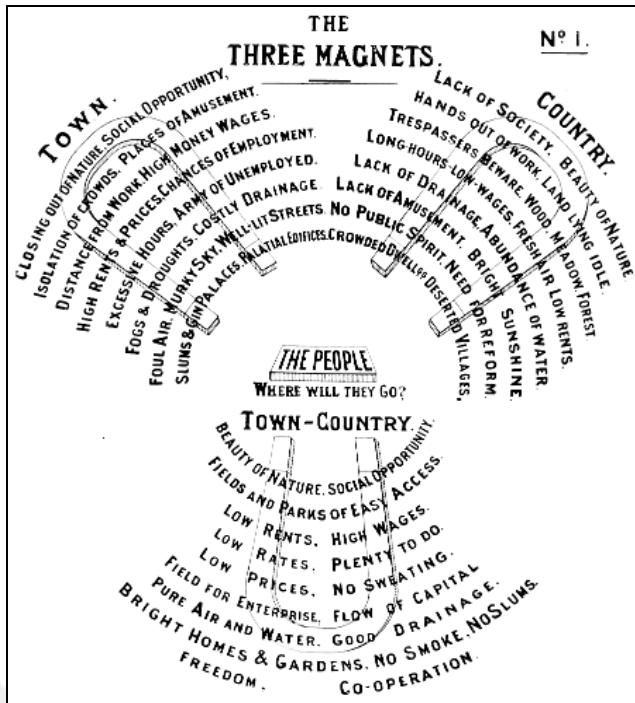
Figure 2.14 : Three Magnets diagram (Url-17).

The notion of city as an organism came with rise of biology in the 18th and 19th centuries. Organic theory is one of three normative theories that also involve cosmic and machine theory. Information of the whole organism is dynamic, which is formed by homeostatic dynamism, influenced the planning of cities. Biological organism was developed in the 18th century and addressed in the works of social reformers, naturalists, romantic landscape designers and utopian thinkers in the 19th century. Organic theory was created in the 19th century and developed in the 20th century. The notion of biological organism was used in the work of Ernst Haeckel who expressed the relationship between organism and its environment as ecology[11] in the 19th century. Pioneers and developers of this theory are socialist reformer and city planner Ebenezer Howard, landscape architect Frederick Law Olmsted, city planners Lewis Mumford and Patrick Geddes, regionalists Howard Odum and Berton MacKaye. The studies were based on the relationship between living organisms and their environments (Lynch, 1984).

By planning in modern era were aimed to create better and healthy cities. Unhealthy conditions of 19th century had a major impact on this purpose. A lot of solutions were

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[11] The branch of biology that deals with the relations of organisms to one another and to their physical surroundings (Url-66).

developed in order to supply freshwater, prevent spread of epidemic diseases, and remove traffic problems; however, the destructive face of modernism appeared in most of them. Urban renovation projects were conducted by laws and the process continued as modernization (Turner, 1996).

Modernism has also been directed by various social and political discourses. Idealistic reformers developed utopian visions describing ideal society and city. Futuristic new ways of living and perfect living space were discussed in the writings and models of visionaries.

Broadacre City was a never realized city vision, which was designed by Frank Lloyd Wright and took place in The Disappearing City published in 1932. The proposal, which originated individualism and shattered the traditional city model, formed by at least one acre homesteads. The democracy was so important for Wright and he believed that democracy is only possible with the physical and economic independence of the citizens. Emphasizing the independence of the individual, decentralization in his model enables to spread of individual property. The homogeneous distribution of public buildings, commercial units, factories, cultural centers among farmsteads prevents the compact city center. Transforming the physical environment, he represented a city of future adopting airplane and automobile (Eaton, 2000; Klinkowitz, 2014) (Figure 2.15).
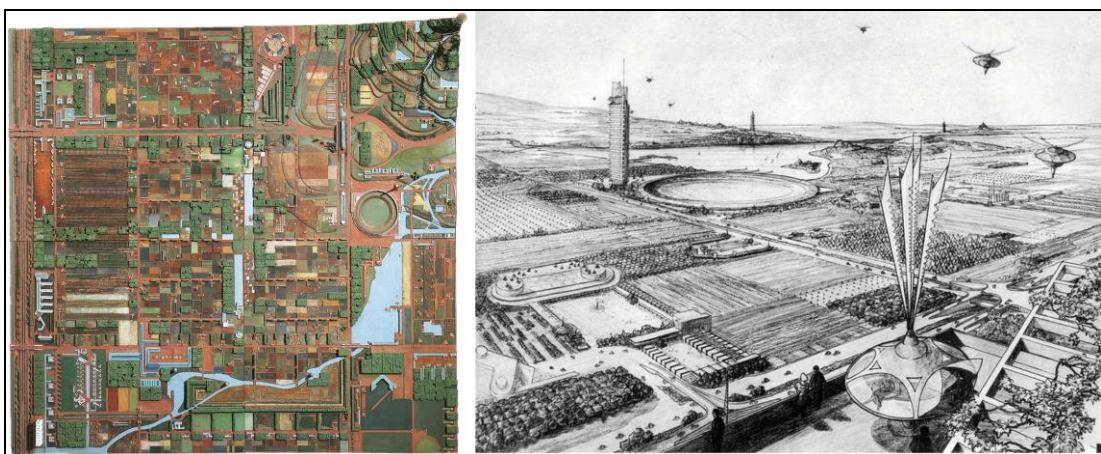
Figure 2.15 : Broadacre City (Url-18) (Url-19).

In the early 20th century, many of avant-garde 'isms' characterized the artistic world. After French Revolution artists were aware about style, they created new movements formed by pioneering 'isms' thanks to experiments (Gombrich, 1997, Chapter 27). The influences of these radical changes on art, architecture and city planning demonstrates

that technological development by industrialization and mechanization have played significant role.

Considering architecture of 20th century, architects rejected ornamentation and handled the structures based on their functionalities. Frank Lloyd Wright was important and pioneering architect, who supported 'organic architecture'. According to him, the house was an organism that formed by needs of hosts and evolved by environmental characteristics (Gombrich, 1997, Chapter 27) Fallingwater House is well-known work of modern and organic architecture (Figure 2.16).

Figure 2.16 : Fallingwater House (Url-20).

Bauhaus is a sample for the experimental building that was founded by Walter Gropius[12]. The aim of the design displayed the combination of art and engineering unlike 19th century. The students of this school of architecture played role in the design of buildings and equipment. The school enabled students to imagine and experiment

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[12] Walter Gropius (1883-1969). One of the most influential champions of architectural Modernism, Gropius believed that designs should be guided by functionality, and need not reference earlier styles. In 1919 he was appointed director of the Staatliches Bauhaus Weimar, where he would establish a new paradigm in design education, which integrated the study of arts, crafts, and materials, under a faculty that included painters, sculptors, ceramicists, glass-makers, and others (Url-67)

for studies based on the aim of the design. These approaches and theories were summarized as 'Functionalism'[13] (Gombrich, 1997, Chapter 27) (Figure 2.17).
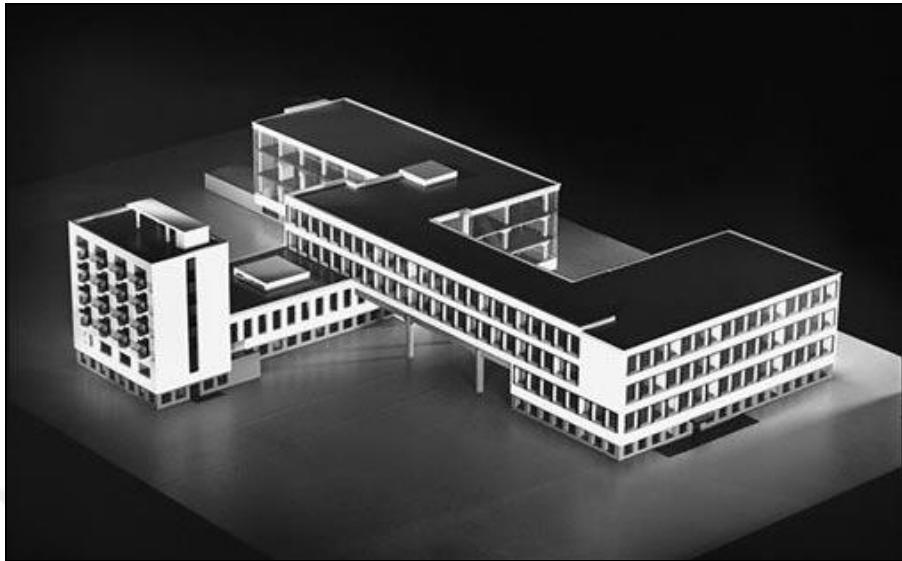
Figure 2.17 : Bauhaus the school of architecture (Url-21).

The harmony between functionality and beauty could be discovered by results of a lot of experimentations. Modern art became a field experimented by the combinations of new forms and motifs before entering daily life (Gombrich, 1997, Chapter 27).

In the first half of the 20th century, Functionalism dominated the architectural projects. Geometrical forms such as circle, squatter and rectangle used in the plans and industrial materials glass and steel emphasized among designs.

The ideas about the cities of the future shaped by technological development and the transformation of the physical environment represented in some anti-utopia cases. For instance, 'We' written by Yevgeni Zamyatin and completed in 1921 illustrated the spatial description of the city model that was fictionalized by science and advanced technology and isolated from the nature by a Green Wall. The reason is in the foreground in daily life and all forms composed by geometrical principles. The transparent material 'glass' is used to construct the whole buildings and pavements because people are doing the same activities in daily living and they have nothing to hide from each other. The form of the Cube Square, where the justice ceremony was held, is also depicted as a square surrounded by sixty-six rows of tribunes arranged in

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[13] The theory that the design of an object should be determined by its function rather than by aesthetic considerations, and that anything practically designed will be inherently beautiful (Url-68).

the form of concentric circles. The Antique House, which is independent from all of these geometry and regularity, is considered as a single sample house of the backward society from previous ages (Zamyatin, 2014).

Generating several 'isms', artists of 20th century aimed to become permanent in the future. The art history of 20th century was formed by these experiments. WWI and WWII caused serious breaking points in the artistic world.

The experimental art appeared in the paintings following various movements that some of them are expressionism, fauvism, cubism, futurism, abstract art, and surrealism. The movements were catalyzed by manifestos including the Futurist manifesto[14] by Marinetti in 1909, the De Stijl manifesto in 1918, the Bauhaus manifesto in 1919 and the Surrealist manifesto[15] by Andre Breton in 1924.

Post-impressionism, which was formed by expression of emotional and psychological responses with bold colors and symbolic images, was used as a term to compass the art works made by Paul Cézanne, Paul Gauguin, Vincent van Gogh, and Georges Seurat, who have their own distinctive style. The artists of Expressionism represented the feeling of person including sorrow, passion, fear and love deforming form and changing colors. Cubism aimed to reorganize the description of the figure instead of totally removing. Abstract art was initiated by Wassily Kandinsky who emphasized the psychological effects of pure colors and believed that it is possible to create spiritual integration between people criticizing the values occurred by scientific and technological innovations. Surrealism emphasized superior reality of the subconscious mind (Gombrich, 1997, Chapter 27). Figure 2.18 displays the artworks related to these art movements.

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[14] The Futurist Manifesto was written by Filippo Tommaso Marinetti in 1909 acclaming speed, dynamism, mechanization, machines, battle and technology (Marinetti, 1909).
[15] The Surrealist Manifesto was written by Andre Breton in 1924 (Breton, 1924).

Figure 2.18 : Post-Impressionism; The Starry Night (1889), Expressionism; The Scream (1893), Cubism; Bottle and Fishes (1910-2), Abstract art; Cossacks (1910-1), Surrealism; The Persistence of Memory (1931) (Url-22) (Url-23) (Url-24) (Url-25) (Url-26).

The reflections of modern art movements such as Abstract Art, Cubism and Surrealism on landscape architecture appeared in the works of Garrett Eckbo[16] and Roberto Burle Marx[17], who are the pioneers of modern landscape architecture. Garrett Eckbo, who inspired by the cultural and art movements, emphasized the landscape design as a social art (Eckbo, 1950). The influence of the artwork of Wassily Kandinsky on Burden Garden is a clear sample to demonstrate the inspiration for a modern garden design (Figure 2.19).

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[16] Garrett Eckbo (1910-2000). Garrett Eckbo saw landscape design as a vehicle for social change. His seminal 1950 book Landscape for Living essentially defined Modern landscape architecture, and his influence on generations of designers continues today (Url-69).

[17] Roberto Burle Marx (1909-1994). Brazilian landscape architect, garden designer and painter. Roberto Burle Marx's work is interesting for its high quality, for its exemplary use of the Abstract Style and for its use of native Brazilian plants (Url-70).
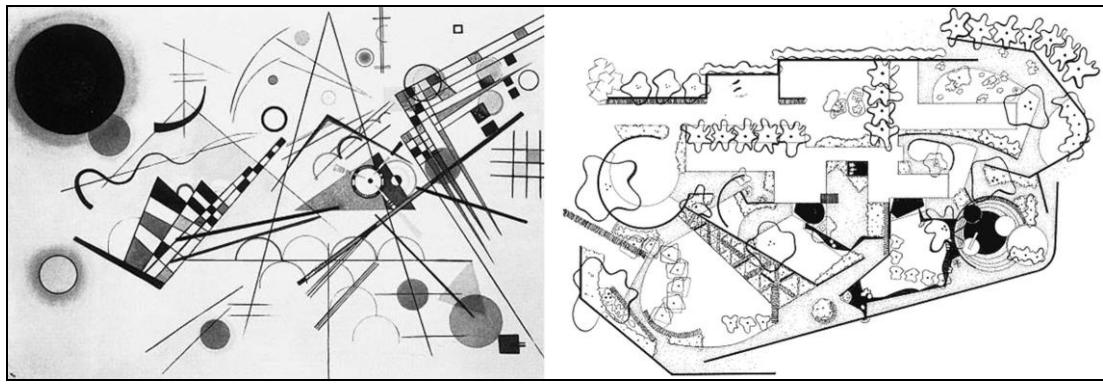
Figure 2.19 : Composition VIII, 1923 and Burden Garden, 1945 (Url-27).

Roberto Burle Marx, who was interested in painting, music and horticulture, inspired by Brazilian colonial motifs and Europen style art movements and used native plants and local materials to design his gardens (Montero, 2001). Besides modern garden designs, Burle Marx designed a lot of public spaces including promenades and parks. Ibirapuera Park, which located in Sao Paulo, was designed by landscape architect Burle Marx and architect Oscar Niemeyer in 1953. The park plan formed by asymmetric geometry involving abstract shaped surfaces, native vegetation, bodies of water and pathways (Figure 2.20). Introducing the richness of Brazilian flora to visitors, the park was planned as a cinematic promenade in total to provide temporal experiences (Reeser and Schafer, 2002).

Figure 2.20 : Ibirapuera Park (Url-28) (Url-29).

Considering the modern approaches in the park projects, Amsterdam Bos Park and Gençlik Parkı were addressed and detailed in terms of design principles and characteristics in the third chapter.

2.3 Postmodern Era

The development of the postmodern thinking has presented that modernism has enclosed society to the only option and in this way, it has become the tool of oppression. Thus, this criticism aimed that to reveal the limitations of modernism and liberate the man (Tekeli, 2001).

One approach to postmodernism[18] debates is the questioning of the approach of modernism to knowledge and science and suggesting a break in these approaches. The project of modernism has been influenced by social development and the assumption that there is only one form of representation is reduced. Instead, relativism has begun to arise and decisive rhetoric began to be questioned. The acceptance of the science is the only way to guide the action has lost its significance because the knowledge did not always result in success. As a result of returning to affect knowledge according to success or failure of knowledge used in practice, the form of reflexive thought began to develop. The reduction of importance of reason is a great breaking point in terms of modernism; thus, the suspicion has appeared about a systematic knowledge of social development can be constructed by human actions. Contextual analysis replaced determinism and collage and assemblage appeared instead of building a system. The concepts of fragmentation, difference, indeterminacy, chaos, temporality, discontinuity replaced the integrity, homogeneity, continuity, determination in a community. The segregation between art, ethics and science in modernism has become meaningless in postmodernism and hermeneutic replaced epistemology (Tekeli, 2009).

One of the thinkers who contributed to the development of postmodernist thinking is Jacques Derrida. Derrida is a philosopher of hermeneutic and is concerned with thinking about the reading of a text. Derrida deconstructed a text and this deconstruction decreased the power of dictation of author on the meaning. The reflections of this approach emerged in urban design and planning and the city was evaluated as a formation that is fragmented, overlapped by various forms of the past, formed by a collage including different uses and temporary elements. A new planning

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[18] In art, postmodernism was specifically a reaction against modernism which had dominated art theory and practice since the beginning of the twentieth century. The term postmodernism is also widely used to describe challenges and changes to to established structures and belief systems that took place in Western society and culture from the 1960s onwards (Url-71).

approach appeared thanks to planners became a part of design instead of being a determiner. According to this approach, the environment will be formed by the participants and the meaning will be always changed (Tekeli, 2009).

Turner (1996) states that "Postmodern planning is also pluralist. Instead of trying to create a rationalist utopia, with a place for everything and everything in its place, postmodern planners have embraced the concept of diversity" (pp. 7-8). The complex and different uses in cities does not create chaos. On the contrary, it refers to a complicated and sophisticated configuration (Jacobs, 2011). The concept of the urban fabric is developed as fragmented, a palimpsest of superimposed past forms and a collage of temporary uses in postmodernism (Harvey, 1989).

Piazza d'Italia designed by Charles Moore in New Orleans is one of the significant icons of the postmodern architecture. The language of the form and architecture inspired by the Italian piazza that maintain social and communicative functions. The design approach demonstrates the classical architecture inserted into a modern context with Pop Art techniques and postmodernist palette (Harvey, 1989) (Figure 2.21).

Figure 2.21 : The day and night view of Piazza d'Italia (1978) (Url-30) (Url-31).

Artists were confronted with the realities of postwar reconstruction by the late 1950s. Questioning the role and definition of art, artists blurred the boundaries between

disciplines and embraced new technologies. Pop art[19], conceptual art[20], media and performance art[21] are the samples of postmodern art.

The environmental problems appeared especially in 1960s, and the publication of the book 'Silent Spring' written by Rachel Carson in 1962 drew attention to hazardous impact of chemicals on the natural environment, so these crucial issues increased public awareness of environmental concerns. The ecological awareness in design discipline emerged by 'Design with Nature' written by Ian McHarg, who was the pioneer of the ecological methodology, in 1969 reconciling nature and design. Integration of science and design resulted in ecological based design in landscape architecture (Balmori, 2011).

The development of environmental art was an unexpected impacts of the postwar ecology movement. Focus of the artists evolved from the subject, to the style and the to material of artwork throughout the century. The avant-garde artists started to use the earth as a basic material and created didactic works for giving ecological messages. The new style was named by various terms including earthworks, land art[22] and environmental art[23]. The most well-known land art work is Spiral Jetty designed by Robert Smithson in 1970 as an inspiring metaphor. Smithson was fascinated by Great Salt Lake in Utah during his travel because an infrequent type of algae was living in the lake despite the salty environment leaded to destruction of species. Smithson, who thought in cosmic and interested in entropy, was inspired by the pinkish red color of the water recalled blood, the prehistoric myth about the lake and abandoned post-industrial area and associated artwork and its environment with a meaning (Campbell, 2007) (Figure 2.22).

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[19] A movement composed of initially British, then American artists in the 1950s and 1960s, which was characterized by references to imagery and products from popular culture, media, and advertising (Url-72).

[20] Art that emerged in the late 1960s, emphasizing ideas and theoretical practices rather than the creation of visual forms. In 1967, the artist Sol LeWitt gave the new genre its name in his essay "Paragraphs on Conceptual Art," in which he wrote, "The idea itself, even if not made visual, is as much a work of art as any finished product." (Url-73).

[21] A term that emerged in the 1960s to describe a diverse range of live presentations by artists (Url-74).

[22] Land art or earth art is art that is made directly in the landscape, sculpting the land itself into earthworks or making structures in the landscape using natural materials such as rocks or twigs. Land art was part of the wider conceptual art movement in the 1960s and 1970s (Url-75).

[23] Environmental art is art that addresses social and political issues relating to the natural and urban environment. Environmental art often takes the form of installation. The term came into use in the late 1960s and is often closely related to land art (Url-76).

Figure 2.22 : Spiral Jetty (Url-32).

Gas Works Parks designed by Richard Haag is the pioneer sample of ecological approach to landscape design based on industrial heritage. Haag protected the industrial past of the site and transformed abandoned coal gasification plant into a post-industrial landscape park; thus, he changed the perception of appearance and context of a park. For the regeneration of industrial landscape, bio-phytoremediation technique was used to decontaminate soil (Campbell, 2007) (Figure 2.23).

Figure 2.23 : Gas Works Park opened to the public in 1975 (Url-33) (Url-34).

Another important brownfield remediation project is located in China, Zhongshan Shipyard Park designed by Turenscape landsacepe architecture firm with the leadership of Kongjian Yu. The park was built on deserted shipyard gathering historical, cultural and ecological components, on the other hand it has the characteristics of a memorial for the shipwrights. Preserving industrial heritage, the elements of industrial landscape were reused in the design. The existing forms were

transformed into new functions and new forms were designed to emphasize the importance of cultural and historical meaning (McLeod, 2012). The objectives of the design are to consider industrial heritage, integrate the park into urban landscape and cerate public open space, use native weeds and low maintenance plants, design the park for controlling flood and adapting water level changes (Saunders, 2013) (Figure 2.24).

Figure 2.24 : Zhongshan Shipyard Park, 1999-2001 (Url-35).

The developments in the second half of the 20th century demonstrates that postmodern philosophy influnced the urban planning and design and transformation of post-industrial landscapes came into prominence.

Considering the use of postmodern approaches in the park projects, Parc de la Villette and Landschaftspark Duisburg Nord were addressed and detailed in terms of design principles and characteristics in the third chapter.

2.4 Post-postmodern Era

The crucial developments occurred in the late 20th century with invention of internet and globalization. The invention of world wide web caused to start of information age and globalization process leaded to an economic integration having social and cultural dimensions.

The signals of post-postmodern era appeared in the professions such as architecture and urban design by the rising of faith. The approaches for building in the past shows that traditional style provides a beneficial relationship between man and the environment. In post-postmodern planning, traditions were rediscovered and values and beliefs were restored. The age of synthesis embraces comprehensible, pleasant, and functional environments that can be formed by diverse methods (Turner, 1996).

The universal and utopian tendencies failed in late modernist design and planning because approaches of planning and design disregarded local characteristics and values. The importance of landscape is increasing present as landscape cares about local qualities and collective meaning of place (Corner, 1999).

The recovering landscape can be divided into three aspects that pay attention to memory and cultural enrichment, social program and utility, and ecology and environment. The attitudes of reclaiming of landscapes cares about symbolic image of a specific place embracing cultural uniqueness, increasing ecological diversity and succession, the innovative responses including global communication, digital media, internet and satellite images (Corner, 1999).

Since the beginning of the 1990s a new design language emerged including the concept of landscape and new design approaches combined with ecology. The perspective that is formed by holistic approach and process in design projects came out and holistic perspective was developed by interdisciplinary approach; therefore, the concept of landscape was stressed as total surface[24].

The theoretical framework of landscape architecture evolved as holistic design theory emphasizing landscape architecture as both art and science. The division between art and science disappeared and sustainable landscape design emerged considering cultural and ecological processes (Baird and Szczygiel, 2007).

By the holistic approach, the concept of landscape had centralized importance in the beginning of the 21th century and focused on the formulation of landscape urbanism[25] concept. Gathering two terms 'landscape' and 'urbanism', a new hybrid discipline was proposed. The themes of the major characteristics of landscape urbanism can be listed as horizontality, infrastructures, forms of process, techniques and ecology (Corner, 2014).

The important potentials of landscape urbanism are defined as shifting scales, locating the urban fabric in regional and biotic status, designing the relationships between

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[24] The term landscape no longer refers to prospects of pastoral innocence but rather invokes the functioning matrix of connective tissue that organizes not only objects and spaces but also the dynamic processes and events that move through them. This is landscape as active surface, structuring the conditions for new relationships and interactions among the things it supports (Wall, 1999).

[25] This new disciplinary collusion was anticipated in the Landscape Urbanism symposium and exhibition in 1997 (Waldheim, 2006).

dynamic environmental processes and urban form. The four themes are highlighted for a practice that are processes over time; underlines processes of urbanization, the staging of surfaces; concerns horizontal surface, the operational method; recommends traditional, conceptual, representational and operative techniques, and the imagination; formed by the experiences. Ecology is a practical approach to analyze and design alternative urban future for organic and fluid urbanism (Corner, 2006).

Spirn (2011) indicates that "Important concepts of ecological urbanism include: cities are part of the natural world; cities are habitats; cities are ecosystems; urban ecosystems are dynamic and interconnected; every city has a deep, enduring context; urban design is a tool of human adaptation" (p. 6).

Constructing landscape urbanism on a horizontal field as large scale infrastructure projects, term of sustainability became important issue in the 21th century design projects. Sustainable landscape designs consider environmental, social and economic maintenance of a practice, which presents adaptation to past interventions and transformation into flexible, process based, and strategic urbanism. Urban transformations by reuse approaches and redevelopment plans has a critical significance on practices of today. Strategies and techniques has developed by the technological innovations during the process and theories such as ecosystem theory, succession theory has shaped the design approaches of contemporary landscape architecture.

High Line is one of the important iconic urban parks based on conversion of the railway into a sustainable landscape. It opened to trains by an elevated railway in 1934 in order to carry the manufactured goods to Manhattan and remove the accidents caused by the vehicles and trains in which share the same level road. The railroad lost its importance due to growth in the interstate trucking industry, so idea of the demolition of the structure raised from some property owners. However, Friends of the High Line was founded and defend the protection of the rail line and reuse as a public space. After the ideas competition and exhibition, professional design competition was realized and the project of James Corner Field Operations was selected in 2004. The park was designed as a linear promenade that enable to walkable public space featuring with its paving, furnishing, planting and lighting designs. The design is based on choreography of movement with changing vistas of the city and experiences and the first section of the park opened to public in 2009 (Tate, 2015).

High Line demonstrates how abandoned transportation infrastructure can be transformed into urban public park owning industrial heritage and considering its environmental and social benefits (Figure 2.25).

Figure 2.25 : High Line by James Corner Field Operations (Url-36).

Seoullo 7017 Skygarden[26] is a public park located in Seoul designed as transforming elevated highway of 1970 into a pedestrianized public space. Skygarden is a linear park that includes a wide variety of Korean plant species of trees, shrubs and flowers and opened to public in 2017. The design enables to evolve of the park for the future vision as an 'Urban Nursery' and it is expanded by additional structures like stairs, lifts, escalators and satellite gardens to connect the elevated walkway to its surrounding (Figure 2.26).

Figure 2.26 : Seoullo 7017 Skygarden by MVRDV (Url-37).

As a mixture of nature and technology, Bay South at Gardens by the Bay[27] is a contemporary tropical park of the 21th century and opened to public in 2012. Bay

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[26] Design: MVRDV - Winy Maas, Jacob van Rijs and Nathalie de Vries. Partners: Landscape Architect: Ben Kuipers, Delft, Netherlands. Local Architect: DMP, Seoul, Korea. Structure: Saman Engineering, Seoul, Korea. Local Landscape Designer: KECC, Seoul, Korea. Sustainability: EAN, Seoul, Korea. Architectural Structure: Cross, Seoul, Korea. Industrial Designers: Studio Makkink & Bey, Amsterdam, Netherlands. MEP: Samsin, Seoul, Korea. Traffic Engineers: Song Hyun R&D, Seoul, Korea. Lighting Design: Viabizzuno, Milan, Italy and Nanam Ald, Seoul Korea. App Design: nhtv, Breda, Netherlands. Cost Engineers: Myong Gun, Seoul, Korea. Images: Ossip van Duivenbode (Url-77).
[27] Design: Grant Associates. Architects: Wilkinson Eyre Architects. Engineers: Atelier One, Atelier Ten. Quantity Surveyors: Davis Langdon And Seah. Collaborators: Thomas Matthews. Client: National Parks Board (Url-78).

South Garden is based on environmental, social and economic sustainability and includes giant supertrees, skyway, cooled conservatories, heritage gardens, vertical gardens, plant gardens, sculptures and intelligent environmental infrastructure (Figure 2.27). Cooled conservatories; Cloud Forest and Flower Dome present plant species of cool-moist climates of Tropical Montane regions and cool-dry Mediterranean climate. The theme gardens formed by Heritage Gardens and The World of Plants emphasize the cultural importance of plant species and display the biodiversity of the planet. Energy and water cycles are the key issues in the design for providing environmental sustainability. Supertrees harvest solar energy and exhaust the air into the Conservatories. In lake system, water runoff and sediments are filtered by wetlands and filter beds, nitrogen and phosphorus levels are reduced by aquatic plant islands to prevent algae and maintain water quality, and fish and dragonfly habitats are created to ensure aquatic plant diversity and water aeration as well as controlling mosquito breeding. The conservatories formed by glass biomes provide energy-efficient solutions by advanced cooling technologies (Figure 2.28).

Figure 2.27 : Bay South Garden in Singapore by Grant Associates (Url-38).
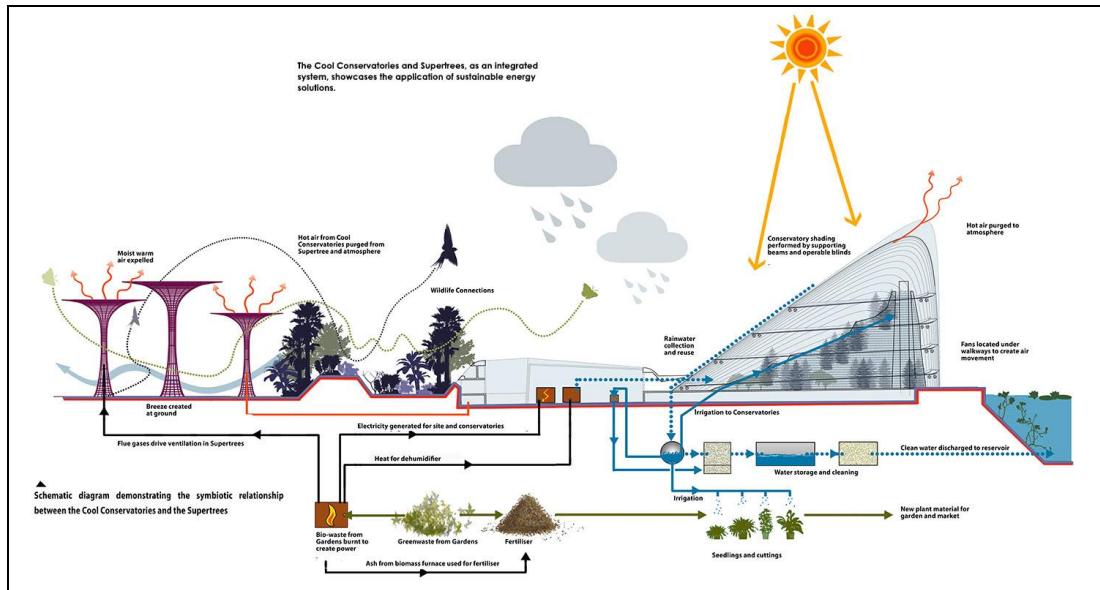
Figure 2.28 : Environmental sustainability with energy and water cycles (Url-39).

Considering the post-postmodern sustainable approaches based on the urban transformation projects, Fresh Kills Park and Queen Elizabeth Olympic Park were described and detailed in terms of design principles and characteristics in the third chapter.

2.5 Chapter Summary

The changes and developments in disciplines including art, architecture, city planning and landscape architecture from romantic to post-postmodern era were described in the theoretical framework. As the outcome of this chapter, timeline demonstrates city park designs in the evolutionary process of art and science involving thresholds, which are scientific discoveries and technological innovations, art movements, world wars, economic crisis, environmental problems, conferences, books that change theoretical framework (Figure 2.29) (Figure 2.30) (Figure 2.31).

THE CITY PARK DESIGNS

Central Park   Gençlik Parkı   Landschaftspark Duisburg-Nord   Queen Elizabeth Olympic Park

Parc des Buttes Chaumont   Amsterdam Bos Park   Parc de la Villette   Fresh Kills Park

1700   1750   1800   1850   1900   1950   2000   2050   3000

2018

ART

Landscape,
James Lambert

Italian Landscape with a Tower,
Joseph Mallord William Turner

Farms near Auvers,
Vincent van Gogh

Dynamic Suprematism,
Kazimir Malevich

Spiral Jetty,
Robert Smithson

Landscape with a
Peasant on a Path,
Thomas Gainsborough

Dovedale by Moonlight,
Joseph Wright of Derby

Giant Mountains,
Caspar David Friedrich

The Avenue at the Jas de Bouffan,
Paul Cézanne

Composition in Oval
with Color Planes,
Piet Mondrian

Industrial Landscape,
L.S. Lowry

The Weather Project,
Olafur Eliasson

Swinging,
Wassily Kandinsky

Yellow Islands,
Jackson Pollock

Figure 2.29 : Timeline of the city park designs and art movements (Karali, 2018).

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THE CITY PARK DESIGNS

Central Park

Gençlik Parkı

Landschaftspark Duisburg-Nord

Queen Elizabeth Olympic Park

Parc des Buttes Chaumont

Amsterdam Bos Park

Parc de la Villette

Fresh Kills Park

1700 1750 1800 1850 1900 1950 2000 2050 3000

2018

SCIENCE & TECHNOLOGY

Industrial Revolution

Ecology

Theory of Relativity

Bell Solar Battery

Modern Biology

The first windmill

ENIAC
Electronic Numerical Integrator and Computer

World Wide Web

The electron microscope

Sputnik I
The first artificial satellite

Figure 2.30 : Timeline of the city park designs and scientific & technological innovations (Karali, 2018).

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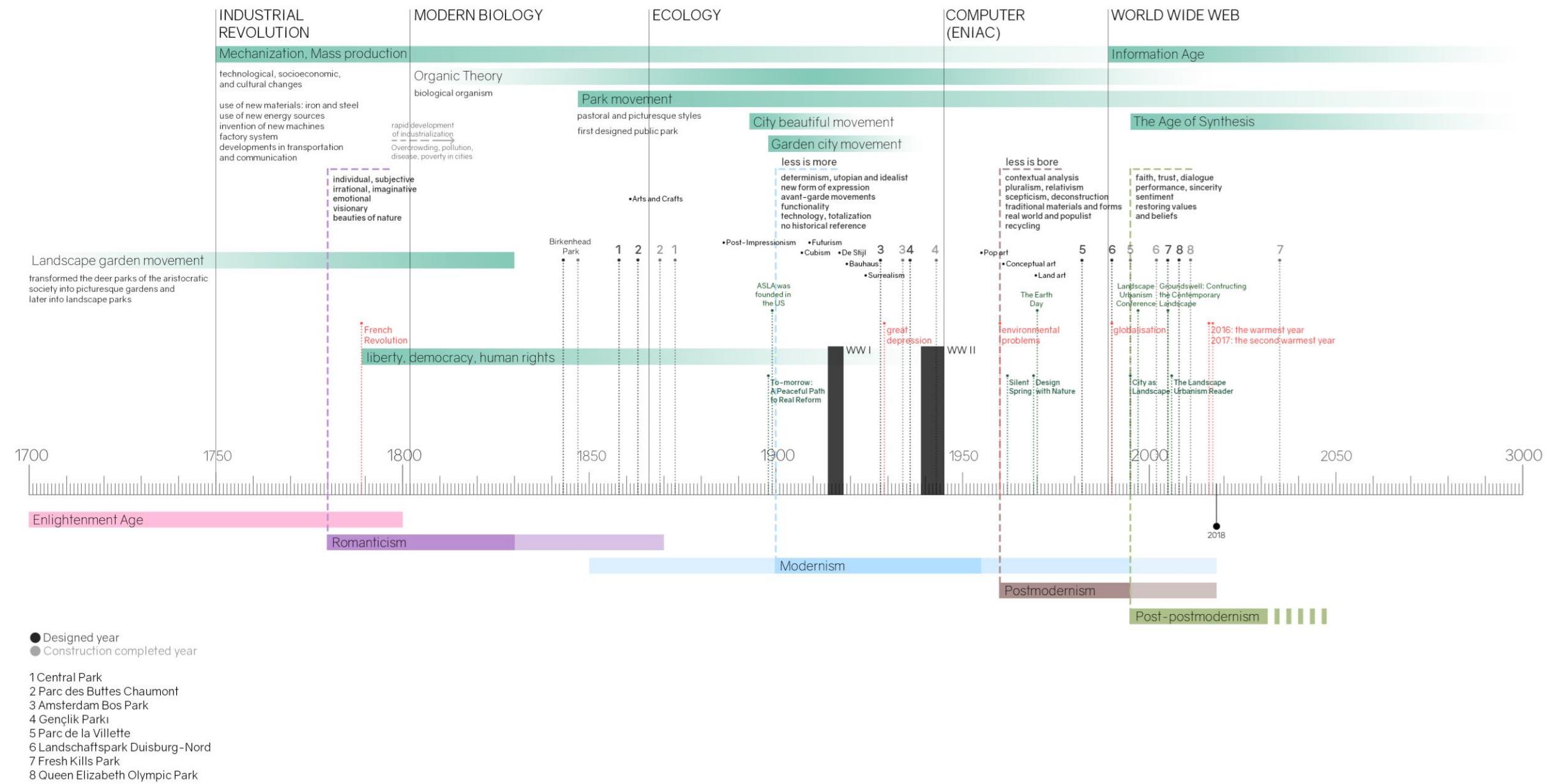
Figure 2.31: Timeline of the evolutionary process of the city park designs (Karali, 2018).

3. EVOLUTION OF THE CITY PARK DESIGNS

The evolutionary process of city park designs based on representative exemplars from romantic to post-postmodern era demonstrates that the design approaches have been evolved in the intersection of art and science; however, the influences of past practices on the following projects can be seen throughout the historical process.

Romantic era practices were based on the idea of landscape park and the aim of the designs addressed the need of urban recreation against deteriorating environmental conditions. The design philosophies were formed by the notions of the sublime, the pastoral and the picturesque inspiring from the beauties of nature.

Modern era practices were formed by the principle of form follows function also including reflections of avant-garde movements. Landscape programs and landscape techniques shaped the design approaches especially based on functionality. Ideal public space approaches were developed for the new urbanized cities.

Postmodern era practices were based on transformation of abandoned industrial landscapes into urban large scale parks and postmodern philosophy formed by deconstruction theory. The projects were developed by the idea that emphasized the urban needs of the 21st century will be different. Furthermore, the former industrial sites that were deserted and nonfunctional areas became the important potential areas for the urban development. Recyling and reuse of these areas considering environmental, social and economic dimensions of revitalization draw the design approaches of that period.

Post-postmodern era attached importance to sustainability involving urban transformations by large scale urban parks originated by landscape and ecological urbanism. This design philosophy was used in the large scale infrastructure projects, and can be integrated each type of open space design as a flexible approach. By the end of 2000s, it was also associated with olympic park designs.

3.1 Romantic Era Practices

The design philosophy of the romantic era practices was developed to create a landscape park, which reflects the beauties of the nature, formed by the concepts of the sublime, the pastoral and the picturesque. The aim of the designs was to create a democratic public space for urban inhabitants including a healthy and natural environment in densely urbanized cities.

As representative exemplars of romantic era practices, Central Park and Parc des Buttes Chaumont were described in this section with their design philosophies, approaches and main symbolic elements.

3.1.1 Central park

Central Park is located in Manhattan and it has a size of 341 hectares. The parkland takes part in Manhattan formal grid having an appropriate rectangular shape (Figure 3.1).

Figure 3.1 : Central Park, New York, the USA (Google Earth, Landsat/Copernicus).

Central Park presented a new space concept for urban landscape with its large scale size and various elements (Jellicoe, 1975). The former site consisted of swamps (Tate 2015). After industrial revolution people started to migrate into the cities. Due to overpopulation, environmental conditions were deteriorated and social problems were appeared in changing urban life. Olmsted thought that urban dwellers need to clean

air, sunlight and open space against urban diseases and stressful life. To improve environmental and social conditions, he proposed increase of tree planting, division of city into commercial and residential zones, and better planning for new developing site (Olmsted, 1870). For park design, he believed that the particular large park can include both active and passive recreation (Figure 3.2).

Figure 3.2 : The Belvedere Castle and Bow Bridge (Url-40) (Url-41).

Olmsted was influenced by the urban parks and rural scenery throughout the Europe trip. To rehabilitate living conditions in cities, he started to design large scale pastoral and picturesque style parks. Central was the first public park design of Olmsted, who developed the concept of public space (Tate, 2015). Setting the nature into the urban grid, Central park, where was an escape from the city for working class inhabitants.

The Greensward plan was conceived by landscape architect Frederick Law Olmsted and architect Calvert Vaux, who were the winners of the competition, for Central Park design competition in 1858. Respectively the completed and continued construction of circulation system and museum building were demonstrated in the plan of 1872. Moreover, the circulation was divided into walkway, carriage drives and bridle path (Beveridge, 2015) (Figure 3.3).
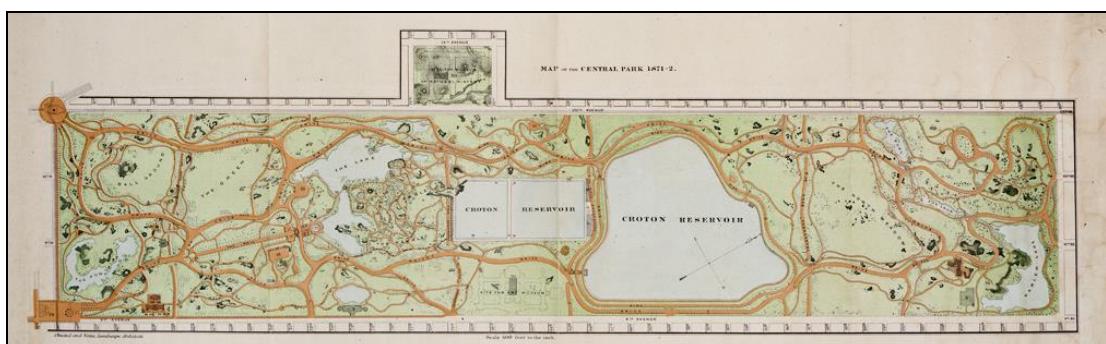
Figure 3.3 : The plan of Central Park, 1872 (Url-42).

Being a visionary and conservationist, Olmsted emphasized the park as a democratic social integrator gathering all classes in the city to the single place. Designing a pastoral landscape with Central Park, Olmsted presented an unprogrammed landscape which can be transformed according to visitors' demand (Constant, 2012) (Figure 3.4).

Figure 3.4 : The Great Lawn (Url-43).

The design of the park is described as inward-looking pastoral, picturesque and rectilinear landscape. The main symbolic elements can be ordered as edges are transverse roads, the Onassis reservoir, districts include water bodies such as the lake and the reservoir, meadows, woodlands, rockier and higher ground, landmarks are the Metropolitan Museum of Art and the Belvedere Castle, nodes are the Great lawn, Sheep meadow, North meadow and Bethesda terrace, and paths are the pedestrian paths and vehicular ways (Figure 3.5).
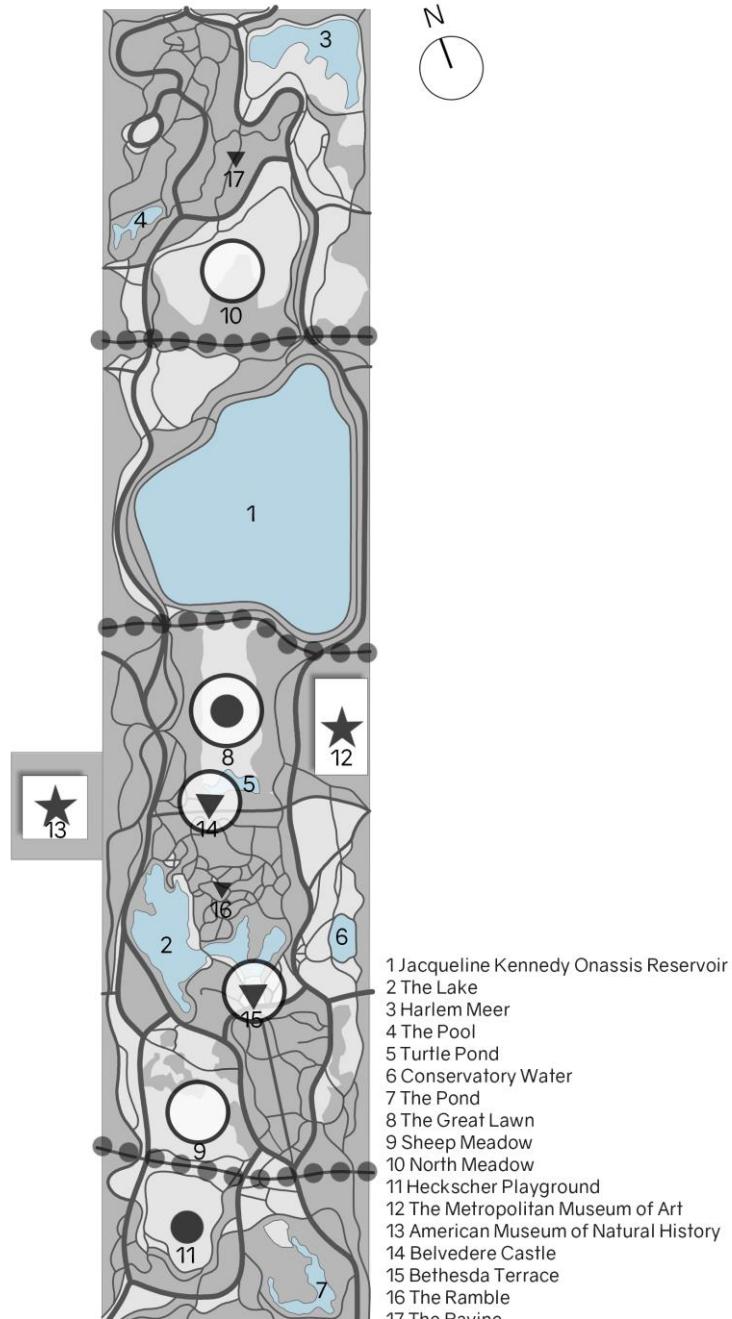
Figure 3.5 : The image of Central Park (Karali, 2018).

Central Park is a romantic era practice of the city park designs transforming the marshland into the urban reservoir and large scale urban park. Both its pastoral and picturesque design philosophy based on rural scenery and landscape park with urban

recreational space approach to site design represent the characteristics of the romantic period.

3.1.2 Parc des buttes chaumont

Parc de Buttes Chaumont is located in the northeast site of Paris and it has a size of 61 hectares (Figure 3.6). The former site comprised the gypsum quarry and refuse dump area in the abandoned industrial area. The transformation of the site into the public park was realized in the last period of Napeléon III by hygienic urban operations of minister Haussmann. According to vision of Napoleon III, the city parks would contribute to renovation of capital to create beautiful and modern metropolitan city (Hopkins, 2015).

Figure 3.6 : Parc de Buttes Chaumont, Paris, France (Google Earth, Landsat/Copernicus).

The one of the important purposes of the redesign of the site was to provide experience of the park for working-class dwellers like the parks of the bourgeois class as well as conceive a public park for clean air and healthy environment (Constant, 2012).

The park designed by engineer Jean-Charles Adolphe Alphand and the design team included horticulturist Jean-Pierre Barillet-Deschamps, architect Gabrielle Davioud and landscape architect Edouard André. The operations on the site began in 1864 and the park opened in 1867 (Tate, 2015) (Figure 3.7).
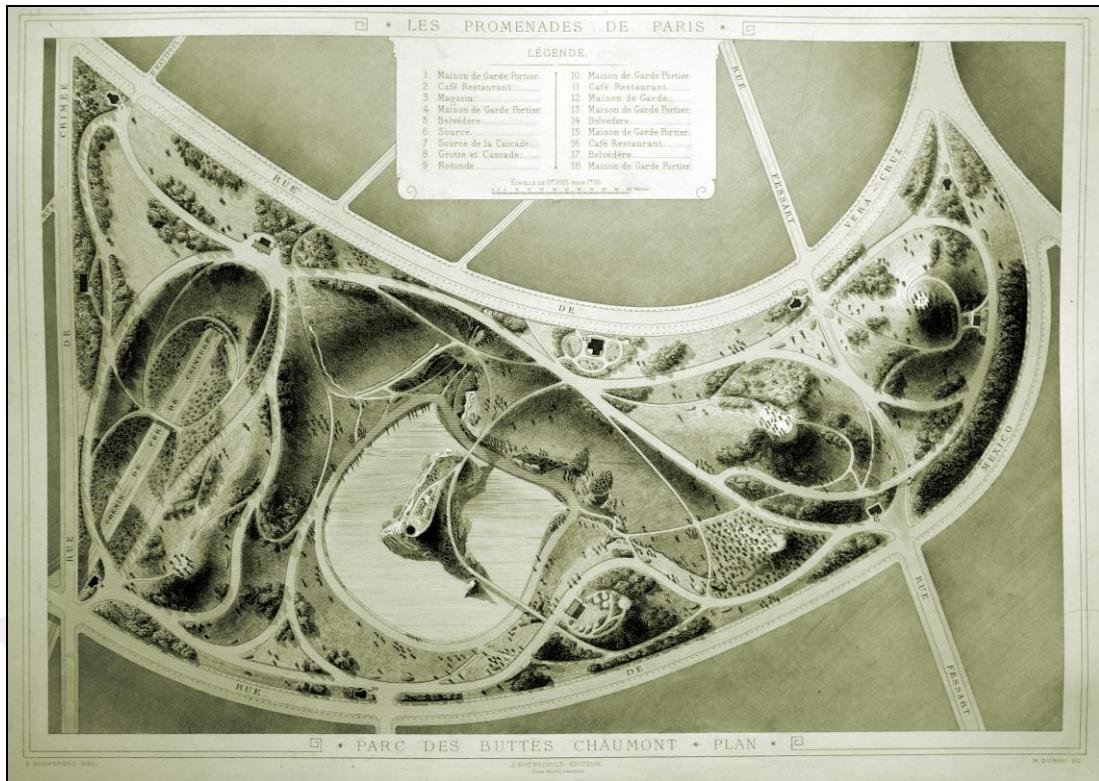
Figure 3.7 : The plan of Parc des Buttes Chaumont (Url-44).

Parc des Buttes Chaumont is handled as an infrastructural project that was designed as an expansion of the urban fabric. In addition, its name derives from bald mountain formed by the soil types of clay, limestone and gypsum, so the plant species could not grow in the site. To create clean and healthy place, and provide the growth of flora, the earth was brought to the site and Alphand conceived an artificial topography (Constant, 2012).

The design layout of Buttes Chaumont is comprised of the systems of points, lines, surfaces and iconographic text. Points are formed by follies including gatehouses, cafes, pavilions and specific points that are bridges, cascades, grotto and belvedere appeared as a result of superimposition of systems. Lines consist of pedestrian and vehicular circulation and surfaces are comprised of artificial landforms, four grass mounts and the lake. Moreover, the use of new materials such as iron and concrete in the construction of bridges, cliffs, fences and steps indicates the innovator approach to design. Iconographic text contains both the cultural and natural history of the site involving landforms resulted from former quarry operations and geology (Meyer, 1991) (Figure 3.8).
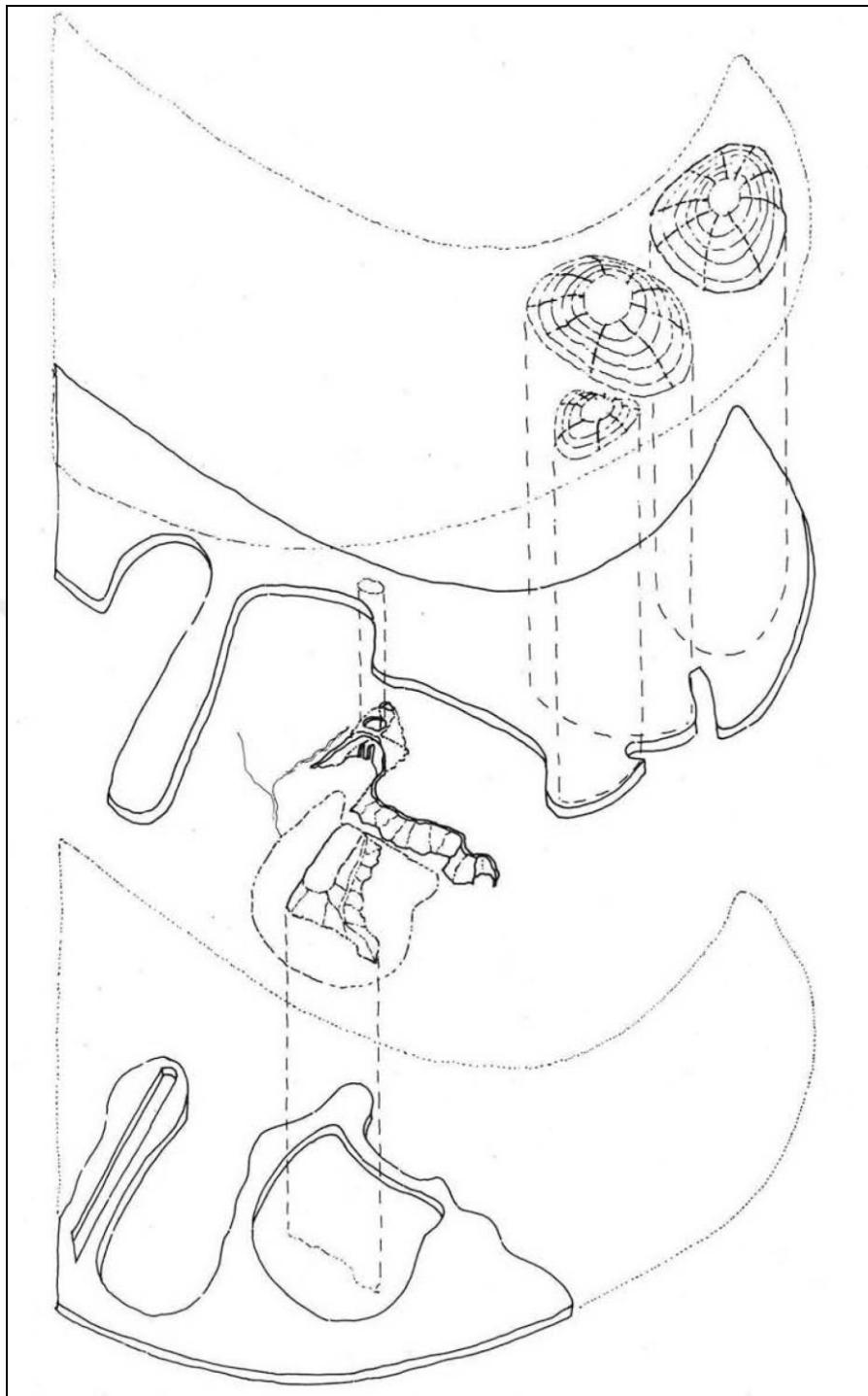
Figure 3.8 : The superimposition system of surfaces (Meyer, 1991).

The links can be established between the artificial landscape and the collective memory. Furthermore, this artificial nature enables to experience the sublime and picturesque landscape. The architectural and landscape elements of the park have metaphorical meanings (Figure 3.9). Parc des Buttes Chaumont embraces the metaphors for technology including the working of the park machine and biology signifying as green lung for urban organism (Meyer, 1991).

Figure 3.9 : The Temple of Sibyl and The Grotto (Url-45).

The contour plan of the site demonstrates that Alphand's technique for shaping the terrain considering the existing contour lines as a basis to develop the construction of the new design. Through re-grading, the existing and proposed contour lines allow to calculate the amount of soil to be brought to the site (Komara, 2009).

As a late romantic and proto-modern exemplar, the main symbolic elements of Parc des Buttes Chaumont can be ordered as edge is the railroad, districts are the lake, meadows and woodlands, landmark is the Temple of Sibyl, nodes are the Belvedere, paths are the pedestrian and vehicular ways (Figure 3.10).
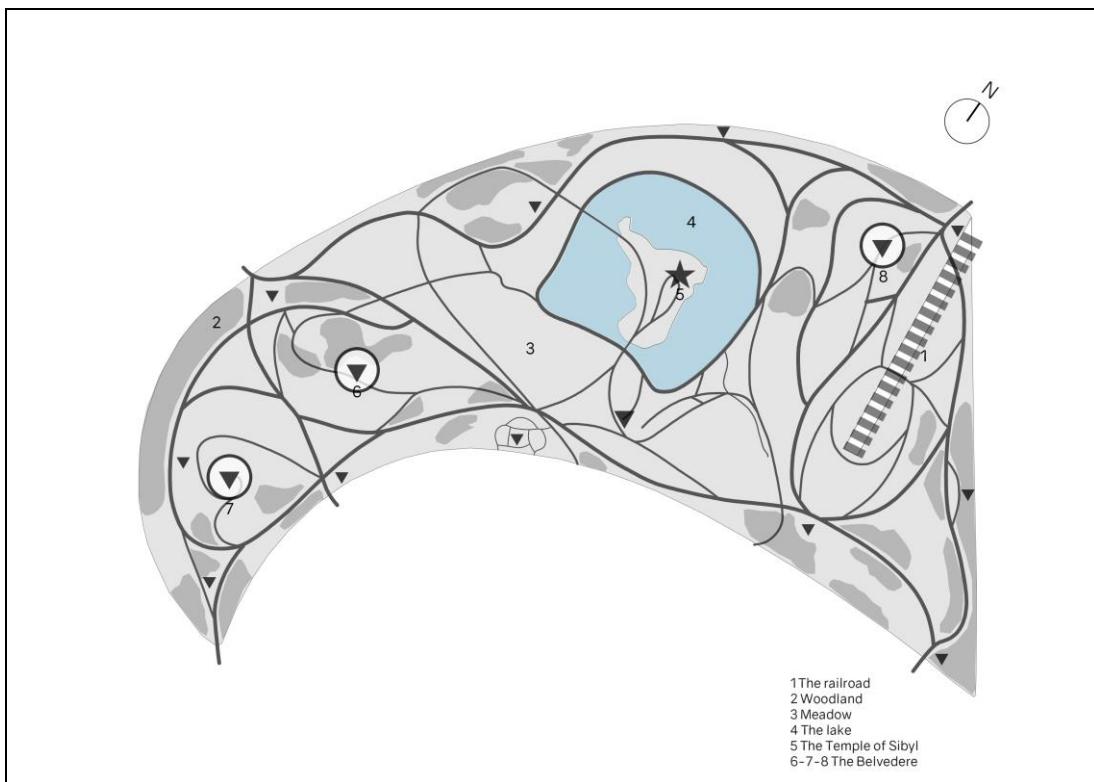
Figure 3.10 : The image of Parc des Buttes Chaumont (Karali, 2018).

Parc des Buttes Chaumont is a late romantic era practice of the city park designs transforming the former industrial site into the large scale urban park. Its metaphoric and innovator approach to site design represent the characteristics of the late romantic period.

3.2 Modern Era Practices

Considering modern era, the design approaches of city parks are related to new avant-garde movements and concept of functionalism. Transformations of marshlands to develop the site and provide for recreational spaces including many activities are important developments in evolutionary process with design strategies and techniques.

In addition, ideal parks were designed for new ideal city models. The aim was to create healthy environment and develop a new social meaning in the concept of public space.

As representative exemplars of modern era practices, Amsterdam Bos Park and Gençlik Parkı were described in this section with their design philosophies, approaches and main symbolic elements.

3.2.1 Amsterdam bos park

Amsterdam Bos Park is located in the Netherlands in city Amsterdam and it has a size of 1000 hectares (Figure 3.11). The park was designed by Dutch architect Cornelis van Eesteren, who was the member of the De Stijl avant-garde movement linking between art and urban planning, and landscape architect Jacoba Mulder (Tate, 2015). Amsterdam Bos, which was a pioneer modern park in Europe, was designed in 1928 and the construction started in 1934 (Jellicoe, 1975).

Figure 3.11 : Amsterdam Bos Park, Amsterdam, the Netherlands (Google Earth, Landsat/Copernicus).

The beginning of the park project was confirmed by the Amsterdam city council in 1929 (Berrizbeitia, 1999). The plan of Amsterdam Bos was completely approved in 1935 as an initial enterprise formally forming the fundamental component of in the General Expansion Plan (Tate, 2015).

As a modern park, the plan of the park demonstrated that it is a park for active recreation rather than passive. The landscape of the Netherlands has a flat land like the art works of Piet Mondrian who had abstract form paintings. However, Bos Park is different considering the form of geometry, the plan of the park made by a team includes engineers, architects, botanists, biologists, sociologists and town planners (Jellicoe, 1975).

Amsterdam Bos Park was developed to provide for recreational needs of the urban public (Constant, 2012) (Figure 3.12). The area below sea level was marshland and

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traditional drainage techniques evolved a forest that has convenient forms for collective sports. The dynamism of the park formed by these shapes although lack of diversity in tree groups consist of oaks and alders and species (Jellicoe, 1975). The layout of the park is both aesthetic and scientific including functionality and technique restoring native plant species and making reference to modern Dutch art forms (Constant, 2012).
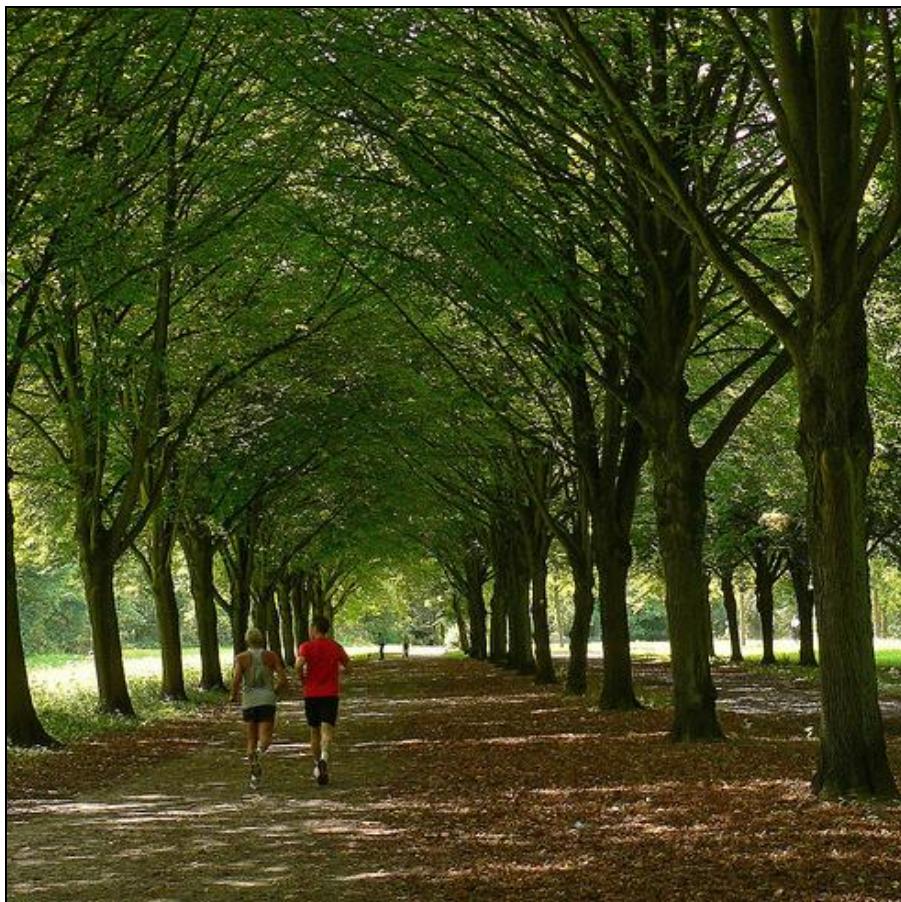

Figure 3.12 : Bos Park (Url-46).

The park can be handled as a modern diagram and includes sport programs, sustainable forest, agricultural fields and waterways. The park as a diagram is originated by the concepts of 'park bos' that was designed landscape for recreation and 'nature bos' that formed by forest, agricultural fields and waterways (Hargreaves, 2007).

Amsterdam Bos Park located in polder areas below sea level was addresses as functional design considering management of water with artificial dikes and productivity by forest; therefore, it broke the picturesque tradition in design (Berrizbeitia, 1999) (Figure 3.13).
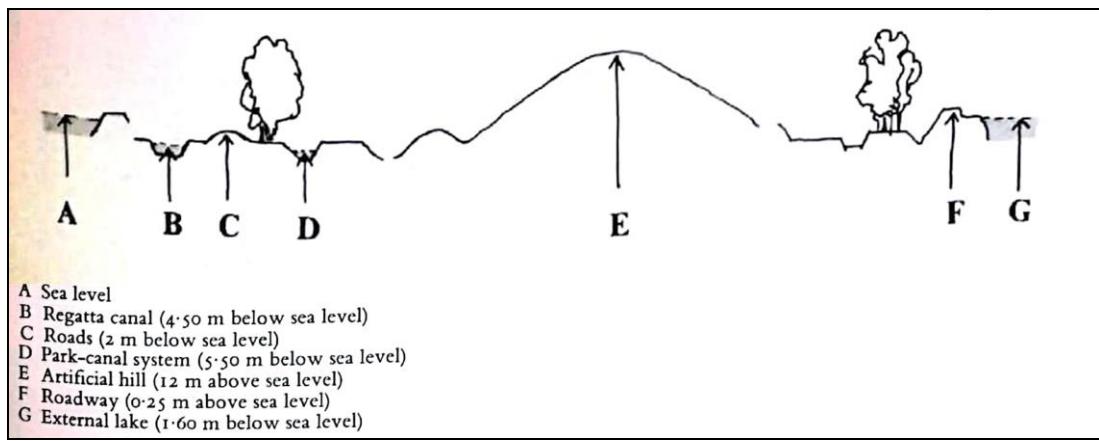
Figure 3.13 : The section of Bos Park (Jellicoe, 1975).

The park was conceived as the concept of process rather than aesthetic design; thus the park was transformed into a productive land by processes including soil drainage and plant succession (Berrizbeitia, 1999).

There are five site operations that are regularizing of the topography, water management by a network of pipes and a series of canals, vegetative succession by temporal forest involving species of alder, willow, poplar, and birch and permanent forest with ash, maple, oak and beech, and spatial organization of landscape elements, which are forest, lawns and water, reminding De Stijl paintings that pay attention to the distribution of the whole elements of the painting (Berrizbeitia, 1999) (Figure 3.14).
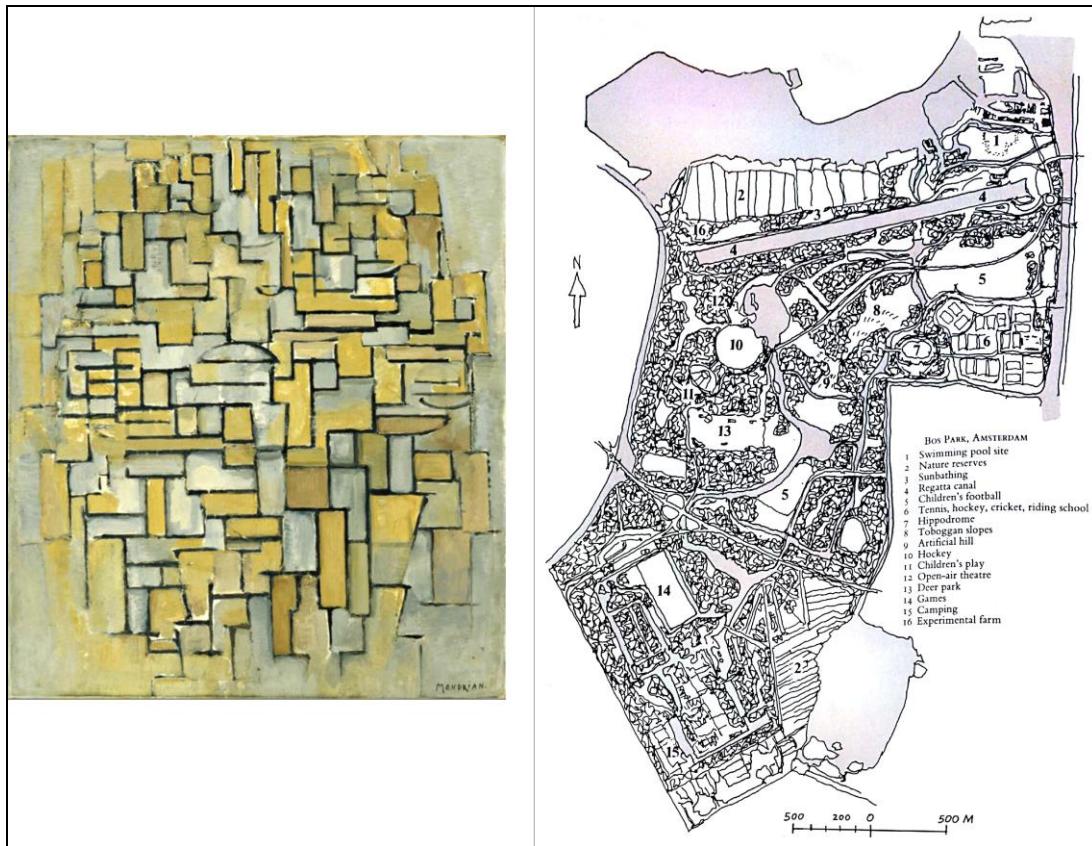
Figure 3.14 : Composition in Brown and Gray by Piet Mondrian 1913, Plan of Bos Park (Url-47) (Jellicoe, 1975).

Bos Park was evaluated as mix of open and closed systems which mean open is dynamic based on successional plant growth and closed is a formal system formed by water bodies (Berrizbeitia, 2007).

The use of form follows function principle appeared in the spaces that were formed by the large scale recreational activities and the design scheme includes biological forms, which resulted from the processes of hydrology, ecology and artificial patterns originated from functional activities involving rowing, walking and cycling. The land cover of the park formed by forest, grassland, water, riparian land with sport areas, roads, paths and parking lots (Tate, 2015). The land use contains sailing pond, rowing course, sunbathing, open air theatre, play areas, camping area and experimental farm (Jellicoe, 1975).

As a strong representation of large scale modern era park design, the main symbolic elements of Bos Park can be listed as edges are the canals and highway, districts involve water bodies, forest and lawns, landmark is the artificial hill, nodes are tennis,

hockey and riding schools, open air theatre, camping area and children play areas, paths are the canals and pathways (Figure 3.15).
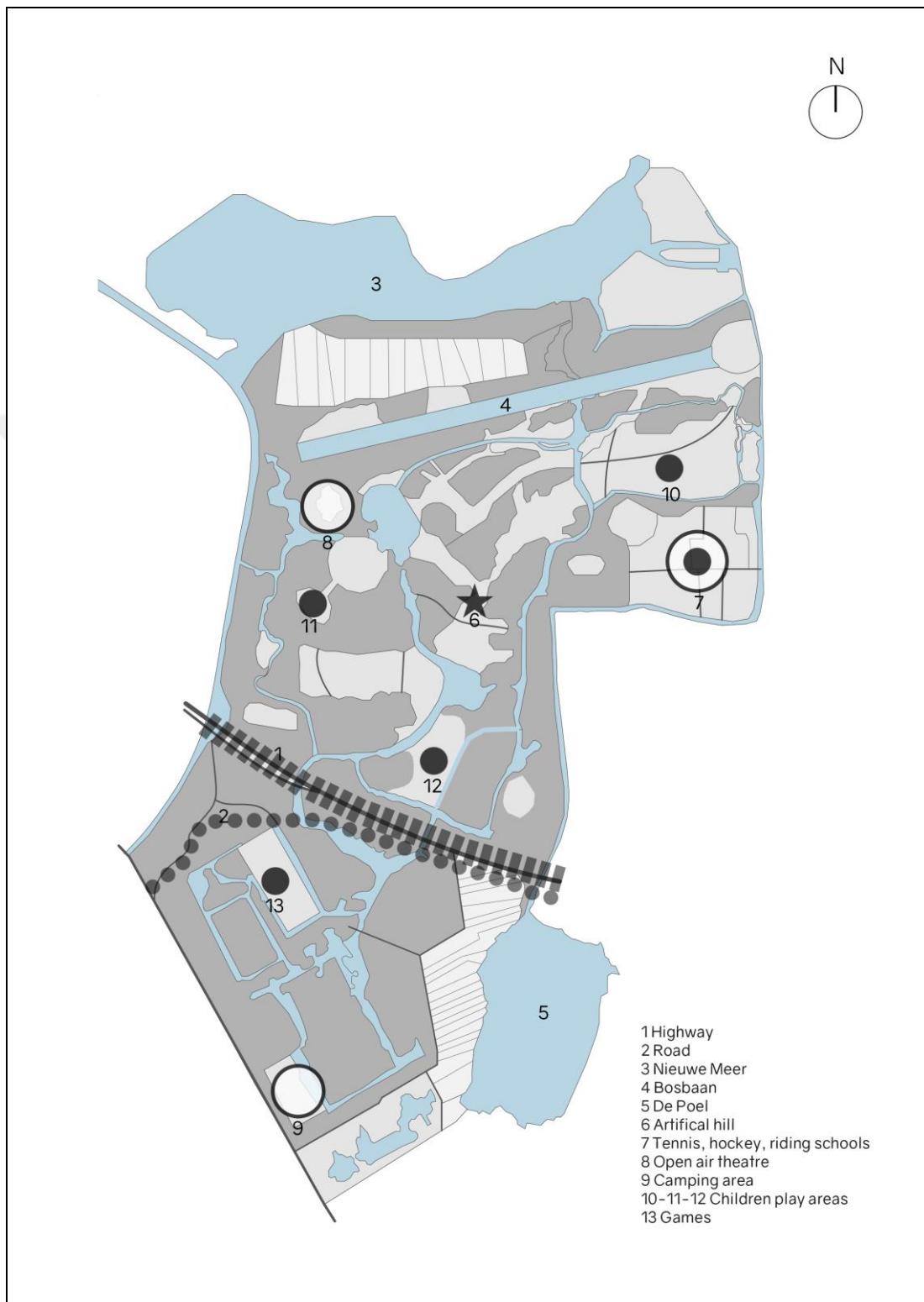

Figure 3.15 : The image of Amsterdam Bos Park (Karali, 2018).

Amsterdam Bos Park is a modern era practice of the city park designs transforming the marshland into the large scale urban park. Both its functional approach to site design and consideration of modern avant-garde style in spatial organization represent the characteristics of the modern period.

3.2.2 Gençlik parkı

Gençlik Parkı is located in central Ankara and it has a size of 28 hectares (Figure 3.16). The former site was a marshland and it had cemetery in a part (Özer, 2005).

Figure 3.16 : Gençlik Parkı, Ankara, Turkey (Google Earth, Landsat/Copernicus).

After Ankara became the capital of the Republic of Turkey, the development of a new urban model was aimed for the city through republican ideology. Ankara became the first planned city of the republic after the Jansen Plan that was formed by Hermann Jansen, who was the winner of the reconstruction competition of the city of Ankara in 1928 (Uludağ, 1998). The plan of Jansen demostrates that the Garden City model was considered as a basis and its principles were used for the capital city (Tankut, 1993). In addition, Jansen Plan introduced the urban green infrastructure system in a planning and design studies and he considered the topographical, morphological and microclimatic conditions of the site (Özer, 2005) (Figure 3.17).
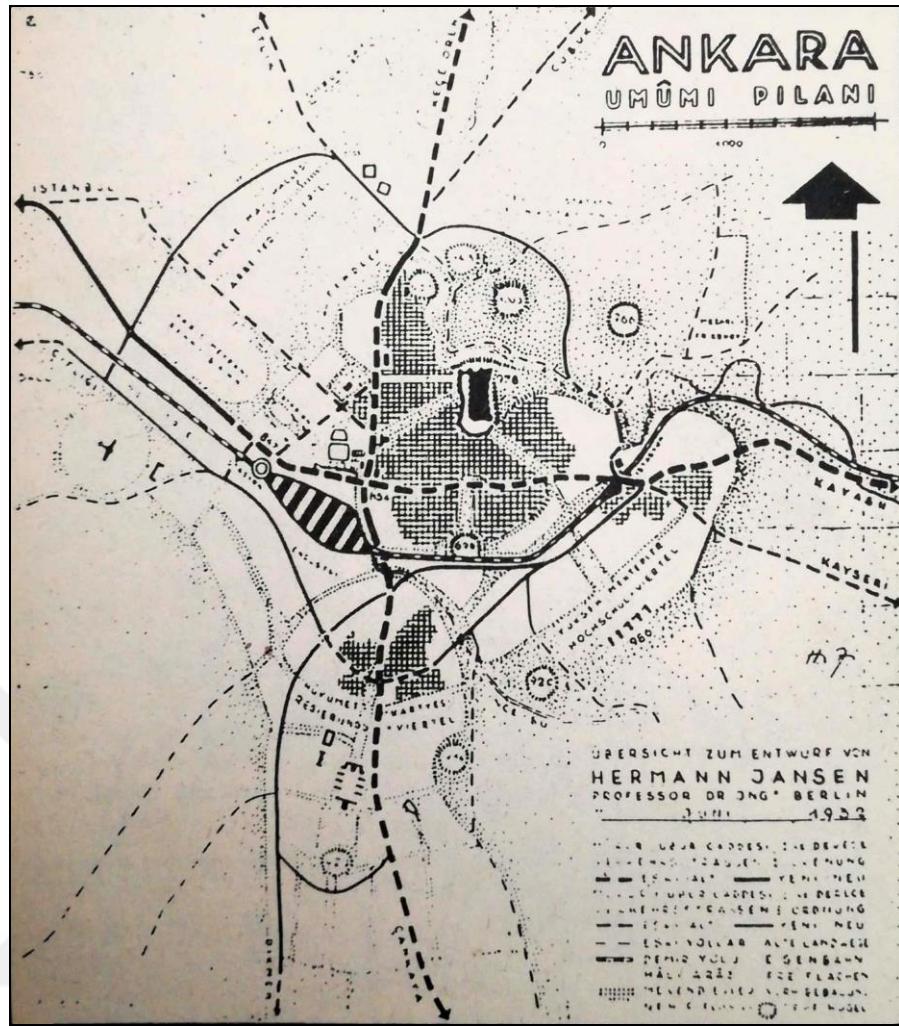
Figure 3.17 : The development plan of Ankara (Tankut, 1993).

The recreation areas of Ankara comprised vineyards, gardens and highlands in pre-republic period. The development plan of Ankara was accepted by the Republican government in 1932 and a proposal was demanded from Hermann Jansen to design Gençlik Parkı in 1933. The park was designed in 1934 and approved in the same year (Uludağ, 1998). Combining the republican ideologies with the planning principles, urban parks for social activities of inhabitants began to be designed. Gençlik Parkı was designed as a welcoming place of the modern city and representing the ideals of the government modern urban environment (Uludağ, 1998). Furthermore, Jansen emphasized the location of the park as a strategic place both combining and separating the old city and its historical values and new urban space (as cited in Özer, 2005). In his plan report, Jansen described the plan of the park as Gençlik Parkı was designed considering the climatic conditions of Ankara. The design was supported by canopy trees to provide shadow rather than large scale grasslands. There is a big water pond

in in the center of the park and the pool was surrounded by promenades and seating terraces. The design also includes alleys of trees, children play area, rose and flower garden, conservatory of endemic plants, cascades, pavilions for seating, open air theatre for meeting and festivals. Tree groups for shadow, pergolas, and tree arrays for preventing the dust and noise from the road formed the planting design (as cited in Özer, 2005). The purpose of the park design was to create a beautiful and healthy recreation area (Uludağ, 1998). Gençlik Parkı opened to the public in 1943 and a Luna park was formed in the park in 1952. Two miniature trains were placed by TCDD in 1957 and cascading pools were added (Özer, 2005) (Figure 3.18).
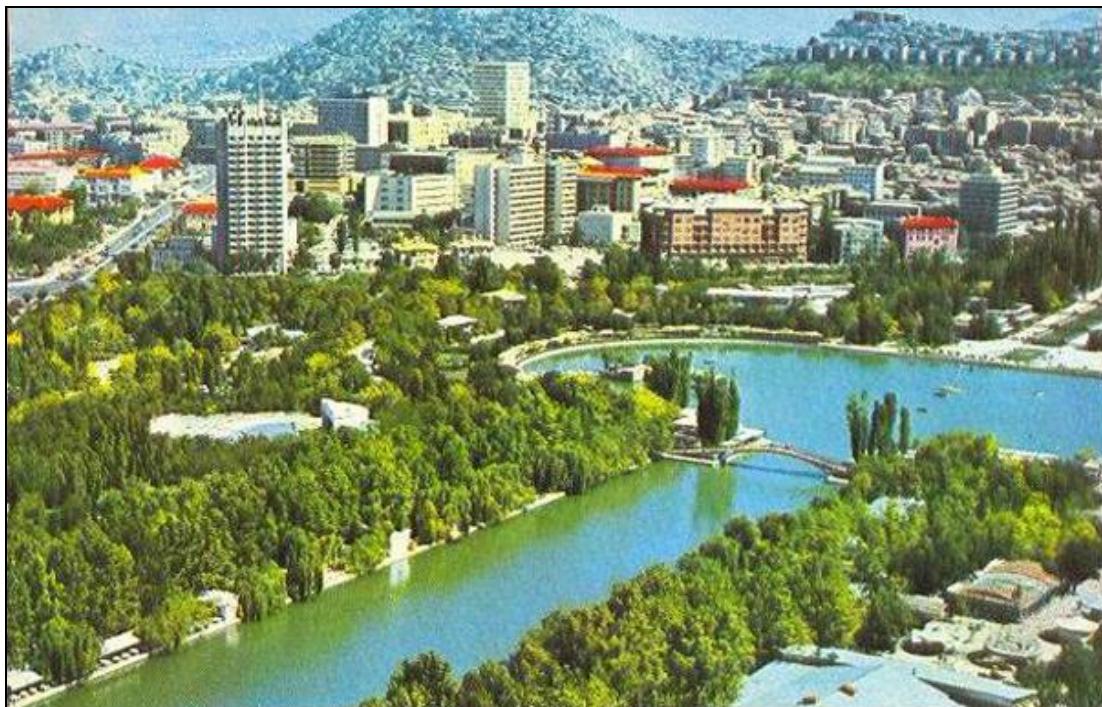
Figure 3.18 : Gençlik Parkı (Url-48).

Gençlik Parkı has a cultural and historical significance and it is evaluated as a cultural heritage. It is the representative exemplar of the new modern capital and it reflects the ideology of the reforms on the public space.

As a historical and cultural representation of large scale modern era park design, the main symbolic elements of Gençlik Parkı can be ordered as edges are the water pool, districts are water pond, canopy tree groups and flower gardens, landmarks are the theatre and opera buildings, nodes are the station and opera entrances, paths are the promenades and alleys of trees (Figure 3.19).

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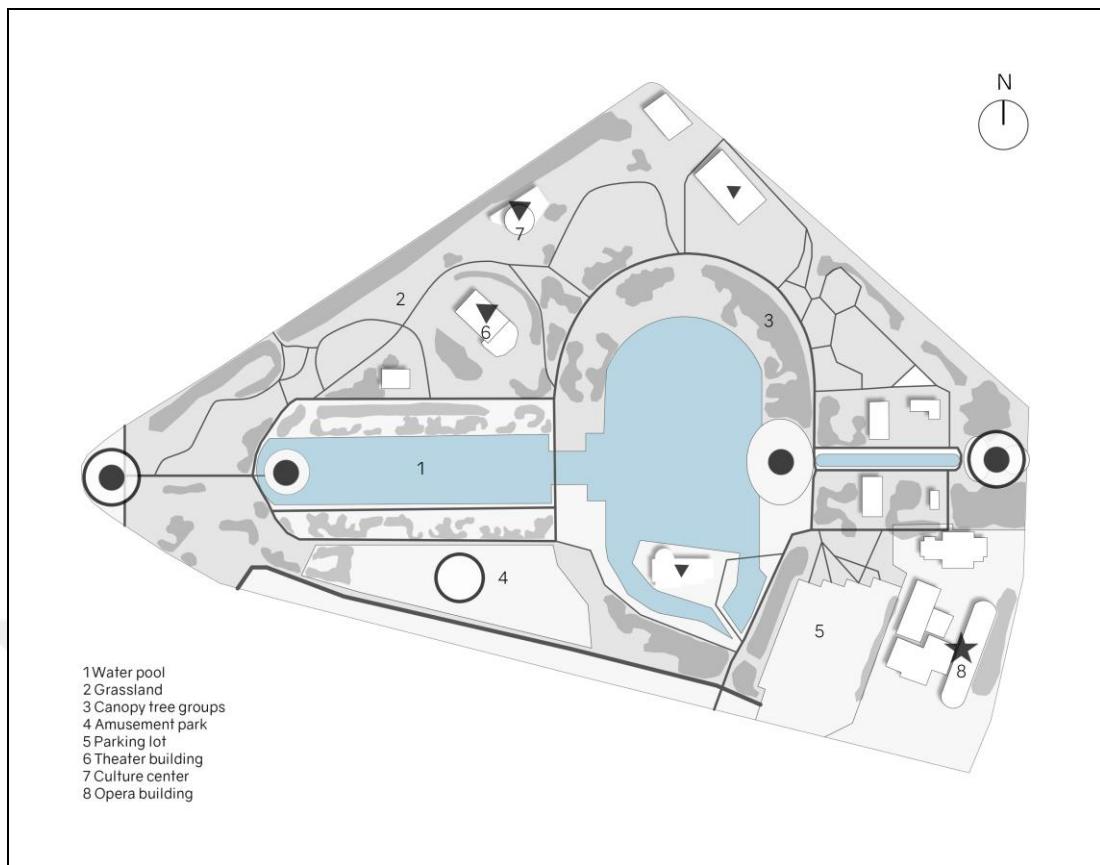
Figure 3.19 : The image of Gençlik Parkı (Karali, 2018).

Gençlik Parkı is a modern era practice of the city park designs transforming marshland into the large scale urban park. Its social meaning demonstrates that the park presents a social experience with the new type of public space and a new public culture. The park is the part and reflection of the social vision on the urban space represent the characteristics of the modern period.

3.3 Postmodern Era Practices

The design philosophies of postmodern era city park designs were formed by the postmodern contextual analysis and deconstructivism and industrial sublime. Transformation of post-industrial areas into culturally programmed city parks and consideration of ecological, social and economic dimensions of design projects can be emphasized as important developments.

As representative exemplars of postmodern era practices, Parc de la Villette and Landschaftspark Duisburg-Nord were described in this section with their design philosophies, approaches and main symbolic elements.

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3.3.1 Parc de la villette

Parc de la Villette is located between two metro stations in the northeast site of the city of central Paris (Figure 3.20). The former use of the site was the slaughterhouse and cattle market which opened to the public in 1867 (Figure 3.21). After the close of slaughterhouse, Parc de la Villette public institution was founded to develop the site in 1979 and the draft plan of the project was created involving a museum of science and technology, an auditorium and an urban park. The park has a size of 55 hectares (Tate, 2015).

**Figure 3.20 :** Parc de la Villette, Paris, France (Google Earth, Landsat/Copernicus).
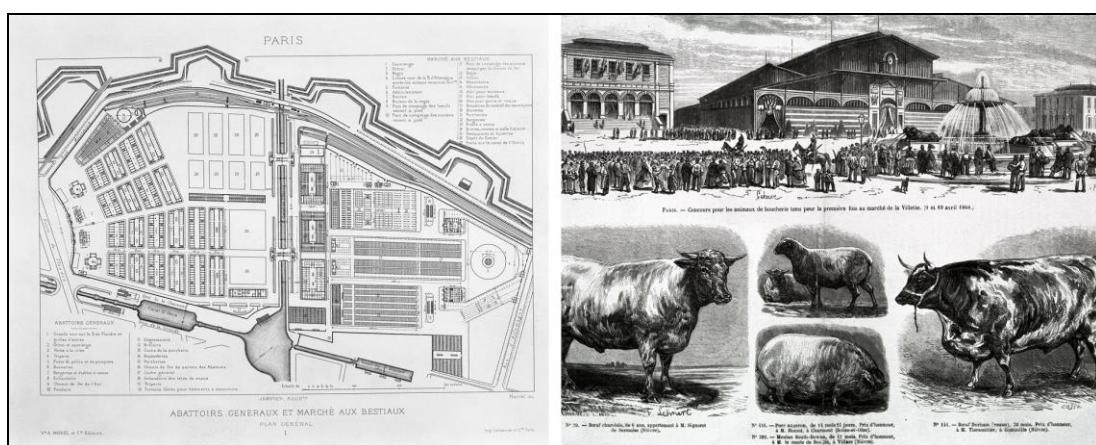
Figure 3.21 : The former use of the site (Url-49).

The competition of Parc de la Villette was constituted by French Government in 1982 to create a vision for a period addressing the urban park for the 21st century. The

significance of the project was to play a critical role on the economic and cultural development in the future of the site (Tschumi, 1987).

The winner of the international competition of Parc da la Villette was architect Bernard Tschumi in 1983 and the design was based on the theory of architecture highlighting 'deconstruction' (Tate, 2015). Proposing a new urban strategy, the layout of the design was developed by the concepts of superimposition, combination and cinematic. In addition, the park was expressed as the largest discontinuous building by Tschumi (Tschumi, 1987).

The purpose of the design was to develop a complex program for cultural and recreational facilities by including open air theatre, art galleries, restaurants and workshops. The concept of the design was formed by three layers that are points, lines and surfaces (Tschumi, 1987) (Figure 3.22).
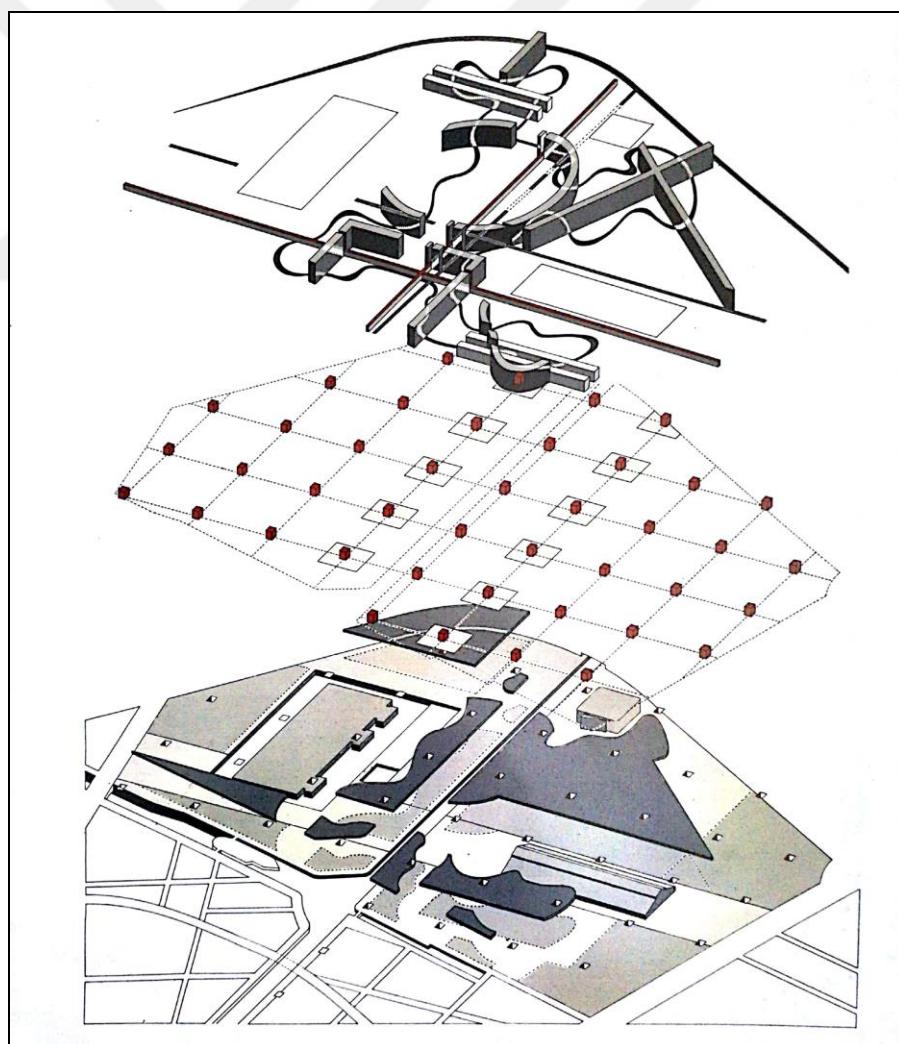

Figure 3.22 : Superimposition of points, lines and surfaces (Hardingham, 2012).

The scheme of the plan was conceived based on the abstract point grid that defines an infinite field of points, decentralized and non-hierarchical space and limitless extension. The park was formed by the superimposition of the points; folies, lines; paths including two coordinate axes, cinematic promenade and alleys of trees, surfaces; grass and pavement. Folies, which are red metal constructions, are the characteristic elements in the park and create distinguished identity. Lines that are formed by cinematic promenade of thematic gardens and the coordinate axes. Surfaces, which are free spaces, are regulated with programmatic needs (Tschumi, 1987) (Figure 3.23)
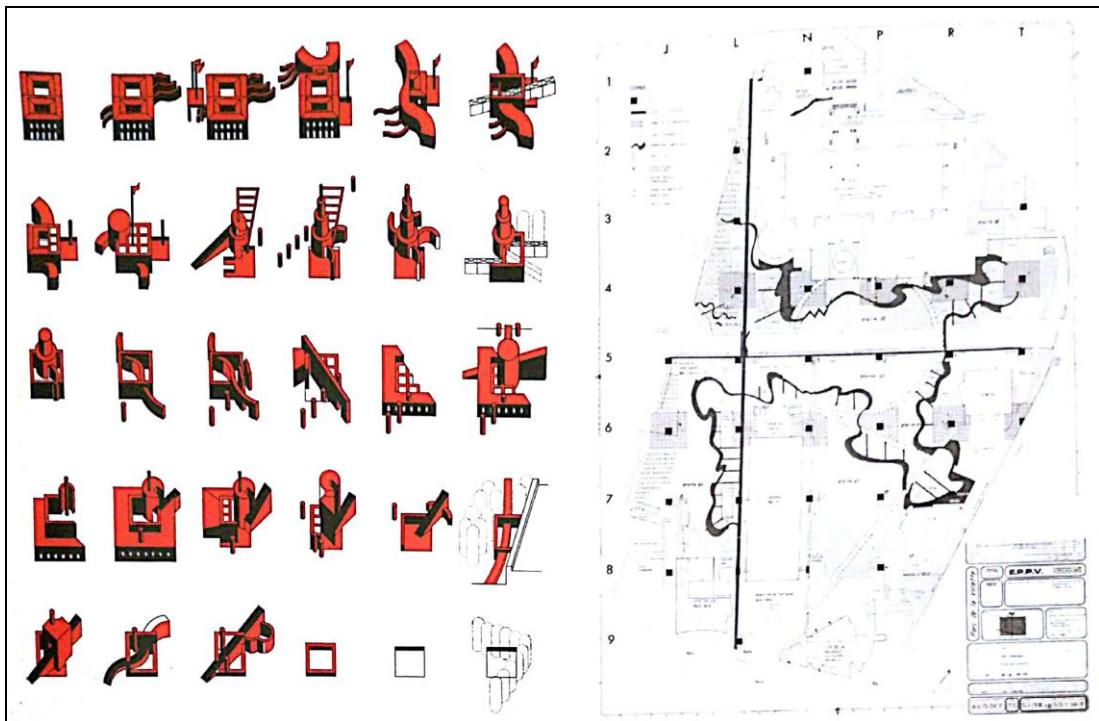
Figure 3.23 : The folies and cinematic promenade (Hardingham, 2012).

The design of folies and cinematic promenade are respectively based on the analogies of madness and film strip. Changing frames of thematic gardens provide a cinematographic presentation to visitors on the pathway throughout the promenade (Tschumi, 1987). Taking all these facts into consideration, it is can be said that the design is the outcome of the film analogies allowing spatial and programmatic transformations according to the needs.

The park was designed as an open air cultural center enables programs such as exhibitions, workshops, concerts, playgrounds, and scientific experiments considering the needs of the city and its limits. Recommending the new programs, the park was

conceived as a new model for the urban park of the 21st century (Tschumi, 1987) (Figure 3.24).
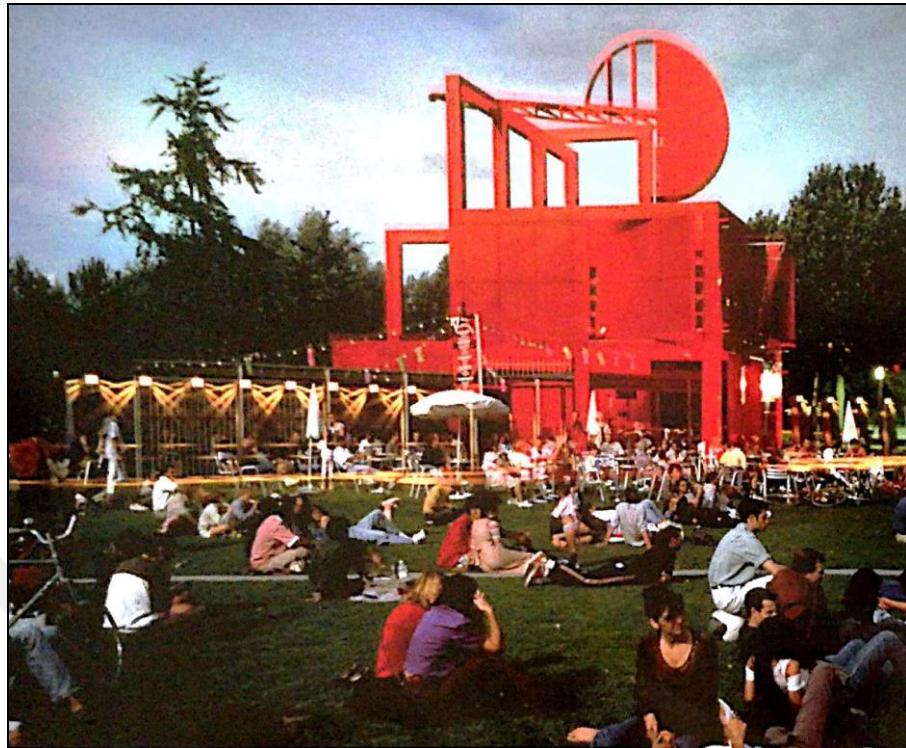
Figure 3.24 : The unprogrammed surface (Hardingham, 2012).

In addition, the design scheme of Parc de la Villette introduced the beginning form of landscape urbanism, which is based on a horizontal field expansion of infrastructure, describing nonhierarchical, flexible, and layered strategies throughout the postmodern notions are open-endedness and indeterminacy (Waldheim, 2016).

As a strong representation of large scale postmodern era park design, the main symbolic elements of Parc de la Villette can be ordered as edges are St. Denis Canal and Ourcq Canal, districts are the water canals, prairies, and thematic gardens, landmarks are Grande Halle, Cité de la musique, Conservatoire de paris, Cité des sciences et de l'industrie, The Géode and the Red folies, nodes are Porte de la Villette and Place de la fontaine aux Lions, Prairie du cercle, Prairie du triangle, paths are the cinematic promenade, two coordinate axes and alleys of trees (Figure 3.25).
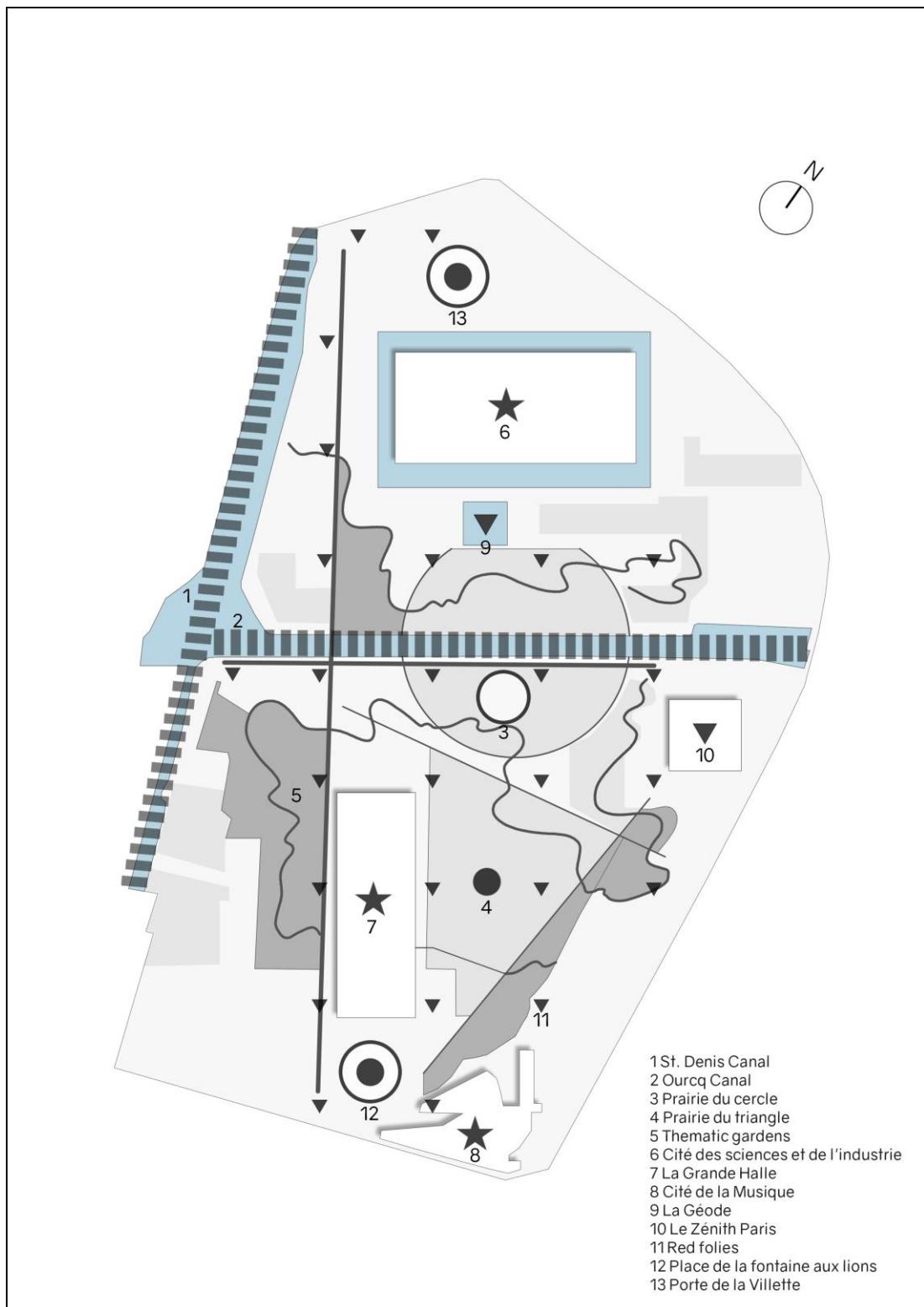
Figure 3.25 : The image of Parc de la Villette (Karali, 2018).

Parc de la Villette is a postmodern era practice of the city park designs transforming the slaughterhouse and meat market into the large scale urban park. Both its deconstructive approach to site design and inspiration of cinematographic analogies represent the characteristics of the postmodern period.

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3.3.2 Landschaftspark Duisburg-nord

Landschaftspark is located in city Duisburg in Ruhr basin and it has a size of 180 hectares (Tate, 2015) (Figure 3.26). The agricultural field of Ruhr district was transformed into industrial plants after industrial revolution. The region had rich coal deposits and became the one of the important industrial zone of the Europe. The population increased in the district through the rapid growth of heavy industry in the mid-19th century (Waugh, 2011). Duisburg is a city next to the River Emscher and it had a site, which witnessed to the significant industrial past, including iron and steel works (Tate, 2015). Due to high oil prices, steel crisis and decrease in coal deposits; steel, coal, and iron production of the industrial facility had ended. After the last cease of production in 1985, the contaminated water used for the sewage collector and earth caused poisonous landscape (Waugh, 2011).

Figure 3.26 : Landschaftspark, Duisburg, Germany (Google Earth, Landsat/Copernicus).

The IBA Emscher Park was founded in 1989 and the program stressed the transformation of the former industrial site based on ecological, social and economic dimensions (Tate, 2015). The objectives of the IBA were to design a greenbelt in Emscher Valley and preserve the existing industrial structure as functionalizing for new cultural uses (Waugh, 2011).

Landschaftspark, which was one of the IBA projects for revitalizing the Emscher Valley, was designed by Peter Latz and Partners in 1990 by winning the first prize in

the international competition and realizing the aims of the IBA that included conservation of industrial monuments, ecological, social and economic transformation, development of new neighborhood (Latz, 2016). The design scheme maintained the history of abandoned industrial area and provide the continuity of the old structures. Reprogram of the existing industrial structures to new uses for social activities were projected owning the industrial past of the site. The design approach of the park was to preserve the former traces considering the history of the site as an image and palimpsest (Berrizbeitia, 2007). Landschaftspark Duisburg-Nord is an industrial landscape monument for the community of the 21st century giving references from real issues in the design (Spens, 2003) (Figure 3.27).
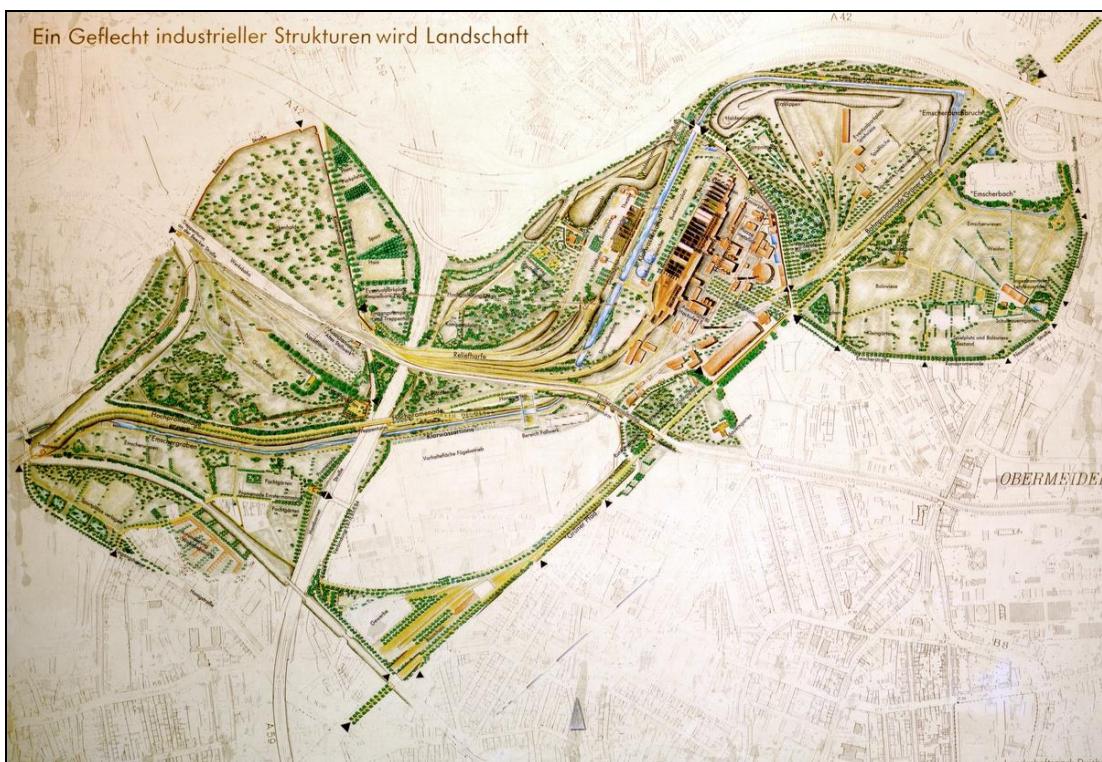
Figure 3.27 : The plan of Landschaftspark (Url-50).

Landschaftspark that is a post-industrial park was emphasized as an industrial sublime and a landmark work. The design consists of four parks that are the railway park, waterpark, blast furnace park and sinter park (Latz, 2016).

The park is a prototype project based on the decomposition and recomposition design philosophy and place-derived pragmatism (Tate, 2015). It is also a brownfield remediation project via bio-phytoremediation techniques and a process based design through successional growth (Latz, 2016) (Figure 3.28).

Figure 3.28 : Landschaftspark Duisburg-Nord (Url-51).

Piazza Metallica locates between furnaces as an artifical landscape formed by metal. The place is a meeting area gathering visitors like a square (Spens, 2003) (Figure 3.29).
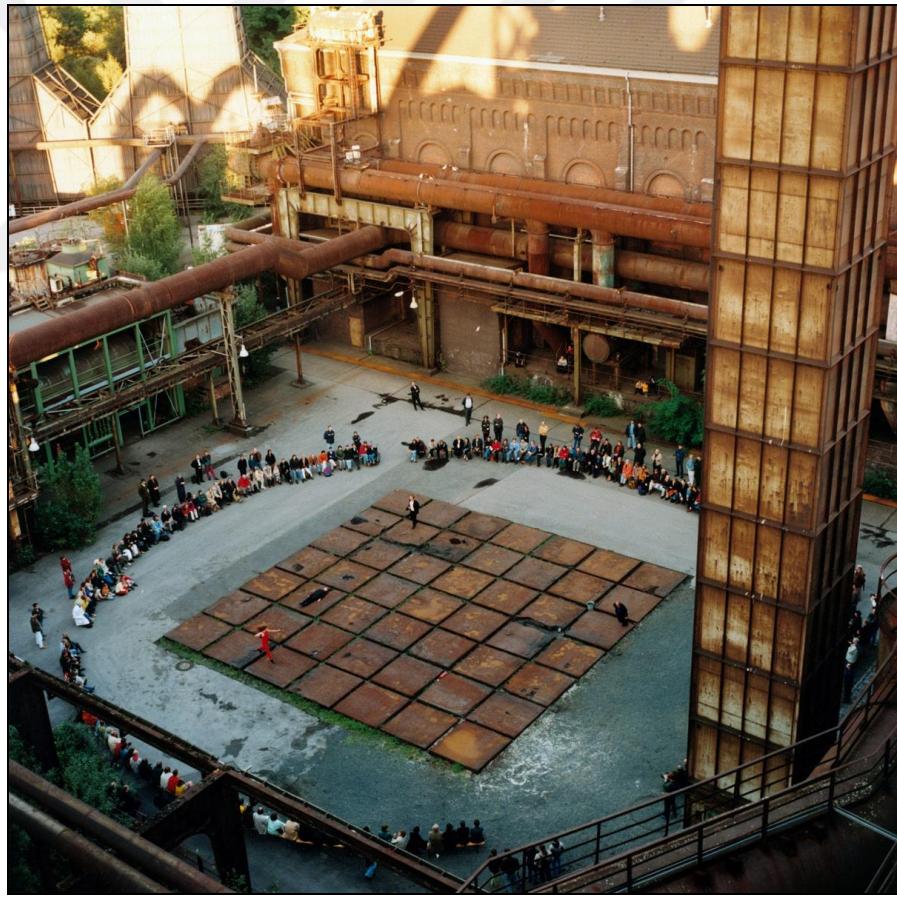
Figure 3.29 : Piazza Metallica (Url-52).

As a strong representation of large scale postmodern era park design, the main symbolic elements of Landschaftspark can be ordered as edges are the railway and highway, districts are the former industrial area, farmland, allotment gardens, and

natural sucession area, landmarks are the ore bunkers, gasometer, blast furnace, power station, nodes are Emscher Stern and Piazza Metallica, paths are the clear water canal, promenades and the former rail lines (Figure 3.30).
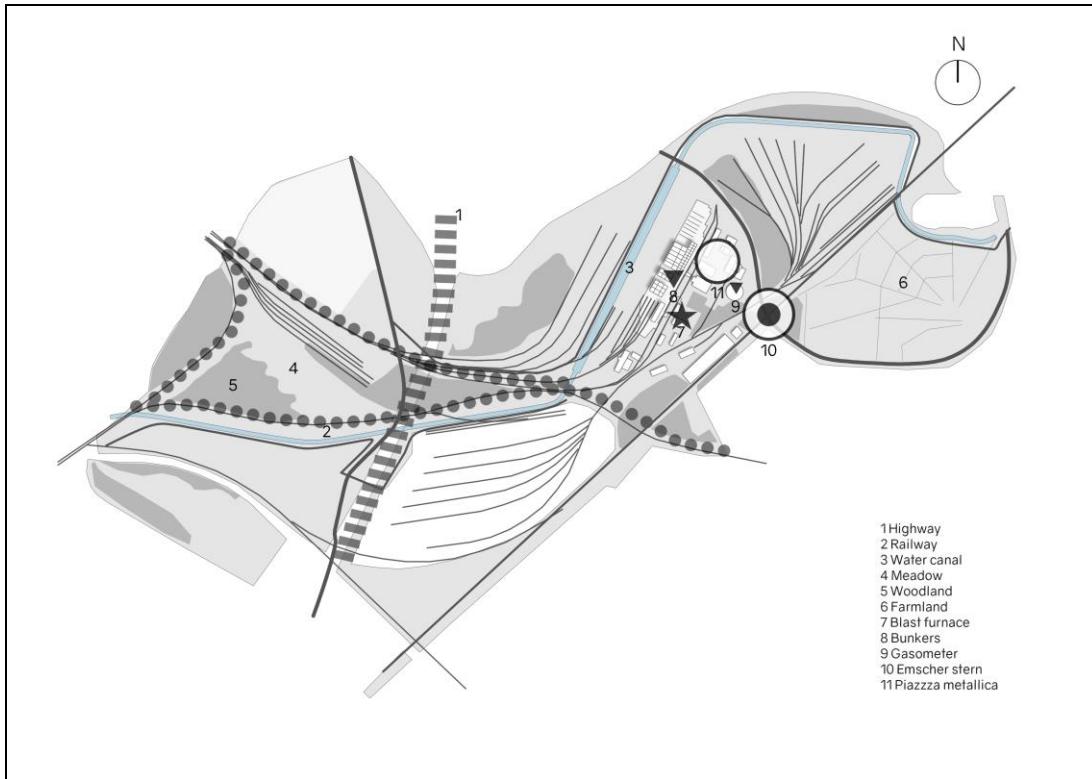
Figure 3.30 : The image of Landshaftspark Duisburg-Nord (Karali, 2018).

Landschaftspark Duisburg-Nord is a postmodern era practice of the city park designs transforming the former industrial site into the large scale urban park. Embracing the industrial heritage, the design of the park aimed that ecological, social and economic transformation of the abandoned district. Including both revitalization of degraded area and adoption the industrial history of the site represent the characteristics of the postmodern period.

3.4 Post-postmodern Era Practices

The design philosophies of post-postmodern era considers the term of sustainability involving urban transformations by large scale urban parks originated by landscape and ecological urbanism. This design philosophy was used in the large scale infrastructure projects, and olympic park designs.

As representative exemplars of post-postmodern era practices, Fresh Kills Park and Queen Elizabeth Olympic Park were described in this section with their design philosophies, approaches and main symbolic elements.

3.4.1 Fresh Kills park

Fresh Kills Park is located in New York and it has a size of 890 hectares (Figure 3.31). The former site was a landfill that was opened in 1947. The City of New York Department of City Planning declared a design competition for landfill area including conceptual design and master plan stages in 2001 (Reeser and Schafer, 2002).
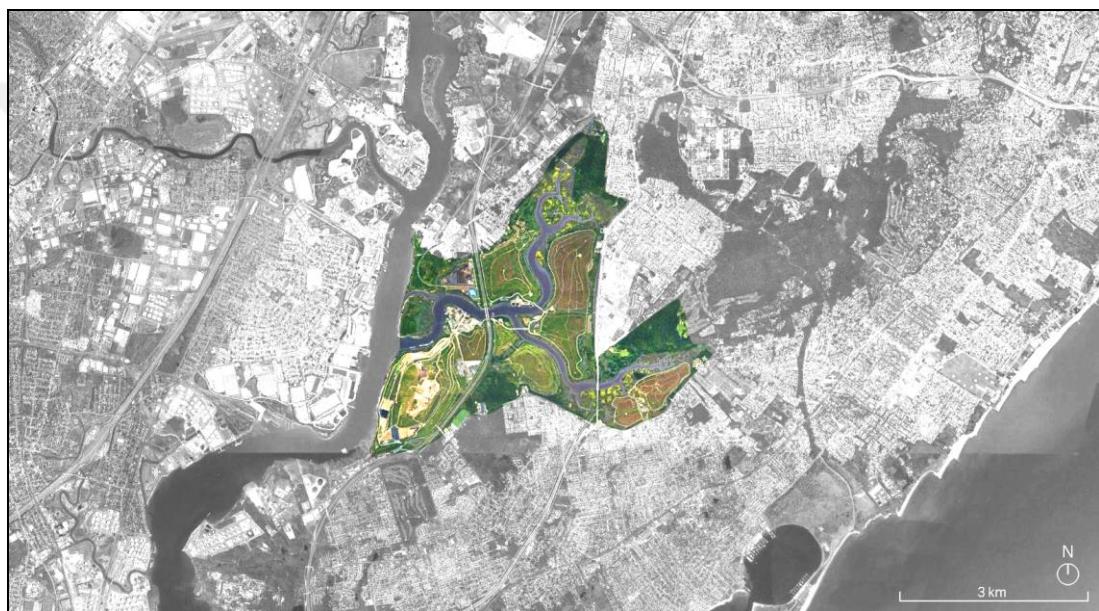
Figure 3.31 : Fresh Kills Park, Staten Island, New York (Google Earth, Landsat/Copernicus).

The winner of the competition was Field Operations with the 'Lifescape' proposal for Fresh Kills landfill. The design was based on a long term strategy involving natural process, reclamation and transformation of the brownfield site with successional growth. The phasing and development scenario of the site was sequenced as seeding, infrastructure, programming and adaptation. The new layers that are programs, pathways and habitats were integrated on the existing systems. The identity of the site was formed by the previous landfill use, the position in the city and wetland ecologies (Pollak, 2007) (Figure 3.32).
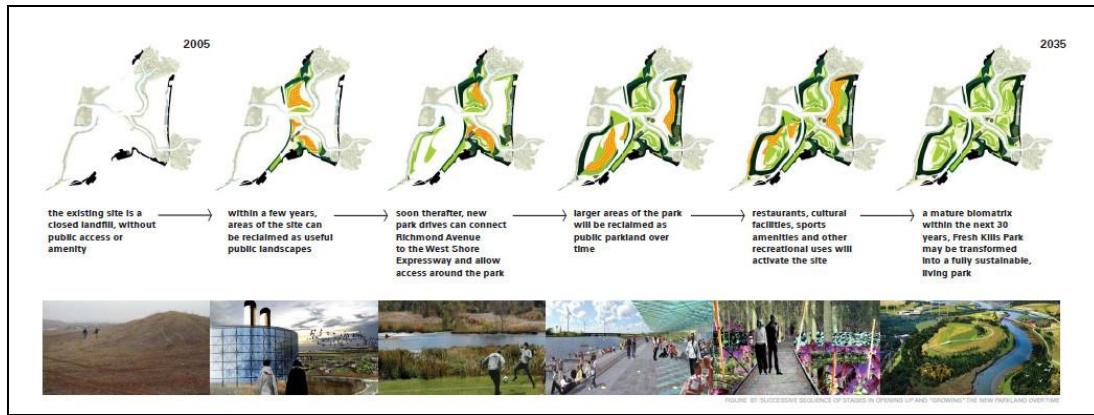
Figure 3.32 : The development of the site (Url-53).

The design strategy is divided into main organizational strategies that are threads, mats and islands. The concept of the design is based on process addressing landscape as a performative reactive and dynamic space (Berrizbeitia, 2007). The expected year of the completion of the parkland is 2035. The design emphasizes the environmental sustainability combining ecological remediation, cultural and educational programming (Figure 3.33).

Figure 3.33 : Fresh Kills Park (Url-54).

Fresh Kills Park comprised five parks that are the Confluence, North Park, South Park, East Park and West Park. The confluence is the center of cultural and waterfront activity and it involves esplanades, restaurants, picnic area and gathering lawn for events, sport fields, promenade, open-air market and educational facilities. North Park

is more natural area including meadows, wetlands and streams and programs are picnicking, fishing, walking and bicycling. South park has large natural areas and provide active recreation. East Park was designed as nature education area with wetlands, exhibitions, art installations. West Park has the largest hill and this place will be designed as monument area (Figure 3.34).

Figure 3.34 : The plan of Fresh Kills Park (Url-55).

As a strong representation of large scale post-postmodern era park design, the main symbolic elements of Fresh Kills Park can be ordered as edges are the waterways and expressway, districts are the marshland, wetland, meadow, grassland and woodland, landmarks are the mounds, nodes are the esplanade, visitor center, large event lawn for gathering in the Confluence area, paths are the pathways, cycle ways, vehicle way, canoe access and promenades (Figure 3.35).

Figure 3.35 : The image of Fresh Kills Park (Karali, 2018).

Fresh Kills Park is a post-postmodern era practice of city park designs transforming the landfill into the large scale urban park. The park design that supports the social, physical and cultural activities with its programming and stress the environmental sustainability represent the characteristics of the post-postmodern period.

3.4.2 Queen Elizabeth Olympic park

Queen Elizabeth Olympic Park is located in the East London and it has a size of 102 hectares (Tate, 2015) (Figure 3.36). The site involves the River Lea, which was the part of post-industrial navigation, was an industrial waterway and bombed during the WWII (Hargreaves, 2009).
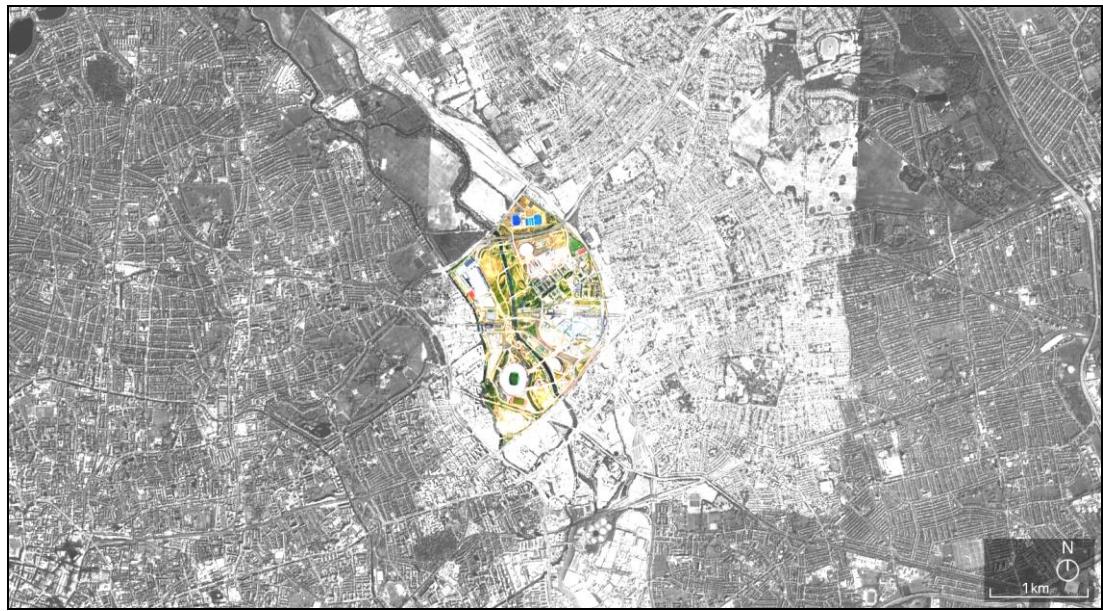
Figure 3.36 : Queen Elizabeth Olympic Park, London, UK (Google Earth, Landsat/Copernicus).

Olympic Park that located on the former industrial area and a marshland, emphasized as the largest new park in Europe (Tate, 2015). The park was designed for the Olympic Games and development of the East London (Hargreaves, 2009). The Olympics was evaluated as an opportunity to provide ecological, social and economic transformation in the district. Meanwhile, it contributed to the development of new mixed neighborhood and local economy (Corner, 2013).

The Olympic Park was designed by Hargreaves Associates working with LDA Design in 2008 Hargreaves, 2013). It is handled as the 21st century representation of the classical English park combined the traditional landscape elements such as lawns, promenades and gardens with contemporary green technologies (Hargreaves, 2009). The design philosophy of the park was emphasized as post-industrial picturesque both presenting the traditional horticulture in English parks comprised collected plant from all around the world and taking place on the post-industrial landscape (Hargreaves, 2013).

The park consists of two major parts that are North and South parks. The South section involves Olympic stadium, aquatics center, gardens formed by plant species of four climatic zones in order to reflect the cultural diversity parallel with the atmosphere of the Olympics (Hargreaves, 2009). The North section includes wetlands, rain gardens and meadows by considering habitat and ecology (Hargreaves, 2013). The northern

park was addressed as an environmental park and the southern park was mentioned as a festival park (Figure 3.37).

Figure 3.37 : Queen Elizabeth Olympic Park (Url-56).

The design strategy was formed by the environmental remediation including baking process and soil washing. The canal walls were removed and river banks were constructed for flood control (Hargreaves, 2009). The transformation of the post-games environment has also importance and the process was designed as many usages will be opened to the public and display gardens will be maintained for the regional visitors. The temporary infrastructure is turned into new uses, so transformed park is connected to surrounding neighborhoods (Hargreaves, 2009). The sustainability is the main issue in the park design. The layered design strategy was used in the park design formed by law and terraces; open lawn and seating terraces, plantings; wet woodland, grassland, wetland, water edge plantings, riparian trees, path trees, existing trees, water systems; drainage, bio-swales, wetlands, River Lea, and landforms (Figure 3.38).

NORTH PARK - Layered Park Components

Lawn and Terraces
- Open Lawn
- Seating Terraces

Plantings
- Wet Woodland With Alder And Willow Carr
- Woodland Hill
- Feature Plantings
- Species Rich Grasslands
- Swale Slope Plantings
- Wetlands
- Water Edge Plantings
- Riparian Trees
- Path Trees
- Tree Connectors
- Existing Trees

Water Systems
- Drainage
- Bio-Swales
- Wetlands
- River Lea

Landforms

Figure 3.38 : Layered design (Hargreaves, 2009).

As a sustainable and cultural representation of large scale post-postmodern era park design, the main symbolic elements of Queen Elizabeth Olympic Park can be ordered as edges are River Lea, highway and railway, districts are wetlands, meadows, gardens, woodland and water course, landmarks are London Stadium and ArcelorMittal Orbit, nodes are Olympic Stadium surroundings in the South park , paths are loop road, pathways and promenade (Figure 3.39).
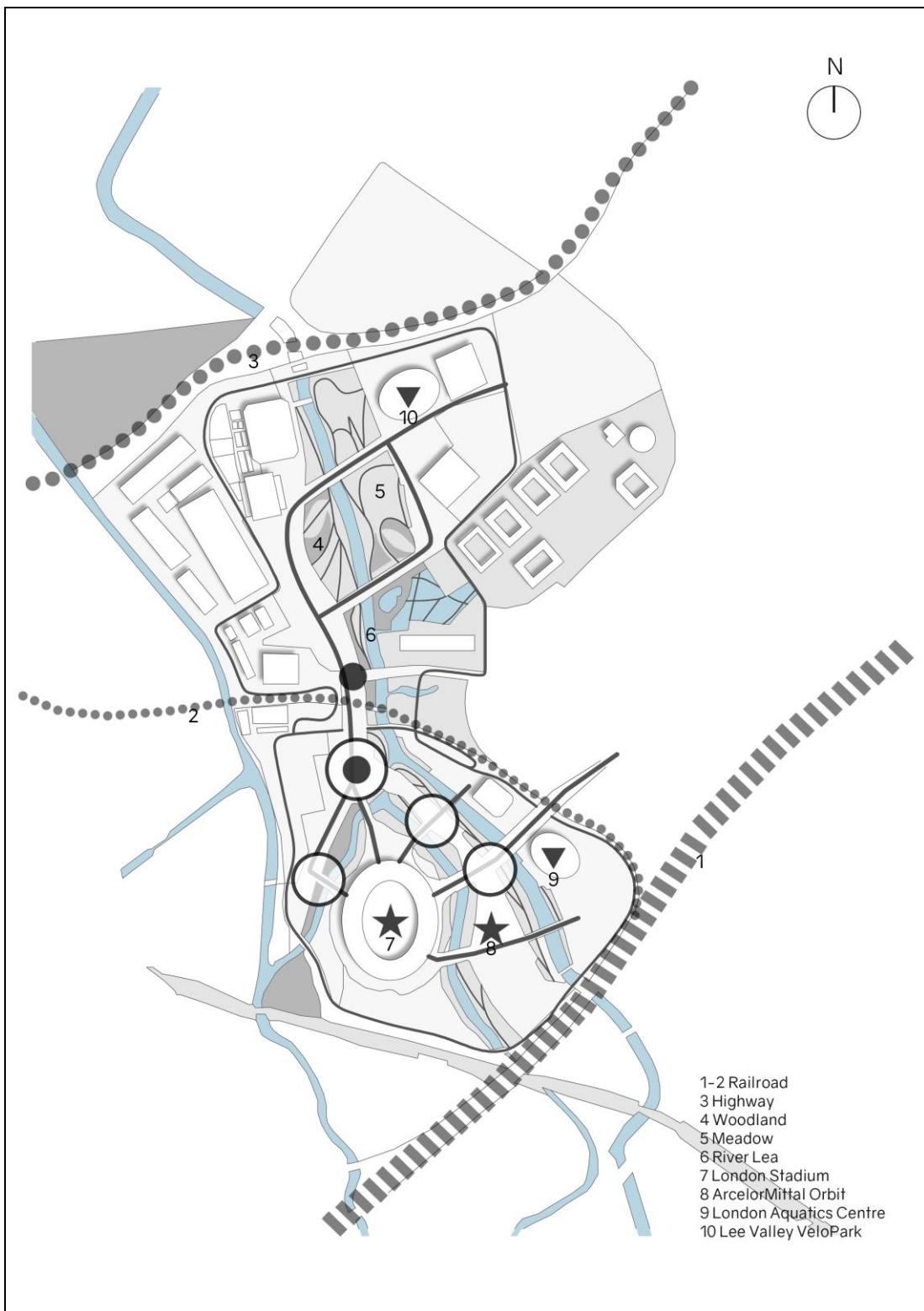
Figure 3.39 : The image of Queen Elizabeth Olympic Park (Karali, 2018).

Queen Elizabeth Olympic Park is a pos-postmodern era practice of city park designs transforming marshland and former industrial site into the large scale urban park. The Olympics was used for urban regeneration and revitalization of the East End. Considering environmental, social and economic sustainability, the purpose of the

design to create a new type of park for the 21st century including both brownfield restoration and continuity of cultural heritage in park design represent the characteristics of the post-postmodern period.
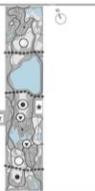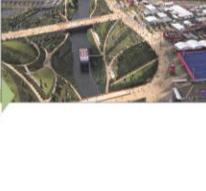
3.5 Chapter Summary

As the outcome of this chapter, the matrix table was formed by the analysis of design philosophies, approaches and principles of the selected eight city park designs.

The matrix introduces the profile information of the park designs, the characteristics of each era, design philosophies, approaches and the concepts of the park designs, the main symbolic elements, architectural and landscape elements in relation demonstrating the evolution from abstract concepts (left) to design concepts (right). Moreover, the vertical column of each section shows the similar concepts. Therefore, the matrix table provides reading by correlating with both horizontal and vertical plane (Table 3.1).

Table 3.1 : The matrix (Karali, 2018).

PROJECT FACTS	CHARACTERISTICS OF THE ERA	DESIGN PHILOSOPHY	DESIGN APPROACHES & CONCEPTS	THE MAIN SYMBOLIC ELEMENTS					ARCHITECTURAL & LANDSCAPE ELEMENTS		THE IMAGE OF THE CITY PARK DESIGN	REPRESENTATION
				EDGES	DISTRICTS	LANDMARKS	NODES	PATHS				
CENTRAL PARK Location: New York, USA Land Size: 341 hectares Design Team: Frederick Law Olmsted, Charles Vaux Designed year: 1857-1858 Construction completed year: 1873	ROMANTIC ERA — individual subjective irrational imaginative emotional visionary beauties of nature	Pastoral and picturesque landscapes Landscape park	Transformation of the swamp into the urban reservoir and urban park Urban recreation Unprogrammed landscape Inward-looking landscape	Transverse roads The Onassis reservoir	Water bodies Meadows Woodlands Rockier and higher ground	The Metropolitan Museum of Art Belvedere Castle	The Great Lawn Sheep Meadow North Meadow Bethesda Terrace	Vehicular ways Pedestrian paths	Bow Bridge, Gothic Bridge, Delacorte Clock, South Gate House, The Loeb Boathouse, Swedish Cottage Marionette Theatre, etc.	The Lake, Turtle pond, Onassis reservoir, Conservatory garden, Butterfly garden, Alice in Wonderland statue, Balto Statue, Bethesda Fountain, Cherry Hill fountain Delacorte theater, etc.		
PARC DES BUTTES CHAUMONT Location: Paris, France Land Size: 24.7 hectares Design Team: Jean-Charles Adolphe Alphand, Jean-Pierre Barillet-Deschamps, Gabrielle Davioud, Edouard André Designed year: 1863 Construction completed year: 1869		Sublime and picturesque landscapes	Transformation of the former industrial site (gypsum quarry) into the urban park Superimposition of points, lines and surfaces Metaphors	The railroad	The lake Meadows Woodlands	The Temple of Sibyl	The Belvedere	Vehicular ways Pedestrian paths	Follies of gatehouses, cafes, overlook pavilions, Bridges	The Grotto, the rocky cliff, water, larged leafed trees, exotic plants, background plants		
AMSTERDAM BOS PARK Location: Amsterdam, Netherlands Land Size: 1000 hectares Design Team: Cornelis van Eesteren, Jacoba Mulder Designed year: 1928 Construction completed year: 1934	MODERN ERA — determinism utopian and idealist new form of expression avant-garde movements functionality technology, totalization no historical reference	De Stijl movement spatial organization	Transformation of the marshland into the urban park Productivism Process based design Successional growth Program and techniques Functionality	Canals Highway	Water bodies Forest Lawns	Artificial hill	Tennis, hockey, riding school Open air theatre Camping area Children play areas	Pathways Canals	Tennis, hockey, riding schools	Nieuwe Meer Bosbaan De Poel Woodland Meadows		
GENÇLİK PARKI Location: Ankara, Turkey Land Size: 28 hectares Design Team: Hermann Jansen Designed year: 1936 Construction completed year: 1943		Modern ideology, new public culture	Transformation of the swamp area into the urban park New type of public space for new modern capital Design considering local conditions Beautiful and healthy recreation	Water pool	Water pond Canopy tree groups Flower gardens	Theater building Opera building Culture center	The station entrance The opera entrance	Promenades Alleys of trees	Pavilions, Conservatory, Theatre and opera buildings, Cafes	Water pool, Canopy trees, Alleys trees, Cascades, Pergolas		
PARC DE LA VILLETTE Location: Paris, France Land Size: 55 hectares Design Team: Bernard Tschumi Designed year: 1982-1983 Construction completed year: 1995	POSTMODERN ERA — contextual analysis pluralism relativism scepticism deconstruction traditional materials and forms real world and populist historical reference recycling reuse	Postmodern contextual analysis, deconstruction	Transformation of the slaughter house and meat market into the urban park Superimposition of points, lines and surfaces Layered design Program, event, activity Cinematographic analogy	St. Denis Canal Ourcq Canal	Thematic gardens Prairies Water canals	Grande Halle Cité de la musique Conservatoire de paris Cité des sciences et de l'industrie The Géode Red folies	Porte de la Villette Place de la fontaine aux lions Prairie du cercle Prairie du triangle	Cinematic promenade Alleys of trees Two coordinate axes	Grande Halle Cité de la musique Conservatoire de paris Cité des sciences et de l'industrie The Géode Red folies	Prairies Allée trees Gardens Water		
LANDSCHAFTSPARK DUISBURG-NORD Location: Duisburg, Germany Land Size: 180 hectares Design Team: Latz + Partner Designed year: 1990 Construction completed year: 2002		Industrial sublime Social, ecological, economic revitalization Decomposition Place-derived pragmatism	Transformation of the former industrial site (coal mining, iron and steel works) into the urban park Preservation of industrial heritage Multi-layered Process based design Successional growth Bio-phytoremediation	Railway Highway	Former industrial area Farmland Allotment gardens Natural succession area	Ore Bunkers Gasometer Blast furnace Power station	Piazza Metallica Emscher Stern	Clear water canal Promenades Former rail lines	Former industrial structures	Water canal, Native and Non-native planting, Groves, Trees for promenades and plazas		
FRESH KILLS PARK Location: New York, USA Land Size: 890 hectares Design Team: James Corner Field Operations Designed year: 2005 Construction completed year: 2035 (expected)	POST-POSTMODERN ERA — faith trust dialogue performance sincerity sentiment restoring values and beliefs mediation between culture and nature sustainability	Landscape urbanism Ecological, cultural and educational programming	Transformation of the former landfill area into the urban park Process based design Successional growth Landfill reclamation Sustainability	Waterways Expressway	Marshland Wetland Meadow Grassland Woodland	The mounds	Esplanade Visitor center Large event lawn Event spaces Artwork and educational programming	Pathway Cycle way Vehicle way Canoe access Promenade	Bird watching Shade for a hilltop picnic area Eco-education center Restaurants	Grass Prairies Shrubs Forest Fishing piers Outdoor sculptures		
QUEEN ELIZABETH OLYMPIC PARK Location: London, UK Land Size: 102 hectares Design Team: Hargreaves Associates Designed year: 2008 Construction completed year: 2011		Landscape urbanism Post-industrial picturesque Ecological, social and economic transformation	Transformation of the mashland and the former industrial area into the urban park Regeneration and revitalization of East End Brownfield restoration Sustainable design Layered design	River Lea Highway Railway	Wetland Meadows Woodland Water course	London Stadium ArcelorMittal Orbit	The South Park Olympic Stadium surrounding	Loop road Pathways Promenade	Olympic Stadium London Aquatics Centre Lee Valley VeloPark	Lawns Wet woodland Grassland Water edge planting Riparian trees Path trees Existing trees		

From abstract concepts   *To design concepts*

4. CONCLUSIONS AND RECOMMENDATIONS

Social-cultural and scientific developments and their influences on art, architecture, and design disciplines have an importance in terms of understanding of the process for fictionalizing and designing the future city parks. The main construct of the study is to analyze the city park designs in the intersection of art and science and decipher characteristics and identity components of the eras considering strong representative exemplars. In order to achieve this aim, firstly, the research is based on the theoretical framework considering periodic features and design disciplines. The changes and developments in design approaches within the disciplines of art, architecture, urban planning and landscape architecture are important in the context of determining the philosophies and characteristics of the periods. The starting point of the study is the Industrial Revolution, and the structure of the study was constructed on four main eras, which are romantic, modern, postmodern and post-postmodern, after this technological development. At the same time, starting from Industrial Revolution, scientific discoveries and technological innovations comprised development of modern biology and ecology, the invention of the first electronic computer and the internet. In this context, the process from landscape gardens to landscape parks in romantic era and contemporary park designs were handled with other disciplines. Eight city park designs, which are the strong representative exemplars of twenty-four park designs that were designed and implemented after Industrial Revolution were analyzed in the second phase. The research that provides the formation of the matrix table is descriptive and enables the comparative analysis.

Five of the eight urban park designs, which were analyzed to determine design approaches and principles, are the transformation of post-industrial sites and the other three are the conversion of marshlands. Rapid migration to the industrial cities after the Industrial Revolution has been an important issue in the cities with increasing population and deterioration of living areas, spread of diseases and poverty. Urban parks have been used as an important tool to ameliorate changing and deteriorating

environmental conditions and to improve the quality of life in the city and to create a healthy environment for democratic use of all urban dwellers, including the working class. The story of urban parks based on the social and environmental improvements also has an economic dimension.

Five of the eight urban park designs researched are the winners of international design competitions. Moreover, when the results of the competition are considered, it appears that there is a significant contribution to the development of new design philosophies and expansion of the boundaries of the theoretical framework.

In the romantic period, creating the healthy environment against the deteriorating environmental conditions was the basic aim of the designs. During this period, Olmsted transformed a marshland into a large urban park in Manhattan, and designed a city park comprised pastoral and picturesque elements to form a rural scenery for the visitors integrating nature into the urban grid. Using existing topographic curves on the land in Paris, Alphand proposed new contour lines for the design, making it easier to do calculations on the land and formed the basis of the shaping landform in the present. Furthermore, the abandoned gypsum quarry has been transformed into a large-scale city park in order to create a healthy and democratic public space. In Amsterdam, the area below sea level consists of marshland and agricultural fields was transformed into a large scale urban forest, which is considered to be important example of the modern era practice, with landscape techniques and drainage systems being a process based design depending on the successional development. The design of the park in Ankara, which has a vision of a cultural context for the modern capital city, is an important part of the urban green system that Jansen developed for Ankara. The park, which was designed considering the topographical, morphological and climatic conditions of the area, is an important cultural heritage of the city. The transformation of Villette, which was the former industrial and slaughterhouse area in Paris, as a new urban park model for the 21st century and the use of the main elements of the postmodern philosophy in the design demonstrated the new role of landscape in postmodern urban planning and represented the primitive example of landscape urbanism. The park, located in the Emscher valley of the Ruhr region that was the former heavy industrial area, was designed on ecological, social and economic transformation of the area. Instead of removing industrial structures from the design, Latz embraced industrial heritage and transformed them into the new uses and

functions, and integrated the design. Corner, who designed landfill area and transformed it into a large scale city park, developed new visions on design strategy integrating programming, wildlife and circulation systems to the park design and proposed a progress based on the successional growth scenario. In London, the former industrial and swampy area was converted into a new type of urban park, which was designed for 2012 Olympic Games, to transform and revitalize the district. The design will also support the development of new mixed-use neighborhoods and contribute to the local economy.

All these designs based on the urban transformation have the common point of the purpose to improve the site and integrate in urban use, although they have varying design philosophies, approaches and strategies. Considering the inferences formed by the matrix table, it is seen that there is a connection between design philosophies, approaches, strategies and concepts of all these park designs and some similarities have emerged.

When the matrix table is evaluated in the vertical plane it is clearly seen that the common approach of the whole urban park designs, which are analyzed in the study, is the transformation of post-industrial sites or marshlands, although there are variations depending on the developments throughout the process. While Central Park and Parc de la Villette have a common point for creating user-focused flexible spaces with unprogrammed surfaces, Central Park was designed as an escape area from the city gathering nature and people; however, Parc de la Villette was designed as the park should be connected with urban life and mass culture, it cannot be separated from the city. Parc des Buttes Chaumont and Parc de la Villette can be said to have a common aspect in the context of design strategy, which is based on the superimposition of points, lines and surfaces in the planning of the parks, although they have different design philosophies. The application of the process based design strategy with successional growth scenario in Amsterdam Bos Park that is the exemplar of modern era demonstrates that the same strategy was used in Landscahaftspark and Fresh Kills Park designs, which are the exemplars of postmodern and post-postmodern periods. It is also seen in the modern period that the conversion of the land depending on the landscape techniques and the design of the landscapes as programs are represented in the following exemplars. Furthermore, multi-layered design strategies used in the postmodern period continued in the post-postmodern period. Parc de la Villette can be

evaluated as the primitive exemplar of the landscape urbanism because it has a flexible approach that enables the expansion in the horizontal plane. The design philosophy of Landschaftspark is based on the industrial sublime can be considered as the industrial heritage-focused reinterpretation of the concept of sublime based on the nature in romantic period. Moreover, in the design of the Queen Elizabeth Olympic Park, which is a representation of post-postmodern era, is an interpretation of the design philosophies of romantic era practices, inspired by the traditional English gardens of the northern area of the park with post-industrial picturesque philosophy.

The city park designs that have evolved from past to present in the process was an exemplar and a basis for the next design projects as approach and principle. Developments in the arts and sciences have been influential on the urban park designs, and design approaches and strategies have evolved with new discoveries and trends in the historical process.

These high-representative urban park designs are iconic representations of each era and they are an important base for today's park designs. As a result of the thesis study, it has been verified that these representative exemplars will play a critical role in shaping future urban park designs. Analyzing the applied projects is important in order to understand the urban park designs that have evolved in the intersection of art and science throughout the historical process, form a basis for developing new visions with changing needs of the era and progressive science and technology. The research has demonstrated that each park design represents its own periodic characteristics and approaches, as well as forms the basis of the next design projects. It is anticipated that complex park designs will emerge by adding innovations to the design approaches and strategies of these representative exemplars. Especially technological developments will contribute to the theoretical framework of these urban park designs and will expand the solutions for the environmental problems. The representative exemplars of the urban park designs that have evolved from the past to the present will play a role in shaping the future visions of the city park designs.

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- 2015 The second in bachelor degree of landscape architecture department, 3.47/4.00.
- 2015 Department of Landscape Architecture Students Graduation Project Awards, UCTEA Chamber of Landscape Architects, Graduation Project: Yassıada, Hybrid Island | Isolated System.
- 2016 Sivas Kızılırmak ve Çevresi Fikir Projesi Yarışması, Kent Kuşağı: Kızılırmak, Honorable Mention, Assistant.

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- **Karali, M.** 2013. From Ruins to Productive Public Spaces, Design for Change/ITU: Urban Agriculture Istanbul, is published in Lille/Design for Change, Design Competition, Students' Projects, Edition 2012-2013, Lille, France.
- **Karali, M.** 2018. Hybrid Island-Study of Yassıada, Student Project is published on WLA Magazine, February 20, 2018, <http://worldlandscapearchitect.com/student-project-hybrid-island-study-of-yassiada-melike-karali/#.WpagtKjFJPY>