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UMI
TURN OF THE CENTURY METROPOLITAN PARK SYSTEMS

by

Roberta Lee Lyon

A Thesis Submitted to the Faculty of the
THE SCHOOL OF RENEWABLE NATURAL RESOURCES
In Partial Fulfillment of the Requirements
For the Degree of
MASTER OF LANDSCAPE ARCHITECTURE

In the Graduate College
THE UNIVERSITY OF ARIZONA

1988
STATEMENT BY AUTHOR

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This thesis is dedicated to research librarians all over the United States for their knowledge, courtesy and unfailing helpfulness.
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ABSTRACT

More than twenty metropolitan park systems in the United States were designed and constructed during a period of intense urbanization in the late nineteenth and early twentieth centuries. Similar conditions of rapid growth and expansion in "Sunbelt" cities today, and continued recognition of the need for urban parks, makes understanding of factors significant to the longevity of the historic systems useful.

Park systems of Washington, DC, Cleveland, Ohio, Kansas City, Missouri and Minneapolis, Minnesota are compared in the literature and by direct observation. Settings, goals, forms, siting, and activities of these systems are examined. Impacts of suburbanization, changes in transportation, increased leisure and development of planning bureaucracies are discussed and compared.

Findings suggest: graphic plans exhibiting broad, bold images were most likely to be implemented; intent of the design is preserved by careful definition of goals and objectives; and systems organized on the basis of natural topography and drainageways have better maintained their usefulness and identity.
CHAPTER 1

INTRODUCTION

More than twenty park systems in major metropolitan areas in the United States were originally designed 80 to 130 years ago (1860-1910). Cranz (1982) suggests, that the "...need for an experience of nature within the city (is) as real now as when the (turn of the century) parks were created". An understanding of how these older park systems have endured over time can contribute to the design of future park systems in the growing cities of today.

This is especially true when it is recognized that, in addition to an experience of nature, a total park system can define

...the very form and nature of the city. Each city is a place of its own, its uniqueness determined in large measure by patterns created by the alternating of structure and void...the larger green spaces, parks and parkways, riverbanks and waterfronts, give to a city the coherence that allows the urban dweller to have a feeling for the whole (Hecksher 1977).

Over time, cultural and physical forces have acted upon and affected all of these early park systems. This study begins with the assumptions that those impacts have been manifested differently in different systems, and that some of the factors that caused those differences can be identified.

The study is presented in four chapters. This first chapter covers the objectives and rationale for the study, a discussion of issues surrounding the development of park systems and a definition of terms. Methodologies used in the study are explained in the second
chapter, and the third chapter presents the findings. The findings are evaluated in the final chapter, conclusions drawn and suggestions for further research discussed.

**Research Objectives**

The goal of this study is to discover what factors might be inherent in these historic park systems that will enable us to create new systems that are strong enough to maintain their form but flexible enough to adapt to the changing needs of the people they serve. Within this goal, the following objectives have been determined:

1) To identify and describe cultural and physical forces which have influenced the development of nineteenth century park systems.

2) To examine several historic park systems for the physical factors and cultural surroundings that existed when they were originally designed.

3) To compare the form and uses of each park system today with its original design, and with one another, assessing which factors were of particular significance in shaping the existing systems.

**Definition of Terms**

Much of the vocabulary used with regard to park systems is not precise and has grown less so over the years. The following terms are defined in both the historical and contemporary sense.
Park

Originally the word "park" referred to a privately—usually royally—owned hunting preserve. That definition has expanded over several hundred years to include many variations of public, private and semi-private open spaces in the urban or suburban context. "The park has come to mean everything from playground to golf course, botanical gardens to downtown squares with no common purpose or definition...." (Cranz 1982).

Frederick Law Olmsted defined a park as "a space of ground used for public or private recreation, differing from a garden in spaciousness and the broad, simple and natural character of its scenery, and from a wood in the more scattered arrangement of its trees and greater expanse of its glades...." (Robbins 1897). It is a testament to the strength and clarity of definition of the pioneer park planners who brought that idealized natural landscape into the city that "as a symbol park has retained the image of grass, trees and tranquility" (Cranz 1982).

French (1973) offers a definition which could ideally encompass all the forms taken by the historic parks in this study. "The most essential characteristic of the city park should be self involvement...it is serving us best when it offers the framework for enactment of our own productions — be they creative, contemplative, athletic or merely restful".
A park "system" has also come to mean several things which differ from each other as well as from their historic definition. Under current usage, public parks, parkways, squares and plazas of all types and sizes which are administered by a single political entity are considered a system. System can also refer to the mathematical formulas used by planners and administrators to determine the size, distribution and function of park properties within a given political boundary. In both cases the relationship between all parts of the park system is an abstract one.

However, this study assumes that a park system must include definite physical connections between and among park elements of varying sizes and functions. It is a definition and approach more in keeping with that under which the turn of the century park systems were developed. Olmsted (1870) described his concept as "...numerous small grounds so distributed through a large town that some one of them could be easily reached by a short walk from every house...." He felt this was preferable to a single large park, "especially would this be the case if the numerous local grounds were connected and supplemented by a series of trunk roads or boulevards..."

Chadwick (1966) gives Olmsted and other park designers of the era full credit for the system approach.
It is perhaps this concept of the park system, as opposed to the limited amelioration of urban congestion by the creation of public parks with definite boundaries, unrelated to each other, as generally holding in England at that time, which is the major American contribution to the nineteenth century parks movement and to the planning of towns.

Parkway and Boulevard

Turn of the century designers used the words "parkway" and "boulevard" to distinguish roads that were considered part of the park system. Their objective was to connect elements of the park system and to provide a pleasurable driving experience. The terms were used interchangeably, although boulevard tended to have a more urban, rectilinear character in practice. Webster's definition today still makes little distinction between the two: they are both roadways or streets bordered or ornamented with "...plantings of trees, bushes and grass".

Metropolitan

A "metropolitan" park system can be broadly defined as one of a scale designed to be attractive to users from all parts of a major city and its immediate surroundings. The specific definition, however, will vary according to the period and can always be assumed to be the contemporary one. For instance, if any "urban" population was discussed for the period around 1860, the definition included all residents of a city of greater than 8,000. Since the Census Bureau created the Standard Metropolitan Statistical Area (SMSA) in 1950, the definition has included the population of a central city, the county of which it is
a part, and sometimes additional counties. Therefore, discussion of an "urban" population in 1960, one hundred years later, was based on the residents of any central city with a population over 100,000 and its associated counties (Glaab and Brown 1961).

Background

Centrally located public open space has been a part of cities and towns for as long as humans have settled in groups (Chadwick 1966). Throughout many cultures and historical periods public open space functioned as a market for the exchange of goods and gossip or as a setting for government and religious buildings. Frequently the same area served both purposes.

Open areas not centrally located and which were dominated by plant material rather than buildings, did exist before the mid-nineteenth century but were privately owned. These were more closely associated with the recreation and leisure activities we ascribe to parks today, but public access was limited. The larger gardens and parks belonging to royal families in Europe, such as Versailles outside Paris and Kensington Gardens in London were open to the public at the whim of royalty. Usually forests, hunting preserves, parks and gardens were reserved for a limited few.

The very earliest public open spaces in the United States were town and market squares, which were utilitarian in character. Many Eastern and Midwestern cities, including Cleveland and Minneapolis, contained central squares designed to accommodate the courthouse,
capitol building, market, church or college. In a few, such as Washington, DC and Annapolis, Maryland, the entire city plan was built around and focused on those important locations. Savannah, Georgia not only included planned open spaces, but their regular and repeatable pattern defined neighborhood boundaries and allowed for expansion of the city.

The Law of the Indies assured a rigid pattern of public and private spaces in the Spanish towns of the West and Southwest, such as Santa Fe, New Mexico. Under this Law, the towns in New World territory claimed by Spain followed a specific formula which included a public market square and public grazing lands as well as a portion of land to be owned by the crown and those for individuals. Newton (1971) felt that the New England common, used for pasturage and drilling the militia, "...provided a strong background of tradition when the time came for fostering the new notion of country parks...." However, the park as defined earlier did not exist in the United States until almost 1860.

In 1860 the total population of the United States was 31.4 million, almost one quarter of which were considered urban residents. Much of this urban growth was a result of the industrial revolution which brought people from rural areas into the towns; changing town to city and parts of the city to slums. Early nineteenth century America was described by visitors as having a "bright, airy appearance and absence of the decaying, congested districts to be found in the cities of Europe". By 1815 slums had started in Boston and New York, gradually
appearing in other Eastern cities and moving west (Glaab and Brown 1961).

The Industrial Revolution in England and its concomitant urban conditions started even earlier, as did the demand for public parks. Pressure from people in the crowded industrial cities, a pressure that was violent on occasion (French 1971), eventually resulted in the first "...recorded instance of outdoor recreational space on land acquired and owned by the people themselves, developed with public funds and open indiscriminately to all" (Newton 1971). Although not complete, the 193 acres of Victoria Park in the East End of London, opened in 1845 and was quickly followed in 1847 by Paxton's smaller Birkenhead Park near Liverpool.

It was Birkenhead that so profoundly affected the young American traveler, Frederick Law Olmsted when he visited it in 1850: it "...was the first he had ever seen, and it broke upon him like a revelation" (Roper 1973). It was as much the concept of the park as an instrument of a truly democratic society, as the pastoral style of the landscape itself.

Current Issues

Historic Preservation

In the second half of this century historic parks were first viewed as simply more open space (Zaitzevsky 1982), but interest in historic preservation and the breadth of its focus have increased steadily since the Historic Preservation Act was passed in 1966. In the
early years, implementation of the Act usually meant preventing the
destruction of a single building or the site of an historic event, but
understanding of the importance of context has widened that view to
include entire streets, districts, the landscapes that surround them
and, most recently, landscapes of significance in themselves.

A number of turn-of-the-century parks are being recognized as
important historic landscapes. In recent years substantial funds have
been allocated by New York City for restoration work in Central Park,
and by the State of Massachusetts for eleven Olmsted-designed parks in
eight different cities (Preservation News 1986).

Like historic main streets and downtown districts, park systems
and some of the larger single parks, are integral parts of the fabric of
the city. If such park systems are to continue to be positive, active
elements in the urban framework, then both their form and function must
be considered. Restoration could be accurate in terms of form, but
result in the creation of outdoor museums without the life and social
interaction that was so essential a part of the nineteenth century park
concept. The reverse is also true. If function is the only goal, then
the form and style of historical significance could be lost.

"Boomtowns"

In the 1850s the United States was in the middle of a period of
enormous growth and expansion, most of which was taking place in the
urban areas of the Northeast and Midwest. Between 1810 and 1860 the
total population was increasing by about one third every ten years. The
urban population, however, increased three times faster (Glaab and Brown 1967).

Stimulated by technological advances during the Civil War and swollen by accelerating immigration from Europe, cities continued to grow rapidly. In 1860 less than a quarter of the United States population was considered urban. By 1910 it was almost half (Thernstrom 1968). The trend was so overwhelming that a contemporary author writes:

The contemplation of what large cities are likely to become in the course of time almost fills the mind with awe...should the present rate of increase of the twelve principal cities of the country be maintained, a century hence will find them with a population equal to that of the entire Union today (Gould 1888).

What was occurring 100 years ago in midwestern and northeastern cities is taking place today in "Sunbelt" cities such as Atlanta, Phoenix and Tucson. Bernard and Rice (1983) define the Sunbelt as all the continental United States below the 37th parallel extending from coast to coast. In the forty years between 1940 and 1980 the total population in that area increased by 112.3%, while the Northeast and Midwest (the "Frostbelt") grew by only 41.9%. Like a century ago, a large part of that population is concentrating in the cities. Thirteen metropolitan areas in the United States with populations over 250,000 had growth rates exceeding 40% in the 1970s. Twelve of those are located in the sunbelt (Bernard and Rice 1983).

Burgeoning populations, soaring land prices, concerns about community image and polarization of opinion around land use issues, are "boomtown" characteristics exhibited by cities of both eras during
periods of rapid growth. They are also issues and characteristics that
directly affect the development of urban parks and park systems.
Because of the similarity of these economic and psychological
conditions, an examination of the older park systems could provide
valuable information for park planning in the newer cities.
CHAPTER 2

METHODOLOGY

Three basic methods were used in addressing the research objectives of this study: literature search, personal observation and interview. The literature search and analysis provided the foundation for establishing criteria for selection of specific systems to study. It also provided the criteria for making comparisons among them. It was the method used to identify and describe physical and cultural forces and factors that combined to affect the historic park systems since their inception.

Observation provided descriptions of existing conditions and was the primary means of determining the most important impacts on the park system. Elements selected for observation in each of the systems included a large "natural" park, a park near the center of the city, boulevards and parkways.

Interviews were conducted with individuals knowledgeable about the park system as opportunities became available. They served to confirm and enrich historical information and current management policies. The results of the interviews are discussed in the concluding chapter.
Literature Search

Three general categories of literature were examined:

1) Urban history—for the events, trends and people that provided the context for the development of park systems;

2) Park history—for general background on public parks and park systems and specific design, management and planning history of individual systems;

3) Landscape design—for general philosophy and approach to landscape design and evaluation, particularly of parks and park systems.

A number of public and private libraries and associations in the United States were either visited or contacted by mail or phone in conducting the literature review (Table 1).

Most of the historical sources are secondary, especially in urban history, but much of the information on individual park systems was derived from contemporary writings, plans and maps. The individual philosophies of park design were also contemporary. These verbal expressions of the designer operating within his/her cultural context, manifest themselves as physical design on the land.

Selection of Systems for Study

In order to identify possible influential factors on park design and development, it was preferable that the locations be as varied as possible in terms of climate, topography, geographic are, economic and cultural history, and park planner. In addition, and to facilitate the
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**SOURCES**
identification of park systems for study, four criteria were used to provide a basis for comparison. The criteria are:

1) In each study site the parks should have been designed as complete systems rather than single parks. The concern of this study was not with individual parks as expressions of landscape art, but with physically connected open spaces planned as an integral part of the development of the city.

2) Construction of the system should have begun before 1910. The preliminary review of the literature suggests that this date is roughly the end of a fifty year period of intense park building.

3) Adequate and reliable documentation of the system should be available. Substantial information was available on a few systems, particularly those designed by Frederick Law Olmsted. In the interests of expanding available research, preference was given to systems other than those designed by the Olmsted office.

4) Each park system should be considered viable today. If statistics on park system size and use appeared in current encyclopedia articles, then viability could be assumed. No judgement was made at this stage as to level of use or physical integrity of the system.

Observation

Observations were conducted of three basic elements within each park system: 1) a park within the original system and presently located near the center of the city; 2) one of the largest or most "natural" of the parks; and 3) a connecting parkway or boulevard. The specific areas
were chosen using both the maps of the original park systems and current road maps. As a distinction was not always made between boulevards and parkways in the literature, parkways were defined as sinuous lines on the park system maps and boulevards as straight, broad avenues.

Most observation of parkways and boulevards was accomplished in an automobile while driving just below the posted speed limit. In the parks, and where it was possible elsewhere predetermined routes were walked: salient elements and areas of the park were photographed. All the park systems were visited during a single summer, on a weekday, and during daylight hours. Observations in each of the systems focused on three issues: 1) use; 2) integrity; and 3) accessibility.

Level of use is the most common and traditional measurement of the "success" of a park or park system, but one for which there is rarely good quantitative information. For purposes of this study, use was defined as a general impression of the amount and variety of activities taking place and the quality of maintenance in the areas observed.

As the major concern of this study is longevity, survival of a park system over time, integrity was considered an important focus of observation. Integrity was judged objectively, by comparing current park system maps with the originals. In that comparison it was possible to identify additions to or subtractions from system linkages or elements. Integrity was also examined subjectively in terms of continuity and sense of place - whether the areas toured and considered as parkland do have a separate identity that contrast with their
surroundings and whether that sense continues throughout the system. It was not the purpose of this study to determine the historical significance of individual parks, therefore the criteria of integrity as outlined by the National Register—such as historic location, design, setting, materials and workmanship—were not considered (National Register Bulletin No. 18 1987).

The use of any park or park system is to a great degree dependent on the ease, comfort and safety with which people can enter it. Both inter and intra accessibility were considered for drivers of automobiles, bicyclists and pedestrians. Signage, parking facilities, types of roadways and the forms of mitigation where the three modes of transportation conflict, were considered as indicators of accessibility.
CHAPTER 3

FINDINGS

This chapter is divided into five parts: 1) System Selection; 2) The Research Setting; 3) The Original Park Systems; 4) Cultural and Physical Forces; and 5) The Park Systems Today. The first section describes the process used to determine which park systems were to be examined. The second and third sections contain a brief history of each city prior to 1860, an account of the circumstances and people instrumental in creating the park systems, and physical descriptions of the systems and their locations.

A number of physical and cultural forces—technological advances in industry, transportation and communication; rapid growth and change in population size, composition and density; change in disposable income and available leisure time; and social and economic trends—that have occurred since the turn of the century are discussed in the fourth section in terms of their affect on the park systems. The results of the observation portion of this study, the examination of use, integrity and accessibility in the park systems today, is contained in the fifth section.

System Selection

Table 2 displays the preliminary level of information utilized in the selection of the particular park systems for study. The list of cities was assembled primarily from early readings in Heckscher (1977), Chadwick (1966) and French (1973). I had decided to compare at least
Table 2. SYSTEM SELECTION

<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>DATES</th>
<th>DESIGNERS</th>
<th>LOCATION</th>
<th>CLIMATE</th>
<th>TOPOGRAPHY</th>
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<td>Level</td>
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<td>Olmsted &amp; Vaux</td>
<td>NE</td>
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<td>MW</td>
<td>Temp/windy</td>
<td>Flat/ lakeside</td>
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<td>Y 1893, 1905</td>
<td>Bowditch, Olmsted &amp; Stinchcomb</td>
<td>MW</td>
<td>Mild/wet</td>
<td>Rolling/ valleys</td>
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<td>HARTFORD, CT</td>
<td>Y 1853</td>
<td>Weidemann</td>
<td>NE</td>
<td>Temp/mild</td>
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<tr>
<td>KANSAS CITY, MO</td>
<td>Y 1893</td>
<td>Kessler</td>
<td>SC</td>
<td>Temp/4season</td>
<td>Varied</td>
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<tr>
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<td>Flat/wet</td>
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<td>N 1868, 1871</td>
<td>Olmsted &amp; Vaux, Schwartzmann &amp; Copeland</td>
<td>ME</td>
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<td>Y 1866</td>
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<td>Cool/2season</td>
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<td>Y 1791, 1901</td>
<td>L'Enfant, McMillan Commission</td>
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<td>Level</td>
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**SYSTEM SELECTION**
three systems and in doing so perhaps sacrifice some amount of detail for a broader view of the park movement as it occurred in different parts of the United States.

New York, Philadelphia, and New Orleans were not considered because they contained only one or two large parks by 1910 and a "system" of connected parks and parkways was either not designed or never implemented. The Boston and Chicago systems were so complex and well documented that it was unlikely that a short thesis could contribute anything of significance. I very much wanted an example from the Western United States in order to vary the geographic distribution, but the information on Seattle seemed limited and most of the San Francisco system was built later than the period under consideration. Of those remaining, literature on the Hartford system was limited and Buffalo was eliminated as being designed by Olmsted, Sr.

I decided to continue with the four remaining metropolitan areas—Washington, DC, Cleveland, Ohio, Kansas City, Missouri and Minneapolis, Minnesota—accepting the possibility that one might be eliminated at a later date. The park system in each of these cities satisfy the four criteria discussed in the methodology chapter and were designed by four different planners. The locations also display some variety in climate, topography, geographic area, and economic and cultural history (Figure 1).
Figure 1. LOCATION OF STUDY AREAS
The Research Setting

Washington, DC

Major Pierre Charles L'Enfant, a French architect and engineer who had spent his youth in Paris and served with George Washington during the revolution, was asked by Washington in early 1791 to delineate a "...grand plan for the local distribution of the (federal) city" (Kite 1970). Although the plan L'Enfant created was a baroque vision of "grand" diagonal avenues superimposed on a regular gridiron of streets (Figure 2), it is clear from his report to Washington several months later that L'Enfant took careful advantage of the topography, water, drainage, climate, views, existing roads, farms and hamlets in locating avenues, building sites and open space.

Washington, DC was the earliest of the four cities to be founded and the only one planned from the beginning to support a considerable population. Located in a low lying area (25 feet above sea level) between the Potomac and Anacostia Rivers and backed by a ring of ridges, Washington never became the commercial and industrial center that was originally envisioned. The main business of Washington was (and is) government. Its major growth has occurred not in periods of economic expansion but those of national crisis.

In 1800 when Washington became the official capital of the United States it had a population of 8,000; it grew very little until the Civil War—looking as unfinished, unkept and unpaved as many of the
Figure 2. L'ENFANT PLAN OF WASHINGTON, DC, 1791
frontier cities, with portions of it subject to severe and periodic flooding.

Washington's climate is mild, with an average of seventy-five days below freezing. Summer months can be hot (an average of thirty-eight days over 90) and humid, which combined with large areas of shallow water also meant health problems in its early years. Snow is rare, an average of sixteen inches, and rainfall averages thirty-nine inches a year (Boyer and Savageau 1985).

L'Enfant's plan included considerable public open space distributed throughout the city in circles, squares and triangles at street intersections, surrounding major buildings, along the broad boulevards and in the two open areas tying the Capitol building to the President's House (later called the White House) that met at the river's edge. This unusual amount of public space aroused criticism. It was considered too extensive and completely unsuitable, that "...an immense and gloomy wilderness (was being cultivated) in the midst of a thriving city...." (Kite 1970). Fortunately, President Washington supported the plan in almost its original form and overruled its detractors.

Cleveland, Ohio

Only five years after the L'Enfant plan, Moses Cleaveland and a team of surveyors and settlers laid out the town of Cleveland on the south shore of Lake Erie at the mouth of the Cuyahoga River (Figure 3). Like the other two cities in this study, the original plan of Cleveland
Figure 3. PEASE MAP OF CLEVELAND, 1796
is modest compared to that of Washington, but it did include a ten acre meadow at its center which came to be known as Public Square. Based on standard New England town planning, the open area was not unusual and cost the land development company only $1.76. In 1946 the same space was valued at $4,320,000.00 (Rose 1950).

The land is mostly level rising towards the southeast edge. As the city grew it became divided between east and west by the Cuyahoga River and its valley. Cold winter winds from the north and summer heat are moderated by the expanse of Lake Erie, but that same influence gives Cleveland an average relative humidity of 72% and a reputation for being one of the drizzliest metropolitan areas in the United States (Boyer and Savageau 1985).

Malaria was a serious problem in the early years and growth was slow, until Cleveland became the northern terminus of the Ohio Canal in 1825. Ten years later the population had increased more than five fold (World Book Encyclopedia 1987). By 1850 it had more than tripled from that figure to 17,034 (Rose 1950). A center for shipping, trade and industry, Cleveland was also the leader in coal-oil production at the end of the Civil War and the setting for John D. Rockefeller and Standard Oil. The economic prosperity attracted huge emigrant populations so that by 1870, 38% of Cuyahoga County's population was foreign born (Rose 1950).
Kansas City, Missouri

Kansas City, located at the confluence of the Missouri and Kansas Rivers, was founded in 1821 as a trading post by employees of the American Fur Company (World Book Encyclopedia 1987). No plat was filed, however, until 1839 (Figure 4) and the city was not actually incorporated until 1850 (Smith 1962). The topography of the area varies from gently rolling to dramatic bluffs and steep hills in what are now the older parts of the city. The climate is considered temperate.

While the Civil War provided impetus for growth in Washington and Cleveland, Kansas City, at nearly the geographic center of the United States, was almost destroyed by it. In 1865 Kansas City had a total population of only 3500. The efforts of a few active property holders brought major rail connections and the first railroad bridge over the Missouri to Kansas City in 1869. By 1880 the population had jumped to 55,785 (World Book Encyclopedia 1987).

"The rise of Kansas City, Missouri as a western railroad center and regional metropolis supplies one of the best examples of the relationship of real estate, local promotion and railroad planning to the growth of individual cities in this era of booming development of new regions" (Glaab and Brown 1961). By 1890 the population had increased another 236%, and the city was no longer in danger of being eclipsed by other growing metropolises along the Mississippi and Missouri Rivers.
Figure 4. MAP OF THE TOWN OF KANSAS, 1846
Minneapolis, Minnesota

Minneapolis was officially founded in 1849 when the Minnesota Territory was established. However, it had been settled for a number of years prior to that by farmers and lumberjacks attracted by rich, gently rolling land, ample water and extensive hardwood forests. Its location on the upper Mississippi and Minnesota Rivers provided ready access to markets in other areas and water power for the sawmills and flour mills which were a major basis of its tremendous growth in later years.

Places Rated Almanac (Boyer and Savageau 1985) designated Minneapolis as one of the eight coldest metropolitan areas in the United States with an average of 34 days of below zero temperatures, 158 days below 32, and only 15 days over 90. The land is mostly level and dotted with numerous shallow lakes (twenty-two of them still within the city limits), but there are several areas of high palisades and bluffs along the river.

As in Kansas City, bringing the railroad to Minneapolis was a necessary part of the intertwined factors that promoted urban growth. In both cases the settlement of farm families and development of agriculture along the railroad land grants was as important as the transportation links it created. Immigration was encouraged and partially subsidized by the state and the railroads to the degree that the native-born population of Minnesota dropped from two-thirds of the total in 1860 to less than one-third in 1880, and immigrants continued to come. In that same period the population of Minneapolis had grown
from about 4,200 to 55,000 (Adams 1976). By 1890 had reached 164,000 (Glaab and Brown 1961).

Although there was no park space incorporated into the original city plan, Edward Murphy donated two city blocks for a park when his addition became part of the city in 1856 and also secured passage of a resolution that "only should a plat be accepted by the city if a portion of the land so platted be dedicated to park purposes" (Wirth 1945).

The Original Park Systems

In 1857, Frederick Law Olmsted, Sr. was given the opportunity to express his interest in public parks in a concrete form. He and Calvert Vaux entered and won the design competition sponsored by the Board of Commissioners of the Central Park for the city of New York and in doing so started a fifty year fever of park building all over the United States. Central Park may not have been the first effort in this country to establish a public park (Stewart, 1969), but it was clearly the most influential. "The beginning of a whole movement for public parks can be traced directly to one example (Central Park) and two designers working almost as one" (Chadwick 1966).

Goals and Rationale

The designs of Olmsted and others of the period "...were rooted in a clearly articulated social philosophy...(they) looked toward the development of social institutions and physical environments that would strengthen the web of community life" (Bender 1975). By bringing nature into the city, parks were expected to provide several benefits: restore
the physical and mental health of the city inhabitants; increase property values in the vicinity of the park; contribute to the aesthetic appeal of the city; attest to the cultural level and social conscientiousness of its citizens; and provide a forum of democratic ideals where all classes could meet on an equal footing.

Nineteenth century concerns about the moral corruption of city life and the mental health of its inhabitants may have been unfounded, but those related to physical health were not. Epidemics of cholera and yellow fever were regular and devastating; malaria, dysentery, typhus, typhoid and consumption were frequent killers as well. "Sixteen thousand children under five died in New York (City) in 1887 - almost one thousand in a single week" (Gould 1888).

Until the 1880s the germ theory of disease was not generally accepted (Glaab and Brown 1961, Bender 1975) and both moral and physical ill health was attributed to the "miasmas" generated by crowded and dirty conditions of urban life. Parks were viewed quite literally as the lungs of a city where the impure "...air is disinfected by sunlight and foliage" (Olmsted 1870). The contribution of parks to public health was even recognized by the American Medical Association in a committee report on Public Hygiene (Schuyler 1979).

The financial success of Central Park in terms of increasing property values and attracting both tourists and permanent residents to the city is cited frequently in the literature of the time. In the four years between 1866 and 1870, 30,000,000 people were counted as visiting Central Park, and there were likely more uncounted. In 1850 it was
thought that 600 acres was too much for parks in New York, but by 1897 there were 5185 acres of parklands in the city (Robbins 1897). When encountering active opposition, park advocates in other cities used such figures to support less quantitative rationale for the development of urban parks and park systems.

The spirited rivalries between neighboring communities and the larger urban centers eventually included the development of parks. In spite of considerable opposition initially, parks and boulevards, along with population and production, became an important symbol of status to a growing city.

The idea of the necessity of pleasure grounds is so generally accepted now that it is hard to realize how stoutly resisted it was within our own generation, and how much persuasion was necessary to bring about the cession of land for the first large park in New York city...in 1869 there were but two well-advanced rural parks in the United States; in 1886 there were twenty, and since that time they have multiplied with wonderful rapidity... (Robbins 1897)

As a new and great republic, Olmsted and others saw a portion of America's self esteem tied to the ideal of a public park. Frederick Law Olmsted wrote after visiting Birkenhead in 1850 "...and all this magnificent pleasure ground is entirely, unreservedly and forever the people's own. The poorest British peasant is as free to enjoy it in all its parts as the British queen...Is it not a grand, good thing?" (Chadwick 1966). However, the somewhat patronizing if well-intentioned implication in most of the literature of the time, was that the working classes would gain the most from the intermingling (Cranz 1983, Bender 1975).
Form, Style and Siting

The form and style of these early parks was borrowed from the pastoral ideal of the English landscape school.

...the landscape gardeners actually built landscapes in presumed conformity with wild nature...(they took) steps toward evolution of what would later be consciously developed as a new form of outdoor space...with curving boundaries of untrimmed vegetation seldom parallel to the sight line, floored the undulant surface of the land, and subject to purposeful manipulation and modeling. Today this kind of plastic, gently formed, pastoral space is taken for granted as a normal component of the landscape architect's palette...it did not exist as a medium of design until after the English 18th C" (Newton 1971).

Separation of circulation systems was also a feature of many of these early parks and appeared in Paxton's Birkenhead Park. Olmsted and Vaux carried it further in Central Park by designing grade changes that prevented conflicts among vehicular, pedestrian, equestrian or bicycle traffic.

The value of these grade separations lies not so much in the greater safety to pedestrians, and still less in the speeding up or continuity of flow of traffic attainable, but chiefly in the freedom from distraction and in the greater comfort for people who have come to the park for its enjoyment" (Chadwick 1966, from the original report by Olmsted and Vaux to the City of New York).

Although the park planners urged the purchase of park land based on its scenic beauty, central location, or proximity to transportation routes, sites for the larger parks were often selected on the basis of expediency. Often because they were considered useless for other development or because they were a gift to the city by some generous, wealthy park patron. The site for Central Park was a remote, rocky and
debris filled wasteland when Olmsted first saw it. Chicago's South Park was a swamp and Golden Gate Park barren, shifting sand dunes.

Where a complete park system was developed, the large rural park became an important feature, but not the sole focus. Olmsted advocated the system approach that was adopted by other planners and writers of the time. Gould (1888) described systems of "...small open spaces, well distributed over a city, but numerously located in populous districts..." with boulevards and broad avenues forming "links of connection between the smaller spaces of the city proper and the larger parks on the outskirts". He felt that large parks were a necessary part of the system, but are not the most used or useful. Often the rural parks "...are practically inaccessible to those who need them most, and in their adornment comfort is too frequently sacrificed to aesthetic taste".

Activities

Frederick Law Olmsted felt that a park should be "...a place where the urban inhabitants can to the fullest extent obtain genuine recreation coming from the peaceful enjoyment of an idealized rural landscape in rest giving contrast to their wonted existence among the city's turmoil" (Weir 1928). In keeping with that philosophy, activities in the country parks before 1900 were unstructured but not necessarily passive. Bicycling, ice skating and baseball were as popular as concerts and picnics. However, gambling, vaudeville, boxing, drinking, dancing or other "unrefined" activities were strictly
prohibited and even some of the more vigorous sports had to overcome strong opposition before appearing at the end of the period (Cranz 1982).

The People

Whether for or against parks, the sentiment of the time was expressed in strong terms and usually by the same class of people all claiming to represent the interests of the many. Power in this era was characterized by an accumulation of recreational capital amassed by "moral entrepreneurs" a social and economic elite acting out of idealistic motives. They saw themselves as working on behalf of the people as the "guardians of the highest cultural ideals" (Cranz 1982).

Olmsted and his associates and followers considered themselves and were considered peers of the commissioners and backers of urban parks. Therefore, when city fathers were interested in hiring a designer for a new city park, "...they turned perforce to a body of men as well organized, homogeneous in opinion and powerful within their sphere as any professional organization" (Cranz 1982).

Washington, DC

Only Washington, DC of all four metropolitan areas (and probably any other city in the United States), had what could be termed a park system before 1800. It was limited, however, to relatively small spaces and formal boulevards and did not include the large scale rural park that became the hallmark of Olmsted and the park movement. Conversely, with the McMillan Commission plan in 1902 (Figure 6), it was the last of
four cities in this study to develop a design for a truly metropolitan system containing a variety of parks and parkways.

In the over one hundred years between L'Enfant's plan and the McMillan plan, both improvements and disfigurements were made to the open spaces of the city in a haphazard fashion. In 1837 the Treasury Building was erected across the intended vista along Pennsylvania Avenue between the Capitol and the White House; the Smithsonian Building was built jutting into the Mall space ten years later; the Washington Monument was placed four hundred feet southeast of its planned position at the intersection of sight-lines from the Capitol and the White House; and Congress approved construction of a railroad station in the center of the Mall in 1872.

However, in the 1870's "stimulated and led by Alexander R. ("Boss") Shepherd...numerous public works projects enhanced the open space amenities of the city. Parks of all sizes were improved, vistas framed and accentuated, and scores of miles of clean, orderly and humane streetscape came to life" (National Capitol Planning Commission 1983). Proposals were also made during this period to create a National Park in the Rock Creek Valley and to dredge and reclaim the Potomac flats. Implementation of these ideas took another twenty to thirty years but by 1900 funds had been secured to begin the purchase of Rock Creek Park land and 621 acres of new land and 118 acres of tidal reservoirs were dedicated by Congress as Potomac Park.

In 1900, as part of Washington's Centennial celebration, President McKinley revealed plans for the enlargement of the White
Figure 5. THE MCHILLAN PLAN OF WASHINGTON, DC, 1901
House, plans that were "...quickly opposed by the American Institute of Architects...Senator McMillan, chairman of the Senate Committee on the District of Columbia, and apparently by almost everyone else" (Newton 1971). It did, however, spur McMillan to secure a resolution from the Senate authorizing his Committee to study the park system of the entire District of Columbia.

The experts chosen by McMillan to conduct the study and make recommendations included: Frederick Law Olmsted, Jr., landscape architect (Olmsted Sr. having retired from practice); Daniel Burnham, the architect and director of works at the Colombian Exposition; Charles McKim, another well-known architect; and Augustus Saint-Gaudens, a leading sculptor of the period. The political situation faced by these men was quite different from those designers and planners of the other three systems; their only official status was as commissioners, advisors to a Senate Committee. There were no funds set aside to implement their recommendations, and they were neither hampered nor supported by an active body of local citizens.

Washington was unique in terms of a design problem. Like other park systems, the design was intended to provide for the "...recreation and health of a constantly growing (local) population" (Senate Committee on the District of Columbia 1902), but simultaneously any solution would be of national and international significance because of its location in a major world capital. Consequently, the commissioners conducted exhaustive studies of Washington, present and past, and of other cities and parks in the United States and Europe. Burnham
explained the extensive travel because the group needed to "...see and discuss together parks in relation to public buildings. That is our problem here in Washington and we must have weeks in which we are thinking of nothing else" (National Capitol Planning Commission 1977).

The plan that emerged reaffirmed the wisdom of L'Enfant's original plan. Within the L'Enfant city the Commission confined itself primarily to corrections of the worst nineteenth century blunders, although the Mall was extended to include the reclaimed acreage of Potomac Park with a memorial to Abraham Lincoln as a new western terminus on the Potomac. However, the new proposals were broader in scope than L'Enfant's plan, and provided for parks and park linkages throughout the District. Some of the changes included: the recreational use of Anacostia Flats on the eastern edge of the District; boulevards and parkways connecting the city center to Mount Vernon, the Great Falls of the Potomac, Rock Creek Park and areas outside the District; and a mix of neighborhood parks primarily outside the original city.

Cleveland, Ohio

Mid-nineteenth century was a time of enormous economic prosperity for Cleveland. Long wagon trains headed for the West, arrived in Cleveland on the way. Many chose to stay believing that the flourishing lake city offered immediate opportunity. It was also an attractive city. Even though domestic animals roamed free in Public Square, the editor of the rival city of Cincinnati's newspaper commented "the town is clean, tasteful, elegant and healthful; for vegetables,
fruit and flowers it is preeminent - for groves, parks, ornamental trees and shrubs, it is hardly surpassed by New Haven..." (Rose 1950).

Surrounded by hundreds of acres of forest, with Lake Erie and the rivers and creeks so close, there was little public demand for parks until the late 1850s, and then supporters encountered strong opposition from the City Council. In 1835 land for Clinton Park was set aside as the center of a fashionable residential development and donated to the city, but, despite numerous offers of sites on generous terms, the Council was unwilling to even consider another park for over thirty years.

After ten years of reports, a stubborn City Council finally recommended for purchase the ten unsightly acres covered with squatters' hovels that was to become Lake View Park (Rose 1950). Four years later, in 1871, the first Board of Park Commissioners was created and control of public grounds put into their hands. Their control was limited, however, because until the second Park Board was formed twenty-two years later they had no power to appropriate land or issue bonds and were dependent on funds granted piecemeal from the City Council.

The piecemeal allocations did result in several projects, including the improvement of Public Square, which

...raised the city's front yard to a level of respectability. The Square took on a rustic, rest-provoking air, where citizens could enjoy concerts and oratory, or spend leisure time in familiar exchanges with friends and neighbors. On the broad avenues that crossed it, horse-drawn buggies and aristocratic carriages carried men and women on errands of business and society (Rose 1950).
Lake View Park was finally purchased and developed in 1873 and the 75 acres of Wade Park was accepted as a gift in 1882 with a commitment to the donor to spend $75,000 in improvements.

In 1891 the first Park Board was abolished and for two years responsibility for the parks was transferred to the Department of Public Works. During this time, a group of concerned citizens whose understanding and awareness of the advantages of a park system had developed with the popularity of the existing ones, formed the Park and Boulevard Association. "This was one of the first evidences of modern city planning in Cleveland" (Rose 1950). "Perhaps more importantly, this was one of the first instances of active and influential citizen participation, which would later prove to be an influential force in the acquisition and administration of Cleveland City Parks" (Behnke 1976). In 1893 the Park Act was passed against strong opposition and the second Park Board came into being.

Concerns about the lack of comprehensive planning were expressed in the 1879 report of the first Park Board.

While the laying out of streets and avenues is not within the province of this Board, your Commissioners would suggest that some well devised general plan, looking to the symmetrical development of the many local advantages surrounding our city, be adopted and that a due regard be had to the probable future requirements for park purposes.

Such a plan was finally developed and adopted in 1894 (Figure 6) by the second Park Board of Commissioners with the assistance of "Mr. E. W. Bowditch, of Boston, Mass., a landscape engineer of national reputation" (Board of Park Commissioners of the City of Cleveland 1894).
Figure 6. BOWDITCH PLAN OF CLEVELAND PARK SYSTEM, 1897
The plan included provision for "...a large park on the outskirts of the city in each of the seven main sections, the same to be so located...that such outlying parks could be readily united and connected by a broad smoothly paved boulevard, enclosing the city" (Rose 1950). A total of $800,000 in bonds were issued immediately, and in the next six years before the Board's term expired, over 1,300 acres of parkland were acquired and improved together with thirty miles of roadway and thirty-three miles of walks (Board of Park Commissioners of the City of Cleveland 1899).

Kansas City, Missouri

The community effort that brought the railroads to Kansas City after the Civil War insured its survival, but

Kansas City in 1870, and for some years thereafter, was an anomalous community, impossible to characterize either as a frontier settlement or as an urban center. Its birthmarks as river town were still upon it: the unpaved streets with their dust and mud, the ugly wooden buildings, the rough and largely transitory population, and its frequently raucous behavior (Brown and Dorsett 1978).

It was in this atmosphere that a few citizens first attempted to develop city parks.

The opposition was so extreme that in 1872 one offer to donate land caused outraged citizens to carry the case all the way to the Missouri Supreme Court, which ruled that the city could not accept the offer. "Such proposals (and there were many over the next twenty years) were considered at best silly, or worse a sinful extravagance" (Scott, Jr. 1962).
In 1880 William Rockhill Nelson, newcomer to a Kansas City of 56,000 people, began publishing the four page Kansas City Star and took on the cause of acquiring parks for the city. Ten years later, when a third attempt finally resulted in the establishment of a Board of Park Commissioners, the population was just short of 120,000 and was still growing rapidly. It took five more years, incredible legal machinations and two more Board charters before one with full voter approval and real power to acquire and develop park properties was created (Wilson 1964).

The Board of Park Commissioners toured a number of American cities with established park systems, studied the topography of Kansas City and surroundings and consulted with Frederick Law Olmsted, Sr. before preparing their first report (Board of Park Commissioners of Kansas City 1893). Olmsted recommended that the Board hire George Kessler, a young engineer from Texas who had studied forestry and botany abroad and been a gardener in New York's Central Park, to design and oversee the development of a complete park and boulevard system.

In the 1893 report, Kessler, as Engineer presented everything from "a detailed and comprehensive look at Kansas City's topography and traffic patterns, population density and growth, its industrial and residential sections and its prospects for future development" (Wilson 1964) to plans for the first parks and one hundred foot wide connecting boulevards (Figure 7), preliminary sketches of all parks and boulevards in the system and even construction details and a request for a nursery. Kessler seemed to handle both the practical and aesthetic with equal enthusiasm and detail.
Figure 7. KESSLER PLAN OF KANSAS CITY

PARK AND BOULEVARD SYSTEM, 1893
Effective resistance to Kansas City's park plan was over by 1900, particularly as once the plan became visible on the ground it gained more enthusiastic supporters. By 1903, ten years after the first report, over 2,700 acres of park land had been acquired and miles of boulevards developed. Over half that acreage was a single park, Swope Park, which was donated to the city and which initially even Kessler thought to be too distant from the center to be useful. Fifteen years later Kessler was using the example of Swope Park's rapid engulfment by the city and his own miscalculation to support considerable expansion of the park system into outlying areas (Board of Park Commissioners of Kansas City 1909).

Minneapolis, Minnesota

Like Kansas City, Minneapolis also had a history of park land offered for sale or donation that was rejected by the City Council, even though in 1869 the Council passed a resolution favoring the establishment of parks. The whole of Nicollet Island was lost when a majority of eighty-five citizens voted against its acquisition in 1866; a strategically located twenty acres because one "...very prominent citizen declared that there never would be a house south of Tenth street and that beyond it was all park"; a forty acre site that the Council felt exorbitantly priced at $25,000 in 1869 which was unobtainable and valued at $1,000,000 in 1910; and a number of other lost opportunities (Nimocks 1910).
It was not until 1882 that "...the City Council finally evidenced active proof of its sincerity in approving the establishing of parks...by taking steps to begin (land) acquisitions" (Wirth 1945). Not satisfied with the rate at which the Council was moving and the lack of a complete plan for park and boulevard development, a group of businessmen belonging to the Minneapolis Board of Trade passed a resolution to urge the State Legislature to create a park commission for the City of Minneapolis that would have the authority to plan, acquire and develop such a system.

The committee appointed to carry out the resolution included three men who had been actively promoting the idea of parks for ten to twenty years: Col. William S. King and C.A. Nimocks, both newspaper publishers and Charles M. Loring, who became known as the "Father of the Minneapolis Park System". Within three months this committee had drafted and amended a park bill, seen it pass both houses of the State Legislature, formed a Board of Commissioners and gained a 58% majority in an election of the citizens of Minneapolis to ratify the Park Act and the Board. The opposition to the bill was strong and emotional, but not sufficiently organized to prevent ratification.

Almost immediately the first Board of Park Commissioners engaged the services of Horace W. S. Cleveland, a noted landscape architect. Cleveland, like Olmsted, took an early interest in scientific farming and was a trained surveyor and civil engineer. He had designed cemeteries, estates and public parks in cities and towns in New England, the South and the Mid-west and was opposed to the grid development of
cities as he felt "it betrayed the character of the land and sacrificed chances for giving cities their own form and character" (Heckscher 1977). By using the natural drainage patterns to build a system of parks and parkways, Cleveland felt he would permanently break the grid in Minneapolis. Included in the plan, however, was an "ornamental Boulevard" system in downtown where the grid already dominated.

At the end of the first year of the Board's work, a plan was approved (Figure 8) and eighty acres of park land had been added to the six they inherited. At the end of the second year Captain William M. Berry had been made the first professional, full-time Superintendent of the Minneapolis park system. In four years Minneapolis had acquired 1,024 acres of land and water for parks with eleven miles of parkways. In ten years another 450 acres was added. Initially much of the area acquired for parks in Minneapolis was swamp and shallow water. Extensive dredging operations were conducted to deepen the lakes and raise and extend the land area of the parks.

Cultural and Physical Forces

In all the cases studied the park systems have been subjected to more or less definable cycles of interest and concern to neglect and abuse from the public they were developed to serve. Often the cycles have been in response to nationwide trends of which it is only possible to highlight a few of the most important. Occasionally they have resulted from the activities of single individuals or groups, or economic fluctuations in a particular city.
Figure 8. CLEVELAND PLAN OF MINNEAPOLIS PARK SYSTEM, 1883
The Metropolitan City

The 1910 Federal Census for the first time identified twenty-five cities as "metropolitan centers", those whose central-city population exceeded 200,000. Nineteen cities were listed as "emerging metropolises", with at least 100,000 in their central city population (McKelvey 1968). All four of the cities in this study were in the first category and, with the exception of Washington, could be considered to display a basic form becoming common to most of these new metropolises—a vertical skyscraper downtown encircled with horizontally spreading suburbs.

In the early decades of the century the large cities retained some individuality as a result of regional and local contrasts in density and different patterns of construction which sprang partly from their ethnic composition and partly from regional, historic and functional differences (McKelvey 1968). As the century advanced and improved transportation and building construction technologies became widely shared, those regional differences were more and more submerged, particularly in the rapidly growing suburbs. This change in form of the city was reflected in the expansion of park systems into outlying areas.

Transportation

Until the development of horsecar lines in the later decades of the nineteenth century, the portion of the urban population living outside the central city was primarily confined to wealthier families who could afford the time and money of maintaining a residence removed
from the work center. The trend grew as the speed and low cost of horsecar lines and later trolleys, subways or elevated trains, made it possible for lower income families to enjoy the advantages of suburban life and for central city dwellers to reach the great "rural" parks.

The most explosive changes came with the automobile. In 1905 the annual production of passengers cars was 24,550, but had grown to 895,930 ten years later. Four hundred and fifty trucks were produced in 1905, and that figured leaped to 74,000 in 1915. By 1920, in spite of reduced production during World War I, the total number of trucks and cars on the roads reached 9,239,191. Five years after World War II there were forty million passenger cars and eight million trucks on American roads (McKelvey 1968).

This phenomenal and rapid change in the means of transportation created a demand for space for roads and highways to which the park systems were particularly vulnerable. "In this pell-mell rush to accommodate the automobile, federal and state highway planners were quite ready, if necessary, to sacrifice other social concerns, urban parks for example. Park lands were tempting targets for highway encroachment for two reasons: the land was already cleared; and voters did not reside in parks" (Metropolitan Council 1985).

In addition to direct encroachment on park land, the proliferation of the automobile had two other effects on the urban park systems: parkways and boulevards designed as links in the park system were often appropriated and widened for use as major transportation routes; and the increased accessibility to "nature", often in the form
of regional, state or national parks, reduced the demand for the rural style of park in the city.

Park Activities

Cranz (1982) divides the history of parks in the United States into four periods: the "Pleasure Ground"—1850 to 1900; the "Reform Park"—1900 to 1930; the "Recreation Facility"—1930 to 1965; and the "Open Space System"—1965 to the present. The change in emphasis on park activities during these periods is distinctive and usually a reflection of changing social attitudes.

The Pleasure Grounds of the original parks created "breathing spaces" in the city that by their very existence were thought to increase the mental, moral and physical health of a population separated from rural nature. While certain "unrefined" activities such as horseshoe pitching, wrestling matches, drinking, dancing and popular music were excluded from the pleasure grounds, it was not thought necessary to organize what people did do there (Cranz 1982).

As working hours shortened and vacations lengthened, the resulting spare time began to be seen as a threat to society, for which the unstructured pursuits of the Pleasure Grounds were not sufficient antidote. Out of this concern the Reform Park was born, in which "...park organizers, park leaders, play directors, and efficiency-minded experts in recreation...." (Cranz 1982) strove to fill the new leisure time of the masses with planned, healthful and structured activities. These activities were designed to train good citizens, keeping children
off the streets and adults, particularly the working man, out of the "saloons".

"In the 1930s park administrators abandoned their idealistic efforts to use parks as a mechanism of social reform" (Cranz 1982). The park as Recreation Facility lost much of its individual identity and was viewed more as an empty space on which to locate ball fields, tennis courts, swimming pools, gymnasiums, zoos, botanical gardens and war memorials. At the same time the controversies of earlier periods dissipated and parks became an expected amenity of urban life.

The utilitarian demands made by the activities of both the Reform and Recreation Facility periods affected the form of the parks. Unfortunately, park designers seemed unable to accept the change from Pleasure Ground principles and "as a result, facilities for active recreation often marred previously well-designed parks, and barren-looking playgrounds were established in many neighborhoods" (LaGasse and Cook 1965).

The Open Space System came into being as the demand for recreational facilities in parks disappeared and could no longer be used to justify park budgets.

The middle class was no longer seeking park services; to the contrary, they conspicuously avoided parks, now considered so unsafe that they were part of the urban crisis rather than its cure. The new park was something of a performance artist...meant to be as exciting as the pleasure grounds had been programmatically unexciting, and their new image was adventurous, colorful, seductive, chic, hip, hot, and cool (Cranz 1982).
The activities promoted during this period included everything from rock concerts to puppet shows, beer and wine parties to kite flying, and ecological tours to fashion shows. Unlike those of previous periods, these activities had little affect on the physical form of the historic park systems. However, a growing awareness of environmental and preservation issues in the same period renewed a part of the Pleasure Ground view: that parks have an intrinsic landscape value not derived solely from the uses to which they are put.

Bureaucracy and Planning

In most cases the early park advocates and park board commissioners were businessmen, "pillars of the community", with economic or philanthropic motives for establishing park systems in their respective cities. The professionals associated with the parks during this period were the landscape architects and, in the larger systems, park superintendents. In both cases they tended to be men of the same class and general focus as the commissioners.

In 1910 there was no college level curricula whose primary purpose was to train people to manage outdoor recreation resources for recreational purposes. Equally lacking was specific training for park superintendents and recreation personnel. Positions for park superintendents were mostly filled by...engineers, landscape architects, horticulturalists and some who had learned the business through an apprenticeship" (LaGasse and Cook 1965).

The demands of the Reform Park period, however, created a new group of professional employees—social workers, school teachers and physical educators with specialty recreational training provided by
growing numbers of college programs and private institutes across the
country.

When the reforming zeal failed (and the Recreational
Facility came into being)...the profession itself occupied
relatively less of their attention, and the local bureaucratic
structures they found themselves in relatively more.
Accordingly...the bureaucrat emerged as the new park power, and
the maintenance and enhancement of the park bureaucracy came to
be as much an end as a means of park policy" (Cranz 1982).

It was during this period that the standards and formulas for locating,
equipping and sizing parks was developed— standards that tend to equate
quantity with quality.

Several authors (Chadwick 1966, Chudacoff 1975, McKelvey 1968)
mention the urban park movement as an important antecedent to city
planning. "...Efforts to create large, landscaped city parks had
awakened people to the possibilities of determining the mode and
direction of future urban growth" (Chudacoff 1975). Given impetus by
the "White City" of the Columbian Exposition and the City Beautiful
Movement of the late nineteenth century, thirty-odd cities had official
planning boards with at least advisory powers before World War I
(McKelvey 1963).

By the second World War planning and zoning was an accepted part
of most city governments and in some cases beginning to function in
metropolitan or regional terms. As part of a general trend towards
consolidation, park development became absorbed into the total planning
bureaucracy. In that situation, however, it was often considered of
lower priority than the more pressing problems of streets, water
supplies, transportation and housing. Beginning in the early fifties
many metropolitan park systems were operating on reduced budgets and becoming
dependent on federal monies for open space development and staffing.

Washington, DC

The rush of city plans that appeared after the Columbian Exposition were "in the content of their plans, in their reliance on elaborate published reports, in their employment of experts, and above all in their use of baroque planning devices for civic squares, monumental grouping of buildings, and imposing boulevards..." in most cases imitative of the McMillan Plan for Washington (Reps 1967). The major difference being that the McMillan Plan was eventually carried out in almost its entirety, whereas few other city plans were.

It was a task that took almost a quarter century to even gain full approval. The McMillan Plan was officially sanctioned by Congress when the National Capitol Park Commission was formed in 1924. In the interim, the Council of Fine Arts (later the Commission of Fine Arts) was created as an advisory board to Congress and was instrumental in insuring the location of the Lincoln Memorial in Potomac Park, a key point in the McMillan Plan, as well as preventing major changes that might have hampered its complete implementation in the future.

In 1926 the Park Commission became the National Capital Park and Planning Commission and its responsibilities were expanded beyond the development of parks, parkways and playgrounds to include the "...duty of preparing, developing, and maintaining a comprehensive, consistent
and coordinated plan for the National Capital and its environs" (National Capitol Planning Commission 1983). Within the next twenty years new responsibilities such as approving the location, height and size of Federal buildings and establishing boundaries of urban renewal areas were added to the Commission's powers, further broadening its scope. In 1952 an act of Congress confirmed the functional re-emphasis of the Commission by creating the National Capital Planning Commission.

During the 1950s, Washington was the second most rapidly growing metropolitan area in the country (McKelvey 1968). To accommodate that growth, the Commission developed a number of plans over the next thirty years, of which the most influential was the "Year 2000" plan in 1961 (Figure 9). Inspired by the form and location of Rock Creek Park, this plan called for "vast wedges of open countryside" to control and direct urban growth along a pattern of corridors radiating out from the metropolitan center (National Capitol Planning Commission 1983). Like the McMillan plan, the "Year 2000" plan was ambitious and imposing, spawning a number of similar schemes throughout the country. Unlike the McMillan plan, however, it was never implemented as designed (Heckscher 1977).

Today there is over 8,000 acres of federal open space in the District of Columbia alone (85,000 acres in the National Capital Region) over the major portion of which the National Park Service has jurisdiction. There is also open space within the District, particularly in neighborhood playgrounds, administered by local agencies
Figure 9. "YEAR 2000" PLAN FOR WASHINGTON, DC, 1961
Unlike Washington, DC whose central city parks had been planned a century before the metropolitan expansion came into being, Cleveland found herself contemplating the idea before the original suburban parks were even developed. In 1905 William A. Stinchcomb, a Cleveland-born engineer and disciple of Olmsted, began campaigning for a Metropolitan Park Board whose powers to tax, acquire park lands and develop them would extend beyond the city limits. "Here is an instance where one man could indeed be called the architect of a park system... (he) led the Park District from its earliest beginnings to its position among the leaders of our nation's metropolitan park systems" (Regional Planning Commission 1961).

By 1910 Cleveland was the sixth largest metropolis in the nation and "...was undergoing physical changes to the detriment of the city's beauty. The trees that had advertised it as the Forest City were disappearing... Decentralization was quickening, and incomes earned in the city were building attractive homes and boulevards beyond the city limits" (Rose 1950). Even with the pressures of growth, it was 1915 before the Ohio General Assembly granted sufficient funds to a temporary county park board for Stinchcomb and Frederick Law Olmsted, Jr. to conduct a study and propose a plan (Figure 10). The Metropolitan Park Board was finally established in 1917 with Stinchcomb as its first
Figure 10. STINCHCOMB PLAN OF

CLEVELAND METROPOLITAN PARK SYSTEM, 1916
director. He remained director for almost forty years.

During the same period, efforts within the city park system, now under the control of the Department of Public Properties, were concentrated on development not acquisition. Recreation became the primary focus and the "...existing parklands suffered as a result of overuse, abuse, and reductions in funding" (Behnke 1976). In 1940 there were over 2300 acres of city park land, but it was the sixty baseball diamonds, sixteen playgrounds, eleven skating ponds, ninety-two tennis courts, several golf courses, soccer fields, swimming pools, football fields and many other features which made the parks attractive (Rose 1950).

The Metropolitan Park System consisted of over 11,000 acres in 1940 distributed in nine reservations and connected with fifty to sixty miles of roads, foot trails and bridle paths. The policy for these parks from the beginning was to keep each reservation a minimum of 500 acres, usually double that amount, and reserve 95% of it as undisturbed land (Regional Planning Commission 1960). Using data gathered in a 1959 survey of 2000 Cuyahoga families, the Regional Planning Commission recommended adding another 8400 acres over the next twenty years to a metropolitan system that had grown to 15,000 acres since 1940.

These projected needs did not include acquisition and development of park land along the lake shore, which was also needed. The older lakefront parks and those nearest the central city had suffered most directly from the impact of the automobile and highway construction, particularly Gordon Park which was split in half by the
lakeshore freeway. As city funding for parks continued to drop and the cost of just maintaining existing parks rose, it became clear that restoring the lakefront parks to usable condition was beyond the financial capacity of the city park budget. In 1978 the problem was solved, uniquely in this study, by leasing the Gordon, Edgewater and Wildwood Parks to the State of Ohio, which performed the necessary work and re-opened them as the Cleveland Lakefront State Park.

Following the national trend, Cleveland appointed a City Planning Commission in 1913 and had a monumental civic center designed by Burnham and two other architects between 1902 and 1911. They "...produced a rather unimaginative plan for a pompous rectangular space tightly bordered by uniformly "classical" buildings" (Newton 1971). Cleveland has a long history of citizen involvement and its Citizens' League served as a model for other city groups during a resurgence of citizen participation in the fifties. The League grew out of the Municipal Association of Cleveland which was a "watch dog" organization of the late 1800s when corruption in government was rampant. While not their only interest, both organizations participated heavily in the development of the park system.

Kansas City, Missouri

George Kessler, the landscape architect for the original park system in 1893, was involved in planning the Kansas City park system until his death in 1924. In those thirty years he was able, with Park Superintendent Dunn, to provide continuity and direction to the
expansion of the system. Like Stinchcomb in Cleveland, Kessler realized early in the new century that land for parks needed to be acquired outside the city before suburban growth made it too expensive. Almost one third of the more than 7,600 acres of parks in Kansas City today were purchased or donated before his death in 1923 (Figure 11).

Kessler's approach to the planning of parkways and boulevards, however, seemed more accommodating to the automobile than that of Stinchcomb. Kessler and his first board departed from Olmsted's rural vision. They saw Kansas City as having other needs—public squares and local parks, the embellishment of notable urban points, and a primary system of parkways. "...An artificial structure to make the city more urbane" (Heckscher 1976). In the 1915 report of the Board of Park Commissioners of Kansas City, Kessler stated:

In its way the park system, together with its boulevards and parkways in Kansas City shows that the communication needs or transportation needs of a community are the basic requirements that need solution...Kansas City's boulevards are today serving in part a very distinct traffic highway need. Inasmuch as the best streets of the city are becoming more and more congested, the distinct need for a separation of swift moving, possibly pleasure vehicles, from the normal heavy trucking of business traveled streets becomes pronouncedly evident.

In 1930 over fifty percent of the population commuting into the central business district came in private cars (McKelvey 1968). Neither parallel drives for commercial and "pleasure" traffic nor widened roadways solved the problems of congestion, and both actions made serious impacts on the park system. "It is clear now that Kessler laid out his boulevards too well for their own preservation" (Wilson 1964).
Figure 11. GREATER KANSAS CITY PARK AND BOULEVARD SYSTEM, 1920
While the park system was expanded to accommodate the growing suburbs, one subdivision in particular was deliberately meshed with the parks and boulevards. The Country Club District of Kansas City was begun on a modest ten acres in 1907 by Jesse C. Nichols and grew to several thousand acres. From the beginning Kessler was a consultant on the project and the position was carried on after his death by the landscape architecture firm of Hare and Hare (Newton 1971).

Minneapolis, Minnesota

Horace Cleveland, designer of the first Minneapolis park system, predicted the results of adequate park and boulevard planning in immense detail, stressing that all of the city's functions would be enhanced. In order to secure "...the full enjoyment of its theaters, museums, libraries, lectures and social pleasures it is essential that the means of access to them should be rendered not only easy, and free from danger or discomfort, but attractive and elegant" (Glaab and Brown 1961). Before the turn of the century, when ten miles of wilderness still separated them (or roughly fifteen miles by river), Cleveland envisioned Minneapolis and St Paul completely joined by suburban growth and wished to plan for that future. He urged the purchase of park land in outlying areas while it was still inexpensive and while it was possible to preserve the most scenic areas or "...future generations will only deplore the want of features of natural beauty as no money could purchase and no art could presume to imitate" (Anonymous 1889).
By 1905, 1,800 acres of that system had been acquired. Another 3,500 acres was added while Theodore Wirth was Superintendent of Parks and much of it within the guidelines established by Cleveland. Wirth (1945) also comments on the growth of the roadways. "The total length of our parkways in 1906 was 31 miles... today we have 62.23 miles... (and) the circuit of the Grand Rounds parkway system is almost complete". Wirth expanded the system with the city limits and made continuous recommendations for extension into the surrounding counties (Figure 12). Cleveland's plans for broad boulevards along both banks of the Mississippi River, interspersed with parks and lined on the inland side with rich residences unfortunately did not extend into the center of the city, an area no doubt occupied by mills and factories at the time. The value of preserving that river land for park purposes has been recognized and acted upon in the last twenty years.

Minneapolis parks have had a long history of dealing with conflicting use of their parkways and boulevards. In 1891 a special committee reported to the Board of Park Commissioners that "...parkways that serve the three-fold purpose of accommodating residential, commercial and park traffic in one are always too heavy a charge against the levy for park purposes" (Wirth 1945). They recommended that roads over which they had no use control revert to city ownership.

When the pressures on parks from highway construction were enormous in the middle fifties, Park Superintendent Doell developed a well defined set of principles which he submitted to the State Highway
Figure 12. WIRTH PLAN OF MINNEAPOLIS METROPOLITAN PARK SYSTEM, 1935
Department in hopes of effecting compromises that would preserve "...aesthetic settings and recreation for the people...(and provide) what was best for the city as a whole" (Metropolitan Council 1985). Among those principles, Doell recognized the importance of neighborhood boundaries and that the "character" of park roads can be damaged by the introduction of highway traffic. Conversely, he made it clear that all park property was not sacrosanct, and that compensation in cash or new property could be of benefit to the system.

August Heckscher (1975) asked Robert Ruhe, the then Commissioner of Parks, what he planned on doing about an admitted problem of constant increase in speed and numbers of cars on the parkways. He replied, "I am narrowing the parkways".

**The Park Systems Today**

"If the pleasure ground had been a pious patriarch, the reform park a waitress or a car mechanic, the (open space system)... was something of a performance artist" (Cranz 1982). Most of the historic park systems today contain layers and artifacts of all the periods since their original design. In a few cases the worst abuses and intrusions are being removed or relocated and the park system restored to an approximation of the original designer's intent.

Political restructuring has occurred in most of the cities so that portions of the park systems have come under different authorities, or planning, funding and administration functions have been separated from one another.
Washington, DC

In comparing the L'Enfant and McMillan plans with the current one (Figure 13) it would seem that the general form of both earlier plans are retained today, with two exceptions. The addition of the Potomac Parks with their attendant memorials, and to a lesser degree Anacostia Park, changed the shape of the L'Enfant city and the river views from the Capitol. The McMillan plan indicates extensive building around the Washington Monument which has never been done and park areas adjacent to the Soldiers Home Hospital and Galludet College. Those two park spaces do show on the Washington, DC street map, but as they are not longer administered by the Park Service neither they nor the parkways intended to connect them to each other or to Anacostia and Rock Creek Parks appear on the current plan.

Although not apparent from the maps, the literature would suggest that details of how portions of the plans were implemented has been altered. For instance: what was intended as a pleasure drive linking the Civil War forts in the McMillan plan, has retained its form but been made a pedestrian/bicycle pathway; and, while the shape of the Mall remains the same, the locations of some buildings and drives differ from both the earlier plans.

Observations were made in parts of Rock Creek Park, along the parkway leading from it into central Washington, on Pennsylvania Avenue between the Capitol and the White House, along the Mall and into West Potomac Park (Figure 14). Automobile access to all the areas covered was well marked, however all areas except Rock Creek Park were congested
Figure 13. NATIONAL OPEN SPACE SYSTEM, 1970/1985
Figure 14. OBSERVATIONS, WASHINGTON, DC, 1986
even during nonrush hours, with almost no parking available. The amount of traffic and the speed at which it traveled made impossible anything more than a general impression of pleasant, undulating wooded areas in Rock Creek Park and open, level lawns with trees framing acres of familiar monumental buildings in other areas.

Walking in Rock Creek Park was an experience in keeping with the general impression while driving—a natural setting of both open and wooded areas, moving water in the creek and unobtrusive development. By contrast, West Potomac Park was highly manicured, level, almost entirely open, and laced with roads and highways. The clumps of trees seemed reserved for shelter around building groups, which was also where I found a place to park and walk. The Mall presented a similar manicured and clearly urban appearance, but for the pedestrian there were a variety of spaces, in and out of trees, with interesting edges and, despite the traffic, safe and comfortable access.

While the Mall could be considered both boulevard and park, Pennsylvania Avenue is definitely a boulevard as L'Enfant would have envisioned it, punctuated with parks, plazas and memorial triangles but completely dominated by the built environment. The only exception to that dominance being the new Pershing Square at the western end of the Avenue. In spite of its relatively small size, it manages to convey a real sense of entrance and contrast to the surrounding city.

In Rock Creek Park during mid-morning most of the users seem to be people going through on their way elsewhere, except at the zoo and to some extent the Nature Center. West Potomac Park was almost devoid of
pedestrians except around the Lincoln and Vietnam Veterans Memorials, but the Mall and Pennsylvania Avenue were crowded with people for most of the day. As a major tourist attraction, Washington is unique among the four cities in this study, and most of the pedestrians seemed to fit in that category. Casually dressed, guidebooks and cameras in hand, they walked in unhurried fashion, bought candy and soft drinks at corner kiosks or sat on benches, steps, walls and fountains.

Cleveland, Ohio

"The Emerald Necklace today retains much of its original quality of wilderness. Later roads have crossed it, but no expressway pre-empt or parallels it...at least in the areas seen at first hand, the roads have been kept narrow and the temptation to turn them into speedways has been resisted" (Heckscher 1977). That was also my experience when making observations in the outer ring of the system—traveling along Valley Parkway and through Rocky River Reservation—but not in the oldest sections near Ambler and Wade Parks (Figure 15).

The traffic on the parkway and in the reservation was minimal and the pace slow enough to be aware of details such as rustic bridges, varied forms of trees and shrubs and the colors of rocks in the river. Much of the passing scenery looked completely "natural", densely wooded and undeveloped, and was interspersed with vistas of water in lakes or creeks, lawns, picnic groves and even residential areas. Awareness of the effectiveness of the transitions was heightened when approaching the occasional at grade street crossings. The sensation was of emerging for
Figure 15. OBSERVATIONS, CLEVELAND, 1986
a brief instance from a calm, peaceful world to the jangle of an everyday life you had temporarily forgotten.

Parking was unobtrusive, available and scattered in a number of smaller groups rather than a single large lot. I observed few special crossings for pedestrians or bicyclists, but did get intermittent glimpses of paths for both these groups while driving on the road. Although there were not large numbers of people, each view seemed to contain at least one jogger, bicyclist, bird watcher or picnicker.

Although there were buildings associated with the reservation, you felt they were there as guests and must remain on their best behavior. In Wade and the adjoining section of Ambler Parks the reverse was true. The landscape existed as a setting for buildings, both residential and public. Here the parking lots were large, heavily traveled roads too close and access while driving very confusing. The pace of people using the area was relaxed but purposeful, as if the landscape was pleasant but its appreciation was not the objective of their presence.

Figure 16 is a composite map showing the reservations of Cleveland Metroparks, the Lakefront Parks now leased to the State and the major parks still administered by the City of Cleveland. All of the parks indicated on the 1897 plan still exist, however, major highways now slice through Brookside and Gordon Parks, and isolate Edge Water Park from the rest of the city. While not shown on the plan, the literature and other maps suggest that the original intent was to link all the inner parks in a circle around the city with parkways or
Figure 16. CLEVELAND COMPOSITE PARK SYSTEMS MAP, 1986
boulevards, almost none of that has been accomplished. With the exception of the continuous line of parks along the Chagrin River on the east boundary, most of the 1916 plan has been implemented. In many cases, the reservations have been expanded considerably so that the overall form is less that of a continuous linear park.

Kansas City, Missouri

Penn Valley Park, one of the first in Kansas City, is comparable to Cleveland's Wade Park in size and proximity to the central city, however it is both more "natural" and less accessible. While Wade Park is relatively level, at least half of Penn Valley Park has very rugged topography with steep climbs, a small lake and an expansive view from the top. Unfortunately, the view is primarily of the busy city streets and highway interchanges that surround the park and make pedestrian access extremely difficult. Finding the way into and through the park in an automobile was no easier, if less hazardous. Parking was almost nonexistent along the narrow winding road of the steep half of Penn Valley, while cars lined the wider road in the more level part of the park.

From Penn Valley, I followed the southern section of the Paseo to Swope Parkway and into Swope Park (Figure 17). Portions of these roads were divided by broad areas of lawn and trees, and occasionally flowers, but the speed and congestion of traffic only allowed for a general impression. The topography of Swope Park was gentler than that
of Penn Valley, rolling and very open, with acres of mowed lawn and occasional densely wooded areas removed from the road.

Traffic in most of Swope park was moderate, but traveled generally faster than the posted limits, which in themselves were too fast for detailed sightseeing. There were a number of places to stop, park and walk, but the prospect of doing so was less inviting than Cleveland’s Rocky River Reservation or Washington’s Rock Creek Park. Much of the landscape in Swope seemed not to have a life of its own that one could explore, but was designed rather as space to accommodate large numbers of people engaged in activities unrelated to it.

There were several people fishing in the lake in the natural part of Penn Valley Park, while the other section was dominated by parked automobiles, commercial buildings and people headed elsewhere. Swope Park also seemed deserted—the breadth of hardly traveled roads, almost empty parking areas and scattered paper or plastic remnants only emphasized how lost small numbers of people looked in the large scale of its spaces.

All of Kessler’s original plan still exists today, but is divided and marred by freeway development (Figure 18). Freeway interchanges cut between Benton Boulevard and The Grove, between The Parade and The Paseo north of it and isolate a third of the original West Terrace Park. To compound the problem, rather than separating the park road system from city transportation roads, these early boulevards in Kansas City serve as major access points to and from the freeways.
Figure 18. KANSAS CITY PARK AND BOULEVARD SYSTEM, 1986
Heckscher (1976) also said that "Kansas City... attributes to the boulevard system the tendency for its residents to disperse evenly, making Kansas City one of the least densely populated cities in the country". This was certainly true for residential areas near Penn Valley and Swope Parks. The delightful neighborhoods only seemed to heighten the abandoned feeling of the parks.

Minneapolis, Minnesota

Except for the inevitable intrusions of freeway development, almost none of the Minneapolis park system as designed by Cleveland has been eliminated and much has been added, but all within the dictates of the "Grand Rounds" concept (Figure 19). Major highways have cut Wirth, the largest park and not part of the original plan, into three sections and crossed the river parks in two places.

There were a number of attempts to create a Minneapolis metropolitan park system beyond the city boundaries based on Wirth's 1935 plan, but that was never accomplished. Instead, in 1957, the Hennepin County Park District came into being and a comprehensive plan designed by Doell and Dhainin the following year (Figure 20). Like the Cleveland Metroparks, the primary objective of that plan has been the preservation and restoration of natural resources. The Metropolitan Parks and Open Space Commission was created in 1974 and has made possible the coordination of park funding and development between the cities of Minneapolis, St. Paul and the surrounding counties.

Acquisition and development of parkland along the river banks
Figure 19. MINNEAPOLIS PARK SYSTEM, 1986
Figure 20. DOELL PLAN FOR HENNEPIN COUNTY PARK SYSTEM, 1958
has been taking place in the last ten years. Cornelia Einsweiler, Recreation Research Analyst for the Minneapolis Park and Recreation Board, informed Tom Volgey of Tucson in 1985 that almost 1000 acres had been added to the Minneapolis system since 1968. While some of the increase was a result of a change in political control over neighborhood parks, a portion was land on the east side of the Mississippi River opposite the downtown.

The Minnehaha Parkway between Lake Nokomis and Lake Harriet was pleasant, uncongested and primarily residential in character (Figure 21). Wide median strips planted with lawn and trees looked inviting and moderately accessible to a pedestrian. Lake Harriet was impressive in size and an attractive setting for the surrounding residences. However, the amount of land between the road and the water was extremely limited. Signs of heavy use or poor maintenance were visible, although there was no one there at the time.

The new river park was not complete at the time I was there and so impossible to evaluate. It looked raw, uninviting and dominated by its parking lot. Minneapolis was the only one of the four cities studied that was currently engaged in major park expansion in the central areas of the city rather than the suburbs. Renovation of Cleveland's river parks was accomplished by the State of Ohio and did not involve purchase of land not previously in park use.

While none of the parks I visited retained the flavor of Olmsted's "rural" parks, like Kansas City the system was important in shaping the form of the city. "To this day Minneapolis neighborhoods
Figure 21. OBSERVATIONS, MINNEAPOLIS, 1986
have been stabilized and given identity by their relation to an arrangement of parkways and boulevards laid out a century ago" (Heckscher 1976).
CHAPTER 4

DISCUSSION AND CONCLUSION

This chapter is divided into three major sections. The Research section contains a discussion of the limitations and successes of various aspects of the study. Discussion of findings examines the significance of the findings presented in Chapter 3. The final section presents conclusions from this study as they relate to the overall goal, and suggestions of directions for further research.

The Research Objectives

There were several stated objectives of this study and each was achieved to varying degrees. The examination of "nineteenth century park systems for the physical and cultural surroundings that existed when they were originally designed" was presented in the Research Setting and Original Park Systems sections of the third chapter. This objective was the most thoroughly documented and that emphasis was partly a matter of choice. It was during this period that the philosophical and physical foundations of the historic park systems were laid and on which subsequent forces would act.

Additionally, the late nineteenth century is a period that has been widely studied from different points of view and the available literature is substantial. More particularly, the idea and development of public parks during that brief era was a matter for intense
discussion among professionals and lay persons alike in letters, reports, newspaper articles, and journals. As parks became a less unique part of the urban landscape, the intensity of discussion moderated and was more often confined to professional broad-brush planning, landscape architecture and recreation journals.

The nature of this study made it necessary to limit the area of investigation for all sections, and the objective of identifying and describing "cultural and physical forces which have influenced the development of those (historic park) systems" was further circumscribed by the areas of literature studied. In particular, the possibilities of strong influences on the park systems stemming from economic trends and political structuring were less thoroughly developed and examined than design philosophy, physical factors and social or technological trends.

The determination of "which factors were of particular significance in determining the shape of each system today" has occurred in two stages. The topics covered in the Cultural and Physical Forces section of Chapter 3 represent the most important of those examined in the literature. The factors whose significance was reinforced by direct observation are discussed further in the next section of this chapter.

The final section of Chapter 3 was devoted to comparing the forms and uses of each park system today with its original design and with one another. The time and financial constraints imposed by comparing four systems in widely dispersed locations were particularly limiting to this objective. It was only possible to spend a day or two in each location, which was not really sufficient to see the whole
system or even the chosen portions in any great detail. It was particularly frustrating not to be able to revisit a park system when accumulating insights made it desirable to do so, or discover that some literature and maps were unavailable from Tucson.

Definition of Terms

It seems that many of the real insights of this study are not new, but are rediscoveries of concepts related to the development of park systems that have lost precise meaning over time. Communication among professionals and the public will be ambiguous until some of that precision is restored, or a new vocabulary developed.

Operational definitions of the key words—park, park system and parkway—were adopted initially to confine the range of investigation and to establish a common understanding. Each of these words seems to have a fundamental meaning that separates them from other essential and tangible elements in our environment—like housing and clothing—and an interpretation of that meaning which has been expanded and possibly abstracted over time. I emphasized the "park era" definitions of these words because they were the clearest, and their interpretations closest to the fundamental concepts.

Cranz (1982) suggests that the fundamental concept of "park" relates to the expression of "irrepressible life force" through the use of plants (I would add water, as well) and the recognition of the need to play. It is the presence of those basic elements that allows us to recognize golf courses, river walks and baseball fields as parks,
despite their differences. In the same way we see igloos, castles and tents as houses or kilts, suits and loincloths as clothing.

Assuming the physical or social environment demands it, few would argue the necessity of protection provided by housing or clothing, although different cultures, generations or classes may debate the merits of different types. Perhaps because the English landscape style of rural parks has become synonymous with the symbolic image of "park", discussions in the literature about the validity of this interpretation are often thought to be discussions of the need for any expression of the fundamental concept in our urban landscape.

A statement that bustles are an absurd and unnecessary article of clothing today, would not be interpreted as support for universal nudity. Nor would the appreciation and preservation of the Doge's Palace in Venice be considered a denial of the validity of other architectural interpretations of housing. By the same logic, whether the Olmstedian style of park is appropriate to our time or to non temperate climates, is a different argument than whether parks as expressions of our ties to the natural world and our need for play should be a part of everyday urban life.

The definitions of park system and parkway suffer similar confusions. Since each is preceded by "park", it can be assumed that each should contain some form of plants and/or water and an opportunity for play. The elements of a political or mathematical "system", which are abstract concepts, need not be related in any way that can be experienced physically. However, it seems more logical to presume
concrete and organic linkages for a "system" whose elements are parks. Plants and water do not exist in the abstract.

The parkway has been a device for linking parks but, whether it provides a "way" for horses, pedestrians or automobiles, it must also support the fundamental concept of "park" to merit the name. Trees and babbling brooks do not a parkway make—the opportunity for play must also be provided. A parkway does not have to be a narrow, winding country road. Even a four lane highway designed for high speeds and high traffic volumes can use the term legitimately if the natural scenery in view can be appreciated at 60mph, and heavy, noisy commercial traffic is excluded. Ideally, such a roadway would connect parks or provide places to exit, stop and enjoy the surroundings more intimately. In such a setting, driving could be considered "play". However, I think few would consider battling congested lanes of fast moving traffic on foot or in a car, "play" not matter how attractive the surroundings, particularly if they were denied physical or visual access to them.

Methodology

The goal and objectives of this study were intended to be exploratory, and the observations were structured in keeping with that exploratory nature. However, one or both of two preliminary steps—testing the observation criteria in local parks first, or spending a longer period of time in the first park system visited—might have resulted in a more efficient use of time without a reduction in the
degree of openmindedness or a significant change in my response to each
park system environment.

Discussion of Findings

Research Settings and the Systems

The variations in geographic area, climate and topography of the
four systems studied affected the types of activities that occurred and
choice of plant materials within individual parks—although even these
were subject to fashion. These physical factors do not, however, appear
to have affected the basic form of each system or the order in which
they were originally designed or modified.

All four cities had extensive drainage systems, river and/or
lakefronts and prominent topographic features and vistas. Whether those
features formed the basis for the design, however, depended on the
sensitivity of the designer, the structure of the existing city and the
willingness of the public to accept unique landscape as a rationale for
parkland. In Kansas City, for instance, both Olmsted and Kessler
considered the rugged topography an advantage for park planning. A
pamphlet published by one of the major opposition groups presents
another view. Using language from the Board's own 1893 report that
describes the proposed Penn Valley Park as a "topographical enigma,
(containing) fantastic twists, deeply indented rocky fiords....", the
pamphlet argues that "...any practical man (would realize) that this
land is wholly unsuited for park purposes..." (Gunn). On the other
hand, in laying out the connecting links for the Kansas City park
system, Kessler chose to enhance and expand the imposed grid of the original city and mostly ignore irregularities of topography.

Similar combinations of the style appear in the other cities, either in the interior design of individual park spaces or the siting and borders of those spaces relative to the topography. In Washington, DC the form of Rock Creek Park and its parkway are examples of a different era and awareness of nature than the Mall and Pennsylvania Avenue. L'Enfant included much more open space than was considered "civilized" at the time, but the shape and siting of those spaces was still more responsive to the works of man than the work of nature. In Minneapolis and Cleveland the grid structure in the central cities dominated the form of the park system, but was abandoned where possible in the outlying areas.

The east to west geographic location of each city was a factor in their founding, but not in when or how the park systems were designed. The chronological order of incorporation of each city moves from east to west, coinciding with the pattern of western moving settlement in America (Table 3), however, the four original park systems were not designed in the same westward time sequence. Also, all four systems were designed within a span of less than twenty years. These two factors would suggest that the influence of Olmsted, the "Park Era" and the City Beautiful Movement were of greater importance than geographic location. It is also possible that rapid population growth was a necessary precondition, as Washington was the last of the four
cities to experience significant growth and the last to develop a park system.

Cultural and Physical Forces

Parks, Plans and People. The size, type and distribution of parks, parkways and boulevards in all four systems, whether oriented to the grid or natural topography, were a result of both planning and happenstance. Having fought so hard to get political approval for parks at all, it seems likely that early park boards were unwilling to reject gifts of wealthy supporters or purchases made before the system was designed.

For instance, the largest park in Kansas City was a gift which Kessler would not have planned for initially, as he felt it was too remote a site. Washington's largest park, Rock Creek, was purchased ten years before the McMillan Plan incorporated it in the metropolitan system and major park purchases in Cleveland began twenty years before any comprehensive, system plan. Minneapolis seems to have the greatest consistency between Cleveland's original plan, when there was only twelve acres of parks in the city, and the reality of over 5000 acres of parkland today. Even land acquired by donation in Minneapolis was, like portions of Lake Harriet, within the original design.

On the other hand, for the professionals associated with the development of the park systems, the plan provided clear direction for their efforts and a means of communicating that direction to the public. The elaborate exhibit of the McMillan Plan for Washington in the Corocan
Gallery was a major factor in gaining support for the plan. Theodore Wirth pointed with pride to the completion of Cleveland's plan for the Minneapolis park system over fifty years after it was designed. In turn, Wirth's metropolitan park plan from 1935 became the basis for the Hennepin County park system proposed more than twenty years later.

It was perhaps also happenstance that a single man or group of men were willing and able to dedicate a considerable portion of their lives to the early development of each park plan. Kessler in Kansas City worked initially without compensation. Berry and Wirth between them covered the first sixty years of the Minneapolis park system. In Washington, Moore provided a "...continuity of conscience for more than four decades...." (Reps 1967) and Frederick Law Olmsted, Jr. supported the plan even though he had no official status until 1926. Stinchcomb was director of the Cleveland Metropolitan park system for forty years. Regardless of the reason, individuals with a strong vision of the future were a determining factor in the survival of each park system.

Transportation. The park era was sandwiched tightly between the industrial and transportation revolutions. The inhumane living conditions which accompanied the industrial revolution precipitated a growth in social conscience of which parks were one manifestation. The transportation revolution drastically changed the speed, distance and ease with which people traveled, impacting park systems directly and indirectly.

Carriage roads that accommodated travel to and through the park during the Pleasure Ground era were generally thought to be compatible
with the park environment, as the pace in a carriage or on horseback was not a great deal faster than that of a pedestrian. "The slow speed allowed more intimate enjoyment of the scenery and allowed the road to be constructed with many curves and steep gradients... conform(ing) to the topography" (Eliot, II 1924). Carriage travel also meant that a drive through only a part of the larger park system could easily be an afternoon's entertainment. Even public transportation like streetcars, contributed to the popularity of the parks by providing service from the city center to those in outlying areas, frequently serving as the transportation for advertised tours of the systems.

With the growing use of the automobile in the early decades of the twentieth century, the relationship between transportation and the park systems became more adversarial. The change was gradual enough, however, that seemingly only a few recognized the divergence, but there has always been at least three levels of response: succumb completely to the demands the automobile made on the system; use various means to discourage heavy automobile use; or restrict automobiles entirely. The latter was the approach that Charles W. Eliot, II preferred when he wrote in 1924 "While park roads in the days of carriages were incidental to the broad landscape effects of the park, and were subordinate elements in the design, the requirements of an automobile road are such that whatever may be done, it can not be made subordinate: it dominates its neighborhood".

Usually the potential direct encroachment of a new road or highway over park land has been recognized as a threat, whether or not
it could be prevented. However, the many seemingly minor decisions—to widen a boulevard, straighten or regrade a parkway, allow a new highway to border but not enter a park, increase the speed limit on a park road or not provide parking except in large lots at widespread locations—have too frequently been as destructive in their cumulative effects as any eight lane freeway at grade through the center of a rural park.

Most of those decisions have encouraged the use of automobiles for purposes they are best at, moving their passengers as rapidly as possible from one point to another. It is an objective that contradicts the original intended use of the park systems and makes difficult, if not impossible, appreciation of natural scenery or details of fountains and residences along the more urban boulevards. While the larger parks may have been able to absorb some of the impacts, the parkways and boulevards have not. These links between parks have in many cases become one of the means of isolating the parks from one another. Cutting the linkages between parks by allowing major traffic arteries or highways to be built around their perimeters accomplishes the same kind of isolation. Access to the park becomes hazardous for pedestrians and frustrating for motorists. The pedestrian is unwilling to cross lanes of fast moving heavy traffic to reach a park that, if not large, may be just as noisy as a city street. The motorist cannot really enjoy the park in the midst of traffic and access to the park and a place to stop once he arrives is limited.

Another even less direct and somewhat controversial impact of the automobile on parks, is the abandonment of the urban core to slums
and office buildings—surrounding the park with a population that has little leisure time or spends it elsewhere (Glaab and Brown 1961). Geographic expansion and suburbs may be inevitable elements of urban growth, but abandonment of parks in the inner city is not. Whether it is a part of the "gentrification" process occurring in many cities in recent years, or a response to the siting and design of the park system, Minneapolis parks suffer from overuse not underuse. According to Loper (1986) this is in part because some of the suburban population comes into the city to use the parks and few of the urban population go out of the city for their recreation.

"Things" in the Parks. The appeal and art of the early parks lay in the arrangement of spaces. However, Nelson (1978) said the "natural" style is difficult to sell and hold because the public is unable to see where the money went. Buildings, statues and tennis courts, on the other hand, are visible and easily valued. Several park designers felt they were fighting to keep war memorials, art museums, restaurants, zoos and floral extravagances out of the spaces of the park almost before they were completed. In Washington, DC the problem of memorials is a continuing one. Only recently has there been legislation strictly limiting the conditions under which memorials can be built in the Washington parks (Ronsisvalle 1986).

There can be few absolute assumptions about whether an item constitutes a "thing"; each must be examined in relationship to the fundamental concept of a park. Does it contribute opportunities for play and enhance, or at least not inhibit, expressions of the
"irrepressible life force"? While a skyscraper is clearly not in keeping with those criteria, picnic shelters and toilet facilities, if sensitively sited and constructed, could be. Conversely, items like jogging trails and combinations of lawn and trees can become "things" when applied to the park landscape in a perfunctory manner at the dictates of fashion and without regard for the topography and environmental conditions of the site.

It is only since the Victorian manner of park design has moved out of context and become, in effect, an incongruous survival, that one ceases to appreciate it, or perhaps what is sometimes assumed to be the Victorian manner and which, often, on closer examination, proves to be something much less self-confident or assured, and much less capable....(Chadwick 1966).

Many of us have grown up with parks that are collections of haphazardly distributed living or constructed items over a profoundly altered natural landscape, and therefore meaningless in terms of a quality experience of nature or play. It is difficult to appreciate and perpetuate quality outdoor spaces, or the continuity of a "park" experience within a system if examples are not available to experience.

**Conclusions**

The goal of this study was "to discover what factors might be inherent in these historic park systems that will enable us to create new systems that are strong enough to maintain their form but flexible enough to adapt to the changing needs of the people they serve". Many of those factors are presented in the third chapter and evaluated in earlier sections of this chapter. This final section will discuss
other insights gained from this study and how they may be applied to future research or the design of park systems today.

Natural and Urban

These words represent two basic approaches to the design of metropolitan parks and park systems. They did so 100 years ago and they still do so today. Neither of the obvious extremes—wire fenced, solid concrete yards and completely untouched wilderness—appear in the portions of the park systems which were observed, nor would they be appropriate. A tendency or balance in one direction or the other is apparent, both in individual parks or sections of parks and in the design of the system as a whole.

The urban approach is anthropocentric. While it may recognize a human need for plants, water and play, it assumes that the disposition and development of those natural elements or constructed facilities should be controlled by man: trees will grow and toddlers will play only in the boxes provided for them; grass will be 1 1/2" high and not exist outside predetermined straight edged boundaries. When designing from this point of view, parks exist as decoration for the built environment of the city and to provide spaces for specific recreational activities.

This approach fails to recognize that the attraction of those elements often lies in their very refusal to submit to "civilized" control. The "tree that grows in Brooklyn" was admired for the tenacity with which it lived and grew in the face of multiple manmade obstacles.
Civilized adults sometimes long for the freedom and ability of children to find enjoyment in pebbles, puddles and mud.

The natural approach to park and park system design awards precedence to the dictates of nature. It recognizes that living elements in the landscape and the shape and composition of the earth that supports them constitute an aesthetic and physical reality separate from, but not necessarily incompatible with, the built environment.

It is an approach that broadens design solution possibilities where the conflicting demands of nature and the city do exist, but also one that requires an understanding of forces, dynamics and relationships of the natural world. Rivers and washes are subject to periodic flooding, but encasing them in concrete is not the most aesthetic or necessarily the most efficient means of protecting the urban population during such a period. A visual effect similar to mown turf can be achieved with a mixture of low growing plant materials allowed to seek their own boundaries, and one that is more easily maintained and often as functional.

The development of form "...is not the preoccupation of dilettantes but a central and indissoluble concern for all life" (McHarg 1969). Halpern (1986) stated that form follows process, not function; that there is an ecology of form which evolves from nature acted on by process. Form can reveal what McHarg terms "ill fit, misfit, unfit, fit and most fitting". The design of urban park systems must find the most fitting solutions for both the natural and built environment.
Plan and Policy

The idea of a plan was not new even when Horace Cleveland was urging the Minneapolis Park Board to make one in 1881, but the existence of a plan is essential to the realization of an idea. Plans are today an almost institutionalized part of park development.

Reps (1967) suggests that several attributes of the McMillan plan were instrumental in insuring its completion—attributes that should be considered in designing today's park systems. The McMillan Plan was effective because it was not just a statement of goals, objectives and standards but contained "...specific, concrete images in plan drawings, models and perspectives...that were bold, broad in outline and simple enough to be comprehensible" (Reps 1967).

While none of the other park system plans were presented in the same elaborate form as the McMillan Plan—"plans, perspectives, bird's-eye views, models, (and) renderings..." by some of the nation's best known illustrators (Newton 1971)—they were highly publicized and debated. The "Kite Plan", as the core of the McMillan Plan was dubbed, Cleveland's "Grand Rounds" concept for Minneapolis and the "Emerald Necklace" of the Cleveland Metropolitan park system, were all bold images that have been almost wholly realized, even though it took a considerable period of time.

The plan establishes direction and a strong visual image. If the plan is not to be completely inflexible, however, there needs to accompany it a carefully drafted set of definitions, goals and objectives. The same criteria of simplicity and comprehensibility in
the broad outline should apply to policy statements as are suggested for the plan, but those statements also express the conditions and boundaries under which the plan might be changed.

If Eliot's (1924) definition of parks as "...lands intended and appropriated for the recreation of the people by means of their rural, sylvan and natural scenery and character...." were tied to a specific park system plan, then decisions to widen park roads to accommodate automobiles would probably not have been made. Conversely, Kessler's definition of boulevards as being part of the traffic system of Kansas City, almost mandated that they be widened when the decision had to be made.

A park system is only one of many systems in the city. Clearly stated definitions, goals and objectives not only help maintain the distinct identity of a park system, but help determine the compatibility of land uses adjacent to the parks. If accessibility for pedestrians to the park is one of the goals, then freeways on its borders are no more acceptable than freeways through its center. On the other hand, changing the linkages between the Civil War forts in Washington from a parkway, as originally designed, to a pedestrian/bicycle way, is an example of the intent as defined by policy taking precedence over the plan.
Linkages

Even though this study was confined to park systems, and systems by definition must include linkages, the importance of the form and quality of those linkages was still a revelation to me. The uniform application of green to parks, boulevards and parkways on road or park maps was deceptive, and left me unprepared for the differences.

In the late nineteenth century when roads were difficult to build and maintain and the society was rapidly urbanizing, the "Grand Boulevard" concept could have held more appeal than the narrow, winding "parkways" that followed waterways and topographic features. But the straight lines and ample width of the boulevard were, in the systems studied, the most vulnerable to the impact of the automobile and they retained the least sense of a park.

The parkways because of their narrow, sinuous form and irregular grades were perhaps more expensive to modify to accommodate the greater speed and numbers of cars moving in and out of a growing city. It is also possible that because the parkways are frequently associated with appealing natural features, they have been perceived as clearly "parklike" and deserving of preservation.

Whatever the reason, this study indicates that the park system linkages whose form and siting are tied to natural topography, particularly drainage systems, have been impacted the least by changes in technology and activities. However this research only involved portions of four park systems; it would be interesting to address that issue alone with a broader sampling of systems.
The findings of this study also suggest that all park elements are more likely to survive if they are part of a system and not isolated from one another. Time is a basic factor in the perceptual impact of an environment. In all but the largest parks, there is not enough space to provide the length of experience necessary to establish an identity and sense of place, particularly for the driver as well as the pedestrian. When space is at a premium, a group of smaller parks physically and experientially linked could achieve the same goal more economically.

Such a system is also more likely to provide accessibility to the parks to a larger portion of the city's population. As was suggested by the observations in Penn Valley Park in Kansas City, even a medium sized park with spectacular natural scenery can atrophy when isolated from the potential users. A smaller park in a similar situation would be totally absorbed by its urban surroundings and cease to exist as a park at all.

A park system then becomes a network, with a specific identity and function, that touches all parts of the body of the city as do transportation and potable water systems. By doing so it becomes accepted—sometimes appreciated, sometimes taken for granted—but a definite part of everyone's daily life and therefore more secure in a social as well as a physical sense.

If the organizing scheme of the park system is based on natural features—drainage systems, ridges, marshes and mountains—then it also provides a degree of protection for those features and the functions and
wildlife they support. The combination of park and natural systems provides mutual reinforcement for the portion of the fundamental park concept that relates to our ties to the biological world. Care must be exercised, however, to avoid the dilemma of the National Parks, where the opportunity provided for play has become in some instances environmentally destructive.

Like the issue of linkages tied to natural topography, it would be interesting to compare a wider sample of urban parks that included those not physically linked into a system at all. The question of possible disadvantages of a system approach has not been explored. It seems possible that in some sense the linear links of parkways may be too fragile to provide protection to parks not large enough to function in isolation.

Further Research

Some research suggestions have been made earlier in the chapter, but the following is a list of other questions suggested by the study:

1. There has been a shift in the past 100 years from viewing the development of urban parks as a social cause, to a part of the planning bureaucracy. What have been the attendant changes in prestige and financial support for the parks? What are the existing choices of bureaucratic structures for park administration and development, how did they evolve and how are they funded? What differences have those various structures meant in the control of new park development and current management and maintenance?
2. There exist a variety of means for financing the development of urban parks. What methods have been used to acquire and improve park properties? What part have the city, county, state and federal governments played?

3. Urban renewal, like decentralization, has long been a part of the growth of cities. During the early Park Era, parks were often considered the replacement choice for "blighted" areas, while during some periods they were considered part of the problem. Under what conditions have those changes in attitude occurred? How do the cycles relate in individual park systems to Cranz' (1982) contention that parks reflect attitudes of and towards the urban community.

4. Bradley and Millward (1986) found "...that use of green space (in Britain) tends to be largely passive, and yet resource allocation and the facilities provided...do not reflect this emphasis". There is not sufficient information available on: how, why or how much urban parks are used; standardized methods to obtain such information; criteria to determine how much use is sustainable.

Success

Designing park systems involves struggling with the long debated questions about man's relationship to nature.

The fear of insignificance, of impotence, of loneliness drives man to create meaning, to produce proof to himself and to others that he counts. Since man first began to symbolize... and especially since he first began to erect a wall around his society, a large measure of that proof has been the material environment that he has created out of nature...(however) the more we build, the more isolated we become, both from the
Designing urban/metropolitan park systems places the designer at the heated center of that inward and outward conflict. Wilderness preserves are somewhat protected from the conflict by being "out there"—bears, floods and poison ivy are much more acceptable at a distance than in our back yards. The design of purely urban plazas also presents less difficulty because in that context it is acceptable for nature to be represented minimally, symbolically or not at all—they make no pretence to being parks.

I avoided the use of the term "success" in defining the scope of this study, because there seemed to be so little consensus on what constituted a successful park system. Where there was agreement on criteria for success, for example—intensity of use, there seemed to be no standard method of measurement. If the historic park systems can be viewed as battle grounds on which the continuing struggle to reconcile "civilization" and nature is fought, then I think their success is defined by the fact of their survival, whatever other measures we may wish to apply to the quality of that survival.
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**Population**

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**Park Systems**

- North Kansas City Park System/1957
APPENDIX A

MAP SOURCES

There are occasional discrepancies between dates that appear on maps or plans in this manuscript and dates mentioned in the literature for the same map or plan. The precise plan described in the literature may not have been available or the difference in dates may indicate a time span between development and publication of the map. I am including below a listing of where the maps were found, as indexing for map material, particularly before 1900 is scanty.

Figure 2. L'Enfant Plan of Washington, DC, 1791—this is a reduction of a color poster published by the United States Department of Commerce, National Oceanic and Atmospheric Administration.

Figure 3. Pease Map of Cleveland—-from Rose (1950).

Figure 4. Map of the Town of Kansas, 1846—-from the map collection of the State Historical Society of Missouri in Columbia, MO.

Figure 5. McMillan Commission Plan of Washington, DC, 1901—-from the National Capitol Planning Commission Report (1983).

Figure 6. Bowditch Plan of Cleveland Park System, 1897—-this is a reduction of a map in the collection of the Cleveland Public Library in Cleveland, OH.

Figure 7. Kessler Plan of Kansas City Park and Boulevard System, 1893—this is a reduction of the map attached to the 1893 annual report of the Board of Park Commissioners.

Figure 8. Cleveland Plan of Minneapolis Park System, 1883—-from the map collection of the Minnesota Historical Society in St. Paul, MN.


Figure 10. Stinchcomb Plan of Cleveland Metropolitan Park System, 1916—-from the map collection of the Cleveland Public Library in Cleveland, OH.

Figure 11. Greater Kansas City Park and Boulevard System, 1920—-from the 1920 annual report of the Board of Park Commissioners.
Figure 12. Wirth Plan of the Minneapolis Park System, 1935—from Wirth (1945).


Figure 16. Cleveland Composite Park Systems Map, 1986—this is a reduction of the 1986 Cleveland Metroparks System guide to which have been added by hand those parks now administered by the Cleveland Department of Parks, Recreation and Properties and the State Natural Resources Department.

Figure 18. Kansas City Park and Boulevard System, 1986—from the 1983 report of the Board of Park Commissioners.

Figure 19. Minneapolis Park System, 1986—this is a reduction from a full color poster published by the Minneapolis Board of Park Commissioners.

Figure 20. Doell Plan for Hennepin County Park System—from Kostik (1987).
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