Plans and Actions for Sustainable Urban Spatial Structure of Seoul

Chang Yi · Inhee Kim · Meekyong Song · Ji-ye Yoon



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01 Introduction

Seoul became the capital of Korea under the Joseon Dynasty¹ in 1394. It had a monocentric spatial structure from then until the 1960s, with one CBD (central business district) in the northern part of the city. From the 1960s on, population and industry began to be densely concentrated in the traditional CBD due to industrialization and economic opportunities. Devolving various urban functions of the traditional CBD to other growth centers was always an important agenda for the Seoul Metropolitan Government (SMG), with the rationale being to avoid traffic congestion and housing shortages that a densely populated CBD brought. However, there were serious security concerns.

In the late 1960s, there was a series of security threats from North Korea. Government officials at the national level were concerned that if another conflict with North Korea were to break out, it would be virtually impossible to effectively defend the city with 5~7 million civilians inside. All government functions would likely have ceased if the North concentrated its attacks on the CBD. Potential casualties would be unimaginable. Thus, the national government saw the need for a set of policies to restrain further development of the CBD and redistribute its population to other parts of the city².

For this reason, Seoul has aimed for a multicentric urban spatial structure since the 1960s. The city's spatial policy was to intentionally create multiple growth centers so as to minimize the security risks from population density. Aside from these security concerns, the SMG gradually realized that a city with multiple growth

¹ The "Joseon Dynasty" was a Korean dynastic kingdom that lasted for approximately five centuries.

² This concern has been documented in several publications such as 손정목, 2003, 서울도시 제획이야기: 서울 격동의 50년과 나의 증언, 한울. and Kim, Kwang-Joong et al., eds, 2003, Seoul Twentieth Century_ Growth & Change of the Last 100 Years, the Seoul Development Institute.

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centers would be more sustainable than if it had only one center. There are a variety of social costs incurred by a single urban center in terms of transportation system, environmental management, waste management, and housing. In that context, creating a multicentric spatial structure seeks to 1) relieve traffic congestion increasingly worsening from the single urban nucleus system due to centralized urban functions, 2) decrease energy loss and environmental pollution due to longer commutes, and 3) reduce the inconvenience experienced by the general public in relation to urban services. As Seoul has grown into a metropolis since the 1960s, its population has multiplied and boundaries have been rapidly pushed outward. At that rate, the single-nucleus system could no longer sustain the growth.

This book is about how Seoul developed into a city with multi-growth centers. In particular, we focus on the impact of the master plans for Seoul on its urban spatial structure. A series of urban master plans from the 1960s proposed urban spatial structure with the focus on creating a multicentric city. There are many other strategies in various disciplines in these master plans, but the reader will see a consistent vision for a city with multi-growth centers, even in the master plans from the 1950s. The Yeongdeungpo/Yeouido and Gangnam regions were growth centers outside the traditional CBD, promoted a number of times by the plans. A range of strategies were planned and projects conducted to realize the vision of multiple centers in the master plans. Before an in-depth discussion on creating multicentric urban spatial structure for Seoul, we will first look at how Seoul expanded and became the metropolis as it is today.

02 Population Growth & Expansion

During the Joseon period, Seoul's built-up areas were confined to the northern area of the city until the late 19th century. The city then began to expand horizontally. Since the end of the Joseon Dynasty, Seoul has undergone phenomenal growth to become what it is today. Normally, the growth of a city is determined by population increase. For Seoul, there were other factors such as socioeconomic changes of the time, commitment of the central government to developing the city, and the investment in urban infrastructure.

After liberation from Japanese colonial rule, Seoul experienced a rapid growth in population. In 1945, it had a population of only 900,000. In 1949, that had nearly doubled to 1.42 million with the city's administrative divisions covering 268.35km in area. The population did not exceed 2 million until the mid-1950s. However, along with the national industrialization that took place over 30 years, 200,000 to 400,000 people moved to Seoul every year looking for job opportunities during the 1960s. Rural populations rushed to Seoul every day by train. The city's population increased to 3 million over 15 years. In the decade between 1965 and 1975, the population nearly doubled from 3.47 million to 6.9 million. In the 35 years between 1955 and 1990, Seoul's population grew from 1.6 million to 10 million. It is no exaggeration to say that modern Seoul is the result of a fight against population growth, as can be seen in Figure 1 and Table 1 below.

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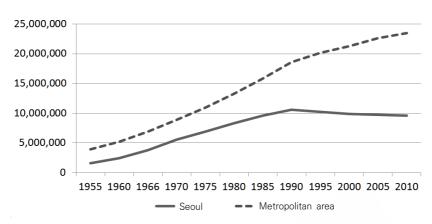


Figure 1. Population Trends in Seoul and the Metropolitan Area

Source: Statistics Korea - Annual Population Census (1955~2010)

Table 1. Trends in Economic & Population Growth, Korea and Seoul

Period	Change in nominal GDP (%)	Change in population (Korea) (%)	Change in population (Seoul) (%)	Average annual population increase in Seoul (people)
1955~1960	142.9	16.2	55.9	175,331
1960~1966	182.9	16.7	55.1	224,646
1966~1970	211.0	7.8	45.7	432,996
1970~1975	262.1	10.3	24.5	270,840
1975~1980	297.9	7.9	21.4	294,230
1980~1985	153.9	8.1	15.3	255,028
1985~1990	278.6	7.3	10.2	195,499
1990~1995	199.1	2.7	-3.6	-77,215
1995~2000	101.0	3.2	-3.6	-72,641

Source: Statistics Korea-Annual Population and Housing Census, Bank of Korea-Economic Statistics



Figure 2. Gwanghwamun Area Devastated during the Korean War (Nov. 1, 1950) Source: Republic of Korea Armed Forces, Defense Photo Magazine

Indeed, the explosive increase of population is what made Seoul. After liberation, Koreans who had been forcibly moved overseas by Japan and those who moved south due to the war started to return. It was during this time that population increase was the greatest. From the 1960s, Korea's economic development and job opportunities centered around its capital city. The government's aggressive approach towards urban redevelopment along with population growth promoted urbanization.



Figure 3. Cardboard Houses in Yongsan District (Jun. 15, 1964)

Source: Seoul Museum of History, 2011, 서울, 폐허를 딛고 재건으로 II: 1963~1966. 서울시정사 진기록총서 II, Seoul Museum of History, p.65

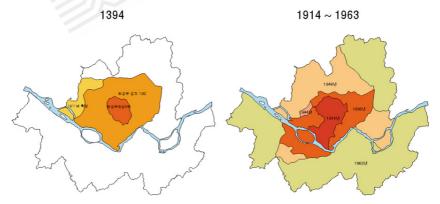


Figure 4. Expansion of Seoul's Administrative Districts

Source: Seoul Institute, 2000, Geographical Atlas of Seoul, p.25

As population grew, so did the administrative districts. The city's boundaries greatly expanded in 1963, similar in size to the present situation. This expansion was implemented on a large scale, even considering the population growth at the time. However, this expansion formed an important foundation for managing urban development in the future. Through reflection of advanced expansion of the administrative districts in urban planning, the public sector was able to lead urban development.

At first, Seoul was comprised of nine gu-districts, which formed the beginning of a metropolis. Seoul's built-up areas began to grow outward when the regions to the south of the Han River were integrated. With this change, the administrative regions grew from 268.35km to 613.04km in the 1960s, while the population grew to 3.26 million. It was a decade dictated by the first and second 5-Year Economic Development Plans. Land parcel readjustment programs were carried out on an extensive scale, including a project covering 26.44km that heralded the age of Gangnam, otherwise known as Yeongdong³.

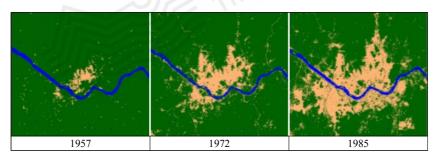


Figure 5. Expansion of Seoul

Source: Ibid., p.23

The land parcel readjustment programs worked as shown in Figure 6. The key was to replot land parcels by reducing their size. Replotting redrew landowner's property boundaries so that buildings could be built and urban development could

³ Gangnam was initially called Yeongdong, which means east of Yeongdeungpo.

occur. It involved land reduction, which meant that landowners received back 30~70% of their original land after replotting, with the remainder set aside for public use such as for roads and parks. The sale of this public land allowed project costs to be covered. The advantages of land parcel readjustment were that 1) the public sector did not bear the cost burden of acquiring the land, 2) it facilitated private participation, 3) it made securing public land easy, and 4) it avoided the burden of needing to sell large tracts of land parcels.

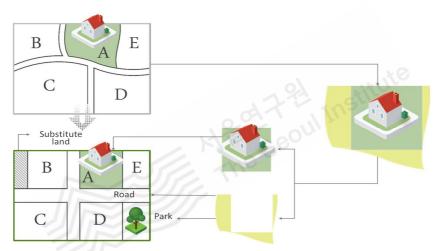


Figure 6. Example of Land Parcel Readjustment Method

Source: 성장환 외, 2017, A Study on Experience and Performance of Korean Urban Development, 한국토지주택공사 토지주택연구원, p.57

In 1963, part of Gyeonggi-do Province was incorporated into Seoul, leading to extensive expansion of the administrative divisions and also the city's built-up areas. This was followed by comprehensive development of Yeouido, promotion of Gangnam development, and other such land readjustment projects that accelerated urbanization. The urbanization of Seoul continued to affect the readjustment of the city's administrative divisions as well as spatial distribution of its population.

Another expansion took place in 1973, introducing new gu-districts. The initial

nine gu-districts were increased to eleven, and the area in all administrative divisions grew to 627.06km. In 1975, the region to the south of the Han River became Gangnam-gu, now the center of the Gangnam area. The 1970s were when the monocentric structure highlighted by the city center was retained while sub-centers were gradually developed. In accordance with its policy to distribute its population, Seoul began to develop Gangnam as a way of suppressing the population concentration in the northern part of Seoul, known as Gangbuk, and divert the population to south of the river.

Housing development was prohibited across Gangbuk. New facilities were restricted in the city center to discourage population growth in Gangbuk. Schools and public facilities were relocated to Gangnam, whose development played a decisive role in making the city multicentric by moving and spreading some of the major functions to the Gangnam. A land readjustment project was also carried out on 11.23km², resulting in massive housing blocks⁴.

In the early 1980s, policies that suppressed development in Gangbuk and encouraged it in Gangnam were designed to divert the functions of the city center, which eventually led to development projects focusing on Gangnam and aggravating the imbalance between the two regions. In 1990, Seoul released a master plan to address the issue of imbalance and promote balanced development between Gangbuk and Gangnam as a major theme. Designed to develop necessary infrastructure, improve residential environments, and boost the city center in Gangbuk, the plan was not successful. In the 2000s, the New Town program was introduced to improve the living environment in existing built-up areas in Gangbuk. This was followed by a variety of other projects designed to promote balanced regional development and make the urban spatial structure, heavily focused on the city center and Gangnam, more multicentric.

⁴ Land readjustment projects were explained in detail in another work from the Seoul Institute, *Coping with Exploding Housing Demand: Experience of Seoul* (2018).

03 Central Place Theory

As Seoul expanded, multicentric urban spatial structure was pursued by public policy. The rationale for multiple growth centers is based on the central place theory proposed by the German geographer Walter Christaller. It is important to examine the history and development of the discussion around central place theory to better understand the spatial structure of Seoul. "Central place" refers to a growth center, a hub of important urban functions and activities (including business) usually comprising a nucleus of a city. There may be one central place in a city or more than one. Generally, a modern metropolis has central places that can become multiple nuclei or growth centers. At times, multiple central places have the same functions and hierarchy. Sometimes, central places have different special functions of varying sizes within a hierarchical structure.

The hierarchy of central places is determined by their roles and functions. They may be comprised of a main growth center and sub-centers. Today, Seoul's central places are the city center, sub-centers, and regional centers. A city center is a central place where major urban activities are based. The term is generally used to refer to the central business district (CBD). Administrative functions and business services are integrated in a city center, providing services to the entire city and oftentimes serving as the heart of the greater metropolitan area. In addition, the city center also has functions that enable the city to compete with other large cities around the world.

Sub-centers complement the city center with similar functions (international business, higher-order services, etc.). Sub-centers also offer city-wide services, but in general, they serve as employment hubs for larger communities and hinterland cities in the capital region. Regional centers are central places in their respective regions within a city. They are the center of medium-sized communities and share some of the functions played by sub-centers. The roles and functions of these regional centers vary greatly by region. Some share the functions of sub-centers,

and many of their functions focused on business.

Monocentric City

A monocentric city is a model with a single growth center. In such a city, employment is concentrated in the CBD around which residential blocks are formed. Commuting arises from residential areas to the city center and then from the city center to residential areas. Access to the CBD is therefore the most important factor in any locational decision. The characteristics of residential location in a monocentric city are explained by the urban land use model developed by William Alonso and based on the Von Thünen theory on use of agricultural land. According to Alonso's model, access to the CBD is reflected in land prices, which peak in the center and fall as one goes farther away from the center.

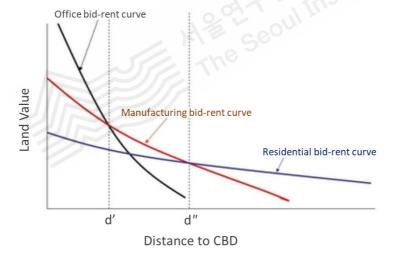


Figure 7. Monocentric Model and "Bid-rent" Curves

Source: https://lawprofessors.typepad.com/property/2005/12/sprawl_part_ii_.html

A monocentric city is an urban structure preceding industrialization. The model could well be applied to a small or medium-sized city with a single center. Some of the well-known monocentric city models include Ernest W. Burgess' concentric

theory and Homer Hoyt's sector theory. A significant problem with the monocentric model is its poor suitability to a modern metropolis, most apparently in relation to the inconvenient inter-regional transportation outside the city center. Because the CBD serves as a transfer point, it is bound to attract unnecessary traffic. Inter-city transportation is facilitated by train stations or terminals located in the centers of each city. Even within the same city, users still need to go to the city center in order to travel from one district to another. This leads to traffic congestion, environmental pollution, energy loss and a number of other issues in the CBD.

- 1. Central business district 2. Zone of transition
- 3. Zone of independent workers' homes
- 4. Zone of better residences 5. Commuter's zone

Figure 8. Ernest W. Burgess' Concentric Zone Model (1925)

Source: https://planningtank.com/settlement-geography/burgess-model-or-concentric-zone-model

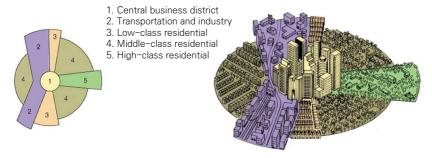


Figure 9. Homer Hoyt's Sector Model (1939)

Source: https://planningtank.com/settlement-geography/hoyt-model-sector-model-land-use-1939homer-hoyt

Multicentric City

A multicentric city is one with two or more nuclei (sub-centers) rather than a single city center. In some cases, the sub-centers are formed naturally by the market while in others, they are planned and created by the public sector. Most cities with a million or more in population have multiple nuclei, as is the case for Seoul. Theoretically, the multicentric city was conceived in the multiple nuclei theory in Harris and Ullman (1945). When a city grows, it is accompanied by a number of separate nuclei - some that exist from inception of the city and others that are created for different reasons.

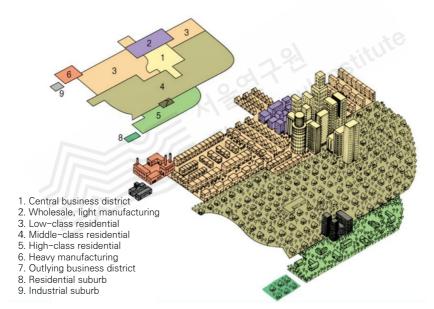


Figure 10. Chauncy Harris and Edward Ullmans' Multiple Nuclei Growth Model (1945)

Source: https://planningtank.com/settlement-geography/hoyt-model-sector-model-land-use-1939-homer-hoyt

In a multicentric city where all of its nuclei are identical in function, one would assume that they would be the same in size and coverage. Such a multicentric city with identical functions is, however, far from likely in reality. A multicentric city

therefore has a main nucleus and sub-centers that are smaller but have identical functions. Sub-centers do not overlap in their coverage. In an urban spatial structure comprised of a main nucleus and sub-centers, the former is larger and offers city-wide functions whereas the latter serve as centers for each neighborhood community.

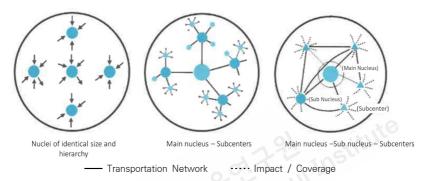


Figure 11. Types of Multicentric City

Source: Seoul Metropolitan Government, 2009, 2009 서울 도시계획 중심지에 대한 평가 및 위계 재정립방안 연구, p.16

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Plans for a Multicentric Urban Spatial Structure

The SMG has planned an urban spatial structure with a "one center and multiple sub-centers" system through a series of plans ranging from the 1966 Master Plan to the 2030 Seoul Plan. The 2030 Seoul Plan, the current acting master plan, was the first to design three core centers of equal importance (the Gangnam district, the traditional CBD, Yeongdeungpo/Yeouido), seven metropolitan centers and 12 regional centers. The three core center-based system introduced in the 2030 Seoul Plan was announced in 2014. The idea of three growth centers was based on the reality that the urban spatial structure of Seoul had actually been formed around three growth centers of equal importance. In essence, the "three core center-based system" firmly established in the 2030 Seoul Plan, can be seen as an outcome of the series of the master plans that pursued a multicentric urban spatial structure with multiple core centers over the last 50 years.

1952 Master Plan

After the Korean War, people came to Seoul from all over the country. Due to continued population growth, Seoul's infrastructure became increasingly vulnerable while the demand for urban services grew. Many actions had to be taken. In 1952 when the Korean War was still being fought, plans were drafted to rebuild the city, covering zoning systems and road networks. The area involved for zoning was smaller than it had been under colonial Japanese rule at 135.2km². To strengthen its functions as the capital, the administrative boundaries were expanded and its zoning area increased to 269.8km². Commercial and industrial zones were broadened. The 30.6km² of land that remained undesignated by the colonial Japanese government was also added for mixed-use and green space.

As part of the redevelopment of built-up areas, land parcel readjustment was used in the city center, hard-hit by the war, and dilapidated buildings along major arterial roads. City officials were concerned that the city would function

inefficiently since the land parcel division was amorphous and roads were narrow. The key purpose of the 1952 plan was therefore to refine the shape of land parcels for redevelopment and secure space for roadways.



Figure 12. 1952 Master Plan: Land Use Source: Seoul Metropolitan Government, 2017, 서울 도시계획 연혁 2016, p.194

1966 Master Plan

Aimed at making use of 451.21km of land, the 1966 Master Plan was the first attempt to shape a multicentric spatial structure in Seoul. The target year was 1985 and the population goal was 5 million. The urban spatial structure had its focus on the city center, aiming to promote one city center and five sub-centers. After the liberation of Korea in 1945, the country became a new constitutional democracy, and chose to embrace the doctrine of separation of powers and planned to set up legislative (the National Assembly), administrative (government ministries) and judicial branches (the Supreme Court). This was also to be manifested in urban spatial structure. Therefore, selecting locations for the government organs was an

integral part of the 1966 Master Plan. In part, this was to disperse government facilities and create the multicentric urban spatial structure. The SMG situated major legislative, administrative and judicial organs in the three core centers. The city center was planned as the administrative center while the legislature was positioned in Gangnam and the judiciary in Yeongdeungpo.

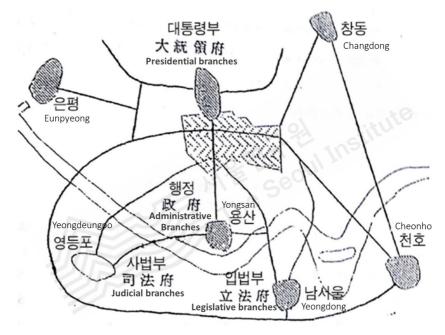


Figure 13. 1966 Master Plan: Spatial Structure

Source: Seoul Metropolitan Government, 1966, 『서울도시기본계획』 1권, p.59; 서여림, 2016 *Yeongdong refers to Gangnam This decision had symbolic meaning but practically aimed at distributing public functions. This meant that it treated the Gangnam district, the traditional CBD, and Yeongdeungpo/Yeouido as the major urban centers with higher positions in the hierarchy of urban spatial structure. Even though the term "three core centers" was not officially used in the plan, it was the first plan to emphasize three growth centers. They are composed of one main center (the traditional CBD) and two sub-centers (Yeongdeungpo/Yeouido and the Gangnam district). At the time, organizations under the three government functions were located within the traditional CBD and there was no specific action plan to actually relocate them. Thus it was a rather idealistic plan where realistic factors were not considered.

When Seoul's population exceeded 5 million in the early 1970s, revision of the 1966 plan was inevitable. The revised plan of 1970 aimed for 1991 and set its population goal at 7.6 million. The monocentric structure that focused on the city center was retained, but the number of planned sub-centers was increased to seven. Gangnam was assigned to house administrative functions while Yeouido was designed to share the legislative functions and serve as the industrial sub-district. The road network was a radial model focused on a city center linked to sub-centers, and comprised three ring roads and eight radial roads. Another revision was drafted in 1972, which also aimed for 1991 but set its population goal at 7.5 million. The urban structure remained the same as it had in 1970, but the plan included expansion of six radial arterial roads. The road network therefore included three ring roads and 14 radial roads.

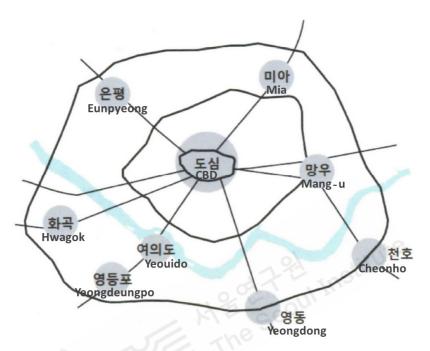


Figure 14. Revision of the 1966 Master Plan: Spatial Structure (1970)

Source: Seoul Metropolitan Government, 2009, 2009 서울 도시계획 중심지에 대한 평가 및 위계 재정립방안 연구, p.43

As noted, another significant concern for Seoul in the 1960s and 1970s was national security. The highest decision makers were constantly aware of the difficulties of evacuating millions of people across the Han River in time of the Korean War. To them, concentrating urban functions in the traditional CBD was not only unsustainable, but also dangerous. This was another strong motivation to decentralize from the traditional CBD to Gangnam and Yeongdeungpo/Yeouido.

During President Park Chunghee's⁵ New Year inspection tour taken place in

^{*}Yeongdong refers to Gangnam

⁵ Park Chunghee was a South Korean politician and general who served as the President of South Korea from 1963 until his assassination in 1979, assuming that office after first ruling the country as head of a military dictatorship installed by the May 16 coup in 1961.

March 1975, the mayor of Seoul (Gu Jachun) reported the SMG's aim to give Seoul a multicentric spatial structure. The written record states:

"President Park Chunghee made a New Year inspection tour of the SMG on March 4, 1975. During his meeting with the president, Mayor Gu Jachun reported the SMG's aim to create a multicentric spatial structure. He suggested the route design of the Seoul Subway Line 2 be changed into a circle route instead of the existing linear route, and have it link the traditional CBD, Yeongdeungpo/Yeouido and the Gangnam district to achieve the goal."

- Excerpt from *Seoul's 600 Years of History* (p.1374), published by the Seoul Historiography Institute 1996

From the excerpt, it is clear that the SMG even attempted to utilize large scale infrastructure projects such as rerouting the subway to realize a multicentric spatial structure, which was the SMG's first and foremost priority. The subway project would soon be altered to support forthcoming multicentric spatial structure.

1978 Master Plan

A need arose in 1978 to draft a new master plan to prepare for the changes of the 21st century. The 1978 Master Plan targeted 2001 and a population goal of 7 million on 720.87km of land. It was the first plan to consider the functions of Seoul after potential Korean unification, and put forward a vision for Seoul in the 2000s. The plan set out four objectives: 1) suppress the sprawl of built-up areas and population concentration in the north; 2) encourage work-home proximity by relocating urban functions/facilities and making the city polycentric; 3) improve transportation, amenities, and public facilities; and 4) create a pleasant and beautiful living environment by reducing pollution and preserving cultural heritage. Thus the plan embraced a multicentric model to deal with a number of objectives.

To alleviate congestion and density in Gangbuk, development of Gangnam was

pursued so as to strike a balance. As part of this plan, the urban spatial structure was comprised of one main growth center (the traditional CBD), seven regional centers, 27 district centers, and 157 neighborhood centers.



Figure 15. 1978 Master Plan: Spatial Structure

Source: Seoul Metropolitan Government, 1978, 2000년대를 향한 서울도시기본계획 요약집, p.14; 서여림, 2016, Development of the 'Multi-Centric Concept' since the 1960s and Changes in the Spatial Structure of Seoul, 서울시립대학교 대학원, Seoul, p.17

It is noteworthy that the concept of three core centers was obvious in the 1978 Plan. According to that plan, administrative functions were allocated to the traditional CBD, industrial functions to Yeongdeungpo and business/offices to Gangnam. Here, the SMG proposed to relocate major facilities in the traditional CBD to other core centers to reduce their concentration of major urban functions. The master plan assigned industrial functions to Yeongdeungpo. While the plan

contained a plan to redevelopment of the former industrial area in the city center, existing factories in the traditional CBD were to be relocated to Yeongdeungpo.

From long ago, Yeongdeungpo had fulfilled industrial functions as a traditional factory area due to its proximity to the Han River. In the 1970s, Yeongdeungpo was important since the first and second national Five-Year Economic Development Plans were being implemented to boost industrial production. It was the time when Korea entered its era of industrialization and industrial functions began playing a key role in economic development. Thus the SMG designated Yeongdeungpo in the master plan to be the center for industrial functions, with an eye on the future. To that end, it proposed physical improvement projects, and built a ring-shaped overpass and high-density apartments targeting mid- to low-income households around Yeongdeungpo Station.

In Gangnam district, large-scale development projects were already underway in the 1970s. Thus, both reality and future plans were reflected in the 1978 Master Plan. The SMG planned to build secondary executive government agencies (for instance, the Office of the President), distribution centers and cultural, business and financial institutions. It also planned administrative and business districts, a second Seoul Station, permanent trade centers and an international sports center and improvement of the bus terminals.

This plan broke away from the previous bus-dependent transportation system, introducing a focus on urban rail and passenger vehicles. The previous radial ring road network that resulted in traffic overload was restructured into a grid pattern. That is more suitable for the polycentric model. Within the grid of arterial roads, road networks were altered in accordance with local geographical features, thereby forming independent local networks within each greater neighborhood area.

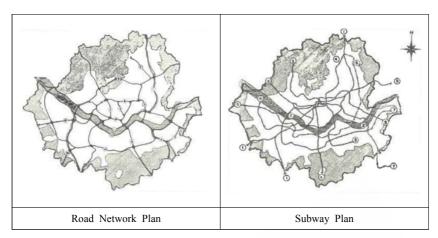


Figure 16. Transportation Plan in the 1978 Master Plan Source: Seoul Metropolitan Government, 2017, 서울 도시계획 연혁 2016, p.203

1984 Master Plan

With revision of the Urban Planning Act in 1981, establishing an urban master plan became statutory for the SMG. As a result, a new plan was developed as Seoul's urban master plan in 1984. The new plan proposed the direction for Seoul's development in the 2000s and set out guidelines on restructuring urban spatial structure. It targeted 2001 and set a population goal of 10 million on 720.87km of land. However, it could not be legalized due to a delay in holding public hearings. This was a time when there was scarce experience with citizen participation in planning. But this plan also had the same objective of decentralizing urban functions from the traditional CBD to other growth cores to create a multicentric spatial structure.



Figure 17. 1984 Master Plan: Spatial Structure

Source: Seoul Metropolitan Government, 2009, 2009 서울 도시계획 중심지에 대한 평가 및 위계 재정립방안 연구, p.44

To prevent outward expansion and suburbanization, the plan included development of satellite cities based on the multicentric model (within the current boundaries of Seoul), and revision of the monocentric transportation network by turning the radial ring road system into a grid pattern. As part of the plan, the city center would be the main nucleus, supported by 13 sub-centers, and 50 district centers. Sub-centers were selected based on their suitability for specific roles, with the potential to share the functions of the city center and be divided into different districts.

In accordance with the plan, voluntary redevelopment was encouraged for any undeveloped land less than 10,000 m² in size in residential areas in both Gangnam and Gangbuk. For land larger than 10,000 m², residential development and land

parcel readjustment programs were implemented. Development of Gangnam was promoted until 1991, while only selective development of Gangbuk was allowed. Expansive undeveloped land within the green space was to continue as a buffer to prevent the outward sprawl of built-up areas. Development was divided into phases to respond to the shortage of housing sites and public facilities. Flexible development and timing were encouraged in consideration of future changes in circumstances. In terms of transportation, the existing bus-oriented transit system was to be restructured with a greater focus on the subway. Even distribution of subway lines was considered in built-up areas with organic connection to road networks. Developing the subway, as noted, was a key to realizing a multicentric spatial structure.

1990 Master Plan

The 1990 Master Plan is meaningful in that it was the city's first statutory plan. It targeted 2001 and set a population goal of 12 million. It allocated standardized basic living facilities, designed the grid road network and ensured accessibility by matching urban activity centers with transport nodes so as to promote balanced development between Gangnam and Gangbuk. In the meantime, the plan ensured that the city was multicentric and flexible, with a greater emphasis on the role of sub-centers.

The basic direction was to retain the continuity of development restrictions in Gangbuk within a multicentric spatial structure. This plan developed a hierarchical multicentric spatial structure with 1 city center, 5 sub-centers, and 58 district centers. Further, the plan was designed to distribute the population between Gangbuk (5.55 million) and Gangnam (6.25 million). To handle the population redistribution, high-density development was encouraged in sub-centers. In Seoul, primary transport hubs around the metro network formed the skeleton of the city. Major transport hubs were designed as high-density areas (600 persons/ha on average) and the secondary hubs as medium-density areas (320 persons/ha on average).

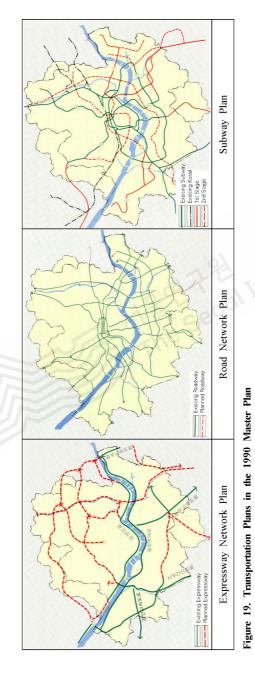


Figure 18. 1990 Master Plan: Spatial Structure

Source: Seoul Metropolitan Government, 2009, 2009 서울 도시계획 중심지에 대한 평가 및 위계 재정립방안 연구, p.44

An efficient transport network was key to integrating multiple growth centers in Seoul. Expanding the subway network and developing arterial road networks in a grid enhanced connectivity between growth centers. Subway lines were planned to assist sub-center development. Residential areas and business/commercial areas were connected in different directions for even distribution of travel demand. In preparation for the growth of private vehicle ownership in Seoul, the plan included building an urban expressway network of 10 routes extending 235km.

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Source: Seoul Metropolitan Government, 1990, 서울시 도시기본계획; Seoul Metropolitan Government, 2017, 서울 도시계획 연혁 2016, p.217

2011 Seoul Plan

In the late 1990s, there was a need among professional urban planners to review feasibility of the acting master plan, the 1990 Master Plan. To revise and improve the 1990 plan, a new one was drafted in 1997, targeting 2011 and a population of 12 million.

The plan proposed a vision of Seoul in the 21st century, suggesting tasks with a priority and ongoing tasks to be pursued. Whereas the 1990 Master Plan had its primary focus on the city of Seoul, the 1997 Master Plan adopted a broader approach to the sharing of urban functions on a metropolitan scale. In the previous plan, a multicentric spatial structure was proposed with one city center, five sub-centers, and 59 district centers, although there were no specifics on how to achieve this. However, the 1997 plan introduced four phases to pursue the multicentric model in a more aggressive manner, proposing a structure of one city center, four sub-centers, 11 regional centers, and 54 district centers.

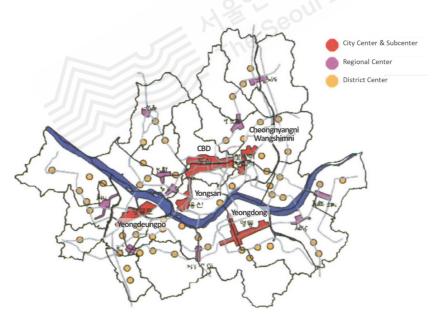


Figure 20. 2011 Seoul Plan: Spatial Structure (1997)

Source: Seoul Metropolitan Government, 2009, 2009 서울 도시계획 중심지에 대한 평가 및 위계 재정립방안 연구, p.45

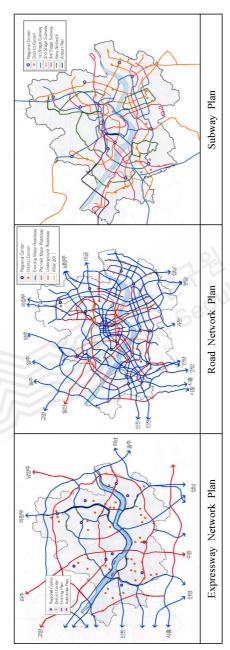


Figure 21. Transportation Plans in the 2011 Seoul Plan (1997)

Source: Seoul Metropolitan Government, 2017, 서울 도시계획 연혁 2016, p.223

The key was to integrate the roadways and subway lines into a seamless transportation network. As part of the plan, the road network was to include urban expressways and arterial roads. The current radial roadway framework coming out from the city center was to become a network of ring roads in a grid pattern. That network comprised three loops of urban expressways (inner, middle, and outer beltways) and four grid patterns of urban expressways completed by two axes (north-south and east-west). In addition, connectivity between urban expressways and arterial roads was improved to better facilitate traffic flow between all roads.

The rail network plan was built on the third subway plan, and also allowed for light rail to supplement the subway. It was a long-term plan targeting 2011 and incorporating a network of urban rail to help adopt a polycentric loop model.

To ensure that the transportation system was oriented toward public transit, the plan included expanding subway networks and construction of new stations. Furthermore, there were programs for improving bus transit, introducing new modes of transport in areas with limited access to the subway, improving road signs, and implementing Transportation Systems Management (TSM)⁶.

2020 Seoul Plan

In the 2000s, it was proposed that the 2011 Seoul Plan (1997) needed a feasibility review and subsequent revision so as to reflect rapid changes in population, the local government system, demands for citizen engagement, and expansion of the greater metropolitan area. The 2011 Seoul Plan assumed that population growth would continue and emphasized a response to current issues. The plan, however, had no follow-up evaluation indices to assess policy goals and lacked considerations for balanced regional development. It became necessary to reset the previous directions in terms of the direction in which the plan should head. That is why the 2020 Seoul Plan switched from comprehensive to strategic, focusing more

⁶ Transportation Systems Management (TSM) refers to techniques employed to enhance the capacity of transportation infrastructure without expanding its size.

on the citizen engagement process than on expert involvement and outcomes. The plan clarified the priority for goals and strategies. The goals, which had been somewhat mixed and scattered in the 2011 Seoul Plan, were integrated into a structure dictated as 'future vision-goals-tasks-strategies' to ensure consistency across sectors. To encourage citizen participation during the planning process, online discussion sessions were utilized. A number of sessions were held for the general public, researchers, and city officials to encourage process-oriented planning. The plan extensively incorporated expert and citizen input and proposed indices for monitoring. Advisors with planning expertise were involved as well to enhance the quality of final outcomes.

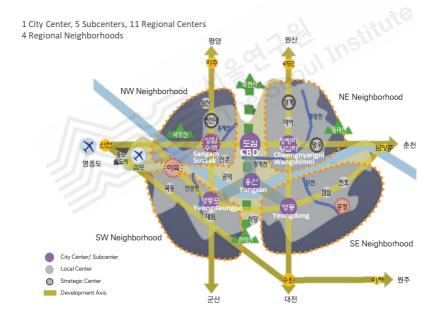


Figure 22. 2020 Seoul Plan: Spatial Structure (2006)

Source: Seoul Metropolitan Government, 2020 서울도시기본계획 발표자료, Dec. 27, 2005

The 2020 Seoul Plan maintained the existing multicentric spatial system from the previous plan. The 2011 Seoul Plan was a comprehensive plan covering the physical and socio-economic aspects, while the 2020 Seoul Plan is by nature a strategic plan designed to overcome the limitations of the comprehensive plan. It focused on clarifying the priorities in terms of goals and strategies. In this plan, the urban spatial structure is comprised of one city center, five sub-centers, 11 regional centers, and 53 district centers.

Table 2. Comparison of the 2011 & 2020 Seoul Plans

2011 Seoul Plan	2020 Seoul Plan
Demand-oriented in the aftermath of rapid population growth	Policy leading the way to qualitative growth and its management
Results-oriented, formulated by a few experts	Process-oriented, engaging various entities
Declarative policy goals and list of strategies announced	Clear policy goals and follow-up evaluation indices proposed

2030 Seoul Plan

In 2009, the authority to approve the master plan was transferred from the central government to local governments. The city now had a foundation on which it could incorporate the characteristics of Seoul and the directions of city governance and make the plan more achievable. The SMG now had a set of policy priorities that better reflected the city's characteristics and a set of strategic plans that focused on key issues.

In 2010, a draft master plan was prepared, based on surveys, input from *gu*-district governments and advisory meetings held in different sectors. In 2011, the city welcomed a new mayor of Seoul through popular election, whose administration put a greater emphasis on citizen participation in the planning process. The initial draft master plan, heavily skewed to expert views, was scrapped and a new plan begun with a focus on citizen participation. In the new plan, citizens were engaged from early on in planning, such as in developing the

visions, tasks and plans for key issues, in collaboration with administrators and experts.

As more and more citizens took part in the planning process, there was heavy criticism of the previous master plan efforts in Seoul. Most of all, it was difficult for the general public to understand the 2020 Seoul Plan as it was vast, comprising 12 parallel plans on topics ranging from future visions to spatial structure and neighborhood planning. The 2030 Seoul Plan was therefore prepared as a strategic plan on key issues, focusing on city affairs based on the approach of selection and concentration. It was also reduced in size, and better written to make it easier for residents to understand. Further, non-physical aspects (e.g., welfare, education, history and culture, environment) were emphasized in addition to physical features. The SMG departments collaborated with one another, elevating the status of the plan as the city's supreme plan.

While the 2020 Seoul Plan proposed various programs in 12 sectors with 52 goals, the 2030 Seoul Plan was simpler, presenting one vision, five key issues, and 17 goals. The new version found success as a strategic plan, integrating the vast planning that covered the entire city, prioritizing key issues and strategies.

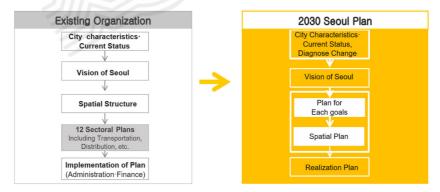


Figure 23. Comparison of the 2020 and 2030 Seoul Plans

Source: Seoul Metropolitan Government, 2017, 서울 도시계획 연혁 2016, p.228

The SMG finalized and unveiled the 2030 Seoul Plan, the fourth official master plan, in May 2014. The plan set three core centers (the Gangnam district, the traditional CBD, Yeongdeungpo/Yeouido), seven metropolitan centers and 12 regional centers. It is very important to note that the 2030 Seoul Plan was the first master plan to recognize the three core growth centers as having the same degree of importance. Before, the traditional CBD was the most important growth center that contained various functions. Yeongdeungpo/Yeouido and Gangnam, while important, were sub-centers, and not national hubs. In essence, the previous plans pursued since 1966 were based on one center and multiple sub-centers. The 2030 Seoul Plan recognized that the three core centers are equally significant while having different characteristics. This was to reflect the reality that the growth of Seoul had occurred around the three core centers. The reality was that the urban functions in Yeongdeungpo/Yeouido and the Gangnam district were strengthened, and the regions consequently took on international financial and business functions.

The SMG considered the traditional CBD as the international cultural center which would be pivotal in cultural exchanges between the country and other nations. The city seeks to foster the traditional CBD into a central place full of history and culture, taking advantage of the city's unique natural, historical and cultural heritage to strengthen its characteristics and sense of identity. Yeongdeungpo/Yeouido is to serve as the international financial center. The SMG planned to make Gangnam the international business center, with a range of responsibilities such as attracting international organizations and multinational firms. In a nutshell:

- Traditional CBD (central historical and cultural place): Hosts international cultural exchange and serves other purposes as the historical center of the city
- Yeongdeungpo/Yeouido: International finance (such as the Korea Stock Exchange)
- Gangnam: International business (international organizations, MICE industry etc.)



Figure 24. 2030 Seoul Plan (2013)

Source: Seoul Metropolitan Government, 시민참여형 도시기본계획 2030 서울플랜(안) 발표자료, Sep. 26, 2013

The 2030 Seoul Plan proposed a three core center-oriented spatial structure for two reasons: 1) It regards Yeongdeungpo/Yeouido as the center of Southwestern Seoul, a part of the city with greater potential for new developments. Therefore, a variety of factors essential for future growth were taken into consideration, including existence of currently undeveloped sites suitable for factories/venture companies and accessibility to airports; 2) Major business and commercial functions of the traditional CBD have already been handed over to the Gangnam district. For the traditional CBD, the SMG placed greater emphasis on preserving historical and cultural assets. The sentiment towards historical and cultural preservation gained importance as public awareness increased of the city's heritage.

Summary

Going back to the 1966 Master Plan, the legislative, judicial and administrative organs were placed in Gangnam district, Yeongdeungpo/Yeouido and the traditional CBD, respectively. It indicates that the SMG planned to have these three core centers perform different functions. Considering the current locations of the three organs - administrative (government complex) in the traditional CBD, legislative (the National Assembly) in Yeongdeungpo/Yeouido and judicial (the Supreme Court) in Gangnam district, the strategies for decentralization and allocation of urban functions in the 1966 Master Plan were realized in the 21st century.

From the 1960s to date, Seoul has had a central place system built on a multicentric spatial model in its master plans. However, the number of central places has changed somewhat, going from one city center and six sub-centers in 1966 to the three equally-important growth centers in the 2030 Seoul Plan. Nonetheless, there have been no major changes to their locations. Table 3 summarizes the system of central places in the series of Seoul master plans for the nearly 40 years from 1966 to 2014.

In Figure 25~28 below, a line is drawn around the regions selected by each master plan as major growth centers. A number of lines are drawn in layers when the same regions are chosen multiple times as growth targets. As can be seen, the traditional CBD, Gangnam and Yeongdeungpo/Yeouido have been repeatedly selected as major growth centers for Seoul. This is true for other sub-centers as well. There has been a strong tendency to strategically promote the growth of multiple centers and the corresponding multicentric urban spatial structure.

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Table 3. Changes to Major Growth Centers in Seoul's Master Plans

Category		1960s & 70s		1980s	1990s		2000s	
	1966 Master Plan	Revision of 1966 Master Plan (1972)	1978 Master Plan	1984 Master Plan	1990 Master Plan	2011 Seoul Plan (1997)	2020 Seoul Plan (2006)	2030 Seoul Plan (2013)
City	1 city center (within the city walls)	1 city center	1 city center	1 city center	1 city center	1 city center	1 city center	3 city centers
Sub- centers	5 sub-centers (Changdong, Cheonho, Gangnam, Yeongdeungpo, Eunpyeong)	7 sub-centers (Mia. Mang-u, Cheonho, Yeongdong, Yeongdeungpo, Hwagok, Eunpyeong)		3 sub-centers (Yeongdong, Yeongdeungpo, Jamsil)	5 sub-centers (Sinchon, Cheongayangni, Yeongdeungpo, Yeongdong, Jamsil)	5 sub-centers (Yongsan, Wangsumni, Cleongnyangni, Yeongdong, Yeongdeungpo)	5 sub-centers (Yongsan, Wangsimni, Cheongnyangni, Yeongdong, Yeongdeungpo, Sangam, Susaek)	
Regional			7 regional centers (Yeongdeungpo, Fongdong, Suyu, Jamsil, Janganpyeong, Susaek, Hwagok)	13 sub-centers 77 in Gangbuk, 6 in Gangnam)	201721		11 regional centers	7 regional centers (Changdong/ Sanggwe, Shangshimni, Sangam/Sisaek, Yongsan, Jamsil, Magok, Gasan/Daelim)
District & Neighbor hood Center			27 district centers, 157 neighborhood centers	50 district centers	58 district centers	59 district centers	53 district centers	12 local centers 116 neighborhood centers

Source: Modified from the Seoul Metropolitan Government, 2009, 2009 서울 도시계획 중심지에 대한 평가 및 위계 재정립방안 연구, p.47

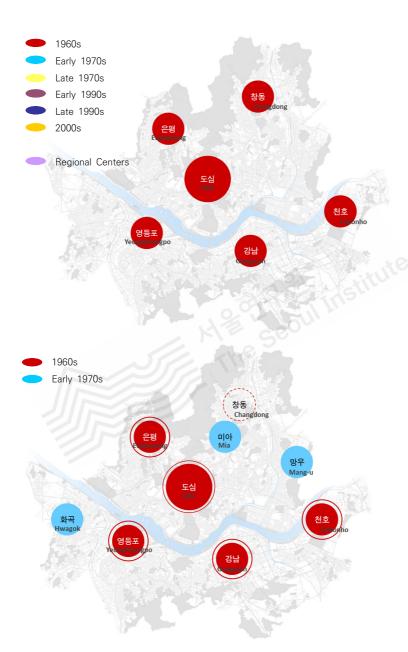


Figure 25. Changes to Major Growth Centers: 1960s & Early 1970s

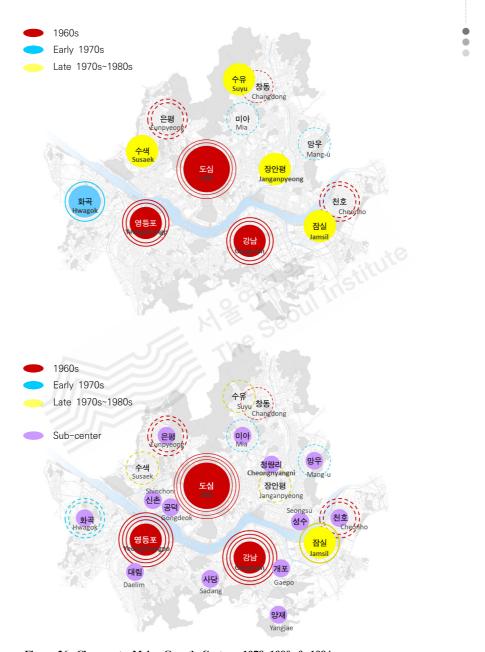


Figure 26. Changes to Major Growth Centers: 1978~1980 & 1984

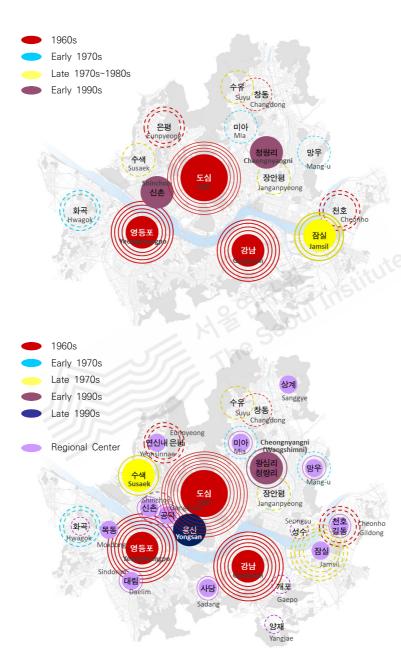


Figure 27. Changes to Major Growth Centers: 1990 & 1997



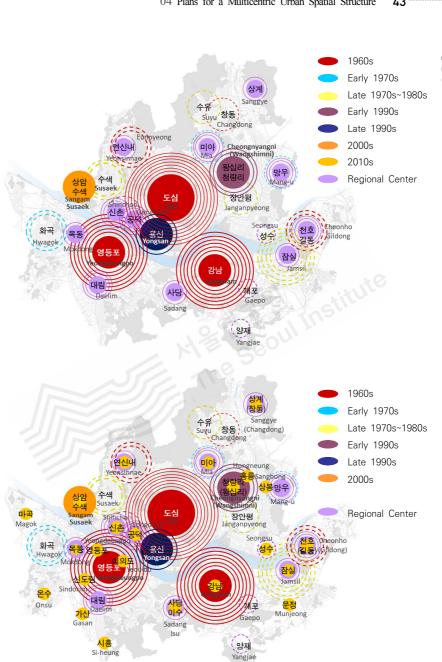


Figure 28. Changes to Major Growth Centers in the 2020 & 2030 Seoul Master Plans

Actions towards a Multicentric Urban Spatial Structure

Provided by the series of master plans, it was obvious to SMG officials that growth should be targeted towards multiple regions: the traditional CBD, Gangnam and Yeongdeungpo/Yeouido. The goal was to establish a firm multicentric urban spatial structure. However, plans are not enough; action must be taken as well.

The SMG conducted large-scale development projects to translate the vision of a multicentric spatial structure into reality. Gangnam was strategically developed to decentralize essential urban functions from the north. Building a subway was one of the most important projects for the Gangnam development. Subway stations were strategically located throughout the Gangnam area to promote growth in the southern part of Seoul. At the same time, development activities were restricted in Gangbuk, the northern part of Seoul. While major administrative functions were relocated to Gangnam and Yeouido, commercial facilities in the north, such as large department stores, were not approved by the SMG. With these policy actions combined, the vision of a multicentric urban spatial structure in Seoul became reality. This chapter reviews what projects contributed to this structure. We begin with the subway.

Building the Subways⁷

In April 1964, lawmakers discussed the exacerbated traffic woes in Seoul. They demanded that the SMG consider this issue seriously, and agreed that there was a need to build a subway system. In the following year, the SMG announced plans to build four subway lines. For that purpose, the former director of the Korea Railroad Corporation⁸ was appointed as the mayor of Seoul (Yang Taeksik) in April 1970,

⁷ This section is largely benefitted by research done by 서여림, 2016, Development of the 'Multi-Centric Concept' since the 1960s and Changes in the Spatial Structure of Seoul, 서 울시립대학교 대학원

and the plans for a subway system crystallized very quickly. In June of the same year, an Office of Subway Construction was set up in the SMG. Plans for Subway Line 1 were finalized and unveiled in March 1971. The following month, a groundbreaking ceremony was held to begin its construction.

The routes for Seoul Subway Line 2 were planned in 1972, along with plans to expand it to Yeongdeungpo. Subway Line 3 and 4 were designed to be a symmetric and bell shape, centering around the traditional CBD. Of particular note is that the routes for the Subway lines 2, 4 and 5 were extended to the Gangnam district, indicating that the SMG had actively striven to develop the Gangnam since 1972. The four subway lines were designed to pass through the traditional CBD via most of the sub-centers. It means that the SMG attempted to interconnect the traditional CBD and the sub-centers through subway lines. This indicates that the subway plan was closely related to master plan to create the multicentric spatial structure. Nonetheless, the three growth centers that were heavily promoted were not so obvious in the subway plans.

⁸ Korea Railroad Corporation, promoted as KORAIL, is the national railway operator in South Korea. Currently, KORAIL is a public corporation managed by the Ministry of Land, Infrastructure and Transportation.





Figure 29. 1972 Subway Plan

Source: 서여림, 2016, Development of the 'Multi-Centric Concept' since the 1960s and Changes in the Spatial Structure of Seoul, 서울시립대학교 대학원, Seoul, p.38

In 1974, the plans for the entire Seoul Subway System were totally transformed. Starting that year, Mayor Gu Jachun endeavored to multicentric spatial structure with the three growth centers. In an effort to fulfill this aim, the SMG developed the idea to build circular-shaped subway lines connecting the three core centers in Seoul. This idea was then reported to President Park Chunghee during his New Year inspection tour of Seoul City Hall, who then gave the green light.

In March 1975, Mayor Gu unveiled plans to construct circular-shaped subway lines consisting of the following lines: 1) Circular Line No. 1 linking the traditional CBD, Yeongdeungpo and the Gangnam district (currently Seoul Subway Line 2), 2) Circular Line No. 2 connecting the existing subway system and the Gangnam

district, and 3) Circular Line No. 3 circling around the traditional CBD, linking areas ranging from the traditional CBD to northern Seoul. Two out of the three lines were designed to interconnect the three core centers. It was obvious that then-Mayor Gu intended to form multicentric spatial structure by constructing circular subway lines centering around the three core growth centers.



Figure 30. Plans for Circular Subway Lines 1~3 announced in 1975

Source: Donga ilbo, 서울시 '다핵도시개발' 전망 방대한 의욕 실현되려나, 1975.3.5; 서여림, 2016, The Development of 'the Multi-Centric Concept' since 1960s and Changes in the Spatial Structure of Seoul, 서울시립대학교 대학원, Seoul, p.40

However, only the plans for Circular Line No. 1 (currently Line 2) were put into action. In the plans for Line 2, unveiled in 1977, the route design initially to be

linear in shape was changed to a circle route linking all three core centers. This circular route had a significant impact on realizing the multicentric urban spatial structure desired for Seoul.



Figure 31. 1977 Subway Plan

Source: 서여림, 2016, The Development of 'the Multi-Centric Concept' since 1960s and Changes in the Spatial Structure of Seoul, 서울시립대학교 대학원, Seoul, p.41

Subway Line 1 and 2, however, were not considered sufficient to resolve the traffic issues in the traditional CBD and put the SMG's plans for a multicentric urban spatial structure into practice. Many members of the public were not willing to use Line 2, since it took quite a roundabout way of going from the traditional CBD to the Gangnam district. It was considered necessary if the future Line 3 and 4 were to connect the residential areas northeast and northwest of Seoul with the traditional CBD. The original designs were for Line 3 and 4 to be symmetrical,

centering around the traditional CBD, but this changed so that they would intersect each other and pass through the traditional CBD in an 'X' shape. As a result, Line 3 and 4 were designed to pass through the traditional CBD, interconnecting with Line 2. This was how the subway lines could link the Gangnam district with the traditional CBD

It is clear that the SMG intended to accelerate the formation of the three core center spatial structure by facilitating urban development around subway stations and creating efficient transit connections. With Lines 3 and 4, it appears that the SMG sought to form the multicentric spatial structure by making transfers with Line No. 2, which covers the three growth centers.

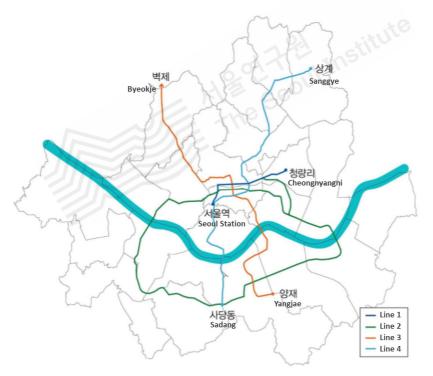


Figure 32. 1979 Subway Plan

Source: 서여림, 2016, The Development of 'the Multi-Centric Concept' since 1960s and Changes in the Spatial Structure of Seoul, 서울시립대학교 대학원, Seoul, p.43

The discussion on constructing additional subway lines had not taken place for a while. In the late 1980s, traffic congestion worsened. Further, the number of subway users increased, resulting in worsening subway congestion as well. In a bid to resolve the issue, the SMG determined to build additional subway lines in 1988 and announced a second phase in subway plans.

Unlike the first phase which involved construction of Subway Line No. 1 to 4, with all subway lines designed to pass through the traditional CBD, second-phase subway lines, except for Line 5, were not. For instance, Line 7 was not designed to pass through the traditional CBD. Instead, it was planned to pass through the areas below Yeongdeungpo, connecting the Gangnam district and Yeongdeungpo directly. Subway Line 5 was supposed to link Yeongdeungpo/Yeouido and the traditional CBD. It was the first to pass through Yeouido, indicating that the SMG had begun seeing the area as another main growth center in 1989 and realized the need to build a subway line.

Subway Line 6 was planned to avoid the three core centers. Rather, the SMG intended to improve connectivity with existing subway lines, built based on the first and second phase plans, by making more transfer stations. Subway Line 8 and the extension were to enhance connectivity with new towns. Once the first and second phase of the subway plans were completed, the third phase was to construct four additional subway lines. However, in the aftermath of the Asian Financial Crisis in 1997, this third phase was discarded. Much later, Subway Line 9 was built through private-public partnership.

In sum, since the 1960s, the subway lines have been designed and built to put the multiple core centers concept into action. They were arranged in consideration of the multicentric spatial structure by the series of master plans for Seoul. The subway lines built according to the first-phase plan for the Seoul Subway System (Lines 1 through 4), were designed to realize its aim to form the multicentric spatial structure, with the key being Line 2 and its circular shape. The subway lines constructed following the second-phase plan for the Seoul Subway System (Lines 5 through 8), were designed to integrate and strengthen the structure of the subway

network. Line 5 and 7 were designed to link Yeongdeungpo/Yeouido and Gangnam to meet the increasing travel demand between the three core centers. Together, these lines created the foundation for the sought-after multicentric urban spatial structure.

Developing Gangnam

The subway project provided strong momentum for developing Gangnam as a major hub for growth. However, this had actually begun in the late 1960s as a by-product of regional expressway projects. The Gyeongbu Expressway, connecting Seoul with Busan, the second largest city in Korea, was developed using land parcel readjustment to cover the cost of construction. In other words, Gangnam development was initially begun to fund a major regional transport network. Thus, financing an expressway was a starting point for the Gangnam development. Building the Gyeongbu Expressway broke ground in 1967, with the southern end of a bridge over the Han River as the starting point. Large-scale land parcel readjustment was carried out to secure land for the first 7.6km road segment. Essentially, the cost for construction was covered by the National Treasury. This was the start of major development projects in Seoul.



Figure 33. Construction of Gyeongbu Expressway (Oct. 15, 1968) Source: Seoul Museum of History, 2011, 40 Years of Gangnam: Exponential Growth, 서울반세기 종합전 II, Seoul Museum of History, p.27



Figure 34. Gyeongbu Expressway Opening Ceremony (July 7, 1970) Source: 장남종 외, 2015, 도시공간구조 50년 어제와 오늘, 서울연구원 발표자료, p.25



Figure 35. The 3rd Han River Bridge (Hannam Bridge), Completed in December 1969 Source: 장남종 외, 2015, 도시공간구조 50년 어제와 오늘, 서울연구원 발표자료, p.27

It was in 1963 that the Gangnam area was incorporated into Seoul as an administrative district. At the time, Gangnam was a day-trip destination where the residents of Seoul needed to cross the Han River in small boats. The 1966 Master Plan recommended land parcel readjustment to form an urban district in Gangnam, but the idea largely remained in the planning stage.

The plan for developing Gangnam was largely influenced by the Korean War, which ran from 1950 to 1953. Seoul was confined to the north side of the Han River at the time, and only two bridges existed on which to cross to evacuate the city when North Korea was poised to take it. In the 1960s, many people still remembered the war. The photograph in Figure 36, taken by Max Desfor in December 1950, captures a moment when refugees from the north tried to cross the Han River through a bombed-out bridge. This image had been stamped on the memory of government officials and people who experienced the Korean War. Thus, there were fears among the public officials that people would be unable to cross the Han River in the event of an emergency. A river as large as the Han River would surely be an obstacle to evacuate many people in the event of a renewal of conflict between the South and the North. Many felt that a "new" Seoul should be built on the southern bank.



Figure 36. Refugees from Seoul Crossing a Bombed-out Bridge during the Korean War Source: Washingtonpost.com

After the war, tensions persisted between South and North Korea. In 1968, armed assassins attacked the Blue House⁹. The First Lady was shot and killed in

⁹ The Blue house is the official residence and workplace of the Korean president.

1974, although North Korean involvement was unclear. As a result of concerns over this series of events, dispersion of the population was called for. This was to be accomplished by a Presidential directive that the population of Gangbuk had to decrease. The mayor of Seoul, Gu Jachun, was appointed in 1975, and received special instructions from President Park Chunghee on population dispersion from the Gangbuk.

The population density in the Gangbuk area at that time was deemed an undermining factor to military operations during the war. More than 70% of the city's population resided in Gangbuk then. The issue had been in consideration since the late 1960s, but it was in 1974 that a strong initiative was introduced by the president to balance the population between Gangbuk and Gangnam. In essence, Gangnam was born out of the military consideration of dispersing the population and urban functions to prepare for a military confrontation between the South and the North.



Figure 37. The First Government Employee Apartments Built in Nonhyun-dong, Gangnam Source: Seoul Museum of History, 2011, 40 years of Gangnam: Exponential Growth, 서울반세기 종합전 II, Seoul Museum of History, p.34

At first, Gangnam was not popular for the people of Seoul, who viewed the area around the traditional CBD as a more attractive place to live and work. The government first tried to sell the land to the private sector, but it did not sell well, making it difficult to collect the funds needed for the next stage of the project. In response, the president instructed housing to be built on vacant land to encourage its sale. High-rise apartment buildings were the structure of choice, since they could be built cheaply and quickly. Gangnam also began to gain popularity as the government suppressed new developments north of the Han River.

Gangnam was developed through heavy use of land parcel readjustment. About 40 millionm of fields became urban area in 10 years. To further support development, bridges were constructed, financed by the land parcel readjustment; the southern beltway that connects the southern part of the Han River opened; a major bus terminal sitting on 150,000m land was also built. However, Gangnam was not popular until the mid-1970s, in part because of the limitations of land parcel readjustment.



Figure 38. Gangnam Bus Terminal Under Construction

Source: Seoul Museum of History, 2016, 가자 강남으로: 1974-1978, 서울시정사진기록총서 VII, Seoul Museum of History, p.28



Figure 39. Passengers at Gangnam Bus Terminal (Sep. 1, 1976)
Source: Seoul Museum of History, 2016, 가자 강남으로: 1974~1978, 서울시정사진기록총서 VII, Seoul Museum of History, p.27

Land parcel readjustment in Gangnam represents a time when vast fields over 40 million m² in area became urban area over a decade. To accommodate the ever-expanding population, the SMG decided on land parcel readjustment due to the low initial investment, which in the end was a great success. Land parcel readjustment programs had the advantage of enabling formation of an urban district with little initial investment, but the programs also carried several disadvantages.

First, the process takes between five and 20 years due to the complexity of the structure of and procedure for replotting land. The most difficult aspect was the increase in land reduction rate. There were cases where a project was delayed by frequent disputes over unavoidable increases due to rising project costs and increased demand for public land. In Seoul, the average land reduction rate increased from 31.6% in the 1960s to 55.0% in the 1980s, while the amount of

public land was easily reduced in the face of strong opposition from land owners.

The SMG introduced "apartment districts" through a new law. The apartment district is a sort of zoning where only high-rise apartment buildings can be built. In the early 1970s, it was a method used to supply large numbers of housing units. Apartment housing was a good alternative to single houses on small lots created by land parcel readjustment and was indeed the turning point that made Gangnam a new town with modern high-rise apartment buildings. In the early 1970s, pilot apartment projects in Yeouido became very popular. The SMG decided that if Gangnam was to be developed to provide a massive supply of housing to citizens, high-rise apartment buildings would serve the purpose, and the population would increase and real estate prices would rise. This had not been feasible with land parcel readjustment method, since no large parcel of land existed on which to build an entire apartment complex.

In 1975, the SMG requested permission from the Ministry of Construction to build apartment districts. A special law was then enacted to provide tax support to construction companies who built apartment buildings. Institutional incentives were implemented for construction of apartment complexes by exercising land tenure, which made it legal for the government to purchase privately-owned land for "fair" compensation to the owner.

In 1976, 11 apartment districts were designated in Gangnam. Building height was restricted to 5~12 floors, with 5 floors for those around highways, and an exception of 15 for those around the Han River. The entire land area for apartment buildings was set to be at least 661.15 m², with the building area restricted to 330.57 m². In total, the SMG designated 779 million m² - or 25% of the Gangnam area - as apartment districts. Since only apartments could be built in apartment districts, small landowners had to form unions with their neighbors to build apartment housing or sell their land to apartment builders. At the same time, the SMG banned the construction of apartments in Gangbuk. The population in Gangnam exploded due to the apartment districts. As this occurred, prestigious schools and famous hospitals in the Gangbuk region relocated to Gangnam.

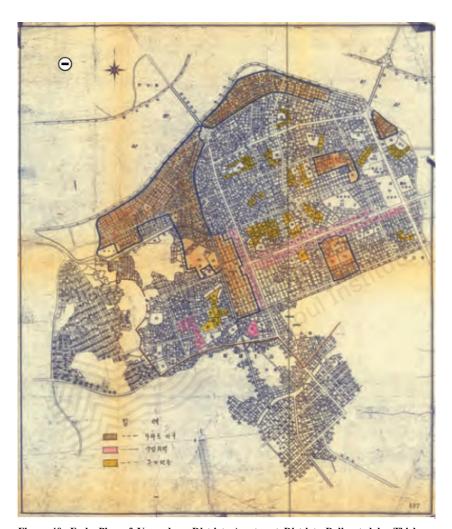


Figure 40. Early Plan of Yeongdong District: Apartment Districts Delineated by Thick Brown Lines along the Han River

Source: Seoul Museum of History, 2011, 40 Years of Gangnam: Exponential Growth, 서울반세기 종합전 II, Seoul Museum of History, p.30



Figure 41. Apgujeong Hyundai Apartment in Gangnam (1972)
Source: Seoul Museum of History, 2011, 40 years of Gangnam: Exponential Growth, 서울반세기 종합전 II, Seoul Museum of History, p.15

According to a report in the 1970s about forecasted housing demand by the Korea National Housing Corporation (now LH), only 6% of the nation's total population preferred apartments, but this increased to 11% for college graduates and 25% for female college graduates. In other words, even though apartments were unfamiliar to most people, high-income residents in the middle class were aware that their household chores would be reduced when living in modern apartments. Apartments were preferred by people actually looking for housing. In particular, Gangnam became the epicenter of an "apartment culture" and a preferred location for a modern lifestyle among the middle class.

Korean-style apartments were also advantageous as a real estate investment. Compared to single-family residences that differed in shape and size, apartments were standardized and had simple addresses. This made it convenient for market transactions. As apartment transactions became more popular and prices increased, apartments were recognized as a means of building equity, further catalyzing their price. Sometimes citizens invested their entire net worth in an apartment purchase.



Figure 42. Gangnam Apartment Buildings in the 1980s Source: Designer's Party (www.facebook.com/designersparty)

A typical Korean apartment complex was like a vertical stack of traditional Korean houses. They had excellent ventilation, good heating systems, and made pest control easy. Cleaning was convenient. They helped to decrease household chores for housewives. They were also advantageous with their standardized space

structure. Transactions were easy. While the apartment was an unfamiliar residential dwelling before the 1970s, positive perceptions increased.

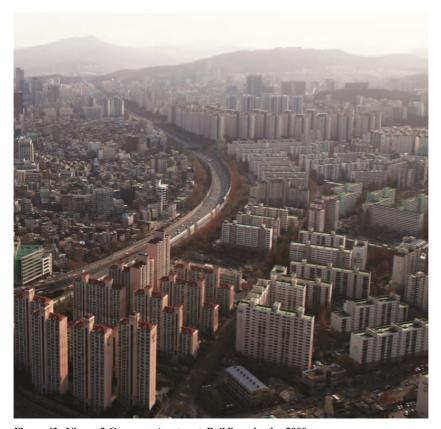


Figure 43. View of Gangnam Apartment Buildings in the 2000s Source: Seoul Museum of History, 2011, 40 Years of Gangnam: Exponential Growth, 서울반세기 종합전 II, Seoul Museum of History, p.101

Redistributing Major Urban Functions

As mentioned, the central government implemented population control targeting Seoul in the 1970s. In doing so, the series of master plans proposed relocating major public institutions from Gangbuk to Gangnam. Throughout the 1970s, it was decided to relocate the Supreme Prosecutor's Office, Korea Electric Power Corporation (KEPCO), several diplomatic institutions, Korea Customs Service and the Supreme Court, for which the SMG considered several suitable sites in Gangnam. In 1978, the SMG decided to move the Seoul High Court, the Seoul High Prosecutor's Office, and the Seoul District Public Prosecutors' Office. In 1988, it was decided to relocate the Supreme Court and the Supreme Prosecutor's Office. Now there is a legal office complex in Gangnam. Plans were also in the making to relocate Seoul City Hall to Gangnam to lead its development, but it was not realized

It was not only administrative functions that were to be relocated to Gangnam. In the 1978 Master Plan, administrative, business and industrial functions were proposed for assignment to the three core centers - administrative facilities in the traditional CBD, business in Gangnam and industrial facilities in Yeongdeungpo. This idea was put into action. Most of the business facilities were located within the traditional CBD until the early 1970s, indicating that a monocentric spatial structure was manifested in Seoul. Then new office buildings started to rise in other growth centers in the late 1970s, representing the beginnings of a multicentric spatial structure being created with the three core centers. Large-scale facilities, including prestigious secondary schools and general hospitals from Gangbuk, also moved to Gangnam through their own choice without government intervention.



Figure 44. Relocation of Seoul Municipal Children's Hospital (Jan. 17, 1978)
Source: Seoul Museum of History, 2016, 가자 강남으로: 1974-1978, 서울시정사진기록총서 VII, Seoul Museum of History, p.38



Figure 45. Relocation of Prestigious High Schools

Source: Seoul Museum of History, 2011, 40 Years of Gangnam: Exponential Growth, 서울반세기 종합전 II, Seoul Museum of History, p.38

Figures 46a, 46b, and 46c show how business facilities were gradually distributed to Gangnam and Yeouido. The three core center spatial structure was noticeable in 1994. It can be concluded that the control and decentralization policy targeting the traditional CBD and the plans to form a multicentric spatial structure

were effective from the 1970s to the 1980s. The distribution pattern for 1999 was similar to that of 1994, indicating the Gangnam district was fully expanded in the 1990s. Even today, the spatial structure of three core centers has been maintained. Thus, business facilities began to appear in earnest around the three core centers from the late 1970s and accelerated multicentric spatial structure centered around the three core centers throughout the 1980s.

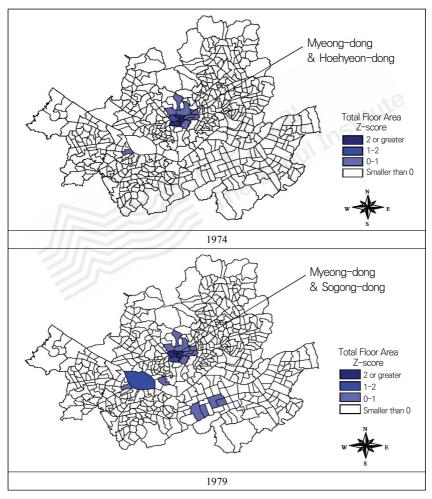


Figure 46a. Changes in Disposition of Business Facilities: 1970s



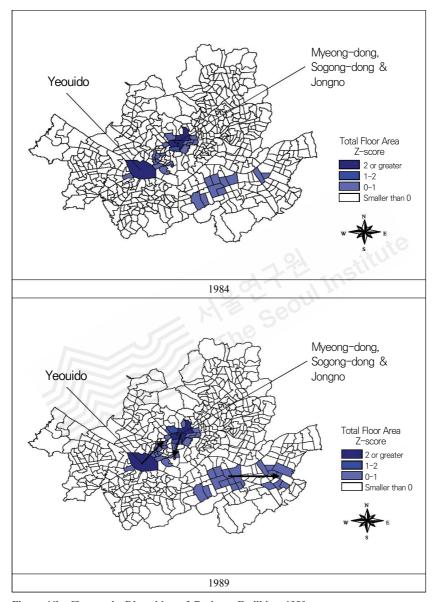


Figure 46b. Changes in Disposition of Business Facilities: 1980s

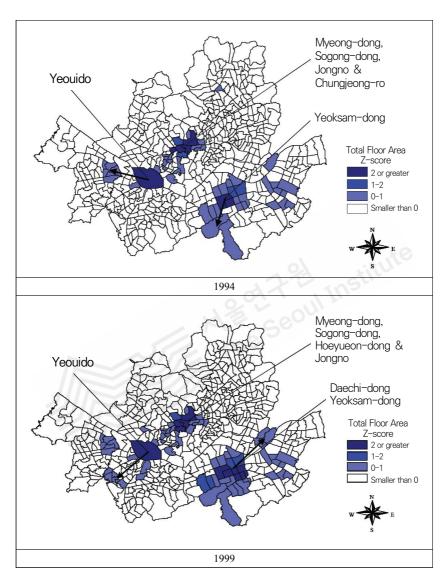


Figure 46c. Changes in Disposition of Business Facilities: 1990s

Source: 여홍구·정선아, 2002, 서울오피스의 공간분포 및 입지특성에 관한 연구, 국토계획 37권 7호, pp.120~123; 서여림, 2016, Development of the 'Multi-Centric Concept' since the 1960s and Changes in the Spatial Structure of Seoul, 서울시립대학교 대학원, Seoul, p.25

^{*} In statistics, the Z-score is a way of counting the number of standard deviations between a given data value and the mean of the data set.



Figure 47. View of the National Assembly in 1975 Source: Seoul Museum of History, 2016, 가자 강남으로: 1974~1978, 서울시정사진기록총서 VII, Seoul Museum of History, p.77



Figure 48. Current View of the National Assembly and the Surrounding Business Districts Source: Korea National Assembly, 2019, 제20회 국회 홍보 책자

The National Assembly was built in 1975 on Yeouido, which was designated as a business district in 1976. During the 1970s and 1980s, a range of company facilities were built on Yeouido, including broadcasting companies, the Korea Stock Exchange, the Federation of Korean Industries, the 63 building 10 and the LG Twin Towers (LG headquarters).

As noted, serious consideration was given to creating a multicentric spatial structure based on three core centers when determining the locations of the administrative, business, and judicial centers. Further, the central government expanded infrastructure to make the Gangnam district a new hub for growth. As seen from these examples, the location of the legislative and administrative organs (in the three core centers) with strategic business decisions substantially contributed to creation of the current multicentric spatial structure of Seoul. The rapid growth of the Gangnam region was accompanied by a surge in land prices and a boom in property speculation.

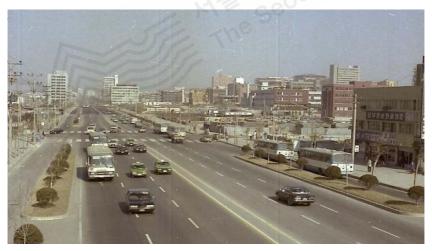


Figure 49. View of Hannam Road from Gangnam Station in 1983

Source: Designer's Party (www.facebook.com/designersparty)

¹⁰ The 63 Building, officially called 63 SQUARE (formerly Hanwha 63 City), is a skyscraper on Yeouido Island, overlooking the Han River in Seoul, South Korea.



Figure 50. Current View of Hannam Road in Gangnam, Looking towards the Han River Source: Seoul Museum of History, 2011, 40 Years of Gangnam: Exponential Growth, 서울반세기 종합전 II, Seoul Museum of History, p.98



Figure 51. Current View of Teheran Road in Gangnam

Source: Seoul Museum of History, 2011, 40 years of Gangnam: Exponential Growth, 서울반세기 종합전 II, Seoul Museum of History, p.130

Restricting & Improving Gangbuk

While growth was promoted in Gangnam and Yeouido, development of Gangbuk was heavily penalized. Especially, commercial facilities were severely restricted. Since the 1970s, the SMG continued assigning business and commercial functions to the Gangnam district through its master plans to create the multicentric spatial structure. Most of the department stores in Seoul were approved only within the Gangnam district until the late 1980s. On the other hand, from the mid-1970s to sometime after, new department stores were not approved within the traditional CBD or any other area in Gangbuk region. In three master plans devised from the 1970s to 1980s, commercial functions were assigned to Yeongdeungpo and the Gangnam district. The decisions and actions on locating the department stores were heavily influenced by the master plans for multicentric spatial structure. Figure 52 shows an announcement from the SMG on the location of major commercial facilities.

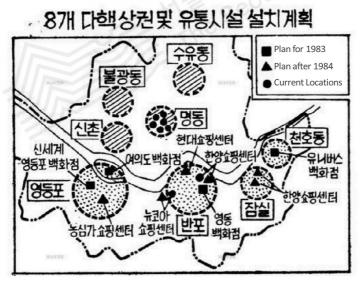


Figure 52. 1983 Plan on Development of New Department Stores

Source: Donga Ilbo, 한쪽에 치우친 부도심 상권개발 백화점 신축 강남지역 집중현상, 1983.1.21; 서여림, 2016, Development of the 'Multi-Centric Concept' since the 1960s and Changes in the Spatial Structure of Seoul, 서울시립대학교 대학원, Seoul, p.31 The actual effects can be seen in Figure 53. Department stores began to appear in Seoul in the 1960s. As time passed, the majority of leading department stores began appearing in the Gangnam district, with some built in Yeongdeungpo/Yeouido. The 1980s saw a higher number of department stores opened in the Gangnam district and two department stores in Yeongdeungpo. Over the 1970s, a huge residential complex was built, and a commercial district followed. It seems that the number of department stores increased as high-income households started gathering in the Gangnam district.

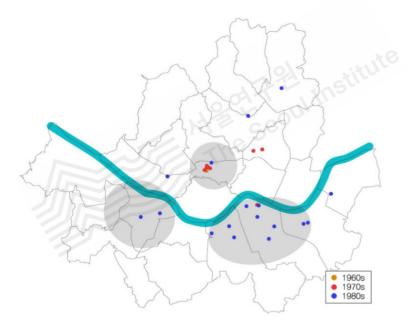


Figure 53. Opening of Department Stores: 1960s to 1980s

Source: Ibid., p.28

While restricting development in Gangbuk, improving its urban environment was a separate task for the city of Seoul. Redeveloping Gangbuk would conflict with the policy of restraining its development and promoting Gangnam. Nevertheless, modernizing the underdeveloped city center (without inviting

population growth) was recognized as an important task. Moreover, several international events including the Asian Games and the Olympics were scheduled to take place. Consequently, significant action was taken to begin urban renewal projects to modernize the area.

In 1974, the SMG referred to redevelopment of poorly managed urban areas in Gangbuk as a priority. The city used the term "redevelopment" for the first time. A project was implemented that targeted the management of unauthorized shack housing, and was intended to reclaim public land, currently occupied by unauthorized housing, for roadways and redevelopment into high-rise apartments.

According to a projection at the time, the population of Seoul would reach 7.5 million by 1981. To accommodate increasing population, about 70,000 new housing units had to be built each year. Housing projects mainly targeted areas filled with unauthorized housing, and land parcel readjustment method was used heavily in Gangbuk. The redevelopment projects around Seoul were commissioned to private construction companies, but by the 1980s, it had taken the form of joint redevelopment projects in which large companies took the initiative¹¹.

In the traditional CBD, redevelopment aimed to restore urban functions and create better landscapes, which was possible by constructing new buildings, roadways and parks. There were two main aspects to urban redevelopment in the city center: one was to restore its functions and respond to increasing needs for business space in accordance with economic development, while the other was the symbolic action of transforming Seoul into a modern metropolis. The main target was the business quarter of Seoul's traditional downtown area. Redevelopment districts were first designated, and then plans established.

Joint redevelopment is explained in another work from the Seoul Institute: Coping with Exploding Housing Demand: Experience of Seoul (2018).

Developing the Han Riverside

Another important piece of the puzzle in creating a multicentric Seoul is the Han Riverside. While developing the traditional CBD in the north and Gangnam in the southeast, it was critical to also develop the southwestern part of Seoul. As a catalyst, the National Assembly was relocated to Yeouido.

In the pre-modern era, urban areas were about 5km away from the river to avoid flooding. Originally, the area surrounding the Han River was frequently flooded. In the early 20th century, this was not a significant problem since only the northern part of the city was urbanized around the traditional CBD, and the main river was about 5km away from there. However, as the population grew, the number of people living around the Han River increased. The SMG had to build embankments to protect the residents against flooding. Modern embankments were begun in 1923, with larger ones replacing them after they were destroyed by flooding in 1925.

In the 1960s and 1970s, a major tool for developing the riverside was the reclamation of "public water", i.e., the Han River. This reclamation was carried out through construction of a major roadway network on the embankment. The way of building roadway on the embankment of the Han River was aggressively pursued in the 1960s. This way, the SMG started undertaking large-scale roadway projects from the mid-1960s around the Han River. Completion of the embankment road between the Han River and Yeongdeungpo - the first urban highway to Gimpo International Airport - created 80,000 m² of land.

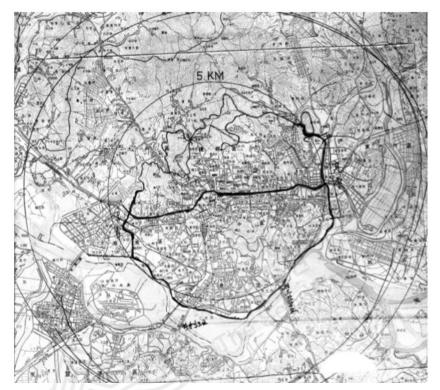


Figure 54. Plans for Construction of Main Roads along the North Side of the Han River (1968) Source: Seoul Museum of History, 2013, 돌격 건설! 김현옥 시장의 서울 II : 1968~1970, 서울시 정사진기록총서 IV, p.104

Soon the possibility came to the SMG's attention that it could utilize new land naturally created by the embankment for residential use. The mayor of Seoul, Kim Hyunok, realized that the new landmass created inside the embankment road could be sold to finance the city's urban development projects. The cost of building these embankments was covered by selling existing land or new land created within them. After the landfill and roadway on the embankment were completed along the river, demand arose to develop more land behind the river. As this occurred, drainage facilities were provided for previously flood-prone areas, serving as the key to fundamentally resolving the problem of flooding.

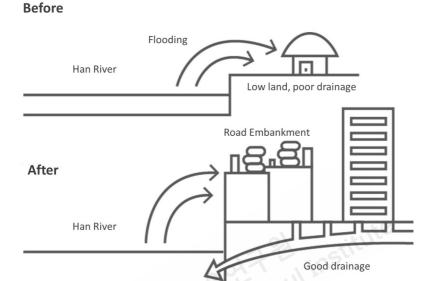


Figure 55. Land Development through Reclamation of Public Water

Source: 성장환 외, 2017, A Study on Experience and Performances of Korean Urban Development, 한국토지주택공사 토지주택연구원, p.48



Figure 56. Yeouido and the Han River Coastal Development Plan (한강종합기술개발공사, 1966) Source: Seoul Museum of History, 2013, 돌격 건설! 김현옥 시장의 서울 II : 1968~1970, 서울시 정사진기록총서 IV, p.225

Building the Han River embankment road and sales of residential land were the strategic processes leading to developing the island of Yeouido. It was then a "New Town". Mayor Kim Hyunok planned for the embankment around Yeouido to allow development and land sales, which would provide funds to tackle the city's various other urban problems. At that time, Yeouido was used as a military airbase. There were also not many residents on the Yeouido island because the Han River overflowed so quickly during flood season, making it unsuitable for habitation. The essentials of the Yeouido plan were to earn massive funds to develop urban infrastructure and provide low-income housing while eliminating flooding concerns. Yeouido would become Seoul's second city center.

In 1967, a three-year plan for development of the Han River was announced. First, nine embankment roads of 4 lanes each were built across 74km on the north and south shores of the Han River. About 2.3 millionm were to become residential land. The whole project was divided into nine sections. Selling the residential land created section by section would secure the funds needed for construction of the road on the next section. The profits from lot sales were eventually put into developing Yeouido.

In the 1970s, a total of 2,871,000m of land was created on Yeouido with 2,112,000m sold and 59,000m used for roads. At the time, the SMG had insufficient money and had already sold most of the land owned by the city. Meanwhile, subway construction was a high priority on the agenda. In addition, a special decree from President Park Chunghee required that 396,000m be set aside for a large public square. In order to raise the money in such a difficult situation, Yeouido's new town project had to be a great success.



Figure 57. Yeouido Development Plan (1971) Source: Korean Territorial Development Museum, 국토세움실, www.molitum.or.kr

In 1971, the proceeds from land sales not only recovered the cost of Yeouido's development but also funded construction of the subway. This success was due to the city being able to convey the charm of the new town to the residents of Seoul. The pilot luxury apartment known as "Mansion" was not well-received at first, but word-of-mouth soon changed the negative perception. As some housing projects succeeded, private contractors flocked to Yeouido to develop high-rise apartments. However, the road infrastructure was not ready within Yeouido, as the island was better equipped with bridges and roads to connect it with the outside of Yeouido. In 1976, a bridge and an underground driveway were opened between Yeouido and the rest of Seoul. The following year, a three-dimensional crossroads was built around the area. With such an investment in transportation systems, Yeouido began to rise as the new center of Seoul.

In the end, Yeouido became the first successful new town in the entire nation with the convenience and comfort of apartment buildings. Residential communities were established around a pleasant environment with modern urban scenery and the beauty of nature. There were also plenty of excellent educational facilities.

These characteristics gave the citizens a clear impression. The apartment complexes created this way now form residential areas around the Han River.



Figure 58. Arial View of Yeouido (1995)

Source: http://data.si.re.kr/node/33293



Figure 59. Arial View of Yeouido (2015)

Source: http://www.instahu.com

The strategy of preventing flooding with embankments along the Han River, while creating residential areas with excellent flood protection and returning the profits to the city coffers, was a smart idea. The housing around the river today was built in this way. This supply of housing, along with relocating the National Assembly complex to Yeouido made the island another effective center for growth in the southwestern part of Seoul. However, there was a downside.

Embankments and roads greatly restricted public access to the Han River. Furthermore, housing along the river has monopolized the magnificent scenery. It became difficult to see people gathered on the banks of the Han River as in the old days or sledding or fishing as they had before. Even though the Han River Park came out of this project, public access to the river is now minimal at best. Nonetheless, it is noteworthy that the persistent flooding in Seoul from the river was resolved. Not only did it involve building an embankment on Yeouido, but the land within the embankment was also developed. New sewer systems were installed, with the city able to keep its installation costs within budget.

Spatial Integration of Growth Centers

For multiple urban centers to work as interlinked activity hubs, operated organically within a city, smooth transport connection is critical between them. From the late 1960s to the end of the 1970s, the SMG focused on building key road networks in Seoul. After rapid urbanization, the city experienced severe traffic jams. One newspaper, dated September 25, 1974, reported that, "The problem of severe traffic jams with approximately 80,000 cars is due to the poor roads. For this reason, public institutions and schools should be moved outside of Seoul's urban areas". Another commentator said that "Over 200,000 cars in the next three years will lead to traffic that is even more severe, which requires construction of subway routes and roads to take priority".

As the previous chapter explained in detail, the subway lines, including Line 2, provided a push for development of Gangnam. The SMG had also begun to aggressively pave the roads, anticipating an increase in population and the number

of vehicles. The city obtained private land for paving roadways through financial compensation. In some cases, such compensation was insufficient, resulting in contention between citizens and the SMG. When infringement of property rights occurred, the citizens regarded the city as wielding too much power. In spite of the civil complaints, the city center's major streets were widened in this way, and 14 main roads radiating out from the traditional CBD were secured.

Most of all, major road networks had a great impact on the urban spatial structure by connecting Gangnam and Gangbuk. Thanks to the riverside development plan from the SMG, urban highways were built along the Han River connecting east and west. However, Gangnam and Gangbuk were separated by the Han River until a number of bridges were also built to connect north and south. By the late 1970s, there were more than a dozen such bridges, closely integrating the two sides of the river. As new construction technology was introduced to bridge-building, the distance between piers was extended, and bridge exteriors became more refined and sophisticated.

With the north-south roadway network, integration between the city center and the Yeongdeungpo/Yeouido area was strengthened, cementing the multicentric urban spatial structure based on three growth centers. In essence, transportation networks were able to connect the areas in Seoul, despite an explosive pace of development, and the city integrated into one. One can observe its changes in Figure 60a and Figure 60b.



Figure 60a. Changes to Seoul's Roadway Network: 1936 & 1966



Figure 60b. Changes to Seoul's Roadway Network: 1972 & 2015

Source: 장남종 외, 2015, 도시공간구조 50년 어제와 오늘, 서울연구원 발표자료, p.10

06 Closing Remarks

Analyzing the series of master plans for Seoul, it is evident that the SMG had the concept of a multicentric spatial structure from the 1950s, highlighting three core centers. The SMG put these plans into action by identifying the main urban functions and facilities in the three core centers as well as conducting large infrastructure projects to promote multiple growth centers. Although it is difficult to pinpoint the link between a plan and a specific action, there is no doubt that the master plans in Seoul were influential on forming current multicentric urban spatial structure in the long term.

The original reason for pushing forward with development of multiple growth centers in Seoul was over security concerns. To government officials, the population density was too high in the traditional CBD, which remains close to the border with North Korea. However, even as the threat from the North was lessened, the series of Seoul master plans and a number of projects did not derail the city's direction towards a multicentric urban spatial structure, as it is more sustainable urban form than a monocentric city.

There are some important points to highlight in this effort.

First, the SMG sought to create a multicentric spatial structure by relocating major government institutions in the three cores. Even though the locational details changed, the legislative, administrative and judicial branches were indeed relocated to the three core centers over the long term. It can be concluded that the urban spatial structure proposed in the master plans was taken into account when deciding to move public institutions from northern Seoul to Gangnam and Yeouido.

Second, Gangnam development was critical to realizing the multicentric urban spatial structure. Now Gangnam is a world-renowned business hub. Initially, it was planned as a new town with modern high-rise apartment buildings, for which the government enacted a special law to make it easy to build apartment complexes.

Strong momentum was provided by relocating prestigious secondary schools to the area, along with major public institutions. As a negative by-product, Gangnam also became the center of real estate speculation in Seoul, and this is probably true to this day. Nonetheless, the development of Gangnam was indisputably an effective solution to disperse population and distribute major urban functions.

Third, the idea of creating a multicentric urban spatial structure and the master plans to focus on developing the three core centers affected the arrangement of business and commercial facilities. From the late 1970s, business facilities began to disperse to the core centers in the southern part of Seoul. Throughout the 1980s, it was obvious that a three core center spatial structure had formed. Between the late 1970s and the 1980s, commercial facilities such as large department stores were concentrated in Gangnam, while development of Gangbuk was strategically restricted.

Fourth, the concept of a multicentric spatial structure in the master plans significantly impacted the subway lines in Seoul. This was also true of the first plan for the Seoul Subway in the 1960s. Especially, Line 2's route was designed to take a circular shape, directly interlinking the three core centers. It was to integrate the three growth centers. The current length of Line 2 is 48.8km. A circular subway line as long as this one is not easily found in other cities around the world. Although some might criticize the inefficiency caused by its length, the strategic purpose was to strengthen the multicentric urban spatial structure by integrating the three growth centers.

It is remarkable that the 2030 Seoul Plan, the current master plan for Seoul, considers the traditional CBD, Gangnam, and Yeongdeungpo/Yeouido as growth hubs of equal importance. This kind of urban spatial structure with multiple CBDs is unprecedented even in other major global cities such as New York, London, or Tokyo. This book shows that the SMG has not lost its focus on developing a sustainable urban spatial structure. Indeed, over a few decades, the SMG has been consistent in carrying out policies and projects to create and maintain the multicentric urban spatial structure. With tremendous effort on the part of the

SMG, it worked.

Now the 2040 Seoul Plan is being drafted. The multiple growth centers will continue to be major activity hubs, and the citizens of Seoul will continue to benefit from its sustainable urban spatial structure in the future.



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