Seoul, Twentieth Century:
Growth and Change of the Last 100 Years
Seoul Development Institute was founded in 1992 as a non-profit, independent research organization by Seoul Metropolitan Government. The SDI provides vital research and planning expertise to develop an informed basis for the coordinated decision-making of Seoul Metropolitan Government. The SDI is composed of scholars and experts in principal areas of urban studies and policies including urban planning, transportation, environment, urban management, social development, and urban information. More than 60 regular research fellows work on a wide range of research projects supported by some 100 research assistants. The SDI publishes research reports, books and periodical journals to foster wider discussion on Seoul’s increasingly complex urban problems and newly emerging social issues.
Seoul,
Twentieth Century:
Growth & Change of
the Last 100 Years

Edited by
Kwang-Joong Kim

SEOUL DEVELOPMENT INSTITUTE
Contents

List of Illustrations vii
Message from the Mayor xv
Foreword xvii
Contributors xx

Chapter 1 Introduction:
Growth and Change of the 20th Century Seoul
Kwang-Joong Kim 1

Chapter 2 Seoul's Urban Growth in the 20th Century:
From a Pre-modern City to a Global Metropolis
Ki-Suk Lee 21

Chapter 3 Transformation of Seoul's Modern Urban Landscape
Kyu-Mok Lee 91

Chapter 4 Development of Transportation Network
in the 20th Century Seoul
Hae Un Rii 151

Chapter 5 Changes in the Residential Features of Seoul
in the 20th Century
Sei-Kwan Sohn 213

Chapter 6 Sanitation in the 20th Century Seoul:
Development of Water and Wastewater Service Systems
Chul-Whan Yun 305
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 7</td>
<td>Seoul's Parks and Green Space in the 20th Century: From a City in Nature to Nature in the City</td>
<td>365</td>
</tr>
<tr>
<td>Chapter 8</td>
<td>Colonial City Planning and Its Legacy</td>
<td>433</td>
</tr>
<tr>
<td>Chapter 9</td>
<td>Evolution of Modern City Planning in Seoul: 1950-2000</td>
<td>489</td>
</tr>
<tr>
<td>Chapter 10</td>
<td>Urban Renewal and Change of the 20th Century Seoul</td>
<td>543</td>
</tr>
<tr>
<td>Appendix</td>
<td>Timeline of Spatial Transformation of the 20th Century Seoul</td>
<td>597</td>
</tr>
</tbody>
</table>
List of Illustrations

Table

Table 2.1 Results of land readjustment, 1937-1945 ........................................ 34
Table 2.2 Land use designation, 1939 ............................................................ 37
Table 2.3 Number of factories in Gyeongseong and changes in productivity .......... 38
Table 2.4 Years after construction of house, 1960 .......................................... 51
Table 2.5 Public housing in Seoul, 1955 - 1960 ............................................... 51
Table 2.6 Industrial facilities in Seoul, 1946 .................................................. 53
Table 2.7 Employment structure of Seoul by occupation, 1954-1958 ................. 54
Table 2.8 Employment structure of Seoul by industry, 1960 ............................ 54
Table 2.9 Number of shanties in Seoul, 1961-1970 ...................................... 58
Table 2.10 Employers in Seoul by industry (percentage), 1960-1999 ................. 63
Table 2.11 Ratio of gross industrial product of Seoul by sector (1972-1998) ........ 64
Table 2.12 Number of companies and employees involved in various industries .... 65
Table 2.13 Number of companies and employees classified by district .............. 66
Table 2.14 Employment structure in Seoul .................................................. 66
Table 2.15 Migration from Seoul to satellite cities ........................................ 71
Table 2.16 Companies, employees, and added values in the manufacturing industry: 1988-1998 ............................................................ 73
Table 2.17 Number of users of telephones, pagers, and mobile phones ............... 75
Table 2.18 Number of employees classified by district ................................... 76
Table 2.19 Structure of employment classified by industry ............................. 76
Table 4.1 Construction of Seoul’s electric street-car railway lines ..................... 160
Table 4.2 Annual passenger traffic of electric street-car railways and buses (1945-1948) ................................................................. 170
Table 4.3 Annual passenger traffic of electric street-car railways and buses (1953-1959) ................................................................. 172
Table 4.4 Changes of population in Seoul (1950-1968) .................................. 173
Table 4.5 Passenger traffic of electric street-car railways and buses a day (1960-1965) .... 175
Table 4.6 The ratio of registered private vehicles to total registered vehicles in Seoul (1982-1999) ............................................................. 188
Table 4.7 Trends in the number of private cars registered (1982-1999) .............. 188
Table 4.8 Changes in the number of railway passengers (1985-1999) ............... 191
Table 4.9 Changes in the number of air passengers (1985-1999) ..................... 192
Table 4.10 Actual shares of transportation in Seoul (1990-1999) ....................... 195
Table 6.1  Water Supply phase 3 expansion plan overview ........................................... 314
Table 6.2  Water Supply expansion during the Japanese rule ....................................... 315
Table 6.3  Water supply during the Japanese rule ......................................................... 315
Table 6.4  Water treatment facility expansion between 1945 and 1960 ........................... 324
Table 6.5  Water supply from 1945 to 1960 .................................................................. 325
Table 6.6  Overview of water supply expansion plan, 1961 ........................................... 327
Table 6.7  Overview of water system expansion (1961-1979) ....................................... 332
Table 6.8  Overview of water supply (1960-1979) ......................................................... 334
Table 6.9  Improvements in conduits (1961-1979) ......................................................... 335
Table 6.10 Trend of conduits by type (1965-1980) ....................................................... 336
Table 6.11  Covering up major sewage streams (1955-1976) ......................................... 337
Table 6.12  Indices for the first mid-to-long term water supply plan ............................... 341
Table 6.13  Basic indices for the second mid-to-long term water supply plan .................. 341
Table 6.14  Basic indices for the mid-to-long term water supply plan ........................... 342
Table 6.15  Development of the water supply system (1980-1999) .............................. 344
Table 6.16  Water pollution in the Han River (BOD) (1980-1998) ............................... 345
Table 6.17  Paldang reservoir as water source .............................................................. 346
Table 6.18  Control elements of the quality of drinking water ....................................... 348
Table 6.19  Water treatment facilities as of the end of 2000 ........................................... 349
Table 6.20  Improvement in water supply (1979-1998) ............................................... 349
Table 6.21  Water supply, consumption and accounted water rate in the 1990s .......... 350
Table 6.22  Plans for the construction of new waste water conduits (1983-2001) ......... 350
Table 6.23  Plans to improve existing conduits (1983-2001) ........................................ 352
Table 6.24  Construction plans for wastewater conduits by phase ............................... 352
Table 6.25  Indices used in the wastewater treatment improvement plans ........................ 354
Table 6.26  Phase 1 wastewater treatment facility expansion plan ............................... 356
Table 6.27  Wastewater treatment facility expansion plan (1988-1992) ...................... 357
Table 6.28  Phase 2 wastewater treatment facility expansion plan ............................ 358
Table 6.29  Increase in wastewater treatment capacity ............................................... 358
Table 6.30  Mid-term plan for wastewater conduits (1984-1987) ................................ 359
Table 6.31  Mid-term plan for wastewater conduits (Revised) ..................................... 360
Table 6.32  Composition of conduits by shape (1980-1998) ........................................ 361
Table 6.33  Maintenance of the sewer system (1979-1998) ......................................... 361
Table 6.34  Population with access to flush toilets ..................................................... 362
Table 7.1 Seoul's parks in 1928 ................................................................. 386
Table 7.2 Park plan ................................................................................. 389
Table 7.3 The Development of the city park concept ......................... 392
Table 7.4 Changes in the area of Seoul's parks (1945 - present) .......... 392
Table 7.5 Fluctuations in parks in the 1960s ........................................ 397
Table 7.6 Han River Improvement Projects ........................................... 407
Table 7.7 Theme Parks created in the 1970s and 1980s ......................... 409
Table 8.1 Gyeongseong-bu land readjustment project phasing .......... 463
Table 8.2 Project enforcement order for Gyeongseong-bu land readjustment ................................. 464
Table 8.3 Anti-air-raid Space in Gyeongseong ....................................... 476
Table 9.1 Restructuring of urban spatial structure and city centers .......... 530
Table 10.1 Population growth and housing shortage in the colonial era (1926-1944) ......................... 545
Table 10.2 Socio-economic and housing profile in selected years, 1950-1995 .............................. 547
Table 10.3 Building regulation by sub-areas in Seoul, 1979 ..................... 570
Table 10.4 Progress of downtown redevelopment (as of Jan. 1999) .... 579
Table 10.5 Accomplishment of downtown redevelopment (as of the end of 1998) ...................... 580

Figure

Figure 1.1 Population growth of selected world major cities .................. 2
Figure 2.1 A map of the old capital Hanseong ......................................... 24
Figure 2.2 The urban area of Hanseong in 1910 ...................................... 27
Figure 2.3 Residential areas in Seoul in the 18th century ....................... 29
Figure 2.4 Changes in Seoul's administrative districts, 1394-1963 ............. 31
Figure 2.5 Changes in the population of Seoul, 1906-1944 ....................... 32
Figure 2.6 Location of residential areas by ethnicity .............................. 33
Figure 2.7 Government land use in Gyeongseong Bu and surrounding area .... 36
Figure 2.8 Map of the areas in and around Gyeongseong, 1928 .................. 37
Figure 2.9-1 Distribution of factories in Gyeongseong, 1922 ...................... 40
Figure 2.9-2 Distribution of factories in Gyeongseong, 1936 ....................... 41
Figure 2.10 Urbanization of Seoul in the late 1930s ................................. 43
Figure 2.11 Sex Ratio change in Seoul, 1945 - 1950 ................................. 46
Figure 2.12 Irregular pattern of street network of Haebang-chon, 1960s .......... 48
Figure 2.13 Land use zoning, 1952 ........................................................... 52
Figure 2.14  Population movement in Seoul, 1979-1999 ........................................... 57
Figure 2.15  Social and natural population change in Seoul (1979-1999) ....................... 57
Figure 2.16  Distribution of the shanty towns ......................................................... 59
Figure 2.17  Resettlement towns and citizen's apartments ......................................... 60
Figure 2.18  Land readjustment project districts since 1960 ...................................... 61
Figure 2.19  The aerial view of the Guro Industrial Complex 1 in its formation (1966) .... 62
Figure 2.20  Increases of buses and personal automobiles ....................................... 67
Figure 2.21  Changes of population in Seoul (1980-1990 and 1990-2000) .................. 72
Figure 2.22  Distribution of high tech industries in Seoul, 1999 ................................. 74
Figure 2.23  The distribution of the employed population in 1999 ............................... 77
Figure 2.24  The distribution of the employed population in producer services in Seoul .... 77
Figure 2.25  The number of people involved in daytime activities: 1990 and 1995 .......... 78
Figure 2.26  The ratio of college drop-outs and graduates by district .......................... 81
Figure 2.27  Collection of local taxes in 1991 ........................................................... 83
Figure 2.28  The number of people occupying a room ................................................ 83
Figure 2.29  The number of foreign residents in each district in 1995 .......................... 84
Figure 2.30  Foreign companies in Seoul (1981-1996) .............................................. 86
Figure 3.1   Jeong Sun's 'Janganyunwoo' ................................................................. 93
Figure 3.2   The city wall and gates of Seoul before they were torn down ..................... 95
Figure 3.3   Namsan in Jeong Sun's drawing ......................................................... 96
Figure 3.4   The street ground plan of the shops in Jongro ......................................... 97
Figure 3.5   Myeongdong Cathedral, the image of a European Medieval city ................. 100
Figure 3.6   The plan of the district around the Arch of Triumph in Paris ..................... 103
Figure 3.7   Chosun local produce exhibition in Gyongbokgung, 1915 .......................... 109
Figure 3.8   The four inner mountain axis and the four outer mountain axis ................. 110
Figure 3.9   The Gyeonggeong street improvement routes ........................................ 113
Figure 3.10  The Japanese street, Honnachi ............................................................... 116
Figure 3.11  Jongro in the 1930s with Western-style buildings ................................... 118
Figure 3.12  Drawings of the mud huts, 1942. ......................................................... 121
Figure 3.13  The garden city of Welwyn in England .................................................. 123
Figure 3.14  The Sejong Cultural Center on Sejongno .............................................. 130
Figure 3.15  A postcard Picture of the Yeouido 63 building ...................................... 132
Figure 3.16  Gyobbo building in Gwanghwamun ..................................................... 133
Figure 3.17  A silhouette of buildings near the trade center ....................................... 134
Figure 3.18  Teheranro image introduced in the newspaper in the early 1990s ............. 134
<p>| Figure 3.19 | The cafe street in front of Hongik University, 1992 | 136 |
| Figure 3.20 | The street of fashion, galleries, and ceramic art introduced in a newspaper, 1992 | 136 |
| Figure 3.21 | A plan and a bird’s eye view of the Mapo apartment estate | 137 |
| Figure 3.22 | High-rise apartment estate in any newspaper advertisement | 138 |
| Figure 3.23 | A simulation of an apartment redevelopment plan | 138 |
| Figure 3.24 | A representative landscape of Seoul surrounded by mountains as shown in a tourist postcard | 141 |
| Figure 4.1 | The transportation structure of Seoul in the 20th century | 152 |
| Figure 4.2 | Half-covered electric street-car railway system in the early days | 157 |
| Figure 4.3 | Electric street-car railway lines in Seoul (1936) | 161 |
| Figure 4.4 | Transportation shares by buses, taxis and subways in Seoul (1974-1986) | 182 |
| Figure 4.5 | Subway map of Seoul (1999) | 194 |
| Figure 5.1 | Seoul in Daehan Empire Period with Gyeongbok Palace and Gwanghwamun Gate | 215 |
| Figure 5.2 | Seoul photographed in 1904 | 216 |
| Figure 5.3 | Jingogae in the opening period | 218 |
| Figure 5.4 | Japanese residential quarter in Yejang-dong (circa 1920) | 219 |
| Figure 5.5 | Two-story Shop house in the early 1900’s | 220 |
| Figure 5.6 | The house of Grandson of Heungsun Daewongun, Lee Jun-yong | 221 |
| Figure 5.7 | Japanese houses in Sampantong; circa 1930 | 225 |
| Figure 5.8 | Mud-huts in Seoul during the colonial period | 226 |
| Figure 5.9 | Improved Korean homes remaining in Galhoe-dong | 230 |
| Figure 5.10 | Improved Korean houses in Waryong-dong, 1954 | 231 |
| Figure 5.11 | Improved Korean homes in massive land readjustment districts | 232 |
| Figure 5.12 | Today’s view of Dorim housing site built by Chosun Housing Corporation | 235 |
| Figure 5.13 | Standardized types of house plan designed by Housing Corporation | 236 |
| Figure 5.14 | Red-light quarters during the colonial period | 239 |
| Figure 5.15 | Makeshift houses along Cheonggyecheon Stream | 241 |
| Figure 5.16 | Public housing complex in Sangdo-dong built by UNKRA aid, 1964 | 243 |
| Figure 5.17 | People’s house in Bugwang-dong | 245 |
| Figure 5.18 | Drinking water supply in a hilly neighborhood in the 1960s | 248 |
| Figure 5.19 | Guro-dong housing complex, 1965 | 250 |
| Figure 5.20 | Single block Gaemyeong Apartment | 252 |
| Figure 5.21 | Mapo Apartment, the first apartment complex in Korea | 253 |
| Figure 5.22 | A typical citizen apartment | 255 |
| Figure 5.23 | Waifu citizen apartment site after collapse | 256 |
| Figure 5.24 | Bongheon-dong substandard housing area | 258 |
| Figure 5.25 | Example of shanty area occupying hilly site in 1960's | 259 |
| Figure 5.26 | High style detached house in Pyeongchang-dong, 1975 | 261 |
| Figure 5.27 | Construction of Yeoetido Sibum Apartment, the first high-rise apartment in Korea | 263 |
| Figure 5.28 | Banpo First Apartment Complex | 264 |
| Figure 5.29 | Mixed-use Seon Sanga apartment in the late 1960's | 267 |
| Figure 5.30 | New neighborhood formation in Gangnam area | 270 |
| Figure 5.31 | Pedestrian only walkways in Mok-dong apartment complex | 273 |
| Figure 5.32 | The Asian Athletic Village Apartments | 274 |
| Figure 5.33 | The 1988 Olympic Athletic and Reporters' village | 275 |
| Figure 5.34 | Diversified skyline by different heights of apartments | 277 |
| Figure 5.35 | Pedestrian green corridor in Ilsan Newtown | 278 |
| Figure 5.36 | Multi-household and multi-family houses replacing existent single homes | 280 |
| Figure 5.37 | Villas in Yangjae-dong, Seocho-gu | 283 |
| Figure 5.38 | Daerim Acroville in Dogok-dong, a typical high-rise mixed-use apartment | 284 |
| Figure 5.39 | Redeveloped Apartments on the hill in Oksu-dong | 286 |
| Figure 5.40 | Layout scheme and courtyard photo of Sujoldang | 288 |
| Figure 5.41 | Model of Cho Sung-yong's Gahoe-dong district No.11 design | 289 |
| Figure 6.1 | Trukdo purification plant, 1912 | 308 |
| Figure 6.2 | Pumping facility at Trukdo plant, 1912 | 309 |
| Figure 6.3 | General plan for Gyeongseong water system, late 1920s | 312 |
| Figure 6.4 | Plan of the main lines in the Gyeongseong-bu sewage system, 1931 | 318 |
| Figure 6.5 | Gwangnam purification plant | 330 |
| Figure 6.6 | Aerial View of Cheonhgyecheon purification plant | 338 |
| Figure 6.7 | Aerial View of Jungrang sewage treatment plant | 338 |
| Figure 6.8 | Four drainage zones in Sewage Improvement Plan | 353 |
| Figure 7.1 | Seoul's urbanization process and pattern | 366 |
| Figure 7.2 | The Green Belt surrounding Seoul | 402 |
| Figure 7.3 | Plan of Olympic Park | 405 |
| Figure 7.4 | Plan of Paris Park | 411 |
| Figure 8.1 | Gyeongseong City Improvement Plan (proposed road network) | 446 |
| Figure 8.2 | Land readjustment area (1928) | 456 |</p>
<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.3</td>
<td>The 2nd District Land Readjustment (before and after), 1928</td>
<td>458</td>
</tr>
<tr>
<td>8.4</td>
<td>Plan of Donam land readjustment district</td>
<td>464</td>
</tr>
<tr>
<td>8.5</td>
<td>Plan of Daehyon land readjustment district</td>
<td>465</td>
</tr>
<tr>
<td>8.6</td>
<td>Gyeong-In Regional plan</td>
<td>471</td>
</tr>
<tr>
<td>9.1</td>
<td>City planning area and land use zoning, 1939</td>
<td>493</td>
</tr>
<tr>
<td>9.2</td>
<td>City planning area, 1949 and land use zoning, 1952</td>
<td>495</td>
</tr>
<tr>
<td>9.3</td>
<td>Excerpt description of 1966 Seoul Comprehensive Plan</td>
<td>507</td>
</tr>
<tr>
<td>9.4</td>
<td>Subarea and community plan, 1966</td>
<td>509</td>
</tr>
<tr>
<td>9.5</td>
<td>Road network plan, 1966</td>
<td>511</td>
</tr>
<tr>
<td>9.6</td>
<td>Subway lines plan, 1966</td>
<td>512</td>
</tr>
<tr>
<td>9.7</td>
<td>Geumhwa Park citizens apartment development plan</td>
<td>514</td>
</tr>
<tr>
<td>9.8</td>
<td>Namsan Park master plan</td>
<td>516</td>
</tr>
<tr>
<td>9.9</td>
<td>Revised Seoul Comprehensive Plan, 1972</td>
<td>520</td>
</tr>
<tr>
<td>9.10</td>
<td>2nd Seoul Comprehensive Plan (proposed), 1978</td>
<td>523</td>
</tr>
<tr>
<td>9.11</td>
<td>Seoul Urban Development: Long-term vision and mid-term plan, 1980</td>
<td>525</td>
</tr>
<tr>
<td>9.12</td>
<td>Still living in Gangbuk?</td>
<td>529</td>
</tr>
<tr>
<td>9.13</td>
<td>Proposed Seoul spatial structure and residential densities, 1990</td>
<td>532</td>
</tr>
<tr>
<td>9.14</td>
<td>Seoul city center system, 1997</td>
<td>537</td>
</tr>
<tr>
<td>9.15</td>
<td>Seoul comprehensive plan, Land use plan, 1997</td>
<td>538</td>
</tr>
<tr>
<td>10.1</td>
<td>Illegal shanty town on mountain slope in the 1960s</td>
<td>546</td>
</tr>
<tr>
<td>10.2</td>
<td>Location of squatters</td>
<td>548</td>
</tr>
<tr>
<td>10.3</td>
<td>Progress in residential redevelopment projects</td>
<td>552</td>
</tr>
<tr>
<td>10.4</td>
<td>Comparison of plan types of substandard houses and renewal apartments</td>
<td>556</td>
</tr>
<tr>
<td>10.5</td>
<td>Scene of residential redevelopment completed (case of Dongsomun-dong)</td>
<td>558</td>
</tr>
<tr>
<td>10.6</td>
<td>Urban condition of Seoul in the late 1960s</td>
<td>561</td>
</tr>
<tr>
<td>10.7</td>
<td>Perceived vision of downtown renewal</td>
<td>567</td>
</tr>
<tr>
<td>10.8</td>
<td>Target area of downtown renewal in 1979 master plan</td>
<td>568</td>
</tr>
<tr>
<td>10.9</td>
<td>Downtown renewal phasing plan</td>
<td>569</td>
</tr>
<tr>
<td>10.10</td>
<td>Time period of district designation and project completion of downtown renewal</td>
<td>575</td>
</tr>
<tr>
<td>10.11</td>
<td>Example of project plan of downtown redevelopment</td>
<td>578</td>
</tr>
<tr>
<td>10.12</td>
<td>Downtown Seoul, 1999</td>
<td>580</td>
</tr>
</tbody>
</table>
공백
Message from the Mayor

I am pleased to introduce this English-version of Seoul 20th Century: Growth and Change of the Last 100 Years published by our City’s proud research organ, Seoul Development Institute. This piece vividly delineates the spatial transformation of Seoul from a walled-and-gated walking city to a modern metropolis with a population of some 10 million.

The growth and change of Seoul during the past century have been truly phenomenal and dynamic. Seoul’s spatial connotations and denotations have incessantly evolved around such historical process as the fall of Chosun Dynasty, colonial ruling, the Korean War, rapid economic development, the 1988 Olympic Games and Asian financial crisis. In particular, leading the fast growing economy, Seoul underwent an unprecedented radical change in the course of the late twentieth century to be one of the most heavily populated human settlements on earth. Since these changes have been so intense in an unusual compact milieu, Seoul embodies one of the most acute contemporary urban challenges.

As such, Seoul deserves a decent documentation and exploration as to its physical change. I am certain that this book will be of great help for foreigners to better understand the spatial aspects of Seoul’s past and present.

Mayor, Seoul Metropolitan Government
Myung-Bak Lee
공 백
Foreword

In 2000, Seoul Development Institute (SDI) published Seoul Twentieth Century: Photographical History of the Last 100 Years in conjunction with the coming of new century. This photographic document was published in Korean and English and over 400 copies have been sold serving the greater-than-expected interests of both Koreans and foreigners who were in need of knowing Seoul’s past and present. The book was also used by the City of Seoul in their various international exchange activities as an information material and/or goodwill souvenirs. This enthusiastic response to the photographic documentation was a good ground from which SDI continued working to publish this second-phase book, Seoul Twentieth Century: Growth and Change of the Last 100 Years, which documented Seoul’s physical change of the twentieth century in the form of written text.

The impetus of publishing Seoul Twentieth Century: Growth and Change of the Last 100 Years is not different from that of the previous photographic book. Both are self-reflection efforts for Seoul to be better civilized in the coming century - they attempt to ascertain where Seoul stands now by looking at the past and to build the basis of self-reflection for the future betterment. In particular, this book focuses on the spatial dimension of Seoul’s change and transformation. It traces the mutation of urban growth and cityscape while recording the change of citizens’ life spaces such as housing, transportation, parks and sanitation. It also reviews the evolution of city planning as a driving force that shaped Seoul’s dramatic spatial transformation during the twentieth century. In short, this book intends to reflect and interpret how Seoul has come to be and why, and what it means.
The spatial growth and change that Seoul went through during the twentieth century was a unique spatial phenomenon in human urban history. No other cities encountered such fast, condensed growth as Seoul: Very few cities have accommodated as many people in such a compact space as Seoul. Seoul is now experimenting the densest urban life perhaps mankind has ever experienced. It is in this fact that Seoul provides much larger implication to other world cities for the better management of increasingly complex urban society. I believe that Seoul studies should be further promoted and exchanged, and this book can be a valuable basis for that direction.

The publication of this book has been made possible by many dedicated institutions and individuals. I would like to thank Seoul Metropolitan Government and City Council for their generous financial support to SDI, from which this particular publication project has been funded. Behind the promotion of this project were the leading efforts of Dr. Hong-Bin Kang and Dr. Won-Yong Kwon, the former presidents of SDI. I once again recognize the significance of their initiation and thank them sincerely. The documentation of Seoul’s spatial change of the last 100 years was indeed a challenging task as it made imperative to have the best mind in each subject area: SDI was fortunate to have those distinguished writers for the chapters and I deeply appreciate with great respect their unspiring efforts to come up with the fascinating history of Seoul’s physical transformation of the twentieth century. They are: Professor Sang-Chuel Choe at Seoul National University, Professor Keewon Hwang at Seoul National University, Dr. Kwang-Joong Kim at SDI, Professor Ki-Suk Lee at Seoul National University, Professor Kyu-Mok Lee at the University
of Seoul, Professor Hae Un Rii at Dongguk University, Professor Emeritus Jung-Mok Sohn at the University of Seoul, Professor Sei-Kwan Sohn at Chung-Ang University, Mr. Chul-Hwan Yoon, a retired city official, and Professor Il-Sung Yoon at Busan National University. I would also like to thank the translators who willingly participated in this project and shared their expertise with us. Finally I acknowledge Mr. Sang-Hyun Koh at Ithink Communications for his excellent assistance to design and print this important book of Seoul's urban history.

Yong-Ho Baek, Ph.D.
President, Seoul Development Institute
Contributors

Sang-Chuel Choe
Professor, Seoul National University

Keewon Hwang
Professor, Seoul National University

Kwang-Joong Kim
Senior Research Fellow, Seoul Development Institute

Ki-Suk Lee
Professor, Seoul National University

Kyu-Mok Lee
Professor, University of Seoul

Hae Un Rii
Professor, Dongguk University

Jung-Mok Sohn
Professor Emeritus, University of Seoul

Sei-Kwan Sohn
Professor, Chung-Ang University

Il-Sung Yoon
Professor, Busan National University

Chul-Hwan Yun
Former city official, Seoul Metropolitan Government

Translators

Seon Yong Ban (Chapter 9)
Steven Capener (Chapter 2)
Jae-Yun Chung (Chapter 3)
Sarah Kim (Chapter 5, 8, 10 & Timeline)
Kathy Jee-Yeon Koo (Chapter 6)
Jean-Young Lee (Chapter 4)
James Potter (Chapter 1)
Mila Steele (Chapter 7)
Seoul,
Twentieth Century:
Growth & Change of
the Last 100 Years
CHAPTER 1

Introduction:
Growth and Change of the 20th Century Seoul

Kwang-Joong Kim

At the dawn of the twentieth century, London and New York were
cosmopolitan cities populated by millions, and neighboring Tokyo
had grown into a metropolis with over a million inhabitants.¹
Meanwhile, Seoul was merely a pre-industrial city of roughly
200,000.² Today, a century later, Seoul, with some 10 million
inhabitants, has become a megacity with more inhabitants than Lon-
don, New York and Tokyo. Over the twentieth century, Seoul has
grown from the small, unknown capital of the Korean peninsula to
one of the world’s largest cities (Figure 1.1). As one urban scholar
once remarked, no other city has experienced such a rapid and con-
densed transformation in human history.³

Even if we set aside abundant evidences of prehistoric settle-
ment, the urban history of Seoul can be traced back to some 2,000
years ago. Located in the central part of the Korean Peninsular and
on the Han River connecting the sea and inland, Seoul had been vig-
Figure 1.1
Population growth of selected world major cities

Source: Seoul Development Institute, Seoul and World Cities: Comparative Reference on Urban Context and Infrastructure, 2002.
oruously contested by many forces throughout Korean history. The southeastern part of Seoul, Fort Uiryu, was an early capital of the Baekjae Kingdom (BC 18-AD 660). Since then the city's name, status and profile varied from one period to another, depending on who ruled the area. After Koryo Dynasty (918-1392) unified the peninsular, Seoul became a local province with increasing importance, and at the end of Koryo Dynasty (eleventh century), it was eventually named the Southern Capital (called Nam Gyeong), one of two sub-capital cities.4)

It was not until 1394 that Seoul was firmly established as the capital of the Chosun Dynasty (1392-1910), which overturned ailing Koryo. Seoul was chosen and laid out as the new capital given its practical merits of location, defense and transportation, as well as spiritual well-being, as defined by the principles of Feng Sui and other Chinese planning concepts. Surrounded by lush mountains and endowed with an abundant water supply, Seoul accommodated royal palaces, ritual institutions, public buildings, commercial districts, and residential quarters within its 16-square-kilometer walled and gated enclave. Seoul's official boundary, however, included the outside rural suburbs surrounding the city wall, having its southern city limit marked by the Han River.5) Throughout the Chosun Dynasty, Seoul experienced no major changes except for foreign invasion, maintaining a size of about 200,000 people.

Seoul's swift transformation began around the turn of the twentieth century. After being forced to open its ports by the great powers of East Asia and the West, including Japan, China, Russia, the United States, and the United Kingdom, Seoul was exposed to hitherto unexperienced urbanization. For the first time, people came into contact with modern, Western goods, and this began to strongly influence the lifestyle of Seoul's citizens. Around 1900, electricity was installed for the first time, interregional railroads were constructed, and electric trolleys were built in the city. Also around this time, the city parks, water supply system and Western schools and hospitals were introduced for the first time.6) However, the country's opening soon led to the Japanese colonial period (1910-1945), during which time, Seoul underwent spatial transformations that reflected the colonial rule. Colonial planners broke up the royal family's property, modified the capital's organization and transfigured the traditional fine-grained urban setting. New land-use zoning laws gave birth to new commercial and industrial areas where various colonial businesses thrived.7) As Seoul gradually industrialized during this period, it witnessed a rapid population increase and spatial expansion due to the concentration of labor. The population of Seoul surpassed one million in 1942, and as the city walls were torn down, the city expanded along trolley lines and arterial roads. As
central functions concentrated in the city center, land readjustment projects transformed the outside areas around city walls, a tranquil agricultural suburb during the Chosun Dynasty, into a massive residential district. This period also saw the general emergence of illegal, substandard settlements as an enormous number of petty farmers flocked to Seoul to avoid the crushing poverty produced by colonial agricultural policies.

As a result of the Second World War, Korea regained independence in 1945. Because Seoul continued to grow after liberation through the steady inflow of the rural population and the return of Koreans who had gone abroad during the Japanese occupation, its administrative region expanded to 248kms² and its population reached 1.4 million in 1949, just before the Korean War. The Korean War (1950-1953), however, suddenly destroyed the city. Roughly thirty percent of homes, many commercial buildings, and many public facilities were demolished. Though there were reconstruction projects after the 1953 armistice, the 1950s were extremely difficult times for Seoul. Many people lost their homes through the war and had to endure a lack of daily necessities and construction materials in severe poverty. However, despite these conditions, Seoul offered a better chance of survival than any other city. Remarkable numbers of people flocked to Seoul to escape the destitution of agricultural villages. Because a fair number of these people built dwellings on hills or vacant land, shantytowns formed all over Seoul.

A population census in 1960 showed that Seoul’s population had reached 2.4 million. As the leading city of an impoverished nation, Seoul had to accept rapid urbanization. Seoul, thus, had to confront various difficult urban problems, including poverty, sanitation, employment and housing, but these problems worsened due to the constant social and political upheaval from the end of the Korean War through the late 1950s.

Entering the 1960s, Seoul witnessed the advent of the Third Republic, a strong, new military regime. Under the development-first national policy that the authoritarian government pursued in the 1960s and 1970s, Seoul experienced explosive growth. This policy of gathering national energy to throw off poverty under the slogan of modernizing the fatherland was, at the same time, an export-led industrialization policy. Since raw materials had to be imported, the price competitiveness of manufactured export commodities was maintained through cheap labor and low prices for agricultural products. With downtown apparel factories and export industrial complex in Guro-dong, Seoul was a prime executor of this urgent national strategy. However, Seoul’s near monopoly on opportunity and the deepening gap between the city and the countryside accelerated urbanization. Consequently, Seoul experienced population
growth of about 500,000—the size of Boston—every two years.¹⁰ In this process, a great number of shantytowns formed around the city, and the outer areas were transformed by new residential districts that rapidly grew their way into Seoul.¹⁵ With the annexation of the southern (known as Gangnam) and northeastern areas in 1963, Seoul’s administrative area doubled to 594km² and the population topped 3 million. And Seoul continued to grow rapidly, forcing it to confront the plethora of urban problems such as traffic congestion, environmental degradation, overcrowded housing and illegal settlement.

Under the strong central government of the 1960s, Seoul’s mayors, who were appointed by the President, led an unprecedented spatial transformation of Seoul to support the national growth strategy. They carried out urban development projects with a military-like drive under the policy goal of “commando construction”.¹⁶ In order to mitigate traffic congestion, roads were aggressively widened and extended, including the construction of a great number of arterial roads often elevated at the cross sections, and a great number of pedestrian overpasses and underpasses were built to prevent pedestrians from impeding traffic. It was also at this time that Cheonggyecheon Stream in downtown was covered and Seoul’s first elevated highway, Cheonggye Elevated Road, was constructed. Cheonggye Elevated Road and the 31-story Samil Building that was built next to it emerged as symbols of the modernization of Korea and Seoul’s modern transformation.

This was also the time that a vast new town was planned for Yeoouido, an island on the Han River that often flooded during the rainy season. At a scale and technique that were fairly ambitious for the time, this construction project built a 10-meter-high, 7.6-km-long embankment around the island. And the land-fill inside the bank created almost 300 ha of new urban space.¹⁷ This enormous task began in 1967, and by the 1970s, Yeoouido was being transformed into the planned residential and commercial district that it was shortly later being called “Seoul’s Manhattan.”

The clearance and redevelopment of illegally settled areas became one of Seoul’s most important projects at this time. Slums and red-light districts that had taken over the city center were resolutely dismantled and replaced with modern commercial arcades and gigantic mixed-use apartments known as Se-wun Sang-ga.¹⁸ Illegal settlements on the steep slopes around downtown were also a target for removal. To renovate these hillside slums, a project to build four- to five-story “citizens’ apartment” in their place was promoted, resulting in the hasty construction of almost 400 buildings in just one year of 1969. One year later, one of these buildings collapsed due to poor construction, resulting in 73 casualties.¹⁹
Entering the 1970s, Seoul was making great leaps in economic growth, and exports and per capita GNP were setting new records every year. From roughly 250 USD in 1970, per capita GNP exceeded 1000 USD in 1977, and Seoul was at the heart of this accomplishment. This is because downtown apparel factories and outlying export-oriented light industry made up of an enormous number of exporting enterprises. People continued to flow into Seoul to find work and, more importantly, better opportunities, and as a result of this rapid, continuous growth, the population of Seoul reached 6 million in 1972. Growth was so explosive that “planning is not leading the realities, but, rather, is being led by the realities.”

However, a new national defense strategy arising from the increasing tensions between North and South Korea at this time began to exert a new influence on Seoul’s growth. A strong, government-led growth management policy that included Seoul and Gyeonggi Province began to be applied to the capital. The central government had come to consider the ceaseless expansion of Seoul, which lay within range of the North’s missiles, a threat to national defense. Therefore, the “Greenbelt” (Development Restriction Zone) was established around the city boundaries to block Seoul’s expansion. According to the same logic, the concentration of Seoul’s city functions in the area north of the Han River (known as Gangbuk) was also perceived to be a threat. In order to decentralize the concentration in Gangbuk on one hand and to accommodate Seoul’s explosive growth, it was decided to develop Gangnam, the area south of the river. Accordingly, this once tranquil agricultural area underwent an immense land readjustment, creating a great checkboard city. Thanks to various decentralization policies, a 6250-acre area had become an amalgam of upper class detached housing areas, super block apartments, high-rise corporate offices, and dense commercial developments in less than two decades.

In 1973, the administrative boundaries of Seoul expanded almost to the current size of 605 km². Already among the largest cities in the world, due to its bounding economic growth during this period, the Seoul was demanding the expansion of modern infrastructure, and therefore, of necessity, urban construction went on continuously. The old electric trolleys that had been built at the turn of the century were removed in 1968, and Seoul’s first subway line, the No. 1 Line, was completed in 1974. This took place nearly one hundred years after London introduced the subway. As Seoul’s appearance and its citizens lifestyle changed ceaselessly, a great number of private and public construction projects continued to blanket the city. Office towers, luxury hotels, a trade and exhibition center, cultural buildings, and more were completed, and large-scale urban infrastructure projects, including arterials, tunnels, bridges, and
water treatment facilities, were under continuous construction. Through this construction, the previous image of Seoul as the capital of a divided and impoverished nation was changed. At this time, international society came to call this Seoul that had been reborn from the ruins of the Korean War through bounding economic growth, "The Miracle on the Han River."

Seoul, the central driving force behind the nation's economic growth, grew to a metropolis of 8.4 million by 1980 and became a city of 10 million within the next decade. In the process of this miraculous rapid economic growth, Seoul witnessed the emergence of large enterprises called chaebol, more diversified industries and the budding middle class. Although the Third and Fourth Republic, which had led economic development, suddenly ended with President Park, Chung-Hee's death in 1979, Seoul's changing socio-economic conditions demanded continuing city-building efforts so as not to fall behind the times. Moreover, as Seoul had attracted the 1986 Asian Games and the 1988 Summer Olympics, Seoul became acutely aware that it must actively improve and beautify the city. While Jamsil area was under intensive construction works to build gigantic stadiums, athletics villages and other Olympic-related facilities, the Han River underwent a radical modification in an effort to clean up polluted water. With many pros and cons, this Han River project completely reshaped the river. As the riverbed was widened and straightened, the natural waterfront was replaced with concrete blocks, and the mid-level flat land were created along the riverbanks that are used as parks. Drainpipes were laid along both sides of the river to intercept water pollutants, and a highway was built along the riverbank to connect then Kimpo International Airport to the city center and the Olympic stadium. Though intended to relieve Seoul's chronic traffic problems, subways were also built in preparation for the Olympics. The circular No. 2 Line opened in 1984, and construction of the No. 3 and No. 4 Lines, which form an "X" through the city center, was completed in 1985. Downtown renewal was galvanized by the need for both beautifying the city and meeting increasing demand of office space. Providing tax benefits and volume incentives, Seoul issued the streamlined permits for more than 70 modern high-rise buildings. Trade conglomerations, banking institutions, and insurance companies participated in redevelopment of the city core by investing in real estate and establishing head offices. The central government, to prepare for the Olympics, also encouraged redevelopment projects for the city core by mobilizing the public development organizations such as the Korea National Housing Corporation and the Korea Land Development Corporation. Through the redevelopment of the 1980s, the traditional face of Seoul's central district was significantly remodeled and the center
of Seoul was born anew.

Squatter renewal and housing development was also deemed essential in creating a new image of Seoul and in meeting the central government’s ambitious housing policy. Housing development was even more pressing when one considers the explosion of demand for housing by the emerging middle class. In Gangnam, Mokdong, Goyuk, Gaepo, and Sanggye, large agricultural and forest areas were converted to residential uses, where new town-sized large-scale apartment complexes for about 100,000 persons were built. Apartments became popular in Seoul during the 1980s as they offered the various conveniences such as central heating, indoor toilets, hot water supply, Western-style kitchens, and high levels of privacy and security. They instantly began to appear as the dream house of Seoul’s citizens, replacing the general housing form of detached housing that had nearly dominated Seoul’s past. Because of the city’s lack of high quality housing and the high profits of building apartments, Seoul experienced a boom in apartment construction. In the hillside squatter areas, along the Han River, and in the suburban new towns, apartments were spreading rapidly and changing the face of Seoul.

Even after the 1988 Olympics, Seoul’s aggressive transformation did not halt. Seoul, the capital of an newly industrialized country whose per capita GDP had surpassed 10,000 USD, had grown into a metropolis of over 10 million people. And as ever, urban improvement was needed to respond to the demands of a transformed, high level economy and its citizens. The major urban developments that emerged in the 1990s include many public and private projects: Four subway lines (Nos. 5, 6, 7, and 8) were added, and the Seoul municipal government and the central government built new bridges, highways, art museums and concert halls, while the many high-rise buildings constructed by the private sector altered the skyline of the city’s core and Gangnam area. However, for Seoul, the 1990s was an era of new departures. Above all else, Seoul had to witness the aftereffects of rapid growth. In 1994, 37 people died when the Seongsu Bridge collapsed into the Han River, and in the same year, there were the tragic deaths from an explosion of an underground gas storage space that seemed to destroy the whole surrounding neighborhoods. And as the upscale Sampoong Department Store collapsed in 1995 due to poor construction, killing more than 500 people, Seoul was forced to ponder the truth and falsity of the breathless growth of the second half of the twentieth century. Having to receive aid from the IMF to confront the financial crisis of 1997 was yet another challenge. When the debt-ridden large chaebol economic order collapsed, Seoul had to confront the new urban problems of unemployment, labor, the homeless and social welfare. The introduction of the newly revived local autonomy system, too,
was a new departure for Seoul. The direct elections of the mayor and the city council brought fundamental changes in local politics, necessitating citizen participation in municipal administration and urban planning. And for Seoul’s twenty-five political districts, this served as an opportunity to be granted appropriate autonomy to actualize various district-level plans and facilities.

The 1990s were also a period of new urban conditions for Seoul. Seoul experienced extensive suburbanization and sprawl, which had begun in the 1980s. Due to increasing automobile ownership and the construction of the highway network, the city jumped over the Greenbelt and began spreading; new towns, like Bundang and Ilsan, and suburban areas developed continuously. One could say that Seoul was no longer an independent city but was rather the central city of an rapidly expanding metropolitan region of 20 million. On the other hand, the inner areas of Seoul also experienced a tremendous change. Once peaceful single-family neighborhoods underwent a significant transformation, as multi-story rental apartments and condominiums replaced the prevailing detached houses and two million cars turned neighborhood streets into parking lot. Whether they were downtown office buildings or residential apartments, high-rise towers sprang up all over the city, turning its single-core structure into a polycentric one that included a number of emerging distinctive neighborhoods such as Sinchon, Gangnam, Jamsil, Chunho, Mapo, Yeoeuido, and Yeongdeungpo among others. Now, at the conclusion of the 20th century, Seoul has undergone a complete transformation from the walled city of one hundred years ago to one of the most highly populated metropolis in the world.
This book describes the spatial transformation of Seoul during the twentieth century. It chronicles noteworthy physical changes of the city and examines the forces leading to them. Its aim is to reflect on how Seoul has changed, why these processes have taken place the way they did, and what social implication they entail. This book approaches the spatial transformation of the past century from three broad perspectives. The first is the spatial and geographical transformation of Seoul: population increase, urban expansion, spatial differentiation, and the resulting change of urban landscape. In chapter 2, the geographer Lee, Kee-Suk looks at the fascinating transformation of Seoul’s scale and growth and its internal spatial structure. Analyzing Seoul’s experience of unparalleled, explosive population growth and the accompanying expansion and transformation of the urban structure, he concludes that although the development process differs from that of western cities, Seoul followed a route to becoming a world city. In chapter 3, Lee, Kyu-Mok explains how Seoul’s changing urban landscape came to be and interprets how it reflects the city’s social and cultural history. According to him, during the twentieth century modernization period, Seoul’s landscape could not cultivate its own morphological mutation process from its unique and original urban form; rather it has been seriously distorted and resulted in dualistic character. Lee claims that the causes are the brutal urban modification under colonial ruling and the subsequent capitalistic urban development that expelled Seoul’s unique sense of place.

The second perspective on Seoul’s spatial transformation is those changes related to its citizens’ everyday lives. Ri, Hae-Un (chapter 4) records the means of transportation Seoulites used to manage their daily lives starting from the pedestrian-centered walled city of the early twentieth century. Linking the development of public transportation to the experiences of city residents, she traces the advent of the electric trolley and the city bus that followed, the period of competition between the two, the dominance of the bus and the extinction of the trolley. Ri also documents how Seoul introduced its extensive subway system followed by the universalization of the private automobile in the later part of the twentieth century. Sohn, Sei-Kwan (chapter 5) chronicles the types of houses that Seoulites have lived in over the past one hundred years. He explains
how Seoul's universal, traditional Korean home of early twentieth century transformed during the Japanese occupation and how the traditional house was westernized through the construction of public housing following the Korean War. He documents the ordinary detached housing that filled the vast land readjustment project districts of the 1960s and 1970s and the multi-household flats that replaced it in the 1980s. The recent proliferation of high-rise apartment buildings and high-style mansions are also examined. In chapter 7, Hwang, Kee-Won looks back over the transformation of Seoul's parks and green spaces. According to him, Seoul was originally in harmony with nature and there was no need to distinguish between the city and its green space. However, during the Japanese occupation that followed, Seoul's natural topography and organization of green space were distorted, and in the process of rapid development after the Korean War, these spaces were rapidly damaged and disappeared. Hwang traces this regrettable history of open space in Seoul and recognizes that there emerges a revival of efforts to create parks and green spaces at the end of the 20th century. Among the noteworthy changes in citizens' everyday lives over the last hundred years are changes in sanitary facilities, including water supply, sewerage, and toilets. In chapter 6, Yoon, Chul-Hwan, who directly witnessed the transformation of sanitary facilities when he worked for Seoul City Hall, explains the process by which Seoul developed into a city that possesses modern water supply and sewerage facilities. According to him, this is a remarkable achievement since, even at the turn of the century, Seoul impressed visiting foreigners as dirty and foul-smelling because water was drawn from wells and waste water and sewage was discharged untreated into the streams inside the city walls.

The third perspective from which the spatial transformation of Seoul is approached is an understanding of the nature and impact of public urban management. This section looks at how Seoul was planned, how this influenced its spatial transformation, and how and why urban planning and policy developed the way it did. Sohn, Jung-Mok (chapter 8) chronicles the colonial city planning during the first half of the twentieth century. He makes clear that although there were individuals who desired to reorganize the city at the end of the Imperial Korean Dynasty, colonial urban planning during the Japanese occupation (1910-1945) mattered most of the first half of the century. Sohn records the way in which colonial planning was introduced and how it influenced Seoul and its subsequent city planning practice from that time on. Choe, Sang-Chuel (chapter 9) looks at the development of urban planning in the second half of the twentieth century after the Korean War (1950-1953). He explains how Seoul's urban planning evolved in the face of the unique social,
political and economic conditions by illuminating Seoul’s periodic official comprehensive plans. He recognizes that Seoul lost the opportunity for active restoration after the Korean War, and socio-political confusion led to pervasive spatial disorder. And there was technical dependence on foreign planning theories and specialists, amid rapid urbanization that exceeded the predictions of all plans. According to Choe, however, this time saw the birth of Seoul’s own modern town planning that had to wait the end of colonial occupation. Finally, in chapter 10, Kim, Kwang-Joong and Yoon, Il-Sung document how urban renewal policy has transformed Seoul’s space and appearance. They find that the renewal policy has been strong enough so as to radically affect the spatial organization of Seoul. Through this aggressive renewals, Seoul removed the illegal shantytowns that were a legacy of impoverished times, and turned Seoul’s historical core and many hillsides into a forest of high-rise buildings. Kim and Yoon interpret, however, this remarkable urban renewal could not help but be limited as a public urban management policy since the city’s meager public finances forced it to rely on private sector-led market principles.

It is impossible to record in one volume the entirety of Seoul’s one hundred year history of spatial transformation, given it is hard to find any parallel rapid growth throughout the world. Further, Seoul’s urban history is in its infant stage in terms of the methodological maturity and research outcomes. There are a variety of reasons, but most of all it stems from the lack of resources: the poor storage of graphic materials like plans, maps and photographs; the lack of systematic and detailed governmental records; the absence and the diffi-
culity in accessing personal records like letters, diaries and memos; and a lack of awareness of the importance of individual’s role in initiating urban transformations. Despite this lack of resources, however, we can hypothetically posit a number of characteristics of Seoul’s spatial growth and transformation in the 20th century that are not only offer a useful vision for understanding these changes but also suggest future directions for the study of Seoul’s urban history.

First is the role of the central government in influencing the spatial transformation and growth. There is nothing new in cities under a strong authoritative political regime being influenced by the central government, but the influence on Seoul was exceptionally phenomenal, and this appears to be a major characteristic of Seoul’s spatial growth and transformation. For instance, the government’s national defense strategy directly influenced Seoul’s spatial expansion and internal structural changes, as it took various measures dispersing the population, establishing the Greenbelt and decentralizing urban functions, among others. Similarly, the government’s growth management policy called the Capital Region Plan has framed the general outline of land use, industrial location and urban development in Seoul and its surrounding regions. The government’s housing policy also had a noticeable impact on the spatial growth and transformation of Seoul. The government’s goal to construct two million housing units in the late 1980s was the main cause of Seoul’s transformation into a apartment forest, and its promulgation of the Housing Construction Promotion Act had an enormous impact on the growth of housing development and the resultant urban landscape. Also, following the Housing Site Development Promotion Act, Seoul witnessed the emergence of large-scale suburban residential complexes, which led Seoul’s expansion.

On the surface, it looks as if Seoul managed itself through a variety of local plans and regulations, but in fact, all the plans and mechanisms implemented in Seoul were established under the mandatory guidance of the central government. The central government determined what and how Seoul would manage its growth: Seoul established its major plans in accordance with the contents and standards—and even the processes—determined by the central government and ultimately had to receive its approval. Citywide comprehensive plans, redevelopment plans, district plans, engineering standards, zoning regulations and building codes—all determined by the central government, with little room for local variances. Though the authority of local governments to determine their own plans has been strengthened through the revival of the local autonomy system at the end of the 20th century, the plans’ substance and standards are still under the control of the central government. From this perspective, it cannot be denied that a great deal of Seoul’s spa-
tional growth and transformation in the 20th century has taken form through Seoul's adaptation of the various laws and regulations that reflect the central government's urban vision and policy. Yet, despite the enormous impact of the central government on Seoul's growth and transformation, documentation and analysis of this aspect remains sparse in the scholarship of Seoul's urban history.

The second particular characteristic of Seoul's notable 20th century transformation is the role of the city officials. These civil servants were primarily responsible for responding to the various urban problems that ceaselessly accumulated, especially during the explosive growth throughout the second half of the 20th century. And they were the main actors taking the lead in aggressive urban development within a remarkable short period of time. They genuinely played the important role of technocrats during the years before the introduction of local autonomy and citizen participation, when the private sector's socio-economic capacity was weak. Especially during the rapid urbanization years of the 1960s and 1970s, when Seoul's population experienced an unparalleled increase to one million in only four to five years, the city officials had to take care of the daily lives of the surging number of residents, had to prevent floods and fire, and had to respond to the mounting urban problems, including housing, sanitation, traffic, and welfare. Sohn, Jung-Mok attests that at that time Seoul City Hall felt like a "War Room" where there was no distinction between daytime and nighttime or working days and free days. Indeed, when one technocrat was promoted to vice mayor, he remarked that he took office as if he was "preparing for war." Though the atmosphere has lessened, the feeling has remained throughout the second half of the 20th century. In the middle of this situation, Seoul's technocrats crafted various city policies and drafted project plans in accordance with the directions of top decision makers, and then implemented them amid pressing difficulties. Through their realization of urban development and public works projects, including roads, bridges, tunnels, subways, water treatment plants and new towns, within an unbelievably short period of time, they had an astounding impact on Seoul's spatial growth and transformation. Indeed, Seoul's 20th century transformation was the swiftest since the Chosun Dynasty moved the capital to Seoul (then Hanyang) at the end of the 14th century, and was the most rapid urban reorganization in Korean history. One might say that under a strong central authoritarian regime and top-down management structure, the vision, philosophy and political views of the country's leader and the mayor largely determined the nature and speed of urban management during this time. As discussed, however, it would be difficult to explain Seoul's spatial growth and transformation without the administrative and technical support of Seoul's civil ser-
vants. This aspect also demands the detailed documentation to better understand who made the 20th century Seoul.

The third special characteristic of Seoul's twentieth century spatial transformation is the role of the private sector. Although the city did in fact heavily invest in the urban infrastructure, including roads, bridges, and subways, due to its meager public finances, Seoul chiefly relied on private capital to finance the bulk of urban development. The spatial transformation arising from this method of development is one of Seoul's distinguishing features and is deeply reflected in Seoul's appearance. For many types of urban development to take place, including land readjustment, urban renewal and housing development, the city adopted the technique of designating spatial project zones and then waiting for private sector investment in physical development. The city placed the burden not only of urban development itself but also of the construction of the infrastructure needed for development; its principal role was to apply the regulatory standards to the projects and to direct the development process. In order to make urban development work without investing public finances and yet guaranteeing public facilities, the city developed a variety of measures to induce private investment, like zoning change, volume incentives and tax benefits. A variety of public facilities, including underground passages, terminals and park facilities, were constructed by private money by offering the commercial use of the space within a certain period of time. By not investing public funds and relying solely on private capital, the city received criticism for sacrificing urban environmental quality in favor of urban development, but this approach was clearly a driving force behind Seoul's remarkable urban transformation in such a short time with limited public finances. Once the private sector had taken one step on the road to participating with its own capital in the urban development opportunities, it took a more aggressive role in guiding urban development. To serve their interests, large-scale capitalists proposed various urban development projects, and they often put them into practice by securing property rights on their own. It was also the private sector that guided consumer tastes and offered a greater variety of choice, as the real estate market developed new products endlessly. It cannot be denied that strong market forces greatly influenced Seoul's spatial growth and transformation in the 20th century and that the role of the private sector was at its heart. However, there is still insufficient research into how the real estate capital, construction companies and financial institutions in the private sector became linked and in what way they influenced Seoul's growth and change.

Finally, an important characteristic of the spatial growth and transformation of Seoul in the 20th century is that it was strongly influenced by the top-down, growth-centered urban management
paradigm. During the second half of the 20th century, from the 1960s to the revival of the local autonomy system in the 1990s, the mayor of Seoul was appointed by the president, and Seoul's urban policies were either a direct embodiment or local interpretation of the chief national policies. The president's interests and tastes directly influenced the city's decision making, from paint colors of the bridge to large-scale urban development. And the appointed mayor made achieving the president's hopes for Seoul the goal of urban policy. At the time that the nation's slogan was, "Let's fight (against communism) on the one hand and build (for the nation) on the other," the mayor's catchphrase was "commando construction." The avid followers of the president, the mayors made sure that any project of national importance had to be approved, implemented and completed. Since the vertical clarity and efficient execution of decision-making was systematically protected, the framework for Seoul's top-down decision making structure for urban management could not be thrown off. Though it is not that there was no consideration of citizens' opinions and the disadvantaged, in the general flow of city administration, these arose within the framework of top-down planning and implementation. And the national policy of development, which was at the head of the decision making structure, was certainly connected to Seoul's urban management. The primary goal of the Third Republic, which began in the 1960s, was to throw off poverty and develop into a modern nation. Therefore, a metamorphosis into a modern city had to be accomplished by restructuring Seoul's urban management and modernizing its urban structure. While revitalizing the appearance of an impoverished era and possessing modern urban infrastructure facilities were regarded as important, other top priorities such as environment, historical preservation, quality of life and social welfare, were considered as one that could only be pursued in the future. Seoul, of course, is not the only city underwent a phenomenal mutation process. Eighteenth century London, New York in the early 20th century, Tokyo after the Great Kanto Earthquake and the Second World War, all had a history of aggressive urban rebuilding. However, it is difficult to find a city that has experienced such rapid, aggressive, top-down urban development as Seoul. As such, Seoul could have little time to cultivate sound historical, environmental or cultural values and to gain deep understanding of the relationship between people and their communities. Nor did it have the leisure to nurture the delicate sensibilities or sophisticated techniques necessary to manage its urban places.

The characteristics of 20th century Seoul's growth and transformation listed above demand a fuller, indepth study of Seoul's urban history in the coming years. Outside of these, too, Seoul's one hun-
dred years of growth and transformation can be viewed from a variety of perspectives. The chapters that make up this book cannot synthesize all the various aspects on Seoul’s last hundred years, and it is even more difficult to combine the writings of many people from different fields into one unified vision. In this book, each writer’s analysis and evaluation of Seoul’s 20th century transformation distinctly differs depending on how he/she views it. This book does not attempt to unify these various perspectives, nor does it feel that this is necessary. Rather, it hopes to encourage new documentation and assessment of Seoul’s spatial development and transformation. Considering the meager fruits of urban historical studies of Seoul, this hope is all the more pressing.
Notes


2) As The History of Gyeongseong-bu only reports Seoul’s population from 1915, there are no formal population counts from the beginning of the 20th century. Though The History of Gyeongseong-bu lists Seoul’s population as 250,000 between 1915 and 1924 and exceeding 300,000 for the first time in 1925 (Seoul Municipal Government, 1991, Seoul Statistical Database), considering the uncertainty of the figures at this time and the fact that most research estimates the actual population to have been 350,000 at this time, the actual population in 1900 is estimated to have been about 300,000.


10) Seoul Metropolitan Government. (1962). Second Annual Statistical Report, p. 18. Seoul’s first annual statistical report was published in 1961, but the first time annual population changes from 1915 were listed was in 1962.


14) Seoul’s population grew from 2.5 million in 1961 to 3.0 million in 1963, 3.5 million in 1966, 4.0 million in 1968, and this trend continued through the 1970s and into the 1980s. Seoul Metropolitan Government, Annual Statistical Report (for each year cited).

23) Immediately after Seoul was designated as the site for the Olympics in 1981, the city inaugurated the Olympic Preparation Planning Committee (promoted by the president in 1983 to the Olympic Planning Committee), the success of the 1988 Olympics became a primary policy aim and the city’s administrative capacity was fully mobilized. Seoul Metropolitan Government, Annual Report (Shi-jung) (1981-1988).
28) Hwang, Myung-Chan. (1996). "The development and content of the policies of our nation’s capital", in Where are the Policies of Our Nation’s Capital Going? (Final report of Urban Environmental Policy Seminar held by Seoul National University’s Graduate School of Environmental Studies and the Environmental Planning Institute), pp. 15-34.
공백
CHAPTER 2

Seoul's Urban Growth in the 20th Century:
From a Pre-modern City to a Global Metropolis

Ki-Suk Lee

In the last 100 years, Seoul has grown at a rate unprecedented in history. Hanseong, the capital of the Chosun Dynasty for more than 550 years, was a city surrounded by citadel walls, the economy of which was based on its population hovering around 200,000 people. Hanseong, comprised of the area inside the citadel walls and outside area called Seong-jeo-shim-ri, was an agrarian based, typical pre-industrial city which served as the political and administrative center with a market function. At the turn of the twentieth century, railroads and electric streetcars were constructed and, following new urban planning, the old districts were reorganized and the foundation for a modern city was prepared. In spite of the fact that under colonial control some aspects of growth were undesirable, in general, urban growth was managed and sustained systematically and certain sectors of the city were developed as specialized industrial areas. During the colonial period, the population increased fivefold from 200,000 to 1,000,000, but the area of the city was not as large as the administrative area during the Chosun Dynasty.

In spite of the hardships experienced after liberation due to the division of the peninsula and the Korean War, Seoul, as the capital, continued to grow. During the war, the population of Seoul dropped
to 500,000, but after the war, and with impetus from economic recovery and rapid industrialization, Seoul developed with surprising speed into a modern industrial city. For a period of time, the rapid growth in the population of Seoul led to the widespread appearance of sub-standard dwellings. A large-scale land development project led to the expansion of residential areas creating the appearance of apartment complex-centered dwelling patterns. From the 1960s until the 1980s, led by export-driven growth, Seoul's development continued unabated, the population hitting the ten million mark in 1988.

From the beginning of the 1970s, many efforts such as green belts and the metropolitan area consolidation plan were made in order to achieve a dispersed, balanced growth: however the unfettered growth of the city continued. Toward the end of the 1980s, the city's population began to be stabilized due to extensive adjustments to the labor-intensive industrial structure. The metropolitan expansion plan to develop satellite cities in the areas surrounding the city coupled with the widespread use of personal automobiles. The metropolitan expansion of Seoul resulted in the development of such large satellite cities as Incheon, Suwon, Bucheon, Seoongnam, Anyang, and Goyang. The development of these cities was spurred by high tech industries such as microchip manufacturing. Following this, in the 1990s, with the development of the telecommunications industries in metropolitan areas based on the concentrated high tech industries and the normalization of relations with socialist countries, Seoul's globalization and integration with the information super-highway were accelerated making it a city of central importance in East Asia.

During the last one hundred years, the area of Seoul has increased three fold and the population has grown fifty fold making it one the world's largest cities. Also, Seoul was the center of democracy during the period of Cold War, and during the recent period of reconciliation, it has, through rapid development brought on by accommodating worldwide changes, become a leading international metropolis. What is more, in spite of the fact that during that time Seoul has been under the control of three different outside powers, it has never lost its status as the capital of the Korean people. Today, Seoul is a unique global city with an international air terminal network and twenty-four hour shopping.
From Fortress to Modern City:
The End of the 19th Century - 1910

At the end of the 19th century, Seoul underwent a period of enlightenment to outside influences and a short period of liberalization before coming under Japanese colonial rule in the beginning of the 20th century. In spite of great internal change in the areas of politics, economics, and society in general, these changes exerted no great influence on the external structures of the city. The areas of the city during this period remained roughly the same as they had been during the Chosun era. However, this time also saw Seoul make its first steps toward becoming a modern city with its opening to foreign influences, the establishment of a railroad and electric street cars, a foreign residents' district, and expansion of the roads. Of particular importance to Seoul's development during this period were the beginning of an increase in population from the 200,000 people that had remained constant for nearly 500 years and the acceleration of its growth toward becoming a modern city.

THE UNCHANGED URBAN AREA

Seoul is situated in a geographically important area in the Korean peninsula. Some two thousand years ago, it was already the site of the old capital of the Baek Jae dynasty which encompassed the earthen fortresses areas of the Han River basin. When Seoul became the capital of Choson dynasty in 1394 and the fortress walls were built, its administrative area within the walls included five districts and 10-ri (some four kilometers) radius area outside walls. This structure roughly corresponded to that of contemporary metropolitan area: center city and suburbs. For the 500 years of the Chosun dynasty that Seoul was called Hanseong and up until the time that its name was changed to Gungseong under Japanese rule, the areas under its administration hardly changed. In other words, until the 20th century Seoul never expanded its administrative boundary; the only changes were to the internal demarcation of sub-administrative units (such as Bang, Gye, Dong) within the five administrative districts. There are not many records concerning administrative areas outside of the fortress walls: however, in the east, south, and north regions
there were many residents and a kind of urbanization was underway in the areas named as Sungshin-Bang, Inchang-Bang, Bansong-Bang, Banseok-Bang, and the like. In other areas outside the walls, Ri and Dong were used, but it is not clear when the system of Myun and Ri was adopted.

Although some of outer areas were urbanized earning the status of Bang, most of the areas of outside walls corresponding to the Seong Jeo 10-ri were, up until the period of enlightenment, apparently farm lands. This rural nature of outside walls is even more evident from the fact that important relics from the Hansoeng period and the royal tombs such as Oh-neung, Jeong-neung, and Hong-neung, were located in outer Seong Jeo 10-ri area. The areas outside of the West, South, and East gates were densely populated and urban development could be seen along the routes of major roads; however, there was essentially no regional demarcation in these areas outside the city walls.
INCREASES IN POPULATION AND CHANGES IN RESIDENTIAL AREAS

Up until the end of the 19th century, the population in and around Seoul's five main districts is said to have approached 200,000 people. However, according to a survey performed in 1900, the population, including foreigners, was 196,898 people and this number grew to 238,488 by the year 1910. In spite of the fact that this is only a 2 percent increase in the population, it represents a substantial increase compared to the population growth during the 18th century when Seoul was known as Hanseong. Foreigners played an important part in the population increase as attested to by the fact that there were 34,000 Chinese, Japanese, and others living in Seoul at the time. In addition, as new foreigner's residential areas were ensured, Seoul began to take on the personality of an international city. The construction of the railroad outside of the city and the introduction of the electric trolley that traversed Seoul brought changes to the old structure of the city. Representative of foreigner's districts were the Chinese community in the area of Supyo bridge, and the Japanese community in the Chungmu-ro 2-ga district. In addition, the new Yongsan area was developed after the Russo-Japanese war with the construction of a railway and military facilities by Japan.

Actually, Japanese did not begin to reside in the Yongsan area until 1897, and it was after 1906 that this area grew rapidly as a Japanese residential neighborhood. Based on 1910 statistics, 30 percent of the Japanese residing in Gyeongseong, or 10,638 people, resided in Yongsan making this a new Japanese residential area. In addition, official residences and consuls began to be concentrated around the Seoso-mun and Chungmu-ro areas giving Seoul, for a time, the appearance of an international city. Furthermore, the rapid increase in the Japanese population within the walls of the city gradually changed its nature from a traditional to a colonial one.

Originally, Hanseong, as the capital of the Chosun dynasty, served as the center for political, administrative, military, and commercial activities. The records show that, inside the wall area, there were important governmental ministries such as Uijeongbu, Ho-Jo, Ye-Jo, Byung-Jo, Hyung-Jo, Gong-Jo along the main avenue emanating from Gyeongbok Palace. And in the area stretching from South Gate (Sungraemun or Namdaemun) to East Gate (Heungjinmun or Dongdaemun), many merchants gathered forming huge markets of thousands of shops demonstrating that the city performed the important commercial functions of a typical pre-industrial city. However, the city began to serve new functions as it
changed itself into a colonial city after the enlightenment period. According to a survey of population and employment conducted in 1910 and which included Japanese residents, 24.1 percent were employed in commercial or transportation related jobs; 13.2 percent in agriculture, forestry, and fishing; 17.1 percent either public officials or had their own businesses; and 23.0 percent unemployed. This shows that, at this point, Seoul no longer resembled a traditional city. However, when viewed overall, it is apparent that the growth of the city had been stagnant for a long period of time, despite the establishment of the railway and electric trolleys allowed the city to perform new functions, and the commercial activities increased along the Han River.

DEVELOPMENT OF RIVERSIDE FERRY CROSSING VILLAGES

Areas that had a direct effect on the growth of Hanseong were the villages on the shore of the Han River that were concerned with ferrying and shipping activities. Roads leading to Gwangju, Yongin, Gwacheon, Shiheung and Incheon could only be accessed by the use of ferries on the Han River and because of this, ferry villages developed on both banks of the river. Among such villages, those that combined shipping and commercial activities were quite large in scale.

From the beginning of the Chosun era, the Han River had been the important transportation corridor; tax grains from the provinces of Gyeongsang, Chungcheong, and Gangwon had been shipped to Seoul through the Han River and as a result many warehouses (such as Gwanheung-chang, Manri-chang, Pungjeo-chang, Gunjaegam-chang and Jinyul-chang) had been built along the river. Because of this, sizable villages with varying characteristics developed along the river stretching from Gwangnaru to Yangwhajin at sites like Tsukseom, Dumopo (now Oksu), Hangang, Seobinggo, Yongsan, Mapo, Seogang and Mangwonjeong (Figure 2.2). On the opposite bank of the Han River, Songpaen and Noryangjin developed. As the center of river and sea transport for Hanseong, these locations became important centers of distribution for daily necessities and commercial transactions and grew in close relationship with the markets within the inside city. In the late 19th century, as foreign ships and traders began to utilize these places, their importance grew beyond the function of storage areas and ferry facilities to that of commerce and trade. When the fact is considered that already in the 18th century the river villages near the city had a population of 40,000 people (Koh, 1993), which means that some 25 percent of the city's
population resided in river villages, it is easy to imagine the close relationship between the city inside the wall and these villages. Furthermore, as can be seen in Figure 2.2, the built-up area of Hanseong was concentrated within the city walls, but the urbanization was evident towards these villages along the riverbanks and Yongsan area. It can also be surmised that, Wangshim-ri and Ttukseom were sizable villages at that time with close relationship with the inner city area.

THE END OF THE WALLED CITY AND THE TRANSITION TO A DUAL STRUCTURE CITY

The time from the Enlightenment period to the beginning of Japanese colonization was one of great change in all spheres of urban growth. Among these changes, no doubt the catalysts for the greatest spatial growth in the city were the establishment of the railroad and the electric trolley. This also prepared the city to take on new functions. The Gyeong-In (Seoul-Incheon) line was established in 1899, the Gyeong-Bu (Seoul-Busan) line in 1905, and the Gyeong-Eui (Seoul-Shineuiju) line in 1906. Furthermore, work was underway at the time on the Gyeong-Won (Seoul-Wonsan) line. For many years after the opening of these rail lines, their routes played an important role in determining the pattern of development in the areas outlying the city. With the establishment of the Seodaemun (West Gate) -
Cheongryangri trolley line in 1898, the Jongro-Namdaemun (South Gate) line in 1898, the Namdaemun (South Gate) - Old Yongsan line in 1901, and the extension of the reach of the trolley to New Yongsan in 1910, the sphere of the residential area, previously limited to the inner city, was expanded to outside of the city as well. It was the establishment of transportation facilities to areas outside the city walls that brought the greatest changes to the city and established the basis for the scope of later urbanization. Having the line pass Namdaemun (South Gate) and terminate outside of Seodaemun (West Gate) appears to have been planned with the intention of maximizing the interconnection between the inner city and the outer area. In other words, the railway and the electric trolley were planned to go outside of the South Gate and the West Gate in order to have a direct relationship with the river ports developed at Yongsan and Mapo. When the electric trolley line was first being constructed, its radius of operation was extended to include the area from Dongdaemun (East Gate) to Cheongryangri which was a large barren plain at the time, and from Namdaemun (South Gate) to Old Yongsan which had developed into a port on the Han River. In all, these transportation lines were carried out to extend the urban area and to connect the larger Seoul area.

Yet, the overall appearance of the inner city (inside the walls) was still that of a pre-industrial one during the Enlightenment period, despite foreigners started to reside in the city and the electric trolley brought in diversity to city life. No major changes were found in land use pattern inside the city wall during the Enlightenment period, because it was already deliberately planned when the capital was moved to Hanseong in the late 14th century: i.e. what was already determined were the locations of palaces, shrines, major road systems, residential areas divided by classes. In particular, the upper class lived in the area of north of Cheonggyecheon (especially high-ranking officials around royal palaces), while merchants and craftsmen were concentrated along Jongro, and the lower class traditionally dwelled at the southern areas of Cheonggyecheon (Figure 2.3).

However, there began to emerge a dual structure of Seoul, during the first part of the 20th century, although the main roadways and back alleys of the Hangeong era remained unchanged. It was the residential areas of the lower class and public lands which first came under foreign influence and began to undergo change. Also, with the establishment of the railway and electric trolley outside of the walls of the city, the areas around New Yongsan and Seoul Station outside of the citadel began to develop into new neighborhoods, which coexisted with the inner walled city.
Figure 2.3
Residential areas in Seoul in the 18th century

Over 50m above sea level
Public land
High-ranking officials
Low-ranking officials
Military - footmen
Merchants - Craftsmen
Low-ranking military
General low-class
Upper low-class

500m
Seoul as a Colonial City: 1910 - 1945

From 1910 to 1945, the growth of Seoul was greatly influenced by Japanese colonial rule. Administrative boundaries were adjusted and an influx of Japanese residents began in earnest. Modern, variegated industrial facilities were located inside and out of the city. In addition, various institutions of colonial governance were located in the center of the city and modern education was promoted through the establishment of primary schools throughout the city. Also, colonial urban planning was applied to the extension of roads system and the modern housing platting through implementation of land readjustment projects. As a result, Seoul no longer played the single role of the traditional capital. Factories and heavy industrial facilities were constructed in areas outlying Seoul and commercial activities were concentrated in the city, all signaling the beginning of new Seoul as a modern industrial city.

THE SHRINKING CITY BOUNDARY AND THE SUDDEN GROWTH IN POPULATION

After Japanese occupation of Chosun in 1910, the traditional name Hanseong was changed to Gyeongseong and the city was subordinated to Gyeonggi Province thus denigrating the position of Seoul. In 1911, the city's administrative structure was reorganized around 5 Bu (urban oriented district) and 8 Myun (rural oriented district). In 1914, the whole country underwent a reorganization of its administrative structure and Seoul was also reorganized and part of it was annexed to Goyang County. The 5 Bu and 8 Myun system was done away with and in its stead what was established was a system based on 186 various wards (named as Dong, Jeong, Tong, and Jeongmok) plus four district offices of East, West, North and Yongsan areas. The result of this was that the area under the administrative control of Seoul was 36.18km², one seventh of what it had been when the city was known as Hanseong. In 1936, a part of Gyeonggi Province was incorporated into Gyeongseong increasing the area of its jurisdiction to 133.94km². In 1943, the Gu (district) system was introduced and the city was divided into 7 districts: Jongro-gu, Jung-gu, Dongdae-
Figure 2.4
Changes in Seoul's administrative districts, 1394-1963

--- City walls
--- Estimated city limits of 1394
--- Adjusted city limits of 1910
--- City limits of 1963

City limits of 1913
--- 1936
--- Expansion of the city in 1944
--- 1949
--- 1963

Kilometers
0 2 4 6 8
0 1 2 3 4 5

Miles

| Seoul's Urban Growth in the 20th Century
mun-gu, Yongsan-gu, Seongdong-gu, Youngdeungpo-gu, and Seodaemun-gu. The following year in 1944, with the incorporation of Yeonhi Myun to the newly established Mapo-gu, Seoul’s administrative area increased to 136km². With these three major reorganizations in the administrative structure, the original appearance of the city’s administrative districts was completely lost.

At the time of annexation in 1910, the population of Seoul was 240,000 people, but with the reorganization of the city’s administrative boundaries in 1914, the population decreased as much as those living outside the city boundary. It was ten years later, in 1925, that the population of the city reached 300,000 people. Ten years after that, in 1935, the population hit the 400,000 mark. By this time, a 25 percent of Seoul’s population consisted of Japanese. With a new reorganization of Seoul’s boundaries in 1936, the population exceeded 700,000 people. The population continued to grow, and in 1942, under colonial rule, the population of the city hit the one million mark for the first time in its history. However, between the time the Second World War began and liberation in 1945, the population had dropped by some 150,000 people (Figure 2.5).

THE SEGREGATION OF JAPANESE QUARTERS AND LARGE SCALE RESIDENTIAL DEVELOPMENT

Like in typical colonial cities, the rapid increase in the Japanese population that accompanied the increase in the general population of the city led to the social and physical separation between the ruling class and the ruled class. The area from the new neighborhoods of Yongsan and those lower class neighborhoods between Euljiro and
Figure 2.6
Location of residential areas by ethnicity

Source:
Gyeongseongbu, Population Distribution by Ethnicity.
Namsan Mountain were first converted to major Japanese residential area. In particular, these areas thrived as Japanese residential district as some 70 percent of the residents in this area were Japanese. The area north of Euljiro, on the other hand, with the exception of a few places where modern schools and other urban facilities had been established, had a limited Japanese resident population and the percentage of Japanese in the total population did not exceed 20 percent (Figure 2.6). In this fashion, even under the colonial rule, the area north of Cheonggyecheon which had been traditional residence of noble class (called Yangban) during Chosun dynasty maintained its role of residential neighborhoods of Korean people.

In addition to the Yongsan residential development for exclusive use for Japanese, Japanese residential segregation was markedly furthered by the establishment of official and private residences developed for those employed in the colonial organs which had been newly established in Seoul. In addition to the official residences for the railroad and military officials which had already been built by 1911 in Yongsan and Seodaemun, official residences for the judiciary, department of communication, provincial governor, board of education, and private residences for official of the East India Trading Company, East Asia Tobacco Company, and the Bank of Korea were established (Yang, 1991). Establishing such official residences in this concentrated fashion in order to solve the housing problem for Japanese residents in colonial Korea resulted in a lasting, visible Japanese influence in Seoul’s urban landscape.

The increase in population and the growth in size of Seoul are closely related to the development of large-scale housing tracts. In 1936, the city limits were expanded bringing 10 new districts comprising 5,530,000 pyeong (1 pyeong = 3.3 m²) of land readjustment into the city limits. The housing developments that accompanied

<table>
<thead>
<tr>
<th>Sites</th>
<th>Project Period</th>
<th>Area (pyeong)</th>
<th>Project began</th>
<th>Project Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donam</td>
<td>1937-1940</td>
<td>704,000</td>
<td>1937.10.28</td>
<td>1940</td>
</tr>
<tr>
<td>Yeongdeungpo</td>
<td>1937-1940</td>
<td>1,590,210</td>
<td>1937.11.12</td>
<td>1940</td>
</tr>
<tr>
<td>Daehyun</td>
<td>1938-1941</td>
<td>477,368</td>
<td>1938.11.18</td>
<td>1941</td>
</tr>
<tr>
<td>Hannam</td>
<td>1939-1942</td>
<td>123,903</td>
<td>1939.11.24</td>
<td>1942</td>
</tr>
<tr>
<td>Yongdu</td>
<td>1939-1943</td>
<td>592,928</td>
<td>1940.1.10</td>
<td>1943</td>
</tr>
<tr>
<td>Sageun</td>
<td>1939-1942</td>
<td>524,399</td>
<td>1940.1.12</td>
<td>1942</td>
</tr>
<tr>
<td>Daebang</td>
<td>1939-1942</td>
<td>371,335</td>
<td>1940.1.15</td>
<td>1942</td>
</tr>
<tr>
<td>Cheongnyangri</td>
<td>1940-1944</td>
<td>332,805</td>
<td>1940.10.21</td>
<td>1944</td>
</tr>
<tr>
<td>Sindang</td>
<td>1940-1944</td>
<td>459,688</td>
<td>1940.10.21</td>
<td>1944</td>
</tr>
<tr>
<td>Gongduk</td>
<td>1940-1944</td>
<td>453,260</td>
<td>1940.10.24</td>
<td>1944</td>
</tr>
</tbody>
</table>
this project served not only to bring improvements to the existing urban area, but also were instrumental in absorbing the rapidly increasing population (Table 2.1). This project was carried out with the main focus on the development of new districts; however, completion was to require a great deal of time.

During this time, another residential phenomenon that took shape was the appearance and growth of squatter areas known as Tomakchon. These slums came about when state or private land would be occupied without permission and either caves were dug or shacks were erected out of whatever materials were available. After the land survey of 1920, the majority of the poor living in the squatters were found to be farmers who had lost their holdings and moved to the city, those who had been relocated due to city planning projects, or groups who had fallen on hard times due to repeated floods or other disasters. The number of squatter dwellers in 1931 was 5,093, but that number grew to 20,911 by 1939. There was a tendency for these dwelling to be near the city center, and the most favorable sites were hills, near railroad tracks, under palace walls, on embankments, near streams, or under bridges (Kang, 1987; Nam, 1989).

THE CONCENTRATION OF COLONIAL RULING FUNCTIONS AND THE DEVELOPMENT OF COMMERCE AND INDUSTRY

Among the various and rapid changes that Seoul underwent while becoming a Japanese colonial city was the appearance of various buildings throughout the city related to colonial governance. Following the city district reorganizations of 1912, the road system was improved and the electric trolley routes were continually expanded. In addition, factories sprang up and large-scale official residences were built in an effort to solve existing housing problems. Also, modern schools were built in number inside the city to promote colonial education. In this process, internal structure of the city began to change at a rapid rate.

The main organs of colonial rule that were concentrated in the city were the Chosun Colonial Governor's headquarters, City Hall, East India Trading Company, the military police, police headquarters, the land reform corporation, the bureau of communications, the geological survey office, the postal service, sales control bureau, and financial services. The reason that these facilities were concentrated within the city as opposed to the new Yongsan area for instance, probably had to do with the fact that much land held for official use such as municipal land, administrative land or state land
from the Chosun period was located within the old city walls. Another reason for this concentration may have been the fact that most residents of this area fell into the poor class and it was fairly easy to purchase their land and convert it for use to something else (Figure 2.7).

One of the things promoting rapid change away from a traditional city structure was the establishment of educational facilities. The earliest established primary schools, which started with the Gyodong primary school built in 1894, were the Gwanghi, Maedong, and Hyojae schools. By 1910, there were a total of 10 primary schools. Then with the advent of the Gyeongseong government, that number increased to 70. Also, the establishment of around 100 educational institutes, including middle and high schools, and universities, brought about progressive changes in the structure of the city so that it no longer resembled the traditional walled citadel that it once was. From this time on, Seoul was the center of education.

After the proclamation of the Chosun City Planning Decree in
Table 2.2
Land use designation, 1939

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Area (km²)</th>
<th>Ratio (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential area</td>
<td>92,131,999</td>
<td>68.0</td>
</tr>
<tr>
<td>Business area</td>
<td>5,991,350</td>
<td>4.4</td>
</tr>
<tr>
<td>Manufacturing area</td>
<td>6,658,015</td>
<td>4.9</td>
</tr>
<tr>
<td>Undesignated area</td>
<td>30,573,608</td>
<td>22.7</td>
</tr>
<tr>
<td>Total</td>
<td>135,355,032</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source:
Seoul City (1965), Seoul City Planning

Figure 2.8
Map of the areas in and around Gyeongseong, 1928

Source:
Gyeongseong-bu (1928), Report of City Planning for Gyeongseong

1934, several areas in Seoul were officially designated for certain use according to an urban land use plan formed in 1939. Among the designated uses were commercial areas, industrial areas, residential areas, and undesignated areas. In this way, Seoul first took on the appearance of a city of commerce and industry under colonial rule (Table 2.2). Yet, commercial and manufacturing facilities were already spread across the city even before land use zoning was designated, necessitating the need for solving the problems of those non-conforming uses. According to the results of a survey conducted in
1925 for the sake of implementing the land use zoning system, there were many unsuitable factories scattered throughout the city (Figure 2.8).

After becoming a colonial city, commercial and industrial activity began to be concentrated in Seoul. Yet, these activities began to take a spatial concentration as urban planning designated certain areas as commercial and industrial zones. In fact, commercial activity centered in Gyeonggung and Jongro during the Chosun period. However, it was only after the establishment of official urban planning that commercial areas were systematically designated according to the road networks within the city. Designation of land use zones by the Urban Planning Decree of 1939 served to promote the differentiation of Seoul’s land use pattern as manifested in newly created commercial and industrial areas. The land use structure that was formalized at this time maintains an influence on the organization of the city even today.

### Development of manufacturing areas

After 1910, modern factories were developed and the percentage of the population involved in manufacturing increased from 10 percent to 19 percent by 1937 giving Seoul the appearance of an industrial city. The number of factories increased from 318 in 1917 to 1,002 in 1937. In particular, as of 1920, 10 new factories were opening a year, but that number had increased to 30 a year by 1930. After the Manchurian Incident of 1931, economic emphasis shifted from an agriculture-centered one to a policy jointly promoting agriculture and industry. As a result, the colonial intention to turn Gyeonggung into an industrial city was partially reflected in Seoul. Including the 300 some factories employing five or less people in 1938, there were a total of 1,300 factories employing nearly 40,000 people.

Among the major industries, the most important were food and beverages, weaving, chemical, and printing. In addition, utilizing the Han River’s water, plentiful labor, and the convenient transportation, other industries like machinery, lumber, ceramics, and the electrical industry became concentrated in Seoul (Gyeonggung Chamber of Commerce, 1938). These factories were spread across the

<table>
<thead>
<tr>
<th>Year</th>
<th>Weaving</th>
<th>Metallurgy</th>
<th>Machines</th>
<th>Ceramics</th>
<th>Chemicals</th>
<th>Wood Products</th>
<th>Printing</th>
<th>Food</th>
<th>Electronics</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1922</td>
<td>40</td>
<td>93</td>
<td>40</td>
<td>15</td>
<td>46</td>
<td>56</td>
<td>53</td>
<td>200</td>
<td>2</td>
<td>191</td>
<td>738</td>
</tr>
<tr>
<td>1,097</td>
<td>2,135</td>
<td>3,957</td>
<td>459</td>
<td>1,549</td>
<td>1,231</td>
<td>4,701</td>
<td>8,645</td>
<td>2,879</td>
<td>18,327</td>
<td>45,241</td>
<td></td>
</tr>
<tr>
<td>1936</td>
<td>28</td>
<td>85</td>
<td>98</td>
<td>40</td>
<td>103</td>
<td>99</td>
<td>223</td>
<td>3</td>
<td>213</td>
<td>936</td>
<td>83,431</td>
</tr>
<tr>
<td>11,654</td>
<td>3,263</td>
<td>4,059</td>
<td>2,576</td>
<td>9,015</td>
<td>1,865</td>
<td>9,595</td>
<td>33,380</td>
<td>3,919</td>
<td>4,110</td>
<td>83,431</td>
<td></td>
</tr>
</tbody>
</table>

Source: Bae, Seong-jin (1988), p. 228

---

Ki-Suk Lee
entire Seoul area in no systemized pattern. However, in 1920, introduced rubber industry was concentrated around the Seoul station area (particularly in Jungrim-dong, Bongrae-dong, Dongja-dong, and Galwol-dong) and Yongdu area including Shinsul-dong, and later spread to the Youngdeungpo area as well. Development of the Youngdeungpo industrial area started with the Chosun Leather Works in 1912 and it continued to grow into a Seoul's primary industrial district with the entry of ceramics, machinery, and brewing factories to the area.

Before the designation of the land use zones in 1939, factories were spread out over the entire city. However, land was set aside for the construction of new factories in the areas such as Youngdeungpo, Yongsan, Jeonnyong-dong, Sagcun-dong, and the areas of the north of the Gyeong-chun (Seoul-Chuncheon) road (such as Emun-dong and Huigeung-dong). It appears that designation of these industrial areas within the city was pursued with the intention of developing the area between Gyeongseong and Euijeongbu, and the area between Gyeongseong and Incheon into major industrial regions. While some modern industries were established with local Korean capital, large-scale industry and relevant facilities were introduced and managed under colonial rule by the Japanese with labor provided by Koreans. The result was that under colonial rule and with the introduction of modern factories, the function of Seoul changed from that of a traditional political, administrative and mercantile city to that of a modern industrial one. It was, therefore, inevitable that the administrative boundaries of the city be expanded, and that changes in the rural conditions surrounding the city as well as the internal structure of the city would follow (Table 2.3, Figure 2.9-1 and 2.9-2).

**Development of commercial areas**

Commercial activity in Gyeongseong intensified during the colonial period and became the central function of the city. In 1910, 24 percent of the population was involved in either commerce or transportation. While this number grew to 40 percent in 1920, it stood at 29 percent in 1940. Among the factors stimulating the commercial growth of Gyeongseong was the fact that commercial power became concentrated in Seoul as the result of transportation activity made possible by the railroad network centered in the city, and the advent of automobile traffic made possible by road construction. In particular, with the advent of Japanese retailers and department stores, Seoul's commercial activities took on a new look. According to records of the Gyeongseong Chamber of Commerce from 1936, there were 9,585 stores in Seoul. Of those, 1,478 were wholesale
Figure 2.3-1
Distribution of factories in Gyeongseong, 1922.

Source:

- Korean owned factory
- Japanese owned factory
1 dot = 1 factory
Figure 2.9-2
Distribution of factories in Gyeongseong, 1936.

Source:
Bae, Seong-jun, 1988

- Korean owned factory
- Japanese owned factory
1 dot = 1 factory
outlets and the rest were retail stores. Of the goods sold in these businesses, 40 percent were Korean products, 50 percent were Japanese and the rest were imported.

Among new commercial activities, the most notable were the establishment of new type of markets and the development of department stores. Unlike traditional markets (called Sjeon) along Unjongga (now Jongro), emerged a new type of market that was operated by corporate companies. In July of 1905, the Gwangjang Company established by the Jongro merchants around Ehyun and Yeji-dong, open the first modern market known as Gwangjang Market. In 1921, the Japanese-owned Chosun Agricultural Company served as the basis for the establishment of the Namdaemun Market located in the western part of the city. Both of these markets dealt in rice, fish, fruit and sundries. Also, from 1920 on, public markets were established in Mungdong (then Mungsanjeong), Jongro, Yongsan, Seodaemun, Yongdeungpo, Gwangdong, Dongdaemun and Seorindong in order to secure the supply of daily necessities to the populace. By 1940, a total of 10 such markets had been established. In addition, including the Younggrak market in 1921 and the Michang market of Bukchungi in 1935, 22 private markets dealing in sundries were in operation by 1940. Also, during the same period, modern department stores and specialized shops appeared around the center of the city. In 1927, the Samwol department store was established by the Samjeong Group at Chungmuro 1-ga street where the Sinsegye department store is currently located. This was the beginning of the development of such department stores in Seoul with the Samjungjeong department store and the Pyungjeon department stores also being built in Chungmuro 1-ga street around the same time. In 1939, the Jeongjaok department store was built where the Midopa department store is currently located and, in the same year, the Hwasin department store opened its doors in Jongro. By that time, specialty stores had already opened in the area around Jongro and Namdaemun: those stores included Gyerim Sanghoe, Koryo Yanghaeng, Geumgang Sanghoe, and Dukwon Sangjeon. In this way, the center of the commercial function of Seoul shifted from the traditional market areas around Jongro to the areas of Namdaemun and Chungmuro that were newly created in the colonial era. As a result, the residential communities were served by public markets, while the city center accommodated the department stores and specialty shops. Namdaemun Market and Dongdaemun Maket served the western and eastern part of the city respectively. What emerged around the area of Namdaemun was the center of finance with the establishment of the Dongil Bank, the Hanseong Bank, the 18 Bank branch office, the Siksan Bank, the Sangu Bank, the Jael Bank branch, Commercial Bank and Chosun
Bank. With this concentration of banks and department stores, the city center took on the new appearance of a colonial city, and together with the establishment of markets, it restructured the spatial order of commercial activity. At the same time it also created the dualistic nature of the city structure as the commercial areas were divided by Korean and Japanese communities. What is most important about these developments, however, is that the form the city took at the time played a decisive role for Seoul's current city center to become an area of central business district known as CBD.

PLANNED URBAN GROWTH

During the period between 1910 and 1945, urban growth took the form of a new type of colonial city which was born of the implementation of the colonial policy of the time. The most important elements of colonial policy that affected the characteristics of the city and its urban growth were the various city improvement projects (called shi-gu-gye-jeong), the expansion of manufacturing and commercial capabilities, establishment of rail and trolley lines, introduction of land use zoning, land readjustment projects, the establishment of the military base at Yongsan, and the formation of residen-
ritional areas for Japanese and other foreigners. Figure 2.10, based on a map of 1937, shows the expansion of built-up area at that time. The most identifiable development occurred towards Yongsan outside the South Gate. At the same time, the development of Gyeong-gang, an area which had early been commercially active, was relatively stagnant compared to that of Yongsan. The figure also shows that the strip development took place along the long, narrow corridor between the East Gate and Cheongryangri, while the area of Youngdeungpo accommodated the planned development. When the progress of urbanization is considered overall, it can be observed that changes within the city wall were mostly in the form of construction, while development outside the walls mostly followed the route of the railway and trolley lines. There is no doubt that the geographic characteristics of Seoul influenced these patterns of urban growth of Seoul at the time. However, transportation such as the electric trolley played a primary role in determining the growth pattern. When considering the fact that the route of the trolley lines was deliberately determined according to colonial citywide land use planning and urban policy, it is apparent that Seoul’s urban growth at the time was undoubtedly a planned one.

Urban Change during the Period of Turmoil: 1945 - 1960

With the end of the Second World War and liberation from colonial rule, the city of Seoul was, for a time, thrown into turmoil. As a number of Koreans returned from Japan and China in conjunction with liberation, there followed a reorganization of residential areas since Seoul had to accommodate the suddenly expanding popula-
tion. In addition, the many refugees that poured into Seoul from North Korea as a result of the division of the peninsula and the Korean War affected the growth and development of the city in many unexpected ways. Also, due to the impoverishment of rural villages after the war, many farmers gave up farming and moved en mass to the city greatly accelerating growth.

THE EXPANSION OF CITY BOUNDARY AND THE RAPID INFLUX OF REFUGEES

After liberation, the city’s name of Gyeongseong was changed to Seoul, and in 1946 the city was separated from Gyeonggi Province to become its own entity. In 1949, Sungin Myun (town) of Goyang County was annexed into Seoul and became Seongbuk Gu (District): Unpyeong Myun of Goyang County was incorporated into Seodaemun Gu, Trukdo Myun was incorporated into Seongdong Gu, and part of Siheung County was incorporated into Youngdeungpo Gu. The amount of land newly incorporated into the city limits, 134.4km², was almost equivalent to the previous total area of the city at 135.4km², thus bringing the total area of the city to 267.8km² (Figure 2.4).

Seoul’s growth can be evaluated by looking at the increase in population, its administrative boundary, and economic power. Seoul’s population broke the million person mark for the first time in 1942 and 1943, however; as the city became embroiled in the events surrounding the end of World War II, the population once again dropped and, according to a 1944 survey, stood at 950,000 people. In June of 1945, the year of liberation, the population stood at 900,000 people. When the WWII ended in August, some 200,000 Japanese civilians and military personnel left Seoul, but by the end of 1946 the population had reached 1,260,000 people. This means that just after liberation, some 500,000 new people entered Seoul. This sudden rise in population can be attributed to the influx of military personnel and laborers forcibly conscripted by the Japanese as well as to the return of Koreans residing abroad and those escaping communism in North Korea. There has never been such a population shift in the history of Korea. In addition, the population grew by another 380,000 in 1947. However, with the establishment of governments in both the north and the south, and with free movement between the two sides becoming more difficult, population growth due to those coming down from the north shrank drastically. In 1949, according the first Report of the General Census of the Republic of Korea, there were 1,410,000 people residing in
Seoul. However, high possibility is that this number was inflated by those trying to take advantage of government foodstuffs to those housing refugees. This census calculated that a total of 328,791 Japanese, Chinese, Manchurians, North Koreans, and others repatriated to their countries, and more than 50 percent of the rise in Seoul's population over those four years was the result of an influx of Korean foreign residents. The remaining 50 percent increase can be seen as the result of natural increases and the migration of farmers to the city. In any case, Seoul's population increased to 1,700,000 people between liberation in 1945 and the outbreak of the Korean War in 1950. The increase in Seoul's population accounted for 70 percent of the increase in the entire South Korean population. In this way, even before Seoul began industrializing, the social foundation for Seoul to be the dominant center of the nation was in place.

However, in 1950 with the start of the Korean War, 1,000,000 of Seoul's residents were dispersed out of the city. During the years that the war lasted, the population of Seoul fluctuated between 600,000 and 700,000 people, but the normal functions of the city came to a standstill. During this time, the provisional capital was moved to Busan. Seoul was restored as the capital in 1953 and the population once again reached the one million mark. After this, the population increased rapidly reaching 2,450,000 by 1960. Nationally, during the census period between 1955-1960, a total of 1,740,000 increased in the city areas and half of that increase was recorded in Seoul. This meant that Seoul would experience phenomenal growth in the coming years. In reality, during this time, making an accurate estimate of the population was difficult task. It was

Figure 2.11
Sex Ratio change in Seoul, 1945 - 1950

Source:
Seoul City, each year, Seoul Statistical Yearbook
because households were exaggerating the number of people living under each roof in order to obtain more of the aid being provided by the U.S. military government. On the other hand, due to the fear engendered by the Korean War, many residing in Seoul were not registering their residency thus leading to population estimates that were lower than the actual number. This tendency has continued to the present day. In addition to the registered number of residents in Seoul, there is still a large unregistered, fluid population.

In the relatively brief period between 1945 and 1960, the social characteristics of the times, as shaped by the war and the social turmoil of the era, were reflected in the gender make-up of the population. Due to the repatriation of military personnel and laborers during the period between liberation and the Korean War, the male population was disproportionate to the female population. However, after the war, due to the fact that many men were transferred to other areas for military duty and a great many had been lost during the war, the female population of Seoul became more dominant than female (Figure 2.11). The gender balance of Seoul's population, the influence of the Korean War, was restored around 1960. Yet, even after this, the city's female population outnumbered male population as Seoul's service industry grew.

Another characteristic of the growth in Seoul's population during this period was that the Jongro Gu (District) and Jung Gu reached their limits as to the number of residents they could accommodate. At one point in 1947, these two areas accounted for 30 percent of Seoul's total population with 500,000 people. However, after this, the population of these two areas started to decrease in proportion to the percentage of the total population of the city that this area could absorb. And in the early sixties, as experienced in other large cities worldwide, a trend in the decrease in population in the city center began to manifest itself. This decrease in the ability of the city center to accommodate residents can be explained by the fact that it began to take on new and diverse urban functions and began to push residential functions out of the city center.

EMERGENCE OF OVERCROWDED SHANTY TOWNS

While liberation and the Korean War served to fix Seoul as the prime city in the country, the fact was that no solution was found for the problem of the rapidly increasing population and the housing needs that accompanied this rise. The result was that the entire city, including the city center, suffered from overcrowding. A certain percentage of the Koreans who had returned from abroad and those
who had come down from the North were accommodated in former Japanese residences, however; there was no way to accommodate the remainder. Due to this, the shortage of housing emerged as an unexpected social problem. Near Jongro Gu and Jung Gu areas, groups of illegal dwellings sprung up on vacant land or at the foot of Namsan mountain. Unlike the squatter dwellings that existed during the colonial period, the size, location, and construction process of these dwellings were uniquely the result of the sudden rise in the population. One of these illegal residential areas was constructed in Yongsan area and called Haebang-chon (literally Liberation Village).

Haebang-chon was built by refugees who came from the north around the time of liberation. The reason that these people chose to settle in that location can be attributed to the fact that, not only was it close to the city center, but it was also a large tract of vacant land. Refugees who had been occupying the residences in the military installation were dispersed to this area. Also, another group of
refugees were housed in tents at the base of Huam-dong where the old Japanese shrine (called Shinsa) was located. It was the ideal location for the refugees in that the Namdaemun market and the U.S. military base were within 15 to 30 minutes walking distance, the close proximity for possible work. Their own hands built all the dwellings constructed in this area. The materials used for building these dwellings consisted mainly of items scavenged from items discarded by the U.S. military and trees cut clandestinely from Namsan mountain and fashioned by hand into building materials. Fuel also came from trees cut from Namsan mountain. Due to these factors, there was constant friction between the authorities and those squatting on this land. The houses built by the squatters were not of the Seoul style but resembled the type of homes they had lived in North Korea. These style houses contained living quarters and kitchen designs that were not suited to the climate of Seoul. While such houses are almost nonexistent now, one can still see traces of the original village pattern in the irregularly-shaped narrow street network and the location of the churches (Figure 2.12).

According to records of the time, the population in this area rapidly increased from 6,531 people in 1947 to 13,458 people in 1949 with the number of dwellings reaching 1,280. Haebang-chon can be seen as Seoul's first illegal squatter area to take shape after liberation. The residents of Haebang-chon were particularly industrious to make a living: they mainly worked in the Namdaemun market, U.S. military base, and the Yongsan and Huam-dong areas as well as Seoul Station. Some of them formed household industries wrapping cigarettes or making other sundry articles for sale in the streets. Some households even banded together packaging matches out of their homes and in this way supported themselves. Another household industry that was common was making notebooks for sale in the streets from paper illegally obtained from the U.S. shooting range that adjoined Haebang-chon. In addition, a large amount of aid, such as rice that provided by the U.S. military government, was concentrated in this area further contributing to the livelihood of the residents. For these reasons, not only were the social characteristics of the development of Haebang-chon unique, but it also became one of the most overcrowded areas in all of Seoul. Haebang-chon was the first of such unplanned, large-scale developments to absorb the influx of disfranchised people. Thus the greenery around the foot of Namsan mountain was damaged and disappeared by the formation of this squatter settlement, although it had already been encroached by the construction a large firing range by Japanese in earlier time.

Another factor that contributed to overcrowding was that after Seoul was recaptured from communist forces, shacks were hastily built over residential areas that had been destroyed during the Kore-
an War. What made these dwellings different from the squatter dwellings of the colonial period or the dwellings of Haebang-chon was that, after the recapture of Seoul, they were employed as temporary shelters and built on any piece of vacant land. Originally the shacks were built by refugees for temporary shelter, however; after the retreat of January 4th, their numbers greatly increased due to the large number of war refugees from the north who decided to settle in Seoul. There were periodic increases in these shantytowns on the outskirts of Seoul after 1957 due to the influx of farmers that were leaving impoverished rural villages and moving to the city to find work. During this period, the most conspicuous of such developments that were close to the heart of the city were the shantytowns that lined both sides of the Cheonggyechon stream and those in the foothills around Naksan, Changsin and Sungsin areas.

It is difficult to identify the total number of shacks that existed at the time, however: the following resources give an idea of the phenomenal size of these shantytowns. According to a housing survey conducted in 1953 titled Sise Ilram, the term "shack" or "board house" was not used. Instead, such dwellings were called "box houses" or "packing crate houses." This document states that there already existed 5,356 such houses in Seoul, but it also compares the location of dwelling concentrations and composition of building materials of the shacks before the recapture of Seoul and after the war’s end in 1953 and found significant differences in both factors. After the war, houses were initially built over existing houses which had been destroyed, but later the locations moved closer to the city center. As to building materials, they mostly consisted of discarded materials left over from wartime. In any case, the fact was that during the restoration of Seoul after 1953, the population greatly increased and there was no policy in place to provide for the housing needs created by this situation. Therefore, shanty houses and villages were built directly by those in need of housing. According to the housing statistics published in a 1955 report titled Report of the Simplified Census of the Republic of Korea (Gani Chong Ingu Josa bogo in Korean), 3.55 percent of households, a total of 10,011, were classified as "other" households. Here, “other” referred to those dwelling in shacks, tents, or refugee camps. Since this number refers to households, the actual number of structures cannot be known for sure, however: the number gives us a rough idea of the number of such dwellings.

Another document from 1960 titled Report on Population, Housing, and National Taxation (Ingu Jutaek Gukse Josa Bogoseo in Korean) gives us more information. In this document the number of structures and the year of construction are calculated. The time since construction is listed and classified as less than 1 year, 1-9 years, 10-
Table 2.4

<table>
<thead>
<tr>
<th></th>
<th>Less than 1 year</th>
<th>1-9 years</th>
<th>10-14 years</th>
<th>over 15 years</th>
<th>Unknown</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jongro</td>
<td>1,379</td>
<td>8,347</td>
<td>4,685</td>
<td>24,529</td>
<td>381</td>
<td>39,301</td>
</tr>
<tr>
<td>Jung</td>
<td>1,130</td>
<td>13,121</td>
<td>2,604</td>
<td>13,771</td>
<td>296</td>
<td>30,922</td>
</tr>
<tr>
<td>Dongdaemun</td>
<td>5,714</td>
<td>31,778</td>
<td>9,591</td>
<td>14,796</td>
<td>493</td>
<td>62,372</td>
</tr>
<tr>
<td>Seongdong</td>
<td>7,224</td>
<td>30,577</td>
<td>8,126</td>
<td>16,667</td>
<td>999</td>
<td>63,593</td>
</tr>
<tr>
<td>Seongbuk</td>
<td>7,246</td>
<td>22,327</td>
<td>6,262</td>
<td>14,136</td>
<td>465</td>
<td>50,436</td>
</tr>
<tr>
<td>Seodaemun</td>
<td>7,856</td>
<td>29,487</td>
<td>7,536</td>
<td>19,018</td>
<td>776</td>
<td>64,673</td>
</tr>
<tr>
<td>Mapo</td>
<td>2,968</td>
<td>13,730</td>
<td>7,278</td>
<td>18,406</td>
<td>798</td>
<td>43,180</td>
</tr>
<tr>
<td>Yongsan</td>
<td>3,899</td>
<td>21,593</td>
<td>5,273</td>
<td>15,754</td>
<td>1,018</td>
<td>47,627</td>
</tr>
<tr>
<td>Youngdeungpo</td>
<td>6,120</td>
<td>24,589</td>
<td>7,811</td>
<td>19,980</td>
<td>1,288</td>
<td>59,788</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>43,627</strong></td>
<td><strong>195,568</strong></td>
<td><strong>60,160</strong></td>
<td><strong>157,072</strong></td>
<td><strong>6,514</strong></td>
<td><strong>462,941</strong></td>
</tr>
</tbody>
</table>

14 years, and more than 15 years, thus making it possible to calculate the total number of houses built in 1950. As can be seen in Table 2.4, there were roughly 463,000 homes in Seoul in 1960 and about 230,000, or just over half, had been built in the last 10 years. Excluding the areas of Seoul which began to develop early on such as Jongro Gu, Jung Gu, and Mapo Gu, more than half of the homes in the other areas had been built with 10 years.

This figure of 230,000 includes various housings that were constructed during the 1950s with aid from the government, city, public organizations, and foreign aid organizations: they were built in the name of Buheung Jutaek (Resurgence House), Jaegun Jutaek (Rebuilding House), Shibum Jutaek (Model House), and Gukmin Jutaek (People House). During this period, such housings totaled approximately 13,796 units (Table 2.5). Taking this figure into account, among the 230,000 structures built in the 1950s, the majority were some type of temporary structure such as plank

Table 2.5

<table>
<thead>
<tr>
<th>Public housing in Seoul, 1955 - 1960</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source: Seoul City History Compilation Commission, 1983, Six Hundred Year History of Seoul, Vol. 5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>1955</th>
<th>1956</th>
<th>1957</th>
<th>1958</th>
<th>1959</th>
<th>1960</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Units</td>
<td>1,120</td>
<td>400</td>
<td>1,103</td>
<td>3,178</td>
<td>4,785</td>
<td>3,210</td>
<td>13,796</td>
</tr>
<tr>
<td>Buheung House</td>
<td>1,120</td>
<td>-</td>
<td>325</td>
<td>-</td>
<td>-</td>
<td>1,372</td>
<td></td>
</tr>
<tr>
<td>Jaegon House</td>
<td>-</td>
<td>400</td>
<td>160</td>
<td>200</td>
<td>-</td>
<td>750</td>
<td></td>
</tr>
<tr>
<td>Nammin House</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>601</td>
<td>-</td>
<td>601</td>
<td></td>
</tr>
<tr>
<td>Gukmin House</td>
<td>-</td>
<td>-</td>
<td>300</td>
<td>250</td>
<td>560</td>
<td>331</td>
<td>1,441</td>
</tr>
<tr>
<td>Sujaemin House</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1,278</td>
<td>-</td>
<td>1,278</td>
<td></td>
</tr>
<tr>
<td>ICA House</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1,872</td>
<td>1,450</td>
<td>2,570</td>
<td>5,992</td>
</tr>
<tr>
<td>Himang House</td>
<td>-</td>
<td>-</td>
<td>105</td>
<td>146</td>
<td>105</td>
<td>574</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>-</td>
<td>490</td>
<td>458</td>
<td>636</td>
<td>204</td>
<td>1,788</td>
<td></td>
</tr>
</tbody>
</table>

51 | Seoul's Urban Growth in the 20th Century
shacks. Other official data that deals with shanty structures include the 1961 Seoul Statistical Yearbook (called Seoul Shi Tonggye Nyunbo) that listed a total of 29,600 shack structures from which the number of shacks built in the 1950s can be estimated.

Both liberation and the Korean War contributed to overcrowding in Seoul. Refugee neighborhoods such as Haebang-chon came into existence close to the city center and with the advent of shanty dwellings all over the city, the problem of substandard dwellings surfaced. As time passed, it became difficult to distinguish between refugee neighborhoods and shanty dwellings, however, such housings brought forth new urban landscape and Seoul's rapid urbanization saw the large scale formation of such villages within the city.

LAND USE AND CITY FUNCTION IN SOCIAL TURMOIL

After liberation and the war, Seoul was paralyzed due to a swelling population. It entered a phase of disorder and overcrowding without ever managing to readjust itself to the new circumstances. However, regulations and programs were implemented in a bid to reconstruc
the destroyed areas and improve efficiency in land use. The land use zoning system took effect in March 1952, and the land readjustment project followed in October of the same year. Though it did not immediately bring about drastic changes in land use at that time, the land use zoning system laid a framework for shaping the future spatial structure of Seoul.

Figure 2.13 is the land use planning map based on zoning system. It shows the scheme to establish commercial zones in the downtown and along the highways, and to develop seven areas including Youngdeungpo, Sinchon, Yongsan and Cheongnyangri into small-scale commercial centers. Also, continuous, though not realized as planned, efforts were made to integrate the areas between Namdaemun (South gate) and Dongdaemun (East gate) into a single commercial center. On the other hand, the manufacturing and the mixed-use zones together made up as much as 26.4 percent of the total designated areas. This indicates the ambition to develop Seoul as a leading manufacturing city. Most areas in those two zones were directly linked by the existing railway networks. Yeouido, linked with Yongsan and Youngdeungpo, was intended to grow into the core of a major manufacturing zone.

The land readjustment project was carried out in two stages. In the first stage, downtown areas such as Euljiro 3-ga, Chungmuro, Gwancheul, Jongro 5-ga, and Mukjeong were selected and post-war restoration efforts and urban street improvement programs were carried out. In the second stage, Namdaemun, Wonhyo-ro, Haengchon and Wangshinri, most of which had been destroyed during the war, were chosen. Through the project, it was expected that these areas would be modernized complete with urban facilities and that they would perform increased commercial and residential functions. The scope of the land readjustment project was greatly expanded from the downtown areas in the first stage to outer areas in the second stage.

Nevertheless, land use on the outskirts, which had been incorporated into the city in 1949, hardly changed in this period; those areas were too severely impeded by the limited transportation systems and damaged industrial facilities. Meanwhile, the rapid sprawl of illegal shantytowns and the locations of the many public housing complexes significantly affected the overall land use. The most actively utilized areas were those along the public transportation routes and around the intercity bus terminals located in downtown

---

**Table 2.6**

<table>
<thead>
<tr>
<th>Industrial facilities in Seoul, 1946</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Total</th>
<th>Metalworking</th>
<th>Textile</th>
<th>Chemistry</th>
<th>Food</th>
<th>Transportation</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,297</td>
<td>440</td>
<td>168</td>
<td>191</td>
<td>134</td>
<td>27</td>
<td>337</td>
</tr>
</tbody>
</table>

Seoul's Urban Growth in the 20th Century
Gwanghwamun, Jongno 2-ga, Jongno 5-ga, Euljiro 6-ga and Seoul station.

Because of insufficient source material, it is usually difficult to evaluate Seoul’s function in terms of economic activities during this period. Judging from the employment structure, however, Seoul apparently stopped functioning as a city right after liberation. Then, from 1945 to 1950, some industrial facilities began operating and increased employment to a certain level. According to sources from 1946, there were a total of 1,347 industrial facilities running along with 48,602 employers in the city. Employment in textile, machinery and chemical sectors recovered nearly to the same level as before liberation (Table 2.6).

In the almanacs from 1954 to 1958, the population was classified into different occupational groups. That makes it difficult to compare the data with those from the 1940’s that were organized by industrial groups. In addition, ambiguous categories like 'Other', 'Dismissed' and 'Jobless' make interpreting the data difficult. Considering the manufacturing sector only, though, employment in 1954 was only half the level of 1946. This level remained unchanged until 1960 (Table 2.7 and 2.8).

As shown in a 1960 census, the employment structure by industry was quite different from the employment structure by occupation. Despite the differences, these data commonly indicate a unique characteristic of Seoul’s employment structure in this period; secondary industries like manufacturing were stagnant, while service sectors were growing rapidly. This seems even more true, considering that before 1960, due to lack of a strategy for systematic surveying,

<table>
<thead>
<tr>
<th>Employment structure of Seoul by occupation, 1954-1958</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>1954</td>
</tr>
<tr>
<td>1956</td>
</tr>
<tr>
<td>1958</td>
</tr>
</tbody>
</table>

Source: Seoul Metropolitan Government (each year), Seoul Almanac.

<table>
<thead>
<tr>
<th>Employment structure of Seoul by industry, 1960</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture &amp; Fishery</td>
</tr>
<tr>
<td>------------------------</td>
</tr>
<tr>
<td>1960</td>
</tr>
</tbody>
</table>

Source: Economic Planning Board (1960), Census of Population, Housing and National Taxation.
people working in those sectors that didn’t fall into any official industrial category were mostly left out of the count. Generally, a traditional agrarian city first converts into an industrialized city, and then, as it grows, comes to perform more enhanced service functions. Unlike this scenario, Seoul underwent industrialization as a city with a strong service base amid massive population movement caused by liberation and the war. Similar phenomenon can be found in the urban growth of those countries that gained independence after the Second World War. After liberation up until 1960, Seoul functioned as the capital of the Southern half of the country, and maintained employment levels with a refugee-based service economy.

Transition into a 20th Century Industrial City: the 1960s - the Mid 1980s

From the 1960s until the mid 1980s, Seoul prepared the foundation for a manufacturing industry and industrialized itself in terms of employment structure and industrial facilities. Urban growth was greatly influenced by the massive movement of an idle labor force from the countryside. The bus-centered public transportation system saw the advent of the subway era. Population and facilities which used to be concentrated in areas north of the Han River spread to areas south of the river. The common housing type began to change from the detached house to apartment. In the areas around the newly built apartment complexes, a new way of life displaying stratified social traits came into being. On the other hand, because of the failure to ensure a stable housing supply, illegal shantytowns appeared periodically on the outskirts of the city. As the consolidation of those sub-standard dwelling areas began in earnest, the apart-
ment-centered housing supply was accelerated. Regarding the energy source of the urban households, firewood and charcoal was replaced by briquettes, and then by city gas.

AGGRESSIVE ANNEXATION AND RAPID POPULATION GROWTH

Seoul drastically expanded its boundaries incorporating parts of Yangju Gun (county), Gwangju Gun and Gimpo Gun of Gyeonggi Do (province) in January, 1963. With the added 324.02 km², which was bigger than the existing 269.73 km², Seoul’s total area reached 593.75 km². The included areas were mostly the outlying rural areas, and except Youngdeungpo and Noryangjin, most of the present Gangnam areas were incorporated at this time. In January, 1973, part of Gyeong-dong, Youngdeungpo was returned to Siheung Gun, Gyeonggi Do, while some other parts of Siheung Gun and Goyang Gun were additionally annexed, increasing the total area of the city to 605.30 km². However, the newly incorporated Gangnam areas, to the east of Youngdeungpo, didn’t develop dramatically until the Hannam Bridge and Gyeong-Bu Highway were constructed.

Seoul’s urban growth brought about continual readjustment of administrative districts and rapid change in the spatial distribution of the population. In 1973, Dobong Gu (district) and Gwanak Gu were created increasing the number of districts from nine to eleven. Gangnam Gu was established in 1975, Gangseo Gu in 1980, Eunpyeong Gu and Gangdong Gu in 1979, and when Guro Gu and Dongjak Gu were added in 1980, this brought the total of districts in the city to 17. The creation of new districts was used as a means to control the explosive growth of the population, and thus shows in which parts of the city the population was becoming concentrated and how fast the process was taking place.

Seoul’s population growth was spurred by the influx of people from rural areas starting from the late 1950s. Moreover, according to the first Five Year Economic Development Plan of the central government, Korea Export Industry Corporation 1, 2, and 3 were built in Guro-dong. Soon, Seoul was the base of various small and medium sized companies with its cheap and plentiful labor pool. Up until the mid 1980s, when Seoul’s industrialization reached its peak, the population swiftly increased at an average of nearly 300 thousand people a year. After 25 years of industrialization, the population multiplied fourfold from 2.45 million as of 1960 to 9.64 million in 1985.

Seoul’s population jump was triggered mainly by migration
from other regions. After a series of events such as the first oil crisis, a metropolitan dispersal policy promoted in earnest from the late 1970s and the industrial restructuring process initiated from the mid 1980s, many factories, government offices and civilian facilities moved out to Gwacheon, Ansan or other outlying suburbs. Consequently, the growth rate began to slow down. As in all the other large cities in Korea, the net migration of Seoul was stationary by 1986 (Figure 2.14). As illustrated in Figure 2.15, population growth
caused by migration virtually stopped after the mid 1980s; various social factors causing the rise in population to abate. Now the leading contributor to urban growth was the natural increase of the existing inhabitants of the cities. With migration from the outside dwindling, a transformation of population structure followed; the number of the so far increasing primary and secondary students began to go down, while college and university students swelled in number dramatically.

**DISPERSED SUBSTANDARD DWELLINGS AND RESIDENTIAL LAND DEVELOPMENT**

The rapid urban growth of Seoul amid industrialization resulted in some unique features of the city. Despite its spatial limits, more and more illegal sub-standard houses appeared at times of social and political insecurity, and eventually they spread all over the hilly areas and low-lying lands of the city where the surveillance enforcement was weak. According to official statistics, these sub-standard houses, similar to the shanties in the 1950s, kept appearing until the number, which was 41,000 in 1961, rose to 190,000 in 1970 accounting for 30 percent of the total housing in Seoul. Table 2.9 and Figure 2.16 show that the shantytowns were distributed all across the city. In Figure 2.9, some newly established resettlement towns are marked as well. They were created to collectively accommodate those who had been evacuated from their dwellings because of the street expansion projects in downtown or redevelopment initiatives in some neighborhoods. Some such well-known places were Samyang-dong in the Mtari area, Hongje-dong in Seodaemun, Sinlim-dong and

**Table 2.9**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total houses (A)</th>
<th>Shanties (B)</th>
<th>B/A (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1961</td>
<td>275,436</td>
<td>41,238*</td>
<td>14.97</td>
</tr>
<tr>
<td>1962</td>
<td>306,289</td>
<td>44,721*</td>
<td>14.60</td>
</tr>
<tr>
<td>1963</td>
<td>322,366</td>
<td>45,446*</td>
<td>14.09</td>
</tr>
<tr>
<td>1964</td>
<td>331,133</td>
<td>43,946*</td>
<td>13.27</td>
</tr>
<tr>
<td>1965</td>
<td>345,657</td>
<td>43,321*</td>
<td>12.53</td>
</tr>
<tr>
<td>1966</td>
<td>361,945</td>
<td>136,650**</td>
<td>37.75</td>
</tr>
<tr>
<td>1967</td>
<td>406,119</td>
<td>150,000**</td>
<td>36.93</td>
</tr>
<tr>
<td>1968</td>
<td>516,810</td>
<td>169,000**</td>
<td>32.70</td>
</tr>
<tr>
<td>1969</td>
<td>543,645</td>
<td>181,000**</td>
<td>33.29</td>
</tr>
<tr>
<td>1970</td>
<td>600,365</td>
<td>187,554**</td>
<td>32.24</td>
</tr>
</tbody>
</table>

---


Bongcheon-dong in the Gangnam area, Siheung and Geoyeo-dong. They were resettlement towns in name, but in practice, they were shabby housing complexes formed on a massive scale in the outlying areas. Around the same time, a huge dwelling complex was set up in Gwangju Gun, Gyeonggi Do, to accommodate some of the displaced people. From 1969, at 32 sites where the shantytowns had been demolished, a total of 426 citizen’s apartments were erected renewing the cityscape (Figure 2.17). Although unsuccessful, the resettlement program and the large-scale construction project of citizen’s apartments, implemented for the purpose of providing new shelter to the relocated people and consolidating the city’s land use, represent a new aspect of urban growth.

The land readjustment project, which began during colonial rule, was pushed forward until the mid 1980s both in extent and intensity. It played a crucial role in formulating the present spatial structure of Seoul. The goal of the project from the 1960s onward...
was to disperse the centralized facilities and population around the suburban areas. Starting with the Seogyo district in 1960, a total of 59 districts had been readjusted until the project was finished with the Yangjae district in 1986. The whole area covered amounted to 923 km², accounting for 20 percent of the city's total area or over 50 percent of the total building sites (Figure 2.18). This project is credited for preparing the layout of the road networks and the spatial structure of the residential areas. However, in most areas except some parts of Gangnam, it is criticized for its shortsighted contribution to the outward growth of the city, not responding to the approaching era of automobile and subway.

Another planning action that greatly affected urban growth was the designation of the Development Restriction Zones (DRZ : Greenbelt) that were applied to the major cities across the country since 1971. Generally, the main goal of the establishment of DRZ was to prevent urban sprawl, to protect the natural environment around the cities and to secure a healthy living environment for urban inhabitants. In the case of Seoul, the mountain areas and urban corridor areas linking outer cities were designated as DRZ.
The problem was that DRZ hindered the natural development of the liaison between the city center and the suburban areas accelerating the concentration of inhabitants near the city center and in the surrounding cities at the same time. Because the small cities inside DRZ offered relatively low-cost housing, economically challenged people often moved out to settle down in these areas temporarily to return to Seoul as soon as they could afford it. In other words, there was a constant ebb and flow in the population of Seoul.

Another new change was the government efforts to promote Yeouido and disperse the population and facilities into Gangnam area (south of the Han River) with a view to thinning out congested growth of Gangbuk area (north of the Han River). Many apartment complexes were built in Gangnam through land readjustment projects, and such renowned high schools (such as Gyeonggi, Baejea, Huimun High Schools, and Gyeonggi and Sukmyong Girls' High Schools) and various facilities including the Courts, the Public Prosecutor's Office, the National Library and the bus terminals were relocated from downtown to Gangnam. As a result, Gangnam and Gangbuk began to strike a functional balance. With the construction
Figure 2.19
The aerial view of the
Guro Industrial Complex
1 in its formation (1966)

The complex construction
period lasted from 1965 to 1967.
Its total area was 140,000
pyeong (one pyeong equals to
3.3 square meters), and it was
located between Dorm creek
and the Siheung highway.
Access from Youngdeungpo or
Incheon was not very
convenient. Some roads were
still under construction. The
agricultural land between
Youngdeungpo and the
complex remained
undeveloped, showing a stage
of urbanization in the
Youngdeungpo suburban area.

Source:
Ministry of Construction and
Transportation Aerial
photograph (scale 1:37,500,
magnified).

Ko-Suk Lee
### Table 2.10
Employers in Seoul by industry (percentage), 1960-1999

<table>
<thead>
<tr>
<th>Year</th>
<th>Agriculture/Forestry / Fishery</th>
<th>Mining/Manufacturing</th>
<th>Tertiary Industry</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>11,970 (2.7)</td>
<td>25,613 (55.7)</td>
<td>411,850 (91.6)</td>
<td>449,433 (100)</td>
</tr>
<tr>
<td>1961</td>
<td>12,117 (3.4)</td>
<td>32,886 (99.2)</td>
<td>313,667 (87.5)</td>
<td>356,659 (100)</td>
</tr>
<tr>
<td>1962</td>
<td>52,300 (7.3)</td>
<td>147,800 (20.5)</td>
<td>520,600 (72.2)</td>
<td>720,700 (100)</td>
</tr>
<tr>
<td>1963</td>
<td>61,500 (8.6)</td>
<td>128,000 (18.3)</td>
<td>511,500 (73.0)</td>
<td>701,000 (100)</td>
</tr>
<tr>
<td>1964</td>
<td>36,600 (4.8)</td>
<td>180,500 (23.8)</td>
<td>541,800 (71.4)</td>
<td>759,000 (100)</td>
</tr>
<tr>
<td>1965</td>
<td>27,140 (3.4)</td>
<td>147,430 (18.4)</td>
<td>625,830 (78.2)</td>
<td>800,400 (100)</td>
</tr>
<tr>
<td>1966</td>
<td>25,869 (3.3)</td>
<td>169,268 (21.3)</td>
<td>598,056 (75.4)</td>
<td>793,193 (100)</td>
</tr>
<tr>
<td>1967</td>
<td>37,261 (4.1)</td>
<td>226,645 (25.0)</td>
<td>643,246 (70.9)</td>
<td>907,152 (100)</td>
</tr>
<tr>
<td>1968</td>
<td>24,842 (2.4)</td>
<td>225,835 (22.0)</td>
<td>775,244 (75.6)</td>
<td>1,025,921 (100)</td>
</tr>
<tr>
<td>1969</td>
<td>24,805 (2.2)</td>
<td>243,540 (21.7)</td>
<td>851,570 (76.0)</td>
<td>1,119,915 (100)</td>
</tr>
<tr>
<td>1970</td>
<td>26,796 (2.1)</td>
<td>287,518 (23.0)</td>
<td>938,168 (74.9)</td>
<td>1,225,482 (100)</td>
</tr>
<tr>
<td>1971</td>
<td>25,000 (1.6)</td>
<td>335,000 (21.3)</td>
<td>1,215,600 (77.2)</td>
<td>1,557,600 (100)</td>
</tr>
<tr>
<td>1972</td>
<td>22,200 (1.4)</td>
<td>348,300 (21.5)</td>
<td>1,248,200 (77.1)</td>
<td>1,616,700 (100)</td>
</tr>
<tr>
<td>1973</td>
<td>22,400 (1.2)</td>
<td>405,500 (22.4)</td>
<td>1,383,400 (76.4)</td>
<td>1,811,300 (100)</td>
</tr>
<tr>
<td>1974</td>
<td>25,000 (1.4)</td>
<td>398,400 (22.7)</td>
<td>1,331,400 (75.9)</td>
<td>1,754,800 (100)</td>
</tr>
<tr>
<td>1975</td>
<td>20,005 (0.9)</td>
<td>752,541 (32.8)</td>
<td>1,524,201 (66.4)</td>
<td>2,296,747 (100)</td>
</tr>
<tr>
<td>1980</td>
<td>21,055 (0.9)</td>
<td>721,169 (30.2)</td>
<td>1,648,670 (69.0)</td>
<td>2,390,894 (100)</td>
</tr>
<tr>
<td>1981</td>
<td>20,282 (0.8)</td>
<td>702,890 (28.6)</td>
<td>1,737,392 (70.6)</td>
<td>2,460,584 (100)</td>
</tr>
<tr>
<td>1982</td>
<td>20,740 (0.8)</td>
<td>763,854 (29.7)</td>
<td>1,784,826 (69.5)</td>
<td>2,569,420 (100)</td>
</tr>
<tr>
<td>1983</td>
<td>24,097 (0.9)</td>
<td>776,545 (29.1)</td>
<td>1,864,656 (70.0)</td>
<td>2,665,298 (100)</td>
</tr>
<tr>
<td>1984</td>
<td>20,905 (0.7)</td>
<td>824,588 (28.9)</td>
<td>2,010,657 (70.4)</td>
<td>2,856,150 (100)</td>
</tr>
<tr>
<td>1985</td>
<td>27,408 (0.9)</td>
<td>893,514 (28.7)</td>
<td>2,058,636 (70.4)</td>
<td>2,925,558 (100)</td>
</tr>
<tr>
<td>1986</td>
<td>20,355 (0.7)</td>
<td>918,345 (29.3)</td>
<td>2,191,173 (70.0)</td>
<td>3,129,873 (100)</td>
</tr>
<tr>
<td>1987</td>
<td>19,484 (0.6)</td>
<td>1,006,652 (32.6)</td>
<td>2,378,400 (69.9)</td>
<td>3,403,936 (100)</td>
</tr>
<tr>
<td>1988</td>
<td>16,958 (0.5)</td>
<td>1,047,787 (30.7)</td>
<td>2,350,212 (68.8)</td>
<td>3,414,957 (100)</td>
</tr>
<tr>
<td>1989</td>
<td>16,000 (0.4)</td>
<td>1,072,000 (30.1)</td>
<td>2,469,000 (69.4)</td>
<td>3,557,000 (100)</td>
</tr>
<tr>
<td>1990</td>
<td>21,000 (0.5)</td>
<td>1,351,000 (30.0)</td>
<td>3,132,000 (69.5)</td>
<td>4,504,000 (100)</td>
</tr>
<tr>
<td>1991</td>
<td>19,000 (0.4)</td>
<td>1,345,000 (29.4)</td>
<td>3,212,000 (70.2)</td>
<td>4,576,000 (100)</td>
</tr>
<tr>
<td>1992</td>
<td>21,000 (0.5)</td>
<td>1,255,000 (27.2)</td>
<td>3,331,000 (72.3)</td>
<td>4,607,000 (100)</td>
</tr>
<tr>
<td>1993</td>
<td>21,000 (0.4)</td>
<td>1,203,000 (25.5)</td>
<td>3,497,000 (74.1)</td>
<td>4,721,000 (100)</td>
</tr>
<tr>
<td>1994</td>
<td>23,000 (0.5)</td>
<td>1,198,000 (24.5)</td>
<td>3,674,000 (75.1)</td>
<td>4,895,000 (100)</td>
</tr>
<tr>
<td>1995</td>
<td>22,000 (0.4)</td>
<td>1,159,000 (23.1)</td>
<td>3,833,000 (76.8)</td>
<td>4,501,000 (100)</td>
</tr>
<tr>
<td>1996</td>
<td>20,000 (0.4)</td>
<td>1,064,000 (21.7)</td>
<td>3,814,000 (77.9)</td>
<td>4,908,000 (100)</td>
</tr>
<tr>
<td>1997</td>
<td>17,000 (0.3)</td>
<td>987,000 (20.1)</td>
<td>3,904,000 (77.5)</td>
<td>4,890,000 (100)</td>
</tr>
<tr>
<td>1998</td>
<td>14,000 (0.3)</td>
<td>835,000 (18.8)</td>
<td>3,603,000 (80.9)</td>
<td>4,432,000 (100)</td>
</tr>
<tr>
<td>1999</td>
<td>15,000 (0.3)</td>
<td>847,000 (19.0)</td>
<td>3,601,000 (80.7)</td>
<td>4,898,000 (100)</td>
</tr>
</tbody>
</table>

Source: Seoul Metropolitan Government (each year), Seoul Statistical Yearbook, 1975-1978, data unavailable.
of the Jamsil Grand Bridge (1972), the Dongjak Grand Bridge, the Seongnuri Grand Bridge (1979), the Youngdong Grand Bridge (1973), the Jamsu Bridge (1976) and the opening of the second subway line, Gangnam area started to grow in alignment with Gangbuk and operate like a city within the city.

On the other hand, downtown area began to experience a hollowing out phenomenon. It first appeared in Jongro Gu and Jung Gu in the early 1960s and expanded to most of Gangbuk including the Yongsan area in the 1970s. Since the late 19th century, world large cities have all experienced the doughnut phenomenon as the downtown areas lost residential populations with functional specialization into administration, trade, business, and finance sectors. The phenomenon is still going on in the downtown area, transforming the composition of the residents in accordance with the area's function.

RAPID GROWTH TOWARDS AN INDUSTRIAL CITY

Driven by industrialization, Seoul rapidly grew into a modern city. Seoul's rapid growth was also supported by the over-concentration of various educational, financial and other capital functions. Korea made its first step toward industrialization with the construction of industrial complexes in Guro Gu (District), which were first established by the military government in 1965. Although there were already sectors in Youngdeungpo and Seongdong Gu designated as specialized industrial areas, the 1973 completion of the first, second, and third Guro industrial complexes not only served to establish a basis for representative domestic export industries, but also contributed to the systematic creation of jobs in the manufacturing industry.

Before liberation, the ratio of people involved in the mining and

<table>
<thead>
<tr>
<th>Year</th>
<th>Agriculture, Forestry and Fishing</th>
<th>Mining and Manufacturing</th>
<th>Tertiary Industry</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1972</td>
<td>2.6</td>
<td>27.4</td>
<td>70.0</td>
<td>100%</td>
</tr>
<tr>
<td>1975</td>
<td>1.4</td>
<td>27.3</td>
<td>71.3</td>
<td>100%</td>
</tr>
<tr>
<td>1980</td>
<td>1.0</td>
<td>28.8</td>
<td>70.2</td>
<td>100%</td>
</tr>
<tr>
<td>1985</td>
<td>0.7</td>
<td>19.0</td>
<td>80.3</td>
<td>100%</td>
</tr>
<tr>
<td>1990</td>
<td>0.6</td>
<td>14.3</td>
<td>85.1</td>
<td>100%</td>
</tr>
<tr>
<td>1995</td>
<td>0.5</td>
<td>11.1</td>
<td>88.4</td>
<td>100%</td>
</tr>
<tr>
<td>1998</td>
<td>0.5</td>
<td>9.0</td>
<td>90.5</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 2.11
Ratio of gross industrial product of Seoul by sector (1972-1998)

Source: Seoul Statistical Yearbook
Based on current market price

| Ki-Suk Lee |
manufacturing industry was 20 percent. The 1960 census shows this rate was 17.5 percent, but the rate increased to 20 percent by 1965. In 1971, the number of people employed in this area was 1.2 million (Table 2.10). After that, the mining and manufacturing industry of Seoul continued to grow and in 1979, the ratio hit 32.8 percent, the highest in its history. The time from 1960 to 1980 saw the fastest development of the mining and manufacturing industry and in 1984, the number of employees reached 2 million. However, during the period from 1979 to 1990, the mining and manufacturing industry faced an adjustment phase with the employment rate staying between 28 percent and 30 percent. This shows that the restructuring process had started in this labor-intensive industry. The rate of people involved in the mining and manufacturing industry of Seoul was higher by 4-5 percent than the national average, indicating that the development of Seoul was more based on the manufacturing industry compared with the other local large cities. However, the ratio of this industry in the gross product of Seoul continued to drop after reaching its peak in 1979 (Table 2.11). This decreasing pattern indicates that although the number of people employed in this industry continued to grow, a restructuring process was underway inside the industry.

According to the statistics on the industrial structure and the ratio of employees in Seoul, the manufacturing industry served as a center of employment in 1986, followed by the wholesale, retail, food and lodging industries (Table 2.12). In addition to these two industries that led the development of Seoul as a center of employment, social and individual services, electricity, gas, and water ser-

<table>
<thead>
<tr>
<th>Table 2.12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of companies and employees involved in various industries</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Industry</th>
<th>No. of Industry</th>
<th>No. of Employee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Forestry, Fishery</td>
<td>71</td>
<td>2,744</td>
</tr>
<tr>
<td>Mining</td>
<td>164</td>
<td>3,920</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>218,952</td>
<td>880,229</td>
</tr>
<tr>
<td>Electricity, Gas, Water</td>
<td>971</td>
<td>36,738</td>
</tr>
<tr>
<td>Construction</td>
<td>9,528</td>
<td>317,078</td>
</tr>
<tr>
<td>Wholesale, Retail, Food, Hotel</td>
<td>283,395</td>
<td>821,295</td>
</tr>
<tr>
<td>Transportation, Warehouse, Comm.</td>
<td>4,388</td>
<td>148,430</td>
</tr>
<tr>
<td>Finance, Insurance, Real estate, Service</td>
<td>32,687</td>
<td>298,423</td>
</tr>
<tr>
<td>Social and individual service</td>
<td>85,712</td>
<td>386,638</td>
</tr>
<tr>
<td>Total</td>
<td>483,986</td>
<td>2,869,444</td>
</tr>
</tbody>
</table>
### Table 2.13
Number of companies and employees classified by district

<table>
<thead>
<tr>
<th>District</th>
<th>No. of industry</th>
<th>No. of employee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jongno</td>
<td>37,961</td>
<td>252,880</td>
</tr>
<tr>
<td>Jung</td>
<td>59,858</td>
<td>492,965</td>
</tr>
<tr>
<td>Yongsan</td>
<td>16,377</td>
<td>105,455</td>
</tr>
<tr>
<td>Seongdong</td>
<td>32,765</td>
<td>198,322</td>
</tr>
<tr>
<td>Gangnam</td>
<td>44,341</td>
<td>197,102</td>
</tr>
<tr>
<td>Seongbuk</td>
<td>22,215</td>
<td>81,166</td>
</tr>
<tr>
<td>Dobong</td>
<td>31,798</td>
<td>141,012</td>
</tr>
<tr>
<td>Guro</td>
<td>15,866</td>
<td>53,532</td>
</tr>
<tr>
<td>Seodaemun</td>
<td>16,905</td>
<td>65,008</td>
</tr>
<tr>
<td>Mapo</td>
<td>16,677</td>
<td>93,884</td>
</tr>
<tr>
<td>Gangseo</td>
<td>22,468</td>
<td>121,841</td>
</tr>
<tr>
<td>Gwacheon</td>
<td>28,283</td>
<td>225,930</td>
</tr>
<tr>
<td>Youngdeungpo</td>
<td>31,865</td>
<td>276,347</td>
</tr>
<tr>
<td>Dongjak</td>
<td>15,654</td>
<td>57,971</td>
</tr>
<tr>
<td>Gwanak</td>
<td>18,932</td>
<td>67,739</td>
</tr>
<tr>
<td>Gangnam</td>
<td>37,169</td>
<td>309,223</td>
</tr>
<tr>
<td>Gangdong</td>
<td>34,873</td>
<td>129,067</td>
</tr>
<tr>
<td>Total</td>
<td>483,986</td>
<td>2,889,444</td>
</tr>
</tbody>
</table>

### Table 2.14
Employment structure in Seoul

Source: Economic Planning Board (each year), Census on Population and Households

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>205</td>
<td>382</td>
<td>528</td>
<td>764</td>
<td>1,002</td>
<td>20.6</td>
</tr>
<tr>
<td>(23.1)</td>
<td>(23.5)</td>
<td>(24.8)</td>
<td>(29.9)</td>
<td>(33.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional work</td>
<td>53</td>
<td>98</td>
<td>133</td>
<td>198</td>
<td>266</td>
<td>21.4</td>
</tr>
<tr>
<td>(6.0)</td>
<td>(6.0)</td>
<td>(6.3)</td>
<td>(7.8)</td>
<td>(9.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative work</td>
<td>30</td>
<td>47</td>
<td>51</td>
<td>81</td>
<td>90</td>
<td>10.8</td>
</tr>
<tr>
<td>(3.4)</td>
<td>(2.9)</td>
<td>(2.4)</td>
<td>(3.2)</td>
<td>(3.1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office work</td>
<td>122</td>
<td>237</td>
<td>344</td>
<td>485</td>
<td>646</td>
<td>22.7</td>
</tr>
<tr>
<td>(13.8)</td>
<td>(14.6)</td>
<td>(16.2)</td>
<td>(19.0)</td>
<td>(21.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales</td>
<td>199</td>
<td>334</td>
<td>429</td>
<td>542</td>
<td>589</td>
<td>10.3</td>
</tr>
<tr>
<td>(22.5)</td>
<td>(20.6)</td>
<td>(20.2)</td>
<td>(21.2)</td>
<td>(20.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td>120</td>
<td>231</td>
<td>246</td>
<td>291</td>
<td>313</td>
<td>8.4</td>
</tr>
<tr>
<td>(13.6)</td>
<td>(14.2)</td>
<td>(11.8)</td>
<td>(11.4)</td>
<td>(10.6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
<td>24</td>
<td>31</td>
<td>42</td>
<td>23</td>
<td>20</td>
<td>-0.9</td>
</tr>
<tr>
<td>(2.8)</td>
<td>(1.9)</td>
<td>(2.0)</td>
<td>(0.9)</td>
<td>(0.7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td>336</td>
<td>621</td>
<td>864</td>
<td>938</td>
<td>1,028</td>
<td>10.8</td>
</tr>
<tr>
<td>(38.0)</td>
<td>(38.3)</td>
<td>(40.7)</td>
<td>(36.7)</td>
<td>(34.8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>23</td>
<td>16</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>(0.0)</td>
<td>(1.4)</td>
<td>(0.8)</td>
<td>(0.0)</td>
<td>(0.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual average growth rate</td>
<td>884 (100)</td>
<td>1,622 (100)</td>
<td>2,125 (100)</td>
<td>2,559 (100)</td>
<td>2,952 (100)</td>
<td>12.3</td>
</tr>
</tbody>
</table>

66  | Ki-Suk Lee
ices, construction, and the finance and real estate business contributed to the creation of jobs. Regionally, Jung Gu and Jongro Gu, which performed capital functions, were the center of employment, followed by manufacturing-centered Youngdeungpo and Guro areas. Gangnam, a newly established center of business, also became an important job center (Table 2.13). These three areas created most of the jobs in Seoul.

During this period, the urbanization of Seoul was spurred by industrialization, but the employment structure was changing due to the growth of professional, administrative, and office work. This change shows that the urban function of Seoul was gradually transforming from manufacturing-centered activities into management-centered activities. Table 2.14 shows that while the rate of people employed in the service sector had continued to drop since 1970 and the ratio of workers in the manufacturing field ceased to grow after reaching a peak in 1975, the ratio of office workers increased by more than 20 percent annually. In 1985, one third of the entire

Figure 2.20
Increases of buses and personal automobiles

Source:
Seoul Metropolitan Government (each year), Seoul Statistical Yearbook.

<table>
<thead>
<tr>
<th>Year</th>
<th>Buses</th>
<th>Private Automobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>5,000</td>
<td>200,000</td>
</tr>
<tr>
<td>1976</td>
<td>5,500</td>
<td>250,000</td>
</tr>
<tr>
<td>1977</td>
<td>6,000</td>
<td>300,000</td>
</tr>
<tr>
<td>1978</td>
<td>6,500</td>
<td>350,000</td>
</tr>
<tr>
<td>1979</td>
<td>7,000</td>
<td>400,000</td>
</tr>
<tr>
<td>1980</td>
<td>7,500</td>
<td>450,000</td>
</tr>
<tr>
<td>1981</td>
<td>8,000</td>
<td>500,000</td>
</tr>
<tr>
<td>1982</td>
<td>8,500</td>
<td>550,000</td>
</tr>
<tr>
<td>1983</td>
<td>9,000</td>
<td>600,000</td>
</tr>
</tbody>
</table>

Seoul's Urban Growth in the 20th Century
work force was involved in office work. This tendency resulted from the implementation of a dispersal plan to transfer manufacturing units to other parts of the country while keeping the headquarters and research units in Seoul. When the development of a city is driven by management-centered activities, the city can be said to have entered post-industrial society.

DISPERAL AND RELOCATION OF URBAN FUNCTIONS

As Seoul rapidly grew through the industrialization process, various metropolitan functions were dispersed and a relocation policy was implemented. As part of the dispersal plan, Yeouido was developed starting in 1968. Although the completion of this development required a great deal of time, broadcasting companies, finance and insurance companies, the National Assembly building, and major companies’ headquarters were successfully transferred to Yeouido. At the same time, Gwacheon was designated as a new administrative city and performed major governmental functions. In 1978, Ansan newtown was developed to accommodate industrial facilities that were deemed unsuitable for Seoul. The completion of these large-scale projects by the mid-1980s contributed to the dispersal and transfer of metropolitan functions. Also, residential areas were remarkably expanded by land readjustment projects and as a result, the concentrated population was dispersed.

Changes in transportation also served as a principal agent in dispersing various metropolitan activities and developing new specialized areas. Above all, as the major means of public transportation gradually changed from buses to subways, new centers of employment, such as Gangnam, emerged and major urban functions were dispersed into the areas near important subway stations. The radius of operation of buses was extended in response to the expansion of residential areas. Up until the early 1980s, the number of buses operated in Seoul steadily grew to 8,000 comprising more than 60 percent of all public transportation. However, after subways came into use, this rate decreased (Figure 2.20). In addition, the steep increase in the number of personal automobiles accelerated this decreasing tendency. The efforts by the authorities to secure parking lots and construct more roads contributed to gradually transforming Seoul into a city where automobiles are the major transportation means.

The opening of the No. 1 subway line in 1974, the No. 2 line in 1984, and the No. 3 and 4 lines in 1985 resulted in a shift in the major means of transportation from bus to subway. During this period, the urban functions generally found in central areas began to be
dispersed to areas near subway lines due to their good accessibility. Through subway construction and outer residential development, Seoul was able to disperse urban functions despite its rapid growth and industrialization. During this period, the government also took a part of this decentralization process by transferring unsuitable industrial facilities and governmental functions to outer areas in an effort to maintain the manageable size of Seoul.

Seoul as a Global Metropolis: 1985 - 2000

Based on various indicators, it can be said that the foundation of employment was transferred from the manufacturing industry to service ones in the later course of the twentieth century. This means that during this period, Seoul had become increasingly a post-industrial society or an information and communication-oriented society. In the first place, secondary industries such as the mining and manufacturing industries declined sharply in their employment rates and production of added value. In their place, high tech industries, research and development, producer services and various information and communication businesses prospered.

In the case of public transportation, subways replaced buses. As to the existing communications systems, pagers and mobile phones were newly added. Fax and e-mail became widely used. The 1986 Asian Games and the 1988 Olympic Games served as an opportunity for Seoul to showcase itself to the world. The construction of a new international airport and the running of convention centers reflected Seoul’s development into a global metropolis. In particular, after 1988 when 5 new satellite cities were constructed, the growth in the population of Seoul came to a standstill. However, as the subway services became available in the suburbs and many people began
Using personal automobiles, urbanization progressed along the development corridors of Gyeong-In (Seoul-Incheon) and Gyeong-Bu (Seoul-Busan) axis. At the same time, this urbanization promoted the growth of big cities such as Suwon, Bucheon, Seongnam, Goyang and Anyang, leading to the spatial expansion of Seoul. The establishment of new residential areas and the construction of various apartment complexes made it possible for people to choose the location they wanted to live in and as a result, residential areas were developed according to socio-economic status. As the metropolitan functions became differentiated, once a single-core spatial structure were substituted by the multiple centers of employment. Many offices and skyscrapers concentrated in these centers shaped Seoul’s unique skyline.

REGIONAL EXPANSION AND MIGRATION TO THE SUBURBS

The urbanization and growth of Seoul since the mid 1980s are closely related to the spatial expansion of the city. In 1970, the surrounding satellite cities were the existing smaller cities or towns that grew rapidly. In 1979, Ansan and Gwacheon were included in the scope of the satellite new towns that were developed for the dispersal of industrial and administrative functions. In the late 1980s, however, suburban areas within commuting distance were urbanized in the process of the expansion of Seoul. Incorporated into the city status in this time were Gwangmyeong (1981), Dongducheon (1981), Guri (1986), Siheung (1989), Gunpo (1989), Euiwang (1989), Hanam (1989), Goyang (1991), Namyangju (1995), and Gimpo (1996). Furthermore, the population of existing cities such as Suwon, Bucheon, Goyang, Seongnam, and Ansan exceeded 500,000 and approached one million. The spatial expansion of Seoul was spurred by the expansion of the area within which commuting was feasible, which was made possible by the widespread availability of subways and personal automobiles. In addition, the expansion of Seoul was accelerated by the construction of new cities aimed at securing sufficient residential areas. Although this spatial expansion was observed in almost all the areas surrounding Seoul, the dependency of these areas on Seoul did not weaken at all.

The growth of Seoul during this period is closely related to the rapid social changes and the construction of five satellite cities. Political demonstrations from 1987 to 1988 and the inauguration of a president who had no military background led to radical social changes. From 1986, the labor movement became active and unions were established in many work places. As a result, wages increased
Table 2.15
Migration from Seoul to satellite cities

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Seongnam (Bundang)</td>
<td>76</td>
<td>100</td>
<td>87</td>
<td>110</td>
<td>69</td>
<td>55</td>
<td>44</td>
<td>52</td>
</tr>
<tr>
<td>Bucheon (Jungdong)</td>
<td>-</td>
<td>57</td>
<td>58</td>
<td>52</td>
<td>31</td>
<td>26</td>
<td>28</td>
<td>34</td>
</tr>
<tr>
<td>Anyang (Pyeongchon)</td>
<td>55</td>
<td>63</td>
<td>41</td>
<td>33</td>
<td>45</td>
<td>36</td>
<td>24</td>
<td>27</td>
</tr>
<tr>
<td>Goyang (Ilsan)</td>
<td>32</td>
<td>56</td>
<td>113</td>
<td>132</td>
<td>100</td>
<td>89</td>
<td>69</td>
<td>68</td>
</tr>
<tr>
<td>Gunpo (Sanbon)</td>
<td>18</td>
<td>26</td>
<td>29</td>
<td>18</td>
<td>15</td>
<td>13</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>181</strong></td>
<td><strong>302</strong></td>
<td><strong>328</strong></td>
<td><strong>345</strong></td>
<td><strong>260</strong></td>
<td><strong>219</strong></td>
<td><strong>177</strong></td>
<td><strong>193</strong></td>
</tr>
</tbody>
</table>

(Unit: 000)

and a social reform was adopted in wide spectrum of social realms, contributing to the migration of people. In the case of Seoul, the increase in the population due to migration demonstrated a fluctuating pattern from 1985 to 1989. From 1985 to 1992, the population of the city increased by an average of 190,000 people annually. The majority of the increase (65 percent) resulted from natural growth rather than an influx of people. The highest population level during this period was 10.97 million.

Another factor influencing the change of the population of Seoul was the decrease in growth of the city’s population made possible by partial completion of satellite cities in 1992. These satellite cities such as Ilsan (Goyang), Bundang (Seongnam), Sanbon (Gunpo), Pyungchon (Anyang), and Jungdong (Bucheon) began to be constructed from 1988. From 1992 to 1999, a total of 2 million people moved to these 5 satellite cities meaning that an average of 250,000 people a year left Seoul during the eight years. (Table 2.15). If such a migration hadn’t happened during this time, the population of Seoul would have continued to increase steadily.

In addition to a halt in the growth of the city’s population, the center of Seoul steadily became hollow in a residential sense as the large-scale urban renewal was adopted. And people and some of major urban functions continued to move from Gangbuk (north of the Han River) to Gangnam (south of the Han River) (Figure 2.21).

FROM POST-INDUSTRIALIZATION TO AN INFORMATION-BASED CITY

Toward the end of the 1980s, the industrial foundation of Seoul changed from a labor-intensive one to a technology-intensive, capital-centered one, which sought high-added value. As the semiconductor-centered, high-tech industries prospered and the information and communication industry rapidly developed, Seoul began to take
Figure 2.21

Source:
Korea National Office of Statistics, Census on Population and Household

1980-1990

1990-2000

over 100
60 - 100
15 - 50
0 - 15
-10 - 0
-20 - -10
below -20

Ri. Suk Lee
<table>
<thead>
<tr>
<th></th>
<th>No. of company</th>
<th>No. of employee</th>
<th>Added value (million won)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>17,105</td>
<td>14,878</td>
<td>551,137</td>
</tr>
<tr>
<td>Food &amp; Drink</td>
<td>268</td>
<td>236</td>
<td>29,982</td>
</tr>
<tr>
<td>Textile</td>
<td>2,081</td>
<td>1,709</td>
<td>52,429</td>
</tr>
<tr>
<td>Cloth &amp; Fur</td>
<td>4,040</td>
<td>4,495</td>
<td>141,915</td>
</tr>
<tr>
<td>Printing</td>
<td>1,625</td>
<td>2,694</td>
<td>49,948</td>
</tr>
<tr>
<td>Metal</td>
<td>860</td>
<td>607</td>
<td>16,100</td>
</tr>
<tr>
<td>Clerical</td>
<td>77</td>
<td>117</td>
<td>4,546</td>
</tr>
<tr>
<td>Medical, Optical, Watch</td>
<td>282</td>
<td>358</td>
<td>12,127</td>
</tr>
<tr>
<td>Others</td>
<td>7,672</td>
<td>4,662</td>
<td>244,080</td>
</tr>
</tbody>
</table>

Table 2.16
Companies, employees, and added values in the manufacturing industry: 1988-1998

Source:

on new functions. Due to the industrialization of neighboring countries, the labor-intensive industries lost most of their advantages and moved to less-developed countries like China and Vietnam, with which Korea formed new and friendly relations. In some industries, foreign laborers replaced domestic laborers. Yet, Seoul grew steadily through this restructuring process.

The details of the industrial restructuring can be seen in Table 2.16, which compares the number of companies employing more than 5 people, the number of employees, and added value of 1988 with those of 1998. According to the Industrial Survey Report, the number of manufacturing companies decreased by 13 percent, and the number of employees dropped by as much as 56.2 percent. However, the added value of this area increased by 96.7 percent. In particular, the textile industry, a representative labor-intensive industry, saw a reduction in the number of employees from 52,000 in 1988 to 21,000 in 1998 recording a decrease of 60 percent. However, the added value increased twofold. On the other hand, the number of companies involved in publication, printing and copying increased greatly with the added value of these industries increasing threefold. These restructuring processes saw a decrease in the number of companies and employees and an increase in added value. Although some manufacturing industries were highly developed in Seoul, the city experienced the same post-industrialization process as other large cities around the world.

During this gradual, post-industrialization process, semiconductor related companies, most of which were electronics companies, were concentrated in Seoul. This convergence was conspicuous in the information and communication industries such as computers, communications and multi-media, which rapidly grew from the mid 1980s. Most of these high-tech industries were concentrated in Seoul.
and its surrounding areas because of the proximity to research and development units. Moreover, personal computers were developed based on high-tech industries and widely provided for education and research. Following this, the information processing industry became a new center of employment. The high-tech industries that sprang up in the 1990s played the pivotal role in preparing Seoul to be an information-based city. Now, there are 3,500 high-tech companies in Seoul and almost half of them are along Teheran Street (locally called Teheran Valley) in Gangnam Gu and Seocho Gu (Figure 2.22). The concentration of high-tech businesses in Teheran Valley is different from those in Silicone Valley and Boston Route 128 in many ways. While the latter were developed based on the long-time establishment of related industries, the former are like an quick-formed island of innovative information and technology built on the foundation of a highly advanced information network, convenient transportation, a sufficient and highly skilled workforce and governmental support. Along with the rapid development of information and communication industries, Seoul became an information-based city faster than any other city in the world. As early as the mid 1980s, almost every house in the country had at least one telephone and in the 1990s, the number of pager users increased explosively. Furthermore, mobile telephones were popularized from 1996 on (Table

![Figure 2.22](image_url)

**Figure 2.22**
Distribution of high tech industries in Seoul, 1999

<table>
<thead>
<tr>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 1 Std. Dev.</td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>1 - 2 Std. Dev.</td>
</tr>
<tr>
<td>2 - 3 Std. Dev.</td>
</tr>
<tr>
<td>&gt; 3 Std. Dev.</td>
</tr>
</tbody>
</table>

K.S. Lee
2.17).

Due to the post-industrialization of Seoul, YounSIDEungpo, an industrial area since the colonial era, has changed. Many apartment complexes have been constructed in the districts where industrial complexes used to exist in the 1980s. Recently, Guro Industrial Complex, a symbol of industrialization in the 1960s, is being developed into the center of the digital industry utilizing the information superhighway. Presently, about 130 high-tech companies and 400 fashion and design companies are located in the Guro Industrial Complex. Now, Guro Gu and YounSIDEungpo Gu are the center of post-industrialization. However, post-industrialization and the relocation of unsuitable factories caused illegal factories to spread across neighboring areas surrounding Seoul. Although the air pollution of Seoul improved a little due to these relocations of the industries, satellite cities and Development Restriction Zones (known otherwise as Greenbelt) came to experience the same problems Seoul had in the past.

FORMATION OF MULTI-CENTERS AND RESIDENTIAL DIFFERENTIATION

Seoul advanced rapidly as it was transformed from a walled city to a colonial city, and then to an industrial city. Although its internal structure became more elaborate, important metropolitan functions
### Table 2.16

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gangbuk area</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jongno</td>
<td>342,129</td>
<td>317,406</td>
<td>274,804</td>
<td>-19.6</td>
</tr>
<tr>
<td>Jung</td>
<td>520,949</td>
<td>556,304</td>
<td>425,153</td>
<td>-18.8</td>
</tr>
<tr>
<td>Youngsan</td>
<td>101,222</td>
<td>125,174</td>
<td>126,010</td>
<td>26.5</td>
</tr>
<tr>
<td>Seongdong (Gwangjin)</td>
<td>153,970</td>
<td>216,830</td>
<td>207,639</td>
<td>34.9</td>
</tr>
<tr>
<td>Dongdaemun (Jungnang)</td>
<td>142,222</td>
<td>219,042</td>
<td>226,503</td>
<td>60.7</td>
</tr>
<tr>
<td>Seongbuk (Gangbuk)</td>
<td>69,092</td>
<td>81,624</td>
<td>155,414</td>
<td>220.0</td>
</tr>
<tr>
<td>Dohung (Nowon)</td>
<td>114,304</td>
<td>157,931</td>
<td>127,269</td>
<td>11.3</td>
</tr>
<tr>
<td>Punpyung</td>
<td>40,865</td>
<td>57,506</td>
<td>68,923</td>
<td>76.2</td>
</tr>
<tr>
<td>Seodaemun</td>
<td>61,066</td>
<td>61,634</td>
<td>80,761</td>
<td>32.3</td>
</tr>
<tr>
<td>Mapo</td>
<td>60,284</td>
<td>153,811</td>
<td>134,726</td>
<td>123.4</td>
</tr>
<tr>
<td>Sub Total</td>
<td>1,607,015</td>
<td>1,946,711</td>
<td>1,826,702</td>
<td>13.8</td>
</tr>
<tr>
<td>Gangnam area</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gangseo (Yangcheon)</td>
<td>81,874</td>
<td>153,026</td>
<td>186,430</td>
<td>130.1</td>
</tr>
<tr>
<td>Guro (Geumcheon)</td>
<td>179,609</td>
<td>255,804</td>
<td>225,006</td>
<td>30.8</td>
</tr>
<tr>
<td>Yongdongpo</td>
<td>198,073</td>
<td>342,820</td>
<td>326,945</td>
<td>65.1</td>
</tr>
<tr>
<td>Dongjak</td>
<td>48,171</td>
<td>61,820</td>
<td>79,725</td>
<td>65.5</td>
</tr>
<tr>
<td>Gwanak</td>
<td>47,567</td>
<td>94,345</td>
<td>92,264</td>
<td>94.0</td>
</tr>
<tr>
<td>Gangnam (Seocho)</td>
<td>158,025</td>
<td>554,519</td>
<td>847,370</td>
<td>434.2</td>
</tr>
<tr>
<td>Gangdong (Songpa)</td>
<td>57,384</td>
<td>218,589</td>
<td>276,155</td>
<td>381.2</td>
</tr>
<tr>
<td>Sub Total</td>
<td>771,303</td>
<td>1,680,723</td>
<td>2,045,895</td>
<td>165.3</td>
</tr>
<tr>
<td>Total</td>
<td>2,378,316</td>
<td>3,629,434</td>
<td>3,874,597</td>
<td>62.9</td>
</tr>
</tbody>
</table>

### Table 2.19

<table>
<thead>
<tr>
<th>Industry</th>
<th>Gangbuk(Jongro, Jung-gu)</th>
<th>Gangnam(Seocho, Gangnam-gu)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>863,078</td>
<td>875,609</td>
</tr>
<tr>
<td>Agriculture, Fishery</td>
<td>0.10</td>
<td>0.27</td>
</tr>
<tr>
<td>Mining</td>
<td>1,321</td>
<td>629</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>145,816</td>
<td>241,074</td>
</tr>
<tr>
<td>Electricity, Gas</td>
<td>1,015</td>
<td>643</td>
</tr>
<tr>
<td>Construction</td>
<td>282,619</td>
<td>152,828</td>
</tr>
<tr>
<td>Wholesale, Retail</td>
<td>32.75</td>
<td>17.45</td>
</tr>
<tr>
<td>Transportation, Communication</td>
<td>88,325</td>
<td>240,349</td>
</tr>
<tr>
<td>Social and Individual services</td>
<td>10.23</td>
<td>27.45</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>46,884</td>
<td>45,709</td>
</tr>
<tr>
<td>Wholesale, Retail</td>
<td>5.41</td>
<td>5.22</td>
</tr>
<tr>
<td>Social and Individual services</td>
<td>56,885</td>
<td>56,117</td>
</tr>
</tbody>
</table>

(unit : person, %)

Source:
Korea National Office of Statistics (each year), Industrial Survey Report.
Figure 2.23
The distribution of the employed population in 1999.

Figure 2.24
The distribution of the employed population in producer services in Seoul.

LQ
- LQ > 1.5
- 1 - 1.5
- 0.5 - 1
- 0 - 0.5
(Average: 0.7121)
(Std. Dev.: 0.4871)
Figure 2.25
The number of people involved in daytime activities.
1950 (above), 1995 (below)
were concentrated in the time-honored center inside the wall until the Gangnam region was developed. As the 1980s approached, the widespread use of subways and automobiles resulted in the shift of various urban functions such as education and public services to Gangnam, and in the formation of new centers near densely populated areas. During this time, Seoul began to take on the personality of a big city due to two kinds of spatial differentiation. First, the centers of employment were localized in three different districts. These centers of employment developed while maintaining close relations with one another and at the same time keeping their autonomy. Second, the residential areas were divided by social and economic status furthering the development of a hierarchical structure.

**Formation of multi employment centers**

Among the factors stimulating the dispersal and migration of the population were the establishment of new residential areas, downtown urban renewal, and the expansion of urban areas. In particular, the development of Yeouido and Gangnam largely contributed to the creation of significant jobs. According to a survey on the number of employees classified by district in Seoul, the number continued to drop in Jongno Gu and Jung Gu, but remarkably increased in Seocho Gu, Gangnam Gu, and Youngdeungpo Gu (Table 2.18). Although the number was higher in Gangbuk area than Gangnam area until 1991, 1995 statistics show that the number of employees were a little higher in Gangnam than Gangbuk. Table 2.19 shows with which industries people were involved in Gangnam and Gangbuk. Although the distribution of jobs was similar in both regions, Gangbuk was more focused on manufacturing than Gangnam, which relied heavily on construction. In general, besides the existing centers of employment such as Jongro and Jung Gu, new centers of employment were formed in the areas like Gangnam Gu, Seocho Gu, Guro Gu, and Youngdeungpo Gu including Yeouido (Figure 2.23). It is notable that the centers of employment were formed along the routes of the second subway line (Subway Line No. 2).

The emergence of these three new centers has to do with the rapid growth of finance, insurance, real estate, and production services including business services. These businesses are among the important factors for the globalization of metropolises. Figure 2.24 shows the distribution of the 1995 producer service location coefficient which shows that producer services were more widely distributed in the Gangnam area than in the Gangbuk area. In light of that, it is considered that the Gangnam area was more influenced by the globalization process of the city.

The three newly emerged employment centers coincide with the
distribution of the current commercial centers and the highest population coefficient area where the day-time working population is larger than the night-time resident population. Figure 2.25 was produced on the basis of the coefficient of the night-time resident population and the day-time activity population. In 1990, areas with the higher producer service coefficient were concentrated in the Gangbuk area, however, in 1995, higher producer service coefficient areas were shown in the three newly emerged areas of the Gangnam area, which demonstrates the appearance of an employment multi-center. In addition, the appearance of such an employment center was the result of the city government's effort to decentralize excessively concentrated city functions to the outskirts of the city. In other words, the Seoul city government brought the National Assembly building, finance, securities, mass media firms and other city service facilities to the Yeouido area, and moved a courthouse and the National Library to and constructed a trade and convention center in the Gangnam area. It also built an Olympic sports-complex and luxurious hotels in the Gangnam area. As a result, it is said that the city government's efforts had a direct influence on the decentralization of city functions.

**Social segregation of residential areas**

Although Seoul's urbanization led to the expansion of the total spatial area and the development of the functional regions, it was inevitable for most residents within the inner city to move to other places to find proper residential areas. Up until the 1990s, more than 20 percent of the Seoul population on average had moved within the city for various reasons. In certain times, some of Seoul's population had to move out of their communities because of the demolition of sub-standard dwellings. However, most moved out to find residential accommodations more in keeping with their social and economic conditions as new residential complexes supplied new types of housing. Between the 1960s and the 1970s, as the housing supply of land readjustment projects centered on the construction of individual houses, economic conditions and the social status of residents did not matter. However, apartment complexes, which started being supplied since 1980, were considered not only as places to live but also as the means of increasing personal wealth. Against this backdrop, residential districts in Seoul came to experience new social changes. In other words, the possession of an apartment house represented a certain social class because large-scale apartment complexes were able to attract groups with similar social and economic backgrounds. At the end of the 19th century, in the West, a housing class emerged during the Industrial Revolution along with the massive housing
supply for factory workers. Like the West, a similar housing class appeared in a short period of time in Seoul through the supply of large-scale apartment complexes.

The formation of a class that owned apartment houses facilitated the spatial differentiation of residential areas in Seoul. With the exception of some traditionally prestigious and sought after residential districts, traditional neighborhood areas with well mixed social classes of haves and have-nots fell behind compared to the apartment-centered residential areas because house prices dropped and the number of people looking for apartment houses over individual houses increased. The massive migration of upper-class people away from traditional neighborhoods led to a social filtering process in which many residents were not able to find new homes because of their economic conditions. Such a process accelerated in line with the city government’s dispersion policy to move various social service facilities into Gangnam from the Gangbuk district. In particular, the massive exodus of prestigious high schools into Gangnam was responsible for changing Seoul into a more stratified society than ever before, producing a special education district of the so-called privileged 8th School District in Gangnam. A home owning class was notably found in the Gangnam district in which apartment complexes were extensively constructed while the Gangbuk district in which independent houses were concentrated entered a period of

![Figure 2.26](image)
stagnation. Currently, more than 30 percent of the total house-owning population in Seoul live in apartments and 9 out of 25 Districts (Gu) have more residents who live in apartments than in individual houses.

The fact that the homeowner population was centered around apartment complexes indicated that such residents’ social and economic profiles were almost identical. Residents’ social and economic conditions generally involve their education, jobs, and income. In the case of Seoul, however, statistics involving social and economic conditions in each district are not available, so it is difficult to conduct spatial analysis such as social area analysis in cities abroad. However, following some indexes has been helpful in producing a general picture of spatial analyses in Seoul based on residents’ social and economic backgrounds. Figure 2.26, which shows the number of college drop-outs and graduates as of 1995, and demonstrates that the dispersion of residential areas occurred according to the education of residents, given that Yeouido, Ichon-dong in Yongsan, Seocho, Gangnam, and Songpa areas, which hold relatively more apartment complexes than other areas, show a higher ratio of college drop-outs to graduates. The rough statistics of each household income in Seoul are available, however, statistics gathered in a district unit have not been made available yet.

The amount of a person’s annual local tax payment in a particular area can substitute for statistics showing the level of incomes in a district unit. Local taxes which include residence tax, property tax, car tax, and the aggregate land tax of each household indirectly reflects the income level of residents. In 1991, areas with the larger amount of annual payments for each person mostly correspond to the apartment-centered areas. Although some parts of central areas of Jongro Gu and Jung Gu show the same characteristics as the center of the metropolis, most parts of Yeouido, Ichon-dong and Gangnam areas have spatial characteristics corresponding to the education level of residents (Figure 2.27). Another social characteristic can be determined by the density level of residential areas. Although there are a lot of variables involved in estimating the density level, it can be easily produced by calculating the percentage of the population now dwelling in a single room. Figure 2.28 shows four different areas with the different level of densities: the Seocho, Gangnam and Songpa areas, which are considered to be ranked higher when it comes to social and economic conditions, appears to be lower level of densities and to maintain the most comfortable residential environment. In and around the Seongdong Gu and Guro Gu, there are densely populated areas. Such a distribution of densely populated areas corresponds with the spatial patterns of the education level.

It is undesirable that, as happened in Seoul, construction of
Figure 2.27
Source:

Figure 2.28
The number of people occupying a room.
Source:
Comprehensive Census on Population and Housing
large-scale apartment complexes led to the formation of residential segregation according to residents' social and economic conditions. Although similar social phenomenon as the emergence of a housing class took place in other countries during the rapid expansion period of large cities, the phenomenon did not last long. Considering the examples of foreign cities, social and economic differentiation currently found in the residential districts in Seoul will be refined as time goes by. Residents' recent tendencies in housing preferences show that an increasing number of households are moving to villas and houses with gardens reflecting new living patterns. This social tendency will facilitate another suburbanization process, along with the constant massive movement into the five new towns around Seoul. Therefore, apartment-centered housing patterns are expected to experience changes through another type of social filtering process and to go through a new spatial differentiation down the road. The heavily apartment-concentrated Gangnam areas, which maintain a higher quality of life and social status, have been entering a stable life

Figure 2.29
The number of foreign residents in each district in 1995

No. of foreign residents per 10,000 Koreans
- 0 - 5 person
- 5 - 40 person
- 40 - 100 person
- over 100 person

1 Ki-Suk Lee
cycle stage, which means not only that demographically the number of children is decreasing but also that the number of students per classroom in middle schools is going down compared to that of other areas.

Along with the social stratification of residential areas, recently the distribution of foreign residents is drawing an attention. Unlike Japanese residential areas were separated from other Korean residential areas during Japanese colonial rule, the number of foreign residents in Seoul today stands at 57,000 and is extensively dispersed. Figure 2.29 is a map showing the 1995 proportion of foreign residents in each district (Gu). Ichon-dong, Hannam-dong, Itaewon and Banpo-dong on the shore of the Han River showed the highest concentration rates. According to Figure 2.29, foreign residents are also concentrated in university area such as Daesin-dong of the Seodaemun Gu and the central areas of Seoul. Given the fact that foreign residents were extensively distributed throughout the city of Seoul, it can be said that the residential environment of Seoul has generally improved. The increase in the number of foreigners and the expansion of residential areas has something to do with the increase in the population of foreign workers from China, the Philippines, Vietnam, and Russia since 1990. There was a certain tendency for Japanese residing in Seoul to be concentrated in Ichon-dong in Yongsan, Chinese in the Guro Gu, Chinese-Koreans in Yeonhoe-dong, Americans in Itaewon, and French in Bangbae-dong and Banpo-dong.

ENTERING THE RANKS OF GLOBAL CITIES

While Seoul was rapidly developing during the industrialization process of Korea, the excessive concentration of political, economic and cultural functions in Seoul has caused a number of urban problems including housing, transportation, and environment as well as insufficient infrastructure. With the help of the city government’s continuous decentralization policy in the 1970s and 80s, the city population growth stagnated and the concentration of urban functions in Seoul partly abated in the 1990s. Not only that, but externally, Seoul has succeeded in playing a new role and serving new functions to meet the changes of the world economy. In particular, as Seoul turned from an industrial city into a post-industrial city, it has laid the basis for actively accommodating the functions of an international city by establishing an information and communications infrastructure, developing high-tech industries, opening the door to multi-national companies and nurturing start-up companies.
Consequently, this basis has considerably helped Seoul take its position as one of world or global cities.

In a general sense, in order to become a global city, many conditions must be met. More than anything else, however, a city must be able to command and control the fields of international economic matters, culture, sports, and politics through international networks. Today, multi-national corporations mostly dominate the world economy and the number of headquarters or branch offices of multi-national companies located there determine the level of a city's globalization. Also, the level of cities' globalization can be evaluated not only by the amount of foreign and multi-national companies' investment but also by the number of foreign workers, the ability to put on international culture and sporting events, and the number of international conferences held.

It is safe to say that the internationalization or globalization of Seoul started in earnest in the middle of the 1980s. The 1986 Asian Games and the 1988 Olympic Games are significant in that Seoul improved its infrastructure to international levels while preparing for these two international sporting events. This was done for the sake of its citizens rather than as a publicity stunt for the benefit of the foreign media. After the 1988 Seoul Olympics, Seoul witnessed a considerable increase in the number of foreign companies and foreign investment, which is not irrelevant to the improvement of Seoul.
as a global city (Figure 2.30). Also, the 2002 Korea-Japan World Cup which Seoul is now preparing, will serve as an opportunity for Seoul to improve its international status.

It is said that the main engine for change in Seoul was the growth of high-tech companies and the rapid development of information technology and telecommunications. Information and telecommunications networks centered around Seoul provide the excellent global access. Seoul has also established the infrastructure for international conferences and exhibitions. The Asia-Europe Meeting (ASEM) in 2000 was one example of Seoul's increasing international convention business.

The globalization process in Seoul will be further boosted by Gimpo Airport and the newly opened Incheon International Airport that are regarded as part of the network infrastructure because the two airports are able to serve as central airports not only for Korean national flag carriers but also for international airlines. The geographical importance of Seoul has greatly increased after the collapse of communist countries, their openness to the international community and the normalization of their relations with Korea. In other words, Seoul is equipped with all the conditions that will enable the city to serve as the hub of the North East Asian region. Although the idea of BESETO (named after BEijing-SEoul-TOKyo), a comprehensive city network plan connecting Beijing, Seoul and Tokyo, has not yet taken shape, it is certain that the cooperation of these cities will be a critical part of a global city network project in the foreseeable future.

In retrospect, Seoul has grown from a unknown, remote pre-industrial city to one of the largest world cities in the course of the twentieth century. At the end of the Chosun Dynasty at round the turn of the 20th century, Seoul was a reclusive city surrounded by citadel walls. Under Japanese colonial control, Seoul laid the foundation to become an early industrial city, and after the two wars - WWII and Korean War - Seoul laid the firm ground for bona fide industrialization. In the industrialization process, Seoul has grown at an unprecedented rate, garnering international acclaim of "Miracle of the Han River." Seoul became to be better known to international community in conjunction with, and afterwards, the 1988 Seoul Olympic games. Seoul, as a capital of one of the leading countries of semiconductor producers, has served as an incubator for high-tech industries and start-up companies. Upon this foundation, Seoul is now accommodating the strong information and telecommunications industry. These industries have helped Seoul become an important city in the North East Asian region and join a group of world cities at the global scale.
Notes

1) Data regarding the number of people coming south from the north vary with each survey so that such numbers can only attain approximate accuracy (Seoul City History Compilation Commission, 1997). According to the Seoul Statistics Sourcebook, the number of people coming down from the north by year were as follows: 185,441 in 1946, 165,074 in 1947, 2,541 in 1948 totaling around 350,000 in that three year period.

References


Gyungseong Municipal Office. (1928), Results of a Study on Gyungseong City Planning.


———, (each year), Statistical Yearbook on Population Movement.


The History Research Department at Gyeongsong College of Education. (1933). The Geographical History of Gyeongsong.


CHAPTER 3

Transformation of Seoul's Modern Urban Landscape

Kyu-Mok Lee

The Urban Landscape at the End of the Chosun Dynasty since the Opening Era

A LOOK INTO THE URBAN LANDSCAPE OF THE PAST

Trying to visualize how Seoul must have looked in the past is difficult at this point in time when there is very little that remains of it. One can rely only on indirect sources such as relics, literature, maps and photos to make assumptions. In this chapter, therefore, the urban landscape of Seoul in the 20th century will be examined not from the perspective of a historian who looks at verified historical facts and changes but from the perspective of a landscape analyst who bases his understanding of the past urban landscape by analyzing the various related materials. The urban landscape includes not
only the physical attributes but also the images of the people and their lifestyle. Examining the physical structure and form of the city is important but it is equally important to understand how these elements affected the people in those times: how they appeared to the people, how they affected the thoughts of the people and consequentially what kind of image they had of the city. In this chapter, an attempt will be made to establish the formation, the characteristics and the changes in the urban landscape through the perspective of the people who lived in those times by analyzing the various materials that provide descriptions of the city. An examination of the changes in the city in the 20th century requires a study of the end of the 19th century, since this is when changes started to take place with the opening of the port. Therefore, this chapter will first examine the changes that took place at the end of the Chosun Dynasty, then discuss the changes that took place in the Japanese colonial period as a result of the policies of the colonial rule. Finally, it will examine the changes in the half century since the country's liberation from its colonial rule.

Related sources on the urban landscape around the period of the opening of the port include Park Jae Ga's (1750-1806) Bukhakeui, Yoo Deuk Gong's (1749-1807) Gyeongdo Japji, and his son, Yoo Bon Yae's Hangeyonjinae, as well as Sungshijeondo (1792), which are poems that were written for King Jeongjo by his men in court. At the time 16 were selected as the finest, and among these the poems by Park Jae Ga, Lee Duck Moo (1741-1793) and Park Joo Dae (1836-1912) are famous. Park Ji Won, who gained the trust of King Jeongjo, and his friends Park Jae Ga and Yoo Deuk Gong who belonged to the 'Bukhakp' were interested in practical everyday social life, and their focus of study was mainly social reform. Yet they also showed a particular interest in the city environment, so that their writings make up the majority of the materials on urban landscape. There are also valuable writings by foreigners describing Hanyang (Seoul) at the time of the opening of the port, which include Gilmore’s dissertation, "Korea from its Capital" (Gilmore 1892), Bishop’s Korea and her Neighbors (1897), and Hulbert’s The Passing of Korea (1916).

SEULS URBAN LANDSCAPE AT THE END OF THE CHOSUN DYNASTY BEFORE THE OPENING OF THE PORT

A general view of the city would reveal that mountains, whether they are inside the city or surrounding it, are the most prominent feature of the urban landscape as is evident from the many drawings the
artist, Gyumjae Jeongsun, drew of Seoul (Figure 3.1). The mountains formed the main skyline and appeared as a landmark. This feature differs greatly from the Western tradition of erecting shrines, ziggurats, and churches that reach up high into the sky. The prominence of the mountains in the urban landscape is a common characteristic that is also found in Japan and China. This can be explained as an influence of Fengshui, which considers mountains as yang energy (though in certain contexts they can be interpreted as yin energy), and as for houses, tall ones are yang and low ones are yin. Since only yin and yang energy together can create harmony and enhance positive energy, two yings as well as two yins would create conflict. Therefore, it was believed that in a country such as Korea, where there are many mountains, building tall buildings would not be fortuitous but cause the country to decline. For this reason the palace and the houses in Koryo and Chosun dynasties were not built high. Hulbert, who traveled in Korea at the end of the Chosun dynasty, found the reason for these one-storied houses to be in the problem of balance between the heavy roofs and the pillars. However, it seems more likely that there were socio-cultural reasons—the people’s respect for and worship of mountains—for this phenomenon. Whereas Westerners had a fascination for tall, man-made structures, Koreans had more interest in mountains. Whereas Westerners built on top of hills and mountains such as on the Seven Hills of Rome and
the Acropolis in Athens, Koreans left mountains in their natural state. Mountains were not only a point of reference for the locating of cities and houses, but they were also the most frequently portrayed subjects in literature as well as in various records. Especially in Seoul, Bukhansan, Gwanaksan, Duckyangsan (Hengjusanseong), Achasan (Walker Hill), which were considered the four outer mountains according to Fengshui as well as the four inner mountains—Bukaksan, Namsan, Inwansan and Naksan—were mentioned most frequently. Looking down at the city from the mountains, all the houses would have looked flat, and one would have been able to see the palace (approximately two stories high), the south gate (Namdaemun), Gwanghwamun gate and also the city wall in the distance. Park Jae Gyu (1792) described the view in Seonghi jondochi as follows:

"Have you not seen the palace reaching up into the sky in Hanyang. The palace wall extends 40 'rit'. On the left there is Jongmyo, on the right there is Sajikdan, behind it there are mountains, and the Han River flows in front." (Translated by Park, Jung No)

However, if one were to come from outside of the city, the city wall and the gates would be the first thing that one would have seen. The south gate, which was the gate that led into the city from the southern and eastern provinces, would especially have been most imposing due to the viewing terrace on the gate, which was at the second floor. The city within the city wall was completely enclosed. Gilmore (1892), who was doing missionary work in Seoul in the 1880s, described his first impression of Seoul as "a city, which was enclosed within walls and where there were no lights after nightfall and from which one could not escape unless one climbed over the wall, was most medieval in character." Hulbert (1906) also wrote that the structure of the city wall was oppressive and that its grandeur was impressive (Figure 3.2). The city wall was not only a prominent visual feature of the city but it also served a functional purpose of isolating the city from outside. Furthermore, it was used as a place of leisurely pursuits. Apart from the places that were not easy to climb up, the walls were used as paths for walks, and because one could look down into the city and outside the city from the wall, 'soonsungnor' was popular. 'Soonsungnor' was an event in the spring and summer where people in Seoul walked along the city wall and enjoyed the scenery within and outside the city. A similar event is held in Goseong, Gochang, and also in the West such as in Chester and York, medieval cities in England, the castle walls are used as walk paths.
Gilmore (1892) again emphasized the similarity of Seoul to the Western medieval cities, when he wrote that "if you stand somewhere where you can see Namsan at sunset, or somewhere outside the west gate where you can see the mountain from the closest possible distance, the medieval impression becomes stronger." Of course, Western European cities are also surrounded by castle walls, but the biggest difference is that in these cities, there is a church or cathedral in the middle of the city with tall spires that can be seen from every direction. However, in Seoul there is Namsan (Figure 3.3), which has always been the most important feature in the landscape. Gilmore also mentioned that it was "a beautiful mountain covered with trees south of the city center". Namsan served not only as a landmark but it was also a place from which one could look down onto the city. The view of Seoul from Namsan appears in various different writings, but it is well summarized in Lady Bishop's memoir.

"From the beautiful hill Namsan, Seoul is best seen, with its mountainous surroundings. [. . .] The city is a sea of low brown roofs, mostly of thatch, and all but monotonous, no trees and no open spaces. Rising out of this brown sea, there are the curved double roofs of gates, and the gray granite walls of royal palaces and within them the sweeping roofs of various audience halls."

There were three main streets at the time. The present Jongro
was the main commercial street, whereas Sejongro from the Gwanghwamun intersection (Hwangtohyun) to the palace was the representative street at the time accommodating six government ministries (called Yukjo). Shinmunro that stretched from Gwanghwamun intersection to the west gate had all the public buildings. After the belfry was built where the bell was rung twice a day, once in the morning and once at night, to open and close the eight gates, Jongro was called Jongru (belfry) crossroad or Unjongga. The name Jongro was given to the street during the Japanese colonial period (1913). Jongro became a busy commercial street from when the capital city was first established, and it flourished even more after the public commercial arcade (called shi-jeon-haeng-rang) formed. These shops were mostly tile-roofed houses, which had living quarters for the family at the back. After Japanese Hideyoshi’s Invasion of Korea in 1592 and after the Chinese invasion in 1637, ‘Yukeuijeon’, a government-authorized store, was established and acquired commercial supremacy in Hanyang. In the late Chosun Dynasty Jongro together with Namdaemunro, which formed a T-shape, became the commercial center of not only Seoul but the whole country (Figure 3.4).

When Jongro was built, it was quite wide (16.8-17.5 meters in width), but the shops, called ‘gaga’, started to invade the street. This
The street ground plan of the shops in Jongro (Unjongga), showing the distribution of shops according to the merchandise.

situation and its reasons are recorded in Buchakeui: "Gaga refers to the shops that the middle class citizens opened up for buying and selling goods. At first they were only stalls under the caves that could be brought in, but gradually they started to build them up with clay, and eventually the shops took up space on the streets. Trees were even planted in front of their shops, making the street so narrow that it was difficult for two people on horseback to go past each other." Because of this the commercial area not only looked disorderly, but it also caused inconvenience. Hulbert (1906) deplored the main streets becoming narrower because of the shops, and Gilmore (1892) also described the situation at the time as such:

"The streets (apart from the ones leading to the palace) were narrow and had many alleys, so that people could barely walk along without brushing shoulders with others. [...] Because the street is narrow and the tiled-roofs and thatched-roofs jut out, it is difficult for even one man on a horse to walk through. In order not to fall off the horse, one must keep one's head down and sit carefully on one's saddle."

The origin of the gaga in Seoul could be traced back to when the 'shijeon' (store) first appeared. However, it was probably after
Hideyoshi’s Invasion of Korea, when there was general disorder in the country’s state of affairs and when there were frequent fires, that the gaga became permanent buildings invading the streets. It is also speculated that this situation became most serious in the Kings Yeongjo and Jeongjo period, when commerce and industry developed and the economy flourished both within and outside the city. At the end of the Chosun dynasty there were efforts to partially keep the gaga in check, but they eventually became permanent buildings that resulted in today’s stores, and acted as impeding elements detracting from the view of the commercial street.

With Jongro in the middle, the residential area was divided into the northern and southern parts where the upper class (yangban) lived and the central area where the lower and middle class lived. The government officials lived mostly in the northern part such as Gyedong, Gahoedong, Wonscedong, and Angukdong, whereas the so-called ‘namsangol-sennim’, who were scholars without government positions, lived at the bottom of Namsan mountain. This area is today’s Hoehyun-dong and Pildong (then Batgol). These scholars, who led upright and righteous lives despite adverse circumstances, had critical minds characteristic of what would be today’s opposition parties. The area around Cheonggyecheon developed into a middle-class residential area, where rich merchants and the middle class started to reside. Those middle-class citizens, who had miscellaneous jobs to do with the palace, lived in Jongro-Gu. Nuhadong, Jeoksodong and Sajikdong (Semal), Mapo-Gu Dohwadong (Bokseong), Dongdaemun-Gu Jegidong, and Seongbuk-Gu Jongamdong (Bukbawi). The soldiers lived in Seongdong-Gu, Wangshimri, and the merchants, who crossed the Han River to and from to do their business, along with the fishermen lived in Mapo (Sangme), so that they could live near their place of work. Those whose work was related to the funeral service lived in Jung-Gu Gwangheedong on the side of Shigumun (officially Gwangheemun), and many of the Bekjung (the lowest class) lived in Jongro-Gu Haehwadong. The ‘kiseng’ (service woman in high-class restaurant) who offered their services to merchants and government officials lived mostly in Cheongjin-dong, Seorindong and Dadong. The bars that the merchants used to go to have now become the ‘haejangguk’ restaurants today.

Park Jae Ga (1792) describes in his Seongshi Jeondo shi that “the forty thousand tile-roofed houses that stand side by side like scales on a fish look like yellow tails and carps under the water.” However, as Bishop described, apart from the palace and the government office, all the rest of the houses had thatched roofs, and the surrounding conditions were also probably sub-standard. Bishop (1897) criticized the conditions of the city and described the narrow, muddy alleys, the children in ragged clothes playing the open sewers full of
rubbish, and the dogs, which she portrayed as the only existing street cleaners.

"I thought it the foulest city on earth till I saw Peking (Beijing), and its smells the most odious, till I encountered those of Shaoxing. For a great city and a capital its meanness is indescribable."

THE CHANGES IN THE LANDSCAPE AFTER THE OPENING OF THE PORT

The modest, isolated and medieval city amidst the natural landscape went through enormous changes during the thirty years up to the Japanese invasion (1910) as the ports in Busan, Wonsan and Incheon opened up as a result of the Korea-Japan amity treaty (1876). This was a time when a new order was established as the traditional medieval society transformed into a modern one, and the image of the city was no exception. First of all, the skyline of the city changed as new building started to appear such as Doknipmun (1897), Myeongdong Cathedral (1898), Jeongdong Church (1898) and later Sukjojeon (1910).

Changes also took place on the streets with the appearance of the tram between Seodaemun and Cheongryangri (1899), the streetlights at the Jongro intersection (1900) and the installation of electricity poles and phones. There were also changes in residential space; since Japanese citizens were permitted to reside in Korea (1885), Chungmuro 2-ga near Jingogae became the main residential area for the Japanese. With the establishment of the American legation (1883) Jeongdong in Jung-Gu became an American neighborhood, and Shin Yongsan started to become developed as a military base.

The biggest change, however, was probably the breaking down of the city wall, which had been a significant part of the landscape for five hundred years of the Chosun dynasty. There were eight city gates that closed around 10 o’clock at night at the sound of the bell (injeong) and opened at 4 o’clock in the morning when the bell rang (paru). This curfew system protected the capital and also played an important role in keeping law and social order in society. Near the end of the Chosun dynasty a peculiar organization under the name of ‘committee for the removal of the city wall’ was set up, led by the Lee Wan Yong cabinet (1907). The city wall on either side of Dongdaemun was first to be removed, and then the whole wall that extended more than 18km was all removed except for some parts on
the mountains (Presently 9.8 km of it remains through reconstruction). Consequently, the circular shape of the city disappeared starting with the outer wall. This can be seen as an important opportunity for Seoul to break with traditions, but it is a phenomenon that should be seen more as an act on the part of the Japanese to destroy the Korean culture. This was an ordeal that not only Seoul but other regional historical cities like Gyeongju and Jeonju also suffered.

Together with the demolition of the city wall, the most important change in the skyline of Seoul was probably the appearance of Myeongdong Cathedral on the northern hill at the foot of Namsan (Figure 3.5). Jonghyun, where the cathedral was situated, provided a good view. A Westerner bought the land from a bankrupt ‘yangban’ (a nobleman) and built the cathedral that took six years to complete. The cathedral, a Gothic style building that was 69m in length, 28m in width, 23m in height and had a bell tower that was 45m high, was the talk of the town, and people came from all over the country to look at it. People did not understand why the building was being built so big. There were funny stories that some even thought that the reason they kept building up the cathedral with bricks was because they couldn’t put up the beams. The bell tower on the hill created a skyline that resembled an old European city. This building stood out as a dominating feature in the surrounding landscape for many decades until other high-rise buildings were built in the vicinity. Furthermore, the cathedral came to have a considerable influence on the sociopolitical and cultural aspects in Korea not unlike the European cathedrals did in their countries.

A new landmark that appeared around this time was Doknipmun (Independence Arch). The construction of this edifice began in

**Figure 3.5**
Myeongdong Cathedral on the hill that conjures up the image of a European Medieval city
1896, when the extension of the Myeongdong Cathedral was almost completed, and it was completed in the following year. Doknimpun was special not only because of its unique appearance but also because of the purpose and the process of its construction. With the purpose of showing the world that Chosun was an independent country, it was erected in the place of the old Youngeunmum, a remnant of a subservient diplomacy of worshipping the powerful countries. The founder of the Independence Association, Seo Jae Pil, had commissioned the Russian architect, Sabatin, to design it. Seo Jae Pil commented that this stone arch was an imitation of the Arch of Triumph in Paris. Although it falls short of the grandeur and design of the Arch of Triumph, it must have still been an impressive sight among the scores of one-storied houses at the time.

The view of the city also changed greatly when the streetlights came on in Jongro. As it is recorded in Gyeongdo Japji, Jongro was lit brightly by lamps hung high above the shops on Buddha’s birthday (April 8th according to the lunar calendar), which was celebrated by all the citizens. However, other than on this particular day, the streets in Seoul were unlit. Just as Lady Bishop wrote, the city was very dark and dreary. Therefore, one can imagine the kind of sensation that was created when the streetlights came on for the first time.11

"The nocturnal silence is very impressive. There is no human hum, throb, or gurgle. The darkness too is absolute, as there are few if any lighted windows to the streets. Upon a silence which may be felt, the deep, penetrating boom of the great bell breaks with a sound which is almost ominous."

There are also other factors that contributed to the drastic changes in the scene of Seoul after the opening up of the country, which will be discussed later in relation to the circumstances after the 1910s. On the whole, however, the quiet and isolated city, surrounded by its walls, lost its circular layout and started to spread out horizontally and vertically.

THE BEGINNING OF A NEW KOREAN-STYLE URBAN LANDSCAPE

The original view of Seoul as a fortress city was very different from today. The few remnants scattered across the city are the only traces left of the former city, whereas in many European Medieval cities the old buildings, streets and landmarks feature as important elements in
the urban landscape. The reason for this lies foremost in the transformation the social-cultural system. Unlike Western Europe, the changes took place drastically due to outside forces. Although it is impossible to come to any conclusion before further examining the changes that took place after the arrival of the new culture, a novel interpretation can be attempted by pointing out an interesting fact.

As examined previously, most of the old materials related to the urban landscape were written by scholars of the positive school, such as Hong Dae Yong, Park Ji Won, and Park Jae Ga. These scholars made frequent trips to China and met Chinese scholars or Western missionaries, who spread Western science to China. The books written by these scholars were not simply accounts of their travels but contained their view that positive aspects of the Western countries must be learned to promote productively and contribute to the social welfare that would improve the people’s life. These scholars had a lot of interest in the city, and though fragmentary, there are clear evidences in their writing that they had intentions to reform the environmental conditions of the city.

This can be seen first of all in the Utopian thoughts of Lee Joong Hwan and Park Ji Won. Lee Joong Hwan, who was well-versed in human geography, after discussing the places that were habitable in the whole country in Taekriki, mentioned in the last verse "a land that is not land". Through this he was suggesting a utopian land that is not in this world, stating a view that refuted the thought of 'Gilji' (belief in propitious land), which was popular at the time. Although in a different context, Park Ji Won also indicated his ideal for a better society by suggesting 'an uninhabited island' in his satirical novel Hursengeon. In contrast to these men’s conception of an ideal society, Park Jae Ga, a pupil of Park Ji Won, focused on more realistic urban problems, while still espousing idealistic values. In his book, Bakhakeui, especially in the chapter on bricks, he advocated the use of standardized bricks as building material to protect houses from flood, fire, burglars, and to stop houses from crumbling and collapsing, getting wet and rotting. Also, in the chapter on streets, he lamented the state of streets being taken over by stores and emphasized the need for state regulations to prohibit such activity. In the chapter on markets, he used the words of ministry, Chae Jae Gong, to maintain that the stores should have signboards with names appropriate to the goods they sold, and thereby completely change the appearance of the streets from Dongdaemun to Namdaemun. He also mentioned the problem of drainage when he suggested three ways in which brooks could be dredged. If bricks had been produced and distributed as building material, which was completely possible at the time with the technique they had for making roof tiles, the appearance of the city would have changed completely
within ten years, as he had claimed.

The reformist ideas and practical approach of these Bukhakpa scholars had a great influence on the reformists, who made up the core of the coup d'état in 1884. Park Kyu Soo (1807-1876), the grandson of Park Ji Won, was the one who bridged the two generations. After he retired from his position as "wueujeong" (one of the two prime ministers) he gathered a number of bright young men to whom he gave lectures on the collection of poems by Park Ji Won, and advocated the knowledge and new ideas brought in by Chinese envoys. As a consequence, Kim Ok Kyun and Park Young Hyo, who ardently believed in reform, gave birth to the theory of road construction (Chidoron). The details of this are given in Kim Kwang Woo's study (1992), but it was based mainly on a theoretical writing on urban planning, called "the theory and regulations of road construction", obtained from the more enlightened Japan. This book contained details of urban structure and urban improvement. The conditions of hygiene and the appearance of the streets of Seoul were almost embarrassing at this time. Therefore, Park Young Hyo, as soon as he became Hanseong panyoon (city mayor) in 1882, strove to establish a system of public peace and order as well as the construction of a modern city by setting up the government department for road construction, based on the theory of road construction.

Seo Jae Pil, who had been instructed by Kim Ok Kyun and had participated in the coup d'état of 1884 after his studies in Japan, was also influenced by these reformist thoughts. At the time that the Independence Arch was being constructed, Paris was going through a drastic transformation under the remodeling plan of Baron Haussmann (Figure 3.6). This grand plan, along with the London Regent
Street remodeling plan, was revealed to the world, and it became a model for the remodeling plan for Tokyo, functioning as a symbol of enlightenment in Asia.\(^{16}\) Doksippum (Independence Arch), which was modeled after the Arch of Triumph, can also be seen as a symbolic monument reflecting Seo Jae Pil’s intentions of reform to improve the landscape of Seoul. Although the arch lost some of its significance when it was moved from its original location, it still remains today as a gate to the Independence Park in Seodaemun.

Furthermore, King Kojong, who wished to launch a new political system, whereby the monarch had direct control over the state affairs, felt the need to build a palace and roads that would suit the purpose. Therefore, he reappointed the reformist, Lee Chae Yeon, as Seoul city mayor, and started the Hanseong remodeling project centered around the Gyeonggungung (Ducksugung) in the heart of Seoul (1896-1898).\(^{15}\) Lee Chae Yeon was a pro-reform government official, who had visited America and also participated in Seo Jae Pil’s Independence Association. The remodeling project that he undertook was short-term, but it was the most worthy of attention in the whole period of the Great Korean Empire (otherwise known as Great Daehan Empire). The rough outline, such as "the radial roads, circular roads and circumscribed roads centering out from Gyeonggungung,"\(^{16}\) is all that is known to us today. However, the fact that the project was a success is clearly evidenced in the writing of Lady Bishop who revisited Seoul (1897), when the project was well under way and commented on how much Seoul had changed. Bishop had formerly described Seoul as the dirtiest city in the world, but her image of Seoul had changed completely, when she saw how the roads were widened, the muddy brooks were filled in and how the bicycles sped along the wide, paved roads. The garbage was collected, and instead of the thatch-roofed houses, there were houses with tiled roofs and stone walls.

"When I entered Seoul, the city was under the authority of Ye Cha Yun (Lee Chae Yeon), an energetic and enlightened governor. Under his auspices the western parts of the city has lost the refuse heaps and foulness, with their concomitant odors, which were its chief character [. . .] From having been the foulest, Seoul is now on its way to being the cleanest city of the Far East [. . .] It must remark the capital is being reconstructed on Korean lines, on is not being Europeanized."

The reformists did not intend for a westernization that simply adopted foreign thoughts and experiences, but aimed to integrate the Western practices into the Korean culture and develop all the potentials in the Korean tradition.\(^{17}\) However, these attempts to change Seoul into a 'Korean style city' were thwarted by the Japanese.
Although one cannot make hypotheses about history, if the city remodeling project, which derived from the positive school of thought, had continued, Seoul would have turned into a modern city of a very Korean kind.

The Distorted Urban Landscape in the Japanese Colonial Period

THE CAUSE OF THE DISTORTION AND THE EFFECTS ON THE CITY

The 36 years of Japanese colonial rule in the first half of the twentieth century has a particular significance in the modernization of the Korean cities. Although it was at the end of the nineteenth century, when the ports were opened, that the traditional circular urban landscape started to change. More fundamental changes and changes in urban planning occurred in 1910 when Japan colonized Korea. This was a period when cities and architecture went through dynamic changes in the West as a result of modernism. It is most unfortunate that Korea had to be under Japanese colonial rule at that time, for if Seoul had been left to change autonomously, it would have turned out quite differently. This section will examine how the colonial policies and the sociopolitical and economic factors influenced the urban landscape to change, and especially will focus on the notable phenomena of distortion.

The basic premise is that Japan had intended to debilitate the sense of Korea's identity throughout the colonial rule, and that this
intention had influenced the urban landscape. The colonial policies of the Japanese can be found in many direct and indirect sources, but *Maet Shinbo* (daily newspaper), which was issued continuously for 36 years during the colonial rule, reveals not only the clear intentions behind their policy but also their policies for publicity, propaganda and press. *Maet Shinbo* was published as the ministerial newspaper for the Chosun colonial government from the time of the annexation (August 30, 1910) to the day of Korea's liberation. *Doknip Newspaaper* and *Hwangsong Newspaper* were abolished before the invasion, and *Dongna Ilbo* and *Chosun Ilbo*, the national daily newspapers published by Koreans, were launched in 1920 after the 1919 Independence Movement, but were prohibited again after 20 years in 1940. Along with other related literature, this chapter has made extensive use of *Maet Shinbo*, especially the editorials, which reveal clearly the intentions of the Japanese rule.

The Japanese invasion of Korea began with the opening up of the port (1876), but 1910 is considered to be the time when the Japanese occupation started and when Korea essentially came under Japanese rule. Politically the Japanese colonial policy can be divided into three stages based on their policy conversion: Namely, the period of militaristic-authoritarian rule (from 1910 to the 1919 Independence Movement), the period of cultural rule (from 1920 to the Manchurian military incident in 1931), and the period of preparing Korea as the logistic base for the colonization of the Asian continent. However, as far as the changes in the city are concerned, it would be appropriate to divide the Japanese policy into two stages—the early and later period—in considering the changes in urban planning, urban landscape and architectural characteristics.\(^1\)

With the mid 1920s as the dividing point, the period before then was dedicated to abolishing the existing sovereign power and preparing the foundation for a colonial rule. During this period the city remodeling project for street improvement was undertaken, and many public buildings, including the colonial government building, were built. Also, railroad facilities and buildings for related services for the preparation of the Japanese colonization of the Asian continent were constructed at this time. The urban landscape that was formed in this period can be seen to reflect the process of political colonization. The later period of the Japanese colonial rule was a time of finishing off the work of laying down the foundations for the colonial rule and of transforming the Korean cities into colonial industrial cities. Also, this was the time when many Japanese commercial firms and offices were built, since the abolishment of the Chosun private company decree led to the infiltration of the Japanese cartels. The Chosun City Planning Decree proclaimed in 1934
had a particular influence in giving Seoul its modern image. As for architecture at this time, it reflected the tendency of 'modernism' following the Japanese trend.

The Japanese colonial policy aimed at completely eliminating the old ruling class from political power in order to gain complete control. This method of complete domination continued throughout the militaristic-authoritarian rule period and did not change even after the shock of the 1919 Independence Movement. This was different from the colonial policy of Western European imperialism and even from the Japanese colonial rule of Taiwan. This is revealed in the severity of the governing style and the consequent assimilation policy. The Japanese colonial policy imitated the French style and therefore persisted in the principle of direct rule, but the fundamental difference lay in the fact that it enforced a 'non-Japanese national extermination policy' in the name of 'assimilation.'

The foremost aim of the Western European colonial policy was social-economic exploitation, whether it was a direct or indirect rule, and for the European colonialists, it was natural that the people of the colonized country should maintain their nationality. The colonialists took an indifferent attitude towards national cultural movements as long as they were not direct independence movements. However, the Japanese colonial policy did not stop at social and economic exploitation, but focused on creating a subordinate social class within their own empire by eradicating the non-Japanese nationality. With the slogan "integration of Chosun into Japan" the Japanese undertook a thorough and ruthless colonial slave education based on the assimilation policy. Yamamoto, the leading figure of the Japanese colonial policy, pointed out the fallacy of the Japanese policy: He stated that it would be best to permit autonomy to the Chosun State, and to maintain a relationship with a self-governing colony in the same way that England did with Canada, Australia and South Africa.

The reason for Japan's oppressive colonial rule lay in their motive to use Korea as the bridgehead and base of operations for the Japanese advance into the Asian continent. They considered Korea to be their military supply base and the object of economic exploitation as well as their advanced base. However, a more fundamental reason can be found in their attempt to higgledly govern a nation, which was superior in culture and tradition to their own. The Han people (Korean people) are a homogenous race with a common historical and cultural tradition, and they had a longer history and a more advanced culture than Japan at the time. Also, after the annexation the people constantly resisted the colonial rule, holding anti-Japanese movements such as the 'loyal soldier fighting (eunhyung tujaeng)' and the 1919 Independence Movement. There-
fore, the colonialists had to use a more oppressive policy. Aoyanaki, who wrote 'the Essay on Governing Chosun,' also wrote about why a military rule was inevitable. "When the Japanese Empire annexed Chosun ten years ago, the question of how to govern a nation with 2000 years of history and 15 million people came up, especially since [Japan] as a nation from a small island in the East Sea had no root in the culture of the continent, nor had the people a superior foundation as an ethnic group." In fact, at the time of the invasion social development in Korea had reached too advanced a level to become a colony.

This oppressive manner of colonial rule by the Japanese was evident in their policy to weaken the royal family. The colonialists simplified the King's norm and institutions, schemed to set up marriages of convenience with the Japanese Imperial family, and disregarded the traditions of the royal family, hence, Japanizing all ceremonies. Moreover, they destroyed the authority of King by building the colonial government building in the heart of the palace, which had been the symbol of sovereign power. Such destruction of symbols was carried out willfully all over the country, and in the later half of their colonial rule, they even attempted to build a new city in the historical city of Buyeo. The Japanese policy to eradicate the Han nationality continued even after the resistance of the 1919 Independence Movement when they changed to a so-called cultural rule. They maintained their basic militaristic rule, but their methods only became more cunning, such as implementing the so-called "divide and rule" method. By the time of their invasion of Manchuria, the cultural rule came to an end and their policy to eradicate the Korean nationality was reinforced while they switched over to their policy to exploit Korea to make it their military base. They employed more ruthless methods such as forcing the people to renounce their Korean names and adopt Japanese ones, and forcing them to worship at the Japanese shrine, as well as to become Japanese people.

This unique colonial policy of Japan and the consequent social, economic conditions directly affected the formation of the urban landscape in a negative way. It was most unfortunate that Korean cities had to go through such an unnatural process when the rest of the world was in the midst of modernism. Whatever the circumstances, Seoul and many other cities transformed into modern cities during this period. The next section will examine how the disguised urban planning, the manipulation of symbols to abase the authority of Korea and the deceptive colonial policy have led to the distortion of the urban landscape.
The manipulation of symbols, the transformation of the landscape axis and the construction of the colonial government building

Gyeongbokgung (palace) and the symbolic axis centering on it became the target of the Japanese policy to weaken the Chosun dynasty and destroy the national spirit. Gyeongbokgung already lost its dignity when it was chosen as the location for the Chosun Local Produce Exhibition (1915), which was held to show the achievements of the colonial government in the five years of their colonial rule. Under the pretext of building exhibition halls, many palace buildings were torn down and sold off to citizens, and Geunjeongjeoun, Gyotaejeon, Gyeonghoeru and others were used as display cases.²³ Also, the palace garden was crowded with people from all over the country (Figure 3.7). The colonial government stated that the purpose of the exhibition was to publicize the achievements of the five years of colonial rule, the promotion of industry and the promotion of export trade.²⁴ However, choosing to use Gyeongbokgung was clearly a willful act to defile the sovereign power.

With the construction of the colonial government building
(1916) the Japanese completely overpowered the palace. This building, which took ten years to build, was not only overpowering in size, but it also deliberately distorted the main landscape axis in the way it was set up. As mentioned in many other sources, the central dome of the colonial government building represented the crown of the Japanese Emperor, and the ground plan of the building showed the character 日, representing Japan. Mt. Bukak had the shape of the character 火, whereas the Gyeongseong bu building (the present city hall), which was completed in the same year, looked like the character 本. Therefore, when looking down the form above, one could clearly see the shape of the characters 大日本 (The Great Japan).25

On the day of the inauguration ceremony for the new colonial government building, the newspaper editorial was full of praise; "On this day when the cool breeze plays the music of joy and the clouds dance in the sky, this grandeur! This success!"26 The colonial government building, which was at the time the grandest in both size and appearance in the whole of Asia, was the central office governing the peninsula, and it completely covered the front of the palace.

It was also discovered that the setting of the central axis was distorted.27 The Gyeongbok palace was located on the four outer mountain axis connecting Bukhansan and Gwanaksan. In contrast, the colonial government building was turned aside about 3.5 degrees, so that it lies on the inner mountain axis of Namsan, although it did not line up completely with Bukhansan. In traditional geomancy and architecture the guardian mountain "jinsan" which protected the city in a wider sense, was more important than "jusan (major mountain)" (Figure 3.8). This was more clearly revealed in the process of removing the old official residence of the colonial government inside the Blue House (presidential residence) and building a park in its place. This was originally the place of the gecko, which guarded the palace in the Chosun dynasty. According to geomancy it was the part that corresponded to the head of the dragon, and therefore, a propitious site. Yet the official residence was built on this spot, which was along the four inner mountain axis that connected Bukhansan, the official residence, the colonial government building, the Gyeongseong bu building and Namsan. This arrangement was intended to destroy the spiritual energy of the capital city, which was built according to the strict geomantic theory, and furthermore to destroy the spiritual energy of Chosun.28 This can be seen as the symbolic manipulation aimed at subordinating the Korean spirit to Japan.

Before the completion of the colonial government building, the Japanese built the Chosun shinto shrine (the present botanical garden site 1918-1925) on the new Namsan axis that they had set up. By doing so, they made the entire northwestern foot of the moun-
tain, including Namsan, which had been the representative symbol in the Seoul skyline, a part of the new Chosun shinto shrine grounds. When Lee Taejo founded Chosun, he made Hanyang the capital and built the Mokmyuk ancestral shrine on Namsan, the very place which the Japanese had set as the site (approximately 166 acres) for the new Chosun shinto shrine (October 15th, 1925). The Mael Newspaper stated that the Chosun shinto shrine, which was built "with the intention of making the Emperor's people and the people of the new territory equal", was the epitome of grandeur standing in harmony with the beautiful scenery of Namsan. However, this was most likely an eyesore for the Koreans. Around this time the praying at the shinto shrine for Koreans became an issue and became compulsory. For the Koreans the shinto shrine became an object of fear, and they avoided going there. Consequently, after the Chosun shinto shrine was built, the Namsan park completely lost its function as a park.

Measures to abase the sovereign power can also be found in other places. Already in 1907 before the occupation, a museum, a botanical garden and a zoo were built inside the Changgyeonggung. Thereafter, a pond was made and cherry trees were planted, so that the palace became a park for the public. In April and March when the cherry blossoms were in bloom, 5000 people visited the place every day. The palace now debased to the status of a garden, hence, Changgyeongwon, continued to function as a place for amusement even after the liberation of Korea until the zoo was moved out to Gwacheon and the palace restored in the 1970s. The national facilities of the dynastic age were disappearing. For example, Wondudan, the place of worship, was removed and in its place a hotel was built (the present Chosun Hotel 1914). Also, Sajikdan (1922), Jangchungdan (1919), and Dukssung (1933) were made into parks, and a Japanese school was built in Gyeongheegung. The Japanese military headquarters in Chosun, located in Yongsan at the southern end of Namsan on the new central axis, was strategically located, so that it enabled the protection of the Japanese residential area as well as easily control the Seoul downtown area. The headquarters was used as a means to oppress the Korean citizens as well illustrated in the 1919 Independence Movement. The strategic value of this area remained even after the liberation and became the American military base of today. In 1929 the trade exhibition was held again in Gyeongbokgung, where the colonial government building was already built, causing severe damage to the palace. From 1935 Gyeongbokgung was open to the public, so that it was no longer a palace but a mere park.
Street improvement, City Planning Decree and the changes in the urban structure

Straight after the occupation the colonial government ordered the street improvement plan (1912), which became the basis for the remodeling and regulating of the urban district for 20 years until the Chosun City Planning Decree was declared. The context of the decree was rather simple: "When improving or widening the streets in an important urban district in the region, a description and plan of the project must be submitted and approval obtained. However, in the case of minor changes, this is not necessary." This was modeled after the Tokyo street improvement plan (1888) promulgated earlier, but there were a few differences between the two.

In the case of Japan, the street improvement plan was enacted to transform Tokyo into a modern city, whereas in Korea it was implemented as a means to justify the policy of colonial rule. Therefore, in Japan the project carried out operations related to public facilities for the citizens such as water supply and drainage. However, in Korea the operations were carried out almost completely to make roads. Also, whereas the source of the funds for the project was clearly prescribed in the case of Tokyo, the question of finances was not even mentioned in the case of Korea. Therefore, since the project was carried out coercively with no funds, it was met with a lot of conflict. In other words, the street improvement project was used as a means to make roads without paying much for the land, and furthermore, it was used as a means for the Japanese to secure landed property. In editorials at the time there appeared statements such as "streets were directly related to the communication of civilization," or that by building roads that stretched in all directions "we intend to develop Chosun." However, these were phrases that concealed the colonial policy of exploitation under the thin disguise of a street improvement plan. The fact that this project came up against considerable resistance from the Koreans is shown in the following sentence of the editorial: "The ignorant citizens do not understand the grand plan of the state and the claim that the state is taking control of their houses and land [...]. The [people] must abandon their suspicions for the grand public enterprise."

The street improvement project started in Seoul, and in the 17 years (1912-1929) 47 routes were improved. Among these there were exiting roads that were widened or improved, such as the stretch from Gwanghwamun to Hwangtohyeon Square (the present Sejongro intersection) and the street from Namdaemun to the Namdaemun bus stop. However, there were also routes that basically changed the structure of the city center, such as the route extending from Hwangtohyeon Square via the Daehanmun Square (the present
City Hall Square) to Namdaemun, as well as the stretch from Gwanghwamun to Ehwadong, going past Angukdong Square, Donhwamun-dong, the colonial government hospital (the present Seoul National University hospital), Ehwadong, which cut across Changdukgung and Jongmyo (Figure 3.9). Most significantly, they widened the road from Gwanghwamun, where the colonial government building was, to Daehanmun Square, where the Gyeonggeongbu building was, and connected it directly to Yongsan where the Japanese military headquarters was. This was an act to thwart King Gojong's attempt to build the Daehan Imperial Government centered around Gyeongungung (presently Duksugung). At the same time it can be interpreted as their intention to remove the base and
tradition of the anti-Japanese demonstrations that were held frequently at the square in front of Saehanmun.\textsuperscript{37} Whatever the reason, these roads were improved according to the street improvement standards of Tokyo. Sidewalks were built on either side of the road and a separate lane was made in the middle of the road for horse-drawn carriages. In sections where there was a lot of traffic, the roads were paved with asphalt. Although there were no buildings nearby, the appearance of the roads would have looked similar to those of today. Through these changes the basic T-shaped road system and the irregularly patterned streets of Gyeongseong, which had formed in keeping with the natural landscape, changed to a grid pattern. This was the first and last street improvement project in Gyeongseong, and the changes thereafter took place after the Korean War during the restoration work.\textsuperscript{38}

Another characteristic change in the urban landscape that must be pointed out took place as a result of the city walls being torn down. The Japanese regime destroyed traditional buildings of cultural value and took whatever cultural properties they could to Japan, but the tearing down of the city walls had the most influence in changing the city. As mentioned before, this act of destruction began before the colonization when the street improvement work had not yet fully started. The removal of the beautiful city wall in Seoul began when the electric tramway was built (1898). After the pre-colonial rule (1905) it gained full momentum, until the entire city wall was removed, leaving only Namdaemun, Dongdaemun and some parts of the wall on the skirts of the mountain, for which they could not find an excuse to destroy. The fortress walls in the provincial towns were also removed. The fortress wall in Jeonju and Daegu were torn down a little earlier than in Seoul (1906). Fortunately, Pungnapmun in Jeonju was preserved, so that it has become an important feature in the landscape of Jeonju today. However, in Daegu the wall and all the gates were completely removed. This is different from the barbaric act of the Turkish who utterly destroyed the ancient Greek cultural relics when they conquered the culturally more advanced Greece. At the time the colonial government gave practical reasons for removing the city wall, namely that it no longer had a practical purpose and that it caused inconvenience for traffic.\textsuperscript{39} However, it must also be noted that the destruction of traditional, cultural elements of the colonized people was an important motive. The "soonseonggnori", which had been a long tradition in Hanyang, continued even after the removal of the city wall, even to the degree that the "much longed-for soonseong walk"\textsuperscript{40} was written about in the newspaper as the top news.

The Chosun City Planning Decree that was proclaimed near the end of the colonial period (1934) was the first modern type of
urban planning enactment that affected the landscape of Seoul and also other cities in Korea. There were of course all kinds of residential area projects and also the street improvement plan. In some areas of Seoul the building regulation bylaw was applied (1913), but the Chosun City Planning Decree was the first full-scale legal system. This law had combined the urban planning law and urban building law, which were enforced in Japan at the time. According to the colonial government, this decree entailed planning for urban districts, development control and land adjustment, and it "aimed to facilitate urban development, contribute to the promotion of social welfare of the citizens and develop the culture and industry of Chosun."[41]

However, this law was different from that of the Japanese in intention and purpose from its very conception. It was in fact constituted with the purpose of making the Korean peninsula the continental military base for the East Asian War, which Japan was waging.[42] There was in fact a need for an urban planning law from the early 1920s when the city began to develop in a disorderly manner.[43] However, when the real estate price soared in the new city, Najin, as a result of the founding of the Manchurian State after the Manchurian Incident, the colonial government authorities put together and proclaimed this decree in a hurry.[44] This was in order to carry out the land adjustment project, as a means to procure land without having to pay for it. Therefore, while the urban planning law in Japan was targeted at existing cities, the Chosun City Planning Decree focused more on the development of new urban districts rather than on improving the already existing urban districts. The street improvement project in the early colonial period was intended to remodel the existing urban districts and, hence, had contributed greatly to changing the landscape and the central road network of many cities. On the other hand, the City Planning Decree, which aimed at extending the boundary of the city, focused on increasing factory sites and residential areas. Therefore, it did not have as much influence on the landscape of the urban center. However, this law was maintained until the urban planning law and building code were separated by the military government after the 5.16 coup d’etat (1962). Therefore, it affected the development of new urban districts and residential areas of the rapidly expanding cities like Seoul even after the liberation.

The formation of the dual commercial streetscape

Commercial streets with a modern appearance started to form in Korea at the time the ports were opened in the foreign quarter in Busan and Incheon. In Busan, for example, a Japanese quarter was
formed in the present day central district of Gwangbokdong area centered around the consulate building. Surrounding it were the consulate building, the police station, bank, hospital, the business conference hall and the telegraphic office, beyond which the shopping street was located. In Incheon three foreign quarters were formed in the Freedom Park area, around which a commercial street similar to the one in Busan was built. In many inland cities new streets were built centered around the railway stations that were newly established, and these naturally developed into commercial streets. By the end of the colonial period when the colonial policy had established itself and commerce had developed, streets with a modern look and modern buildings appeared.

The building regulation bylaw (1913) and the Chosun City Planning Decree (1934) were proclaimed right after the street improvement. Among these the law related to development control played an important role in forming modern commercial streets. The regulation bylaw prescribed what is referred to nowadays as lot coverage, building line, building materials, design control and prevention of disasters. The City Planning Decree focused more on new projects, but it had more detailed prescriptions than the regulation bylaw such as height limits based on land use and street width, so that it directly affected the appearance of the streets. Through such regulation "the streets that were filled with garbage, and looked no different from a toilet" and "the uneven-looking houses" transformed to take on a modern appearance, albeit through enforced

Figure 3.10
The Japanese street, Monmachi

Kyu-Mek Lee
In many cities these new commercial districts were where the Japanese carried out their business. The districts where the Koreans set up their businesses were either connected to the Japanese district or they developed independently, so that dual-structured commercial streets were formed in the same city. In the Japanese districts imposing buildings were built on the streets, and the Japanese residential areas were invested in and developed, so as to differentiate them from the streets resided by Koreans (Figure 3.10). This phenomenon was even more visible in Seoul. Honmachi (Chungmuro area) was the Japanese street, and Jongro was the Korean street. At the beginning of the annexation Jingogae (the present Chungmuro) was the central Japanese district that led to the other Japanese quarters in front and behind Namdaemun, Hoehyeondong, Namsan, Myundong, Euljiro. This Honmachi area was as developed as the cities in Japan. In contrast, in Jongro, which was the commercial center of the Koreans from the early Chosun dynasty, two-storied Korean-style shops were built in the late 19th century even before the Japanese occupation, forming a unique streetscape that combined the Korean and Western style. A Japanese journalist wrote his impression of the two streets when he visited Seoul:

"Honmachi is in one corner of Gyeongsong, but it is so lively and peaceful. All the houses are two or three stories high. There are no low houses like the ones in Jongro. There is an abundance of merchandise and all kinds of people, and the magnificence quite astounded my eyes. In contrast, Jongro, though it is in the heart of the city, only has old-fashioned Chosun houses, which are old and worn out and so low that a tall man can hardly stand up straight without his head touching the ceiling. The poor conditions of the buildings are probably a good indication of the quality of the merchandise they sell. The goods made by the Chosun people are ramie cloth and white cotton broadcloth. Apart from these, most of the merchandise were imported goods."

Although the Jongro street seemed paltry in the eyes of the Japanese, the two-storied Korean-style shops, which predominated the Jongro street, are worthy of attention. These were built by wealthy merchants in keeping with the new road width, when the disorderly 'gaga' in Jongro were removed as part of the street improvement project (1896). They came about out of a need for new functions following economic change, the overcoming of social convention, the development of architectural technique and the recognition of the need to utilize vertical space. At first there were attempts to give the building a traditional look by building a balcony
that imitated the traditional towered building and attaching decorative eaves on the corners. However, between 1920 and 1935, the conservative tendency of the conventional style was overcome, and more importance was placed on use and functionality. With the use of new building materials such as cement, paint and glass, the appearance of the buildings started to change. Later on bricks were also used. This was the result of the autogenous development process of Korean architecture.\textsuperscript{50} This can be seen as a phenomenon of the people accepting, inheriting and developing the traditional architecture. Unfortunately, however, it was not able to develop independently because of the historical circumstances of being subordinate to Japan and because of the influence of modernism.

The two disparate-looking streets changed around 1926. One of the reasons was the abolishment of the Chosun Company Decree (1920), which enabled the Japanese to set up a company without permission from the colonial government. As a result, the increasing Japanese investment in Korea created the need for high-rise office buildings. Also, the influence of the modern architecture movement that started around 1920 in Japan due to the succession school movement and the appearance of American-style buildings led to the modernist architecture in Korea though to a small degree.\textsuperscript{52}

The Gyeongseong Electricity Company building (the former Korea Electricity Company Headquarters building 1929) and Samwol Department Store (former Shinsaegae Department Store, the present Jeil Bank 1930), which were the first American-style buildings,
are not modernist but more decorative and transitional in style. However, from the mid-1930s internationalist or rationalist architecture started to appear. Scores of shop buildings appeared near the Japanese business area and the foreign quarter such as Namdaemun and Taepyongro, as well as Chungmuro, Gwanghwamun and Jongro. The 1930s can be seen as the period when the central streets of Seoul were formed (Figure 3.11). Hwashin Store (1937), Jeongiaok Department Store (the present Midop 1939), Chosun Building (former Bando Hotel 1938) were buildings, which brought about an enormous change in the urban landscape. The Hwashin Company building (present Jongro Tower), which has now been removed with the widening of the street, was particularly impressive and became a landmark. Thus, the streets in the heart of Seoul including Chungmuro and Jongro changed to a Western-style modern urban landscape.

Together with Jingugae and Chungmuro, Myeongdong was a mainly Japanese district with Japanese stores. However, after the 1930s Myeongdong became a cultural street and a place where Chosun literary men and artists gathered. It is also famous for the legendary story of "Lee Bong Gu, the Count of Myeongdong". From around 1927 modern coffee shops (‘dabang’) started to appear in Myeongdong, and thereafter also in Jongro. There were so many coffee shops in Myeongdong at the time that Myeongdong could even be called the street of coffee shops. ‘Venus’ in Insadong, ‘Nakrang’ in Sogongdong, and ‘Mona Lisa’ in Chungmuro were the famous coffee shops that were frequented by artists. Myeongdong also became a movie street, when movies were introduced to Korea. The place where Na Woon Kyu (pennname Chunsa) made his films was in an office in Myeongdong, called Chosun Kinema. Jongro also developed immensely, and when the Koreans started opening up big stores such as the Hwashin Company, designed by the Korean architect, Park Kil Yong, the Japanese did all they could to find a way into Jongro.

In short, in the process of developing into a colonial city, Chungmuro had become a Japanese district, whereas Jongro had from the past been a predominantly Korean district, which resulted in a dual-structured streetscape. The downtown area of Seoul maintained this structure until it changed into a modern commercial district through the influx of modernization and westernization.

The formation of a dual residential landscape
The appearance of the traditional residential area, which consisted mostly of ‘hanok’ (Korean-style houses), started to change after the opening of the port, when Japanese and other foreign quarters were
formed. In Incheon the Sechang Trading Company residence was the first western-style brick building (1884), and in Busan a thousand odd Japanese-style houses were built. In Seoul there were a few Western-style houses in Myeondong, Jeongdong and Namsan. After the invasion Japanese-style buildings spread rapidly all over the foot of Namsan and Jingogae. In fortress cities like Daegu and Jeonju the Japanese started to build new residential districts outside the city wall, whereas the Koreans resided within the city wall or in existing urban districts. In the mid-colonial period the Japanese quarter expanded into the city center through the land readjustment project. The Japanese quarter, which was built according to a plan, had a grid pattern. The Korean residential area, on the other hand, which had formed naturally, had an irregular pattern. The Japanese and Korean residential areas were distinguished further due to the difference in living standard. The Japanese people living in the city made up the upper class, and the Koreans made up the lower class. As a result the residential landscape showed a bipolar appearance.

In Seoul, where there was a division in residential districts according to social class from the beginning of the Chosun dynasty, this phenomenon was more distinct. When the Japanese legation was built at the foot of Namsan after the opening of the port, the Japanese started to rent or buy houses in the Jingogae area. Thereafter, they started to buy vacant land and build houses, gradually forming a Japanese community. Unlike the dirty streets in the rest of the city, the Japanese residential area in Jingogae was clean and had convenience facilities like coffee shops, theatres and stores. After the occupation many commercial buildings and official residences were built not only in the Japanese quarter but also on major streets of Seoul. The Japanese tiles, slate roofs, zinc roofs, and void wall, characteristic of the Japanese residential landscape, started to appear, and from the 1920s Japanese style buildings increased rapidly all over the city.

Since the Japanese-style houses did not suit the Koreans, the Korean-style houses adopted the functional aspect of the Western-style houses and changed to houses that were a compromise between the Western and Korean styles. In the 1930s this became the U-shaped urban 'hanok', centered around a court yard. These were built en masse, and they can still be seen in Bongikdong and Gahoe-dong areas. These 'hanok' houses were very different from the Japanese-style houses.

In the 1920s Seoul started to experience a serious housing shortage not only because of the houses being pulled down as a result of the street improvement project, but also because of the influx of farmers and others who had lost their land to the Japanese. Due to the increase in Japanese settlers and the influx of the farming popula-
tion, who had been uprooted due to the exploitation policy, in many major cities including Seoul, Busan and Pyeongyang, deficient residential areas came about, forming the so-called 'mud hut settlement'. The farming people who left the countryside came to the cities, but they could not afford to buy a house in the city. However, since the colonial authority did not provide the necessary facilities to accommodate them, they had no choice but to build mud huts on vacant lands around the city. This is how deficient residential areas first came about in Korea.

The mud huts were built by making an 'ondol' floor on the dug-out earth and using straw mats to make roofs and doors. These people built and lived in such primitive huts on riverbanks, under bridges and forests without permission (Figure 3.12). Their dwellings and their lives were indeed squalid. The press described the situation as an indescribably wretched spectacle or "a terrible phenomenon where many of the citizens live half of their lives out in the open." The people who lived in these mud huts were not limited to a certain class, isolated from Chosun society. This was a lifestyle that was common to the Chosun people in general. Such mud hut settlements continued to increase, so that by the middle of the colonial period (1930) there were as many as 4,300 such houses in Seoul alone. The civilization of the Japanese district in the city created a sharp contrast with the barbarism of the Korean people's residential areas, again forming a dual landscape.

The concentration of population in the city and the housing shortage brought about changes in the housing supply and construction. After the 1920s a large-scale construction of houses began, and housing construction finally separated into suppliers and demanders, forming a housing market, though only on a small scale. This is when the house builders first appeared. As a solution to the housing shortage the colonial government authorities increased the public housing and promoted the organization of housing co-operatives. As a political means to solve the housing problem, the Chosun Housing Corporation was finally established (1941), and a public housing system was introduced. The Housing Corporation bought land in eight districts including Sangdodong, Daeangdong and Donamdong, and based on the land readjustment method the Corporation developed three public housing estates as their first stage. These were all single house estates. Sangdo housing estate was developed while keeping the hilly district where there was a roundabout (presently the three-way road in front of Soongsil University). Dorim housing estate had grid form streets with convenience facilities including a park, hospital, barbershop, and stores. In the Dae-

Figure 3.12
Drawings of the mud huts showing people's lifestyle in a report for an investigation carried out by the Gyeongseong University sanitation inquiry section (Sketched by one of the writers of the report), 1942.
concept, which did not have the appearance of either the Japanese or the Korea-style landscape. It was a completely new residential landscape that remained until after the liberation of Korea and even became a model for the single house estate in other districts like Hwangakdong in 1960.

EFFORTS TO DISCARD THE VESTIGES OF JAPANESE IMPERIALISM

The colonial government building, which stood in the main palace of Gyeongbokgung and thereby destroyed the symbolic axis of Seoul, was called Jungangcheong after the liberation and, as a government building, played a central role in Korean politics. It was left in ruins after the Korean War, and it was restored and used again after the 5.16 coup d'état. In 1986 it was remodeled into a national museum. However, less than ten years later the building was torn down despite much controversy as part of the 50th Independence Day event to put an end to the Japanese Imperial past. The steeple was taken down first under the pretext of "removing the cover that fettered the national spirit."660 However, the opinions of those including the author who opposed the idea of pulling down the building for reasons of preserving the historical urban landscape, were reduced to a minority view: Then president Kim Young Sam made a political decision to have the building removed without proper consideration of public opinions. The Chosun Shinto shrine on Namsan and also other shrines all over the country were torn down right after the liberation. The Japanese-style houses and residential areas, which did not agree with the Korean lifestyle, slowly disappeared. Despite the ruthless assimilation policy of the Japanese, Koreans did not assimilate nor did they willingly imitate the Japanese lifestyle.

However, the city street network, the national road network and the railway network system, which were built during the colonial period for reasons of effective governing of the colony, formed the basis of Korea's traffic system even after the restoration of Korea's independence. Also, the commercial and public buildings and the downtown streetscape, which underwent the process of modernization, still remain as the architectural trend of a period, though they changed partially after the liberation due to American and Western European modernist influence. These are the remnants of the Japanese colonial rule that we have kept.

The half-century, starting from the enlightenment period at the end of the 19th century through the 36 years of colonial period, was
also a time in Western Europe, when the modern idea of urban planning was applied. The garden city that E. Howard presented (1898), as an effort to realize an ideal city, had an influence on the construction of many new towns as well as on the urban planning of existing cities (Figure 3.13). In Frankfurt, Germany, the Adidas law came into effect (1902), contributing to the development of urban planning. In England the building code and urban planning law were established (1909), influencing not only England but also Japan and other countries. In the early 20th century City Beautiful Movement (1900-1910) started in America, which contributed greatly to the aesthetic modeling of cities and the formation of a monumental urban landscape. In architecture, too, modernism was entering its golden age, and the monumental buildings of the early modernists and their successors, such as Le Corbusier, W. Gropius, Mies van der Rohe started to appear in the cities. Isolated from such trends of the world, the Korean cities transformed through the urban planning that was used by the Japanese as a means to exploit and control its colony. Through the oppressive colonial policy a distorted symbolic space and a dual-structured streetscape were formed in Korean cities.

The tearing down of the Chosun colonial government building cannot change the urban landscape already transformed by the Japanese nor can it remove the remnants of the Japanese imperialism. While keeping in mind the independent and autonomous suggestions of the pioneers in the past, we need to cast off the colonialism and develop a landscape model of our own. The urban policy in the time of Yeongjo and Jeongjo, which was the most prosperous period of the Chosun dynasty, was very active, and before the annexation Korea had the opportunity to import and accept the Western practices in architecture and urban planning. As mentioned before, several reformist scholars as well as King Kojong himself attempted to remodel the city autonomously and independently, and the Hanseong Mayor, Lee Chae Yeon carried out a urban landscape remodeling project. It must be emphasized that if Korea had been able to maintain its political independence and cultural autonomy, so that the architecture and urban planning could follow a natural course of development, the Korean cities would look very different today.
The Urban Landscape in the Half-Century after the Liberation

THE FORMATIVE ELEMENTS OF TODAY'S URBAN LANDSCAPE

The modern landscape of today's Korean cities can be seen as a result of the process of modernization that started with the opening of the ports at the end of the 19th century and continued through the Japanese colonial period in the first half of the 20th century. However, as mentioned before, modernization on a more fundamental socio-cultural level started earlier in the Chosun dynasty in the time of King Jeongjo by the positive school and by the Utopian thought of Park Ji Won and Hur Kyun. This chapter will examine the changes in the urban landscape and their causes in the second half of the 20th century since the liberation of Korea, which have greatly influenced the appearance of the city that we see today. There are raw data on individual buildings as well as on urban development and planning, which can help in the examination of the changed urban landscape. However, there are no books that have compiled these data, and there has not been sufficient research carried out to give these data a unified perspective. Furthermore, there are even fewer references based on a perspective of urban landscape that looks at architecture and cities together. Despite the lack of materials, an examination of the changes in the landscape in the 50 years since the liberation will be attempted based on the fragmentary data available. As reference for the 1960s and 1970s, Space (founded in 1967) was used, an architectural professional magazine still being published today. For the decades following, such magazines as Ggyumim (founded in 1976), C3 Korea (founded in 1984, formerly Architecture and the Environment), Plus (founded in 1986), Archiworld (founded in 1994) and Ideal Architecture (founded in 1992) were used. Apart from these professional architecture magazines, newspapers and other related literature were used. Photos and other factual data have been omitted, but a few drawings, which illustrate well the city’s image, have been included as examples.

The process of modernization based on capitalism was the factor that had the greatest influence in forming the modern cities of
Korea. However, because Korean society went through the initial stage of modernization through the oppressive measure of an outside force, modernization did not go through the proper stages of development such as in the development process of Western Capitalism, where Christianity formed the basis and the ethics of capital was rationalized. This tendency continued after the liberation, so that one could even say that the modernization of Korea consisted in basically adopting the foreign model. The Korean urban society did not experience civic revolutions or an industrial revolution in its history like the Western Europeans, and neither was there a fostering of a middle class that would initiate such revolutions. The Confucian culture, which had sustained the society in the Chosun dynasty, was rejected as the logic of an old order, but there were no other ethics to take its place. Only acts based on instinct and selfish individualism prevailed. There was no social class, nor a particular group to lead the urban society.\textsuperscript{60} Korean capitalism was not checked by either the Korean traditional morality of Confucianism or Buddhism or by the modern democratic spirit embodied in Western thought. It was a vicious and materialistic kind. This consequently brought about the so-called merchant capitalism, which conditioned immoral measures to gain the most profit from the capital invested.

Such a social and historical background did not allow Korean urban planning and architecture to grow autonomously. Just as modernization was forced on by the Japanese colonial rule, urban planning and architecture in Korea began with the importation of foreign systems and culture. While accepting the techniques of modernism, Korea disregarded the reformist and critical tendency that modernism had given birth to. As a result, urban planning in Korea had belittled itself to the minor role of managing the already existing order. It failed to achieve productivity in carrying out practical affairs, and in the area of research it failed to set unbiased urban planning projects that adhere to certain standards and principles. Consequently, urban planners had no choice but to follow the policies of the administrative authorities and the government. The basis of planning theory employed in modern Western Europe lay in the pursuit of rationality based on empiricism. Its methodology was scientific planning based on instrumental rationality or positivistic methodology, and impartiality was the common value. In Korea, more focus was placed on external phenomenon than the analysis of the relevancy of social structure. Therefore, focus was placed on solving existing problems, and the complexity of reality was simplified logically. Therefore, although there were many great planners with theoretical knowledge, urban planning became a servant to authority. Also, Korean architecture was merely "a characterless and uncritical functionalism and foreign architecture,"\textsuperscript{60} so that it never went
through the process of understanding and overcoming the essence of
Western architecture, the effects of which have lasted to this day.

THE CHANGES IN THE URBAN LANDSCAPE AND THEIRCAUSES

A look into the landscape of Seoul

Compared to the changes in the landscape of Seoul that have been
examined so far from the end of the Chosun dynasty through the
colonial period, the changes in the 50 years since the liberation were
astronomical in scale and volume. A mononuclear city north of the
Han River changed into a huge city of international scale on the
north and south side of the river, and new cities were built in its
vicinity. Also, the high-rise commercial buildings and apartments
changed Seoul into a three-dimensional city.

As mentioned previously, the socio-cultural circumstances after
the liberation and the application process of the urban planning and
architectural theory directly affected the formation of the urban
landscape. As will be examined in the next section, Korean cities did
not develop into sound commercial cities but consuming cities with
a centrally-focused development. Due to the overly rapid develop-
ment of the cities, traditional and Western elements coexisted in dis-
cord, and imitations of various different Western architectural styles
were rampant.

Just as Relph (1989) stated, landscape is created by idea and
construction. The 50 years since the liberation, especially the 30
years in the late 20th century, were a period of unprecedented urban
construction. In this period of rapid change and expansion, what
was the basis on which the structure of Seoul and the streetscape
were built, and what were the factors that caused the changes? How
did Western Modernism and Postmodernism affect the urban
landscape of Seoul? What efforts have been made to establish our
own way of thinking and planning? These questions must be dis-
cussed while examining the urban landscape in the past half century,
and thereby search for the true character of Seoul’s urban landscape.

Changes in the structure and the scale of the city:
the limits of western modernism

With the rapid modernization in the 1960s the Chosun City Plan-
ning Decree of the colonial period became unsuitable, and, there-
fore, a new urban planning law and building law (1962) were established and proclaimed. Also, the land readjustment law (1966) was separated from the urban planning law. In the latter half of the 1960s the city expanded horizontally and vertically, emerging from an agricultural country and entering an age of urbanization. The first 5-year economic development plan (1962) that was launched at this time marked the beginning of the rapid economic growth that continued until just before the financial crisis in 1997. Through such rapid growth, the Korean cities underwent the greatest change structurally and in scale in Korean history. The construction of the large-scale industrial complexes such as in Ulsan, the building of highways, the establishing of Development Restriction Zones (known otherwise as greenbelt, 1971), the establishment of the mass production system as a solution to the housing problem based on the housing construction promotion act (1972) are examples of development and construction in the 50 years since the liberation of Korea.

In Seoul and other major cities, not only the already existing urban districts but also the vast undeveloped areas were developed. For example, at the end of the 1960s (1967) Kim Hyun Ok, the Mayor of Seoul, intended to develop all the undeveloped areas and green space, and even set 'construction' as the goal of the city government. Such incomprehensible logic abounded in those years. The enormous Saen shopping arcade in the heart of the northern part of the city, which is a source of headache even until now, was criticized even then as showing a lack of keen perception of the city. The 3.1. elevated road in Cheonggyecheon was pointed out as "a mistake and a vulgar display that impaired the dignity of the capital." The collapse of Wau Apartment (April 1970), which was built on top of a mountain, was an incident that was symbolic of the failure of hasty development. At the time foreigners criticized severely that "it was a terrible incident that was caused by the imbalance resulting from economic development." New development plans led to tremendous land speculation. The land value in newly developed areas rose higher than the already developed areas, so that profit from real-estate investment was higher than that from production industry investment. Such ruthless capital logic and commercialism became the leading logic in our lives.

Development that focused on quantity and size, which ignored or obliterated the existing environment, destroyed the diversity, the historicity and the ecological complexity of the urban environment, which had formed over many years. This history of development and construction destroyed the historical environment built over thousands of years. Because of the quantity-oriented construction trend, which demanded hasty production, the Korean architects were criticized as "having the most inferior ability of design in histo-
and the situation reaches "the dissolution of aesthetic harmony based on the unique consciousness of the urban society."76

Appearance-wise, the cities became modernized and grew in scale, but the city structure, built rapidly by mass production according to a foreign theory, made the whole urban environment anomalous and exclusive. As a result, cities became a bleak environment, alien to the Korean sentiment. The modernist method of strictly divided land use produced spaces that were unrelated to the life pattern of the people and their neighbors and brought about adverse functions that were isolated from real life. Also, the use of isolated lands led to unnecessary traffic and congestion. Thus, the alienation and loss of one's sense of place in cities put a lot of emotional and mental pressure on people.

The issue of architectural style: The acceptance of tradition and modern style

Urban landscape is a ground pattern formed by structure, three-dimensional shapes and space. Just as the form and size of individual trees make up the core of the natural landscape, urban landscape is closely related to the style and shape of individual buildings. Korean architecture, which became modernized and westernized by indirect exposure to Western civilization through the Japanese rule, faced the task of overcoming the vestige of the past, namely, the colonial character. Colonial character in architectural style refers to heteronomy, dependency and adaptability. The task of overcoming colonialism continued after the liberation from Japanese rule because Korea immediately came under American rule, so that Korean architecture could not develop its own style. The modern system that the Japanese established and the attitude of America-worship made a strange combination that became the social structure of South Korea.73

Under these circumstances Korean architecture faced the problem of inheriting the Korean tradition versus accepting foreign architecture. Also, it struggled in its search for the orthodoxy of modern Korean architecture. The Japanese colonial rule might deserve a positive evaluation for the contribution it has made to the development of the country. However, when considering that modernization is not simply an increase in production, but an opportunity to break away from convention and form new rules and values, colonial rule certainly contains a negative aspect, for it failed to provide this opportunity.

The process of development of modern Korean architecture shows that the antagonistic relationship between Korean traditional architecture and foreign architecture was not resolved, and the two
were not developed into a unified style. Instead, the traditional Korean style was fused into the foreign architecture or the foreign traditional architecture was simply adopted. This is because rather than a process of active reception of the true nature of modern architecture and an attempt to overcome it, there was only a superficial imitation of it.⁷⁰ From the late 1960s to the 1970s, based on the economic development, an attempt was made to go beyond simply adopting the modern architecture. With the increase in large-scale and multiple projects, and with the appearance of young architects, the perception of architecture changed. Efforts were made to search for the geographical and climatic characteristic. In the architecture of the late 1960s, the issue of tradition was particularly important in the discussion of Korean architectural style.

The debate on tradition started with the National Folk Museum (1968), which was a complete imitation. Kang Bong Jin, who had entered a competition, designed the building, but it was a thorough reproduction of Palcangeon in Beopjul Temple and nine other traditional buildings, but built with concrete. At the time this building received harsh criticism, such as being called a "simple form of revivalism," "anachronistic act," "the appearance of a monster in the 20th century Seoul," and "a gentleman with a tie wears a 'gat' (a Korean hat made of bamboo)."⁷⁷ A more full-scale debate over architectural style started with the problem of Buyeo Museum (1969), designed by Kim Su Geun, "resembling a Japanese Shinto shrine," which became a social issue. After much debate among architects and other cultural experts, it was concluded that the building did exude a Japanese style but that it was not an exact imitation. However, this was not a conclusion based on proper architectural criticism and formal analysis. Several public buildings, including the ones just mentioned, became the subject of criticism every time there was a debate over the issue of tradition. In a survey, the French embassy in Jeongdong, designed by Kim Jung Up in the early 1960s, stood out as an excellent building that had inherited the Korean tradition.⁷⁸ However, a climate for serious architectural criticism to find the right answer was not established, and the issue of inheriting the Korean tradition was left as an incomplete chapter.

The parliament building in Yeouido (1968-1975), which was supposedly built using all the knowledge, energy and resources available, also brought about the debate on architectural tradition. Despite the enormous effort made by the architecture community and despite the monumental value as a government office building, it received harsh criticism because it lacked a clear formative characteristic. It was criticized as "a deformity of cross-breeding, a stage setting of unknown nationality, a trial and error of cultural history,"⁷⁹ and "a monster in the sunset."⁸⁰ This is due to the fact that the
design concept of the parliament building did not emerge from the creativity of a single architect but from the collaborative design of many architects. The several different styles that were the outcome of heterogeneous minds were combined without necessary connections. Buildings that were designed with an awareness of tradition continued to appear. For example, the Sejong Cultural Center (1974-1978) was built in Gwanghwamun on the central street axis in Seoul, and thereafter the Seoul Arts Center (1988-1993) was built on the Nambu circular road, despite the argument that the location was problematic. These can be seen as the 'government-manufactured architectural style,' which represents the architectural culture of the military rule since the Park Jung Hee regime.

With the grand auditorium in Pyeongyang, North Korea in mind, the Sejong Cultural Center, designed by Eom Deok Mun, placed an excessive number of seats (4,240 seats) in order to hold the National Conference for Unification. The building was built with an obvious intention of incorporating a traditional element, as can be seen in the use of Korean patterns, but the effort stopped at merely generating details, so that it failed to express the general value system as a cultural symbol of that age. It was evaluated as a traditional architecture that lacked creativity. However, this building is in Gwanghwamun, a representative street of Korea, so that it is still considered the most impressive building for foreigners. In recent years the building was spruced up and night lighting was installed to improve the night view. Whether we like it or not, the building has its worth as an example of modernization of Korean traditional style (Figure 3.14).

The Seoul Arts Center, which can be said to be the greatest achievement of the military government, was designed by Kim Seok
Cheol, who won the nominated architects competition. However, the judgment was not made public as had been promised, and the announcement of the prize-winning work was delayed. However, the final draft that had been decided on was different from the draft that the contest winner had submitted. Many parts were redesigned into a simple form that was an imitation of a 'satga' (a Korean bamboo hat) and a fan, so that it left a bitter feeling that the epoch of Korean architecture had come to an end. These were all the products of a rigid military government and can be interpreted as reflecting the nationalistic spirit, which, by returning to a fossilized tradition, only retrogrades to revivalism. It could be said that tradition was used as a stepping-stone to justify an immoral government, or used as an ideological means to control the void that cannot be fulfilled through material things in this modern age. In this way, the issue of tradition and its modern reception is becoming increasingly difficult.

These buildings that were built as symbols of our own age almost all occupy major locations in the city and together with the commercial buildings of international style play an important role of giving character to the urban landscape. Around the 1980s efforts to break away from the uniformity of international style started to bear fruit. Importance was attached to character and diversity, and buildings that had discarded regionalism and endemicism started to appear. However, the problem of tradition versus modernity, and the West versus the East in the architectural style of monumental or public buildings remain unresolved.

The changes in the commercial area: High-rise buildings and a sense of identity

The changes in the urban landscape since the liberation, especially the changes in the skyline, were caused by the appearance of high-rise buildings. It was at the end of the 1960s when the 22-storied government office building was built in Gwanghwamun (1967-1970), that the high-rise buildings became an issue in the architectural community. Although Na Sang Jin initially won the design contest, the Korean government authorities did not have faith in the Korean architect's design and commissioned foreign architects (RA & E) for the design of the building. The 18-storied Chosun Hotel building, which appeared immediately thereafter, was redesigned by a foreigner (W.B. Tabler) in the final stage of the schematic design, because the company that had granted the loan to the hotel said that they could not trust the design of a Korean. The Samil building (31 storied building), a glass skyscraper that was designed by Kim Jung Up, became a symbol of high-rise architecture and became a repre-
sentative landmark in the northern part of Seoul. Although this building was designed by a Korean architect, the design was merely a imitation of the Seagram building in New York, designed by Mies van der Rohe, the originator of the glass skyscraper. In this way Korean high-rise buildings were either designed by foreigners, or they were merely imitations of foreign buildings. Therefore, the transformation into a modern city did not go through necessary stages of development. The hasty transition led to the loss of a sense of identity, so that in the eyes of a poet, for example, the image of the city was one of "(the Korean) sentiment taken hostage or the collapse of aesthetics."  

The Daehan Insurance 63 building (1979-1985), which was the highest building in all of Asia when it was built in the early 1980s (Figure 3.15), was also designed in collaboration with a foreign architect (Park Chun Myung and SOM). Also, since commercialism was the motivating force behind the construction of these buildings, there was no rational feasibility study carried out to examine the appropriateness of the building in terms of its urban functions and its adverse effects in relation to the surrounding urban environment. The LG twin tower (1983-87) in Yeouido and Gyobo building (1978-83) in Gwanghwamun, which appeared in the urban landscape around the same time, were also designed and built in the same way. The Gyobo building which stands on the symbolic axis at the intersection of Sejongro and Jongro, was designed by an American architect, C. Pelli, but it was a copy of the American embassy in

Figure 3.15
A postcard Picture of the Yeouido 63 building, one of the representative scenes of Seoul
Figure 3.16
Gyobo building in Gwanghwamun, an imitation work of a Japanese building

Tokyo, which he had designed with a particularly Japanese-style, formative characteristic. This was, therefore, not only an imitation of a foreign building, but the fact that it was an imitation of a Japanese building brought about an ideological issue (Figure 3.16). Furthermore, the owner of this building has made the building the symbol of Gyobo, and has been building the exact same structure all over the country, only in a reduced size, without considering the context of its location. This is an imitation of an imitation, most definitely an indecent act of design. Thus, the high-rise buildings in Seoul are the products of a foreign-made revivalism, and they adorn the urban landscape with a skyline of indistinguishable nationality.

On Teheranno in the southern district of Seoul, dozens of high-rise buildings were built, and the street, together with its foreign name, is forming a new image of the streetscape. It is quickly becoming a new downtown area of Seoul and has earned the name of "Wall street of Korea" and "the best office street in Seoul." If Jongro had been the representative street in the Chosun dynasty as Myeongdong had been in the colonial period, then Teheranno can be said to be the most characteristic street that was built since the liberation. The trade center building (1987), a mixed-use development complex, which was again a Korean-Japanese collaborative work (Nikensekei, Yoon Seung Joong and Kim Jeong Cheol), stands on one end of Teheranno. This building is representative of the 1980s in many respects and received the review as "a monumental existence that celebrates the past 20 years of economic growth." It was also present-
Figure 3.17
A silhouette of buildings near the Teheran Center

ed as an icon symbolizing the high-rise buildings (Figure 3.17). In recent years with the construction of the conference center for ASEM, the underground space in this area was developed into the 'KOEX fashion plaza,' a grand-scale shopping mall of international scale.

This is, however, still a foreign-made landmark designed by a foreigner. If the building were of a supreme standard and worthy of international acclaim, the fact that a foreigner had designed it would not be a problem. However, the problem lies in that it is a second-rate, commercialistic building. The Posco building that appeared in the early 1990s was noted as having a new sense of form and a novel urban function using our own technical expertise. In the 21st century, Teheran has changed into 'Teheran valley,' a street where the information and communication industry are concentrated (Figure 3.18). In terms of urban function this street has the characteristic of a future-oriented street, but the high-rise buildings in general do not form a skyline or streetscape that has a particular characteristic of its own.

By the 1980s with the years of economic development and the resulting expansion and improvement of the urban areas, there was an increase not only in large-scale high-rise buildings but also smaller commercial buildings. This was a period when postmodern buildings started to appear in Korean society. The pursuit of a new culture led to new ideas in the spheres of culture, the real estate market, and the distribution and consumption industry. In keeping with this new trend many small-scale commercial buildings appeared in Apgujeong-dong, Cheongdam-dong, in front of Hongik University and Shinchon, which started to form a new landscape. These buildings
reflected the affluent living environment of the public. Therefore, they manifested themselves as a form that combined streetscape and urban life activities. The trend of foreign postmodernist architecture influenced the design motifs and methods of these buildings, resulting in buildings of all shapes and forms. These buildings, which were basically imitations of a foreign style, only presented a pleasant facade, but they did not manage to establish a distinct characteristic of the location. Therefore, they failed to form a major current in the urban landscape and only pursued commercialism and its ensuing fashion. Furthermore, the negative behavior of the young people observable in these streets reflects the distorted image of our society.

Apgujeongdong, the "fashion center," which is supposed to "represent the desire of Korean capitalism," is a district, where residential and commercial buildings, expensive boutiques and fast food stores, dignified office buildings and imitations of Western, classical buildings all exist together. The multitude of Western style buildings creates the impression of a foreign country. This street gave birth to a new type of social breed, the so-called "Apgujeong tribe" or "orange tribe," who at one time played a leading role in the popular culture of this age. The street in Cheongdamdong, the so-called Champs-Elysees of Korea, is full of famous American and European brand stores, and the Rodeo street, which is a name that was taken from the top fashion street in Beverly Hills in America, is, according to a critic, "a mixture of indiscriminate imitations in an ultra-modern city, caused by a vulgar inferiority complex towards the West." The stores in Apgujeong have become an exhibition ground for European architecture to attract the overnight millionaires. There is a complete collection of all the architectural styles in the history of Europe, from the Greek temple to the Baroque and Renaissance architecture, and to the recent neoclassical style. The following is an excerpt from Lee Sun Won's novel, *In Apgujeong There Is No Exit*, who describes the streets in the Apgujeong area.

"Apgujeong and Rodeo Street are also more than just a name for a neighborhood or street. They have a symbolic meaning beyond its name. In a positive sense, it is a collective pronoun for the newly risen money upper class, and a symbol of abundant wealth. However, in a negative sense, it is the exhibition ground of the overnight millionaires' endless desire and depravity. No, it is a pronoun for pleasure, which the despicably distorted Korean capitalism upholds like a virtue. For this reason, as a pronoun for this pleasure, 'Apgujeong' or 'Apgujeongdang people' do not simply refer to the Apgujeong neighborhood alone, but it could mean many neighborhoods in the Gangnam (south of the river) area of Seoul, or it could be the thief town in the 70s, the Yangjaedong villas built after the 5th Republic, or even the Dalmajigogae in Haeundae, Busan."
With the decline of Apgujeong, the cafe street in front of Hongik University, which started to form in the late 1980s, became a street with character, popular among young people. The street is filled with 'buildings that had a strong foreign character' (Figure 3.19). These types of young people's streets spread to the regional cities such as Busan, Jeonju and Daegu. The streetscape formed by these small-scale, foreign-style commercial buildings, combined with vulgar commercialism and consumerism, spread not only to the central districts of major cities but also to the smaller commercial areas all over the cities. This streetscape is ruining the ordinary streetscape and also the architectural culture of Korea.

The Gangnam area, formerly the center of affluence in Seoul, is in the process of re-emerging as the 'center of culture.' From the 1990s music and performance facilities have increased in Apgujeong-dong, which will hopefully help to change Apgujeong to 'the street of music.' There are also more than 400 multimedia content firms near Apgujeong subway station, hence, earning the name 'Silicon Alley.' Cheongdam-dong, where the Cheongdam Art Festival is held yearly centering around the galleries, is changing to a 'cultural street,' and since the 2000s, it is becoming a 'Food Valley' because of the many restaurants in the area. The street in front of Hyundai department store in Gangnam has become a so-called 'street of fashion, galleries and ceramic art', rivaling the street of traditional culture in Insadong in Gangbuk (the northern part of Seoul) (Figure 3.20). Since recently, a series of projects are in progress to make the major streets in downtown more pleasant and convenient to walk on. These projects include 'pedestrian-friendly street', 'culture-inquiry street', and 'view street.' If these attempts are successful, there will be visible changes in the streetscape, but given the maturity of urban design in Seoul, it is too early to perceive these as the discovery of our identity or 'place-making'. Even if they were to partially succeed, it would be too early for them to become established as a desirable streetscape or architectural style.
The changes in the residential landscape: The age of apartment culture

The biggest change in the residential landscape of Korea since the liberation, which was made up of mostly one or two-storied Korean- or Western-style houses, was the construction of apartments. The 'apartment culture' in Korea started with the building of the Mapo apartment estate after the Housing Corporation (1962) was established (Figure 3.21). The 6-storied Mapo apartments with 142 households no longer exist, because they were removed due to redevelopment by Samsung Construction Company. However, at the time they were the first of its kind and a novel concept to the public, so that the apartments were used as the subject or background in many movies. In the late 1960s the government built apartments for the poor, and in the mid 1970s apartments for the middle class were built in the district along the Han River bank. From then on, apartments became the form of residence for most citizens of all classes.

The Jamsil district apartment estate (1977), which was built on the Jamsil plain in the mid 1970s, was the biggest in the country at the time, so that it formed an urban sub-center in the eastern part of Seoul. The Western planning method of neighborhood development was adopted and the apartment estate was planned as a neighborhood unit. In the center there were a few apartments with elevators, but thereafter the pressure of housing density and the rise in land price led to all apartments becoming skyscrapers. Now all apartments being built in Korea, independent of the location, are high-rise buildings. The development of large-scale housing estates in Seoul alone continued endlessly, such as the Banpo apartment estate development (1974-77), the Dunchon apartment estate development, the Mokdong new urban district development, Sanggye, Junggye, Hagey housing estate development, and the development of five new towns. Furthermore, after the 1990s the building law was relaxed in order to achieve the unreasonable aim of building 2 mil-

Figure 3.21
A plan and a bird's eye view of the Mapo apartment estate which no longer exists due to redevelopment
lion units: The representative examples include the raising of floor area ratio to 400%, and the relaxation of the distance between apartment blocks and so on. High-rise apartments were built through redevelopment, and when there was no more land left to develop in the city, apartments were built in existing residential areas. Now it is commonly acknowledged that buying a house means buying an apartment in a high-rise apartment estate (Figure 3.22).

In Seoul and other major cities redevelopment became common, but for reasons of profit and an increase in housing supply, the development of high-rise, high-density apartment estates was inevitable. As a result, many problems such as overpopulation, congestion, and lack of public facilities ensued. The Housing Construction Promotion Act, which was the legal basis for the development of housing estates, aimed at a quantitative expansion. Therefore, these aims were achieved to a certain extent, but the law was a development-oriented one that did not guarantee the quality of housing nor the quality of life. Because housing supply was put before the improvement of the living environment quality, high-rise and high-density apartments were built everywhere without consideration for the urban environment or the regional characteristics, hence, causing damage to the natural landscape and bringing about disharmony in the urban landscape (Figure 3.23). The redevelopment that emphasized profit caused the low-income class, who had been living in the
area, to lose their homes, and in effect drove them out of the city once again.

In maximizing the developer's profit, the habitability of the apartment estate deteriorated, and the maximization of living space increased the burden of public facilities around the estate. The redevelopment projects were used only as a means to supply housing but not to improve the quality of the residential environment or the improvement of the urban function. In fact, high-rise, mixed-use buildings with a floor ratio of almost 1000% now appearing in commercial areas will probably worsen the residential environment.

Apartments are attractive as objects of investment, but because of the frequent moves, they create problems in maintaining the sense of home place, and the convenient lifestyle made possible by apartments cause people to adopt a lifestyle and attitude of convenience. Also, residents, who become accustomed to this new living space, change into petit bourgeois. The standardized environment causes the loss of relationship with one's neighbors, the loss of a cooperative consciousness, and alienation from nature. These, in turn, lead to emotional problems. Apartments can be seen as a symbol, which represents the alienation of modern man and the phenomenon of standardization. Another problem of apartments is that they are used as a measure of one's material achievement; a person's social class is determined by whether or not he owns an apartment, and what size apartment he owns in which district. This social division has caused feelings of animosity and discrimination among people from different social ranks. The apartment estates can be seen as a "foreign zone for humans" which is devoid of social life and inferior to the traditional farming community.

This barren supplier-oriented apartment culture created by developers started to change gradually from the 1990s, as people began to reject it. With the recognition that times have changed, developers are realizing the need to accommodate to the tastes and expectations of the people. Recently, apartment complexes with different names have been built in an effort to differentiate them from others, such as the 'theme apartment', 'millennium apartment', 'environment-friendly apartment-estate' and so on. The theme apartments, which emphasize functionality, have different themes such as environment, health, education, old-aged people, leisure and so on, aiming to promote sales by increasing customer satisfaction. These types of apartments will increase in the future, but whether they in fact meet the standard of a high quality residential estate is doubtful. The environment-friendly apartment estate is advertised by many development firms, but such an apartment estate is only possible if a great deal of natural elements and green areas are included in the estate. Therefore, this is a type of development that is
impossible without lowering the housing density and changing the building regulations and law. According to experts, to create an environment-friendly residential environment, the maximum floor area ratio must not be over 150%.

The government plans to lower the population density in order to improve the quality of the residential environment in the 21st century by permitting the construction of collective housing estates such as town houses or terrace houses as in America and Europe. Also, the multi-household houses, which are being built in existing residential areas, do not increase the overall density despite the high density of that area, and they are able to maintain the original atmosphere of the residential area. Therefore, with better designs and an improved system, they could develop into a type of housing to form a desirable residential environment. Because of the housing development estates the urban structure and also the social function in the city are becoming deformed. The apartments that are divided into units of so-called 'estates' become isolated from their surrounding urban area, disturbing the harmony of the landscape in the surrounding area as well as the social function. High-rise apartments not only force a simple type of housing onto residents of various classes and tastes, but they also indiscriminately create the most environmentally undesirable residential landscape all over the country.

The skyline of Seoul: Mountains

As mentioned earlier, the mountains around Seoul are representative elements of the natural landscape. Even today mountains make up the major skyline of Seoul. Whereas the steeple of cathedrals and churches dominate the skyline of old European cities, in big American cities or modern cities of many other countries, the commercial and office buildings in the form of skyscrapers represent the image of the cities. Saint Paul’s Cathedral in London, Pietro Cathedral in Rome, Duomo in Florence, the Empire State building or the Chrysler building in New York, and Sears Tower in Chicago are just a few examples of how the visually prominent buildings in the central area of the city have become symbols that are associated with the image of the city. The skylines show that the heart of the city where these buildings are is higher than the surrounding areas, hence, forming a 'convex shape'.

What kind of skyline do Korean cities form? At a glance it may look chaotic, but in fact the dominating element in the skyline of Korean cities is the mountain. One reason for this is that, when deciding on the location of the city, according to geomancy, the guardian mountain was decided on before the city was built. Another reason may be that geographically there are many mountains in
Korea. The importance of the mountain as the image of the city was indicated in the surveys on citizens' consciousness. According to a landscape image survey carried out by Seoul Development Institute (1994), the citizens chose Namsan (39.1%), the Han River (26.1%), 63 Building (22.3%) as representative elements of the Seoul landscape. In the survey where foreigners were asked to choose the image they associated with Seoul, they chose Namsan, Namdaemun, Han River, the Olympic games, traffic congestion and palaces in the given order.\footnote{In the survey on the citizens' consciousness of the representative elements in each self-governed district, mountains, parks, public buildings, university, and palaces were chosen in this order.} The results of the different surveys show similarities. The Namsan restoration movement, which was carried out over many years up to the year 2000, and the blasting down of the foreigners' apartment on Namsan were attempts to promote the image of the city.

Seoul has many beautiful mountains in and outside the city (Figure 3.24). There are the four inner mountains (Naksan, Inwangsan, Namsan, Bukaksan), bordering on the city wall and the four gates. There are also the four outer mountains (Achasan, Deokyangsan, Gwanaksan, Bukhansan), which form the boundary for Seoul's administrative district, as well as Suraksan, Bulamsan, Dobongsan, Woomyeonsan, Daemosan and Guryongsan, just to mention the ones that are scenically important.\footnote{However, these mountains are disappearing due to reckless housing estate developments. The four inner and outer mountains have been preserved to a}
certain extent, but the smaller mountains have lost their scenic view because of the high-rise apartments. Even in local cities high-density apartment complexes over 20 stories high have been built on the skirts of mountains, forming an even higher skyline than the city center. Recently in Seoul, 'view streets' were selected and 'view protection plan' was established (199) to retrieve the view of the mountains around Seoul. Furthermore, in order to retrieve the view of Gwanaksan, Achaesan and Daemosan, 'view streets' were chosen and height limits for buildings were set for certain areas. The problem of how to manage the mountains in order to restore the unique skyline of Seoul must be considered seriously.

SEARCHING FOR KOREAN CHARACTER IN KOREAN URBAN LANDSCAPE: IDENTITY AND UNIVERSALITY

The reasons for the way the urban landscape has changed since the liberation to the present can be summarized as follows: first, from the Japanese colonial period to this day Korea was unable to attain an autogenous and independent frame for urban formation, and the Western modernist techniques were directly applied. Second, in the process of adopting Western architectural styles, which were alien to Korean traditional architecture, the conflict with tradition was not resolved, leading to disharmony and a break with tradition. Third, we were not able to establish a sense of identity, because the foreign trends, whether modernism or postmodernism, were introduced and brought in on a superficial level while still not having escaped the peripheralism of architectural culture. Last of all, without a sound social value system to replace the traditional Confucian ethics, the vulgar economic logic and commercialism greatly influenced the Korean urban landscape. Now the Korean urban landscape must be given its own identity through a new planning concept and a new paradigm.

The task of our present urban landscape can be summarized as 'the search for the Korean character'. It is necessary to think about what the Korean character of contemporary Korean architecture is, (199) and what the Korean character of our cities is. The Korean character here refers to a kind of Korean archetype. However, it would be more useful at this present stage to determine the concept of 'what we think is our own style', which is neither the modernism of the West, nor the Japanese colonial character, and at the same time different from our traditional style. This must be sought in a universality that is appropriate to our own lives and cultural identity and to the trends of the world. It must, therefore, be based on our
climate, our own lifestyle and our disposition.

As mentioned earlier, the effort to find the Korean character started in the mid Chosun dynasty in the concept of 'gilji' suggested by Lee Jung Hwan or the Utopian thought contained in Park Ji Won's Hurangjoe. The social reformist ideas of these positive school scholars resulted in the realistic urban problems as suggested in Pukhaken. These ideas led to the street improvement theory of Kim Ok Kyun, and then to the stage of its realization through Lee Chae Yeon’s Hanseong remodeling project. These successive efforts came to an end through the Japanese invasion, and Korean cities were reduced colonial cities. Even under colonial rule, a uniquely Korean streetscape was formed to an extent, like the two-storied Korean-style shop buildings. However, the sudden introduction of Western culture after the liberation has caused a loss of our own identity despite the enormous quantitative growth. The development into modern cities became distorted, so that the Korean cities turned into cheap American cities, "cities of foreign culture with no nationality," cities of the overnight millionaires, and "cities of rogues."  

In order to overcome this, we must change our attitude that we are on the fringe of Western culture. Quite unawares we have become deeply affected by the uniquely European thought system of Europocentrism, which considers all areas other than Europe as a fringe area. This system of thought is being challenged by Europe, its very founders. As in Spengler’s The Decline of the West, the center is in decline, and a pluralistic worldview is being established, where there is no fringe area. At this point in time, we must pursue a divergence of perspective, decentralization and furthermore, the possibility of an Oriental approach. In this process we must establish a cultural balance. We must not only overcome the limits of the universality of modern architecture, which has pursued only functional rationality, but also escape from the 'character of play in the pursuing formal representation' of postmodernist or rationalistic architecture. We must pursue an architecture and urban landscape that is appropriate to Korea’s regional locality and the urban context. For this, a proper understanding of our cities’ historicity and locality must be attempted. The act of discovering our architectural style must take place through a balance and interaction between tradition and modernity, which will lead to a recovery of our essence and the definition of our true Korean character.

It is often said that what is most Korean is also most international, but this is too banal a statement. Through the inevitable process of the Korean and the foreign coming together and clashing, a Korean character will emerge as a result of pursuing our own identity as well as an international universality. Establishing our identity
is not a matter of simply continuing the traditional architecture. We must be culturally open and we must be able to share the problems common to mankind that the international architectural community faces. The Korean character must contain both a self-identity and universality, so that the future image of our urban landscape and architecture will become one that accommodates the world trend and at the same time, is founded on the lifestyle of the people, reflecting the culture of our ages.
Notes


10) Yoon, Il-Joo. (1972). *The 80 Years of Western-Style Building in Korea*.


13) *Ibid*. He interprets that Yeonam's positive school of thought was taught and handed down to the future generations.


16) *Ibid*.


18) Yoon, Il-Joo. (1972). *op. cit*. This division is also made form the aspect of architectural history.


59) Donga Ilbo, Nov. 15, (1924).

60) Maeil Shinbo, July 27. (1929). An article under the title "Housing Shortage". Articles on this subject appeared repeatedly at the time.


64) Maeil Shinbo, May 19, (1937). "The Solution to the Housing Shortage".


69) Space, Nov. April.


80) Park, Rae-Kyung, op. cit.


107) Seoul Metropolitan Government. (1998). View Street Project Plan. This project was carried out under my supervision by the research team at the Seoul City University Urban Science Research Center.
108) Ibid.
Hopkins University Press.
Iljisa.
Around the Opening of the Ports. Seoul. Iljisa.
..... (1982). A Study of the Process of Urbanisation in Korea around
the Period of Opening of the Ports. Seoul. Iljisa.
Seoul National University.
Transaction Books.
Seoul: Cheongsa Publisher.
Yang, Yang-Ho. (1985). An Historical Examination of the Two-Storied Korean-
Yoo, Hong-Ryool. (1958). "Seoul and the first western-style building", Hyanggo
Seoul, 4.
..... (1972). The 80 Years of Western-Style Building in Korea. Seoul: Yajeong Munchwasa.
Development of Transportation Network in the 20th Century of Seoul

Hae Un Rii

Introduction

During the 20th century, the development of transportation in Seoul consisted mainly of rail-based transit systems. The electric street-car railway, the first mode of rail transportation, began operations in 1899 and was the only mode of public transportation at the turn of the century. In 1974, the city saw its first subway line go into operation. The line continued to expand, becoming the most important mode of urban mass transportation by the end of the 20th century. Additionally, in 1899, the first interregional railroad was laid between the two cities of Seoul and Incheon. Up to the present day, the rail transportation still remains the most popular means of inter-regional travel. Indeed, over the last 100 years – except for the six year interval between September 30, 1968, when electric street-car railways ceased operation, and August 15, 1974, when Subway Line 1 went into operation – electric street-car railways and subway trains have been
the leading means of transportation in Seoul. While electric street-car railways run on surface tracks, subway trains travel on underground tracks, a feature that allows the subway system to be a fast and convenient means of mass transit that remains unaffected by weather or traffic conditions on the surface. Railway trains that travel between Seoul and other cities are recognized as the safest mode of travel during the winter season and are used by a great number of people.

Other modes of transportation that have served city residents in the 20th century include both buses, which, unlike electric street-car railways and subways, offered more freedom of mobility, and privately owned automobiles, which became ubiquitous in the latter half of the century. Private automobiles became an additional way to travel from Seoul to other regions, in addition to public transportation systems operating on set routes, such as trains, buses and airplanes. As highways were constructed and provided road access to regions across the nation, the use of buses and private automobiles for interregional travel was further promoted.

This chapter discusses the development of urban transportation in Seoul, with a focus on the different modes, and the resulting impact on the city’s development. For the last hundred years, Seoul’s public transit system has undergone many quantitative and qualitative changes as different transportation modes were introduced. From their introduction in 1899, electric street-car railways were the main public transit system of the early 20th century. However, at mid-century, buses replaced electric street-car railways as the dominant public transit vehicle. This was followed by a period in which buses and subway systems co-existed. By the end of the century, as ownership of automobiles became more pervasive, private automobiles were added to the urban transportation landscape (Figure 4.1).

Figure 4.1
The transportation structure of Seoul in the 20th century
Development of Transportation during the Enlightenment Period and under Japanese Colonial Rule

PEDESTRIAN TRANSPORTATION

In the early 20th century, walking was the main means of mobility for most city dwellers in Seoul. Established as the capital of the Chosun Dynasty in 1394, Seoul did not have any public transportation modes until electric street-car railways were introduced in 1899. Although Cheonggye Stream traversed the city, it was not sufficient conditions to support the development of river transportation. The Han River was also run in the south of the 10 ri (approximately 4km) ring of land surrounding the city walls, which made it too distant to have any direct impact on the city's transportation. It must also be noted that, the old city of "Seoul" did not refer to Hanseongbu, which was an administrative zone including 10 ri area beyond the city wall, but to what was basically a walled city defined by four major gates and walls. The city walls played a role to prevent any expansion of the city, and the activities of city dwellers were mostly confined to the area inside the city walls – an area that measured only 16.5 km². Furthermore, as most clusters of houses were located within walking distance of each other, Seoul residents did not feel any particular need to develop other means of transportation for people and goods.

Throughout the Chosun Dynasty, walking was the most common way of getting around. As for modes of transport, sedan chairs were used by the upper class, while pushcarts and horse-drawn wagons were used to transport large amounts of goods. At the end of the 19th century when the Chosun Dynasty opened its doors to the outside world, new modes of transport were introduced along with modern civilization. Rickshaws, bicycles, horse-drawn carriages and automobiles were among these new means of private transportation, and the electric street-car railway was introduced as a means of public transit. When the new century dawned in 1900, Seoul's transportation consisted of a mix of all these transportation modes, yet all of these were considered too expensive for the general populace, who continued to depend on walking as their main means of mobility.
Considering that walking remained the most common method of movement for Seoul residents until the middle of the 20th century, it can be assumed that this was the situation in 1900 as well. Although electric street-car railways were available in Seoul in the 1930s as a major means of transport, according to those who actually lived at the time, most people preferred walking, because it was too bothersome to make transfers and they wanted to save on expensive fares. These testimonies indicate that walking was the more common transport mode, even though electric street-car railways were providing service at the time. I myself remember picnics in elementary schooldays: students used to walk from the school I attended in Cheongpa-dong all the way to Changdeok Palace or Changgyeong Palace. This also indicates that although electric street-car railways and buses were available, most people simply walked to get from place to place. Of course, at the time, there was no other way of transporting large groups of people—like the chartered buses of today—but I believe that such walking field trips were possible because traffic was light and walking was common practice.

In 1963, the area of Seoul had extended to the similar area to the present. However, images from the period show that it was only the traditional residential areas inside the city walls that were transformed into urban districts, while the surrounding area outside the walls remained basically rural landscape. As a result, with few exceptions, most parts of Seoul were reachable on foot. It is natural that walking was the main mode of transport. Even in the mid-1960s when buses emerged as the major public transportation modes and road traffic was becoming heavier than before due to the increasing number of automobiles, people were encouraged to walk short distances. In fact, schools encouraged students in the early 1960s to walk distances up to three or four bus stops, and many students used to walk to school even though it took over thirty minutes. Bus use was on the rise and electric street-car railways still serve in the major parts of the city, but people preferred walking if they had to transfer buses or were moving within the city walls.

Walking was also the most common mode of travel to cities outside of Seoul in the early 1900s—well after the Seoul-Incheon railway service was launched in 1899. Horses were sometimes used for transport during the Chosun dynasty, but mainly by the privileged classes, and walking remained the predominant transport mode for ordinary people. This continued to be the norm until traveling by railway became common place, and remained so in regions to which railways did not travel. Of course, horse-drawn and ox-drawn wagons were used to transport commodities. Many elderly people talk about how they used to walk from the "Old Seoul" inside the city walls all the way to today’s Yangjae-dong or Shiheong.
area: another indication that walking remained the main mode of transport in the early 20th century.

Though pedestrian transportation in Seoul slowly started to give way to newly emerging means of transportation with economic development, population growth and expanding residential settlements in the early 20th century, walking remained the main mode of mobility for Seoul’s residents until the mid-1960s. Only when buses fully established themselves as an important means of public transit and the transportation network expanded to cover almost all parts of Seoul, vehicle use overtook walking.

Dramatic increases in buses and private cars gave rise to traffic congestion in the downtown area, which continued to worsen despite numerous road construction and expansion projects that have taken place since the 1970s. Such congestion was not confined to the downtown area but extended to all parts of the city. Nevertheless, people who had become accustomed to riding vehicles preferred to ride rather than walking even for short distances, a behavior pattern markedly different from the past.

In short, walking was a common means of transportation in Seoul when the city’s spatial scope and its citizens’ sphere of activity were limited. And although electric street-car railways and buses started operation at the end of the 19th century when western civilization was introduced, pedestrian transportation was the norm until the late 1950s, as most activities of city residents took place inside the city walls. However, as Seoul approached its current boundaries and public buses linked the city together, residential areas expanded and people’s range of movement grew. With such developments, people now walked only when the distance was short or when walking itself served a particular purpose.

THE ADVENT OF ELECTRIC STREET-CAR RAILWAYS

At the end of the 19th century when most people traveled on foot, electric street-car railways were introduced in Seoul as a means of public transit. In the 1890s, when the country was opening itself to the outside world and entering an era of Enlightenment, the majority of Seoul residents resorted to walking due to the lack of decent public transportation, although a few means of private transportation did exist, such as rickshaws and sedan chairs. However, the spatial structure of Seoul was undergoing transformation as the city took on international characteristics with the influx of Japanese, Chinese and other foreigners. New commercial sectors and residential areas sprang up. Nevertheless, there was no dire need for a public
transit system as the urban space was limited to the area inside the city walls.

H. Colllbran and H.R. Bostwick, the two Americans who had won the contract to build the Seoul-Incheon railway, recommended that the Imperial House of the Chosun Dynasty introduce electric street-car railways, citing the high cost and inconvenience of Emperor Kojong’s walking trips to Queen Min’s grave site in Cheongryangri as the reason. They persuaded Emperor Kojong to adopt electric street-car railways by elaborating on the many benefits of an electric railway and how the Imperial House could gain income by operating the streetcars for public use during other times. By that time, electricity had been introduced and used by the royal palace, but the general public was deprived of its benefits. In the end, the construction of electric street-car railways not only provided a turning point in the development of transportation in Seoul, but also triggered the development of the Korea’s power industry.

Emperor Kojong ultimately granted permission and allowed the Imperial House to collaborate with the two Americans on an electricity and electric street-car railway venture. The petition asking for the construction of electric street-car railways, which was filed under the name of a Korean for procedural reasons, called for electric street-car railways, street lamps and telephones to be installed in Seoul. It was a landmark event in Korea’s telecommunications, cultural and transportation history. The petition was authorized on the same day it was submitted and led to the establishment of the Hanseong Electricity Company in 1898. Lee Chae-yeon, former mayor of Seoul, was appointed as president of the company, but operations were controlled by Colllbran and Bostwick. This appears to have been partly due to the insufficient budget of the Imperial House, but it was mainly because the foreigners had played the leading role in introducing these benefits of modern civilization.

Hanseong Electricity Company invited three Japanese engineers from Japan’s Kyoto Electric Railway, who helped with the installation of a single-track railway with overhead wires between Seodaemun and Cheongryangri, as well as a power station near Dongdaemun. They also worked to assemble eight open-air street-cars and one VIP car that measured 8.7 meters in length and 2.2 meters in width. The open-air cars, which could carry up to forty passengers, were actually semi-open cars, as they had glass shields in the middle(Figure 4.2).

Upon completion of the construction and assembly work, the electric street-car railway line between Seodaemun and Cheongryangri opened on May 17, 1899. It was the first public transportation service in Korea, a landmark event in the country’s transportation history. Noble families of the Imperial House, foreign envoys and
influential men of society attended the grand opening ceremony amid cheers of the general public who gathered to see the new vehicle. It is said that the crowd reacted with excitement at the sight of the beautifully decorated electric street-car railway car traveling from east to west on Jongro Street. The crowd grew so large that the electric street-car railway had to stop. The electric street-car railway’s introduction to the streets of Seoul, where no other means of transportation existed, was indeed a landmark event in the history of Korea in many respects.

After the electric street-car railway launched operations, it attracted so many people from all parts of the country that tickets were sold out every day. There were some who rode the electric street-car railway all day until the service ended. Evidently, most of the early riders of the electric street-car railway were not passengers with transportation needs but simply curious spectators. A complete lack of other public transit means could partially explain this phenomenon, but it was also because public transportation was not an absolute necessity for moving about in the city at the time.

In its early days, the electric street-car railway made stops anywhere and anytime at its passengers’ requests. Passengers were charged two different electric street-car railway fares. The higher fare was for the seats in the middle where it was covered with glass windows, and the lower fare was for the seats in the front and rear that were exposed to the open air. The fares were 3.5 jeon for the middle seats (a jeon is equivalent to a hundredth of a won); 1.5 jeon for the uncovered front and rear seats for the electric street-car railway line between Jongro and Dongdaemun; and 5 jeon for the middle seats.
and 3 jeon for the front and rear seats between Dongdaemun and Cheonggyeong. The two-tiered fare scheme was discontinued when electric street-car railway cars became fully-enclosed.

The electric street-car railway was initially driven exclusively by Japanese operators who had an experience in the Kyoto Electric Railway Company, and Koreans were employed only as conductors. At the time, unlike other countries, Koreans considered electric street-car railway operators to be highly skilled professionals with unique capabilities and, thus, imported them from overseas. In other countries, electric street-car railway services operated with pre-determined stops that served as focal points of change in the spatial structure of adjacent areas. Also, there were special discount fares for workers, but no difference for the fare between classes to ride the electric street-car railway. Such differences can be attributed to the difference in purpose and design of the system, but was basically due to the difference in the level of social development.

The general public's fancy for the electric street-car railway quickly changed to fury when a two-year-old boy was fatally hit by an electric street-car railway in what is today's Jongro 2-ga. The situation was aggravated by a public sentiment that was already quite tense over the long drought. Following the accident, a crowd of people vandalized the electric street-car railway car and set fire to it. There were rumors that some people were going to overturn the incoming electric street-car railway and destroy the power station. Horrified by what was going on, the company put up barbed wire around the power station and ran 600 volts of electricity through it to deter the angry mob. In the end, the citizens returned to their senses and the riot was suppressed. However, it was the most disastrous event since the electric street-car railways were first introduced. In some ways, the event was foreseeable, considering the way in which the system was introduced and put into operation without any education of a public that had never seen any modern means of transportation.

After the uproar, the Japanese electric street-car railway operators demanded protection of their families in case anything happened as well as a guarantee of their status. However, the company rejected these demands, and the operators, as well as all of the office clerks, resigned in protest. As a result, the electric street-car railway service was suspended after a month of operation. Five months later, services were resumed after recruiting eight operators and two mechanics from the US, but only after installing protection facilities and alarm bell in the electric street-car railway cars.

The electric street-car railway was initially intended for Emperor Kojong's visits to Hongreung where Queen Min was buried. However, because the VIP car was said to resemble a funeral car-
riage, the Imperial House hardly used it. But the service was very popular among average citizens and needed to be expanded. In 1899, the electric street-car railway line was extended from Jongro to Namdaemun. Construction to extend the line to Yongsan began in 1900 and was completed in 1901. The extension was accompanied by the installation of more power stations and street lamps. On April 10, 1900, three street lamps were lit in Jongro, marking the first time electricity was provided to private citizens.13 During the early years of electric street-car railway operation, electricity was provided by the Hanseong Electricity Company, which changed its name to the Korea-America Electricity Company in 1900, again to the Korea-Japan Wasa Corporation in 1909 and finally to the Gyeongsong Electricity Corporation in 1915. The company operated under the last name until Korea gained independence from Japan.

The electric street-car railway, which began operation in 1899, remained the only public transit system in Seoul for thirty years — until bus service began in 1928. Although it was originally intended for the Imperial House, public use increased at a rapid pace, resulting in the expansion of service. This indicates that the city’s growing need for public transportation was recognized at the time. Although the electric street-car railway was a foreign import, the introduction of this modern convenience prompted a revolution in urban transportation and became the starting point for the development of public transit systems.

With continued addition of new lines and double-tracks, most of the electric street-car railway lines in Seoul were in place by 1936 (Table 4.1, Figure 4.3).14 The lines were built extensively to cover all of the downtown area and focused mostly on connecting existing residential and commercial areas rather than on traveling to newly developing areas. The only new line built after independence was the Changgyeong Palace — Myeongryun-dong — Donam-dong line, and the only new extension was to Yeongdeungpo Station. Among the lines in Table 1, the Seodaemun-Namdaemun line (built in 1901) and the Namdaemun-Seodaemun Post Office line (built in 1920) appear to be the same line. This is because the two lines shared the same route traveling from Namdaemun, Bongrae 1-ga, Euijuro 2-ga, Euijuro 1-ga to Outer Seodaemun: a section that had opened in 1901 but closed down later due to low profit.

The Yongsan line and the Chungmuro 4-ga extension line appear to have been built for the purpose of facilitating travel for Japanese officials and residents between the Japanese residential area, the Japanese colonial government building, hospitals and Changgyeong Palace. It seems to be related to the fact that, at one time, a bus route was operated to the Japanese residential area where there were no electric street-car railway lines in place. Another interesting
<table>
<thead>
<tr>
<th>Date</th>
<th>From - To</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1898.12.25</td>
<td>Seodaemun - Cheongnyangri</td>
<td></td>
</tr>
<tr>
<td>1898.</td>
<td>Jongro - Namdaemun</td>
<td></td>
</tr>
<tr>
<td>1901.1</td>
<td>Namdaemun - Sinyongsan</td>
<td>newly built</td>
</tr>
<tr>
<td>1901.7</td>
<td>Namdaemun - Namdaemun</td>
<td></td>
</tr>
<tr>
<td>unknown</td>
<td>Namdaemun - Mapo</td>
<td></td>
</tr>
<tr>
<td>1910.7.21</td>
<td>Sinyongsan - Sinyongsan</td>
<td></td>
</tr>
<tr>
<td>1910.8.26</td>
<td>Jongro - Dongjak-dong</td>
<td>double track</td>
</tr>
<tr>
<td>1910.12.20</td>
<td>Cheonggyeonwon Line</td>
<td>newly built</td>
</tr>
<tr>
<td>1911.4.11</td>
<td>Cheongnyangri</td>
<td></td>
</tr>
<tr>
<td>1911.12.7</td>
<td>Dongdaemun</td>
<td></td>
</tr>
<tr>
<td>1912.2.12</td>
<td>Namdaemun - Seoul station</td>
<td>double track</td>
</tr>
<tr>
<td>1912.3.23</td>
<td>Sinyongsan</td>
<td></td>
</tr>
<tr>
<td>1912.6.3</td>
<td>Wonhyo</td>
<td>newly built</td>
</tr>
<tr>
<td>1912.6.25</td>
<td>Euljiro 2-ga - Euljiro 6-ga</td>
<td></td>
</tr>
<tr>
<td>1912.12.6</td>
<td>Euljiro 6-ga - Gwanghwamun</td>
<td></td>
</tr>
<tr>
<td>1912.12.6</td>
<td>Euljiro - Euljiro 2-ga</td>
<td></td>
</tr>
<tr>
<td>1913.6.10</td>
<td>Jongro</td>
<td>double track</td>
</tr>
<tr>
<td>1914.6.8</td>
<td>Wangsimi</td>
<td>newly built</td>
</tr>
<tr>
<td>1915.8.18</td>
<td>Chungmuro</td>
<td></td>
</tr>
<tr>
<td>1915.8.26</td>
<td>Gwanghwamun - Euljiro</td>
<td></td>
</tr>
<tr>
<td>1916.10.30</td>
<td>Jongro 4-ga - changgyeongwon</td>
<td>double track</td>
</tr>
<tr>
<td>1917.4.15</td>
<td>Gwanghwamun - Toneuro</td>
<td>newly built</td>
</tr>
<tr>
<td>1920.11.8</td>
<td>Euljiro</td>
<td>connection</td>
</tr>
<tr>
<td>1920.11.27</td>
<td>Namdaemun - Seodaemun</td>
<td></td>
</tr>
<tr>
<td>1921.6.23</td>
<td>Dongdaemun - Gwanghwamun</td>
<td>newly built</td>
</tr>
<tr>
<td>1923.8.20</td>
<td>Jongro - Anguk-dong</td>
<td></td>
</tr>
<tr>
<td>1923.10.3</td>
<td>Tongeuldong Line</td>
<td></td>
</tr>
<tr>
<td>1926.3.30</td>
<td>Gwanghwamun - Colonial Government Bldg.</td>
<td>double track</td>
</tr>
<tr>
<td>1926.4.19</td>
<td>Jangchungdan Line</td>
<td>newly built</td>
</tr>
<tr>
<td>1927.12.19</td>
<td>Colonial Government Bldg. - Jeokseon-dong</td>
<td>double track</td>
</tr>
<tr>
<td>1928.9.18</td>
<td>Gyeongmujang</td>
<td></td>
</tr>
<tr>
<td>1928.10.27</td>
<td>Namdaemun - Gwanghwamun</td>
<td>newly built</td>
</tr>
<tr>
<td>1929.7.10</td>
<td>Cheongnyangri</td>
<td></td>
</tr>
<tr>
<td>1929.7.24</td>
<td>Jongro - Anguk-dong</td>
<td>double track</td>
</tr>
<tr>
<td>1929.8.5</td>
<td>Colonial Government Bldg. - Anguk-dong</td>
<td></td>
</tr>
<tr>
<td>1929.9.3</td>
<td>Sinyongsan - Han River</td>
<td>newly built</td>
</tr>
<tr>
<td>1934.5.17</td>
<td>Yongsan - Wonhyo</td>
<td>double track</td>
</tr>
<tr>
<td>1934.10.3</td>
<td>Cheongnyangri</td>
<td></td>
</tr>
<tr>
<td>1935.9.23</td>
<td>Dongnimmun - Yeongcheon</td>
<td>newly built</td>
</tr>
<tr>
<td>1936.8.31</td>
<td>Seodaemun - Mapo</td>
<td>double track</td>
</tr>
<tr>
<td>1936.10.23</td>
<td>Han River - Noryangjin</td>
<td>newly built</td>
</tr>
<tr>
<td>1937.8.14</td>
<td>Wangsimi</td>
<td>double track</td>
</tr>
<tr>
<td>1946.4.1</td>
<td>Changgyeongwon - Myeongryun-dong</td>
<td>newly built</td>
</tr>
<tr>
<td>unknown</td>
<td>Myeongryun-dong - Donam-dong</td>
<td></td>
</tr>
<tr>
<td>1953.5.15</td>
<td>Singil-dong - Noryangjin</td>
<td>double track</td>
</tr>
<tr>
<td>1953.12.5</td>
<td>Youngdeungpo</td>
<td>newly built</td>
</tr>
</tbody>
</table>
The fact is that the extension line built in 1917 connecting Gwanghwamun and the Japanese colonial government building construction site in Gyeongbok Palace was built not for the sake of public benefit but rather to facilitate the construction work. In conclusion, although some electric street-car railway lines were built to serve the general public, they were oftentimes for special purposes and always with the convenience of the occupying Japanese in mind.

The newly introduced electric street-car railway system, new roads and other infrastructure built by the Japanese eventually led to the removal of the city walls. This meant that there was no further need for the ceremonial opening and closing of the city gates. The ceremonies were discontinued, and along with them disappeared the traditional Injeong and Paru, bells that sounded in the evening and morning to open and close the four gates.

However, it also meant that Seoul, hitherto secluded from the outside world for 500 years during the Chosun Dynasty, would
undergo a dramatic transformation. Seoul's residential areas expanded inside the city walls as well as outward toward Mapo, Yeongcheon, which was beyond Seodaemun Gate, and Cheonggyeong, which was beyond Dongdaemun Gate. It also expanded to include Yongsan, which emerged as a new urban district when many Japanese moved into the area. Thus, the electric street-car railway worked as a driving force behind the horizontal expansion of the city. Expansion, however, was limited to places where the terrain allowed for the construction of rail tracks and did not go beyond what are now the CBD and its surrounding area.

A close look at the layout of urban districts and electric street-car railway lines reveals close relationship between the two. The electric street-car railway lines were distributed in the built-up area in 1914. For example, a electric street-car railway line to Wangshimri, the largest urban district outside the city, was constructed in 1914. The long strip of urban districts that formed along the Cheonggyeong-Mapo-Yongsan line also demonstrates the impact of electric street-car railway lines on the creation of urban districts. By contrast, before 1914, the first electric street-car railway lines connected were Sinyongsan, Wonhyoro and Chunghmuro, which were major Japanese settlements: evidence that leads us to believe that the convenience of Japanese residents was the first consideration when laying down tracks.

The electric street-car railway service continued to expand so that the number of electric street-car railway cars rose to 257 units by 1945 and total rail extension increased to 39,906 km. The number of daily passengers also increased to an average of 482,636 in the first half of 1945, indicating a very high utilization rate of 43.9% for Seoul's 1,100,000 population. The electric street-car railway faithfully carried out its role as the city's public transit system. Nevertheless, people hardly utilized the service during the day, and, even when the lines were mostly in place and the service became popular in the 1930s and 1940s, people preferred walking when they were not pressed for time, when they had to make transfers, when the ride still left them a long to walk to the final destination, or when going to places within a thirty minute walk.

THE ARRIVAL OF BUS

In 1928, thirty years after electric street-car railways were introduced in Seoul, buses began operating, providing another public transit alternative. In contrast to the electric street-car railway service that was run by a private company, buses were operated by Gyeongseong-
bu, then city government. In the planning stage, four lines were to be offered: Line 1 departing from Seoul Station, or what was then called Gyeongseong Station, and passing through City Hall, Anguk-dong and Phil-dong, before returning to Seoul (Railway) Station; Line 2 departing from Seoul Station and traveling to Yeongdeungpo Station with three stops along the way; Line 3 traveling from Seoul Station to Seodaemun Prison; and Line 4 departing from the electric street-car railway station in Cho-dong, passing through Changgyeong Palace, Dongdaemun, Jangchung-dong, and returning to the Cho-dong electric street-car railway station.

However, the plan failed to be realized. Instead, when the bus service actually began on April 20, 1928, it basically operated two lines: the 'commute-hour line' and the 'temporary line.' There were two bus routes for the commute-hour line: one connecting today's Seoul Station, City Hall and Gwanghwamun near Gyeongbok Palace, where the former Japanese colonial government building used to be, and the other running from Gwanghwamun, Anguk-dong and Jongro to the provost marshal's headquarters where the Namsan Folk Village is presently located.

These routes connected the Japanese residential areas, the Japanese colonial government building, Gyeongseong City Hall, and the provost marshal's headquarters. It can be assumed that the commute-hour bus lines were provided mainly for the benefit of the Japanese residents. Some of the routes ran parallel to the electric street-car railway, but most of them traveled where electric street-car railway services were not available. In normal times, operating hours were from 9 AM to 4 PM and from 5 PM to 10 PM. In peak-demand periods, such as the spring blossom season or fall sporting season, extra hours – from 8 AM to 9 AM and from 4 PM to 5 PM – were added to the schedule. The temporary line buses departed from Seoul Station and passed Seoul Stadium, Changgyeong Palace and Vocational High School. It was basically a service that ran on an ad-hoc basis to meet the essential needs of ordinary citizens. However, a closer look at the layout of the bus route reveals that the convenience of the Japanese residents was the first priority, as most of the bus stops were in the areas where the Japanese population was concentrated, including the southern part of Cheonggyecheon (what is today's Euljiro) and Toegyero.

Bus fares were much higher than electric street-car railway fares, but the service became so popular that more buses were deployed, the fare was lowered, and more routes were introduced as the number of passengers dramatically increased. When the fare was lowered for the second time in 1929 to equal the level of the electric street-car railway fare, the two services entered into full competition. Excessive competition, however, eroded profits, and the bus service
eventually had to suspend operations despite the many efforts it undertook to save the business by establishing new routes and overhauling existing routes. The operating rights to the bus service were transferred from the city government to the Gyeongseong Electricity Corporation. The municipal bus, which began service in 1928, stopped its intra-city operation in 1932. Instead, linkages were established between buses that basically traveled on routes outside the city and electric street-car railways that operated in the city. Consequently, the electric street-car railway once again became the only public transit system in Seoul.

OTHER MODES OF TRANSPORTATION IN SEOUL.

Throughout the Chosun Dynasty, single-passenger sedan chairs hand-carried by two or four persons, as well as other types of traditional man-powered carriages like "Namyeo" and "Kama", were used to transport people. These were, however, limited to those belonging to the "yangban" (gentry) class. When the nation opened its harbors in the late 19th century, new vehicles of transport were introduced to Seoul, including horse-drawn carriages, rickshaws, bicycles and automobiles.

Horse-drawn carriages, which were introduced for use by foreign diplomats, failed to gain popularity. Merely thirteen units were in operation in Seoul in 1924. Rickshaws, a Japanese invention that can still be found throughout Southeast Asia, were introduced in Korea in 1894. Since the fare was expensive, only those who belonged to special social classes, like Gisaengs (Korean geishas), Japanese and upper-class Koreans, could afford them. Despite this, the number of rickshaws rose so rapidly that a total of 2,279 were operating nationwide in 1911, half of which were in Seoul. As of 1926, 1,816 rickshaws were providing service in Seoul alone. This trend reflects the increased use of rickshaws by Seoul residents. There are many firsthand stories in support of this. People recall hauling and riding rickshaws when they were pressed for time, provided they did not have any heavy luggage with them. In the rickshaw's early days, however, ordinary people were reluctant to ride them as they were perceived to be vehicles for particular classes of people. Though rickshaws were more widely utilized during Japanese rule, they were not public transit vehicles, since they were powered by human force and transported only single passengers.

Bicycles, another single-passenger vehicle, were introduced in the late 19th century. Yun Chi-Ho, who returned in 1894 after studying in America, brought with him a bicycle, which instantly
gained huge popularity in the country. The number of bicycles continued to grow and by 1926, 6,119 bicycles were in use in Seoul alone. Again, however, since they could carry only one person, bicycles failed to play a significant role in developing urban transportation. At the time, a bicycle was an object of envy, and many bicycle races were held. Bicycle racers, especially Korean ones, were extremely popular and enjoyed as much fame as today’s professional athletes. Stories about Eom Bok-Dong, a celebrated Korean bicycle racer, tell us much about the public’s enthusiasm for the vehicle.

In 1903, when the electric street-car railway was established as an urban transit system, automobiles were also introduced. The first automobile, a Ford, was imported by the Imperial House and was used only by royalty. Ordinary people did not have access to automobiles until 1912, when a Japanese driver started to provide taxi services with a single cab. His business quickly grew to a fleet of 88 cabs by 1926.

Although the number of taxis increased, they were not commonly used because of their expensive fare. Moreover, taxicabs were neither as fast as nor carried as many passengers as electric street-car railways, and consequently did not have any significant impact on the city’s transportation system.

INTERREGIONAL TRANSPORTATION

During the period when electric street-car railways served as the city’s only public transit system, the railway served as the most important means of transporting people outside the city. Buses were also used for transporting people, while boats were used for transporting commodities.

The Han River, which cuts through the center of today’s Seoul, served as an important waterway for transportation during the Chosun Dynasty when it was situated outside the city walls. The basic policy of the Dynasty was to use waterways rather than overland routes to transport the bulk commodities that came to the capital from all parts of the nation. As such, the many small and large ports along the Han River not only served as locations for ferry passengers but also as entrepots for goods. However, the role of these ports was changed with the introduction of western civilization after Korea opened the gate to the world of western civilization.

River transportation became more brisk when Yanghwajin, located on the lower Han River, was designated as an open port in 1883 and foreigners were allowed to trade in Yongsan and inside the city walls. Many ports along the Han River developed further as an
increasing number of Japanese settled in the Yongsan area, considering as a favorable location for transportation. By that time, ports had become more important as transportation nodes for commodities than for passengers.

These ports located along the Han River developed into commercial hubs, among which Yongsan, Mapo and Seogang were the most important. Yongsan and Seogang served as an entrepot for grain taxes, while Mapo was an entrepot for seafood and grains. Goods from Gyeongsang province, Gangwon province, Chungcheong province and the upstream region of Gyeonggi province were collected at Yongsan, while goods from Hwanghae province, Jeolla province, Chungcheong province and the downstream region of Gyeonggi province were aggregated at Seogang. Shipbuilding activities also took place in Yongsan and Seogang.

With the introduction of modern civilization, steamers began to travel between Incheon and the Mapo-Yongsan area. Transport of large cargo was made possible by the operation of large-sized vessels. However, transporting goods by ships gradually decreased as railway services between Incheon and Noryangjin began in 1899 and later to Seoul Station. Although forced to compete with the railway for cargo transportation, water transportation still remained the major means of transporting grain, firewood, salt and seafood. However, its significance dwindled as railroad, trucking and other means of overland transportation developed. In particular, the advantages of road transportation increased when bridges were built over the Han River. Overland transportation volume increased, while waterway transportation volume declined proportionately.

The role of the Han River as a transportation waterway was further diminished when the Korean peninsula was partitioned after the end of the Japanese colonial rule. Water transportation on the Han River finally came to an end when the river mouth was blocked after the Korean War. Residential areas had developed around the ports and became the nuclei for future high-density areas. They were also linked to the road transportation system through electric street-car railway services. Having lost their purpose, the old ports’ pace of development slowed compared to other areas. However, today, they have resumed their role as transportation channels since many bridges were built where these ports were once located.

At the time when water transportation on the Han River was active, the railway emerged as the first inter-city transit device with the opening of the Incheon-Noryangjin section of the Seoul-Incheon (Gyeong-In) rail line on September 18, 1899. At the time, the total extension of the Seoul-Incheon line was 33.79 km, and the entire section opened with the completion of the Han River Railway Bridge in 1900. This meant that the Seoul-Incheon line now trav-
eled from Jemulpo Station via Noryangjin Station to Namdaemun Station (today’s Seoul Station). The introduction of railway transportation signified a revolution in transportation and opened a new era of rail-based intra- and inter-city transportation.

The Seoul-Incheon rail line not only shortened travel time between Seoul and Incheon but also removed the obstacle that crossing the Han River had posed. This enhanced the linkage between Seoul and other cities. Noteworthy is the change that took place in cargo transportation by ship from the river mouth to ports like Mapo. Before the construction of the railway, ports used to play an important role in aggregating and distributing goods transported by water. Even after the launch of railway transportation, cargo transport on the river continued steadily, although passenger traffic substantially decreased.

The Gyeong-Bu rail line opened in 1905, linking Seoul and Busan, and the Gyeong-Eui (Seoul-Shineuiju) line opened in 1906. As cargo volume on the Seoul-Busan line increased, the two-way Han River Railway Bridge was constructed in 1912. Additionally, other temporary railroad bridges were built to reduce travel time between Japan, Korea, and Manchuria and were completed in 1944.

Railroads originating in Seoul continued to be extended; in 1914, the Honam and Gyeong-Won line (linking Yongsan and Wonsan) went into operation, forming a railway network that crossed Seoul in the shape of an X. With the basic structure of the railway network in place and passenger traffic continuing to increase, Seoul Station was completed in October 1925. More railroads were laid down to connect Seoul with other cities; the Gyeong-Chun line, linking Seongdong and Chuncheon, opened in 1939; and the Jang-gang line, traveling from the Cheongryangri station to Gyeongju, opened in 1942.

As the railway network continued to grow, its significance in inter-city transportation also increased. However, unlike the urban transit system, it did not have much impact on the transformation of the urban spatial structure. In the first half of the 20th century when railway construction began, some changes were brought about in the urban structure with commercial centers and residential areas burgeoning around railway stations. But, because railways are basically a rail-based transportation mode, it could only have an indirect impact on the transformation of the urban inner structure, as it only triggered the development of areas in the vicinity of the stations and in proportion to the number of passengers using them.

In contrast to the railway that linked Seoul and other regions, a rail-based car called Gi-dong-cha line was built in 1930 between Dongdaemun, Hwayang-dong and Ttukseom. This rail-based car line was linked to the electric street-car railway line and took its
place in the city’s transit system. It significantly contributed to cargo transportation since it linked Seoul and Tukseom, an area which not only supplied fresh produce to the city but also served as the collection point for firewood and grain that were transported by water from the upper Han River region.

The rail-based car was very popular among citizens because it was the only means by which people could go to Tukseom Park and Bongeun Buddhist Temple, which was on the other side of the port from Tukseom.26 Today, people in their 60s will remember taking the rail-based car to Tukseom Park or taking the ferry to Bongeun Buddhist Temple or the pear orchards located across the Han River. As such, the rail-based car was an important link between the Tukseom area and downtown Seoul that brings back good memories for many elderly citizens of Seoul. After the Korean War, the line was extended once to Gwangarari, but it ceased operation in 1968.

Compared to rail-based transit, which is confined to traveling along tracks, automobiles enjoy more flexibility in movement. The first automobile transportation service was offered by buses—then called “Seunghab” cars. These were used for transportation between different provincial areas. Such interregional transportation services first appeared in regions other than Seoul. Buses had already ceased operating in Seoul in 1932, though they were used to link Seoul and the outskirts of the city. The interregional bus lines continued to expand with the construction of “Shinjakros” (paved roads) during the period of Japanese colonial rule. The Seoul-Changhnowon road, later extended to Chungju, and the Seoul-Chunchoon road were the first roads to connect provincial regions to Seoul. Service was further expanded to cover the nation, establishing buses as one of the major modes of mass transportation. While they played an important role in cities other than Seoul, it was not until the late 1950s that they served well as a public transit system connecting Seoul with other cities. This was due to both the lack of paved roads connecting Seoul to faraway cities and the relatively high fare compared to trains.

Along with the waterway and land routes, people traveled by air to regions outside of Seoul. It was 1913 that the first airplane was introduced in Korea. In 1916, the first air port landing field as Army Temporary Landing Field was built, in the present Yeoeuido area. However, Air plane was not a public transportation mode, since flights were only operated on an individual basis. Full-fledged air transit services began in 1929 when regular passenger flights were provided on the Seoul–Daegu and Seoul–Pyeongyang routes. Soon after, another route linking Seoul and Ulsan began service. The number of air passengers, however, remained low, and the service failed to become popularized. These air services were more for military use by the Japanese Army than for popular use.27
Transportation Development after Independence

CHAOS AND THE REARRANGEMENT OF THE TRANSPORTATION SYSTEM

After its eventful introduction, electric street-car railways became the major public transit system in Seoul. Under the Japanese occupations, in particular, these rail-based streetcars took their place as the only urban transit vehicles and were very popular among passengers. In addition, operating and conducting electric street-car railway were among the most well paid, popular and respected occupations at the time.28

Except for the four-year period from 1928 to 1932 during which buses also provided transit service in the city, electric street-car railways, as the only public transit system since their introduction in 1899, played a major role in the city's horizontal expansion. Both the operators and the users of the system were well aware that the electric street-car railway had a huge impact on the development of the city during the time of Japanese occupation.29

As a result of dramatic changes in the political and social situation following independence in 1945 and the sudden influx of Korean expatriates returning home, the city's population surged, having a great impact on society. Transportation was among the most affected aspects. Amid the state of social disorder following liberation, vandalism was rampant and accidents were frequent as result of overextending the system. The city's transit system was in a state of total chaos. Electric street-car railways often broke down and had to suspend operation as they reached the limits of their capacity. After continuing to operate in adverse conditions, often unable to fully collect the fares, the number of streetcars in service plummeted to 68 in the second half of 1945. Meanwhile, the number of passengers per unit swelled to 7,934 during the same period, a two-fold increase over the first half of the year. The figures demonstrate that the electric street-car railway system was being forced to operate beyond its capacity.30

In fact, the existing transportation system could no longer accommodate the rapidly increasing city population, leading to a chaotic state in the urban transportation system. Unlike the past, new highly congested settlements began to form in higher areas that
were inaccessible by any means of transit, whereas the absence of an
alternative transit system to the over-extended electric street-car rail-
ways finally led to the decline of electric street-car railway opera-
tions. Once the electric street-car railway service shrank in absolute
terms, all new possible modes of transportation began to appear in
the city - along with the rapid reemergence of walking – as means
for providing mobility. With electric street-car railways no longer
serving as the major public transit system, Seoul’s urban transporta-
tion system entered a dismal state.

Under these circumstances, all the possible means of transporta-
tion were mobilized: rickshaws reappeared and horse-drawn carriages
– even ox-drawn carts – were used for transportation, albeit tem-
porarily. However, these vehicles fell short of providing a solution to
the problems of Seoul’s public transit system. Again, people resorted
to walking while electric street-car railway operations worsened
despite the efforts of the Gyeongseong Electricity Corporation to
revive the service.

The electric street-car railway service seemed to be returning to
normal in the first half of 1946, but the situation actually deteriorat-
ed. In the first half of 1947, only 17.7% of the total (41 units) were
in operation meaning that up to 12,841 passengers were riding one
car. In July 1947, only 27 units were in operation.30 Testimonies
from those who used the service at the time confirm the dire state of
the electric street-car railway system. In the days following liberation,
people would wait an excessively long time for a streetcar to come
along, and some passengers had to ride by hanging on to the side of
the car. Therefore, most people resigned themselves to walking
instead of riding the electric street-car railway.31

Although electric street-car railways operated under such
adverse conditions, a comparison between the number of bus pas-
sengers and electric street-car railway passengers shows that the for-
er continued to decline each year from 1945, whereas the latter
picked up again after shrinking in 1945 (Table 4.2). The number of
bus passengers in 1948 equaled a mere 2.9% of the total number of
year-passengers of electric street-car railway. The figure further
dropped to 1.7% in 1948, evidence that the electric street-car rail-
ways still remained essential in the public transportation system of

<table>
<thead>
<tr>
<th>Year</th>
<th>Electric Car (A)</th>
<th>Bus (B)</th>
<th>% (B/A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1945</td>
<td>117,832,034</td>
<td>3,376,728</td>
<td>2.9</td>
</tr>
<tr>
<td>1946</td>
<td>106,741,280</td>
<td>2,425,560</td>
<td>2.2</td>
</tr>
<tr>
<td>1947</td>
<td>109,205,780</td>
<td>2,291,692</td>
<td>2.1</td>
</tr>
<tr>
<td>1948</td>
<td>134,336,677</td>
<td>2,236,074</td>
<td>1.7</td>
</tr>
</tbody>
</table>
When the Korean War broke out, another period of transportation turmoil followed. But at the same time, it provided another turning point in the history of urban transportation. During the war, almost all the electric wiring of the electric street-car railway system, all the streetcars, and 13% of the tracks were destroyed. When the war was over, the electric street-car railway system was instantly repaired and put back into operation. However, it was not able to accommodate the transportation demand of the citizens. Due to fuel shortages, buses, too, failed to provide adequate service. To make matters worse, a large number of people living in the northern part of the country fled to the south after the end of the war, and most of them settled in Seoul. The existing public transit system in the city was stretched beyond its limits and again entered a state of turmoil.

During these times, people hoped that buses could alleviate the transportation load, as buses had more freedom of movement than electric street-car railways. However, they fell short of fulfilling such expectations. The electric street-car railway service underwent repair and resumed operation, but failed to transport a large part of population because of its limited coverage and capacity. All the while, buses failed to meet the transportation need of the city due to fuel shortages.

COMPETITION BETWEEN ELECTRIC STREET-CAR RAILWAYS AND BUSES AS THE LEADING URBAN TRANSIT SERVICE

The disrupted transportation system quickly returned to normal after the war was ended, but the management of the electric street-car railway system faced financial difficulties. So there were discussions about the possibility of handing the operation over to the city government, but it never went beyond the discussion stage. Meanwhile, the situation of the electric street-car railway operation improved: 191 street cars, equal to 65% of the fleet were in service in the first half of 1950, the year the Korean War broke out. With a per unit passenger load of 5,851, streetcars played a critical role as a major transit service in Seoul. Of course, buses were providing service along with the streetcars after the streetcars resumed service in the 1940s, but frequent suspensions of operation due to fuel shortages made the city more dependent on the electric street-car railway system.

After the Korean War, government efforts to rebuild the city and the sudden increase in the population pushed out the city boundaries and accelerated the urbanization of Seoul. During the
reconstruction of the city, electric street-car railway lines were extended to reach Yeongdeungpo station and Donam-dong. Double tracks were laid in some sections of the lines, and the total extension of the electric street-car railway line reached a record length of 40,575 km. However, the electric street-car railway system revealed its limitations, since the lines had not been extended since 1953 and the operating speed was too slow to respond to the growing size of the city. Accordingly, there was some consideration of constructing elevated railroads or subways as alternative transit services, but these ideas were never actualized.

Immediately after Seoul was retaken by the South Korean army during the war, electric street-car railways were much more important than buses as a mode of transportation. As shown in Table 4.3, the total number of bus passengers per annum was a mere 0.2% of electric street-car railway passengers in 1953. The figure indicates that the majority of citizens were utilizing electric street-car railways. Electric street-car railway ridership continued to grow, but the number of bus passengers began to increase dramatically in 1954, one year after the transportation system is considered to have returned to normal. Such increases in ridership can be explained by the burgeoning population of Seoul, as a result both of people returning after fleeing to other cities during the war and of an influx of refugees from North Korea. Generally, electric street-car railways were utilized by people to move around downtown, and buses were used by people who lived in areas where electric street-car railway service was not available. The fact that more people used buses than electric street-car railways demonstrates that the residential areas, which used to form around electric street-car railway tracks, were now expanding to other areas where service was not available.

While bus ridership was rising, people still preferred electric street-car railways. In the late 1950s, women and children in particular used electric street-car railways for safety reasons. Many older people recall riding electric street-car railway cars that were filled with passengers — even during midday. I still remember my aunt

<table>
<thead>
<tr>
<th>Year</th>
<th>Electric Car (A)</th>
<th>Bus (B)</th>
<th>% (B/A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1953</td>
<td>87,995,513</td>
<td>144,606</td>
<td>0.2</td>
</tr>
<tr>
<td>1954</td>
<td>116,249,663</td>
<td>50,610,435</td>
<td>43.5</td>
</tr>
<tr>
<td>1955</td>
<td>117,613,425</td>
<td>95,538,645</td>
<td>81.2</td>
</tr>
<tr>
<td>1956</td>
<td>131,762,595</td>
<td>102,055,867</td>
<td>77.4</td>
</tr>
<tr>
<td>1957</td>
<td>133,197,007</td>
<td>149,657,720</td>
<td>112.4</td>
</tr>
<tr>
<td>1958</td>
<td>107,990,837</td>
<td>166,280,480</td>
<td>154.0</td>
</tr>
<tr>
<td>1959</td>
<td>114,028,986</td>
<td>206,251,360</td>
<td>180.9</td>
</tr>
</tbody>
</table>
complaining how crowded the electric street-car railway was after taking the Donam-dong line to get to our house in Cheongpa-dong. The fact that many people used the electric street-car railway service even during the daytime is evidence to the fact that it truly was the most suitable means of transportation at the time.

Meanwhile, bus ridership continued to grow significantly: in 1955, the number of bus passengers was more than 80% of the total number of streetcar passengers (Table 4.3). Although it was cheaper to ride electric street-car railways than buses, the number of bus passengers in 1957 was 149,657,720, compared to 133,197,007 for streetcars. From this point on, the number of bus passengers continued to grow while electric street-car railway ridership kept falling.

This means that the bus was overtaking the electric street-car railway, which had remained unchallenged as the dominant urban transit system since its launch in 1899. At this time, the Gyeongseong Electricity Corporation, which had been operating the electric street-car railway system since national independence, lost its operating rights to the newly established Korea Electricity Corporation, Ltd.36

Seoul went through political, social and economic changes after liberation. The population of the city surged dramatically as Korean expatriates returned to Korea from overseas, and a large number of rural residents also migrated into Seoul. The growth in population was so great that in 1949 the city nearly doubled in size, while population density decreased only slightly, from 6,627 per km² in 1945 to 6,309 per km² in 1950. A look at the population trend during the period between 1950 and 1968, the year electric street-car railways stopped operation, shows that Seoul's population decreased for five years from 1950 to 1955 – possibly an after-effect of the war (Table 4.4).

As the country regained stability, population growth accelerated. From 1955 to 1960, the population of Seoul increased by 55.3%, growing at an annualized rate of 11.1%. Population growth slowed down after 1960, recording a 41.9% increase for the five-years prior to 1965. The annualized growth rate during the same period was

<table>
<thead>
<tr>
<th>Year</th>
<th>Population (Persons)</th>
<th>Growth Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>1,693,224</td>
<td>-</td>
</tr>
<tr>
<td>1955</td>
<td>1,574,868</td>
<td>-7.0</td>
</tr>
<tr>
<td>1960</td>
<td>2,445,402</td>
<td>55.3</td>
</tr>
<tr>
<td>1965</td>
<td>3,470,880</td>
<td>41.9</td>
</tr>
<tr>
<td>1966</td>
<td>3,793,280</td>
<td>9.3</td>
</tr>
<tr>
<td>1967</td>
<td>3,869,218</td>
<td>4.6</td>
</tr>
<tr>
<td>1968</td>
<td>4,334,978</td>
<td>9.2</td>
</tr>
</tbody>
</table>
8.4%, a pace similar to the 9.3%, 4.6% and 9.2% growth rate in the three years following 1965. These figures indicate that the population of Seoul continued to grow at a steady pace after 1960 with slight variances from year to year. In 1968, a big ceremony was held in Seoul Citizens Center (now Sejong Cultural Center) to celebrate the year Seoul's population exceeded four million: a performance delivered by a choir of 400 singers representing all walks of society.¹⁷

Nevertheless, in light of the fact that the size of the city had more than doubled by 1963, the population increase from 1960 to 1965 was relatively small. It can be presumed that much had to do with the social upheavals that took place during the period, including the April 19 Uprising and the May 16 military coup d'état.

Population increase was more evident in the outskirts than in the center of the city.¹⁸ For example, population growth was especially high in Sanggye-dong, Dobong-dong, Suyu-dong and Bulgwang-dong in the northern outskirts of the city; Bongcheon-dong and the Guro area in the south; and the Cheonho area in the east. The trend became more prominent after 1965 and most areas surrounding the city experienced high population growth. Those areas that saw the highest level of population growth during the first five years of the 1960s continued to show high growth rates in the latter half of the decade. In addition, Jangwi-dong, Myeonmok-dong, Geoyeo-dong and Hwagok-dong also experienced large population increases during this period.

Population growth in the outskirts, which had occurred since 1960, had an impact on the formation of urban districts: in addition to the central districts, new urban districts sprang up throughout the city.¹⁹ However, electric street-car railway lines were unable to keep up with this trend; only two lines, the Donam-dong line and the Yeongdeungpo line, had been added since 1945; moreover, the Jungro – Anguk-dong – Jungangcheong line was shut down along with the Euljiro, Chungmuro 4-ga – Changchungdan line. Thus, the electric street-car railway lines do not appear to have influenced the expansion of urban districts. The only direct impact it had was the demolition of the city walls and the gate nearby the newly constructed Donam-dong line. Otherwise, electric street-car railway lines did not effectuate any spatial changes during this period.

A comparison of the electric street-car railway lines and bus routes shows that bus routes covered the entire city²⁰ as well as the newly formed urban districts in the outskirt areas. In other words, buses succeeded in overcoming the spatial limitations of the electric street-car railway system. In contrast, no new lines were added to the electric street-car railway system after 1953, making its spatial limitations apparent. Electric street-car railway ridership also declined relative to buses.
A comparison of daily passenger traffic between electric street-car railways and buses sheds light on the status of the two transit systems between 1960 and 1965. According to Table 5, the population of Seoul increased by 41.9% during the five-year period; streetcars’ daily passenger traffic increased by a mere 29.3% whereas buses witnessed a steep rise of 112.9% in daily ridership. The statistics show that the role of the electric street-car railway as an urban transit system had been undermined by buses. This is because demand for mass transit surged as the city boundaries and residential areas continued to expand outward after 1963 and the electric street-car railway system with its inherent limitations as a fixed rail-based transportation failed to provide the needed coverage, while bus routes were more flexible and expandable.

With the increase in population and the normalization of bus operations, the number of passengers also surged; in 1957, the annual ridership of buses surpassed that of electric street-car railways (Table 4.3). The number of bus passengers continued to rise after 1957, and the daily passenger traffic of buses reached a record level in 1965, nearly three times that of the electric street-car railways (Table 4.5). The figures indicate that buses had emerged as an important means of transportation in Seoul, for they were capable of providing service to and from anywhere, especially in the newly expanded outskirts of the city where electric street-car railway services were not accessible.

There are many interesting stories about buses during their peak period in the 1960s. I remember riding buses during rush hours when so many passengers had climbed onto the bus that the conductors were unable to close the doors. This would be the cue for the driver to make a sudden start so as to jerk the passengers toward the back, thus, not only allowing doors to be shut but making room to take on even more passengers at the next stop. This is analogous to the modern day "push men" of Seoul’s subway, the strongmen who are given the task of pushing more passengers onto already jam-packed subway trains during rush hours. Anyone who has had the experience of riding buses back in the sixties will well remember the authoritative voices of young female conductors shouting "o-rai" (all-right) followed by a double bang on the side of the bus, the all clear signal for the bus driver to depart.

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Electric Car (A)</th>
<th>Bus (B)</th>
<th>% (B/A)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Persons</td>
<td>Growth Rate (%)</td>
<td>Passengers</td>
<td>Growth Rate (%)</td>
</tr>
<tr>
<td>1965</td>
<td>3,470,880</td>
<td>41.9</td>
<td>440,928</td>
<td>29.3</td>
</tr>
</tbody>
</table>

Table 4.5
Passenger traffic of electric street-car railways and buses a day (1960-1965)
Until the mid-1960s, I used to take both buses and streetcars to commute to school. I remember both of them being packed with passengers during commuting hours. There are many anecdotal stories about crowded buses that evidence how many people were utilizing buses at the time. For example, it was common courtesy for seated passengers to offer to take heavy bags from standing passengers. But, with so many people and school bags packed in like canned sardines, seated passengers frequently found themselves holding bags with the owner no longer in sight while standing passengers would be shoved further and further away from their bags. It required tremendous effort to maneuver their way back to their bags or, for that matter, even to get off the bus. There are many stories about lost bags, fluids leaking from broken Kimchi bottles, spoiled dresses, and the like. Many high school girls used to make a big deal of washing their white sneakers every night, knowing that they would invariably get trampled on again the next day. These stories well illustrate the bus situation of that time.

Outside of commuting hours, buses were quite empty. I remember opting to ride the bus when going home from school, even though the bus stop was much further away than the electric streetcar railway station. It was fun to ride a nearly empty bus. The buses in those times had a different seating structure from today's buses; there used to be a row of seats on each side of the bus facing each other - very much like today's subway trains - nd only the rear row of seats faced the front. The large standing space in the middle allowed buses to receive as many passengers as possible, but it also created humorous situations. A sudden stop could jerk a rear seat passenger out of his seat and send him flying across the empty bus all the way to the front of the car. While it must have been embarrassing for the passenger, it was also quite entertaining for the spectators seated on the sides.

OTHER MEANS OF INTRA-CITY TRANSPORTATION

The first taxi service in Seoul was launched in 1912 when a Japanese entrepreneur set up a taxi company and began offering services. However, the expensive fare prevented people from using the service. In addition, ordinary people did not feel the need for taxicabs since they were able to travel by electric street-car railway and bus. Only certain classes of people made use of taxi services, and average citizens used the service only on special or absolutely necessary occasions, such as having to carry large bags and when conditions made it difficult to travel on foot or by electric street-car railway.41
Although taxis became familiar to the public over time, most common people were ignorant about the new modes of transportation due to lack of public education. It was not uncommon for passengers to cordially take off their shoes and carry it on to the cab, or worse yet, to leave their shoes behind outside the taxi door.

The period of turmoil in public transportation following independence and war slowly ended, and Seoul arrived at another turning point. Buses were rapidly emerging to compete with electric street-car railways as the main city transit system, and new vehicles such as taxis and Habseung taxis appeared. 'Habseung' taxis were similar to today's 16-seat minivan in appearance. The fare was more expensive than buses, because all passengers were seated like taxis. Unlike ordinary taxis that carried a single passenger or party, Habseung taxis were carrying passengers through the fixed route and made several stops. Therefore, the fare of this taxi-bus hybrid was much lower than the usual taxi fare. There were also conductors on board these Habseung taxis, which later evolved into what are today's "Jwaseok" buses - regularly running seated buses.

As Korean society stabilized, migration into Seoul accelerated. Korea's Five-year Economic Development Plan promoted economic growth and prompted the migration of the rural population into cities, especially Seoul. The dramatic increase in Seoul's population caused many problems, including a surge in demand for housing and transportation. At the same time, the city began sprawling out into the suburbs. With the city expanding into the suburbs, people preferred buses. Habseung taxis, taxis and privately owned passenger cars, which provided more flexibility than the rail-based electric street-car railways.

Expanded taxi, Habseung taxi, and bus operation, as well as the surge in private automobile ownership, caused serious traffic congestion in Seoul. The situation called for significant improvements to the urban transit system and led to the construction of the subway system, which replaced the electric street-car railways. With the extension of the roads, transportation for individual use, such as taxis and private automobiles, had become more widespread. In short, the major transportation means of the time included buses, Habseung taxis, which later became "Jwaseok" buses, taxis and private automobiles.

INTERREGIONAL TRANSPORTATION

While intra-city transportation was advancing rapidly, the transportation system linking Seoul and other areas was relatively slow in
developing. The steady construction of railways and the increasing number of passengers utilizing them made the railway the fastest and most efficient transportation link between Seoul and the countryside, not only for the citizens of Seoul but for everyone. Therefore, trains were the most prominent means of interregional transportation and were vital to those visiting their hometown during the nation’s traditional holidays.

Even today, it is very difficult to buy train tickets to travel during traditional holiday seasons. The situation was not that different during the 1950s and 1960s. There were more passengers standing on the aisles than seated. During traditional holidays, people used to stand in endlessly long lines at Seoul Station to buy tickets with reserved seats. Once passing the ticketing gate, people would race toward the cars in order to get a good place on the train. Accidents also occurred from time to time; people were hurt and in extreme cases even trampled to death. The situation was even more dangerous during the Lunar New Year holiday season because of the freezing temperatures. One person slipping on the icy stairway would mean that people behind would trip and fall over as the crowd kept pushing ahead. Inside the train, it was common for three people to share a seat intended for two persons, and some just sat on the floor or climbed on top of the baggage rack to lie down.

Despite these problems, more people traveled by railway than by bus, because most roads remained unpaved and did not cover much of the country. The bus terminals for various destinations were scattered across the city. Buses traveling between Seoul and Euijeongbu departed and arrived at the terminal located in Jongro-5-ga; the Dongmajang Terminal near the Mia three-way intersection served buses traveling between Seoul and the area toward northeast of the city; and buses going to the south departed from Yongsan Terminal.

Air transportation had not developed much at this time. During Japanese rule, aviation’s main purpose was to serve the Japanese military. After independence, Korea National Airlines (KNA) received a permit from the Ministry of Transportation in 1948 and provided service on the Seoul-Busan route. In 1949, passenger flights were also provided on the Seoul-Gangreung route, the Seoul-Gwangju-Jeju route and the Seoul-Ongjin route, connecting Seoul to other cities by air. However, the service was discontinued due to the Korean War. When the war concluded in 1953, the first international route opened, serving Seoul and Hong Kong. In 1954, national carriers began providing service on the Seoul-Taipei-Hong Kong route. Hong Kong Airlines was the first foreign airline to provide service in Korea, flying between Seoul and Hong Kong. The number of international flights continued to increase; in 1957, Northwestern
Airlines (NWA), an American airline, provided flights from Seoul to Seattle across the Pacific Ocean. Still however, air travel was not common among the general public. KNA was eventually renamed the Korea Airlines Corporation in 1962 and taken over by the government. Later in 1969, the operation was privatized and sold to Korean Airlines Corporation, Ltd.

The operation of Yeoeuido Airport in Seoul and Suyeong Airport in Busan was privatized in 1948. Northwestern began flying its planes to Yeoeuido Airport. After the Korean War, all airports had come under the control of the military, and Yeoeuido Airport became an international airport as international routes were launched. In 1958, Yeoeuido Airport was converted to a military airfield and Gimpo Airport was upgraded to become the international airport. Domestic air transportation began to develop as well, with the construction of airports in Busan, Gwangju, Jeju and Gangreung.

The Development of Transportation During the Period of Rapid Economic Growth

DISAPPEARANCE OF ELECTRIC STREET-CAR RAILWAYS AND DOMINANCE OF BUSES

In the late 1950s and throughout the 1960s, streetcars and buses were the two major means of mass transportation in Seoul. However, along with the spatial expansion of the city, the role of electric streetcar railways diminished due to their limited mobility, whereas buses gained popularity because of their flexibility in routing. The mismatch between the growing need for transportation and mobility,
and the electric street-car railways' spatial limitations finally led to their demise. Furthermore, as the city grew larger, the number of bus passengers greatly increased – providing yet another reason for policy makers to shut down the electric street-car railway system.

When the electric street-car railway operating rights, previously held by the Korea Electricity Company, were handed over to the Seoul Municipal Government in 1966, the city government again seriously considered the viability of the electric street-car railway service. In the end, electric street-car railway lines began to disappear in parts of Seoul. When the tracks in Gwanghwamun were removed to construct the underground passageway, it precipitated the end of electric street-car railway service, which made its final exit on November 29, 1968.48

Bus services were briefly introduced for four years between 1928 and 1931 and then re-introduced in the 1940s. However, buses and electric street-car railways coexisted for only ten years between 1955 (when bus passengers numbered 81.2% of total electric street-car railway passengers) and 1968 (when electric street-car railway operations ended). When the electric street-car railway service ceased to operate after serving the city for 70 years, buses remained as the city's sole public transit system, and the city consequently grew more dependent on it.

As the only public transit system, buses played a very important role in the expansion of Seoul. Since buses did not require fixed tracks, they could provide services to wherever settlements emerged. Such routing flexibility and mobility made buses an indispensable mode of urban transportation. Moreover, 1968 was the year when the Korean economy began to take off due to the completion of first Five-Year Economic Development Plan and the progress of the second five-year plan.

Thus, in the late 1960s, there was a rapid migration from rural areas into Seoul, which also rapidly changed the spatial structure of the city. Continued economic development provided momentum to the rural exodus and resulted in a rapid increase in Seoul's population in the late 1960s. Population growth led to a housing shortage, a challenge that was addressed by the housing development and the regional development policies. Such development started with Yeouido Island and was followed by the Gangnam (south of the river) area, which includes the Gangdong-gu, Songpa-gu, Gangan-gu, and Seocho-gu. Apartment complexes were first built in Yeouido after a levee was constructed around the island. The island also became an important political, economic and social center as the National Assembly, businesses and other financial institutions moved into the area. Most of the island were transformed to the built-up area.
Numerous bridges were constructed to link both sides of the Han River. The first housing development in Gangnam was built in Jamsil, where large apartment complexes were built after the area was reclaimed by artificially altering the course of the Han River. The areas now called Apgujeong-dong and Cheongdam-dong, and Dogok-dong were also developed as apartment complex sites. As new roads were constructed in the 1970s, the Gangnam area became very popular as a residential area. The rural landscape of the city’s outskirts transformed into urban settlements, and the construction of the river highway along the Han River completed a traffic network linking the north to the south and the east to the west. The new road system reduced travel time between cities and further precipitated urban migration. By 1979, with the exception of some peripheral areas, most parts of Seoul had become urbanized, and large-scale apartment complexes were constructed in Yeouido and parts of Gangnam.40)

In the early 1970s, when the Korean economy began its high-speed growth, the only available public transit system was the bus. People also used taxis, which served as another important mode of transportation. There were cars for private use, but such use was limited to the upper class of the society. Naturally, the expansion of urban districts in Seoul and the role of buses were closely tied: residential settlements developed first and were immediately followed by bus routes penetrating the area.

The ever-increasing bus routes, buses, taxies and private automobiles quickly exhausted the capacity of the roads. Many elevated highways, underpasses and new roads were built and existing roads expanded; however, such efforts were outpaced by the increase in traffic volume. This led to the planning of a new urban transit system that would be faster, safer and more efficient: the subway system, which was introduced in 1974.

With the introduction of subways and electric railways, the city government forced to change bus routes.41) As for sections where bus routes overlapped with electric railways, some sections of the bus routes were altered. The main emphasis was placed on alleviating congestion in the CBD by increasing circular routes. As a result, 933 buses operating on 28 routes, (23% of 148 bus routes in Seoul) were reassigned to other routes. In sections where the bus routes were in competition with both the subway and the electric railway, 578 buses on 17 routes, which accounted for up to 81% of the total 704 buses on 22 routes, were reassigned to other routes. Eight new routes and 292 buses were put in service to connect with subway stations. In addition to the existing 15 connecting routes with 354 buses, 23 new routes with 646 buses were added so that seven subway stations could be accessed from 23 directions. Sixty-three buses operating on
three circular routes were also added to the existing four routes with 132 buses. The number of bus stops in the section parallel to the Seoul Station – Cheongryangri Station of subway was reduced from 14 to 9 (from 28 to 17, if counting stops on both sides of the road) after subway construction started. Meanwhile, the number of taxi stops in the same section of the road was increased from 6 to 16.

Even after the emergence of the subway system, the role of buses in the 1970s was still unrivalled. When the first subway line opened in 1974, buses carried 81.3% of the passenger load in Seoul, while taxis and subways transported 17.7% and 1.1% respectively (Figure 4.4). In 1976, buses were carrying as much as 80.4% of the passenger traffic in Seoul, making the service virtually the only mass transit system in the city. Nonetheless, as the country’s economy grew and the quality of people’s life improved, the number of both taxi passengers and private automobiles increased. Such changes undermined the unchallenged status of buses as the city’s sole mass transit system. Their modal share dropped from 80% in 1976 to 72.5% in 1978. Though the figure bounced back temporarily in 1980, it continued to decline, recording 69.9% in 1984 and 61.1% in 1986.

The diminished role of buses in urban transportation was caused more by increased utilization of subways rather than taxis. As shown in Figure 4.4, the modal share of taxis remained slightly above 20% since 1978 with not much variation. However, the sub-

![Figure 4.4: Actual transportation shares by buses, taxis and subways in Seoul (1974-1986)](image-url)
way's modal share continued to increase from 1974. After the opening of the Subway Line 2, the share increased to 7% in 1984 and jumped to 15.3% in 1986. In conclusion, the increase in subway passengers resulted from a switch from buses to subways rather than from taxis to subways.

After overtaking the electric street-car railway as the major mode of transportation in 1957, buses had consolidated their position when electric street-car railway services ended in 1968. Though the subway system introduced competing service, buses remained the unchallenged provider of public transportation in Seoul throughout its 1970s and early 1980s heyday, which was also a period of fast economic growth. Full competition between the two began only in the mid-1980s, when the subway system opened Line 2 and became fully established as a public transit system. It was also the beginning of the end of the era when buses reigned as the only urban transit system in Seoul.

THE ARRIVAL OF THE SUBWAY

After 1968, buses were literally the only means of urban transit until Subway Line 1 launched operations in 1974, opening a new era of mass transportation in Seoul. In fact, discussions concerning subway construction began in the mid 1960s as part of the Ten-Year Seoul Master Plan announced in February 1965.\(^{46}\) The city was in urgent need of an alternative public transit service that was fast and reliable. Growth in the number of buses, taxis and other vehicles outpaced the expansion of roads and quickly pushed the city's roads to the point of saturation. This triggered discussions on building a subway system, which became one of the few pet projects of the city in the late 1960s. However, it was only in 1970 that the Office of Subway Construction in Seoul Metropolitan Government was established and in 1971 the actual construction began. A subway system was an urban electric railway that travels entirely or mostly underground. The tracks were used exclusively by the subway trains which usually consist of four to ten cars.\(^{47}\)

The subway was capable of carrying a greater number of passengers in a relatively short time than other public transit modes. It was also safer than road transportation. As traffic congestion increased, the number of subway passengers increased as well. Since subway trains travel on dedicated tracks unaffected by surface road conditions or weather, they were the safest and most reliable mode of transportation. Such merits of the subway system were more apparent in bad weather when the number of riders never failed to go up.
The construction of Subway Line 1 began in 1971 and was completed in three years and four months – a world record at the time. The subway line stretched 9.54km, connecting Seoul Station to Jongro and Cheongryangri. Opened simultaneously with the Seoul-Incheon, Seoul-Suwon and Seoul-Weonju electric railway lines, it laid the cornerstone for the metropolitan area’s electrified transit system, which is now 108.14km long. The first subway line roughly coincided with the old electric street-car railway line, traversing the central part of Seoul. At Seoul Station, the line connected to the Suwon-Incheon electric railway lines. It was the backbone of the most important public transit network in the metropolitan area and also connected to the Seoul-Busan and Honam railway lines. At Cheongryangri Station, the subway line was linked to the Seoul-Chuncheon and the Jungang electric railway lines, making Cheongryangri as the transportation hub of the northeastern part of Seoul.

The subway system commenced operation on August 15, 1974, the 29th anniversary of Korea’s independence from Japanese colonial rule. The city government launched active promotion campaigns and generated an air of festivity to celebrate this pivotal event in Korea’s transportation history. However, the unexpected assassination of then First Lady Yuk, Yeong-Su spoiled the mood and depressed the atmosphere of the opening ceremony. The opening ceremony, which was scheduled for 11 AM following the commemoration ceremony, took place without the President and his wife.

After the opening ceremony on August 15, test rides for the general public were provided, and every station was filled with curious crowds. Free tickets were issued for the occasion. Regular operations commenced at 4:30 AM, August 16. Even before the opening, the promotion campaigns for the subway were vigorous and well planned. The train schedule and detailed instructions on how to use the subway were printed in newspapers. There were also articles promoting the safety of the subway, which was greater than conventional railroads. Such was the result of the Seoul Municipal Government’s earnest efforts to solve the traffic problem in the metropolitan area. It was evident that the municipal government had taken care and effort this time, especially if one recalls the unfortunate incident that took place with the earlier electric street-car railway system due to the lack of public safety education.

During the days before and following the 15th, newspapers published big headlines announcing the opening of the country’s new era of public transportation. The test riders expressed their satisfaction with the subway. It is interesting to note that some at the time already pointed out the possibility of accidents that could be caused by the large gaps between the platform and trains, something
that continues to cause occasional problems today. In the early
days of operation, many bought tickets and rode the subway for a
couple of stations merely out of curiosity. The situation was quite
similar to that of the beginning of the electric street-car railway sys-
tem: there were more spectators than actual riders. The public pro-
motion of the subway was clearly a success. People had a positive
image of the subway and the number of riders grew steadily.

In 1974, the first year of subway operation, the subway
accounted for only 1.1% of the modal split, compared to 81.3% for
buses (Figure 4.4). This was because the subway covered only a small
area of a large city, the city people lacked of awareness, and the statistics
only accounted for the four months of the year remaining after the
subway line opened in August. However, in the subsequent years, statistics showed that subway traffic steadily increased.

Subway Line 2 was partially opened in 1982, and the total
extension of 53.7 km opened in 1984. Line 2 circled the city and had
the longest track length of all lines in operation. The important
role of Line 2 was to connect the CBD, including City Hall, to Sub-
centers like Shinchon, Guro Industrial Complex, Shilim, Sadang,
Gangnam, Jamsil and Dongdaemun Stadium. After the opening of
Line 2, the number of subway users increased to 7.3% of the popula-
tion. The subway’s modal share continued to surge after Lines 3
and 4 opened in 1985. Figure 4.4 indicates that subway had become
one of major transportation modes in Seoul with the share of 15.3%
in 1985.

Subway Line 3 traveled 24.2 km from Yangjae to Gupabal, and
Line 4 extended 28.2 km from Sanggye to Sadang. Both lines
opened in 1985 to connect the northern and southern parts of Seoul
by traversing the center of the city. Line 3 was designed specifically
to travel to the basement of the Express Bus Terminal and link to the
transportation network outside of the city.

When the subway was first built in 1974 to alleviate traffic con-
gestion in Seoul, its role was not significant at all. However, with the
opening of Line 2 in 1984 and Lines 3 and 4 in 1985, it became
another important pillar of the metropolitan transit system. This
indicates that the subway was being recognized as a convenient
means of transportation, that people were diversifying their modes of
traveling and that the city government’s policy of building the sub-
way system was the right one.

The opening of the circular line (Subway Line 2) and Lines 3
and 4, which linked the north and south of the city, took place in
the 1980s when Seoul’s population grew exponentially and rapidly
transformed the urban space. At the same time, the construction of
the 88 Olympic Expressway along the Han River and other roads
was ushering in the era of automobiles. Other social changes took
place as well. The trend towards nuclear families and the increased purchasing power of people without homes caused a severe housing shortage. To meet these needs, large apartment complexes were built in the Gangnam area, and later on more were built in Mokdong, Songpa, Jungye and Hagye to function as bedroom communities within the city, giving Seoul a new look.

The changes in Seoul's transit system were not necessarily intended to induce urban structural changes. However, rapid population growth, development of new residential areas like apartment complexes and the consequent rapid urbanization inevitably led to structural changes. Such changes led in turn to the construction of more bridges on the Han River, the establishment of new road networks and the emergence of new public transit systems like the subway. As the number of private automobiles increased along with both available modes of mass transportation and the number of transportation users, residential areas continued to form along transit system routes. In fact, areas adjacent to the subway stations attracted shops and developed as commercial zones. In conclusion, the changes in the transportation system were caused by Seoul's socio-economic changes, which led in turn to alterations of the urban spatial structure.

THE EMERGENCE OF PRIVATE AUTOMOBILES

Urbanization, suburbanization and the construction of satellite cities caused by economic growth spurred the transformation of the city's horizontal structure by building new roads and widening existing ones. The construction of roads, the emergence of new residential areas and the increased economic power of individuals led to an increase in car ownership that again triggered changes in Seoul's transportation system. Automobiles, which had been regarded in the past as an item owned by companies or government offices, became a commodity that individuals owned for convenience. Widespread ownership of automobiles brought about socio-cultural changes that again transformed the urban spatial structure and traffic network.

This period also saw the construction of riverside highways on both sides of the Han River as well as numerous bridges. Most of the present bridges on the Han River were built in the 1970s and the 1980s. The handful of bridges built before the 1970s included the Hangang Bridge, which was already in use during Japanese colonial rule; Yanghwadaegyo Bridge, built in 1965; and Hannam Bridge, which opened at the same time as the Seoul-Busan Expressway in 1969. The construction of Mapo Bridge was completed in 1970. In
all, a total of thirteen bridges were built by the late 1980s: Yeong-dong, Jamshil, Cheonho, Jamsu, Haengju, Seongsu, Seongsan, Won-hyo, Banpo, Dongjak, Gungho and the Olympic Bridge.

With the development of Gangnam, roads with over ten lanes emerged, and many existing roads were expanded to ten or more lanes. In addition to the riverside highways and the Olympic Highway, the city’s roads were now ready for the automobile era. Along with these structural changes inside the city, the number of automobiles grew steadily. Private automobiles emerged in the late 1970s as the new transportation mode of the 1980s.

In 1982, the number of private cars registered with the Seoul Municipal Government reached 127,942, accounting for 50.4% of the total number of automobiles registered and representing one vehicle for every 69.7 people (Table 4.6 and 4.7). Although some of the vehicles registered for private use were probably company cars in practice, private car ownership continued to rise. Except for the period between 1984 and 1986 during which the rate dropped to 45.4%, the number of registered private automobiles increased dramatically throughout the 1980s, exceeding 60% by 1990. In fact, the rapidly growing number of private vehicles accounted for 69.0% of the total registered vehicles in 1990. The rate of ownership also increased rapidly: by 1990, one out of 12.9 persons owned a car.

The increase in private car ownership indicated that private automobiles had become a popular means of transportation and, in effect altered the transit system as well as the urban spatial structure. In fact, the examples of foreign countries show that the arrival of the automobile era has been accompanied by urban sprawl. Urban sprawl and changes in urban space were bound to happen in Seoul as well. Such events identified the 1980s as the period when private automobiles were introduced as a new mode of transportation.

OTHER URBAN TRANSPORTATION

The exponential growth of Seoul’s population, a result of economic development, caused many problems, one of which was a housing shortage. The existing residential areas were incapable of supporting the rapidly increasing population. Consequently, the most urgent tasks were to develop new residential areas and to address the traffic problem. The emergence of buses as a major means of mass transportation provided freedom in mobility, which in turn fueled further expansion of urban residential space and a subsequent expansion of bus routes.

Around the time that subway services were introduced, "Maeul
### Table 4.6

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Private Car</th>
<th>Ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>253,647</td>
<td>127,942</td>
<td>50.4</td>
</tr>
<tr>
<td>1984</td>
<td>377,220</td>
<td>209,710</td>
<td>55.6</td>
</tr>
<tr>
<td>1986</td>
<td>521,521</td>
<td>304,902</td>
<td>58.5</td>
</tr>
<tr>
<td>1988</td>
<td>778,940</td>
<td>493,573</td>
<td>63.4</td>
</tr>
<tr>
<td>1990</td>
<td>1,193,633</td>
<td>823,731</td>
<td>69.0</td>
</tr>
<tr>
<td>1992</td>
<td>1,568,399</td>
<td>1,126,683</td>
<td>71.8</td>
</tr>
<tr>
<td>1994</td>
<td>1,932,233</td>
<td>1,427,705</td>
<td>73.4</td>
</tr>
<tr>
<td>1996</td>
<td>2,168,182</td>
<td>1,627,920</td>
<td>75.1</td>
</tr>
<tr>
<td>1998</td>
<td>2,196,819</td>
<td>1,653,149</td>
<td>75.2</td>
</tr>
<tr>
<td>1999</td>
<td>2,297,726</td>
<td>1,679,727</td>
<td>73.1</td>
</tr>
</tbody>
</table>

### Table 4.7

<table>
<thead>
<tr>
<th>Year</th>
<th>Registered Automobile</th>
<th>Increased Automobile</th>
<th>Growth Rate (%)</th>
<th>Residents per Registered Automobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>127,942</td>
<td>-</td>
<td>-</td>
<td>69.1</td>
</tr>
<tr>
<td>1984</td>
<td>209,710</td>
<td>81,768</td>
<td>63.9</td>
<td>45.3</td>
</tr>
<tr>
<td>1986</td>
<td>304,902</td>
<td>95,192</td>
<td>45.4</td>
<td>32.1</td>
</tr>
<tr>
<td>1988</td>
<td>493,573</td>
<td>188,671</td>
<td>61.9</td>
<td>20.8</td>
</tr>
<tr>
<td>1990</td>
<td>823,731</td>
<td>330,158</td>
<td>66.9</td>
<td>12.9</td>
</tr>
<tr>
<td>1992</td>
<td>1,126,683</td>
<td>302,952</td>
<td>36.8</td>
<td>9.7</td>
</tr>
<tr>
<td>1994</td>
<td>1,427,705</td>
<td>301,022</td>
<td>26.7</td>
<td>7.6</td>
</tr>
<tr>
<td>1996</td>
<td>1,627,929</td>
<td>200,224</td>
<td>14.0</td>
<td>6.4</td>
</tr>
<tr>
<td>1998</td>
<td>1,653,149</td>
<td>25,220</td>
<td>1.5</td>
<td>6.2</td>
</tr>
<tr>
<td>1999</td>
<td>1,679,727</td>
<td>26,578</td>
<td>1.6</td>
<td>6.1</td>
</tr>
</tbody>
</table>

Buses" (local shuttle buses) also appeared. These buses operated between subway stations and populated residential areas or areas with no direct access to the public transit system. Ever since, Maeul Buses with predetermined routes have been operating in many neighborhoods and communities. Community residents welcomed these buses, as their fares were cheaper than ordinary buses. Although there were cases where their routes overlap with those of existing buses, the main purpose of the Maeul bus was to link residential districts with subway stations.

Since all types of regular buses, including Jwaseok buses and Maeul buses, were restricted to predetermined routes, sometimes people had to go through the inconvenience of transferring buses more than once to get to their destination. The transportation
modes that filled the gaps left by the spatial limitations of buses were taxis and private automobiles. They enabled people to reach their destinations without the trouble of transferring between multiple transit systems. As the economy grew at a high speed, socio-economic conditions enabled people to afford increased use of taxis and private automobiles.

Taxis first appeared during Japanese colonial rule and mostly served the privileged classes of society. However, from the late 1960s, the upper class began using their own automobiles, and taxis became the transportation option of the common citizen. As such, the number of taxi passengers continued to increase. After the Five-Year Economic Development Plan produced substantial results, the percentage of passengers by taxis reached 17.6% in 1974. The figure fell slightly in 1976, but it was still above 17%, and in 1978, it was up to 24.3% (Figure 4.4). From that time on, though there were some fluctuations, taxis in Seoul maintained a modal share above 20%. This clearly indicates that taxis were now fully established as one of the major means of transportation in the city.

In sum, the data comparing annual passengers by transportation modes indicates that by 1976, some bus riders switched to taxis and the subway after the subway system began operation. While the number of bus riders decreased steadily, the number of taxi passengers remained quite steady. Noteworthy is 1986, the increase of the sharing percentages by the subway passengers was the similar amount as the decreasing proportion of passengers by buses. This was probably because an increasing number of citizens found the subway more convenient than buses, and taxi riders basically remained unchanged. Such changes in usage patterns foreshadowed changes in the urban transit system.

INTERREGIONAL TRANSPORTATION

Transportation between Seoul and other parts of Korea was mainly provided by surface transit systems such as express buses, inter-city buses, rail and air transportation. Interregional transportation entered a new era when the Seoul-Incheon Expressway was built in 1968 as the first expressway in Korea. The Seoul-Incheon Expressway initially opened with a total extension of 29.5 km. In 1970, the 428km Seoul-Busan Expressway opened, followed by the Honam Expressway and the Yeongdong Expressway. These expressways linked Seoul to other regions of the country. Their construction shortened travel time and made all regions accessible within a single day’s travel. In addition, when the 145.3km long Jungbu Expressway
opened in 1987, connecting Seoul and the Nam-i Junction of the Seoul-Busan Expressway, travel to other regions became even more convenient.

With the construction of expressways, express buses began operating between Seoul and other large cities across the country, and the number of inter-city buses using national highways and expressways increased further. As Gangnam was developed, bus terminals that had been scattered across the city were consolidated in a single terminal. In 1978, Seoul City Bus Terminal was built in Banpo for buses traveling to and from the Honam and Yeongdong region. Then the Seoul Express Bus Terminal was built just east of Seoul City Bus Terminal in 1981 for buses traveling on the Seoul-Busan and Guma line. Thus, Banpo started to play a role as a gateway for interregional bus transportation in Seoul.

Nambu Terminal, which was initially established in 1974 at Yongsan, was moved to its current location in Seocho-dong, in 1989, after the Korea Truck Terminal moved close to the Yangjae-dong Interchange. The various terminals for inter-city buses to the northeastern regions of Seoul were merged into Sangbong Inter-city Terminal located in Sangbong-dong, Jungang-gu. After the opening of the Jungbu Expressway, East Seoul General Terminal was opened in Gweoi-dong, Gwangjin-gu as another gateway to Seoul.

Since the Seoul-Incheon line was started operation in 1899, the railway has been the primary transportation system for connecting Seoul with other regions. However, the socio-economic development of Korea brought about the development of other transportation modes, and the status of the railroads was not what it had been in the past. The development of air transportation and improvements in auto transportation linked with the building of expressways reduced the number of railroad passengers. To regain passengers, the railway authorities came up with ideas such as offering special purpose trains. Railway operations were greatly altered as a result of the new subway and electric railway system that started operating in the metropolitan area on August 15, 1974.9) First, a total of eight limited express lines runs were added – both directions on four stretches of track: the Seoul-Busan line (midnight express), the Cheongnyang- gri-Gangreung line (via the Taebak line), the Seoul-Yeosu line and the newly built Seoul-Masan line. Second, a total of eight runs – both directions on four sections of track – were added on to the four regular express railway lines: Daegu-Masan, Daegu-Busan, Daegu-Geumcheon and Busan-Ulsan. Third, four lines and 34 trains were added to the railroad network around Seoul, and the schedules were standardized. As a result, the trains on the Seoul-Munsan line and Cheongnyangri-Daegwangri line ran every hour, and trains on the Cheongnyangri-Chuncheon line ran every two hours. Fourth, for
freight trains, 22 trains were added for five sections and 11 round trips.

The names for the special express lines also changed. Gwang-wangho renamed to Saemaeulho; all express lines on the Seoul-Busan line, such as Sangrok, Bidulgi, Tongil and Eunhaho, became Tongilho; the name of Taegeuk and Baekma on the Honam line were changed to Pungnyeonho; the Pungnyeonho Express on the Jeolla line became Jeungsanho; Chungmuho, the Euljiho Express on the Seoul-Jeonju line was renamed to Hyeopdongho; the Ship-jaseong on the Central line became Yakjinho; and Janghang Line Express became Buheungho. Also, as trains shifted from steam engines to electricity for power, rail transportation in the country also found itself at a major turning point.

In 1974, the Saemaeul Express that traveled between Seoul and Busan covered the whole distance in 4 hours and 50 minutes. This meant that people could complete a round trip to anywhere in the country in a single day. In the 1980s when the expressways and other roads became overcrowded with the increasing number of automobiles, the railroad system again tried to transform itself. The railroad network in the metropolitan area was expanded, the tracks were improved, and double-tracks were laid in some sections. In 1985, the first privately constructed terminal building opened at Seoul Station. The new building was intended to upgrade the station to a space for shopping and other cultural experiences in addition to simply loading and unloading passengers – one of many efforts to attract more passengers to the railway system.

Thanks to such efforts, the number of railroad passengers reached 337,795,592 in 1985 (Table 4.8). Though the difference was not significant, inbound travelers tended to use the railway more than outbound travelers. The number of passengers grew by 13.2% between 1985 and 1990. Despite the decrease in railroad passengers in the 1970s due to the introduction of express buses and inter-city buses, people came back to the railway in the 1980s because of heavy road congestion and improved railway services.

The privatization of the aviation industry in 1969 gave rise to many expectations, including more flights and passengers. However, the oil crisis of the 1970s and the newly opened expressways

<p>| Table 4.8 |
| Changes in the number of railway passengers (1985-1999) |</p>
<table>
<thead>
<tr>
<th>Get off</th>
<th>Get on</th>
<th>Total</th>
<th>Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>168,467,616</td>
<td>169,307,976</td>
<td>337,795,592</td>
</tr>
<tr>
<td>1990</td>
<td>193,663,586</td>
<td>186,835,780</td>
<td>382,529,366</td>
</tr>
<tr>
<td>1995</td>
<td>240,826,469</td>
<td>235,136,611</td>
<td>475,963,080</td>
</tr>
<tr>
<td>1999</td>
<td>211,550,846</td>
<td>198,527,397</td>
<td>410,078,243</td>
</tr>
</tbody>
</table>
decreased the number of air travelers. Out of fifteen existing local airports, eight airports (Jeonju, Gunsan, Gangneung, Pohang, Mokpo, Ulsan, Jinhae and Samcheok) were closed down. Based on my own travel experience to Jeju Island before the oil crisis, I remember that although the fare was already quite affordable compared to other means of transportation, discount tickets were being offered to students. The number of passengers was substantially large, although there were far fewer airplanes in operation than today. In some cases, prop planes were used for travel between nearby cities. The domestic routes that closed down in the 1970s reopened afterwards, and new routes were added linking Seoul with eleven cities: Busan, Daegu, Jeju, Gwangju, Sokcho, Yeosu, Jinju, Ulsan, Pohang, Gangneung and Yecheon. As foreign airlines started flying to Korea, interaction with the outside world was further promoted.

Gimpo Airport became not only the center of domestic air transportation, but also Korea's gateway to the outside world. With the launch of Asiana Airlines in 1988, healthy competition began to take place between the two companies as both strove to improve services and stay ahead of the other. Between 1985 and 1990, the number of passengers grew 230.5% for domestic routes and 124.0% for international routes (Table 4.9). Traffic congestion on the roads increased not only the number of railroad users but also airline passengers. Although the small territory of Korea does not really provide adequate space for the development of the aviation industry, it seems that the saturated road conditions more than made up for this inadequacy. As for international flights, the growth rate in the number of passengers remained relatively low until overseas travel was liberalized in 1989.

### Table 4.9

<table>
<thead>
<tr>
<th></th>
<th>Domestic</th>
<th></th>
<th>International</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Air Passengers</td>
<td>Rate (%)</td>
<td>Air Passengers</td>
<td>Rate (%)</td>
</tr>
<tr>
<td>1985</td>
<td>2,532,000</td>
<td>-</td>
<td>3,773,600</td>
<td>-</td>
</tr>
<tr>
<td>1990</td>
<td>8,367,000</td>
<td>230.5</td>
<td>8,453,600</td>
<td>124.0</td>
</tr>
<tr>
<td>1995</td>
<td>16,984,000</td>
<td>103.0</td>
<td>13,291,000</td>
<td>57.2</td>
</tr>
<tr>
<td>1999</td>
<td>17,810,000</td>
<td>4.9</td>
<td>15,474,000</td>
<td>16.4</td>
</tr>
</tbody>
</table>
The Development of Transportation in the Late 20th Century

The subway system, introduced in 1974, consolidated its position as a major public transit service when Lines 2, 3 and 4 opened in 1986 and the system carried 15.3% of the city’s total passenger load. Its status as one of the major urban transit systems has been strengthened by continued expansion throughout the 1990s. During this decade, the 6km extension line from Shindorim to Kkachisan was added to Line 2; Line 3 was extended by 1.5km from Gupabal to Jichuk at one end and by an additional 7.5km from Yangjae to Suseo at the other end; and the 4km extension from Sanggye to Danggogae and the 1.2km extension from Sadang and Namtaeryeong were added to Line 4.

Lines 5, 6 and 7 also opened under the operation of the Urban Railroad Corporation. In 1995, some parts of Line 5 went into operation. In 1996, the entire 52.3km of Line 5 was operative and carried passengers from Gimpo Airport to Sangil-dong and Geoyeodong passing through downtown Seoul and Cheonho-dong. In contrast with other lines that traveled on bridges over the Han River, Line 5 crossed the river through a tunnel. Line 8 partially opened in 1996, and with the 1999 opening of the Amsa-Moran extension, the 17.7km line is now in full operation. Line 7 opened in 1998, serving the route between Dobongsan and Geondae station. The entire length of the 46.9km line opened in 2000. In the same year, Line 6 began service in the Sangwoolgok-Bonghwaseon section and the Eungam-Weolgok section. As such, most parts of the city are now connected by the subterranean tracks of the subway system (Figure 4.5).

The subway system, once established, became much more popular than buses and other urban transit services. Table 4.10 shows daily modal share by transportation modes; the subway system carried 18.8% of passenger traffic in 1990 and 24.6% in 1992; the percentage continued to rise to 33.8% in 1999, making the system the number one urban transit system in Seoul. The increase in subway passengers is related to the difficulties of surface road travel; surface transportation had reached its capacity due to a surge in the number of automobiles on the road, and road conditions kept deteriorating because subway construction sites caused bottlenecks in many parts.
of the traffic network. This was especially true when road conditions worsened due to bad weather or when roads were closed for special occasions. Still, residents have come to consider the subway the most effective way to travel in Seoul, since the trains are always on time unless there are mechanical problems.

Traffic congestion reached its peak right before the financial crisis of 1997. Congestion was no longer limited to rush hours but became something citizens suffered throughout the day in all parts of the city. But congestion was greatly relieved during the financial crisis: people refrained from driving their cars and used public transportation instead. Since most people preferred the subway over buses, it seems that the increase in subway passengers after the mid-1990s came from former bus riders, taxi passengers and car drivers who were switching to the subway. In 1998, one year after the outbreak of the financial crisis, the subway system transported 32.3% of Seoul's passenger load, a 2.8% rise in a two-year period; meanwhile, the modal share fell by 1.0% for buses, 0.7% for taxis and 1.0% for privately owned passenger cars. These figures demonstrate that pas-
sengers shifted to the subway system from other public transit vehicles.

In summary, electric street-car railways running on surface tracks opened the 20th century, and subway trains running on underground tracks closed it. Indeed, the subway system currently plays a critical role in Seoul’s transportation, carrying one-third of Seoul’s population every day. With rising ridership, commercial zones started to form around subway stations and brought about structural changes in the urban space. For example, large department stores and shopping centers were built in the vicinity of subway stations. Many stations were transformed so that they could function as more than just a transit facility. Spaces were designed to reflect the geographic or historical characteristics of the area, or to be utilized by passengers as convenient rendezvous points. In some cases, underground shopping centers that connect to subway stations were constructed, and the areas around subway stations became new commercial areas. Today, people give directions by describing the location relative to certain subway stations, and proximity to subway stations has become one of the most important requirements for a good location.

When the third phase of the subway is completed up to Line 13, nearly all parts of the city will be within a radius of 10-15 minutes travel time from subway stations. Therefore, the subway system will accommodate more passengers in the 21st century, which in turn will reinforce the role of the subway system as the first and foremost public transit system. All things considered, the subway system is expected to lead transportation in Seoul in the 21st century.

| Table 4.10 |
|  |
| Actual shares of transportation in Seoul (1990-1999) |

<table>
<thead>
<tr>
<th></th>
<th>Bus</th>
<th>Taxi</th>
<th>Subway</th>
<th>Private Automobile</th>
<th>Etc</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>10,668</td>
<td>3,252</td>
<td>4,632</td>
<td>3,440</td>
<td>2,735</td>
<td>24,658</td>
</tr>
<tr>
<td>%</td>
<td>43.3</td>
<td>12.8</td>
<td>18.8</td>
<td>14.0</td>
<td>11.1</td>
<td>100.0</td>
</tr>
<tr>
<td>1992</td>
<td>9,989</td>
<td>3,072</td>
<td>6,313</td>
<td>3,740</td>
<td>2,601</td>
<td>25,715</td>
</tr>
<tr>
<td>%</td>
<td>38.9</td>
<td>11.9</td>
<td>24.6</td>
<td>14.5</td>
<td>10.1</td>
<td>100.0</td>
</tr>
<tr>
<td>1994</td>
<td>10,037</td>
<td>2,569</td>
<td>7,480</td>
<td>3,796</td>
<td>2,558</td>
<td>26,440</td>
</tr>
<tr>
<td>%</td>
<td>38.0</td>
<td>9.7</td>
<td>28.3</td>
<td>14.3</td>
<td>9.7</td>
<td>100.0</td>
</tr>
<tr>
<td>1996</td>
<td>8,352</td>
<td>1,901</td>
<td>8,165</td>
<td>5,856</td>
<td>2,488</td>
<td>27,762</td>
</tr>
<tr>
<td>%</td>
<td>30.1</td>
<td>10.4</td>
<td>29.5</td>
<td>21.1</td>
<td>9.0</td>
<td>100.0</td>
</tr>
<tr>
<td>1998</td>
<td>7,922</td>
<td>2,636</td>
<td>8,776</td>
<td>5,466</td>
<td>2,405</td>
<td>27,205</td>
</tr>
<tr>
<td>%</td>
<td>29.1</td>
<td>9.7</td>
<td>32.3</td>
<td>20.1</td>
<td>8.8</td>
<td>100.0</td>
</tr>
<tr>
<td>1999</td>
<td>7,909</td>
<td>2,535</td>
<td>9,262</td>
<td>5,385</td>
<td>2,356</td>
<td>27,462</td>
</tr>
<tr>
<td>%</td>
<td>28.8</td>
<td>9.2</td>
<td>33.8</td>
<td>19.6</td>
<td>8.6</td>
<td>100.0</td>
</tr>
</tbody>
</table>
THE POPULARIZATION OF AUTOMOBILES

The increased number of automobiles in Seoul, due largely to economic affluence, has brought about excessive traffic congestion. Moreover, the second phase construction and expansion of the Seoul subway system throughout the city further exacerbated the problem and revealed the capacity limits of the city's road network. Although Seongsu Bridge was rebuilt after its shocking collapse, many people still recall how serious traffic congestion was on the bridge a year prior to the collapse. The traffic jam on the Seongsu Bridge was also linked closely with a series of other congestions in Gangnam, which would last all day and even through the night.

Seoul's severe, time- and location-independent traffic jams were caused mainly by bottlenecks that were created by the inherent structural deficiency of the road system. In addition, limited access to the roads due to subway construction as well as a dramatic increase in the number of vehicles further aggravated traffic congestion in Seoul. Before the outbreak of the 1997 financial crisis, roads in Seoul were often referred to as "quasi-parking lots" where cars were nearly at a standstill due to congestion.

In an effort to alleviate traffic congestion, roads were continuously built and expanded in Seoul. The Dongbu Expressway (Jungangcheon Riverside Highway), Seobu Expressway, Inner Ring Roads and Gangbyonbukro (North Riverside Highway) were newly constructed to improve the heavy traffic flow. The Seogang Bridge was also built along with expansions of existing bridges on the Han River. In addition, the Seoul Metropolitan Government conducted a campaign in 1988 encouraging car pooling and started collecting congestion fees at the No.1 and No.3 toll-gates of Namhan tunnels to reduce inbound traffic to downtown Seoul. This policy received favorable reviews in the early stage when traveling speed for autos increased in the CBD as a result. However, serious doubts as to its effectiveness are being raised nowadays.

Although the pace of growth for registered vehicles in Seoul did slow down in the 1990s compared to the 1980s, the absolute number of vehicles grew continuously throughout the decade. In 1990, the number of registered vehicles in Seoul exceeded one million, among which 69%, or 823,731 cars, were owned privately by individual households. This meant that one person out of every 12.9 Seoul residents had a car (Table 4.6 and 4.7). During 1990-1992, the number of vehicles registered to private households increased by 36.8%, exceeding a million. Consequently, 71.8% of all registered cars were privately owned (i.e., 1 out of 9.7 Seoul residents owned a car). The statistics clearly demonstrate that most of Seoul's popula-
tion owns cars, which are nowadays considered more of a commodity than a luxury item.

The number of privately owned vehicles steadily increased from 1996 to 1998 and constituted more than 75% of the total number of registered vehicles in Seoul. In 1999, however, the proportion of privately owned cars decreased while the absolute number of cars increased. This is largely due to the fact that commercial vehicles and other special purpose vehicles had increased during this period. The steady increase in the number of cars has brought down the ratio of residents to private cars to 6.4 persons in 1996, 6.2 persons in 1998 and 6.1 persons in 1999. Thus, at the end of the 20th century, the private automobile, albeit an individual transportation vehicle, had become a widely used means of transportation in Seoul.

For instance, in 1990, the proportion of private automobiles accounted for 69.0% of all registered vehicles. They carried 14.0% of total passenger traffic (Table 4.10). Private automobiles, however, made up more than 75% of the total number of registered vehicles in 1996 and were responsible for carrying 21.1% of all passenger traffic. Thus, the proportion of private automobiles had increased by 6.8% since 1994 and carried twice taxis’ modal share. The increased share of passenger traffic appears to have come from former bus riders. This is indicated in the fact that the proportion of passenger traffic carried by bus shrank from 38.0% to 30.1% between 1994 and 1996, during which time dependency on subways and taxis increased.

The financial crisis in 1997, however, changed the transportation outlook for Seoul residents who had previously depended heavily on private automobiles for mobility. The outbreak of the financial crisis resulted in such a drastic decrease in auto use in Seoul that rush hour traffic and congestion seemed to be things of the past. Although automobiles did return to the roads after a year or so, the change that took place was caused by a change in behavior among Seoul citizens who refrained from driving their own cars and used public transit systems instead. Consequently, the modal share of private automobiles dropped to 20.1% in 1998 and further decreased to 19.6% in 1999.

At the end of the 20th century, cars became an essential mode of transportation for individuals, a trend that is expected to continue into the 21st century. One of the major challenges, however, lies in the fact that Seoul is a historical city, and no one had, even 20 years ago, anticipated such a dramatic increase of automobiles. This sudden increase gave rise to critical issues, such as parking space shortages and the need to restructure urban space. The municipal government is currently taking initiatives like converting narrow alleys into one-way streets and assigning street-parking spaces to neighborhood
residents first. However, more extended effort is required to address the city's lack of parking.

DIMINISHING ROLE OF BUSES

Since the mid-1980s, when Seoul's subway became the major public transit system for Seoul residents, bus companies have been trying to win back passengers by introducing new types of buses and improving services. The number of bus passengers, however, steadily decreased due to the limitations of land transportation on surface. The "Bus-Only Lane" scheme, which was introduced in 1995, provided more convenience to bus passengers but was not enough to enable buses to compete with the subway in terms of convenience, speed and efficiency.

In 1990, buses transported 43.3% of total daily passenger traffic to take the lead among Seoul's transit systems. All the while, the number of subway passengers continued to increase. In 1992, buses transported only 38.9% of passenger traffic, and in 1996, the proportion dropped to 30.1% as a result of fierce competition with the subway, which was carrying 29.5% of total passenger traffic. Furthermore, 31.5% of passenger traffic was carried by taxi and private automobiles. Therefore, it is safe to say that traffic in Seoul basically relied on buses, subway trains, taxis and private automobiles.

In 1998, when the financial crisis drove up the number of passengers taking the subway and reduced the number of private automobiles on the street, the modal share of buses dropped to 29.1%. Moreover, the subway carried 32.3% of passenger traffic, surpassing that of buses. In 1999, the subway experienced an increase of 33.8%, while buses experienced a decrease of 28.8%. Clearly, buses, which once carried 80% of passenger traffic in Seoul, conceded its position as the top urban transit system to the subway. Since 1968, buses had significantly influenced urban development in Seoul in their role as the foremost public transit system. After going through a period of co-existence with the subway, buses now assumed a merely supplementary role to the subway. The hey-day of buses had finally come to an end.

Nevertheless, buses are expected to continue to play an important role as a public transit system along with the subway, since passenger traffic carried by the bus and subway systems combined was 62.1% in 1990, 63.5% in 1992, 66.3% in 1994, 59.6% in 1996, 61.4% in 1998 and 62.6% in 1999, thus maintaining a 60% level throughout the decade. Therefore, the two major public transit systems continue to play critical roles in transporting Seoul residents.
regardless of some variability in their respective modal shares (Table 4.10). The temporary decrease from 66.3% in 1994 to 59.6% in 1996 for subway passengers is due to the increased number of privately owned cars during this period.

Although the number of bus passengers decreased while subway passengers increased, many people continue to ride buses when subways are not accessible or when the subway follows a longer route to destinations. In addition, both Maeul buses (local shuttle buses) that carry people to subway stations and new bus routes linking subway stations could serve to effectively enhance the role of buses in the public transit system. In conclusion, the current public transportation trend in Seoul is expected to continue on into the 21st century. The modal share of the subway will probably increase further, while the percentage of passengers riding buses keep decrease. Private automobiles are also expected to maintain their current modal share of approximately 20%.

OTHER TYPES OF URBAN TRANSPORTATION

The modes of transportation utilized by Seoul residents at the end of the 20th century can be summarized as follows: buses and subways as public transit systems and private automobiles as modes of personal transportation. Another type of transportation was the taxi, which had become a popular means of personal mobility after its introduction quite some time ago. In addition, other modes of transportation included commuter buses, which only travel between two points, and chartered buses that operate for special purposes.

Taxi services begun during the Japanese colonial period became an important part of transportation in Seoul only after the Korean War. It played a critical role until the end of the 1980s, taking on 20% of the total passengers in Seoul. In 1990, the introduction of the affordably priced subway and the increasing number of private automobiles reduced the ratio to 12.8%, which is much lower than buses, subway and cars. This trend continued throughout the 1990s, and after 1994 the number remained below the 10% level, except in 1996.

The decrease in percentage using taxis can be accounted for partly by the introduction of the subway system, but it is more due to the increase in private automobiles. The assumption is that since taxis cost more than the subway or buses to travel the same distance, it is more likely that taxi riders purchase private cars than do those who utilize public transit services. The number of registered cars in Seoul steadily increased in the 1990s, which may have driven down
taxi usage relative to automobile usage. In addition, after the financial crisis in 1997, many faced economic hardships and turned to public transportation, including taxi users who switched to the subway. This trend is evident in the fact that, with the exception of the subway, the modal shares for buses, private cars and taxis all decreased between 1996 and 1998.

Taxis, on the other hand, tried to respond to the trend by upgrading cars and enhancing customer service. As a consequence, deluxe taxis and call taxis with different fare schedules were introduced. Despite these efforts, the number of taxi passengers further decreased in 1999. Taxis accounted for less than 10% of the modal split in Seoul at the end of the 20th century. This trend is expected to continue into the 21st century so that proportion of passengers using taxis might be reduced, but a certain number of regular passengers continue to retain.

INTERREGIONAL TRANSPORTATION

Various factors contributed to the reduced number of railway passengers: the introduction of express buses and inter-city buses, the construction of new freeways and the expansion of existing state highways in the 1970s, and competition with air transportation, which continued to grow throughout the 1980s. However, the railway has been regaining passenger volume by continually improving services.

In fact, although decreasing during 1995-1999, the number of railway passengers increased during 1990-1995 by 24.4% compared to 1985-1990. This is largely due to the fact that many people chose to travel long distances by private car rather than by public transit operating on fixed routes, such as express buses, inter-city buses, and trains. This trend was further propelled by the expansion of the existing expressway network and the construction of new circular beltways and state highways in the metropolitan area. These new roads include the Seoul Outer Ring Road, the Pangyo-Guri Expressway, the Shingal-Ansan Expressway, the Shiheung-Ansan Expressway, the Jungang Expressway and the Sohacan Expressway. In addition, many more people have come to prefer air travel for long distance travel.

Therefore, the Korea Railroad Corporation is making efforts to attract more passengers. These efforts include both incorporating the company to improve operating efficiency and developing new services, such as the Jeongdongjin Tour Train and the Hwansangseon Snow Festival Tour Train. In addition, railroad passengers can now
purchase or reserve train tickets at convenient locations, such as post offices and banks, through ticketing machines and even over the Internet. Travel time between Seoul and Busan is expected to be reduced to less than two hours with the construction of the high-speed railway, making it possible to travel to and from any place in the country in a single day. Although the number of railway passengers is decreasing, the safety of rail transportation is likely to continue to attract people. Tickets for special tour-package trains usually sell out the moment they are issued. This demonstrates that the railway in Korea, unlike other countries, will probably continue to serve as an important public transportation system. Furthermore, if the Gyeong-Eui (Seoul-Shinuiju) Line and Gyeong-Won (Seoul-Wonsan) Line are restored and linked to the Trans-Siberian Railway, rail transportation will become very important in the future.

Current trends show that express buses and inter-city buses are constantly competing with trains and are also losing popularity. Thus, express buses are striving to provide more convenience to travelers by introducing deluxe express buses and midnight express buses. The continuous extension of the expressway network, however, has given more freedom of movement to people who now prefer driving their own cars over traveling on fixed routes, as express buses do. The national highway system in Korea has twenty routes with a total extension of 1,999.3km as of December 1998. It plays a central role in surface transportation. In 1999, the Yeongdong Expressway, Jungbu Expressway and Gyeong-In Expressway were expanded, and the Seoul Outer Ring Road was also partially built. Furthermore, the total length of national roads in Korea amounts to over 12,447 km. Ninety-eight percent of these roads, or 12,202km, was paved as of the end of 1998. Despite improved road conditions, however, the number of passengers for express buses or inter-city buses is not expected to grow substantially, given that more and more people prefer traveling by private automobile and, when traveling in groups, by chartered bus.

Another transportation mode that connects Seoul to other parts of the nation is air transportation. In 1988, Asiana Airlines was launched as the second Korean carrier, contributing to further development of air, travel and air service. Asiana Airlines now operates fourteen domestic routes, of which eleven are direct flights from Seoul to Jeju, Busan, Gwangju, Mokpo, Daegu, Ulsan, Pohang, Yeosu, Jinju, Gangeuneg and Yecheon. Korean Air, the national carrier, operates sixteen domestic routes, of which thirteen are direct flights from Seoul to Jeju, Busan, Gwangju, Mokpo, Daegu, Ulsan, Pohang, Yeosu, Jinju, Sokcho, Gunsan, Gangeung and Yecheon.

Due to its limited land area, Korea is rather at a disadvantage in terms of developing domestic air transportation, but air travelers are
expected to grow since air travel is the only viable access to Jeju Island other than ships. Furthermore, the nationwide road network is reaching its capacity limit, despite a series of expansions and the construction of expressways and national highways. Consequently, during 1985-1990, domestic and overseas air travelers surged dramatically, by 230.5% and 124.0% respectively. Although the speed of growth slowed down during 1990-1995, the number of air passengers still continued to increase (Table 4.9). Furthermore, domestic travelers increased twice as quickly as overseas travelers, as people came to prefer to travel by air or private automobiles over buses or rail when traveling long distances. In 1995-1999, however, both domestic and overseas travelers grew only slightly as a result of the financial crisis.

Seoul became another gateway in the national transportation system with the development of air transportation, because Gimpo International Airport and Domestic Airport, located in the western part of Seoul, were the arrival point for domestic travelers and an entry port for international travelers. However, with the opening of the service at the Incheon International Airport in 2001, Seoul lost the position as an international gateway and as one of the world’s leading airports in terms of the number of airlines served. The place where Gimpo International Airport has been changed to Domestic Airport and city terminal for international passengers and where Domestic Airport became a huge shopping mall. Gimpo Domestic Airport only manages domestic flights. Nonetheless, Seoul serves as a central hub for domestic flights, since most domestic inter-city flights use Seoul (Gimpo Airport) as a transit point although there are a few direct flights between regional cities.

The development of air transportation had little impact on the spatial structure of Seoul because of the distant location of Gimpo Domestic Airport. Gimpo Airport now serves as another City Terminal for the international airline passengers. Rather the City Air Terminal in Samseong-dong serves as a transportation node in the southeast part of Seoul. This is expected to bring substantial changes to Gimpo Airport, as it will be left to handle mainly domestic flights.
Development of Transportation and Structural Changes in Seoul during the 20th Century

The development of intra-city transportation restructures the city and greatly affects urban space. It is mostly the public transit system, rather than private transportation modes that causes changes in the structure of urban space. Of course, there are cases in foreign countries where people, in the absence of any public transit system, rely mainly on private transportation means. Recently, many Korean cities are also witnessing an increasing role for private transportation, which also causes traffic congestion. The development of transportation, whether it is public or private, has affected the movement of the urban population and, subsequently, changed the spatial structure of the city.

Urban development is accelerated through linkages with other regions that have a high level of mutual interaction. Here, a linkage with another city refers to being connected in terms of transportation or telecommunication. The level of transportation development determines the extent of exchanges between the two regions. Seoul has been the center of Korea in politics, economy and culture for the past 600 years. The centrality of Seoul attracted people and goods and made it the traffic node for surface, sea and air transportation. Such characteristics have had an immense influence in shaping the city.

In 1900, electric street-car railways were already a decade old and faithfully carrying out their role as the main public transit system in Seoul. The electric street-car railway was received with such enthusiasm that immediate expansion was called for. Electric street-car railways transformed the landscape of a city that had not changed throughout the Chosun Dynasty. When they were first introduced, Seoul was a city surrounded by walls that clearly marked its boundaries. Spatial changes had started to take place within the city walls as foreigners moved in after the nation opened its doors to the outside world. Foreign diplomats were settling in the Jeongdong area; the Japanese settled in the northern part of Namsan, forming a commercial district; and the Chinese were settling in Jongro, Bukchang-dong and Sogong-dong.

Some of the urban districts outside the city walls were traditional Korean settlements that had spontaneously developed around their own nuclei. Some were newly built Japanese residential districts. Clusters of houses, mostly taverns and inns, could also be
found near the ports along the Han River. Mapo, which was a hub for waterway transportation, served as an entrepot for grains and fisheries and became a trade center for merchants. In Seoul, markets were being created, houses were built around inns, and city dwellers gathered to live along the main roads where stations were located.

Seoul's urban landscape in 1910 was a dense maze of thatched roof houses and narrow streets. Electric street-car railway tracks and telegraph poles standing in idle streets signified the introduction of western civilization in the form of electric street-car railways and electricity. The distribution of urban districts in 1929 clearly shows the influence electric street-car railways had in shaping the city. Electric street-car railway lines newly laid between 1914 and 1927 were apparently for the purpose of providing convenience to residents in urban districts already established within the city walls. However, a close study of the relationship between electric street-car railway lines and established urban districts before and after 1914 clearly shows that expansion took place along the Dongdaemun-Cheongryangri Line and Namdaemun-Sinyongsan-Wonhyo Line. Such development supports the sector model of urban spatial structure.

The fact that Seoul's electric street-car railway system was designed with priority placed on providing convenience to Japanese residents becomes more evident when it is compared with the way in which residential areas were defined along ethnic lines between 1930 and 1935. The residential areas of Koreans and Japanese, who made up the majority of the population in Seoul, were clearly separated: most Koreans lived in the northern and southern part of Seoul, and most Japanese lived in northern Namsan, southern Yongsan and Wonhyo. The electric street-car railway began operation around the Japanese residential and commercial districts first and was later extended to the northern part of Seoul, where most Koreans lived. But this was only after construction of the Japanese colonial government building began, clearly indicating that the purpose was to facilitate construction work. A new electric street-car railway line was opened in this area, but only after the building was completed in 1926 and the colonial government had moved in. Thus, it is clear that the transportation policy of that time was ethnically discriminatory.

The total land area of Seoul expanded dramatically in 1936. New urban districts were formed throughout the city, while existing ones expanded in size. Yongsan, Yeongcheon and Jangchung, in particular, showed significant expansion. The electric street-car railway system was already built or double-tracked in these areas after 1926, and this contributed to the expansion. Another area that emerged as a new urban district was the Yeongdeungpo area. However, considering that the electric street-car railway line only went as far as Noryangjin, the development appears to be related to the creation of
an industrial zone in this area as well as the area’s accessibility as the railroad junction of the Gyeong-Bu (Seoul-Busan) and Gyeong-In (Seoul-Incheon) Lines.\textsuperscript{50} Thus, the urbanization of Seoul proceeded steadily around existing urban districts. These districts appear to have further expanded by the time the nation gained independence in 1945.\textsuperscript{57} After undergoing major political upheavals, such as national independence and the Korean War, Seoul began to develop rapidly and take on the appearance of a modern city.

In 1963, even after Seoul had expanded nearly to its current boundaries, the city – except for the downtown area – gave the appearance of an agricultural village. Economic development, a surging population, and the bus’ emergence as a major public transit system, however, brought about substantial changes to Seoul. The bus, which freely transported people and goods, promoted the development of residential areas throughout the whole of the city. Furthermore, the introduction of the subway system and the increase in private automobiles enhanced mobility within the city. By 1979, most areas other than the city outskirts had developed into urban districts; by 1992, the whole city, excluding a few small areas, had developed into urban districts.\textsuperscript{58} A notable trend that emerged in the 1980s, as compared to the end of 1970s, was the emergence of newly built mammoth-scale apartment complexes in the Mokdong, Sanggye, Junggye and Hagye districts. A series of high- and low-rise apartments also were built along the Han River, as well as large apartment complexes in Songpa-gu, Gangnam-gu and Gangdong-gu.

Towards the end of the 1980s, low-rise apartments were converted to high-rise buildings as slum areas were redeveloped and aging apartment buildings were demolished and rebuilt. This led to a higher population density and heavier traffic congestion. In addition, as more and more households purchased automobiles, parking shortages became a major problem in residential areas. Until the mid-1970s, we seem to have failed to project such rapid growth in the number of automobiles. This is evident in the roads of the new residential complexes of Shinsa-dong and Apgujeong-dong, many of which are too narrow to accommodate two-way traffic, as well as in the large volume of single houses that lacks parking. Very few apartment buildings built underground parking facilities, as they never imagined that parking space would be in such demand. Parking became a serious problem in the 1980s due to the rapid increase of private automobiles, as well as the number of automobiles per household. Consequently, in the 1990s, legislation was passed requiring apartment buildings to provide subterranean parking lot. Further measures were taken, such as assigning street parking spaces to neighborhood residents first and building commercial parking lots in small alleys.
As Seoul ran out of land to build houses, Ilsan and Bundang new towns were developed, where many Seoul residents chose to move. The daily life of most residents in these new towns has directly and indirectly related to Seoul, so they used to commute to Seoul by buses, subways and private automobiles. Suburbanization, a trend largely witnessed in countries where the automobile becomes the primary mode of transportation, began to occur in Seoul. Although the subway plays a larger role in Seoul’s urban transportation, private automobiles have also had a significant impact on the city’s spatial structure and suburbanization.

In fact, Yangjae, Jamshil and Shinchon, areas from which buses departed for satellite cities, developed into new transportation nodes connecting inter-city and intra-city transportation. In addition, the construction of the Dongbu Expressway, Gangbuk Expressway, the Seoul Inner Ring Road and new bridges made it more convenient to drive in the city.

As the spatial expansion of Seoul came to an end when the city limits were reached in the 1990s, satellite cities started to spring up in suburban areas, leading to the development of many new cities. Meanwhile, the city itself underwent vertical and horizontal spatial restructuring as urban districts were transformed, and high-rise buildings replaced low-rise buildings in the central business district. At the same time, residential areas witnessed the construction of high-rise apartment buildings and "Officetels" (combined commercial spaces and residences) and the replacement of existing single dwelling housing with multi-households dwelling housing. Such changes increased congestion in residential areas. In addition, as the subway system steadily expanded, new commercial zones formed around subway stations.

In conclusion, the spatial restructuring of Seoul was largely horizontal until the 1980s but also became vertical in the 1980s. For instance, intra-city transportation now has three layers: the underground subway, surface transportation and elevated highways. In addition, in the Gangnam area, some roads have fourteen lanes, a feature that is hard to find in other countries. New commercial zones around the subway stations sometimes include department stores and shopping centers that can be accessed directly from the underground stations.

The development of Seoul's transportation in the 20th century occurred in the order of electric street-car railways, buses, the subway system and private automobiles. Although political, economic and social developments have had direct as well as indirect effects on the urban space, there is no doubt that the development of transportation was the most important factor driving the evolution of spatial structure in the city of Seoul.

22.  Ibid. 22.

23.  Kyung-Heong Lee, age 89 when I interviewed with her, says that she used rickshaws for particular purposes (e.g., going to the hospital because of illness) in the 1940s.

24.  Interview with Kyung-Heong Lee.


26.  Interview with Kyung-Heong Lee and two other seniors who used to visit Bongjeong Buddhist Temple often during the 1930s.


28.  Yon-Ha Lee (deceased, male) was employed as an electric street-car railway driver during Japanese rule and quit after a while but was reinstated after independence. He said that electric street-car railway drivers took great pride in transporting workers on time during their commutes. They were all aware of the importance of the electric street-car railway system. In particular, those who used the service as well as electric street-car railway drivers believed that the electric street-car railway service was indispensable in Seoul until the 1950s. (Hae Un Rii, "Perception on the Impact of the Electric street-car railways on the Development of Seoul", Journal of Cultural and Historical Geography (2, 1990: 57-82.)

29.  Ibid. 29.


32.  From 1997 interviews with Kyung-Heong Lee (age 89, female), four other senior citizens then over 60 (76-year-old female, 70-year-old male, 66-year-old male, 64-year-old female) and Lee Yon-Ha (deceased, male, driver for electric street-car railway).


37.  It was burned down in a fire in December, 1972, and the Sejong Cultural Center was built on the site.


41) Interview with Kyung-Hoong Lee (age 89, female).
48) Interview with Chol-Nam Chu (age 62, male), who still had a free-ride ticket issued at that time.
49) Hankaok Ilbo, 16 August 1974.
50) It used to be called the first Han River Bridge. Completed in 1917, it was destroyed during the Korean War. In 1982, when a new bridge was built with the same design, it became a twin-bridge and the name was changed to Hangang Bridge.
54) Ki-Suk Lee: 94.
56) Duck-soon Im: 97-98.
57) Ki-Suk Lee: 106.
58) Ki-Suk Lee: 223.
References


Development of Seoul", *Journal of Cultural and Historical Geography* 2: 57-82.


The City History Compilation Committee of Seoul. (1979), *Six Hundred Year History of Seoul*, Vol. 3-5.

The City History Compilation Committee of Seoul. (1985), *History of the Han River*.


Ministry of Construction and Transportation, Republic of Korea
Seongdong-Gu Office, Seoul, Republic of Korea
CHAPTER 5

Changes in the Residential Features of Seoul in the 20th Century

Sei-Kwan Sohn

Introduction

This chapter describes the process of change in the residential features during the 20th century. It illustrates changes in the physical features as well as the social, political and economic situation regarding the residential conditions in Seoul. It closely charts these changes from the enlightenment period through the explosive changes during Japanese colonization on through to the 1960’s. In order to understand this process of change in the residential environment of the region, we are required to view the actual physical development and change of the residential features as a physical materialization of comprehensive aspects of the era. Seoul’s evocative physical characteristics feature both a brilliant and a dark side and the cities transcendental historical distinctiveness is reflected intact within its’ residential features. This distinctiveness dictates the approach that must be used to depict the historical changes in Seoul’s residential fea-
ures. It should first describe both the positive and negative aspects in the residential landscape that were brought about by the social, political, and economic changes within the metropolitan area and the derivative features of these physical changes on the face of Seoul. In addition, to understand this process of change in the residential features it should take into account that the structural changes were also influenced by Seoul's geographical expansion. The principal influence to the city's structure lies in the fact that these changes have occurred at such a rapid pace. In this respect, the distinctive structure of Seoul is at variance from other cities in different cultural spheres including those of the western world. Such rapid growth in a city produces distinctive characteristics in the residential environment respective to the period of growth. As residential characteristics formed in diverse environments differ in their physical structure and in their residential type, it is inevitable that in writing about the changes to the residential features of Seoul it should take into account those regional characteristics.

Residential Environment During the Enlightenment Period

SEOUL'S RESIDENTIAL ENVIRONMENT BEFORE AND AFTER THE ENLIGHTENMENT PERIOD OF KOREA

People in Seoul during the late Chosun dynasty lived relatively quiet lives and the residential features of Seoul were simple. Seoul then, could well be described as a medieval city in the Orient. Except for major streets and public facilities, most of the city features grew spontaneously and unplanned. From a hygienic perspective, condi-
tions in Seoul were generally poor. Despite numerous political tur-
moil including Imogullan (Military mutiny of 1882) and Gapsin-
jeongbyeon (The Coup d'Etat of 1884 by the progressive party
demanding the abolishment of the ruling class privileges, revising
the land tax laws, and others), Seoul's population continued to grow
rapidly and there were clusters of houses standing roof to roof in the
fortress city. Residential areas were divided by class distinction.
However, in general the tile roofed houses of the upper and middle class
co-existed with the thatched-roof houses of the lower class people.
All the houses were one-story buildings and their humble structures
showed no distinctive features. The lower class houses were in direct
contrast to the palaces and government buildings in surrounding
areas. As Seoul at that time had a very limited city infrastructure of
roads, water supply, sewer system and others, roads were mostly dirt
and during heavy rain the rivers flooded.

The residential features of Seoul in late Chosun period were
known through the witness of foreigners visiting Seoul at that time.
Their impression of Seoul was generally negative. American mission-
ary Allen first arrived in Seoul via Jemuipo (presently Incheon) in
1884 when the Gapsinjeongbyeon broke out. He published, Things
Korean in 1908 in New York. In the book he described Seoul as fol-
lows: "lowly-built and dimly colored commoner's houses clustered
together formed a contrast to the colorful and tall palace buildings.
On the other hand the foreign legation buildings and French Catholic church with steeples break the monotony. Street stalls next to houses or workshops are the only places of commerce. Roads did not distinguish between foot-way and carriageway. Mules, bulls, carriages, streetcars and people are jumbled together in the sand, dust or in the mud.” Another famous British woman traveler, I.B. Bishop visited Korea in 1894 and her impression of Seoul severely criticized it as follows: “It is the dirtiest city in the world next to Beijing. Streets are full of foul smells and even the main roads are not wide enough for two loaded carts pulled by cows. The narrower roads can only accommodate one person with a bull.” Seoul through a visiting foreigners eyes in the early days does not always seem to be negative. For example, H. Norman, a British traveler visiting Seoul at Chosun period praised Chosun (old name for Korea) as a beautiful country and described it as heaven in his essay, comparing Seoul with Beijing.3)

The residential districts of Hanyang (the old name for Seoul) differed according to social class and occupation. For example, there was a clear distinction between 'the north village' and 'the south village'. With the Cheonggyecheon stream as borderline, the ruling upper class lived north of the stream. This was because north of the stream was considered 'a place of good fortune' in Feng-shui (geomancy) and most of the government offices and agencies, and educational organizations were located there. In particular, the sunny, southern slopes of the mountain ranges linking Baekak (peak) to
Eungbong (peak) were home to high-ranking officials and men of power. On the other hand, the middle class such as the translators, doctors, technicians and lower ranking public officials lived in and around Cheongjin-dong, Janggyo bridge and Supyogyo bridge. This was because they were situated close to the government offices. South of the Cheonggyecheon stream, commoners populated the south village, though merchants lived on both sides of the stream. The northern slope of Mt. Namsan, presently the area ranging from Namsan-dong through Pil-dong to Mukjeong-dong of Jung-gu though not particularly sunny was quiet and offered excellent scenic beauty. Classical scholars without influence populated this area. As people lived in different districts according to their class and profession, the size and type of their homes differed significantly from district to district. This division of residential areas remained unchanged until early 1900’s.

Seoul’s residential features began to change gradually along with the political and social change forced upon Korea during King Gojong’s reign (1864-1907). With the abolition of class distinction, various restrictions on housing were lifted. In addition, the introduction of enlightened thought, primarily to the middle class, allowed the middle class to accumulate wealth with which they either rebuilt or remodeled their homes. During the Chosun period there were restrictions on the size and type of housing for the respective social classes, however with these restrictions removed, those of wealth in the middle class built as large and luxurious homes as the upper class. Those distinctive features that had been found only in the homes of the upper class could now also be found in middle class homes. The distinctive features that had been thought of as inviolate, as almost sacred, such as an actual bath in the home and lofty gate, could now be found in the homes of the middle class. This trend spread to the working class and the residential features of Seoul began to gradually change. Reformist intellectuals launched an enlightenment campaign promoting improvement in the way of life and reform of consciousness regarding housing. They emphasized the hygienic aspects of housing such as a modernized water supply, sewer system, toilet, bath, heating and cooling systems, lighting, and ventilation. It is difficult to measure the extent of the influence that the campaign brought to bear however; it is believed that they were the cornerstones that brought about the tremendous changes to middle and upper class life-styles.

As Chosun began to open commerce treaties and exchange with foreign countries, the residential features of Seoul experienced significant change. In other words, where at one time the homogeneous nature of the population had been inviolate for a long period of time strictly bound by Confucian values without exposure to external
influence, now large numbers of westerners had moved in and the original way of life was transfigured. Foreigners were not allowed to live within the walled town of Hanyang until 1880 but they did locate their residences just outside the four gates (the east, west, south and north gates built to protect Seoul's palaces). However as their numbers and influence grew, the rules were loosened and they were allowed to live within the fortress of Seoul. Initially Jeong-dong was the residential district for foreign envoys and ambassadors. Diplomatic and consular offices were built in the district one after another and the district became an extraterritoriality. Churches, missionar y schools and homes were added. The district's residential area became a site replete with exotic touches and customs. With the sovereign power of the Korean king weakening, foreign influence grew stronger, and foreigners' residences spread to Jongro and Youngeondong. Youngeon-dong and the surrounding areas became the commercial center for Chosun merchants and the most prosperous district in Seoul, which adjoined Mt. Namsan and Jingogae once the main residential area of the Japanese.

Japanese comprised the major portion of foreigners in Seoul. Japanese began to live inside the fortress of Seoul after the Imogullen in 1882. Most of them were employees working at diplomatic and consular offices, their families and construction workers building the offices. The majority of them lived in Jingogae where the Japanese consular office was located. As time went by, growing numbers of Japanese gathered in the area. The Japanese lived close to each other in the district that presently stretches from Yejang-dong, Juja-dong
to Chungmuro 1-ga of Jung-gu, and even to this day vestiges of Japanese culture can be found there. Japanese then living in the area renovated Jingogae. They removed buildings on both sides of the street to expand the roads, dug waterways, built public restrooms, and installed street lights. Establishment of Japanese dwellings and their efforts at restructuring the area influenced the spatial distribution of Seoul so that during the Japanese colonial period Seoul’s residential areas came to be clearly divided into north and south villages with the Cheonggyecheon stream as a demarcation line. In other words, residential areas of Seoul were divided in two; northwest of Seoul formed by Koreans and south of Seoul by the Japanese. As a result, the old city structure with east-west axis centering on the Yukuijeon (six kinds of government patronized shops responsible for supplying goods for the royal court) in Jongro (Road of Bell: This name was given as there is a huge bell which is used on important national holidays) expanded to the north and south as well. This phenomenon made a huge influence on the present structure of Seoul.

GRAFTING OF FOREIGN HOUSING AND ITS INFLUENCE

Seoul’s housing during the enlightenment period on the whole exhibited complex features. This was due to Korea opening its door to foreign influence; the traditional Korean home began to take on various architectural features found in the homes of those from foreign countries. Western and Japanese style homes were built in
Seoul, and they either directly or indirectly influenced the traditional Korean homes, this gave rise to a blending of Korean, Japanese, and western style homes.

Western style dwellings were small in number compared with those of the Japanese. The upper class, however, were exposed to western culture through Catholicism, first introduced to the Korean elite, thus they absorbed western culture earlier than the general population of Korea. Particularly after the opening of the ports, diplomatic and consular offices from various countries were established as official residences. In addition, trading companies came in and built offices and homes for their employees which introduced the western style way of life to the upper class of Korea. Sechang Yanghaeng's company house built in 1884 in Incheon was the first western style home in Korea. It was a villa type guesthouse for Germans, a two-story building with the exterior stucco painted white with red roof tiles. It was equipped with offices, a reception room,
bedroom, dining room, and playroom. This was totally at odds from the traditional Korean home. There were houses built for the American diplomatic minister H.N. Allen (1890) and James Johnstone (1905) as well. Influenced by these examples, a few of the upper class people of Korea either built their homes in this western style or renovated their traditional homes to accommodate the western style. It has made no small influence on the housing culture of Korea.

At the time a few western style homes were built from the ground up but usually, traditional Korean homes were renovated in the western style. In some cases Korean homes were given to foreigners as a royal grant and in most cases the recipients renovated them in the western style. Some of the remodeling work was conducted by experienced carpenters, however this was rare. Most of the remodeling work was done either by carpenters experienced only in traditional construction methods such as the Gyeongbokgung palace, Yukjogeori (the government patronized buildings for the royal use), and Deoksugung palace or by simple laborers who were basically farmers but had to work at construction sites to get over the 'barley hump' (spring famine just prior to the barley harvest in early summer). As they were not familiar with western architecture, having no professional training, they worked by eye, measuring as best they could. Therefore, even the renovated western style homes do not truly represent the western home. In other words, western housing introduced as a byproduct of Korea's opening up to the outside world didn't reach deep into Korea's way of life.

A distinctive change appeared in Korean housing. Korean homes that were one-story throughout history began to expand vertically. In the 18th century, stores or homes with high attics could be found in some cities including Gaeseong, however it wasn't until the
early 1900's that two-story stores or homes worthy of the name came into being. Such change is believed to be due to economic growth, urbanization, industrialization, and western influence in general and the introduction of two-story western homes. Stores were a compromise of Korean and western styles and the first combined house-store appeared on Jongro street in Seoul. Such combined house-store buildings were built with a framework of wood with brick walls. It had Korean roof tiles and western style windows. Later on however, various materials came to be used in the construction of walls for example, walls with a mixture of brick and stone became popular. Such combined Korean-western stores appeared in other places besides Jongro, such as in Anguk-dong and around the Namdaemun gate. Two-story, combined house-store buildings influenced the architecture of homes in general and two-story homes appeared as well. After the colonization of Korea by Japan however, this style of housing was discontinued as Japanese style homes became more prevalent.9

When Korea began to open its borders to foreign influence, many Japanese came to live in Korea. During this time a great number of Japanese style homes or a blending of Korean-Japanese styles were built in Korea.7 Most of the materials used to build the Japanese style homes were brought in from Japan and Japanese contractors conducted the construction as well. In many cases, Japanese style houses built at that time disregarded the climatic conditions in Korea. Korean climatic conditions differ significantly from the warm and humid Japanese weather. The Japanese style homes were found to have serious problems in protecting against the cold of winter. Thus was created an architectural pattern, which is basically Japanese, with supplementary, traditional Korean housing features. Those houses had Ondol (a traditional Korean floor heating system) with thick walls and small windows, considerably dissimilar from the traditional Japanese home. In many cases the Japanese bought a Korean house with the Ondol floor heating system and remodeled it to accommodate their needs. Eventually, most of the Japanese homes incorporated Ondol.

When Korea began to open its borders to foreign influence, which was between late Chosun period and the assimilation of Korea by Japan, housing was the area least exposed to the influence of the outside world. In other words, western and Japanese housing styles were accommodated only by a very limited number of the ruling class, and the majority of Koreans showed a strong attachment to their traditional housing. During this period, the Japanese were carrying out reckless deforestation, but since there was no serious shortage in the wood supply this caused little change in the traditional style of Korean housing. Accommodation of western and Japanese
style homes was done by the people of progressive mind or a very small number of people with a taste for luxury however, they did not discard all the traditional Korean features. For example, Lee Jun-yong and Yun Deok-yeong, men of wealth at the end of the Chosun period built huge houses for themselves in the early 1900s. They only built a detached building in the western style to be used as a reception room; the main building was in traditional Korean. This tells us that housing styles do not change easily unless there is a pressing reason in everyday life. The houses of Seoul citizens began to change little by little during the middle of the Japanese colonization period, but only to a limited extent. The features of houses in Seoul experienced huge changes in the 1960's when apartment buildings were introduced.

Residential Features of Seoul during the Japanese Colonization Period

THE GENERAL ASPECT OF THE RESIDENTIAL FEATURES DURING THE COLONIAL PERIOD

During the Japanese colonization of Korea, Seoul experienced a severe shortage in housing. Over the 36 years of colonization (1910-1945), the housing shortage problem grew severe. For example, in 1925, the housing shortage rate stood at 5.5%, however, beginning in the late 1930's, it increased to over 20% and in 1944 to over 40%. Up until Liberation in 1945, which ended the Japanese colonization of Korea, Seoul experienced serious housing shortages. Such serious shortages during the period were due to the following reasons.
First, the social and economic unrest caused by the usurpation of land by the Japanese and the March 1st Independence Movement in 1919 resulted in a huge influx of farmers to Seoul. The nationwide enlightenment movement that advocated building up academic and technical skills and economic power as the only way for Korea to survive also contributed to the large-scale migration into the cities. This concentrated influx in population to Seoul exploded in 1920 and the movement was particularly intensified for about 10 years from 1926 to 1935. This time period is also closely related to Korea’s industrialization around 1930.

As the Japanese government took no particular measures for the sudden population concentration in Seoul, the housing problem grew serious. In 1921 in an attempt to relieve Seoul’s housing problems, Seoul leaders and benefactors banded together to provide homes to the homeless masses and they formed a self-help organization named the ‘Housing Relief Association’. In Pyongyang as well, a housing cooperative established by Korean benefactors provided homes to the homeless. In the same year, the ‘Housing Problem Relief Association’ was founded in Busan, which while different from similar organizations in Seoul and Pyongyang, was part of the civic movement. Alarmed by the various Korean organizations providing homes and finding ways to solve the housing problem, the Japanese colonial government and Gyeongseong-bu (the City of Seoul) built so called the Buyeong homes (built by Seoul city government) for both Japanese and Korean people. There was serious discrimination against Koreans in the distribution of the Buyeong homes. While a 13-pyeong home at a 2-home tenement was given to Japanese, a 3-pyeong home at a 2-4 home tenement was given to Koreans. As a result, the Buyeong homes built by the Japanese colonial government, which represent a rare good-will gesture on the part of the Japanese colonial rulers, turned into a ghetto and a subject of public criticism. In 1925, the Japanese colonial government issued an order of evacuation to the residents under the pretext that the homes would be made available only for the employees of the Japanese colonial government. Judging from the fact that no further articles or documents are found on the Buyeong housing project since then, it is believed that the homes were quietly removed.10)

On the other hand, in order to solve the housing problems in Seoul, Busan and Pyongyang that occurred in the early 1920’s, the Japanese colonial government established a policy providing homes at low rates and had the Siksan Bank (reform to Korea Development Bank) release money for the respective cities. The Japanese colonial government also encouraged government organizations, banks, and companies to provide their employees with official and private residences. Thanks to this effort, the housing crisis was greatly relieved
by the mid 1920’s. In the 1930’s however, the housing problem reoccurred, mainly because the housing supply failed to keep up with the rapid population increase. The Japanese colonial government responded to the housing shortage issue passively, being as it was mainly a problem in Korean society with little impact on the Japanese. The 1936 statistics say that the overall housing shortage rate of 26.8% represented only a 4.7% housing shortage for Japanese and a 22.1% housing shortage for Koreans.

While many Koreans suffered from the serious housing shortage, the Japanese in Korea generally enjoyed a good living. The Japanese who lived in Seoul (then it was called Gyeongseong ‘capital fortress’) during the Japanese colonial days brought in a blend of Japanese-western style homes, which was popular in Japan at the time. It had to a great extent to do with a sense of superiority by the Japanese officials who were commissioned to Korea, then their colony. As time went by, the preference for western style homes abated and a compromise between Korean and western styles homes modified for the Korean climate became popular. After the 1930’s, so called ‘cultural homes’, a compromise of Korean, Japanese, and western style homes appeared (Figure 5.7). A ‘cultural home’ was a combined but generally western looking house with a red slate roof and ‘ondol’ floors. Bath and restrooms were divided. The cultural home was popular among the Japanese and upper class Korean’s who were economically comfortable. In summary, the housing features during the latter part of the Japanese colonial period can be divided into the cultural homes of the upper class, improved traditional homes of the middle class, and the houses built by the Housing Corporation for the lower middle and lower classes.

Such regular homes were available only for Japanese or Koreans above a certain level. The lower classes who moved to Seoul during
the early part of the Japanese colonial rule led the life of residential servants in the homes of the upper class. Those for whom positions as a residential servant were not available lived in dugouts or mud huts. Dugouts were built by digging a hole and covering it with straw mats or straw bags while a mud hut was a cellar-hovel made with trees, straw bags and other various materials (Figure 5.8). They were humble homes that could hardly be characterized as a house, but they were numerous in Seoul at the time. As the low quality dwellings such as dugouts or mud huts increased and many of the city sectors turned into slums, the Japanese government constituted and promulgated a "Low Quality Housing Area Improvement Law" in 1927. Based on the law, the government moved the mud hut residents to a settlement in a corner of the land relocation region and either charged land tax or sold them on installment plans. In case neither was possible, mud huts were removed by force. Some mud-hut residents were sent to Hokkaido Island in Japan or Sakhalin.

In 1934 the Japanese colonial government constituted the Chosun City Planning Decree and began addressing the housing problems. Housing contractors and leasing service industries sprang up like mushrooms after a rain in response to the increased demand for housing, and thus the Japanese colonial government had to constitute the Chosun City Planning Decree to facilitate house building and to prevent mass production of low quality homes. According to the Decree, beginning in 1937, Gyeongseong (presently Seoul), Pyeongyang, and Cheongjin actively pursued land readjustment projects. In addition, the Japanese colonial government carried out housing and development projects and provided land to those who wanted to build houses. But the project fell short of the increasing
demand by citizens and housing contractors due to financial difficulties and the shortage of construction materials. With the 1930's as a turning point, homes came to have commercial value, and it brought an increase in housing construction and supplies. In 1941, the Chosun Housing Corporation was established, and public homes were made available in earnest.

SPATIAL EXPANSION OF SEOUL AND THE CHANGES IN RESIDENTIAL STRUCTURE

Japanese housing policy toward Korea entered a new phase along with the expansion of Gyeongseong-Bu in 1936. The Japanese colonial government issued Bu Ordinance No. 18 in February 1936, announcing that the sphere of jurisdiction of Gyeongseong-Bu would be expanded to incorporate Goyang-gun, Siheung-gun, and Gimp-o-gun. As a result, Gyeongseong-Bu became 4 times larger than it was prior to expansion. The expansion of Seoul's boundaries extended east and west, centering on the old downtown area, which proved to be an important turning point in the modernization of Seoul. The expansion of Seoul's boundaries in 1936 is closely related to the political and economic situation in the late 1930's. With the Manchurian Incident in 1937 as a turning point, Japanese immigration to Gyeongseong accelerated as its importance as a supply base for Japan's advancement into the continent of Asia became evident. In addition, the rural exodus from the disintegrating agricultural villages into Seoul caused a rapid increase in the population. As a result, Gyeongseong-Bu was faced with another severe housing shortage. This made the extensive restructuring of Seoul inevitable if it were to proceed with modernization. The expansion of Gyeongseong-Bu announced in 1936 and the urbanization policy were promulgated in order to solve serious city and housing problems and to expand the urban area for Japanese residents.

Gyeongseong-Bu announced the Land Readjustment Plans in December 1936, 9 months after the announcement of the new urban planning area. The first land Readjustment plans were introduced to keep up with the expansion of Seoul. They proved to be the primary means for supplying housing in Seoul until the 1960's. Except for some special districts (for example, Yeongdeungpo district), the land Readjustment plan was largely for the expansion of housing sites. New roads and residential areas were built in accordance with the land Readjustment plans in all the newly incorporated areas that became part of Seoul by the 1936 boundary expansion announcement. Except for the Yeongdeungpo area south of the Han
River, all the newly incorporated areas were outside the four gates (the gates of the fortress surrounding Seoul: east, west, south, and north gates) that belonged to Seongjeosimni (the area within the range of 4 km from downtown Seoul) during the Hansondo era. Most were agricultural areas, either on flat plains or hilly districts but were considered to be reasonable residential areas with well-connected transportation networks. The Yongsanpo and Beomdae areas adjoined the Gyeong-Bu Railway while other areas were connected with the central part of Seoul by train, at the time the best means of transportation. Along with the expansion of the administrative districts in Seoul and the land readjustment plans, the residential areas of Seoul witnessed rapid expansion.

Even though the 10 land readjustment plans were carried out under the same political and economic circumstances and at periods little apart from each other, the residential areas created in each district show significantly different spatial structures. Residential districts are largely divided into two types. Those with modern residential areas and new streets, and industrial districts with residential areas behind them, were for Japanese, and the other were Korean residences that were an extension of old residential areas that were built to solve the serious housing problems of Gyeongseong-Bu. The Japanese residential areas were located in Yongsanpo, Beomdae, and Hannam districts primarily in the southern part of Seoul around the Gyeong-Bu railway line, Yongsan military post, and in areas that included Japanese residences. On the other hand, Korean residences were formed in Donam, Yongdu, and the Cheonggyeong and Daehyeon districts outside Seoul's West Gate. The administrative districts were located in Inchangbang, and Sungsinbang outside the East Gate and Bansongbang outside the West Gate, belonging to Seongjeosimni during the era when Seoul was referred to as Hansendo. Due to this historical background, Donam, Yongdu, Cheonggyeong, and Daehyeon districts became primarily Korean residential sites. This shows a cross-sectional view of residence diversification according to ethnic group and social class.

Residential division by ethnic group and social class are also depicted in land structure and housing type. The homes in Japanese residential areas such as Yongsanpo were either the uniform houses built by the Housing Corporation or Japan's traditional city houses of 'Machiya' (village of houses), and the land was divided into narrow linear rectangular shapes conforming to housing type. On the other hand, Korean residential areas such as the Donam and Yongdu districts were planned to accommodate a modernized Korean home and the land was apportioned in regular square shapes. Both residential districts were developed in a short period of time based on a modern housing land development plan. Most of the
housing lands were in cross sections, fitted for the most modern, large, land development at the time. The cross section type roads however, differ from each other in detail. Such differences in housing lands, road structure, and housing type are the result of the division of housing areas that took place during Japanese colonial rule. Within respective housing areas lived people with similar social and economic backgrounds. In other words, the districts created by the land readjustment plan were different from other areas in Seoul. This is due to land readjustment development not being carried out on a gradual basis but in a short period of time on a massive scale.

THE APPEARANCE AND POPULARIZATION OF THE IMPROVED KOREAN HOME

The improved Korean home refers to the small to medium sized urban type Korean homes built in and around the central part of Seoul. They were popular from about the 1930's to around the 1960's. The features of the improved Korean home differ from a traditional Korean home. Many improved Korean homes were built on small, square sections of land. This was an important housing type for the working class people and the middle-class before apartments and western style homes became popular. The appearance and popularization of the improved Korean home was closely related to the expansion of Seoul’s boundaries and the land readjustment plan of the 1930's. It is also closely related to the structural change in city space. This occurred when the old downtown area became a commercial district causing the division of large housing tracts to be broken up into smaller tracts. The appearance of the improved Korean home was the result of the pressing demand for more housing and the structural change in city space, this change quickly spread throughout Seoul. Traditional Korean homes were built through detailed consultations between contractor and resident. Contractors built the new homes in accordance with the resident’s requests. Improved Korean homes were however built in large quantities and offered to the public. In downtown areas, according to the size of a housing tract, from 6 to 7 and up to 30 to 40 homes were built together on that one tract. In peripheral areas, larger housing tracts were formed in accordance with the land readjustment plan. This allowed more homes in greater quantities to be built and offered to the people. These homes were standardized in design and with some changes and improvements over the years, this housing type spread to various areas in Seoul.

This improved Korean home was called 'gaeryang hanok'
because it incorporated changes to the traditional Korean home. For example, different construction materials such as brick, glass, and galvanized iron were used. Using these new materials brought significant change to both house structure and appearance. The improved Korean homes had an eaves trough; this was made possible by the availability of inexpensive galvanized iron sheeting. Beginning in the 1930's the width of the tiled eaves was reduced to lessen the weight on the roof; the galvanized iron-sheet awning was used to replace it. The use of galvanized iron sheeting gave more architectural freedom to the architect and the eave corners became more steeply slanted. In addition, as glass became cheaply available in large quantities, sliding glass doors were installed in the main floor rooms and on the veranda. The areas that could only be used during the summer months could now be used as living space for longer periods throughout the year. As brick was made available, it came to be used extensively. Brick was used to build chimneys, for external decorations, and to close off those empty spaces under the wooden floors to keep out rats. Some 'improved Korean homes' built during a later stage used tile instead of brick for the finishing touches. As was pointed out earlier, the improved Korean home had the same structure as a traditional Korean home but with additional improvements.

Construction of the improved Korean homes began in the mid 1920's, mainly by Korean builders. As all the large-scale construction ordered by the government was given to Japanese builders, Korean builders had to find new areas that the Japanese could not touch. These new areas needed to serve a demand in the Korean market and

![Figure 5.9](image)

**Figure 5.9**
Improved Korean houses in Gahoe-dong
must be possible to conduct with limited capital. At the time, the housing problem was serious due to influx of people into Seoul, and ready-made Korean style homes were in great demand. This made building Korean homes and selling them a prosperous business. This type of prosperous business in Korean style homes also met the demand of the times. Korean builders had to build Korean style homes that were untouchable to Japanese builders. The working class, homeless Korean people needed ready-made homes and their preferred style was the traditional Korean home. Up until the mid 1930’s, Korean builders bought large housing tracts in the downtown areas, divided them into smaller lots, and built modern Korean homes on them. Beginning in the late 1930’s however, they began to build improved Korean homes on a large scale outside the downtown areas. At first, small-scale builders built these improved Korean homes however, as business boomed, large construction companies came to the forefront of the construction business in Korea. The housing construction led by the major Korean construction companies played an important role in the development of Korean construction businesses after the modernization and at the same time contributed a great deal in relieving the acute housing problem.180

Each housing site of improved Korean homes exhibited distinc-
Figure 5.11

Improved Korean homes in massive land readjustment districts in Jaegi-dong, Anam-dong and Bomun-dong (1954 photo)

Source:
Lim, In-Sik and Lim, Jeong-Ui, The Features of Those Days, 1955

Speculative features. In other words, based on Seoul’s boundaries when it was still known as Hanseong-Bu and the administrative boundaries set by Gyeongseong-Bu in 1936, housing sites of improved Korean homes were divided into two groups: those in the downtown area and the other on the periphery of Seoul. In terms of interior design, external appearance, and surrounding environment, the two groups showed a big difference. Downtown housing sites were situated in the traditional Korean site of Bukchon (northern village) within the fortress walls surrounding Seoul. Within this area, improved Korean homes were built in the vacant hills and on the grounds of a once prosperous family since ruined, or on government-owned lands. From the dividing of housing tracts to the sale of completed homes, all matters regarding the modern homes were carried out by small and medium sized construction companies. For this reason, the improved Korean homes built in this area were in relative harmony with the existing city structures. For example, new roads were built so that they linked with the existing roads. Gahoe-dong, Nusang-dong, and Bongik-dong in Bukchon (northern village) show these characteristics. In direct contrast the housing sites in the peripheral areas of Seoul were the result of the Land Readjustment Plan of 1936. They were built quickly without regard to the surrounding
city structure. Cross section type roads were built using modern construction techniques and large construction companies built homes on the site. As a result, these improved Korean homes exhibited completely different features than those found in the neighboring homes. The houses in Donam district and Yongdu district showed such characteristics. 19)

The improved Korean home was a housing type that was developed from a traditional Korean home. But in terms of room structure, interior design, and external appearance many of the features differ from the traditional Korean home. The improved Korean home was modeled after smaller traditional Korean houses or the Korean letter "Ⅲ" type traditional home that existed in the downtown area prior to the 1920's. Its roof was in either the Korean letters "Ⅱ" type or open "Ⅲ" type, but "Ⅲ" formed the majority. The modernized homes had a very closed structure with a small patch of yard in the center. A room in the gate section was built close to the road and the inside of the house could not be seen from the outside. This type of spatial structure was similar to a private residence popular in Gyeonggi-do province at the time. The only difference was that while a Gyeonggi private residence had a larger yard and more space, the improved Korean home in Seoul had its closed space centered around a yard in order to fit within a limited housing site.

ESTABLISHMENT OF THE CHOSUN HOUSING CORPORATION AND THE APPEARANCE OF COMPLEX HOUSING TYPES

In order to solve housing problems, the colonial government established the Chosun Housing Corporation (Chosun Jutaek Yeongdan) in 1941. It was the 4th year of the Sino-Japanese War. The Pacific War erupted in December of the same year: the tension was keenly felt not only in Japan but in Korea as well. The Chosun Housing Corporation was enforced even though prices were frozen and the labor force was primarily conscripted. The colonial government's belated creation of the Housing Corporation to solve housing problems in Korea was directly influenced by Japan's public housing policy, in particular the establishment of the Japan Housing Corporation. 20) The colonial government stipulated and promulgated Chosun Housing Corporation Ordinance in June of 1941 and created the Chosun Housing Corporation in July of the same year. The Housing Corporation was established on the condition that the government investment of 8 million won would be made available in installments over a 4-year period and the government was to issue housing bonds worth ten times the government investment. The
ordinance gave various tax exemptions and even approved the right to expropriate land when necessary. The principle objective of the Housing Corporation was to solve housing problems for Japanese living in Korea; however, most significant was the establishment of a public organization being solely in charge of housing construction for the first time in Korean history.

Upon being established, the Chosun Housing Corporation set up a 4-year construction plan. In the plan it was noted that as of July 1941, Korea had an absolute shortage of 60,000 domiciles in 19 cities to include Seoul and ordered the Chosun Housing Corporation to plan to build 20,000 homes within a 4-year period. Accordingly, the Chosun Housing Corporation set up a plan to build 5,000 houses each year from 1941 to 1945, with 1941 exclusively set apart for building houses in Gyeongseong, Pyeongyang, and Cheongjin where the housing shortage was most acute. So, the Housing Corporation set up a plan to build 2,700 houses in Gyeongseong, 1,500 in Pyeongyang, and 1,000 in Cheongjin. In order to solve the housing problems in the big cities, the Japanese colonial government issued an order to Gyeongseong-bu and other local administrative organizations to set up land readjustment plans and prepare government-run housing sites.

Upon completing the purchase of building lots, the Chosun Housing Corporation immediately went into action and built 3 housing sites in Dorim, Beondaebang, and Sangdo, as their first planned housing project in Korea. It was part of the "unified housing site project" in concordance with the Chosun City Planning Decree. The Dorim Housing Complex (presently Mullae-dong) was able to accommodate 500 homes with garden sites planned in each block cross section. The Sangdo Housing Complex was formed out of rice paddies, fields and forest land situated on a gentle slope. It had 3 rotaries with roads radiating in all directions. This housing site of 1,000 homes was estimated to be the best planned housing complex due to its natural landscape, which made the best use of the natural surroundings. The Beondaebang housing complex had 500 homes and was built to conform to the geographical features of the area. The complex had various public and welfare facilities including a large hospital, public bath, barbershop, and merchant shops.

The Chosun Housing Corporation experienced a severe shortage of construction materials due to the ongoing War at the time. Even in such pressing circumstances, the housing problem could not be put on hold as considered to be an absolute necessity in helping the Japanese government to carry out the War in the Pacific. The Japanese colonial government forced the Chosun Housing Corporation to push the plan through. Beginning in 1944, the Chosun Housing Corporation concentrated on building houses at mining
sites and munitions factories. It also constructed smaller homes for employees, company houses, tenements, and dormitories at the industrial sites in Cheongjin, Seongjin, and Pyeongyang. By the time of liberation in 1945, the Chosun Housing Corporation had built a total of 12,184 homes and of these, 4,488 were constructed in Seoul. Even though they had already built that many houses and war was still being conducted, the Housing Corporation established a policy in 1943, the third year of its five-year plan, to secure enough housing land for the next 5 years. They made large land purchases in Jeongneung, Changcheon, Bukahyeon, and Anam. These large tracts of land were not put to use and were transferred to the Korea Housing Corporation after Liberation. After the Korean War part of the land in the Jeongneung and Changcheon areas were used as housing land for various public housing such as 'reconstructed homes' 'people's housing', 'and 'homes of hope'.

The Chosun Housing Corporation created various standard designs to more effectively supply homes in Gyeongseong (Seoul) whose housing problem was most serious. The designs were meant for various classes and contained novel and up-to-date fashions
Figure 5.13
Standardized types of house plan designed by Housing Corporation

<table>
<thead>
<tr>
<th>Type</th>
<th>Plan</th>
<th>Size and module</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>20 pyeong</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 gan 8 ryang</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6 ryang (ondol)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 ryang</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 ryang</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(10 more types)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 pyeong</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 gan 6 ryang</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 ½ ryang (ondol)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 ¾ ryang</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(9 more types)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 pyeong</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 gan 6 ryang</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 ½ ryang (ondol)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(3 more types)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8 pyeong</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 gan 4 ½ ryang</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 ½ ryang (ondol)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2 more types)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6 pyeong</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 gan 4 ½ ryang(ondol)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 ryang</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2 more types)</td>
</tr>
</tbody>
</table>
introducing modern designs. Housing types were divided into five categories; Gap (A), Eul (B), Byeong (C), Jeong (D), and Mu (E). Gap type homes had a floor space of 20 pyeong, Eul types 15 pyeong, Byeong types 10 pyeong, Jeong types 8 pyeong, and Mu types 6 pyeong. Housing plots should be more than 3 times the floor space and Byeong, Jeong and Mu types could be tenements. The Japanese colonial government quoted Chosun City Planning Decree that required the building-to-land ratio to be 60-70%, saying that three times is too luxurious. The Housing Corporation however held their ground, saying that for the sake of dignity and the authority of public-financed housing, housing sites should be at least three times the size of the floor space. Gap type homes were for the upper-middle class, Eul types for the middle class, Byeong types for the working class and laborers. Gap type homes were sold to individuals and Eul type homes and below for rent by all.

All the houses built by the Chosun Housing Corporation were in the Japanese style, both interior design and external appearance, this was the Japanese colonial government’s policy. They made it a rule that one room should have ‘ondol’ (traditional Korean floor heating system) so that both Japanese and Koreans could live in the house. The Japanese government boasted that in housing ‘Japan-Korea are united as one body’, a policy they were trying to realize. The homes built by the Housing Corporation had a combined floor design with little Korean touches added to a Japanese style home. In other words, the home was a ‘corridor in the center’ type so that the front entrance leads to all the rooms. In addition, a garden in the center yard replaced a wooden floor and the bathroom and toilet were built in the house. The Housing Corporation tried to introduce modern conveniences to the standard house design. For example, they tried to make the yard as large as possible so that all the houses would have more than 4 hours of sunlight a day, Gap (A), Eul (B), and Byeong (C) type houses had bathrooms and those houses without bathrooms had a public bath for every 50 homes.25
Residential Conditions after Liberation and in the Ruin of the Korean War

THE RESIDENTIAL CONDITIONS AFTER LIBERATION IN 1945

After Liberation from Japanese rule in 1945, Korea was divided in half along the 38th parallel, which meant losing half of its territory and 34% of its population to communist rule. Even with the Japanese out of Korea, Seoul's population had not decreased. The continued increase can be attributed to repatriation of those who had fled Japanese domination and those Koreans who had lived north of the 38th parallel fleeing communist rule to settle in the South, mainly in large cities such as Seoul and Incheon. In addition, jubilation over Liberation and the overall disarray of social order aggravated the population concentration into the cities. Taking advantage of post war confusion, there were some that dishonestly took possession of properties previously owned by Japanese or destroyed them in a confused display of revenge. Also amid this disorder, 200 homes that were under construction under the aegis of the Chosun Housing Corporation were destroyed before the Corporation understood what was happening.

As more and more people flooded into Seoul after the Liberation, the housing problem grew worse. The serious housing shortage caused people to scramble for the so-called 'enemy homes' that had belonged to Japanese residents in Korea during the colonial days. This became a major housing-related social problem after the Liberation. At that time, there were around 50,000 'enemy homes' (called jeok-san-ga-ok) that Japanese had owned. As the demand for housing was much larger than the supply, it was common for 2-3 households to share one house. Buddhist temples and shrines were used to accommodate families and in some cases, two to ten households shared the temple or shrine. Disputes over 'enemy homes' grew serious and in 1947 a demonstration by war refugees demanded that 'enemy homes' be used as refugee camps. In response to the movement, the Enemy Property Management Office in Seoul opened inns and red-light quarters that had once owned by Japanese to the North Korean refugees. At the same time, Seoul city officials conducted an investigation in cooperation with the tax offices into the former enemy properties.
For 3 years during the US military administration (1945-48), little progress was made in housing policies as the governing administration placed the majority of its attention on maintaining a subsistence level and social order. All the property left behind by the Japanese reverted to the Military Administration Office. Sale or purchase of the properties was not allowed instead, the property was used for military purposes. During this period, the Housing Committee of the Office requested that the Housing Corporation submit a housing construction plan. The plan was to take into account the evacuation of refugees from 'enemy homes' in Sindang-dong, Jangchung-dong, Cheongpa-dong, and Huam-dong and build new housing on the sites for officials of the Office. With the funds provided by the Office, the Housing Corporation built houses in Huam-dong, Yongdu-dong, Anam-dong, Sinsol-dong, Saegundong, and Hongje-dong and moved the evacuees there.²⁴

No changes took place in housing policies even after the establishment of the Republic of Korea in 1948. This was due to concerns about security, and national defense with respect to Communist North Korea, and setting up basic laws and ordinances. Minimal activity such as changing the name of the housing authority from Chosun Housing Corporation to Daehan Housing Corporation was all that the government accomplished while the Military Administration Office was in authority. During this period, roaring public opinion demanded solutions to the problems left behind by three years of less than rational housing policies by the US military office.
and the problems associated with illegal occupation of the homes. In the early 1950's, government policy was finally prepared to transfer ownership of government property to private ownership. The backbone of the policy gave preferential treatment to the present occupants. The occupants were allowed to buy the house if their bid was highest and pay for the house on an installment plan over a long period. This policy cleared up misgivings of the government property occupants.

As shown above, housing conditions in Seoul between Liberation in 1945 and the Korean War in 1950 were extremely poor. This was brought about by an almost non-existent housing supply while the increase in population was burgeoning. As a result, the quality of housing in Seoul decreased with sub-quality housing such as makeshift huts becoming more prevalent. Those in the lowest income bracket who could not even afford 'enemy homes' had no choice but to live in shacks by streams or on mountain slopes, these numbers increased day by day. No accurate statistics are available regarding the number of these shacks at the time however, it is generally presumed there were a vast number of these shacks. Some official records purport that prior to the Korean War, only 53% of the people living in Seoul owned a home. This means that half of the citizens living in Seoul had to rent a house or settle for sub-quality housing. The substandard homes, so called 'moon villages' (the name was given to the villages situated high on mountain slopes close to the moon), arrived on the scene after the shacks in the Cheonggyecheon stream area were gone. The substandard housing that became common in various places is significant to the housing history of Seoul.

SEOUl IN RUINS AFTER THE KOREAN WAR AND THE CONSTRUCTION OF PUBLIC-HOUSING

Housing conditions in Seoul after the Korean War

The eruption of the Korean War in 1950 left Korea in ruin, it was worse yet for Seoul. Indiscriminate bombardment of Seoul by the US military left the majority of Seoul in ruins and residential areas suffered massive damage. With respect to the general buildings in Seoul, the Jung-gu area suffered the most damage followed by Yongsan-gu, Seongdong-gu, and Seodaemun-gu. In terms of residential areas, Yongsan-gu was most heavily hit. This was primarily due to the railway systems concentrated in the area, thus a main target
for concentrated fire. Prior to the war, there were about 190,000 homes (inclusive of the 30,000 unauthorized homes) in Seoul, of them, about half suffered from the bombing attacks or fire and around 20,000 homes were damaged to the point that they could no longer be considered a viable residence. In other words, around 30% of the homes in Seoul had to be restored.

Despite such enormous damage and since the majority of the population of Seoul scattered to the outlying provinces, the housing problem in Seoul did not reach serious proportions until truce was declared at the end of the Korean War in 1953. At that time Seoul was in ruins, there was a serious housing problem compounded by the influx of people returning to Seoul. The population of Seoul, at one time down to 600,000, continued to increase by 100,000 people per year upon being taken back from communist hands. When the government and various military organizations returned to Seoul, their employees and families accompanied them. As a result, despite Seoul's efforts at reorganization, it was inundated with unauthorized housing and a vicious circle ensued where the people would build unauthorized homes and the city would have to demolish them by force. This was a time when living in makeshift huts and caves was not uncommon and to have more than one household live in a residence was considered normal.20 The sub-quality housing that began with mud huts and dugouts in the 1920's on the outskirts of Seoul prior to the Korean War now continued unabated. These sub-quality dwellings could now be found under bridges, along streams, outside the fortresses, they were all over and continued to increase with the
return of war victims and North Korean refugees.

Sub-quality housing prior to the Korean War and following the war exhibited a considerable difference. This type of housing prior to the war was found primarily under bridges, along streams and in the hills however, following the war this type of housing moved indiscriminately into downtown, the areas of Jongro-gu, Jung-gu, Seodaemun-gu and Dongdaemun-gu. Unauthorized housing invaded the downtown areas not only due to war damage but was coupled with various other elements. First there was the 'barley hump' or spring famine just before barley harvest in early summer, 30-40% of the farmers were forced to manage their living with the aid of roots and bark, and many of them gave up their livelihood and moved to Seoul thinking that as a 'A-frame coolie', day-laborer in a city would be a better living. In addition, due to the general elections in the 1950’s administrative enforcement was relaxed and the use of patronage for political advantage was widely practiced. Supervision of unauthorized housing was virtually nonexistent and even serious illegal practices were given tacit approval for political advantage. Frequent natural disasters such as typhoons and other natural tragedies comprised but a small portion to the poor housing conditions in Seoul.

After restoration, the government in Seoul organized various efforts to solve the housing problem for war refugees and tried to reconstruct Seoul based on Provisional Laws on Accommodation of War Refugees which had previously been set up in Busan. In October 1953, President Seungman Rhee announced that he was seeking the people’s cooperation for national reconstruction. In the announcement, he pointed out that the housing problem was of greater importance than the food shortage. The Martial Law Command announced a special statement banning the illegal occupation of homes and promulgated that occupation of these homes would have to go through set legal procedures and any violation of this law would be subject to strict punishment.

Construction of public housing using foreign aid

As society gradually settled down after the truce, the Korean government pursued housing construction in earnest. Beginning in 1955, various public organizations, finance institutions, and aid organizations to include the Chosun Housing Corporation, the Korea Development Bank and the City of Seoul began housing projects for the public. This housing was collectively called ‘public housing’ (gong-young-ju-taek) though they had different names based on housing type, financial source, and purpose. The government financed some projects, however the majority of them were financed by UNKRA (United Nations Korean Reconstruction Agency). The
public housing, under various names, can be divided into several categories. First was Buheung Jutaek (Restoration House) or Gukm Jutaek (People's House) was financed by the issuance of national bonds or housing loans. Apartments and apartments with stores on the ground floor were included in this category. Second was the Jaegeon Jutaek (House of Reconstruction), which was government-planned but financed and controlled by UNKRA. The third category, Himang Jutaek (House of Hope) was set up so that the occupant would bear expenses for the land and construction while the Chosun Housing Corporation provided the construction material. The fourth category was Foreign Housing for foreigners and was financed by the issuance of national bonds.

Reconstruction Housing financed with the aid of UNKRA was constructed with mud-brick walls and typically good quality materials such as 'roofing', nails, Oregon pine and other materials. They were small, crude 4-5 pyeong homes without 'ondol' (traditional floor heating system) with wood walls and floors. The government bore the construction expense for these relief homes and war refugees received them free of charge. Of the homes built with UNKRA aid, there were of better quality. They were about 9 pyeong in size with two rooms, one wooden floor, and kitchen and were called 'welfare homes'. Welfare homes were built in Jeongneung, Jeonnong-dong, Anam-dong, and Daebyeon-dong, a total of 1,000 homes. Priority to the welfare homes was given to those who lived in and owned a house in Seoul prior to the Korean War but were presently without a home because it was partially or totally destroyed.

Figure 5.16
Public housing complex in Sanga-do-dong built by UNKRA aid (1964 photo)
or refugees living in extreme poverty.

The Chosun Housing Corporation constructed the Houses of Hope. The 'houses of hope' were financed with advance payment by the future homeowners who were middle class in various areas around Seoul.296 Their construction by the Chosun Housing Corporation were significantly influential to the development of suburban areas in Seoul, Dapsimni and Bulgwang-dong are representative examples. These areas were originally rice paddies and open fields, removed from urban districts with poor access. Therefore less than the expected number of people were inclined to move to these areas and the Housing Corporation had to offer subsidies to attract buyers. As construction in this area was done first, then came the roads and infrastructure, development was slow. Presently this area is a busy commercial district.

In 1957 a change took place in government housing policies. Previously the government’s housing policy was just a stopgap measure that offered welfare homes financed by foreign loans however, gradually the policy changed toward building permanent homes. In accordance with this change in policy, the Chosun Housing Corporation began building 'people's house', some were single homes and some were apartment buildings. Single homes were 15 pyeong buildings on 40 pyeong of land; apartment buildings were two-story and could accommodate 4 households. The people's house complex in Bulgwang-dong and Galhyeon-dong built in the late 1950's and early 1960's were representative examples of 'people's house'. People's house was designed to improve housing conditions suited for an improved living standard and incorporated many western architectural concepts, it is for this reason that it was also called 'cultural house'. With the construction of these new homes, those areas were upgraded to decent housing areas under the name, 'cultural village' despite there being poor residential quarters remaining in the area.30

The public homes built in the 1950's made their mark in the housing history of Seoul due to various reasons. First, though the public-financed homes fell far short of the demand at the time, it served as a catalyst facilitating housing construction by civilians soon afterward. Second, it introduced the convenience-conscious western style of housing to Korea. Different from traditional Korean homes, much emphasis had been given to kitchens and bathrooms, and introducing the living room as a common space, bedrooms and living rooms were now separate. Third, they played a leading role in the development of Seoul's suburban areas. Public-financed homes were built in the outlying areas of Seoul such as in the surrounding low hills or agricultural areas, this prompted the development of the transportation infrastructure and led to the creation of many new residential areas in the suburbs of Seoul.
The construction of public housing had a negative aspect as well. First, since most of the public homes were built with only limited foreign aid, they were small and were meant to be only temporary residences; these areas soon turned into slums. Second, while public housing led development of the suburban areas in Seoul, at the same time, it brought along a nearby collection of sub-quality housing. In national forests, public forests and privately owned but neglected forest lands adjoining the public housing areas, unauthorized sub-quality homes were thrown together without any forethought or order. Third, as no city plan had been made, there were no plans for the construction of major roads. If there had been, no official announcement was made and nonetheless public housing were built. This later proved to be a hindrance to orderly city development.
Change in Housing during the Economic Development in the 1960's

EXPANSION OF RESIDENTIAL AREAS AND THE RESIDENTIAL ENVIRONMENT IN SUBURBAN AREAS

The 1960s was a period of expansion for the residential areas in Seoul. During this period various laws and regulations regarding housing were set, and the housing policy with regard to providing homes in large numbers was pursued in earnest. In order to solve housing problems, the new government that came to power in 1961 through a military coup changed the Korea Housing Corporation to the Daehan Jutaekgongsa (Korea National Housing Corporation) in 1962 and vigorously pushed forward the 5-Year Economic Plan including new housing policies. In addition, enactment of City Planning Law in 1962 laid the groundwork for large-scale land development projects including land adjustment and housing tract development projects. Therefore, for Seoul the 1960s groundwork was laid for development into a metropolitan city. During this period, various development projects were carried out in Seoul such as construction of new roads, road expansion, and housing tract development in response to the rapid population increase.

During this period, residential areas were developed in various areas, from neighboring areas in existing urban districts to suburban areas, from 5 to 15km from the center from downtown Seoul. This expansion of the residential areas was further accelerated when Kim Hyeon-ok took office as mayor of Seoul in April 1966. At this time Seoul was pushing for a policy to transfer urban paupers and those of low-income to the small, neighboring cities. In order to carry out this policy, Seoul removed illegally built shacks in the downtown areas and at the same time, based on the Land Readjustment Law, built large scale housing tracts in various areas. The housing readjustment projects were carried out extensively in such suburban areas of Seoul as Hwayang and Mang-u in the east, and the four districts of Yeonhui, Yeokchon, Gyeongin, and Gimpo to the west, in Sihung, Sillim, and Yeongdong 1 and 2 districts in the south, and in the Dobong and Chang-dong areas to the north. This residential area expansion policy was supposed to solve the serious housing shortage problems. According to statistics produced in late 1966, the housing
shortage percentage in Seoul stood at 54.6%.

Majority of the houses built in the expanded residential areas was single houses. The houses for common people were mostly with a floor space of 10-18 pyeong on the 30-40 pyeong building site. The houses had either cement brick walls with a tiled roof or cement brick walls with a slate roof made of concrete. Some of them were built by public organizations such as the Korea National Housing Corporation but private contractors built most of them. Homes for the middle and upper class had about 30 pyeong of floor space with a guest room or study. Most of them were one-story homes without a basement, and two-story homes were hard to find. In the 1960s, only a very limited number of homes for the upper class or large mansions had basements. It wasn’t until the late 1970s that two story homes appeared in Seoul, however basements were not living areas but were used as storage or boiler rooms.

The floor plans of the homes for common people that were built and distributed by the Housing Corporation can be divided into three types. Type one had a central wooden floor space with a bedroom and kitchen on either side, and the toilet and bathroom; were located in one corner of the central floor space. Type two had a wooden floor located in the center front while the kitchen was to the back with the bedroom; bathroom and toilet were to either side of the kitchen. In type three, the wooden floor area was to one side in the front with a hallway in the center and bedrooms, kitchen, and toilet was on the other side of the hall. Besides these three types there was a Korean letter ‘ㄱ’ type floor plan or so called land-gun type floor plan homes. Each room had 'ondol' (traditional floor heating system) and the toilet, bathroom, and entry hall were floored in tile. The houses built by the public organizations were relatively decent residences. To the contrary, the homes built by private contractors for the common people were of inferior quality. For the most part the rooms, kitchen, and other spaces were laid out in a linear arrangement. Seoul did not have a sewer system by the 1960s and on into the 1970s, and sewage carts were used to take away excretion from the toilets in the homes. Almost 100 percent of the homes built between 1964 and 1972 had that type of toilets installed that would flush. Therefore, most of the homes built by private contractors had a separate toilet in one corner of the yard. Heating by boiler was as yet unknown and the briquette-heated 'ondol' system was used universally at the time.

The residential setting of the aforementioned single homes was relatively good as they were built on the housing tracts just formed by the land readjustment projects. Residential settings of the common people on the outskirts of Seoul in the 1960s were poor beyond description. Most of the homes were barely better than shacks.
Roughly built cement and brick walls were topped by inexpensive roof tiles or slate situated on a wooden frame. Therefore, it was the lot of a commoners' life to have leaking roofs during rain, to have to endure the scorching summer heat, and to shiver in cold during the winter. Fee outlying area was equipped with water works or sewer system, and when it rained the unpaved roads turned muddy. City buses were the only means of transportation at the time. Buses run at long and irregular intervals and during the morning and evening rush hours, buses were so crowded that they were likened to 'bean sprouts in an earthenware steamer.'

The elevated areas at some distance from downtown did not have waterworks and everyday fresh water had to be supplied by water wagon and 'war over water' was a common theme. Reading through newspapers between 1967 and 1971, there were water shortage related articles almost everyday referring to such things as restricted hours on water rationing, every other day water rationing, housewives launched 'give me water' demonstrations and others. While shortage of water was a serious problem, worse yet was water loss due to old water pipes. Most of the water pipes in downtown areas were 40-50 years old, and the water loss rate was believed to be over 40%. In addition, water demand for newly developed residential areas made the shortage worse, and during the late 1960s and early 1970s, Seoul was known for its water wars.

In the 1960s fuel for heating homes was changed from firewood to coal. Changing to coal brought its own problems. The 'coal famine' began in the summer of 1966 and became worse with the
onset of winter, threatening the lives of the common people. Coal manufacturers cut down briquette production demanding a price increase, and housewives had to wait in line to buy just one or two briquettes. Disposal of the briquette ashes was another serious problem. Homes with piles of briquette ashes by the gate were common in residential areas of the cities.

PLANNED DEVELOPMENT OF PEOPLE'S HOUSING COMPLEXES

Housing construction in Seoul in the 1960s represented a continuation in innovative experimentation. Introduction of apartment complex and the development of large-scale housing complexes taking into consideration of neighborhood were examples of these efforts. The housing complexes built between the Liberation in 1945 and early 1960s were simply dividing large tracts of land into smaller lots. By mid 1960s, western theories on building housing complexes such as theory of residential neighborhood were introduced to Korea by the Korea National Housing Corporation and they began implementing these new concepts. The Housing Land Readjustment Law instituted in 1966 allowed the Korea National Housing Corporation – in the past only local governments had the right to develop housing land – to develop housing land, and it went ahead aggressively with housing land readjustment projects on its own. Several representative examples developed by the Korea National Housing Corporation according to their own housing land development projects were the Hwangok Housing Complex with 300,000 homes, the Gae-bong Housing Complex with 600,000 homes, and the Daegu Suseong Housing Complex.30

The Guro-dong Housing Complex completed in 1961 was the first large scale housing complex after the Liberation in 1945. In 1961, the City of Seoul leased 100,000 pyeongs of land for military use without charge and it was used to build 600 public-financed homes and 275 simple frame homes with money from the national land development budget and the city budget. The public-financed homes were cement-brick-walled-homes for two households and the homeless masses drew lots to earn the right to live in them. Pre-fabricated homes, tenement homes for four households were built to accommodate 1,300 households for the people that had lived in the refugee camps. Their hovels and tents had been destroyed by the city in carrying out the city development plan. A select number of households were allowed to move into the houses without advance payment. The region was a vast, barren area devoid of any common
facilities or buses, and numerous homes with triangular capped roofs were indeed a grand sight. The Guro-dong Housing Complex was the first example of a massive construction of homes in one area.

The first residential complex based on the concept of a neighborhood was the Hwagok Housing Complex of 100,000 households and the adjacent another Hwagok Housing Complex of 300,000 households. The Korea National Housing Corporation carried out the construction of 100,000 units Hwagok Housing Complex in 1965. The Korea National Housing Corporation prepared a 117,000 pyeong housing tract in Hwagok-dong along the Gimpo
road and on it built the 12 - 17 pyeong People's Houses for 758 households. The remaining land was sold to the public as housing tracts. Parks, elementary schools, commercial districts, kindergartens, district offices, police stations and other communal facilities were incorporated into the Hwagok Housing Complex. For this reason, people had to win an average of 3.7:1 competition to get a house, a very high competition in those days. Encouraged by the success of the Hwagok-dong housing complex, the Korea National Housing Corporation began the so called Hwagok Housing Complex for 300,000 households project in 1966, adjacent to the original Hwagok Housing Complex. The 300,000 Hwagok Housing Complex was in accordance with the land readjustment plan and was an example of one complete regional development.34 The two complexes were the seedbed of the present Gangseo-gu and they were the first planned and are representative of the outer expansion of urban areas.

Looking at the Hwagok Housing Complex from today's perspective, the composition of common facilities in the neighborhood were less than satisfactory. It was due to the spatial structure of the complexes. In the complex, homes were tightly arranged in perfect order, but leaving no extra space for common facilities. However, a distinctive difference between the previous housing developments and the Hwagok Housing Complex was that the Hwagok had various common facilities such as fire station, public health center, schools, shops, parks and other facilities in their proper place and they were more than a simple division of housing tracts. It would be proper to say that the Hwagok Housing Complex was more an example of regional development focused on solving the shortage of everyday living facilities than a community planning for livable neighborhood. There was an understanding that the neighborhood is an important concept in residential areas, however, there was an empirical limitation to put the concept into practice.35

APPEARANCE OF APARTMENTS A NEW TYPE OF HOUSING

Background of apartment construction

Beginning in 1962, due to the aggressive industrial policy of the government, the population of Seoul increased sharply and so did the need for housing. In response, in the mid 1960s, the government began a policy of building apartments in urban areas and improving housing conditions in rural areas. Accordingly apartment construc-
tion began in Seoul and other cities. There were only a very limited number of capable construction companies at the time and it was difficult to expect that large quantities of housing would be supplied by the private sector. Therefore, most of the apartment construction and other major housing projects were led by the City of Seoul and Korea National Housing Corporation. In order to facilitate civil sector participation in housing construction, the government instituted and promulgated land and housing related laws and regulations such as the City Planning Law, Land Expropriation Law, Building Law, Comprehensive National Land Development Law and strategically concentrated what was available of the public-financed investments in Seoul. Seoul built 'citizens' apartments in large quantities in the low-income districts outside downtown while the Korea National Housing Corporation went ahead with various large housing projects and began building apartments. This was how apartments, western style, collective housing, was introduced to Korea in the 1960's. The 1960's were a turning point in the housing history of Korea.

**Construction of the Mapo Apartment, the first apartment complex in Korea.**

The Korea National Housing Corporation made its new start in 1962 and built the first apartment complex in Mapo. There were apartments in Seoul prior to Mapo's such as the Haengchon apartments built in 1956, the Jongam apartments completed in 1958, and Gaemyeong apartments constructed in 1959. They were however, single buildings that were not really an apartment complex. In

![Figure 5.20](image)

Single block Gaemyeong Apartment (before Mapo Apartment Complex)
those days, Korea did not have the architectural technology to build sturdy apartment buildings and there were not sufficient construction materials. For apartment construction, expensive foreign construction materials had to be imported and the high-priced apartments went to politicians or high-ranking public officials. Therefore, for the general public, apartments were an ‘object of envy’ and was referred to as ‘dream housing’ or ‘cultural housing.’ Those apartments that had not been built carefully quickly deteriorated due to poor management and the areas gradually turned into slums.

The construction of the Mapo Apartment Complex was the first housing project initiated by the military government in its 5 Year Economic Development Plan and was executed with great enthusiasm. The project was intended to encourage enthusiasm for national reconstruction and to project the new image of Korea both at home and abroad. It was also intended to provide the advantages of modern civilization through a simplified mode of living with an improvement in housing conditions and to promote the image of Korea. In line with these objectives, the Korea National Housing Corporation tried to introduce various new and innovative ideas in
carrying out the housing projects. For example, the housing project would be built on a spacious site; a 10-story apartment would have an impressive coefficient of land utilization ratio and would include plenty of pleasant outdoor space. Apartment buildings would be arranged in the pattern of Y so that all would get maximum exposure to sunlight.

Not all of the new and ambitious ideas were realized in the construction of the apartments. First of all, using as an excuse the shortage of electricity, oil and plumbing, strong objection was presented against installing an elevator, a central heating system, and flush toilets. There was also an opinion that the land on the site was not solid enough to sustain the high-rise apartments. As a result, the number of apartment floors was reduced to 6, the maximum limit that people can manage themselves without elevators and briquette boiler heating was installed in respective apartments. Despite such limitations, the Mapo apartments contain many innovative ideas. Based on the western mode of living, a large living room had been introduced and each apartment had balconies on the front and rear sides to enhance ventilation and exposure to the sun. Besides, various experimental ideas were tried at the apartments and it brought significant change in the mode of living for the Korean people.10

Due to the combined efforts of the newly launched military government’s enthusiasm for national development and housing expert groups who were eager to introduce quality housing to Korea, the Mapo apartments were a significant influence to apartment construction in Korea. The Y shape combined with panel-shaped building of apartment arrangement, large open spaces represented by the 11 percent of building coverage ratio, children’s play grounds, new landscape such as sculptures, and others comprised a very high quality housing complex. These features received a lot of media attention, and as a result, provided momentum for a shift of direction toward a new housing culture in Korea. Through the construction of the Mapo apartments, the Korea National Housing Corporation proved that an apartment complex took up far less land than a single home complex. It also confirmed the possibility of high-rise apartments, communal living, and construction of apartments with domestic construction materials. In addition, it proved that apartment complexes were the answer to both the housing shortage problem and the improvement of urban appearance.

Construction and discontinuation of Citizen Apartment

In 1967, devising the second 5-Year Economic Development Plan, the government announced that it would redevelop slum areas or underdeveloped areas in Seoul and other cities and build apartments
and tenement houses on those sites in order to help solve housing problems for the low-income people. The plan presented a 'one house per household' objective, which clearly reflected the need for spatial structure readjustment in large cities in order to keep up with economic development and large-scale housing redevelopment. This was also an aspect of the campaign promises from the 6th presidential election. Subsequently, the Ministry of Construction announced that in place of the existing housing policies of building apartments and single homes with public funds for the middle class, it would instead use those funds on the redevelopment of slums and poor quality housing districts and build 5-8 pyeong small apartments in large quantities for low-income people. The new policy would correct the practice of making the government-built apartments available only for the middle class and help solve the problem of redeveloping the poor quality housing areas that had always been a hindrance to city development. In order to move forward with the plan, the government allocated 800 million of the 1 billion won total housing budget for 1968 for the construction of apartments in poor quality housing areas in the four major cities, Seoul, Busan, Daegu, and Incheon. The respective local governments were required to put up an amount to redevelop the poor quality housing areas and build apartments. In the past the government provided a 50% subsidy for housing and the remaining 50% had to be covered by apartment owners. In an effort to ease the burden on those with low incomes, the government changed the policy to 40% for the government subsidy, 40% by local government subsidy, and 20% of the expenses to

Figure 5.22
A typical citizen apartment – Naksan Apartment built in the 1960s

Changes in the Residential Features of Seoul
be born by apartment owners. This policy ultimately shifted a significant portion of the responsibility for raising funds for housing construction to local government. Though the policy has achieved housing expansion in terms of quantity, the local governments experienced serious difficulties in finding the financial resources to foot the housing projects. In addition, subsidy repayment ability by those of low income, the to-be-apartment owners, was not carefully considered in the housing policy. Despite the financial uncertainties, apartment construction was enforced and resulted in low quality housing with poor roads, electricity, plumbing, and sewer systems.

Based on the change in the national housing policies, Seoul set up the so called 'citizen apartment' construction plan. In 1968, then Seoul mayor Kim Hyeon-ok announced that the City would invest 24 billion won or 80% of the proceeds from the sale of the Yeouido building sites on the construction of 2,000 'citizen apartment' buildings over a 3-year period from 1969 to 1971. Following up on the announcement, Seoul drew up a plan to remove the shacks on the 780,000 pyeongs of land in the 40 low quality housing areas and there build 90,000 apartments for those in the low income brackets. They planned to build 200 apartment buildings in the first half of 1969, another 200 buildings in the second half of the year, 800 in 1970, and another 800 in 1971. The apartments size was intended to be of 8.5-10 pyeong per household. Apartment residents would be allowed to move in without advance payment, instead residents would pay back the government housing subsidy of 200,000 -
250,000 won over 5, 10, and 15 year periods. The citizen apartment construction plan was a reflection of Seoul’s enthusiasm to solve the housing problems completely.

Apartment construction moved forward actively. In 1968 alone, a total of 26 apartment buildings were built; 19 buildings in the Yeongcheon district of Seodaemun-gu, 4 in the Eungbong district of Seongdong-gu, and 3 in the Changchon district of Seodaemun-gu. From 1969 to 1972, 87 apartment buildings were constructed in Jongro-gu, 14 in Jung-gu, 26 in Yongsan-gu and others, 426 buildings total. In building the apartments the ‘prefabricated frame piling construction method’ was chosen and it received favorable public attention from both the people who moved into the apartments and the public in general. Due to the rough, slipshod construction work, the citizen apartments caused various social problems and all construction work was discontinued when the Wau Apartments collapsed on April 8, 1970. Mayor Kim’s unreasonable citizen apartment building plans and his forcefulness in moving ahead with the plans were major reasons for the prevalence of rough, slipshod construction work. This was made worse by going ahead with the construction without sufficient study of the building sites, geological features, and other conditions that would sustain that many apartment buildings. In addition, construction was pushed forward even during the winter season, the use of low quality construction materials, corrupt public officials’ taking bribes which should have been spent on the construction of sturdy buildings also contributed to the low quality of the buildings. The citizen apartment building plan to provide housing to those in the low-income brackets through the redevelopment of slums and underdeveloped areas was thwarted as such. Up to this point, a total of 426 apartment buildings for 16,962 households or 21.3% of the targeted construction were completed.

EXPANSION OF UNAUTHORIZED SLUM AREAS

Expansion of the unauthorized slum areas in the 1960s is a significant aspect that cannot be overlooked in the history of Korean housing. Formation of the unauthorized slum areas so called ‘moon villages’ began during the Japanese colonization of Korea and by the 1960’s, it was so pervasive it became an obvious housing pattern. Beginning in the 1960s, the manufacturing-industry-first policy, which was in line with the export-oriented economic development strategy, caused a large population influx from agricultural areas into the cities. It deepened the housing shortage problem and Seoul developed an unprecedented large-scale slum area. During the Japan-
ese colonization period, slums formed beneath bridges outside the downtown areas, by streams, or in the hills. But after Liberation and the Korean War, slums spread to the parks and roads in the downtown areas of Seoul. In order to get rid of the slums, the City of Seoul tried various measures including the construction of 'citizen apartments' however housing problems far from being solved grew worse.

In the 1960s, Seoul's overall policy was to remove the slums. Unauthorized houses occupying national and public land in downtown Seoul were demolished in accordance with the city planning laws which were prepared with an eye toward restoration of city function and improving its cityscapes. The City of Seoul announced a plan in June 1967 that 137,000 unauthorized houses would be removed over a 3 year period and the residents of the shacks would be given an 8 pyeong housing site in the national and public lands on the outskirts of Seoul where they could build another unauthorized house. Seoul designated a housing site in completely undeveloped land for each household, the previous slum dwellers were allowed to build whatever they could afford, either shacks or dugout mud huts. They were also responsible for infrastructures such as

Figure 5.24
Bongcheon-dong substandard housing area — a typical Moon Village

258 | Sai-Kwan Sohn
roads and sewer systems. The policy had some advantages, it made removal of the shacks and the transfer of slum dwellers easy, and the new land was close enough to downtown areas so there was no need for a separate employment policy. However, the unplanned development of this area in the end produced a careless expansion of the slum areas. In a way, it represented official recognition of slum areas and as a result large scale settlements were formed in Sadang-dong, Dobong-dong, Yeomchang-dong, Geoyeo-dong, Hail-dong, Sihung-dong, Bongcheon-dong, Sillim-dong, Chang-dong, Sangmundong, Sanggye-dong, Junggye-dong, as well as in other areas and were referred to as 'moon villages'.

In addition, as part of the unauthorized slum readjustment project, Seoul established a satellite city in Gwangju-gun, Gyeonggi-do in 1968 and moved tens of thousands of people whose shacks had been destroyed to there. Gwangju Complex was the first example of a city-sized settlement of previous slum dwellers. Gwangju Complex is presently known as the City of Seongnam. At that time, Seoul hurriedly pushed forward the transfer of large numbers of people to Gwangju, even though the infrastructure such as roads, plumbing, and sewer systems for such a large population was not in place. In addition the people had to pay for the price of the land and various taxes. Against this policy put forth by Seoul, roughly 30,000 people from the Gwangju Complex exploded in violent demonstration, it was called the 'Gwangju Housing Complex Rebellion of August 10'. After the incident, Seoul came to better understand the reality of Gwangju and concentrated on housing improvement and licensing
unauthorized shacks. Despite the effort, insufficient infrastructure and a less than desired self-support effort by the residents of the Gwangju Complex to improve their housing condition came to naught.

Housing Conditions during the Rapid Economic Development in the 1970's

CHANGES TO THE SINGLE HOME IN SEOUL IN THE 1970'S

The most distinctive change related to the housing pattern in Seoul since the 1970s was an increase in multi-family housing such as apartments and row houses. Single homes, however, was the representative housing pattern in Seoul in the 1970s, and the trend continued into the 1980s. As of 1970, single homes comprised 88.4% of the entire housing in Seoul and by 1975 it still stood at 83.0%.

In terms of housing types, the single homes built in the 1970s showed distinctive differences from those of the 1960s. While most of the single homes built in the 1960s were simple houses satisfying the minimum in sanitation requirements, the single homes built since 1970 contain various improvements in terms of architectural design and convenience. It was in large part due to the introduction of modern western housing elements by competent architects such as Kim Su-geun, Kim Jung-up, Ahn Yeoung-bae, and Kong Il-geun. Instead of traditional housing geared to a life style of sitting on the ondol and wooden floors, they introduced a new housing style with independent living room, dining room, and bedroom with western beds. Most of the western style homes had brick walls but roof styles were varied such as flat slate, slanted roofs and others. There was a
big change in the appearance of homes; for example, much emphasis was given to modern western images or the beauty of form. The architecture by distinguished architects made an impact on general housing as well, and single homes in Seoul were witness to significant change in terms of structure, exterior and interior design. First of all, Seoul came to have many two-story single homes in the 1970s. Different from multi-story western homes, the traditional Korean homes are mostly one-story buildings and the utilization of land was low compared with western homes. Analysis revealed that even as late as 1976, of new homes, two-story homes comprised less than 30% of the total. Over a 2 year period between 1976 and 1977, Seoul witnessed a rapid increase in two-story houses. According to statistics, of the new houses built in 1978, two-story homes comprise 80.4%.\textsuperscript{42} Through this process, two-story homes became the representative housing pattern in Seoul in the 1980's, and it accompanied an increase in floor space of house. Two-story homes were a necessity because a one-story single house defies efficient use of the land, and it could not keep up with the rapid urbanization of Seoul. The severe shortage of housing was another reason for the explosion of two story homes. Except for high-class residential areas, two story homes where the owner of the house lives on the first floor while the second floor had a separate entrance and was offered to rent became the general housing pattern in the 1980's and continued up to the early 1990s when multi-household homes became popular.

\textbf{Figure 5.26}
High style detached house in Pyeongchang-dong, designed by Kim Su-geun in 1975
The two-story house built in the 1970’s brought along changes in architectural design as well. First of all, underground space increased. Up to the mid 1970s, a small, around 3 pyeong underground space for either a garage or boiler room was the norm in most houses. However in the 1980s, it became common to use the basement (underground space) as a residence rather than as a garage or boiler room and it became larger than the second floor apartment. Another change included a larger area for the living room. In the 1960s, the master bedroom was generally larger than the living room, which usually had a wooden floor, but in the 1970’s living rooms tended to be larger than the master bedroom room. In the 1980’s, a slight change in trend took place; living became significant as a space with a separate function. Another significant change in Korean homes was that flush toilets became more prevalent. Beginning in the early 1970s, an increasing number of homes had flush toilets and with 1976 as a turning point, most of the new homes have flush toilets. The heating system as well witnessed some changes. Up until the early 1970s, most of the new houses had the traditional ondol floor heating system however, beginning in 1973 heat supplied by a boiler system spread rapidly. According to statistics, more than 90% of the houses built in 1977 had the boiler heating system. Judging from this, it can be said that the single homes in Seoul underwent significant change in the 1970s in terms of housing structure and architectural design.

SPREAD OF APARTMENT COMPLEXES

Construction of apartments for the middle class

The 1970s can be called the apartment expansion period. During this period, apartment construction was primarily to fill the need of the middle class. Following the discontinued citizen apartment construction projects that were pushed forward during the late 1960’s and only until the early 1970’s due to the collapse of the Wau Apartments and the Gwangju Housing Complex rebellion, budget restraints and management problems regarding the construction of rental apartments, apartment construction for low income people was to a great extent decreased. On the other hand, apartment construction for the middle or upper class witnessed an enormous boom. Successful completion of the First and Second 5-Year Economic Development Plans created the increasing volume of the middle class who to a great extent favored apartments as the new hous-
ing type, which provided the conveniences found in the west. Since the success of the Mapo Apartment Complex, apartments became recognized as residences for the middle class and apartments for the middle class were built in various parts of Seoul. In particular, in conjunction with the development of Gangnam area (south of the Han River), Seoul’s housing policy gave more emphasis to the construction of apartments for the middle class, and apartment complexes with larger apartments and a much expanded, improved architectural design. Apartments became the best alternative to solving the shortage of housing in Seoul, it represented the convenience found in westernized homes, and owning an apartment in Gangnam was considered an index representing a certain degree of economic success. The government housing policy switched to apartment construction for the middle classes. This housing policy coupled with people’s expectation that an apartment could be a lucrative investment brought the era of apartments into full swing. The Korea National Housing Corporation concentrated its efforts toward the construction of apartments for the middle class and built the Hangang Mansion (1970-1971), and the Banpo First Apartment Complex (1971-1974) for the middle class. The Corporation built the apartments with payments made by the people who paid in advance based on the model homes. This set a precedent, which is still being used, for purchasing apartments in advance. In 1971, the Korea National Housing Corporation began construction of the Hangang Mansion, a significantly improved version of an apartment complex. The Hangang Mansion is a significant landmark in the housing policy of Seoul, from the previous construction of the citizen apartments to the construction of apartments for the middle class. In addition, a central heating system was installed in the Hangang Mansion, the first in Korea, and it provided a comfortable
and modern style of living. The apartments built in the early 1970’s were different from western apartments, including the Hangang Mansion, which had Korean floor plans. The floor plans were laid out in accordance with traditional living patterns, the living room was in the center of the house facing south and the multi-purpose area was located next to the kitchen. Through the construction of medium and large sized apartments by private contractors in late 1970’s, this floor plan became the norm for apartments in Korea.

On the other hand, in the early 1970’s, the City of Seoul had the Yeouido Sibum(exemplary) Apartments built (1970-1971), thus far the tallest apartments in Korea. They were 15 to 41 pyeongs in size and were considered to be medium and large apartments for the middle class, a total of 1,596 apartment units in 24 buildings. The funds for construction of the Yeouido Sibum Apartments and subway construction were raised through the development of Yeouido. At the time, the Hangang Mansion built by the Korea National Housing Corporation was very popular, and Seoul devised the strategy of constructing the apartments for the middle class to push through the development of Yeouido. In order to attract people of the middle class, Seoul built 12 to 13 story high-rise apartments, at
the time the tallest in Korea. To facilitate the sale of the apartments, Seoul built model homes. These multi-story apartments with one corridor per story were first introduced in the Yeouido apartments and later became the model for apartments in both the Yeouido and Gangnam areas. Even by today’s standard, the Yeouido Apartments are still considered to be superb apartments.

In 1974, the first Banpo Apartment Complex was completed: this was the first project that the Korea National Housing Corporation carried out south of the Han River in the Gangnam area. Construction of the complex continued for 3 years from 1971 to 1974 and was the first apartment complex equipped with various convenience facilities within the complex that filled all the needs of the residents. It was a huge apartment complex with a total of 3,786 middle class apartments on the 167,000 pyeongs of land. The construction of the Banpo First Complex was based on experience earned in the course of building the Hangang Mansion and the Yeouido sibum Apartments. Therefore, it was an improved and expanded version of the previous apartments. The various problems found in building the previous apartments were either fixed or supplemented, thus becoming an important model for apartment construction in the future.

In 1974, Seoul announced that it would develop the Jamsil area and build a large apartment complex, which would be the new center of Seoul. It was to also solve housing problems caused by overpopulation. A major aspect of the development plan was to build an embankment in the Jamsil area, which had thus far not been developed because of frequent flooding, and to develop a single home complex on the 3.08 million pyeongs of land produced by the reclamation. The original plan to build a single home complex in Jamsil was modified to building an apartment complex. The change was due to the recession in the mid 1970's, amid the deepening aftermath of the first oil shock, inflation, and the high price of commodities, the government had to direct all its energies in getting over the recession on industries as a whole. Under the circumstances, in an attempt to facilitate employment and the impact on the domestic manufacturing industries, the Jamsil development plan was instead modified to the development of a large apartment complex. In Feb. 1975, the Korea National Housing Corporation began construction for a huge number of apartments, over 10,000, in the Jamsil 1st-4th complexes. It was followed in August 1976 by development of the 5th Jamsil Apartment Complex in the sub-center of Seoul for 3,930 apartments in 30 fifteen-story apartment buildings. The fifteen-story apartment buildings in the 5th Jamsil Apartment Complex contributed to the spread of high-rise apartments and altered the perception of the middle class in regard to what they thought of apartment thus far.
HIGH-RISE APARTMENT COMPLEXES AND THEIR EXPANSION

In the mid-1970s, Seoul marched to a different drummer; the era of the high-rise apartment. Designation of Apartment Districts and the introduction of paying in advance for an apartment began in the 1970s paved the way for mass construction of apartments. In addition, increasing demand for apartments by the middle class was another factor that furthered the mass construction of apartments. In response, large construction companies began building large apartment complexes; this became the general trend in Seoul and other cities as well. Mass construction of high-rise apartments resulted in a shortage of housing land, which in turn pushed land prices up, and the high-rises grew higher to maximize the use of land. In 1962, Seoul planned to build high-rise buildings in the Mapo Apartment Complex but the plan failed to materialize. By the late 1960s however, there were large numbers of high-rise apartments in Seoul. High-rise apartments at this time included shops in the lower floors as seen in the thirteen-story Hyundai Seun Apartments, the Seun Sanga Apartment, and the 15-story Nakwon Apartments. The Korea National Housing Corporation also built apartments for foreigners starting with the 11-story Hilltop Apartments (1968), Pierson Apartments (11 stories, 1970), Seong-a Apartments (11 stories, 1970), Jeongwoo Apartments (12 stories, 1970), Riverview Apartments (10 stories, 1971), and Sunbojeun Apartments (14 stories, 1971). These were single apartment buildings a far cry from the normal high-rise apartment complex.

Yeoeudio Sibum Apartments were the first of the high-rise apartment complexes, different from the previous high-rise apartment with shops and single building apartments. With the Yeoeudio Sibum Apartment as the turning point, high-rise apartment construction began to gradually expand into Yongsan-gu, Yeoeudio, Gangnam-gu and Gangdong-gu. Starting with the Namson Foreigners' Apartment (1972), the Samik Apartments in Yeoeudio (2 buildings, 11 stories, 1974) the Eunha (the Galaxy) Apartments (4 buildings, 12 stories, 1974), Sambu Apartments (6 buildings, 15 stories, 1975), HanYang Apartments (8 buildings, 12 stories, 1975) and large apartment complexes such as the Hyundai Apartments in Gangnam (1975) and the Korea National Housing Corporation's 5th Apartment Complex in Jamsil (1977), all were examples of high-rise apartments built in the 1970's. Besides these apartments, an almost inconceivable number of high-rise apartments were built in the 1970's. Construction of high-rise apartments was particularly energetic in the Gangnam area, which rapidly became a new apartment area in the 1970's. With 1977 as the turning point, 12-story or
higher high-rise apartments began to flood the Gangnam area. Since then, high-rise apartments have spread all over Seoul.\(^5\)

**HOUSING CONSTRUCTION PROMOTION LAW AND APARTMENT CONSTRUCTION BY PRIVATE ENTERPRISES**

Apartment construction in the 1970s was led by private enterprise, which was in direct contrast to previous apartment construction by the Korea National Housing Corporation or the City of Seoul prior to 1970. In 1971, only 2,300 apartments were built by private contractors, however by 1975 it had reached 10,000 and in 1979 50,000, a 17.2 times increase in a 10 year period. This was due to changes in housing policy from the government-led citizen’s apartments to the construction of apartments for the middle class. The policy was strengthened even more because the middle class apartments built by the government in the early 1970’s enjoyed such explosive popularity. In 1972, the Housing Construction Promotion Law was instituted and in essence assisted civilian sector housing construction and the Law provided the basis for a large planned apartment complex.\(^5\)

In 1974, the Samik and Hanyang Apartments, 12-story apartments for 360 households were built in Yeouido. The apartments turned out to be very popular, and accelerated apartment construc-
tion by private companies. The apartments built by private enterprise were for the most part medium to large size apartments whose average size was 37 pyeong per household. The residents of these apartments were primarily from the middle and upper class because they could afford such large apartments.\footnote{At the time, even the Korea National Housing Corporation who in the past concentrated on building small apartments for low-income people began building apartments primarily for the middle class, and apartment construction for the small income group was pushed aside. In order to expand the supply of housing, the government adopted a housing policy that encouraged apartment construction, for example, by offering various incentives to private construction companies, and allowed housing construction to become a lucrative business. Private construction companies could complete building foundations with the contractor's deposit. They could also receive loans from the Korea Housing and Commercial Bank based on the sales contracts as a pledge. In addition, while construction was still in progress, land prices skyrocketed. This allowed most of the small, private enterprises that ventured into the apartment construction business to grow to be Chaebol (big conglomerates) class construction companies. For example, Woosung Construction Co. who at one time made bricks outside the East Gate, and Hanshin Construction, a boiler manufacturer, grew to be Chaebol-class companies.} At the time, even the Korea National Housing Corporation who in the past concentrated on building small apartments for low-income people began building apartments primarily for the middle class, and apartment construction for the small income group was pushed aside. In order to expand the supply of housing, the government adopted a housing policy that encouraged apartment construction, for example, by offering various incentives to private construction companies, and allowed housing construction to become a lucrative business. Private construction companies could complete building foundations with the contractor's deposit. They could also receive loans from the Korea Housing and Commercial Bank based on the sales contracts as a pledge. In addition, while construction was still in progress, land prices skyrocketed. This allowed most of the small, private enterprises that ventured into the apartment construction business to grow to be Chaebol (big conglomerates) class construction companies. For example, Woosung Construction Co. who at one time made bricks outside the East Gate, and Hanshin Construction, a boiler manufacturer, grew to be Chaebol-class companies.\footnote{Increased apartment construction by private enterprise in the mid 1970s and the increased popularity of apartments among the middle class increased speculation in apartment building. When the supply of apartments fell short of demand due to the energy crisis that hit Korea in 1973, competition to purchase apartments became overheated. Wherever there were apartments ready for distribution, floods of people swarmed. Those applying for apartments were often professional speculators that wanted to take advantage of the difference between the apartment distribution price and the sales price. Even actual home buyers sold their apartments when apartment prices spiked and purchased another apartment, it almost became a lifestyle for those of the middle class to move from one apartment to another. Regardless of quality, available apartments sold like hotcakes, this led to construction companies lowering their standards and building lower quality apartments. They built less than desirable quality apartments to maximize profits. In addition, with no government checks in place against such practice and the need for the development of apartments to house the burgeoning population, the residential environment in Seoul could not avoid becoming poor and slipshod. Accelerated apartment construction in the 1970s contributed enormously to an increase in those industries that supplied con-}
struction materials to the private construction enterprises. General changes in housing patterns, from single homes to apartments, mass construction of apartments, change to the heating system and kitchen designs in turn led to modernized and varied housing construction materials. In the kitchen, stainless steel sinks were introduced in the 1970s when apartment construction by private enterprise was most active. In particular, the availability of gas brought change to kitchen facilities and the convenience of a modernized kitchen brought better quality of life to housewives. Still there were some limitations. Kitchens were designed so that housewives could prepare food while standing (in older, traditional homes, they had to sit or stoop down to prepare the fire for cooking), however, a half wall of brick with a sink was generally the way a kitchen was arranged because modern kitchen furniture was not available. In the 1970s, kitchen furniture manufacturers appeared, and most apartments and homes were equipped with modern appliances with a sink and proper kitchen furniture. The kitchen was not the only area in the apartment to undergo change, living rooms became the most important area in the house, and most apartments came with built-in furniture and a display case. Bathrooms also had built-in flush toilets, a bathtub, and sink. These changes contributed to the development of industries that provided construction materials, materials for interior and furniture and also improvements to the quality of life.

THE DEVELOPMENT OF LARGE HOUSING TRACTS IN THE GANGNAM AREA

In the discussion about apartments in Seoul in the 1970s, the development of Gangnam is too significant to be overlooked. The Gangnam development, also referred to as the Yeongdong Area development, while overlooked in the 1970s, was an earth-shaking event that changed not only the general aspect of residential areas but also the whole structure of Seoul as a city. The Gangnam development was derived from Seoul’s policy of restraining the Gangbuk area, (north of the Han River). The most grave and urgent problem for Seoul in the 1970s was to check the increase in population and industry in the Gangbuk area. The policy to restrain the development of the Gangbuk area was also derived from the military concern of an invasion by North Korea after the assassination of the First Lady Yuk Yeoung-Su (wife of the late President Park Jung-Hee) in 1974. The policy was carried out in conjunction with the development of Gangnam, transferring the residents of Gangbuk to the
Gangnam area. The construction of the 3rd Han River Bridge (presently the Hannam Bridge) in 1969 and the Gyeongbu (Seoul-Busan) Expressway completed in 1970 provided momentum for the development of Gangnam. The development gained even more momentum with the announcement of the 2nd Subway Construction Plan and the construction of the Express Bus Terminal in Banpo, 1975.

In an attempt to facilitate the development of Gangnam, the government instituted the Provisional Law on the Development of Special Regions in 1972. The development of Districts 1 and 2 in Yeongdong was the first instance of the application of this law. The housing development plan was a huge project; it would startle the whole world with its 4.28 million pyeongs of land for the first district and 3.65 million pyeongs for the 2nd Yeongdong district. The government gave various tax exemptions for the two areas. On the other hand, in the Gangbuk area, new establishments or augmenting various existing facilities were restrained and new commercial licenses were strictly controlled, not to mention department stores, wholesale markets, factories as well as entertainment facilities such as nightclubs, cabarets, tearooms, and hotels. It was even suggested that in order to encourage people to move to the Gangnam area, there should be a difference in property taxes, residential taxes, and school tuition between the two areas. Finally in 1975, land development in Gangbuk was entirely prohibited. In addition, the Gyeonggi High School was transferred to Gangnam in 1972, many other schools of various level were also transferred. With such policies in place, the transfer of people from Gangbuk to Gangnam accelerated. Of 25 districts, the so-called Gangnam area, which is composed of Gangnam-gu and Seocho-gu, became a representative example of

**Figure 5.30**

New neighborhood formation in Gangnam area to which the middle class of Gangbuk area moved.
suburban development in Seoul. As a means to facilitate population transfer to the Yeongdong region, Seoul built 12 apartment buildings for public officials in Nonhyeon-dong in 1971. The apartments were at first very popular among public officials because of the low cost and it was only 6-7 minutes by foot from the Sinsa Station of Subway Line 3 or 20 minutes by bus to City Hall. Before long, the majority of the first group of residents sold their apartments due to inconvenience and moved back to Gangbuk, and the policy of building apartments for public officials failed to attract the population of Gangbuk to Gangnam. Not long afterward, the government announced the Yeongdong Housing Construction Plan in 1972 they enticed those in the middle class to move from Gangbuk to Gangnam by offering special incentives to build a home. The Government offered long-term loans with low interest rates, this turned out to be a success. Since that time, single home complexes were quickly established in Appujeong-dong, Hak-dong, and Cheongdam-dong, 10 areas in all. The City of Seoul arranged city busing for the residents of the 10 housing complexes. This resulted in the building of more homes in Gangnam and the contemporary features of an urban built-up area. The single housing complex became the new area of affluence, one of the elite areas in Seoul, and is gradually becoming more of a commercial area with a number of cafes and shops moving in.

Encouraged by the success of the single housing complex, Seoul began building apartments in the Gangnam area. First, the City requested that the Ministry of Construction designate the 4 districts within Yeongdong and 7 districts in other parts of Seoul where apartment construction was in progress as ‘apartment districts.’ The Ministry of Construction honored the request and Banpo Wooslung Apartments across from the Express Bus Terminal (408 apartments in four buildings) were completed. High-rise apartments in the Yeongdong Complex by Hanshin Construction, the Korea National Housing Corporation, Lotte Construction, Hyundai Construction, Hanhwa Construction, and the Samick Corporation followed these. Between 1977 and 1985, over a 8-year period, 16 apartment complexes in the Yeongdong area were filled with high-rise apartments. During this period, 17,339 apartment units in 249 apartment buildings were built in Gangnam-gu, and 31,941 apartment units in 432 apartment buildings were built in Seocho-gu. The Yeongdong Apartment complex brought a change in life style to the Korean people from living in a single home to living in an apartment. This change took place in late 1970s.

As Yeongdong filled with apartment buildings, apartment construction spread out from the Yeongdong Land Readjustment District. In 1975 the Samho Construction Co. built the Bangbac
Samho Apartment Complex in Bangbae-dong, right next to the 1st Yeongdong District, a part of the Yeongdong Land Readjustment District. With this Complex as a starting point, Bangbae-dong also filled with apartment complexes; the Sin Bangbae Samho, Bangbae Gungjeon (palace), Bangbae Woosung, Bangbae Gyeongnam, Bangbae Samick, and Bangbae Sora apartment complexes. From 1978 to 1979, Hanbo Construction Co. built 4,424 apartment units in 28 apartment buildings in Daechi-dong, Gangnam-gu, which is adjacent to the southern border of the 2nd Yeongdong district. The apartment area of Gangnam was further expanded with the establishment of the huge apartment complexes in Bangbae-dong and Daechi-dong just outside of Yeongdong.

Residential Environment in Seoul from 1980 to the Present

HIGH-RISE, HIGH-DENSITY APARTMENTS AND APARTMENTS WITH NEW FEATURES

Appearance and generalization of high-rise apartments

Residential environment in Seoul took on a new face in the 1980's, represented by two distinct features: the expansion of residential areas and the appearance of the high-rise apartments. In the 1980's, the housing supply rate in Seoul fell and population concentration in downtown areas intensified. In an attempt to solve the housing problem and to dissipate the population in downtown areas, the government formed new towns in Gwacheon (1979-1983), Godeok
(1982-1985), Mok-dong (1983-1988), and Sanggye-dong (1985-1989). To ensure a pleasant residential environment in the new towns various, unprecedented public facilities were constructed. For example, a large park, exclusive pedestrian walkways linking various public facilities and apartments, as well as other public facilities were built for the convenience of the residents. The new towns had other negative aspects as well. In most, high-rise apartments were built causing the height of buildings to increase and the density in population in Seoul to rise.

The Ansan Artists Apartments in Ansan, Gyeonggi-do built in 1985 were the first super high-rise apartments of over 20 stories. The complex has 10 15-story buildings and 3 20-story buildings. The Mok-dong new urban district was where the first massive, super high-rise apartments were built. The Mok-dong district was composed of 14 apartment complexes with 18 apartment buildings of 20-story and one 19-story apartment. Super high-rise apartments comprise only a part of the Mok-dong Apartment Complex. Apartment buildings with various numbers of floors such as 5, 12, 14, and 15 stories and the super high-rise apartments were built in more or less similar volumes. For appearances sake, lower apartments were built toward the center of the Mok-dong district while high-rises are arranged in the outer ring of the complex. Judging from the fact that the average building coverage ratio of the Mok-dong Apartment Complex is 14%, the floor area ratio 140%, it is believed that the high-rise apartments in the Mok-dong district were built rather for the aesthetic purposes than to increase land usage.

![Figure 5.31](image_url)

Pedestrian only walkways in Mok-dong apartment complex, the first generation of high-rise apartment
The 25-story apartments in the Sanggye-dong 4th Complex built by the Korea National Housing Corporation are another example of the super high-rise apartments. The complex is an exemplary project testing the use of super high-rise apartments. The emergence of the 25-story high-rise apartments was in response to the need for higher land usage to keep up with the price of land. In addition, it would lend the beauty of variance to a skyline dominated by the uniformity of the 15-story apartment buildings in the Complex. For these reasons, beginning with the Sanggye-dong Apartment Complex, super high-rise apartments became the norm for apartments in Seoul. The Olympic Apartments and the Reporters’ Apartments also have super high-rise apartments in 1988. Since that time, large quantities of this style high-rise apartments were built in the five new towns and the trend toward super height and high density of apartments in Seoul continues to this day.

The government’s housing policy played a large role in supplying large numbers of high-rise apartments in Seoul. For example, the government revised the construction laws so that construction companies were able to maximize their profits with the construction of the super high-rise apartments. In November 1989, the government established a system that provided an extra 12% compensation for expenses in building super high-rise apartments compared with for building 15-story apartments. Though the price ceiling was in force regarding apartment sales, the higher standard commensurate with the construction costs of high-rise apartments encouraged construction companies to concentrate on building super high-rise apart-

Figure 5.32
The Asian Athletic Village Apartments

Sei-Kwan Sahn

Hi Seoul
SOUL OF ASIA
ments. This governmental support coupled with the pursuit of economic profits by the construction companies greatly increased the number of super high-rise apartments.

It is true that high-rise apartments offer a good view and additional outdoor space. For this reason, after their first success, high-rise apartments became the universal trend in housing; this was an excellent solution to increasing high-density development. It was fortunate that the high-rise apartment complexes were kept from becoming a much more dense location thanks to construction laws that dictated that the floor area ratio must be lower than 200% for most of the apartment complexes in housing developed by the government. To the contrary, as the floor area ratio for the majority of the redeveloped apartment complexes in Seoul stood over 300%, Seoul had developed those very distinctive housing aspects of high density in the high-rise apartments, which could hardly be found in any other city in the world.

Figure 5.33
The 1988 Olympic Athletic and Reporters' village.
A new concept in communal housing introduced at the time of the Seoul Olympics

During the 1980s various experiments were made regarding the design of apartment complexes due to the two world-class events during the period; the 1986 Asian Games and the 1988 Olympic Games. Two apartment complexes were built for the athletes that participated in the Asian Games and the Olympics. They induced momentum for the improvement of apartments from uniform, featureless concrete structures built by profit-oriented contractors to an improved communal housing complex. Professional architects were invited to design the apartments and architectural design contests were held for the apartments. This competition process was the first in the history of apartment complex design in Korea. Though in terms of density the new and existing apartments are similar, new apartments incorporated new concept in relation to exterior space arrangement, interior arrangement and the shape of buildings themselves.

The Asian Athletic Village was built to provide quality accommodations for the athletes and staff/officials participating in the 1986 Asian Games. After the games finished the apartment complex became a normal residence but remained as a monument to the Games. The Asian Athletic Village is significant in the history of apartment construction in that it represents a well-designed communal area where the main buildings and surrounding communal facilities are in excellent harmony. In many ways it stands out as a huge improvement over the featureless, uniformity of the past. For example, there was a reasonable amount of space for communal living; the communal areas were linked through the piloti, and the existence of a promenade within the complex. They were well-planned, well-designed apartment buildings as a whole with a smooth transition between residence and communal areas. The various facilities within the compound were arranged to maximize efficiency. The Asian Athletic Village was a fitting monument to the success of the architectural contest and the Games.

The 1988 Olympic Athletic and Reporters’ Village apartments were intended to provide accommodations for the athletes and press corps from countries throughout the world that were participating in the 24th Olympic Games. Various concepts were utilized in planning the apartments such as nearby parks, larger outdoor areas, unique exterior features, a diversified skyline, as well as minimized vehicular traffic, and the formation of residential neighborhood, and they were all materialized in reality. The arrangement of buildings, pedestrian walkways and roads were arranged to ensure maximum efficiency. The various facilities in the communal areas were
arranged to detailed architectural design, the apartment complexes were distinctively different in terms of planning concept and formal beauty from previous apartments: this was an important turning point in the construction of communal residences. Since that time, active discussions were made in architectural community to suggest new models of apartment complexes.

CONSTRUCTION OF NEW TOWNS IN THE SUBURBS OF SEOUL

The housing shortage in Seoul in the late 1980's was serious enough to be called a crisis. But in 1986, the economy had improved and with the improvement the demand for housing increased. Apartment prices were skyrocketing as the supply of medium-and large-size apartments virtually came to an end after the Olympic Athletic Apartments were built in May 1987. Another reason was the increased demand for deposit-based rental apartments in the so called the 8th school District known as popular good school district. The apartment prices of the medium and large apartments in the Gangnam area increased by 500,000 to 1 million won per pyeong a month and this phenomenon spread to Gangbuk and then to other cities. Following the price increases in medium and large apartments, the price of small apartments and homes went up as well. These increases coupled with the crisis in deposit-based rentals and monthly rentals, provided the impetus to create a situation where the housing problem was becoming extremely serious. The appearance of new towns in the suburbs of Seoul was the
product of one emergency measure in alleviating the serious housing crisis. In April 1989, the government announced construction plans for five new towns within the metropolitan area: Bundang, Ilsan, Pyeongchon, Sanbon, and Jungdong. When Bundang was completed in 1992 people began relocating there and the result of this emergency measure became visible. The establishment of the new towns in the suburbs of Seoul however, resulted in an even greater influx of people into the metropolitan areas and the precedence for rough and ready development of towns and large scale housing complexes was set.

The planning of the five new towns was accomplished in a very short period of time; there was no time to listen to the opinions of residents or professional comments of experts. As a result, the new towns failed to accommodate various aspects of balanced housing. The poor results were a combination of government policies that were invoked to solve the serious housing problem and to hastily check real estate speculation as well as for political gain. The development plans for the new towns were hurriedly drafted in order to provide housing in the shortest period of time. The primary concerns were to control the skyrocketing housing prices and meet the tense deadlines. It would have been an excellent opportunity for improving the quality of planning, housing, and architectural design but the opportunity was not realized. The new towns were
limited by being primarily developed for those in the middle and high-income brackets. Bundang in particular was developed as a residential area for people from Gangnam, the majority of the apartments were medium and large apartments with only 33.9% of the apartments under 18 pyeongs in size for those in the lower income brackets.

The apartments in the new towns brought super high-rise apartments into fashion. Under the apartment price ceiling system in force at the time, a measure to keep housing prices in check, the construction companies were committed to building high-rise apartments to reduce construction costs. The government's prime concern was housing and was under pressure to provide it, this encouraged the development of high-density housing. The need for high-density housing and environmental concern over housing complexes led to the development of the super high-rise apartments. The height of apartments in the new towns was divided into four categories: low-rise apartments, medium-rise apartments, high-rise apartments, and super high-rise apartments. The various heights were arranged next to main thoroughfares and apartment blocks were built taking into consideration the skyline. The 20-25-story super high-rise apartments in particular were positioned next to main roads. Super high-rise apartments were not necessarily meant to maximize the use of land in so much as to increase the density. In line with this policy, the average floor area ratio for high-rise apartments in the new towns was kept at 180% (as in the case of Bundang), and the new towns avoided the development of excessive high density.

The development of the five new towns in the metropolitan area, which included Bundang and Ilsan, was through a syndicate of private construction companies. This method was employed beginning in 1986, very early in the stage to facilitate the participation of private enterprise. As a result, many top class construction companies were concurrently building apartments in the same region and competition among them was severe. For the private construction companies who barely survived due to the increased price of land and the high price of apartments, development in the new towns was a battlefield of competition. Respective companies placed most of their efforts on attempting to differentiate their apartments from each other, primarily with architectural design and the use of high quality housing materials rather than complex planning or arrangement of the apartment buildings. Therefore, the competition between construction companies provided an opportunity to bring their planning skills to a new level, though not as much as what had been expected.
THE APPEARANCE OF NEW FORMS OF HOUSING:
ITS LIGHT AND DARK SIDE

Multi-family/multi-household housing and structural change
in the single home

In the 1980s the government made attempts to change the basic
concept of its housing policies from building houses or apartments
for ownership, to building houses or apartments to rent. The reason
for this was that the government judged that it would be impossible
to build enough houses or apartments for everyone to own their
home. In line with this reasoning, the government decided to
increase the number of rental properties and promulgated the
'Rental House Policy' in 1982 in order to stabilize housing for those
in the low income brackets and instituted the 'Rental Property Con-
struction Promotion Law' in 1984. The construction of rental prop-
eries was however, making very slow progress and showed little indi-
cation of solving the housing problems for low-income groups.
Finally in 1984, the government decided to turn to a new residential
form, called 'multi-household housing', in order to increase the
quantity of both rental properties and overall available housing. It
was official recognition of the existing illegal practice where more
than two households lived in a home originally built for one. At that
time, 'multi-household housing' construction began in earnest. Since
its original enactment, the Housing Construction Promotion Law
have gone through five revisions in regard to size, number of floors,
number of households and other reasons. At present, housing construction is still subject to the Housing Construction Promotion Law, which were revised in November 1990 and also to Building Law. The multi-family housing was legislated later than the laws on multi-household housing, at the time the Building Law were revised in December 1989. Beginning in March 1990 when the multi-family housing were instituted, multi-family housing construction began in earnest. The previously strict regulations regarding the size and number of households that would be allowed to reside in one multi-family housing were been relaxed in April 1990. This remains in effect to date.

Multi-household housing is a form of communal housing where several households share one building but each household owns their space independently, while multi-family housing refers to rental apartments. Multi-household housing and multi-family housing are residential forms that are bound to appear in the process of urbanization. In Korea’s case however, urgent housing needs and various other factors contributed to the abnormal expansion in multi-housing. More than any other factor, government housing policies were the prime mover in housing matters. For example, in order to set in motion the development of multi-household housing and multi-family housing, the government relaxed various architectural restrictions and offered financial assistance50. As a result, reconstruction of single homes to build multi-household housing and multi-family housing were given such a boost that these housing forms comprise more than 50% of new housing construction since 1985. In the 1990s, multi-household and multi-family housing development accelerated and reached 65% of the new housing construction. The multi-household and multi-family housing contributed enormously in easing housing problems in Seoul.50

Multi-household and multi-family housing increased. They were built on existing single home sites as a source of income and property values increased significantly compared to existing single homes. The builders of the multi-household housing tried to build as large as possible with a maximum number of floors to maximize rental space. Initially, the law dictated that the multi-household houses could be a maximum of 3-story high with a floor area ratio under 330%. These restrictions were changed to permit the construction of 4-story buildings with a floor area ratio of 660%. Therefore, the reconstruction of single homes to multi-household housing brought tremendous profits to the owners of single homes. Though housing construction costs increased slightly, housing prices and deposit based rentals increased sharply; this created a multi-household housing construction boom. In the process, homes were built to maximize economic benefit within the law: without consideration
for architectural beauty or neighborhood conditions this produced
tremendous side effects as well.

Multi-household and multi-family housing emerged as the prin-
cipal offender of poor residential and urban environments. They
completely changed the previously single home residential areas. The
physical and social character of the single home areas that had
become stable residential areas was rapidly destroyed with the ran-
dom development of multi-household and multi-family housing.
The visual stability presented by similarly sized 1 and 2-story build-
ings were ruined as larger, 3- and 4-story homes with poor archi-
tectural design and completely without individuality, replaced them.
Harmony within the community was also destroyed. In regard to
single homes, individuality, in other words, the distinctive character-
istics that portrayed an owner’s taste were what counted. The multi-
household and multi-family housing was destroying architectural
diversity in terms of shape, building materials, design, and color.
The destruction of the stability of the single home by multi-house-
hold housing was also found in the poor use of land within lot. The
residual spaces were either used as parking lots or remained as useless
and impossible to manage pieces of land. With the creation of multi-
household and multi-family housing, the streets once lined with
trees and flowers were losing their rich and peaceful atmosphere as a
communal area and were turning into parking lots.

Emergence and expansion of 'Villa' as a new form of residence
for the upper class

In the 1980’s, construction companies changed their business pat-
terns. It was exceedingly difficult to purchase land tracts large
enough to build a large-scale apartment complex. Even if they could,
land prices were so high that they could hardly make a profit. Under
the circumstances, they changed their business pattern and began
building 'Villa' a high-class house for those in the high-income
brackets. 'Villa' could be built on just a small parcel of land; it was
easy to acquire land to build a Villa. Villa, a new type of residence,
fit the tastes of the upper class as well. While previously, single
homes were upper class residences with many advantages; mainte-
nance and vulnerability to crime were problems. The upper class
turned to Villa, high quality houses with both convenience and the
advantages of a single home. 'Villa' was a desirable solution to con-
tractors in terms of business and the needs of those in the high-
income brackets. Many high quality Villa houses were built in
Cheongdam-dong, Seocho-dong, Pyeongchang-dong, and Non-
hyeon-dong and the Villa has been embraced as a new type of resi-
dence in Seoul.

Villas, high-quality houses, had distinctive features compared with existing houses. In the first place, they differed from existing apartments that had one entrance leading to all households; villas, on the other hand, shared common walls but had independent entrances; either through a garden or open area. Secondly, villas owners even though communal, could enjoy life as if they were in a single home. Depending on the housing tract, various layouts in terms of residence position are possible, not to mention variety in architectural design both in and outside the house. Third, many households shared expenses for heating and security, and the system was more effective and secure. For these reasons, villas were a fascinating residence for the upper class that either grew tired of a life in an apartment or had problems in managing a single home. In particular, those in the upper class desired distinction in architectural design and they wanted their neighbors to be from the same class so that high quality villas built by notable building companies enjoyed a great deal of popularity.

In order to suit their customers' tastes, contractors tried to distinguish their villas from existing apartments to the maximum degree. They entrusted the design of the villas to eminent architects who pursued artistry in their architectural endeavors as well as using high quality building materials. The ground plans were also diversified and two-story houses appeared. Therefore, a villa that could accommodate only a minimum number of households and were sold prior to the completion of construction at a high price, still immediately gained a big premium. Units of Villa grew larger, from 56-60 pyongs to 70-80 pyongs and more luxurious. While villas had vari-
ous positive aspects such as offering quality housing and diversification of housing type, they created social disharmony due to their overly westernized and luxurious interiors. In addition, the high price of villas caused an overall increase in housing prices as well.

*Emergence and generalization of mixed-use apartments*

Apartments with attendant shops are a new form of residence that emerged in the late 1980s. It is a building with both commercial and residential functions. Even though it was new to Korea, this type of housing has long been a common form of housing over the long Western history. In most Western cities, homes and shops are integrated. In Korea's case however, an apartment complex with shops first appeared in the late 1960s under the title 'Sangga (shopping area apartment)'. The Seun Sangga and the Nakwon Sangga are representative examples of this integration.

They were called 'apartment houses with stores'. However, it was actually a building with complex functions they had residences, a shopping center, and offices combined to allow a family to conduct everyday living without ever leaving the building, rather than a mixture of residences and shops. This type of housing was found to have various problems and temporarily discontinued in the late 1970s, however in the 1980's, it picked up again under the name "combined residence and shops apartment".

The development of 'combined residence and shops apartment'
(high-rise apartment with shops or mixed-use apartment) in the late 1980s, was part of the downtown area redevelopment plan. The plan intended to add residential functions to downtown areas that were exclusively for commercial and business activities, and to make the change happen the government relaxed legal restrictions. Initially, new 'combined residence and shops apartment' were built next to the street, soon however, the trend changed to high-rise apartments with the shops in huge blocks. The first example of this type is the one adjacent to Boramae Park where apartments that can accommodate more than 1,000 households were built with modern offices and various everyday living facilities, thus becoming a model for the 'proximity of office and residence'. Subsequently, a complex with high-rise apartments and shops was built in Sincheon-dong near Lotte World in Jamsil, Mok-dong, and Dogok-dong. The development is characterized by the emphasis being placed on the expansion of housing rather than effective use of city space.

Beginning in the 1990s, the development of the high-rise apartments with shops concentrated in such affluent sub-centers as Gangnam, Songpa, and Yeoeuido. These high-rise apartments are different from those near Boramae Park, the emphasis being given to concepts of high-class living, luxury, and advanced technologies such as automatic doors, visual phones, and Internet ready wiring. These apartments are for the most part over 30 stories high with a certain percentage over 50 pyeong in size; they are equipped with health clubs, children's playrooms, and various other high quality conveniences. It would be proper to call them 'hotel-type apartments'. The super high-rise apartments with such western names as Acroville, Tower Palace, and Trump World in Dogok-dong in Gangnam and in Yeoeuido are examples of combined residence-commercio apartments. The intelligent building concept was introduced in these buildings they have advanced communication systems, teleconferencing systems and various other automated systems, in particular office facilities for those who work from the home. All attempts were made to accommodate residents' tastes and requests to maximum, such as movable walls and optional interiors. In addition, where other existing apartments have units of the same size on a floor, these new high-rise apartments with attendant shops vary in size and architectural design. In the year 2000, the combined residence-commercio apartments continued to be built not only in downtown areas of Seoul but also in those new towns in the sub-centers of Seoul such as Bundang.
PROLIFERATION OF RESIDENTIAL REDEVELOPMENT AND REBUILDING

In 1983, the so-called 'joint redevelopment method' was introduced allowing private enterprise to enter into the urban redevelopment projects and so redevelopment of the poor quality residential areas began in earnest. In 1993 the standards were again lowered for 'redevelopment' of poor housing area and 'rebuilding' of old apartments became much easier than before. For these reasons, redevelopment and rebuilding became more prevalent and this coupled with the government's multi-household and multi-family facilitation policies resulted in devastation of the residential environment. The joint redevelopment projects were subject to the Urban Redevelopment Law for the selection of redevelopment areas and with the Housing Construction Promotion Law in regard to the construction of apartment complexes. For those private construction companies experiencing difficulties due to the shortage of land for new development, the redevelopment projects were a great business opportunity. The residents in the redevelopment areas looked with favor on these projects as well anticipating profits from the redevelopment. Rebuilding old apartments was also a favorable business for everyone. It was an excellent business opportunity for private builders as there was no need to find new land, residents welcomed the rebuilding, and for the government, it was a means to increasing the housing supply practically without the extra expense in infrastructure. All the parties concerned welcomed the redevelopment and rebuilding projects, and the projects were aggressively pushed forward.54)

Most of the redevelopment and rebuilding projects were carried
out to maximize profits without environmental consideration. They ruined the urban landscape, brought about a deficiency in the urban infrastructure, and worsened the urban environment. Redevelopments and rebuildings were carried out at a formidable speed causing significant problems in the general residential environment of Seoul. First, greater numbers of households were built than ever before in the redevelopment areas, and this overtaxed the existing roads, waterworks, sewer systems and other facets of the infrastructure, causing deterioration of the urban condition in general. Second, high-rise apartments were built without regard to geographical location, for example high-rise apartments were built on the hills and this seriously damaged the urban landscape and natural environment. Third, high-rise apartments were built without consideration for the residents that already lived in the area in lower buildings; this violated their right to sunshine and privacy. In addition, since the redevelopment and rebuilding projects were typically medium to large apartments, the projects contributed little to the improvement of those in the low-income brackets.

In terms of floor area ratio, the redevelopment and rebuilding projects were of the super high-density. Around 1985, when joint redevelopment began, the floor area ratio for the redeveloping apartments was more or less around 220%. As apartment redevelopment accelerated in 1986, the floor area ratio of the redeveloped apartments exceeded 250%, and in the 1990's, super high-density developments exceeded the maximum permitted limit of 300% this became the general pattern. With regard to the rebuilding of apartments, the floor area ratio approached 400%, which became the general trend, not to mention the super high-rise buildings. With super high-rise apartments being the general trend in housing development, local communities were thoroughly destroyed and various sections of Seoul became heavy concrete forests. In July 2000, the City of Seoul announced the new development plans to significantly lower the floor area ratio, a rather belated attempt to restore normality in Seoul’s residential environments.

MODEST, NEW ATTEMPTS AT BETTER HOUSING

Since the late 1980s, architects in Korea have been trying to introduce new concepts to Korean housing. This was in response to a growing awareness of the status in the housing environments of Seoul characterized by indiscriminate development without regard to Korean culture. Amid the huge apartment complex construction projects being done by big conglomerates, however their attempts
could not be a major driving force. The architects' innovative ideas in housing would take place on just a small scale. They experimented with various architectural designs primarily with single homes and multi-household housing and multi-family housing. Their work employed advanced construction technology and incorporated various architectural designs which added a sense of value to Seoul's existing, dull and tasteless housing environment. So called urban type single homes designed by renowned architects such as Seung Hye-sang's Sujoldang, Kim Jun-seong's Yeoksam-dong homes Seo Hye-rim's K's house, Kim Yeong-seop's Samcheong-dong house are examples of these attempts. These houses represented a modern interpretation of a traditional Korean home. A courtyard placed in the center of a home was the main theme in their architectural designs, a representation of the old Korean houses that existed in Seoul. Attempts at such drastic conversions were also being made with multi-household housing and multi-family housing. While high-density was still maintained, various changes were being attempted in spatial organization and exterior architectural design.

Of the many attempts made in the 1990's by Korean architects, the Gahoe-dong District No.11 Housing Plan presented to the public in 1991 was the most distinctive example. It was a small architectural exhibition organized by architects for the residents of Gahoe-dong. However, it was a very significant event in that it represented an attempt for a change in direction regarding the preservation of cultural heritage in a representational version of tradition. At the time, multi-household housing and multi-family housing were replacing older homes in Gahoe-dong after the restriction that had been imposed was lifted; it had been designated as a 'Korean House Preservation Zone' where no expansion or reconstruction was
allowed. Six architects drew up designs for multi-family house that
could accommodate roughly 20 households on the 400 pyeongs of
land in District No. 11, Gahoe-dong. Most of designs exhibited the
spatial organization of a traditional Korean home including a court-
yard to preserve the historical features of the area in a modern com-
munal setting. The architects hosted the event out of their moral
obligation to society and they began participating in solving housing
problems which had never been their prime interest.

In 1993 there was a housing design exhibition for single homes
and multi-family house houses that were be built on the corner of
an intersection in Bundang, one of the new towns in the suburbs of
Seoul. The Korean Land Development Corporation hosted the exhi-
bition; a large number of renowned Korean architects participated.
The exhibition was a meaningful event in that it represented a col-
lection of proposals regarding residential culture in Korea. The archi-
tectural designs presented for exhibition however, were primarily for
the upper class beside the point, when new housing models for the
common people were in urgent need. The exhibition was significant
in that it suggested alternative plans in place of high-rise, high-den-
sity communal housing. In 1990, it was considered to be a revolution-
ary event; various experimental ideas were suggested regarding archi-
tectural design and arrangement of residential space as well as ways
to preserve the beauty of traditional housing and maintain a sense of
community.
Conclusion

This chapter describes the process of change in the residential features of Seoul over a 100-year period. The past century is often referred to as 'the era of confusion and turmoil.' Looking at the change in the physical features as well as the social, political and economic situation regarding residential conditions in Seoul, it is found that the dynamics of history, confusion and numerous other aspects of life are fused within the features of the residences. The residential environment, the hub of the life for human beings, unveils various aspects of society and contains a race of past history. Seoul is no exception. The process of change in the residential features of Seoul in the 20th century was prompted by the urgent necessity of a society. Under these urgent circumstances, Seoul could not afford a long-term solution, and the solutions to the pressing problems were drawn from the temporal wisdom of a society. In this situation the process repeated itself, if one were to lay bare the residential features of Seoul you are bound to find conflicts and contradictions. This is how Seoul came to exhibit characteristics that are hard to find in any other city in the world. Followings are the author's findings regarding the process of change in the residential environment of Seoul and its characteristics.

First, the process of change in the residential environment of Seoul is the process of struggle to expand housing. From the end of the Korean War (1950-1953) to 2-million house construction plan in 1992, it can be described as an era of struggling to secure the minimum number of residence. The housing construction in Seoul was a struggle with numbers; a struggle to increase the number of dwellings. Since the Japanese colonial era, Seoul suffered from a chronic shortage of housing and it grew worse after the 1960s under rapid urbanization and economic development. Over the past 100 years, Seoul's population increased continuously; in particular, from 1955 to 1980 it exploded from 1.58 million to 8.4 million. Amid such an abnormal population concentration, Seoul's most pressing problem was to supply as many homes as possible. The extent of the housing shortage was so severe that Seoul could not afford to consider the long-term effects on environment, quality of life, and other considerations.

Second, the residential features of Seoul are the result of political and economic influence. The Gangnam area development, exten-
sive redevelopment and rebuilding projects, expansion of multi-household, multi-family housing, and the development of new towns in the suburbs of Seoul were all in accordance with government policies and the nature of capital seeking maximum profit were all driving forces behind the development. The top priority driving the housing policies of the government has always been to increase housing, which, by the maximum profit seeking construction companies, led to high-rise apartments and high-density development. In addition, the government placed emphasis on the quantitative expansion of housing with minimum investment in communal areas and urban infrastructure: this resulted in the poor quality of residential areas. The quantitative, expansion-oriented housing policies of the government gave way to individual ambition for economic gain from homes and apartments, and housing became a means for economic investment rather than for living space.

Third, quantitative expansion of housing and efficiency-oriented development made apartments the overriding form of residence. Starting with the Mapo Apartments in 1962, apartment complexes have completely changed the residential features of Seoul; this in turn influenced the common people’s understanding with respect to homes. After all, apartments took up more than half of the housing in Seoul and the majority of the new housing being built are apartments. Government policies lay behind many of the changes in the Seoul’s housing features; however, consumer demand for convenience and efficiency also played a great part. The apartment concept that was adopted from the western world drove out the Korean traditional housing, in quantity apartments attained absolute superiority, but the historical continuity inherent in the original residential features was completely ruptured. As the apartment complex phenomenon spread, which strictly speaking can hardly called an urban type residence, the continuity between urban fabric and residential environment was destroyed, thus disrupting the overall harmony of the residential features in Seoul.

Fourth, while housing of Seoul achieved quantitative growth, the quality of residential areas made no significant improvements. From the end of the Korean War to the 1970s, unauthorized shacks represented poor quality residences in Seoul; however, even after the unauthorized shacks were removed, no significant improvements were made in the residential conditions of Seoul. Seoul now presents a dense, disheartening city landscape flooded with multi-household housing, multi-family housing and ultra high-rise apartments. It can be said that other than changes in construction materials from the previously coarse materials to concrete and some improvements in urban infrastructure including plumbing and sewer systems, Seoul has witnessed less impressive major improvement regarding residen-
tial conditions. The excessive density of high-rise developments, uniform buildings, and standardized apartment interiors crushed individuality. This, plus the absolute shortage of communal areas, housing in Seoul is faced with the question of quality from a different perspective.

Fifth, the residential features of Seoul show a distinct stratification. It is even more evident by comparing Gangnam (south of the Han River) with the Gangbuk (north of the Han River); even in Gangnam, there is a significant disparity between the newly developed areas of Gangnam and the old residential areas centering on Yeongdeungpo. The residential conditions of those in low-income brackets who live in ‘moon village’, monthly one-room rentals, illustrate the extreme contrast to the luxurious houses, villas, and deluxe, super high-rise apartments. The differences in the housing of the upper class and that of an ordinary people are a general phenomenon that can be found in any city in the world. In Seoul’s case however, the difference between the two is too vast and for those of the low-income class, the available housing is only a very small percentage of the whole.

Such negative aspects in the residential environment of Seoul derive largely from the acute pressure to provide housing, any type of housing to relieve the pressing need to house Seoul’s multitudes. Unlike scientific development, residential environment are a conservative entity and change comes slowly. Therefore, whatever the culture, any change or renovation in residential features tends to be painstakingly slow and difficult. Housing of Seoul was different. In the process of changing her residential features, time was the enemy and it produced the present physical results. It is hard to say how the residential features of Seoul will change in the new era, but definitely not at the previous speed. In the coming years, the City of Seoul should explore new possibilities for its residential conditions while regulating the speed of development to a more manageable pace. It does not mean that housing Seoul is a total failure that needs to be completely thrown away. It is believed that the development of residences in Seoul should not be a complete rejection of their present status but a ‘grand revision’ toward what it could be. This would be possible only when we look at the values that have been overlooked or denied in the past, from a different perspective.
Notes


4) Japanese immigration to Korea started in the 1880s and by 1885 Japanese civilians began to live in Seoul. They mostly resided in Yejang-dong, Juja-dong, and Chungmuro 1-ga that were close to the Japanese legation in Yejang-dong. In 1885, 89 Japanese, 19 households in total lived in Seoul, however between 1886 and 1889 Japanese resident increased by 50% every year. After Japan won the Russo-Japanese War in 1904, Japanese began to move to Korea in large numbers under the excuse of colonization of Korea. The residential areas of Japanese expanded to Namdaemun gate (South Gate) to the south, Euljiro to the north, and Euljiro 5-ga to the east. By 1910s their residential area expanded to Yongsan and Mapo and they monopolized the commercial rights of Chungmuro and Myeong-dong. During the colonization period, with the Cheonggyecheon stream as a dividing line, the central part of Seoul was divided into the Namchon (southern village) where Japanese lived and the Bukchon (northern village) where the Koreans lived. Rii Hae-eun, 1992, "Distribution of residential areas of Seoul by nation during the Japanese colonial period. ", Hyanggo (hometown) Seoul, No.52, Seoul City History Compilation Committee, pp. 153-155.

5) The house of Min Kyech-ho who was assassinated at the time of the Imo Gullan (military mutiny of 1882) is the first example of the traditional Korean house renovated in western style. After he died, the house was given to P.G. von Molendoff, whom China recommended for Korea to be a diplomatic advisor and it was renovated in western style. The house had 1) green wool carpet on the floor, 2) walls were renovated to accommodate western furniture, 3) lowered threshold, 4) garden in the front yard and tennis court, 5) the servant’s quarters had been changed into office and study. Lee Gyu-tae, 1969, Hundred Lights of Enlightenment Period, Vol.5, Sin-taeyangsa Publishing, pp. 350-352.


7) It is not exactly certain how many but it is presumed there was a significant number of Japanese living in Korea prior to the 1905 Protectorate Treaty. As of 1910, out of 280,000 Seoul population, 35,000 were Japanese. Im Duck-soon, 1985, "The Rise and Development of Seoul", Geography, No.12, Geography Dept. of Seoul National University, p. 92.

8) The Villa of Yun Deok-yeeoung and the house of Lee Jun-yong built right after the 1905 Protectorate Treaty were the representative western style houses in Korea. Lee Jun-yong is a grandson of the Heunjeon Daewongun (the father of King Gojong, the 26th king of Chosun dynasty reigned 1864-1907, He pursued the isolation policy) built his house within the
compound of the Unhyeongung palace and completed it in 1912. The French Renaissance style house has stone porch and pillars and the wall of bricks. The first floor walls made of bricks were mortared. The interior of the house boasts luxury having fireplace as subsidiary heating system, curtains on every window, and chandeliers on the ceiling, which was rare in those days. On the center of the façade of the house is decorated with the insignia of chrysanthemum which symbolizes the Japanese Imperial Household. The chrysanthemum is allowed to use by only those who were knighted. From 1946 the building was used as a headquarter building of Des Kong Woman’s University. Kim Hong-sik, 1987, National Architecture, Hangilsa, p. 213.

9) The statistical yearbooks of the Japanese colonial government and Gyeonggi-do published during the Japanese colonial rule provide no information on housing. Chosun Statistical Yearbook co-published by the daily newspapers of Gyeongseong Ilbo and Mael Sinbo is the only source of information on the housing of Seoul. The yearbook has statistics of housing, household, and population of Seoul in the Gyeongseong-bu chapter. The statistics says that as of 1926 the shortage of housing of Seoul stood at 3,973 or 5.77%. Since then, the housing problem grew worse year by year to 10-15% in the first half of the 1930s and to 20% in the later half. Even the Chosun Statistical Yearbook was discontinued after 1937 when Japan went into war against China. After 1937, Japan made all the statistics a wartime confidential. May 1, 1944, the Japanese colonial government secretly conducted a study on the basic references such as population, housing, to examine resources for the execution of war. The study revealed that Korea was experiencing a serious housing shortage, 89,000 houses or 40.25% in short. Sohn Jung-mok, 1996, A Study on the Cities of Korea during the Japanese Colonization, Iljisa, pp. 245-247.


11) The term ‘cultural housing’ is the product of the ‘enlightened administration’ (muwha tongchi) in the 1920s after Japan announced abandoning reliance on its gendarmerie police forces to maintain control in Korea. The ‘cultural housing’ that appeared in the 1920s and continued to the post colonial era is a splash mixture of western and old Korean style architecture, and the Korean architects of sound judgment such as Park Gil-yong made criticism against them. Most of the houses designed by then famous architects including Park, however, were not exceptions from the general trend. Kim Jeong-A, 1992, “Modern Residences of the Japanese Imperial Period”, by Korean Architecture Movement Research Association, Modern Architecture, Daejeonasu Publishing, pp. 173-181.

12) The life of resident servant is a residence type that the indigent family live in servant quarters of the rich man’s house without paying rent. In return, they worked for the owner of the house free or for small wages and foods and on the remaining hours go on a peddling tour or hiring out as a day laborer. Majority of people who moved up to Seoul then were those whose land had been usurped by the Japanese landlords. They could not afford housing, in addition there were not enough housings to accommodate them, and the life of resident servant was inevitable. Sohn Jung-mok, Ibid, pp. 248-250
15) Seongjeosimni is the region within a radius of 4km from downtown Seoul. Jungnangcheon stream to the east, Hongjecheon stream to the west, the Han River to the south and Mt. Bukhansan to the north was its boundaries. It was not allowed to make tombs or to cut trees within the region, an old version greenbelt of Hanyang (old name of Seoul during Chosun dynasty). The region formed a hinterland of Hanyang and remained undeveloped as an agricultural area. Im Deok-sun, *Ibid.*, p. 59.
16) The administrative system of Haesong-bu (Seoul city) in the early Chosun period was in the order of bu, bang, gye, dong, and tong. Bu corresponds to the present 'gu' (district) and 'bang' to the present 'dong'. Im Deok-sun, *Ibid.*, p. 67.
18) From 1920s, the construction companies run by Koreans went into business in full. The representative Korean construction companies were Geonyangsa Co., Magung Office, and Okong Office. Kim Ran-gi, 1989, p. 121.
20) Japan realized modernization about half century earlier than Korea, however, but housing problem was left unattended and housing supply relied mainly on the private leasing services. As of 1941, 90% of the housing in Osaka and 70% in Tokyo were rental houses owned by private enterprises. As of 1900, the public housing system had already been put in place in the European countries including England and long term loans on low interest rates were made available by the government or financial institutions. Japan, however, had no such welfare system yet. At the time, a judicial foundation named Dongyunhoe that was founded in September 1923 right after the great earthquake in Tokyo for housing restoration works and lasted until 1941 was the only public housing organization. Dongyunhoe is significant in the housing history of Japan that it had contributed to the massive supply of housing and housing modernization. At around 1930s, housing problems grew worse in Japan which due largely to the absence of housing policies. As a result, housing price skyrocketed and in turn it prompted other commodity price increases. In an attempt to check the trend, the Japanese government enacted Land Price and Housing Price Control Ordinance in 1948 and it reduced the supply of rental houses by private enterprises. In May 1941, the Japanese government founded the Japan Housing Corporation and incorporated the Dongyunhoe into it. The activities of the Dongyunhoe and the Japan Housing Corporation made significant influences on the creation of the Chosun Housing Corporation, *The 30 Years of Korea National Housing Corporation*, pp. 53-55.
24) "A Study on the Housing left by the Japanese and the Housing during the US Military Administration (1)", *Architectural Institute of Korea*, October Issue, 1987.
25) Makeshift hut is a modified mud hut that existed during the Japanese colonial period. It is not known for certain when the term 'makeshift hut' began to be in use. It is presumed, however, that the North Korean refugees, who moved to South Korea between 1946 and 1947, after the liberation in 1945 from the Japanese rule, built houses made of lauan, Oregon pine, roofing, and cans and called them 'panjaip', 'a board-framed house' or 'makeshift hut'. According to Grand Korean Dictionary Vol. 6 (published by the Hangyulsakhoe (The Association of Korean Alphabets) in 1957, "panjaip" is explained as 'a makeshift house with walls made of inexpensive boards.' Seoul City History Compilation Committee, 1978, Seoul 600 Years, Vol. 5, p. 693.

26) The housing circumstances of Seoul after the Korean War can be seen in the Presidential Decree promulgated on September 24, 1953. The Decree commanded 1) Refugees' return to Seoul should be kept to minimum until winter is over; 2) Police shall strictly check the refugees who do not have a house in Seoul from crossing the Han River; 3) No board-framed house, mud hut is allowed to be built along the road or by the streams; 4) The top-priority government project will be building 1 million houses even if it means on foreign loans; 5) Police shall be held responsible for supervising that the newly-built houses are within the planned residential areas that in line with the city plan of Seoul. Korea National Housing Corp., Ibid, p. 85.


28) In accordance with the UN resolution at the 5th general assembly, Dec. 1950, the UNKRA (United National Korean Reconstruction Agency) was established for refugee relief and to provide aids for the economic development of Korea who was left ruined by the Korean War. From the end of 1952, the UNKRA began providing foods, housing, clothes, educational facilities and others to Korea and the effort continued until 1960. The total amount given to Korea in aids amounted to $102,084,000. Seoul City History Compilation Committee, 1978, Seoul 600 Years, Vol. 5, p. 703.


30) Many people working for so called 'cultural industry' including novelists, actors and actresses, painters, musicians, professors, news reporters moved into Hongje-dong and the area was called 'cultural village.' Hongje-dong used to be a village of the poor. There used to be a crematorium and a trash dumping site. However, when 'cultural village' was formed at the
entrance of the Jahamun gate, the area has turned into a quality residential area. Korea National Housing Corp., *Ibid.*, p. 89.

31) Korea was in the situation that no housing supply from private construction enterprises could be expected, and the government adopted a policy that it established a public corporation to provide housing in large quantity. The government constituted Korea National Housing Corporation. Law on January, 20, 1962 stating that the Korea National Housing Corporation succeeds the rights and responsibilities of the Chosun Housing Corporation. It stands for further strengthened legal status and larger scope of responsibilities of the housing corporation. In addition, on June 29, 1963, the National Development Office which was under the Economic Planning Board was promoted to the Ministry of Construction under which the Housing Construction Department was newly established within the National Territory Preservation Bureau. On December 16, 1963, People’s Housing Department, which was under the Ministry of Health and Social Affairs was abolished and incorporated into the Housing Department of the Ministry of Construction with the Housing Construction Department. Under it combined, thus streamlining the division of responsibilities among administrative organizations in dealing with the housing problems and construction works.

32) The People’s Housing Complex completed in June 1959 in Bulgwang-dong was the first modern housing complex in Korea. The complex had 120 houses plus children’s playground and public plaza and it was followed by more people’s complexes in Bukgajwa-dong (123 houses, 1959) and Sangdo-dong (75 houses, 1959). But they were too small in scale to be called a housing complex.

33) *No. 213 House*, a short story written by novelist Kim Gwang-sik, which brought him into prominence, is believed to have based on the Guro-dong housing complex. Main character of the novel was drunk, got confused of the identical houses and went into someone else’s house which was one line behind his. Sohn Jung-mok, 1988, *History of Modern Cities of Korea*, Iljina, p. 274.

34) The Hwagok 300,000 housing complex was a regional development because like the Hwagok 100,000 housing complex, a vast area that used to be either a forest or agricultural land had been developed into a residential area. The housing complex was so vast that the idea of readjustment of town lots did not fit the development. In addition, from the scattered small scale housing complex developments, the need for community facilities were keenly felt. Communal Housing Research Association, 1999, *History of Communal Housing Planning of Korea*, Sejinha Publishing, pp. 91-92.


36) The Mapo Apartment was equipped with modern facilities, however, not many people wanted to buy the apartment. Right after the completion of the apartment, only one-tenth of the apartments was sold. It was because apartment was still a new concept residence. There were many interesting anecdotes of the apartment. It was a particularly cold winter when the Mapo Apartment was completed. As majority of the apartments were left unoccupied, the pipes going through the unoccupied apartments were
frozen to burst and briquet gas emerged a serious problem. Apartment residents were uneasy about the possibility of gas intoxication. At last, the Korea National Housing Corporation got six guinea pigs and put them in the empty apartments one each but there was no briquet gas poisoning. Despite the experiment, the apartment residents were still concerned saying human being was different from guinea pig. Construction supervisor and construction company employees had to check around residents over the nights if they were safe. Even at 2-3 a.m. people called at the apartment office asking them to come up and check if there was no gas leaking. The situation continued and at last the construction supervisor came to be on the verge of nervous breakdown. A construction company manager decided to make himself a guinea pig. He got himself drunk and spent one night in the apartment that was said to have worst gas leaking. However, he came out well the next morning. After such tragedies in the initial period, the Mapo Apartment began to be recognised as ‘a residence of a high class westernized cultural living’ and from summer the next year, the apartment price went up. Apartment culture came into being in Seoul in full. Korea National Housing Corp., Ibid, pp. 101-102.

37) Then called ‘frame type construction’ refers to a system that Seoul City was responsible for building the access roads, housing land development, frame works, electricity and piping works, and water works while the residents took care of all interior works including inside walls, sewer system and water works respective of buildings. It was popular as people could own apartment for less money. Jang Seong-su, 1994, p. 112.

38) At around 6 a.m. April 8, 1970, a 5-story Wau Citizen’s Apartment (building No.15) located in San 2 Changeon-dong, Mapo-gu collapsed and left 23 dead, 39 wounded. The accident happened during the thawing season. The reason for the accident was that insufficient number of iron beams had been used in building the apartments, and the pillars could not stand the weight of the building. Over one thousand people were put to rescue works but it was hard to remove the concrete walls and the rescue work was delayed. Alarmed by the accident, the police conducted a safety checking on the 697 apartments nationwide and found 85 apartment buildings were jury-built structures. It caused a apartment shunning phenomenon which lasted for some time. The Wau Apartment collapsed only 4 months after it was completed in December, 1969. The nature of the accident was so grave that the National Assembly discussed the matter of slipshod apartment construction, and Seoul Mayor assumed the responsibility of the accident and resigned. Jang Seong-su, Ibid, p. 112.

39) 'Mountain village' refers to the sub-quality houses clustered on the hills, 'moon village' the sub-quality houses on the high hills from where the moon could be seen well. The names are believed to have derived from their locations. As for 'moon village', Dong-A Ilbo wrote (January 17, 1987) as follows: the makeshift hut dwellers in the downtown areas were transferred to the government designated areas and lived there in a tent on a small piece of land allotted by the government per household. The name 'moon village' derived from that when they lie down to sleep they could see the moon and the stars through the tent. Dong-A Ilbo, January 17, 1987. (It was quoted again from Sub-quality House Redevelopment Kim

40) Seoul City allotted 20 pyeong per household to the slum dwellers who moved to the Gwangju Complex. Land speculation followed and many residents were found to have leased the land from the slum dwellers. To check the land speculation under control, the government had the land owners make a lump sum payment and in addition charged various taxes. On August 10, 1971, the residents revolted against the government policy demanding gratuitous land allotment, exemption of various taxes including purchase tax, property tax, business tax, income tax and others. For 6 hours, the Gwangju Complex was turned into a lawless world due to incendiary fires and the destruction of public facilities by the residents. The incident ended in the afternoon of the day when the then Seoul Mayor Yang Jaek-sik promised unconditional acceptance of the demands of the residents.

41) With the 1970s as a turning point, Seoul’s housing pattern changed abruptly from detached housing to communal housing. In 1970, detached housing comprises 88.4% of the housing in total, however it decreased to 70.7% in 1980, 46.1% in 1990, and 33.6% in 1995. On the contrary, the communal housings such as row house, multi-households house, and apartment that comprised only 10% of the total housing in 1970 increased to 51.2% in 1990, 63.3% in 1995.


43) In an attempt to add maximum pleasantness to apartment, over-sized apartments were built under the name ‘mansion’. According to the Korea Housing Corporation who built the Hangang Mansion and made a huge success, the special features of the Hangang Mansion can be summarized as follows: 1) within 5km distance from the city hall, transportation convenience, 10 minutes by car to downtown areas; 2) excellent educational facilities for children; 3) central heating and water supply system for the first time in Korea; 4) children’s playground, garden, spacious parking lots; 5) shopping centers; 6) hot water system at all times; 7) western style living with bed (no traditional ‘ondol’); 8) a fence around the complex and security guards at posts. Korea National Housing Corporation, ibid., p. 112.

44) The appearance of the high-rise apartment in the 1970s due largely to the deregulation of the restriction on the number of floors. In May, 1975, Seoul City made a regulation restricting the number of floors of apartment to 12 stories but the restriction was abolished in April, 1977. In addition, the regulations concerning the underground floors were also loosened, a very favorable condition for the construction of the high-rise apartments of over 15 stories. The old construction law requiring each building to have a minimum underground space of 1/12 of the total floor space was loosened to 1/15 for a 15-story apartment. It made the housing supply enterprises to turn to building 15 story apartments. It was because a 15-story apartment can be more competitive as it required less unused underground space. From buyers’ perspective as well, a 15-story apartment meant a larger space for less money than an apartment in a 12-story building. As a result, once popular 5-story apartment grew higher to 12-story apartment and to 15-

45) Housing Construction Promotion Law constituted in 1972 represented the strengthened government policy since 1970 giving emphasis on the private enterprise-centered housing supply. The Law was a back-up plan for the 2.5 million houses construction plan over 10 years period, which was announced in October, 1972 right after the declaration of the October Revitalizing Reform (known as Siwal-yushin), to expand the public housing funds to private constructors so that they could help carry out the government policies. The enactment of the Housing Construction Promotion Law resulted in the abolishment of the Public-financed Housing Law, and since then the concept of the public-financed housing had been changed to people’s housing, a broader concept encompassing the houses built by private construction companies. Im Seo-hwan, et. al., 1995. Korea National Housing Corp., *The Changes in the Construction of the Communal Housing*, pp. 237-238.


47) The large scale housing land developments in the 1970s were mostly based on the Land Readjustment Project Law. Apartment complex development could move ahead because various complementary measures had been prepared that enabled the development possible within the land readjustment district. For example, in December 1975, a revision was made to the laws on land readjustment work to secure land for apartment development. In January 1976 'Apartment District System' was introduced enforcing the development of apartment complex within the land readjustment areas. In 1977, a comprehensive revision was made to the existing Housing Construction Promotion Law, aiming at an effective development of a large apartment complex. The revised law allowed private construction companies to take part in the apartment complex development and its main focus was to facilitate apartment complex development by private housing enterprises.

48) In 1968, the Yeongdong District 1 land readjustment work began along with the construction work of the Gyeongbu (Seoul-Busan) Expressway. In the 1970s, the readjustment work was further expanded to the Yeongdong District 2 development (1970) and the Jamil area development (1974) as a part of the Gangnam Development Plan which was to decentralize Seoul population. The Yeongdong development plan came to be faced with difficulties due to slow economy in early 1970s. As a pump-priming measure to cope with the business slowdown and to push forward the Yeongdong district development, the government constituted and put to work the Provisionary Measures Law for the Development of Specific Regions. The main point of the provisionary measures was to give tax favors and preferential financing for the housing construction companies who developed housing land or built apartment in Yeouido or Gangnam area. The measure was originally planned to be effective until December 1975, however it was extended and remained effective till December 1978.


51) The houses in Seoul were rapidly being replaced by multi-household hous-
ing. Multi-family housing was the result of the government policy. The government relieved regulations regarding underground space, distance from the boundary of the neighboring housing, restriction on the height of a building to secure a right to enjoy sunshine, outdoor stairs, and other construction standards to facilitate multi-household and multi-family housings. In addition, the government tried to induce more construction of small houses by making a preference financing available for the construction of the people's housing that are over 20m² and less than 60m². It was also made possible by the government that other than the constructors who acquired business license based on the construction laws, small private builders could build houses, which in turn facilitated the construction of multi-household and multi-family housings. Seoul Development Institute, 1994, Development of General Housing Area Improvement Models, p. 11.

52) From 1985 when multi-household housing was made legal to 1993, multi-household and multi-family housing took up 52.2% of the total new housings in Seoul. Looking the figure further into details, from 1990 to 1993, multi-household housing amounted to 66.1% of the total, showing a gradual increase of multi-household housings. Seoul Development Institute, ibid., pp. 75-76.

53) A plan for the development of the Seun Sangga Apartment was made in 1966. The arcade apartment was then a very advanced concept to the housing market in Korea. Judging strictly based on the result, the Seun Sangga Apartment is considered a failure which due largely to immature political and social circumstances. The site of this Apartment was a city land stretching from Jongmyo (shrine of royal ancestors) to Daehan Movie Theater, about 1km in length and 50m in width, originally reserved for the deployment of the US forces at the end of the Japanese colonial period. At that time, Seoul City referred whether the site should be set aside for a road or to develop it as a housing land to be sold piece by piece. Debates went on and in the process, the Seun Sangga Apartment was developed in haste. Yoon Seung-jung, 1994, "A Story of the Seun Arcade Apartment", Architecture, July Issue, pp. 15-15.

54) Thanks to the housing redevelopment projects carried out by Seoul City, a huge number of houses have been built. From 1973 to the present, over 178,000 houses have been redeveloped which is equivalent to the housings built in the new towns of Bundang, Pyeongchon, and Jungdong combined. Seoul Development Institute, 1995, Alternate Development Models for Redevelopment of Apartment on the Hills, p. 8.
Korean references


Chu, Nam-chol. (1986). "Changes of Korean housings from the late Chosun dynasty to 1945". Architecture, No. 8604.


---. (1986). 40 Years of Modernization in Photos and Special Feature Articles. Chosun Ilbo.

---. (1988). Historical Sites of the Violent Years of the Late Great Han Empire. Chosun Ilbo.


Hong, In-ok. (1987). "Patterns and characteristics of the single housing areas of Seoul City", Geography, No. 25, Seoul National University, Geography Department.


Im, Deok-sun. (1994). Seoul, Capital City of Seoul for 600 Years, Jisik saneosa (Knowledge Industry) Publishing.

---. (1983). "Discussion of the methodologies to study Seoul, the capital city of Korea", Geography, No. 10, Seoul National University, Geography Department.

---. (1985). "Beginning and development of Seoul", Geography, No. 12, Seoul National University, Geography Department.


Im, Seo-hwan, et. al. (1995). Changes of the Communal Housing Construction Technologies, Korea National Housing Corporation.

Korea National Housing Corporation. (1989). 30 Years of Korea National Housing Corporation, Korea National Housing Corporation.
Park, In-seok, et. al. (1997), "Changes of laws regarding the housing land development and their impacts on the communal housing complexes planning", Architectural Institute of Korea, Vol. 13, No. 4.
Seongnam City History Compilation Committee. (1990). History Seongnam City, Seongnam City.

2. Japanese References
Housing Study Group. (1990). Korea Modern Housing Studies, Kenchiku chisiki
Sanitation in the 20th Century Seoul: Development of Water and Wastewater Service Systems

Chul-Whan Yun

Around the turn of the 20th century, conditions of sanitation and public hygiene in Seoul were far from being modern. People of the Dachan Empire (official country name of the last period of Chosun Dynasty from 1897 to 1910, until right before the Japanese annexation of Korea) like the people of the previous era, got their drinking water from wells, dumped their sewage in nearby brooks, and made do with traditional toilets. As a foreigner who visited the country around that time said in her memoirs, Seoul was a dirty, smelly city. The past 100 years, however, have witnessed eye-opening improvements in sanitation and public hygiene. Now as the end of the 20th century approaches, Seoul is capable of providing its citizens with modern living just as any other metropolitan cities of the world. This chapter takes a look at how water supply and sewage treatment began in the early 20th century and developed to their present form in the past 100 years. The chapter chronicles the water supply and wastewater service systems in the subsequent years through the Japanese colonial rule, the devastation of the Korean War, and the ensuing era of unprecedented industrialization and urbanization.
Sanitary Conditions Around the Turn of 20th Century

INTRODUCTION OF THE MODERN WATER SUPPLY SYSTEM

Around the turn of the 20th century people of Seoul relied on wells, springs and rivers for drinking water. Although no specific record is available, statistics filed in 1912 (four years after the first sewer system had been introduced) provide a glimpse of water use in the city. Statistics show that, in 1912, among the total of 56,148 houses, 18,033 houses (32.2%) had water supply, 30,008 houses (53.3%) relied on wells, and 8,107 houses (14.4%) depended on rivers or springs. The figures show that even after the introduction of the water supply system, some 70% had to rely on wells and rivers for water. Given the situation, it may well be surmised that some 44,200 houses (78.7%) and 11,948 houses (21.3%) used wells and rivers (or spring water) respectively before 1908, when water supply system was yet to be introduced. The quality of well water did not seem to be very good. According to statistics already quoted, of the 9,241 wells, only 1,091 wells (11.8%) were drinkable while water from the remaining 8,150 wells (88.2%) was undesirable as potable water. This demonstrates that citizens had been drinking unsanitary water due to lack of modern water supply system.

Most people drew their own water from whatever source available. Only a handful of Seoulites in the upper social brackets paid money to have their water delivered to them. In the beginning, those who provided water for the high ranking government officials worked as live-in servants for 1 or 2 households. Then they began to increase their service scope to 10, 20 and sometimes 30 households, resulting in the creation of exclusive water supply zones. Bukcheong Water Merchants, who entered the city scene around 180 years ago, had actually been people who were paid to carry water for the noblemen. Delivering water developed into an occupation that was dedicated solely to supplying water, and water zones exclusive to each supplier were established. When the supplier had to leave due to an accident or illness, the water zone was traded based on the average revenue of the zone. Moreover, as the number of water suppliers increased, a brokerage system was introduced to trade water zones.

Although the known year for the official establishment of the
modern water supply system is 1908, the origin in Seoul can be traced to a private water supply system for the Japanese living in the city. It was in July 1903 that a private water supply system was introduced by the Japanese Residents Association (known as Il-bon-geo-ryu-min-dan). According to the History of Gyeongseong (name of Seoul under the Japanese rule, 1910-1945) published by Gyeongseong Residents Office (known as Geongseong geo-ryu-min-dan-yeok-so) in 1912, Japanese residents at collective settlements in Myeongdong, Chungmu and Hoehyondong, after failing to secure potable water through numerous joint well digging efforts, invested 4,707.85 won to initiate a water project in March 1903. A water supply system was established with gorges on Namsan Park side and the adjacent east of Namsan as source water. And iron pipes of 700 meters were put in place to be connected to the Japanese residential area. The project was completed in July the same year and the system went into operation. Records show that the prices were 2 jeon and 5 jeon per 36 liters depending on delivery requirement. Later the facilities were purchased by Gyeongseong Residents Office at 4,107 won 85 jeon. Subsequently the Office carried out an expansion project worth 7,780 won, which was completed in December. These facilities provided water to the Japanese residents in Seoul until 1908, when Korean Water Works Company completed public waterworks. The service of the private system, however, was only restricted to limited areas.

FOUNDATION OF PUBLIC WATER SUPPLY SYSTEM

Seoul saw the establishment of a public water supply system in 1908. The seed, however, was sowed in 1903 when Americans Collbran and Bost Wick obtained the license to construct and manage the water system from the Korean government. Collbran and Wick transferred the license to Korean Water Works Company, created in 1905 by an Englishman; and the company, in turn, commissioned the two Americans to execute a water system construction project, which was initiated in August 1904. Four years later in August 31, 1908, an official water supply system was completed, and went into operation starting September 1. The total capacity of the system was 12,500m³/day, to provide 111ℓ/person/day to an estimated 120,000 people. The construction took a total of 2,806,153 won to complete. Service area, in principle, was restricted to parts of Hanseong-bu (1395-1909, Capital of the Chosun Dynasty, now part of Seoul), but service was also provided to some of adjacent areas outside the capital. The adjacent areas, however, were included as part of the city.
as Hanseong-bu was reorganized to Gyeongseong Bu (1910-1945, Hanseong-bu under the Japanese rule), meaning that after the reorganization service was truly restricted to the city itself.

The first ever water purification plant to be constructed as part of the water supply system was Ttukdo Water Purification Plant (Figures 6.1 and 6.2). Clean water produced at the plant was channeled through 3 streams of steel or cast iron pipes, 480mm, 500mm, and 550mm in diameters and stretching 3,334m in length. The water was sent to two distribution reservoirs, whose capacity totaled 9,203m³. The reservoirs were located on Daehyeon Mountain, which was approximately 67.7m higher in altitude than Jongro Crossroad. From there, distribution pipes with diameters of 560mm, 500mm, and 480mm carried the water to Cheongnyung Bridge (Euljiro 5-ga), through Gwanghuimun. At Cheongnyung Bridge water was divided into four streams.

Records show that the so-called 'collective system', whereby more than 2 houses shared one unit of water supply, was more prevalent than the 'dedicated system'. According to 1912 statistics, water service was available to a total of 18,033 houses—including those for Koreans and expatriates—among which 3,104 had privately set-up collective system, and 12,340 had 'special collective system'. This shows that the majority of 15,444 houses or 85.6% resorted to collective supply and that, when taking into account water supply for commercial, shipping, and fire-fighting purposes, the use of dedicat-
ed system was largely minimal. The creation of public water supply was met with violent conflict from Gyeongseong Water Guild, which had grown into an interest group representing Water Merchants who made a living out of delivering water, and eventually led them to go out of business once and for all.³⁰

**IMPROVEMENTS IN THE SEWAGE SYSTEM**

As was the case for the water supply system in Seoul at the turn of the 20th century, sewerage around 1900 had not been modernized. Of course, there had been some repair and maintenance work done on the creeks and brooks throughout Chosun Dynasty. Excavation work had already been done on Cheonggyecheon Stream and Ukcheon Stream at the onset of the Chosun Dynasty; and dredging was performed every 3 years after the creation of Juncheonsa, or the Flood Control Department during the reign of Yeongjo (21st King of the Chosun Dynasty; ruled from 1724 to 1776). The situation, however, towards the end of the Dynasty deteriorated severely as dredging work was unable to be carried out in a timely fashion for lack of budget. The resulting narrowing of passageway for sewer caused the creeks to overflow when there were heavy rainfalls.

No record of the sewer system of the time has been found to
Illustrate what it looked like and how long it was. But according to a report on the First Gyeongseo Sewage Improvement Project, carried out after the Japanese annexation of Korea, for 7 years from 1918 to 1925, repair works were done on a total of 9,452 meters of conduits along Cheonggyecheon Stream, including 4,498 meters of open channels and 4,956 meters of culverts, as well as on 247 meters of open channels along Ukcheon Stream. The project was not to excavate new sewages but to repair open sewage channels by dredging earth and sand from the existing open channels, while setting up globe-shaped or round culverts as required. As Gyeongseo Development Plan records that 6,832 meters of culverts already existed before the annexation, the First Gyeongseo Sewage Improvement Project and the resulting installment of 4,956 meters of new culverts were only part of a maintenance effort rather than a whole new initiative to revamp the sewage system. It can be assumed that the Second Project (1925-1930) also was mostly to maintain existing open conduits.

Extension of Water and Sewage Systems during the Japanese Colonial Rule: 1910-1945

Water supply and sewage systems in Seoul underwent extension and improvement in earnest during the Japanese colonial rule. This was also the time when management of Seoul's water system was transferred from the Korea Water Works Company. The Japanese had been persistent in trying to persuade the company to sell off the facilities ever since it started operation, and long before the annexation of the country. With the forced annexation in 1910, the Japanese colonial government using a Japanese middleman demanded the transfer of management rights. Eventually in January 1911, the right was transferred to Shibuzawa Syndicate. Subsequently the
colonial government purchased it and made it into a government-owned operation. The operation of the facilities fell under the jurisdiction of the Governor of Gyeonggi Province and in April 1922, the facilities were transferred for free to Gyeongseong Bu. As more people began to gain access to the public water supply system and awareness of the convenience and the hygienic benefits increased, demand grew significantly and extension works were done on a constant basis. The sewer system also underwent repair and maintenance. Some drainage facilities were in fact available even during the Daehan Empire. The problem, however, was that most channels were open channels, which had not been dredged for a long time, accumulating earth and sand. To address the problem improvement projects were initiated in earnest to prevent accumulation of earth and sand, and to dispose of waste water through underground channels, dredging works were carried out and globe-shaped or circular culverts were put in.

EXTENSION OF WATERWORKS

As more and more people were able to get water through clean and convenient water system, the demand increased consistently. In 1914, before full-scale extension works began, expansion and maintenance of Tukdo Water Purification Plant was conducted. As a result, water production at the plant increased by 16,000m³/day, and the aggregate production capacity grew to 28,500m³/day. But this was not enough to address the explosion in demand. More distribution pipes had to be installed to accommodate increase in production capacity, and greater service area had to be covered to meet demand. In 1918, connecting conduits were installed to be linked to Incheon Water System (Noryangjin Water Purification Plant) in order to supply more water to the needy city of Seoul. But this was still not enough, and a full-blown expansion project was necessary.

So the first expansion, namely the Gyeongseong Water System Noryangjin Source Water Project, was implemented from January 1919 through 1922. The project was to construct a purification facility for Seoul within the Noryangjin Plant, which was under Incheon's jurisdiction at the time. The construction cost 1,056,733 won 37 jeon. Increased production capacity mounted to 7,800 m³/day, which was almost the volume of the existing Incheon facility. With larger capacity, service areas were also expanded. Clean water produced in Noryangjin Plant was sent through 500mm cast iron pipes to Bondong Distribution Reservoir, located on a 90-meter high hill. From there, 400mm, and 350mm conduits were installed.
or Han River Bridge to distribute water to Yongsan area. Yeongdeungpo at the time was not part of Gyeongseong Bu, and was under Yeongdeungpo Township’s jurisdiction. Water was supplied through the Incheon water system starting December 24, 1912, with initial plans to provide 1,375 people with 21l/person/day. Gyeongseong Bu was an area that encompassed the city wall to the east, the Han River to the south, Dohwadong crossroad to the west and along the Muakjae Hill to the north. The water network after the first expansion is illustrated in Figure 6.3.

The second expansion took place between 1928 and 1933. The City launched the Gyeongseong Water System Project to expand the
Ttukdo Purification Plant. The plan was to provide an estimated 265,000 people in Gyeongseong Bu with a daily water supply of 137L/person or a total of 36,300m³. Water from Han River bed served as source water. The river-bed water facility was comprised of 34 150mm-diameter pipes, outside the right bank of the levee, in front of the Ttukdo Purification Plant. The 34 pipes served as intakes of ground water from 15.6 meters underground. The water was then injected to a catchment well through 2 streams of aqueducts. The facility to take in river-bed water, which existed until sometime in the 1960s, was reputedly dismantled in later half of the decade, when the area was included as land for building new levees as part of Han River Development Project. The second expansion cost a total of 1,230,441 won 22 jeon: the national government put in 240,000 won and Gyeongseong Bu, 990,441 won 22 jeon.

The two expansion works done on the public water supply system were only band-aid repair, because they were insufficient to meet the sudden rise in demand created by the jurisdictional enlargement of Gyeongseong Bu in April 1936. With the expansion of the administrative district, the area was increased by four folds to 133.94Km², as adjacent townships were incorporated into the city. Consequently, securing water supply became an urgent issue. The rate of population with water supply at the time was only 54%, and almost half the citizens depended on wells and rivers. The quality of water was not very good, creating problems for public health-another urgent reason for facility improvement. Records show that the rate of epidemic in Gyeongseong Bu was much higher than those for other cities. Therefore, the only way to improve sanitary conditions in the city was to significantly increase its capacity to supply water. Gyeongseong Bu, after completing a 2-year research for a third expansion, decided to increase the rate of population with water supply to 61% in a decade by 1945, the year for which population was estimated to be 762,000. To achieve this, the city drew up the third expansion plan to increase capacity to 72,000m³/day, including the already available production of 36,000m³/day, in order to service an estimated 465,000 citizens with a daily supply of 155 liters of water per person (Table 6.1). The planned 2,350,000 won project was to build intakes on the edges of Han River along Gwangjang-dong, and set up a water purification plant in Gueui-dong, in a 4-year time frame from 1936 to 1939.

Halfway along the project, the Sino-Japanese War erupted. Prices of iron pipes and other materials skyrocketed and supply was limited due to the ban on the distribution of iron pipes. Consequently, modifications were made to the plan: to partially accommodate the shortfall of 1,000,000 won, an additional 370,000 won was allocated – now the total being 2,720,000 won – to complete part of
the project, deferring the remaining construction work to a later time in the second phase. Table 6.1 is an overview of the expansion plan. The year of the completion of the entire project can be inferred from the budget records. The 1939 Gyeongseong City General Budget Appropriation shows that a total of 2,720,000 won (230,000 won from the national treasury, and 2,490,000 won from the city) had been injected into the project until 1939, and Gyeongseong City General and Special Budget Appropriations for 1940 records that 150,500 won was spent for the same purpose. Records also show that 2,269,000 won was allocated from 1940 to 1944. Therefore, it would be appropriate to say that the project was completed in 1944.

The fourth expansion project took three years from 1943 to 1945. Again, there is no record that specifically refers to the execution of the project. Gyeongseong City General and Special Budget Appropriations for 1944, however, shows that a total of 8,700,000 won was invested for the engineering project: 1,500,000 won in 1943, 3,600,000 won in 1944, and 3,600,000 won in 1945. What cannot be inferred from the budget record is on which water purification plant the construction was done. But it seems reasonable to think that it was the Gueui Water Purification Plant, given the documentation in The History of the City Administration of Seoul (revised edition published after Liberation), which states that the fourth expansion project, initiated to add a second purification facility in Gueui Plant, was suspended with the liberation of the country from the Japanese Rule, after spending 2,019,000 won. The expansion of the water supply system during the 36 years of colonial rule is summarized in Table 6.2.

Increased facility during the Japanese occupation had significant impact on the City’s water supply. According to data collected, the

<table>
<thead>
<tr>
<th>Year of completion</th>
<th>Unit</th>
<th>As of the end of 1895</th>
<th>Planned for 1945</th>
<th>Existing capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Within the territory</td>
<td>Outside the territory</td>
<td>Total</td>
</tr>
<tr>
<td>Total population</td>
<td>Persons</td>
<td>403,703</td>
<td>111,173</td>
<td>514,876</td>
</tr>
<tr>
<td>Water supply rate</td>
<td>%</td>
<td>65</td>
<td>10</td>
<td>54</td>
</tr>
<tr>
<td>Population supplied</td>
<td>Persons</td>
<td>265,049</td>
<td>11,834</td>
<td>276,843</td>
</tr>
<tr>
<td>Max. daily water supply per person</td>
<td>l</td>
<td>-</td>
<td>-</td>
<td>140</td>
</tr>
<tr>
<td>Max. daily water supply</td>
<td>m³</td>
<td>-</td>
<td>-</td>
<td>38,800</td>
</tr>
<tr>
<td>Planned max. daily supply</td>
<td>m³</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Maximum capacity after repair of existing facility: 45,000m³

Table 6.1
Phase 3 expansion plan overview

Source:
Gyeongseong-bu, Overview of Gyeongseong-bu Water Supply System, 1938

<table>
<thead>
<tr>
<th>Note</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>population as of the end of 1935 refers to that within the water supply area.</td>
</tr>
</tbody>
</table>
Table 6.2
Expansion during the Japanese rule

<table>
<thead>
<tr>
<th>Note</th>
<th>Accumulated capacity</th>
<th>Capacity Change</th>
<th>Status</th>
<th>Water Treatment Plant</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turn of the century</td>
<td>Tuikdo</td>
<td>Began operation</td>
<td>12,500</td>
<td>12,500</td>
<td></td>
</tr>
<tr>
<td>1914</td>
<td>Tuikdo</td>
<td>Expansion through repair</td>
<td>16,000</td>
<td>28,500</td>
<td></td>
</tr>
<tr>
<td>1923</td>
<td>Noryangjin</td>
<td>Facility expansion</td>
<td>7,800</td>
<td>36,300</td>
<td></td>
</tr>
<tr>
<td>1933</td>
<td>Tuikdo</td>
<td>Facility expansion</td>
<td>13,700</td>
<td>50,000 Purification Plant II</td>
<td></td>
</tr>
<tr>
<td>1939</td>
<td>Gueui</td>
<td>Phase One construction completed</td>
<td>30,000</td>
<td>80,000 Purification Plant I</td>
<td></td>
</tr>
<tr>
<td>1945</td>
<td>Gueui</td>
<td>Completed</td>
<td>15,700</td>
<td>95,700 Purification Plant II</td>
<td></td>
</tr>
<tr>
<td><strong>During the period</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>83,200</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>95,700</td>
</tr>
</tbody>
</table>

Table 6.3
Water supply during the Japanese rule

<table>
<thead>
<tr>
<th>Year</th>
<th>Total population with in the service area</th>
<th>Population supplied</th>
<th>Water supply rate (%)</th>
<th>Daily supply</th>
<th>Supply per person (l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1912</td>
<td>251,102</td>
<td>78,442</td>
<td>31</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1915</td>
<td>241,085</td>
<td>78,148</td>
<td>33</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1925</td>
<td>302,711</td>
<td>138,384</td>
<td>46</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1930</td>
<td>355,425</td>
<td>180,104</td>
<td>51</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1935</td>
<td>575,876</td>
<td>293,078</td>
<td>57</td>
<td>16,635</td>
<td>92</td>
</tr>
<tr>
<td>1940</td>
<td>930,347</td>
<td>452,008</td>
<td>48</td>
<td>22,907</td>
<td>83</td>
</tr>
<tr>
<td>1945</td>
<td>1,105,390</td>
<td>856,400</td>
<td>77</td>
<td>50,856</td>
<td>59</td>
</tr>
</tbody>
</table>

Source:
2) Data after 1940: Seoul Metropolitan Government, City Overview, 1948

rate of population with water supply increased from 31% in 1912 to 77% in 1945, while daily water supply per person dropped by a large margin from 92 liters in 1935 to 59 liters in 1945, because the rate of increase in daily water supply could not catch up with the rapid pace of population growth (Table 6.3).

SEWER SYSTEM CONSTRUCTION AND IMPROVEMENT

As in the water supply system, improvements to the sewer system were made in earnest during the colonial rule. Sewerage works were done in various forms. Some were carried out based on plans specifi-
ally dealing with the sewer system, while others were done as part of flood prevention projects for certain districts, the Municipal District Maintenance Project, or relief programs for the poor to create jobs for the needy.

**Plans for sewer system improvement and their execution**

During the Japanese rule, there were four repair works based on plans drawn up specifically for the purpose of improving the sewer system. The first one was a 7-year project that lasted from 1918 to 1924. By 1918, eight years into colonizing Korea, the Japanese colonial government had succeeded in putting a ruling system in place. In its maintenance plan, Gyeongseong Bu came up with separate projects to deal with the city’s streets and its sewer system: maintenance work on the city streets were carried out in phases as part of the Municipal District Maintenance Project starting 1913, but nothing was done for the sewer system. Recognizing the imbalance, Gyeongseong Bu decided to plan and implement the first sewer system improvement project. Engineering work for the 7-year project began in December 4, 1918, and a total of 1,618,000 won was appropriated to cover the expenses, including 660,400 won from the national treasury and 105,000 won from local budget. The plan was to improve the main sewers in the Cheonggyechon stream basin and Ukcheon stream basin drainage areas. As for the Cheonggyechon stream basin, the 5,912-meter main river was dredged to 58-109 meters in width, and 2.87-3.0 meters in depths, and eleven bridges were newly constructed or repaired. A total of 9,453 meters of culverts and open channels in 20 main sewages in the basin were dredged to 1.6 to 3.0 meters in depth, or were reinforced with newly laid circular pipes with 450mm-1,500mm diameters and 30 new or repaired bridges. And for Ukcheon stream, dredging operations were done on a total of 2,811 meters of open channels: 2,300 meters from Bongne-dong to Singye-dong, and 509 meters in front of the floodgate near what used to be Yongsan Branch Office. They were dredged to 3.6-16 meters in width and 1.96-3.0 in depths, and 5 bridges were newly constructed or repaired. As appurtenant work, 24 meters of open channel near Changdeok Kindergarten on Han River Road was dredged to 2.7 meters in width and 2.27 meters in depths, and a new bridge was constructed.40

The second sewer system project lasted for 6 years from 1925 to 1930. Thanks to the first project, Cheonggyechon mainstream and trunk sewers, as well as Ukcheon mainstream and part of the trunk sewers were fully repaired. But they were only a small part of the sewer system in Gyeongseong Bu, and much still remained to be done. Moreover, some areas which had been included in the scope of
the first project were left out in actual execution due to sharp inflation. Therefore, there was an urgent need for a second project, and nine main lines of sewers were selected within and without the city to continue repairs. Construction work for the second project began in October 26, 1925, with budget plans to secure a total of 1,250,000 won equally divided among the national treasury and Gyeongseong Bu. But later subsidy from the national government was cut by 40,000 won and the time line was extended by a year. The project was completed 7 years later in March 31, 1932 with a budget of 1,210,000 won (585,000 won from the national government and 625,000 won from Gyeongseong Bu). The scope of the project was to install globe-shaped or circular culverts, and open channels as required, set up L-shaped sewers, side gutters, manholes, rainwater inlets, and ground still bed stills, and build or repair bridges on the mainstreams between Singyo-dong and Doyom-dong, Gyoobuk-dong and Euijuro, Sungin-dong and Jongro 6-ga, Seodae-mun-ro 1-ga, Jangchungdan and Sinyongsan, as well as on tributaries between Sajikdongs and Doyom-dong, Cheonyeon-dong and Pyeong-dong and in Hoyoja-dong and Okin-dong. Specifically, the project covered 3,653.8 meters of globe-shaped culverts, 1,102.6 meters of circular culverts, 27.27 meters of transversal culverts, 172.35 meters of closed side gutter conduits, 5,033.51 meters of open channels, 6,458.62 meters of side gutters, 44 manholes, 14 collection inlets, 9 house inlets, 1 rainwater inlets, and 30 ground still bed stills, and 35 bridges newly built or repaired. Figure 6.4 is a map of the status of the repair work as of the end of 1931.

The third sewer system improvement project was implemented as a 3-year project that lasted from 1933 to 1935. In its Request for Government Subsidy, submitted to the Japanese colonial government as appendix to the Third Sewerage Improvement Plan, Gyeongseong Bu promised that the two sewer system projects, although successful in shaping up the main trunks, had left out much needed repair work on the tributaries and smaller sewers, and requested 500,000 won in government subsidy to undertake an 8-year project that would cost a total of 1,000,000 won from 1932, the year of the completion of the second project, to 1939. But government subsidy-related documents show that only 149,706.34 won was appropriated, probably due to financial difficulty. As a result the budget for the project was cut to 246,500.21 won and the term curtailed to 3 years from 1932 to 1935. Culverts, covered side gutters and L-shaped side gutters were installed on 19,205 meters of tributary sewers between Euljir 1-ga and Gwanghui-dong 2-ga, and in areas what are now Jongro and Jung-gu. The following fourth sewer system improvement project took 6 years (1936 to 1941) and 1,200,000 won (including 600,000 won in government subsidy) to
implement the installation of circular culverts, side gutters and manholes in 180 spots – 73,228 meters in length in Jongro-gu, Jung-gu, Seodaemun-gu, Yongsan-gu, and Mapo-gu.\textsuperscript{11}

**Sewerage repair to improve drainage performance**

During the Japanese rule some sewerage work were done as part of efforts to improve the drainage system. Drainage work in Gu-Yongsan, which is an example in point, was carried out from 1921 to 1923. Gu-Yongsan was a low-lying area, susceptible to flooding of the Han River. In the flooding of July 1920, in particular, the Han River reached water levels that drowned 2,600 units of housing, creating an urgency to build a levee on the River. And thus the engineering project for flood prevention was started in Gu-Yongsan area, along with inner drainage improvement work. The most urgent were drainage works on high-lying areas, for which Gyeongseong-bu was put in charge. Construction began in October 30, 1921, and the project was expected to cost 420,000 won: 210,000 won came from the government and 210,000 won from the local budget. Eight drainage conduits, either closed or open, were constructed, and 10 lines of side gutters were installed. The project, designed to facilitate the flow of sewage from the former Yongsan area, namely Wonhyo-ro, Yongmun-dong, Hyochang-dong, and Sincheon-dong, to Ukcheon stream, was completed in March 31, 1924. Repair works were done on 2,094.3 meters of culverts, 728.2 meters of open channels, and 185.4 meters of stone culverts in the trunk sewerages; 542.6 meters of masonry; and 1,734.7 meters of closed conduits and 3,191.2 meters of open channels in the branch sewerages. In addition, 29 manholes, 10 ground still bed stills, 138.2 meters of support (to stop mud), a clay pipe, and a side gutter inlet were installed; 1,171.3 m\(^2\) of roads were paved with gravel and sand; a bridge was constructed; and 14 meters of water channels, a floodgate, and a well were moved.\textsuperscript{12}

The second round of sewerage repairs to improve the drainage system was carried out from 1929 to 1930, as part of Yongsan flood prevention and Sin-Yongsan Pumping Station construction projects. Engineering work for flood prevention in Yongsan was executed as part of a river improvement project, from 1923 to 1924. A flood control project was implemented as part of Han River Improvement Project after the great flooding in 1925. Although the resulting construction of levees on both sides of Ukcheon stream addressed the infiltration of outer waters, the persistent problem with inner water flooding was yet to be solved. Since the problem could not be solved with natural lowering of water levels, a project was initiated in 1932. The area covered by the project totaled 2.395 million m\(^2\) including

![Figure 6.4](image-url)

*Figure 6.4 Plan of the main lines in the Gyeongseong-bu sewerage system, 1931*
1.639 million m$^2$ in Sin-Yongsan and 756,000m$^2$ in Gu-Yongsan. On the low lying areas near the pumping station, a reservoir was constructed for flood control, area totaling 73,000m$^2$, capacity, 24,000m$^2$, and effective storage capacity, 190,000m$^2$. The underlying calculation for the design of the reservoir was that if effective pondage was converted into precipitation on the basin using a run-off coefficient of 0.8 the figure was 99mm. And given local trends in precipitation, water levels would not reach 15m even at the height of the strongest rainfall if the reservoir could pump out 70mm of precipitation in 4 hours. Therefore, to meet the required drainage capacity of 70mm in 4 hours using an outflow coefficient of 0.8, the reservoir had to be able to discharge 7.45m$^3$ of water per second. To accomplish this, it was decided that a 40-inch diameter pump was sufficient when supported by three 150 HP motors, a 5 ton hand-operated crane and a 21 HP indoor drainage pump. This became the first rainwater pumping station in Seoul.\(^{19}\)

**Sewerage repair as part of municipal maintenance and anti-poverty programs**

During the Japanese rule, sewerage repair works were carried out as part of city maintenance projects and anti-poverty programs. Gyeongseong Bu executed a city maintenance project between 1929 and 1930 to repair and reconstruct roads, which also included maintenance work for the city’s sewers. Street inlets, clay pipes, manholes, side gutters, U-shaped side gutters, house inlets, collection pipes were installed on roads along Gwanghwamun and between Donhwamun and Seoul National University (SNU) Hospital. More specifically, 1,120 meters of side gutters, 246 meters of globe-shaped culverts, 449.16 meters of U-shaped side gutters, 500 meters of hume pipes, 868.29 meters of clay pipes, 650 meters of triangular side gutters, 292 street inlets, 13 manholes, 505.6 meters of side gutters, 67 iron lids, 31 rain water inlets, 35 house inlets, and 656 meters of collection pipes were installed on 730.5 meters of roads along Gwanghwamun and 685.5 meters of roads between Donhwamun and SNU Hospital.\(^{14}\)

Repair works on sewages were also carried out as part of anti-poverty program, which is equivalent to today’s aid programs for the poor in the form of paid labor. One such repair project was conducted from 1934 to 1936. The 3-year project, which cost 521,000 won, was designed to install round culverts and manholes in 33 tributaries, some 16,000 meters in total length, along Jongro-gu, Jung-gu, and Yongsan-gu.

A look into the city’s sewage system during the Japanese rule
shows that, with the passage of time, the focus shifted from dredging accumulated earth and sand in the main open channels to installing globe-shaped culverts, hume pipes, clay pipes and auxiliary facilities in the tributaries, reaching out to locations outside the city centers of Jongro-gu and Jung-gu, although limited to Yongsan, Seodaemun and parts of Mapo.¹³

INTRODUCTION OF NEW EXCREMENT DISPOSING METHOD

Disposing excrements was a big problem for the city during the Japanese rule. Traditionally, farmers would collect excrements for their farms. But the collection was irregular creating sanitary problems for the city. According to data from 1908 during the era of Residency-General (1906-1910, an establishment by the Japanese government to prepare for its occupation of the country), an organization called Hanseong Sanitation Council was established, to improve sanitary conditions, and started to sell Seoul city excrements to farmers. To make it work, excrements had to be delivered out to a place for storage before being sold to the farmers, which was why excrements disposal centers were built right outside the city.

In 1910, excrements disposal centers were set up outside Dongnipmun and in Ahyeon-dong. Since Ahyeon-dong is situated in a high-lying area, clay pipes were buried to carry excrements from the Ahyeon Temporary Disposal Center to the riverside in Mapo, and from there, excrements was shipped to riverside areas to be used as fertilizer. The early excrement disposal facilities were set up right outside Dongdaemun, and in Hyochang-dong and Yul-do (now Bam Seom). Since the facility outside Dongdaemun was too small, private land was leased to have the center moved to outside Gwanghuimun. It was later moved once again to Yongdu-dong, and in 1928, tracks were laid to carry excrements from Dongdaemun to Yongdu-dong. The disposal facility in Yul-do was integrated into Hyochang-dong facility because excrements could not be shipped in winter when the rivers froze. Hyochang-dong facility, however, also had to be moved to Ichon-dong.¹⁴ Such a method of excrement disposal seemed to have continued through the end of the Japanese occupation, as it is documented in Gyeongseong City General and Special Budget Appropriations, published in 1944, that a total of 338,000 won was allocated to install new waste disposal pipes in Sagun-dong, Jeonmung-dong, Donam-dong, and Hyeonjeo-dong, and a waste storage in Doksan-dong in 1943.
Water Supply and Sewage System Maintenance After Liberation: 1945-1960

The Japanese withdrew from Korea after it was defeated in the Pacific War in August 15, 1945, putting an end to the 36 years of colonial rule. The periods leading up to the Korean War in 1950 and to the creation of the Second Republic in 1960 were close to a huge vacuum with regards to improving water supply and sewage systems. Most of the important administrative positions were held by the Japanese before the liberation, and administrative and technical businesses had not been properly transferred to Koreans before the Japanese withdrawal. Right after liberation from Japan, Korea fell under the control of the occupying US Forces, which limited the country's ability to administrate according to the people's desires. Moreover, Korea was financially broke as a result of supporting the Pacific War during the Japanese rule, and was not in any shape to build water systems and repair sewers. To complicate the situation even more, Korean War erupted on the peninsula in June 25, 1950, only 2 years after the establishment of the Korean government in August 15, 1948, before the government could even start to implement policies for the people. The 3-year war incurred severe damage to the existing water and sewer systems. According to statistics on damages on water supply and sewer systems, 30-90% of water purification facilities, 60-80% of the pumping stations, 5-10% of water pipes and drainage, and 90% of communications facilities were destroyed during the Korean War, with damages totaling 47.7 million won. Although less damages were done to the sewerage than to water supply system due to the fact that the former was usually buried underground, there were still some notable damages. The government, after the war, had to tend to do what was most urgent—other than recovering the very basic functions of the water system and the sewerage—because the devastation in government finances made it practically impossible to do anything more. Expansion works were not able to be carried out until late 1950s.
WATER SUPPLY AFTER LIBERATION

No one can live without water. Even amid all the confusion after the country was liberated, the authorities had to deal with greater demand for water supply. After the Japanese left, officials in the water supply departments created an ad hoc organization consisting of Senior Manager for Public Management, Manager for Water Supply, and departments for Public Affairs, Administration and Billing. Supervisors for each departments were elected through mutual voting, and a transitional body was created to cope with urgent demand for water supply. As in other areas, demand for water exploded after liberation, as Korean expatriate flocked back into the capital to find new opportunities and people from North Korea chose to settle in the South. Moreover, the city had to provide water for the occupying UN Forces newly stationed in Yongsan.

The first project was initiated in February 1946: the city acquired the No. 2 facility in Noryangjin Purification Plant from Gyeonggi Do Province, and transformed the reservoir for industrial purpose into one servicing the public. The facility had originally been designed to supply water to munitions plants in Bupyeong and Yeongdeungpo, and had almost completed construction and testing before the end of the war, despite labor and materials shortages. But as it had been neglected in the vacuum resulting in the wake of the liberation of the country, most of the rapid filtration equipment and the pipes around the pumps were ruptured by the freezing weather in the winter of 1945. The city put in 14 million won to repair the facility to produce a daily supply of 56,400m³ of water. To meet the demand of the UN Forces in Yongsan, the city implemented a series of construction projects including a pumping facility, and water pipes between Noryangjin distributing reservoir and the pumping facility, and between Noryangjin and Samgakji. After the completion of the projects the city was able to supply water from 1947, and as the result accumulated capacity was increased to 152,100m³ a day.

Capacity to supply water was further increased by the expansion of the rapid filtration facility in Guemui Purification Plant. The expansion increased daily supply to 9,000m³. The once suspended construction for the five distribution reservoirs in Okin-dong, Samcheong-dong, Seongbuk-dong, Cheonyeon-dong, and Dowon-dong was also resumed to make service for high-lying areas possible. Moreover, the city acquired Noryangjin Purification Plant for a third round of capacity expansion. Noryangjin Plant belonged to Incheon City when it was transferred to Seoul, and had a capacity of 16,200m³/day. With Seoul’s acquisition of Noryangjin Plant the Plant’s accumulated capacity increased to 17,730m³/day. The condi-
The transfer, however, was to supply 25,000 m³/day of water to Incheon citizens until the City completes its Gimpo Purification Plant in October 1959. In the meanwhile the charges would be paid by Incheon. So the newly increased water supply was not entirely serviced to the citizens of Seoul immediately.

The forth expansion work was done on Trukdo Purification Plant. The expansion project for the No. 3 facility in Trukdo Plant was initiated in 1949 (cost of construction estimated at 17 billion won), but was suspended after 30% completion due to the Korean War in June 1950. Construction resumed in 1954, after the armistice, and was completed in 1956. Capacity increased to 4300 m³/day, and accumulated capacity to 217,600 m³/day. The construction of the facility cost 978,508 million won. The fifth expansion took place in the No. 3 facility of Gueui Purification Plant. The 1,899,048,000 won project, executed from 1957 to 1959, was massive in scale: intake facility, up-to-date pre-processing facility, and purification facility were constructed; Wangsimri Pumping Facility and Sancheong-dong Distribution Reservoir were set up; and water pipes between Wangsimri and Malli-dong, and between Wangsimri and Samcheong-dong were laid. Capacity was increased by 60,000 m³/day, and accumulated capacity was increased to 277,600 m³/day. Facility expansion for water production from right after the liberation to 1960 is summarized in Table 6.4.

Water supply rate, which had been at times lower than that for 1945 due to devastation by the war and the ensuing recovery work, was brought back to 84.5% level only in 1960. Changes in water supply during the same period are summarized in Table 6.5.

### Table 6.4

<table>
<thead>
<tr>
<th>Year</th>
<th>Water Treatment Plant</th>
<th>Status</th>
<th>Capacity change (m³/day)</th>
<th>Accumulated capacity (m³/day)</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>As of the end of 1945</td>
<td></td>
<td></td>
<td></td>
<td>95,700</td>
<td></td>
</tr>
<tr>
<td>1946</td>
<td>Gueui</td>
<td>Expansion offeach field</td>
<td>9,000</td>
<td>104,700</td>
<td></td>
</tr>
<tr>
<td>1947</td>
<td>Noryangjin</td>
<td>Transition of jurisdiction and use of the facility</td>
<td>56,400</td>
<td>161,100</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(for industrial use)</td>
<td></td>
<td></td>
<td></td>
<td>Continued supply of 25,000 m³/day</td>
</tr>
<tr>
<td>1948</td>
<td>Noryangjin</td>
<td>Transition of jurisdiction (Incheon City)</td>
<td>16,200</td>
<td>177,700</td>
<td></td>
</tr>
<tr>
<td>1956</td>
<td>Thukdo</td>
<td>Facility expansion</td>
<td>40,300</td>
<td>217,600</td>
<td></td>
</tr>
<tr>
<td>1959</td>
<td>Gueui</td>
<td>Facility expansion</td>
<td>60,000</td>
<td>277,600</td>
<td></td>
</tr>
<tr>
<td>During the Period</td>
<td></td>
<td></td>
<td></td>
<td>181,900</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>277,600</td>
<td></td>
</tr>
</tbody>
</table>
Table 6.5
Water supply from 1945 to 1960

<table>
<thead>
<tr>
<th>Year</th>
<th>Total population in the service area</th>
<th>Population supplied</th>
<th>Water supply rate (%)</th>
<th>Daily water supply (m³)</th>
<th>Daily supply per person (l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1945</td>
<td>1,105,390</td>
<td>856,400</td>
<td>77.0</td>
<td>50,856</td>
<td>59</td>
</tr>
<tr>
<td>1953</td>
<td>760,538</td>
<td>340,000</td>
<td>44.3</td>
<td>60,900</td>
<td>179</td>
</tr>
<tr>
<td>1957</td>
<td>1,671,104</td>
<td>1,088,230</td>
<td>65.1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1959</td>
<td>2,093,969</td>
<td>970,028</td>
<td>46.3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1960</td>
<td>1,462,261</td>
<td>1,235,936</td>
<td>84.5</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Seoul Metropolitan Government, relevant issues of City Overview

although data on daily supply of water per person from 1954 to 1960 is not available.

SEWERAGE WORKS DURING POST-WAR RECONSTRUCTION

Less damage was done to the sewer system than to other facilities during the war, because most sewers were culverts or channels buried underground. But there were damages from bombings or artillery attacks that required repair, and a lot of earth sediments were accumulating inside the pipes. So repair operations and dredging works were carried out during and after the war. Even when the country was suffering from severe shortages in budget and materials right after the war, 1.8 billion hwan (then monetary unit) worth of aid material including cement, steel bars, and wood were used for reconstruction work. 20 There were 28 cases of sewerage related works from 1951 and 1954 including 7 dredging operations, 8 sewer works, 1 drainage pumping station repair, and installation of 4 manholes, 2 culvers, an open channel and a side gutter.

As the post-war recovery works moved to their final stages, full-scale sewage improvement projects got off the ground. What is noteworthy is that in 1955 Seoul District Offices also started to take up sewage works. Records (1955-1956) show that 9 District Offices spent 35,873,973 hwan on 97 cases of sewage works, including small-scale dredging, repair and new construction works. The trend can also be seen in the records of 1957. The Seoul City spent 1,089,432,929 hwan on 38 cases, while district offices spent 116,900,317 hwan on 88 cases, which altogether added up to 1,206,332,246 hwan on 126 cases. In 1958 and years following, sewage works had been divided into City Office projects and district office projects. According to documents preserved, the City Office and district offices executed a total of 3,104,492,912 hwan on 198
sewage works from 1951 to 1960.

One other point noteworthy in the 1950s was the project to cover the sewers along Cheonggyecheon Stream. Construction began in September 1957 on culverts between Daegwang-gyo Bridge and Dong-gyo Bridge. A total of 1,661,709,202 hwan was spent to cover up 2,358.5 meters of sewers, 16 to 54 meters in width: 480m in the first year, 969.5m in the second, 232m in the third, and 677m in the concluding year. The construction covered a total area of 79,849m². There is no figure available for an overall rate of distribution of sewage in the period between 1945 and 1960 because a methodology to calculate distribution rate was yet to be developed.

City Growth and Massive Expansion of Water and Wastewater Systems: 1961-1979

The Third and Fourth Republics in the 1960s and the 70s were crucial to the development of waterworks and sewerage in Seoul. The government, in order to realize the goal of modernization it set for itself, came up with a series of Five Year Economic Development Plans, in which projects for water supply and sewage treatment systems were also represented. Population of Seoul in the same period simply exploded as people flocked into the city as economic and social environments changed. Population rose 3.3 folds in 19 years between 1960 and 1979, from 2.45 million to 8.11 million. When given population increased by an yearly average of 308,000 in 1960s and by 287,000 in 1970s, it can easily be understood how incredible the rate of increase must have been in demands for water and sewage treatment. A city of a population of 300,000 would qualify as a medium-sized city. And Seoul had to expand its water and sewage treatment facilities to meet the demands of a new medium-sized city each year. Along with increase in population, expansion in adminis-
trative districts resulted in increased demand for more treatment and related facilities. With the expansion of administrative districts implemented as of January 1, 1963, total area of the city grew from 268.35Km² to 614.04Km², and population was increased by 178,000. Therefore, area of service was dramatically increased and thus, the requirement to expand the network of water supply. The focus of sewerage improvement was on building sewage end treatment facility and laying culverts to cover up sewer streams downtown. It was during this time covering up of sewer rivers was most actively pursued in relation to addressing road shortages by using the covered space as road.

AMBITIOUS PLANS TO EXPAND WATER SUPPLY AND INSTITUTIONAL IMPROVEMENT

To cope with the situation, Seoul established a facility expansion plan that was truly massive in scale. The first long-term facility expansion plan in the 1960s was the Water Supply Expansion Plan of 1961, which was designed to expand existing water purification plants or build new ones to increase capacity from 297,200m³/day as of the end of 1960 to 1,162,000m³/day in 1974. More specifically, according to the plan, supplementary reservoirs in Sinchon, Miari, and Bulgwang-dong (total capacity of 14,600m³/day), and a purification plant in Bogwang-dong (capacity of 300,000m³/day) would be newly built; and expansion works would be done on Gueui, Tukedo and Noryangjin Purification Plants to increase capacity from 446,000m³/day to 565,400m³/day, from 94,200m³/day to

| Table 6.6 |
| Overview of water supply expansion plan, 1961 |

<table>
<thead>
<tr>
<th>Year of completion</th>
<th>Gueui</th>
<th>Tukedo</th>
<th>Noryangjin</th>
<th>Auxiliary</th>
<th>Bogwang Dong</th>
<th>Increase after expansion</th>
<th>Total treatment capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>119,000</td>
<td>94,200</td>
<td>84,000</td>
<td>-</td>
<td>-</td>
<td>297,200</td>
<td></td>
</tr>
<tr>
<td>1961</td>
<td>20,000</td>
<td></td>
<td>11,000</td>
<td>-</td>
<td>31,000</td>
<td>328,200</td>
<td></td>
</tr>
<tr>
<td>1962</td>
<td>41,000</td>
<td></td>
<td>25,000</td>
<td>3,600</td>
<td>69,600</td>
<td>397,800</td>
<td></td>
</tr>
<tr>
<td>1963</td>
<td>30,000</td>
<td>35,300</td>
<td>27,000</td>
<td>-</td>
<td>92,300</td>
<td>490,100</td>
<td></td>
</tr>
<tr>
<td>1965</td>
<td></td>
<td></td>
<td></td>
<td>150,000</td>
<td>150,000</td>
<td>640,100</td>
<td></td>
</tr>
<tr>
<td>1966</td>
<td></td>
<td></td>
<td></td>
<td>150,000</td>
<td>150,000</td>
<td>790,100</td>
<td></td>
</tr>
<tr>
<td>1969</td>
<td>55,400</td>
<td></td>
<td>16,500</td>
<td>-</td>
<td>71,900</td>
<td>862,000</td>
<td></td>
</tr>
<tr>
<td>1971</td>
<td>150,000</td>
<td></td>
<td></td>
<td></td>
<td>150,000</td>
<td>1,012,000</td>
<td></td>
</tr>
<tr>
<td>1974</td>
<td>150,000</td>
<td></td>
<td></td>
<td></td>
<td>150,000</td>
<td>1,162,000</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>565,400</td>
<td>129,500</td>
<td>152,500</td>
<td>14,600</td>
<td>300,000</td>
<td>854,800</td>
<td></td>
</tr>
</tbody>
</table>

Source: Seoul Metropolitan Government, City Administration Overview, 1962

Sanitation in the 20th Century Seoul
179,500m³/day, and from 84,000m³/day to 152,500m³/day respectively. Full execution of the plan would have enabled the city to increase capacity from 297,200m³/day as of the end of 1960 to 854,800m³/day. Plan objectives by year are summarized in Table 6.6.

The second expansion was a 10-year plan that came as part of 1971 Comprehensive Municipal Administration Plan. The expansion plan (1972-1981) was to increase capacity to 3,08Mm³/day by 1981 so that 7,125,000 people, or 95% of the city’s total population of 7,500,000, would be provided with 432 ℓ of water a day per person. US$8.80 million of foreign loan and 16,612,400,000 won was to be invested. Under the plan, capacity was to be increased in Gueui Purification Plant by 600,000m³/day by 1976, a new purification plant was to be constructed in Amsa-dong by 1976 with an initial capacity of 600,000m³/day, and then be expanded by 400,000m³/day by 1981 to be equipped with a total capacity of 1Mm³/day. And there were other expansion plans for 1977-1981 period to increase capacity by 200,000m³/day.

Systematic management of water supply and sewage treatment had become necessary with the explosive growth of the city in the 1960s. In recognition of the requirement, Water Act was established in 1961 and foreign loans were introduced to make up for the shortage in capital and the lack of technological expertise.

EXPANSION OF WATER SUPPLY SYSTEM

With such ambitious plans in place, waterworks in Seoul expanded rapidly. On top of population growth, higher levels of income achieved through the Five Year Economic Development Plans further increased water use. Moreover, in order to cater to higher standards of living attained through economic development, the city had to go beyond the current level of per capita supply of water for its citizens. Records show that in the 19-year period between 1961 and 1979, there had been 41 cases of new constructions, expansions, improvements and acquisitions of water purification facilities by the city. The details are described in the following.

Construction of auxiliary reservoirs

To immediately deal with severe water shortages created by the expansion of Seoul in the 1960s, auxiliary reservoirs were constructed first and foremost. This was to make up for the insufficient supply capacity of existing purification plants by setting up new reservoirs in Sinchon, Miari, Bulgwang-dong and Sihung. The facilities,
whose source water was provided by river-bed water or ground water, had initial capacities of 3,000 m³/day, 3,000 m³/day, 2,000 m³/day, and 500 m³/day respectively. Later, total capacity of the reservoirs increased by 6,600 m³/day after facility improvements in Sinchon, Miari and Bulgwang-dong Reservoirs. This shows that the city was desperate to meet exploding demands. But in the 1970s as the ability to supply water stabilized with the construction of large water purification plants, auxiliary reservoirs in Sinchon and Siheung were closed in 1973 and those in Miari and Bulgwang-dong in 1975 due to either reduced amount of water in the reservoirs or deterioration of water quality.

Construction of large water purification plants

To meet growing demands for water, the City continued to build large-scale water purification plants. The first one to be constructed was Bogwang-dong Purification Plant with a capacity of 300,000 m³/day. The purification plant took $6 million in foreign loan and 600 million won from government funds to complete. The first phase construction, which began in 1962 was completed in 1967 to service 25,000 m³ of water a day. The second phase was completed in 1968 adding 125,000 m³/day in water production, the third phase in 1969 adding 40,000 m³/day, and the fourth phase in 1970 adding 110,000 m³/day. The source of the water for the purification plant was water from the riverbed from Han River along Bogwang-dong.

The second large-scale purification plant to be constructed was Yeongdeungpo Purification Plant. The Plant, located at the shores of mainstream Han River on the mouth of Anyang River, had a total capacity of 240,000 m³/day, and took 400,086,700 won to complete. The plant also used water from the Han River bed as source water. The first phase construction was completed in April 10, 1971, with capacity reaching 60,000 m³/day. The second phase was concluded in December the same year, putting an additional 90,000 m³/day in capacity, the third phase in 1973, adding 30,000 m³/day, and the fourth phase in 1975, adding 60,000 m³/day.

Next, Seonyu Purification Plant with a total capacity of 400,000 m³/day was completed and started service in June 1978. Construction began in September 1977 with an investment of 4.85 billion won. Again, water from the Han River bed was used as source water. The first phase of construction was completed in June 1978, with a capacity of 200,000 m³/day, and the second phase in 1979, with another 200,000 m³/day. Gwanam Purification Plant, another large facility that was constructed during the 70s, was completed in 1979. As the water in the lower reaches of the Han River

1. Sanitation in the 20th Century Seoul
became too polluted to be used as source water, the Ministry of Construction began to seek measures to secure source water for cities around the metropolitan area. As a result the Ministry launched the construction of the Capital Region Water Supply System, using the lakes of the Paldang as source water. The City of Seoul also took part in the initiative and started constructions for Gwangam Water Purification Plant, which would use Paldang Lake as source water. The City put in 30.5 billion won in investment for the construction of the plant, which would have a capacity of 1 million m$^3$/day when completed in 1981. The first phase construction began in 1975, and was completed in 1979, with a capacity of 400,000m$^3$/day. Constructions for the rest of the project was deferred to after 1980 (Figure 6.5).

Acquisition and expansion of existing water purification plants

Numerous acquisitions and expansions of existing facilities also took place during the period. Seoul City acquired Gimpo Water Purification Plant, which was later renamed to Sinwol Purification Plant, from Incheon City. The transfer was possible based on the assess-
ment that Incheon could be self-sufficient without Gimpo Plant after the completion of Bupyeong Purification Plant. And in fact, Gimpo Plant had already been supplying Yangcheon-gu, located in the southwest part of Seoul. It took 800 million won for Seoul to acquire the 40,000m³/day-capacity facility in 1978. A year after acquiring the facility, the City invested 318.6 million won to expand the facility, adding 60,000m³/day to increase total capacity of the facility to 100,000m³/day.

Three projects were implemented in the period between 1961 and 1979 to expand water purification facilities run by Seoul. The first one to be expanded was Ttukdo Plant in 1970. A fourth water purification facility was added to the plant while 2,950 meters of 700-900mm pipes were newly laid, to increase capacity by 120,000 m³/day. The project cost 535 million won. Expansion of Ttukdo Plant continued in 1971. Six leach fields were added to the No. 1 purification facility, and a new pump was put in place in the No. 4 facility, to increase capacity by 60,400m³/day. The expansion cost 950 million won. Expansion of Gueui Purification Plant was carried out from 1974 to 1976, with a total investment of 35 billion won (32 billion won recruited from within the country, and $6 million in foreign loan). The project, designed to increase capacity by 600,000m³/day to 1,000,000m³/day, included construction of intakes, aqueducts, water purification facilities, and distribution facilities. The project was completed in 1974 adding 300,000m³/day in capacity, and the second phase in 1976 adding another 300,000m³/day. In summary, in the 19-year period between 1961 and 1979, capacity increased by 840,400m³/day thanks to facility expansion: 180,400m³/day from Ttukdo Plant, 600,000m³/day from Gueui Plant, and 60,000m³/day from Sinwol Plant.

Improvement of existing facilities

Improving existing facilities without adding new intake or purification facilities was also actively pursued during the Third and Fourth Republics. In the 19-year period between 1961 and 1979, a total of 572,000m³/day in capacity increased after 22 improvement works. Various improvement works were carried out in some purification plants, two works in a single year—to increase capacity by as little as 3,600m³/day, and by as much as 80,000m³/day. This very well demonstrates the seriousness of the water shortage faced by the city. A look into capacity increase resulting from facility improvement by purification plant shows that: Gueui Plant secured an additional 115,700m³/day after improvement works in 1961 (20,000m³/day), 1962 (20,000m³/day), 1964 (25,700m³/day), 1965 (30,000m³/day),
<table>
<thead>
<tr>
<th>Year</th>
<th>Treatment Plant</th>
<th>Cause of capacity change</th>
<th>Capacity change</th>
<th>Accumulated capacity</th>
<th>Source water</th>
<th>Method of intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>As of the end of 1960</td>
<td>Gueui</td>
<td>Facility improvement</td>
<td>20,000</td>
<td>297,600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1961</td>
<td>Shinchon Auxiliary Reservoir</td>
<td>Newly opened</td>
<td>3,000</td>
<td>300,600</td>
<td>Underground flow</td>
<td>Pressurization</td>
</tr>
<tr>
<td></td>
<td>Miori Auxiliary Reservoir</td>
<td>Newly opened</td>
<td>3,000</td>
<td>303,600</td>
<td>Underground flow</td>
<td>Pressurization</td>
</tr>
<tr>
<td>1962</td>
<td>Gueui</td>
<td>Facility improvement (Plant 2)</td>
<td>20,000</td>
<td>329,600</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bulgwangdong Auxiliary Reservoir</td>
<td>Newly opened</td>
<td>2,000</td>
<td>325,600</td>
<td>Underground flow</td>
<td></td>
</tr>
<tr>
<td>1963</td>
<td>Noryangjin</td>
<td>Facility improvement (Plant 1)</td>
<td>23,000</td>
<td>348,600</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gueui</td>
<td>Facility improvement (Plant 2)</td>
<td>25,700</td>
<td>374,300</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ttukdo</td>
<td>Facility improvement (Plant 2 Leach field)</td>
<td>11,300</td>
<td>385,600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1964</td>
<td>Noryangjin</td>
<td>Facility improvement</td>
<td>3,600</td>
<td>399,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shinchon, Miori, Bulgwang Auxiliary Reservoir</td>
<td>Facility improvement (Plant 2 Leach field)</td>
<td>11,300</td>
<td>385,600</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shinchon, Miori, Bulgwang Auxiliary Reservoir</td>
<td>Facility improvement</td>
<td>6,600</td>
<td>395,800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1965</td>
<td>Gueui</td>
<td>Facility improvement</td>
<td>30,000</td>
<td>425,800</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ttukdo</td>
<td>Facility improvement (Leach fields 1,2,3)</td>
<td>35,300</td>
<td>461,100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Noryangjin</td>
<td>Facility improvement</td>
<td>27,000</td>
<td>488,100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1966</td>
<td>Ttukdo</td>
<td>Facility improvement (Leach field 1)</td>
<td>30,000</td>
<td>518,100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1967</td>
<td>Bogwangdong</td>
<td>Newly opened</td>
<td>25,000</td>
<td>543,100</td>
<td>Han River river-bed</td>
<td>Pressurization</td>
</tr>
<tr>
<td></td>
<td>Siheung Auxiliary Reservoir</td>
<td>Newly opened</td>
<td>500</td>
<td>548,600</td>
<td>Underground flow</td>
<td>Pressurization</td>
</tr>
<tr>
<td></td>
<td>Bogwangdong</td>
<td>Phase 2 construction completed</td>
<td>125,000</td>
<td>668,600</td>
<td>Han River river-bed</td>
<td>Pressurization</td>
</tr>
<tr>
<td>1968</td>
<td>Noryangjin</td>
<td>Facility improvement</td>
<td>10,000</td>
<td>678,600</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ttukdo</td>
<td>Facility improvement</td>
<td>15,000</td>
<td>693,600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1969</td>
<td>Ttukdo</td>
<td>Facility improvement</td>
<td>73,000</td>
<td>766,600</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bogwangdong</td>
<td>Phase 3 construction completed</td>
<td>40,000</td>
<td>806,600</td>
<td>Han River river-bed</td>
<td>Pressurization</td>
</tr>
<tr>
<td></td>
<td>Gueui</td>
<td>Facility improvement</td>
<td>20,000</td>
<td>826,600</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ttukdo</td>
<td>Facility expansion (Plant 4)</td>
<td>120,000</td>
<td>946,600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1970</td>
<td>Bogwangdong</td>
<td>Phase 4 construction completed</td>
<td>110,000</td>
<td>1,056,600</td>
<td>Han River river-bed</td>
<td>Pressurization</td>
</tr>
<tr>
<td></td>
<td>Noryangjin</td>
<td>Facility improvement</td>
<td>23,000</td>
<td>1,079,600</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Noryangjin</td>
<td>Facility improvement</td>
<td>80,000</td>
<td>1,159,600</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<continued>
<table>
<thead>
<tr>
<th>Year</th>
<th>Treatment Plant</th>
<th>Cause of capacity change</th>
<th>Capacity change</th>
<th>Accumulated capacity</th>
<th>Source water</th>
<th>Method of intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971</td>
<td>Thukdo</td>
<td>Facility expansion</td>
<td>60,400</td>
<td>1,220,000</td>
<td>Han River</td>
<td>Pressurization</td>
</tr>
<tr>
<td></td>
<td>Youngdeung-ro</td>
<td>Newly opened</td>
<td>60,000</td>
<td>1,280,000</td>
<td>river-bed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Youngdeung-ro</td>
<td>Phase 2 construction</td>
<td>90,000</td>
<td>1,370,000</td>
<td>Han River</td>
<td>Pressurization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>completed</td>
<td></td>
<td></td>
<td>river-bed</td>
<td></td>
</tr>
<tr>
<td>1973</td>
<td>Thukdo</td>
<td>Facility improvement</td>
<td>40,000</td>
<td>1,410,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Noryangjin</td>
<td>Facility improvement</td>
<td>35,000</td>
<td>1,445,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Youngdeung-ro</td>
<td>Phase 3 construction</td>
<td>30,000</td>
<td>1,475,000</td>
<td>Han River</td>
<td>Pressurization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>completed</td>
<td></td>
<td></td>
<td>river-bed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shinchon</td>
<td>Closed</td>
<td>-4500</td>
<td>1,470,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Auxiliary</td>
<td></td>
<td></td>
<td></td>
<td>Reservoir</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sheung Auxiliary</td>
<td>Reservoir</td>
<td>-500</td>
<td>1,470,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1974</td>
<td>Gueui</td>
<td>Facility expansion</td>
<td>300,000</td>
<td>1,770,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1975</td>
<td>Youngdeung-ro</td>
<td>Phase 4 construction</td>
<td>60,000</td>
<td>1,830,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>completed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Thukdo</td>
<td>Facility improvement</td>
<td>32,100</td>
<td>1,862,100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Miri, Bulgwang</td>
<td></td>
<td>-10,100</td>
<td>1,852,00</td>
<td>Auxiliary</td>
<td>Reservoir</td>
</tr>
<tr>
<td></td>
<td>Auxiliary</td>
<td>Reservoir</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Noryangjin</td>
<td>Facility improvement</td>
<td>18,000</td>
<td>1,870,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1976</td>
<td>Gueui</td>
<td>Facility expansion</td>
<td>300,000</td>
<td>2,170,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Plant 3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1978</td>
<td>Seonyu</td>
<td>Newly opened</td>
<td>200,000</td>
<td>2,370,000</td>
<td>Han River</td>
<td>river-bed</td>
</tr>
<tr>
<td></td>
<td>Sinwol</td>
<td>Transferred from</td>
<td>40,000</td>
<td>2,410,000</td>
<td>Han River</td>
<td>river-bed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inch'on City</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1979</td>
<td>Seonyu</td>
<td>Phase 2 construction</td>
<td>200,000</td>
<td>2,610,000</td>
<td>Han River</td>
<td>river-bed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>completed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gwangnam</td>
<td>Newly opened</td>
<td>400,000</td>
<td>3,010,000</td>
<td>Han River</td>
<td>water</td>
</tr>
<tr>
<td></td>
<td>Sinwol</td>
<td>Facility expansion</td>
<td>60,000</td>
<td>3,070,000</td>
<td>Han River</td>
<td>river-bed</td>
</tr>
</tbody>
</table>

Table 6.7
Overview of water system expansion (1961-1979)

and 1969 (20,000m³/day); Thukdo Plant, 236,700m³/day after 1964
(11,300m³/day), 1965 (35,300m³/day), 1966 (30,000m³/day), 1968
(15,000m³/day), 1969 (73,000m³/day), 1973 (40,000m³/day), and
1975 (32,100m³/day); and Noryangjin Plant, 219,600m³/day after
1963 (23,000m³/day), 1964 (3,600m³/day), 1965 (27,000m³/day),
1968 (10,000m³/day), 1970 (two improvement works, 23,000m³/
day and 80,000m³/day each), 1973 (35,000m³/day), and 1975
(18,000m³/day).

During the 19-year period from 1961 to 1979, thanks to various
measures to increase water production, total capacity increased
by 2,792,400m³/day, from 277,600m³/day to 3,070,000m³/day
(Table 6.7). As the result of such efforts, water situation in Seoul
Table 6.8
Overview of water supply overview, 1960-1979

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population (Persons)</td>
<td>2,445,402</td>
<td>3,470,880</td>
<td>5,536,377</td>
<td>6,889,902</td>
<td>8,114,021</td>
</tr>
<tr>
<td>Population supplied (Persons)</td>
<td>1,335,938</td>
<td>2,257,209</td>
<td>4,737,573</td>
<td>6,140,000</td>
<td>7,402,937</td>
</tr>
<tr>
<td>Water supply rate (%)</td>
<td>50.5</td>
<td>73.7</td>
<td>85.6</td>
<td>89.1</td>
<td>92.3</td>
</tr>
<tr>
<td>Daily water supply (m³/day)</td>
<td>106,885</td>
<td>422,131</td>
<td>808,445</td>
<td>1,349,150</td>
<td>2,171,540</td>
</tr>
<tr>
<td>Daily supply per person (l)</td>
<td>96</td>
<td>186</td>
<td>186</td>
<td>220</td>
<td>290</td>
</tr>
</tbody>
</table>

Source: Data from relevant issues of the Annual Seoul City Statistical Report (Moreover, Daily water supply = Yearly production / Population supplied)

experienced dramatic improvement.

First of all, the rate of water supply (the percentage of population in the service area with water supply) increased from 50.5% as of the end of 1960 to over 90% by the end of 1970s, after recording 73.5% in 1965, 85.5% in 1970, 89.1% in 1975, and 92.3% in 1979. Remarkable improvements had been recorded also in daily supply of water per capita. The figure for daily per capita supply increased by 3.37 folds during the same period from 86 l in 1960 to 290 l in 1979, after recording 165 l in 1965, 186 l in 1970, and 220 l in 1975 (Table 6.8). In the meanwhile, continuous expansion and industrialization of the City created serious problems of water pollution as massive amounts of sewage and industrial wastewater flooded into the rivers. Consequently, water from the lower reaches of the Han River was rendered inappropriate as source water. As a result, in the 1970s, the issues of designating Source Water Protection Zones and moving the intake sources upstream were seriously considered. Moreover, lack of river-heads for cities in the metropolitan area, along with water pollution, led to the creation of the Capital Region Water Supply System.

EXPANSION OF THE WASTEWATER SERVICE

As did the water system, wastewater service also underwent significant improvement in terms of adjustments in laws and regulations, and facility expansion during the Third and Fourth Republics. Basic laws specifically pertaining to the sewer system were first enacted in August 30, 1966 under the title, Wastewater Act. And the Wastewater Service Department under the Bureau of Construction was upgraded in December 31, 1976 to the Bureau of Wastewater Service including the newly established Wastewater Administration Department and the Flood Control Department.

Repair and maintenance works

The need to repair and maintain sewage channels, the basic unit of
wastewater service, increased as the City grew, and particularly, with the more-than-two-fold expansion of the City’s administrative districts as of January 1, 1963. In the 19-year period from 1961 to 1979, a total of 116,829,978,000 won was invested for sewage channel repair and maintenance: 15,111,306,000 won in the 1960s and 101,718,672,000 won in the 1970s.

A look into the rate of conduit extension during the period shows that a total of 5,579.2km of conduits was added to the system. The rate of actual extension versus planned extension increased by 51% from 12.6% to 63.6% between 1961 (planned: 5,000km / Actual: 630.8km) and 1979 (planned: 9,756km / Actual: 6,210.0km). Moreover, as 3,054ha and 19,610ha of drainage areas were newly created in the 1961 and 1979 respectively, the rate of actual increase in drainage area versus planned increase went from 12.2% to 62.0%, resulting in a rise of 49.8% (planned increase: 25,000ha in 1961, 31,600ha in 1979) (Table 6.9).

Meanwhile there had been some changes in the types of structures used in sewerage. In the years between 1965 and 1980, the composition of globe-shaped sewage channels increased from 5.36% to 8.8%, round closed channels from 66.8% to 88.3%, open channels from 10.1% to 2.0%, and U-shaped side gutters from 17.7% to 0.9%. The figures demonstrate that more sewage channels went underground to prevent sewage from outside exposure, and that stronger materials were preferred to maintain easier, as financial situations improved and awareness for sanitation heightened. A summary is in Table 6.10.

Covering up open sewage streams

One of the things that were pursued along with repair and maintenance of sewage channels was the covering up of open sewage streams. Covering up sewage streams and using the covered space as roads had been a measure already pursued by the City since the late 1950s. The first such endeavor was the construction work to cover

<table>
<thead>
<tr>
<th>Table 6.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improvements in conduits (1961-1979)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Planned</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length (km)</td>
<td>5,000</td>
<td>5,000</td>
<td>5,000</td>
<td>5,000</td>
<td>9,756</td>
<td>4,756</td>
</tr>
<tr>
<td>Area (ha)</td>
<td>25,000</td>
<td>25,000</td>
<td>26,170</td>
<td>26,240</td>
<td>31,600</td>
<td>6,600</td>
</tr>
<tr>
<td>Existing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length (km)</td>
<td>630.8</td>
<td>830.3</td>
<td>1,462.8</td>
<td>2,517.0</td>
<td>6,210.0</td>
<td>5,579.2</td>
</tr>
<tr>
<td>Area (ha)</td>
<td>3,054</td>
<td>4,151</td>
<td>7,310</td>
<td>12,442</td>
<td>19,610</td>
<td>16,556</td>
</tr>
<tr>
<td>Coverage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length (%)</td>
<td>12.6</td>
<td>16.6</td>
<td>29.2</td>
<td>50.3</td>
<td>63.6</td>
<td>51.0</td>
</tr>
<tr>
<td>Area (%)</td>
<td>12.2</td>
<td>16.6</td>
<td>27.9</td>
<td>47.4</td>
<td>62.0</td>
<td>49.8</td>
</tr>
</tbody>
</table>

Source:
Before 1965-Seoul Metropolitan Government, Wastewater Treatment Status and Plans, 1978
After 1970 - Data from relevant issues of the Annual Seoul City Statistical Report

Sanitation in the 20th Century Seoul
Table 6.10

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data for 1966 - Seoul Metropolitan Government, White Book on Seoul City Sewage System, 1966</td>
<td>875,159</td>
<td>1,712,725</td>
<td>2,334,605</td>
<td>6,558,480</td>
<td>749.4</td>
</tr>
<tr>
<td>Data for 1971 - Seoul Metropolitan Government, Municipal Administrative Overview, p. 396, 1972</td>
<td>46,950</td>
<td>(5.4)</td>
<td>249,641</td>
<td>(14.6)</td>
<td>356,629</td>
</tr>
<tr>
<td>Data for 1975 - Seoul Metropolitan Government, Masterwater Treatment, Status and Plans, p. 42, 1975</td>
<td>584,655</td>
<td>(65.8)</td>
<td>1,062,577</td>
<td>(62.0)</td>
<td>1,575,518</td>
</tr>
<tr>
<td>Data for 1980 - Seoul Metropolitan Government, Municipal Administration, p. 387, 1981</td>
<td>88,511</td>
<td>(10.1)</td>
<td>93,565</td>
<td>(5.5)</td>
<td>151,456</td>
</tr>
<tr>
<td></td>
<td>155,002</td>
<td>(17.7)</td>
<td>306,939</td>
<td>(17.9)</td>
<td>251,002</td>
</tr>
</tbody>
</table>

Junggakcheon Stream. The City could not afford to have dirty sewage flow across the city exposed to the outside because it created serious problems for public hygiene and city beautification. Traffic congestion was also starting to be a problem. And thus, covering up sewage streams was considered to be a cure for all three problems: public hygiene, city beautification and traffic congestion. And during the Third and Fourth Republics construction works began in earnest to cover sewage streams. Such projects were mostly completed by 1976 after covering 19 streams, 19,207 meters in length (Table 6.11).

Construction of end-point sewage treatment plants

The issue of building a wastewater treatment facility in Seoul materialized in 1962. The city at the time, with a population of 3 million, was experiencing serious water pollution in the Han River. Swimming was banned in the lower streams of the Han River Bridge and deformed fish started to be reported. BOD figures were surveyed in 1963 at Cheonggyecheon Stream, Junggakcheon Stream, and intakes of Tukdo, Bogwang-dong, and Noryangjin Water Purification Plants, in preparation for the planning of Cheonggyecheon Sewage Treatment Plant and Bogwang-dong Water Purification Plant. And the results were: 241ppm at Ongsnu Bridge check point on Cheonggyecheon Stream, 124 ppm at Seongdong Bridge, 1.03ppm at Ttukseom, 2.24ppm at Bogwang-dong, and 3.38ppm at Noryangjin.22

Since the country had neither the money nor the technology to construct a large-scale sewage treatment facility, foreign credit was brought in: AID (Agency for International Development) provided the credit and D.M.J.M(Daniel Mann Johnson & Mendenhall) provided the technology. First and foremost, plans for the construction
of Cheonggyecheon Sewage Treatment Plant was drawn up in 1962, a credit request plan was submitted to the Ministry of Construction in August 1964, and a request for government-guaranteed credit was handed in to USOM in Korea. A credit payment guarantee bill passed the National Assembly in April 1966, a credit agreement worth $3.5 million was signed with the Agency for International Development in July 1967, and in September the same year, a technical service agreement was signed with D.M.J.M. The main design for the plant, completed 2 years later in 1969, was approved by USAID in Korea in November 1969, and ground was broken in June 5, 1970. Inflation, however, brought about shortages in funds, and a credit agreement of additional $2.8 million was signed in 1974, increasing the total amount of foreign loans to $6.139 million. Construction of the Cheonggyecheon Sewage Treatment Plant was completed on September 21, 1976, after 6 years and 3 months of breaking grounds. The opening of the first end-point sewage treatment facility in the country brought in a new era of sewage treatment, servicing an area of 362,670m² in Seongdong-gu, Gunja-dong

<p>| Table 6.11 |
| <strong>Covering up major sewage streams (1965 - 1976)</strong> |</p>
<table>
<thead>
<tr>
<th><strong>Seawage Stream</strong></th>
<th><strong>Construction work overview</strong></th>
<th><strong>Cost (1,000 won)</strong></th>
<th><strong>Duration of construction</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Jungak-cheon</strong></td>
<td>4-6m 2m 1,350m</td>
<td>287,143</td>
<td>1957-1966</td>
</tr>
<tr>
<td><strong>Insa-cheon</strong></td>
<td>4m 3m 247m</td>
<td>4,900</td>
<td>1962-1965</td>
</tr>
<tr>
<td><strong>Ahon-cheon</strong></td>
<td>6m 2.5m 1,007m</td>
<td>3,000</td>
<td>1962</td>
</tr>
<tr>
<td><strong>Pildong-cheon</strong></td>
<td>3.5m 1,940m</td>
<td>127,000</td>
<td>1961</td>
</tr>
<tr>
<td><strong>Gwantong-cheon</strong></td>
<td>5m 3m 470m</td>
<td>88,000</td>
<td>1961-1965</td>
</tr>
<tr>
<td><strong>Sungin-cheon</strong></td>
<td>6m 2m 180m</td>
<td>4,900</td>
<td>1963-1974</td>
</tr>
<tr>
<td><strong>Cheongggecheon</strong></td>
<td>54-60m 2.5-6m 4,976m</td>
<td>2,240,112</td>
<td>1955-1974</td>
</tr>
<tr>
<td><strong>Sadang-cheon</strong></td>
<td>6-20m 1.5-2m 2,325m</td>
<td>253,000</td>
<td>1966-1976</td>
</tr>
<tr>
<td><strong>Dashak-cheon</strong></td>
<td>6-14m 2.5-3m 675m</td>
<td>60,000</td>
<td>1966-1968</td>
</tr>
<tr>
<td><strong>Uk-cheon</strong></td>
<td>6-18m 2.5-5m 2,199m</td>
<td>338,000</td>
<td>1964-1968</td>
</tr>
<tr>
<td><strong>Anam-cheon</strong></td>
<td>3-12m 2-2.5m 780m</td>
<td>54,000</td>
<td>1966-1969</td>
</tr>
<tr>
<td><strong>Bongwon-cheon</strong></td>
<td>4-6m 2.2-5m 800m</td>
<td>43,000</td>
<td>1965-1968</td>
</tr>
<tr>
<td><strong>Sango-cheon</strong></td>
<td>2-4.5m 1-3m 1,550m</td>
<td>39,000</td>
<td>1966-1969</td>
</tr>
<tr>
<td><strong>Geumho-cheon</strong></td>
<td>5m 2m 60m</td>
<td>7,000</td>
<td>1966</td>
</tr>
<tr>
<td><strong>Pokcha-cheon</strong></td>
<td>2-3m 1-2m 400m</td>
<td>8,000</td>
<td>1967</td>
</tr>
<tr>
<td><strong>Hwivyegong-cheon</strong></td>
<td>3-4m 2-2.5m 150m</td>
<td>5,000</td>
<td>1967</td>
</tr>
<tr>
<td><strong>Jangchung-cheon</strong></td>
<td>6m 2.5m 375m</td>
<td>8,000</td>
<td>1967</td>
</tr>
<tr>
<td><strong>Myeongyun-cheon</strong></td>
<td>6m 210m</td>
<td>15,000</td>
<td>1968</td>
</tr>
<tr>
<td><strong>Jeonmong-cheon</strong></td>
<td>420m</td>
<td>20,000</td>
<td>1968</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>19,207m</td>
<td>3,604,055</td>
<td></td>
</tr>
</tbody>
</table>

Sanitation in the 20th Century Seoul
and Songjeong-dong areas. The facility had a capacity of 150,000 m³/day, which was equivalent to the ability to treat sewage generated by 1.3 million people in 5,600ha of Cheonggyecheon Stream watershed area. The facility employed activated sludge process to reduce the average BOD from 330ppm to 19ppm or lower, and the average SS from 330ppm to 30ppm or lower, before wastewater was discharged into Han River (Figure 6.6).  

The next end-point treatment facility to be set up was Jungrangcheon Sewage Treatment Facility, and construction began in December 27, 1975. A total of 10.15 billion won, $4 billion in for-
eign credit from Gradley Brandt Bank and 6.15 billion won from domestic sources, was put into the construction of the plant with a sewage processing capacity of 210,000 m³/day. The plant also employed activated sludge process to treat sewage. The difference between Cheonggyecheon and Jungrangcheon Plants was that the latter plant was able to take care of 60% of its electricity requirement with 1,400KW of electricity produced using gas generated during sewage treatment. Since the facilities were located in Gunja-dong and Songjeong-dong, close to the Cheonggyecheon Sewage Treatment Plant, management of the two plants were integrated with the launching of Jungrang End Treatment Administration Center. Construction of Jungrangcheon Plant, capable of reducing BOD from 250ppm to 20ppm or less, and SS from 300ppm to 30ppm or less, was completed in September 10, 1979 (Figure 6.7).

**Excreta treatment through wastewater system**

It appears that septic tanks or water tank toilets was first introduced around the launching of the Third Republic. According to *City Administration Overview* of 1962, among the 2,038 tons of excrements produced in the city a day, 8% was processed through water tank toilets in 1961. The *White Book on Seoul Wastewater System* published in 1966 records that among 331,133 toilets in 1964, only 18,138 toilets or 5.5% were water tank toilets. The distribution of water tank toilets increased significantly in the 1970s. The number of water tank toilets in the 1970s increased from 52,821 as of the end of 1972 to 156,041 in 1975, and to 287,192 by the end of 1979. The share of water tank toilets increased from 9.1% in 1972 to 39.8% in 1979, which is indicative of the fact that more excrements were being disposed through the sewage system. Excrements were also processed at sewage treatment facilities. For instance, at Jungrang Sewage Treatment Plant, excrements were treated preliminarily (wet oxidation process) at Dongbu Sanitation Treatment Facility, located within the complex, and then moved to the sewage treatment facility to be processed for the second time using the activated sludge method. Jungrang Plant was capable of treating 600t of excrements per day. Another achievement in the 60s and 70s during the Third and Fourth Republics was the improvement made in methodologies used in sewerage administration, one of which is the calculation of sewerage coverage. According to *Sewer System: Status and Future Plans* published in 1975, sewerage coverage, a system first introduced in 1961 and calculated based on drainage area, was 12.2% in 1961, 16.6% in 1965, and 29.2% in 1970.

As has been discussed above, water supply was significantly improved in the period leading up to 1979 thanks to efforts to expand water-works during the Third and Fourth Republics. The improvements, however, barely met the need to address immediate shortages, and were not sufficient to keep in line with an economy that was growing at a tremendous speed. Quantitative facility expansion, therefore, continued through the Fifth Republic into the 1980s. With the advent of the 1990s, shortages in water production were almost overcome, and thus, stable supply of water could be secured even during hours of highest demand. But the period was also noted for serious water pollution due to increasing industrialization and urbanization of the City of Seoul. Finding clean source of drinking water became one of the major issues in water supply and massive expansion works on sewage treatment facilities were carried out to prevent polluting of the rivers and the streams.

REPAIR, MAINTENANCE AND IMPROVEMENT OF THE WATER SYSTEM

Expansion of the water system

In order to meet consistent increase in demand since 1981, mid-to-long-term expansion plans were established. One of the plans, scheduled to be completed in 1988, was based on the estimation that the population of Seoul would grow to 9.72 million by the year, and was designed to secure a production capacity of 4.97 million m³/day to provide 9.41 million citizens or 96.9% of the estimated population with 528ℓ per capita per day. The main projects of the plan included the completion of the second phase work of Gwangam Water Purification Plant, whose first phase construction had been completed in 1979, expansion of Gueui Purification Plant, and construction of Amsa Purification Plant. As 1988 approached, a second mid-to-long-term plan with scheduled completion in 1992 was established. The plan, based on an estimated population of 10,665,000 for the
City in 1992, was designed to secure a capacity of 5.72 million m³/day to provide 10,642,000 people or 99.8% of the estimated population with 537ℓ of water per capita per day. After 1992, a plan was slated for completion by 1995 was set up, based on an estimated population of 11,687,000 for the year. The plan was to secure production of 6.95 million m³/day to supply 11,675,000 people or 99.9% of the estimated population with 487ℓ per capita per day. The mid-to-long-term plans were drawn up to bring production capacity up to 6.95million tons a day from 3.47million tons in 1981, pushing the rate of population with water supply to 100% level from 93.4%. A summary of the plans is provided in Tables 6.12, 6.13, and 6.14.

In line with the City’s ambitious plans, new constructions for water purification facilities continued. The first facility to be expanded in the 1980s was the Gwangam Purification Plant. The Plant underwent continuous expansion and achieved its planned capacity of 1million m³/day after the completion of the second and third phases of construction in July 1981 and 1982, adding 400,000

### Table 6.12
Indices for the first mid-to-long term water supply plan

<table>
<thead>
<tr>
<th>Year</th>
<th>Total population (10,000 people)</th>
<th>Population supplied (10,000 people)</th>
<th>Water supply rate (%)</th>
<th>Planned production increase (t/day)</th>
<th>Production capacity (t/day)</th>
<th>Daily supply per person (ℓ)</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>867</td>
<td>810</td>
<td>93.4</td>
<td>40</td>
<td>347</td>
<td>428</td>
<td></td>
</tr>
<tr>
<td>1982</td>
<td>891</td>
<td>836</td>
<td>93.8</td>
<td>20</td>
<td>367</td>
<td>438</td>
<td></td>
</tr>
<tr>
<td>1983</td>
<td>911</td>
<td>857</td>
<td>94.1</td>
<td>15</td>
<td>382</td>
<td>445</td>
<td>300,000/day production increase</td>
</tr>
<tr>
<td>1984</td>
<td>926</td>
<td>874</td>
<td>94.4</td>
<td>15</td>
<td>397</td>
<td>454</td>
<td></td>
</tr>
<tr>
<td>1985</td>
<td>939</td>
<td>891</td>
<td>94.9</td>
<td>20</td>
<td>417</td>
<td>468</td>
<td></td>
</tr>
<tr>
<td>1986</td>
<td>950</td>
<td>906</td>
<td>95.4</td>
<td>20</td>
<td>437</td>
<td>482</td>
<td>Ansa 1million t/day production increase</td>
</tr>
<tr>
<td>1987</td>
<td>961</td>
<td>926</td>
<td>96.4</td>
<td>40</td>
<td>477</td>
<td>515</td>
<td></td>
</tr>
<tr>
<td>1988</td>
<td>972</td>
<td>941</td>
<td>96.9</td>
<td>20</td>
<td>497</td>
<td>528</td>
<td></td>
</tr>
</tbody>
</table>

### Table 6.13
Basic indices for the second mid-to-long term water supply plan

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident population</td>
<td>1,000 persons</td>
<td>10,286</td>
<td>10,304</td>
<td>10,438</td>
<td>10,558</td>
<td>10,663</td>
</tr>
<tr>
<td>Population supplied</td>
<td>1,000 persons</td>
<td>10,169</td>
<td>10,201</td>
<td>10,354</td>
<td>10,505</td>
<td>10,642</td>
</tr>
<tr>
<td>Water supply rate</td>
<td>%</td>
<td>89.8</td>
<td>99.0</td>
<td>99.2</td>
<td>99.5</td>
<td>99.8</td>
</tr>
<tr>
<td>Facility production capacity</td>
<td>1,000 persons</td>
<td>497</td>
<td>497</td>
<td>522</td>
<td>547</td>
<td>572</td>
</tr>
<tr>
<td>Max. daily water supply</td>
<td>1,000 persons</td>
<td>497</td>
<td>487</td>
<td>504</td>
<td>521</td>
<td>537</td>
</tr>
<tr>
<td>Daily water supply per person</td>
<td>ℓ</td>
<td>422</td>
<td>414</td>
<td>428</td>
<td>443</td>
<td>456</td>
</tr>
</tbody>
</table>
Table 6.14
Basic indices for the mid-to-long term water supply plan

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident population</td>
<td>1,000 persons</td>
<td>10,804</td>
<td>11,110</td>
<td>11,303</td>
<td>11,495</td>
<td>11,667</td>
</tr>
<tr>
<td>Population supplied</td>
<td>1,000 persons</td>
<td>10,808</td>
<td>11,089</td>
<td>11,292</td>
<td>11,484</td>
<td>11,675</td>
</tr>
<tr>
<td>Water supply rate</td>
<td>%</td>
<td>99.9</td>
<td>99.9</td>
<td>99.9</td>
<td>99.9</td>
<td>99.9</td>
</tr>
<tr>
<td>Facility production</td>
<td>1,000 persons</td>
<td>565</td>
<td>615</td>
<td>615</td>
<td>645</td>
<td>695</td>
</tr>
<tr>
<td>Max. daily water supply</td>
<td>1,000 persons</td>
<td>502</td>
<td>515</td>
<td>542</td>
<td>557</td>
<td>567</td>
</tr>
<tr>
<td>Daily water supply per person</td>
<td>$</td>
<td>453</td>
<td>482</td>
<td>470</td>
<td>479</td>
<td>487</td>
</tr>
</tbody>
</table>

m³/day and 200,000m³/day in capacity respectively. The expansions took 49.5 billion won, including funds from domestic and foreign sources. In 1986, Amsa Purification Plant was newly constructed. According to the original plan, a total of 69.8 billion won would be invested in a 5 year period from 1984 to 1988 to build a purification plant in Amsa-dong with production capacity of 1 million m³/day. The plant, to be located in an area of 212,742m² in Amsa-dong, Gangdong-gu, was designed to meet urgent demands created by the development of new residential areas in Godeok-dong, Garak-dong, Gaepo-dong, Mok-dong and Sanggye-dong. The first phase of construction was completed in 1986, with a capacity of 250,000m³/day, and follow up constructions continued through 1989, each year adding 250,000m³/day, attaining the planned capacity of 1 million m³/day in the process. After full implementation of the original plan, an expansion work was carried out from November 1990 to December 1991 in order to make up for the temporary cut in production in Triukdo Purification Plant during facility improvement and expansion works, and to address increased demand for water created by large residential complexes built in Gangbuk region. An additional 25 billion won was spent to increase capacity by 320,000m³/day, increasing the total capacity of Amsa-dong Plant to 1.32 million m³/day as of the end of 1991. Facility expansion in Amsa Plant, however, did not stop here. Another expansion was carried out from July 1993 to December 1995, increasing capacity by 300,000m³/day to 1.65 million m³/day. Water from Han River bed right in front of Amsa Plant was used as source water, and 1.44Km of 1,650mm- and 2,200mm-diameter cast iron aqueducts and water conduits were installed. Construction of Gangbuk Water Purification Plant was also pursued around the same period. A plan was drawn up to build a water purification plant at 432 Sampae-dong, Namyangju City, in Gyeonggi Province, equipped with an intake facility of 2.1 million m³/day, a water purification facility of 2 million m³/day, 50.4Km of 2,400-2,600mm aqueducts and water pipes, and a discharge treatment facility. The plant would take 10 years to complete from 1991 to 2001 and cost 338.2 billion won. Under the plan, phase one con-
struction was completed in 1998 with a capacity of 500,000m³/day, and phase two in 1999 with another 500,000m³/day, bringing total capacity to 1 million m³/day as of the end of the same year. But in 2000, further implementation of the plan was suspended because there was no need to continue expanding in the face of rising accounted water rate. The policy was to suspend expansion project until 2006 at which time the necessity would be determined.

Along with construction of new water purification plants, continuous efforts were made to expand existing facilities. Gueui Purification Plant, opened in 1939, had underwent numerous facility improvement and expansion works and carried a capacity of 830,000m³/day as of the end of 1983. In 1982, a project to establish a forth purification facility in Gueui Plant was initiated to be completed in 1984, in order to address water demands in Gangbuk regions. A total of 24.25 billion won was spent on the project to increase capacity by 300,000m³/day to 1.13 million m³/day.

Tukdo Purification Plant, first such facility to be opened in Seoul (1908), also underwent facility improvement and expansion, and had a capacity of 500,000m³/day as of the end of 1987. An expansion project was launched in 1988 to modernize the aging facility and to meet addition demands being created by development of large-scale residential communities in Jungsye and Sanggye areas. The project, which was estimated to cost 48.8 billion won, was designed to increase capacity from 500,000m³/day to 1 million m³/day by 1992, and lay 23.5km of pipes to carry water from intake sources upstream and 4.9km of pipes to intake water from near the facility. After capacity increased by 250,000m³/day with the conclusion of phase one construction in 1989, it was reduced by 250,000m³/day in 1991 with the removal of aging facilities in the plant. Later in 1992, with the completion of the project, capacity was increased by 500,000m³/day, turning Tukdo Plant into a sizable modern facility with a capacity of 1 million m³/day. Yeongdeungpo Water Purification Plant was also expanded. The plant had undergone four phases of construction from 1971 to 1975, and carried a capacity of 240,000m³/day as of the end of 1990. In the early 1990's new demands for water were created in Gangseo-gu District due to large residential complex developments in Gayang-dong and Banghwa-dong. According to the plan to expand facilities at Yeongdeungpo Plant, a total of 45.8 billion won was appropriated to increase capacity to 600,000m³/day, including the existing 240,000m³/day, and lay 200m of 1,800mm pipes to convey water from nearby intake sources and 8,200m of 200-500mm pipes to channel water from sources upstream. Completion of the expansion work, originally slated for August 1992, 2 years and 8 months after breaking grounds in December 1989, was advanced to July 1991.
### Table 6.15
Development of the water supply system (1960 - 1999)

Source:
- Seoul Metropolitan Government, Municipal Administration '90; '92

<table>
<thead>
<tr>
<th>Purification Plant</th>
<th>Cause of change</th>
<th>Change in capacity</th>
<th>Accumulated capacity</th>
<th>Source water</th>
<th>Method of intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Until 1979</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1980</td>
<td>Gwangam</td>
<td>Phase 2 construction completion</td>
<td>400,000</td>
<td>3,470,000</td>
<td>Paldang Reservoir</td>
</tr>
<tr>
<td>1982</td>
<td>Gwangam</td>
<td>Phase 3 construction completion</td>
<td>200,000</td>
<td>3,670,000</td>
<td>Paldang Reservoir</td>
</tr>
<tr>
<td>1984</td>
<td>Gueui</td>
<td>Facility expansion (Plant 4)</td>
<td>300,000</td>
<td>3,970,000</td>
<td>River-bed</td>
</tr>
<tr>
<td>1986</td>
<td>Amsa</td>
<td>Newly opened</td>
<td>250,000</td>
<td>4,220,000</td>
<td>Han River river-bed</td>
</tr>
<tr>
<td>1987</td>
<td>Amsa</td>
<td>Phase 2 construction completion</td>
<td>250,000</td>
<td>4,470,000</td>
<td>Han River river-bed</td>
</tr>
<tr>
<td>1988</td>
<td>Amsa</td>
<td>Phase 3 construction completion</td>
<td>250,000</td>
<td>4,720,000</td>
<td>Han River river-bed</td>
</tr>
<tr>
<td>1989</td>
<td>Amsa</td>
<td>Phase 4 construction completion</td>
<td>250,000</td>
<td>4,970,000</td>
<td>Han River river-bed</td>
</tr>
<tr>
<td>1990.12.29</td>
<td>Tukdo</td>
<td>Facility improvement (final)</td>
<td>250,000</td>
<td>5,220,000</td>
<td>River-bed</td>
</tr>
<tr>
<td>1991.7.5</td>
<td>Yeongdeungpo</td>
<td>Facility improvement</td>
<td>380,000</td>
<td>5,580,000</td>
<td>Paldang Reservoir</td>
</tr>
<tr>
<td>1991</td>
<td>Amsa</td>
<td>Facility expansion</td>
<td>320,000</td>
<td>5,900,000</td>
<td>River-bed</td>
</tr>
<tr>
<td>1991.12.28</td>
<td>Tukdo</td>
<td>Demolished</td>
<td>-250,000</td>
<td>5,650,000</td>
<td></td>
</tr>
<tr>
<td>1992.9.5</td>
<td>Bokwang</td>
<td>Equipment improve- mnet</td>
<td>20,000</td>
<td>5,670,000</td>
<td></td>
</tr>
<tr>
<td>1992</td>
<td>Tukdo</td>
<td>Facility improvement</td>
<td>500,000</td>
<td>6,170,000</td>
<td>Han River river-bed</td>
</tr>
<tr>
<td>1992.12.31</td>
<td>Sinwol</td>
<td></td>
<td>20,000</td>
<td>6,190,000</td>
<td>Paldang Reservoir</td>
</tr>
<tr>
<td>1996</td>
<td>Gangbuk</td>
<td>Newly opened (Phase 1)</td>
<td>500,000</td>
<td>6,690,000</td>
<td>Han River river-bed</td>
</tr>
<tr>
<td>1998</td>
<td>Bokwang</td>
<td>Reduction of estimation</td>
<td>-20,000</td>
<td>6,670,000</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>Sinwol</td>
<td>Reduction of estimation</td>
<td>-20,000</td>
<td>6,650,000</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>Noryangjin</td>
<td>Partly closed</td>
<td>-150,000</td>
<td>6,500,000</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>Amsa</td>
<td>Facility expansion</td>
<td>300,000</td>
<td>6,800,000</td>
<td>Han River river-bed</td>
</tr>
<tr>
<td>1999</td>
<td>Gangbuk</td>
<td>Newly opened (Phase 2)</td>
<td>500,000</td>
<td>7,300,000</td>
<td>Han River river-bed</td>
</tr>
</tbody>
</table>

During the period, there were also some improvements in equipment used in water purification plants. The fact that only two cases of equipment improvements took place since the 1980s is an indication that increasing production capacity was no longer an imperative. The two cases of equipment improvements were in Bogwang and Sinwol Water Purification Plants. Details of the work...
done in Bogwang Plant in 1992 is not available, but it is known that capacity increased by 20,000m³/day as a consequence. Equipment improvement in Sinwol Plant, also in 1992, resulted in a capacity increase of 20,000m³/day, although again details are not available. A summary of capacity increase in water production from 1980 to 1999 is provided in Table 6.15.

**Water pollution and countermeasures**

As water pollution became a serious issue in the 1980s, the question was quality of the source water. The City of Seoul was able to alleviate deterioration of water quality in Han River by building Cheonggyecheon and Jungangcheon Sewage Treatment Plants capable of processing 36,000m³/day. But that was by no means sufficient. Water pollution continued to aggravate as is shown by BOD figures surveyed from Paldang downward at major check points between 1980 and 1998: figures for Paldang had gone from 1.1ppm in 1980 to 1.5ppm in 1998, and those for Jamsil had also increased from 1.5ppm to 2.2ppm since 1990, while numbers for Noryangjin have stabilized or improved slightly after going from 3.9ppm in 1980 to 4.7ppm in 1985 (Table 6.16).

As the quality of Han River deteriorated, the first countermeasure to be brought up was to take water from the upper reaches of the river. With the phase one opening of the Capital Region Water Supply System in July 1979, water purification facilities at lower reaches of the river were also able to get source water from Paldang. Water allocated to Seoul increased from 400,000m³/day in 1979 to 1,447,000m³/day in 1982 and again to 1,747,000m³/day in 1984. Distribution by plant is in Table 6.17.

But since Seoul could not meet demand just by resorting to water from Paldang Reservoir, first, the issue of moving the source of intake further upstream was reviewed. And after the measure proved insufficient, strict regulatory measures were introduced to prevent water pollution in the upper Han River. The first measure sought, however, was to move the intake source upstream. And the first ones to be transferred upstream were those for Tsukdo and Bogwang.

| Water pollution in the Han River (BOO) (1980 - 1998) |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Data for 1980 - Administration |                           |      |      |      |      |      |
| Environment, Report on Water  |                           |      |      |      |      |      |
| Pollution.                     |                           |      |      |      |      |      |
| Data for after 1985 - Ministry |                           |      |      |      |      |      |
| Environment, Water Quality of  |                           |      |      |      |      |      |
| Major Spots in the four Main   |                           |      |      |      |      |      |
| Rivers (BOO)                   |                           |      |      |      |      |      |
| Paldang                        | 1.0                       | 1.1  | 1.4  | 1.0  | 1.3  | 1.5  |
| Noryangjin                     | 3.0                       | 3.9  | 4.7  | 3.4  | 3.8  | 3.6  |
| Gayang                         | 6.0                       | 11.7 | 11.4 | 4.7  | 4.4  | 4.6  |
Plants. Both purification plants used water from the Han River riverbed right in front of the facilities as intake source, but the quality of the water was second grade. Moreover, riverbeds had been evened out thanks to Comprehensive Han River Development Program, making it even more feasible to move intake source to Han River along Gangbyeon Subway Station, north to Jamsil Bridge underpass beam. The project to build a joint intake facility took 18 billion won to implement. Construction went on from November 1984 to March 1986 to create an intake capacity of 800,000 m³/day, of which 500,000 m³/day went to Tukdo Plant and 300,000 m³/day to Bogwang Plant. 13.3 km of water pipes were laid to channel water from the new intake facility to the purification plants. After the construction water quality in BOD terms improved from 5.5 ppm to 1.8 ppm.

Noryangjin and other water purification plants on the lower reaches of the Han River used water from Paldang Reservoir, which has been the source of water for the metropolitan area since 1979. Since water from Paldang was not enough the plants also took riverbed water from the Han River in front of their respective plants and diluted it for purification. As it was impossible to have more water allocated from the Metropolitan Water Supply System and as cost of source water was becoming a burden, the City decided to move the intake facility to Pungnap-dong. A total of 44.1 billion won was invested to build an intake facility of 700,000 m³/day, of which 110,000 m³/day would go to Noryangjin, 380,000 m³/day to Yeongdeungpo, and 210,000 m³/day to Seonyu. Construction of the facility, which also included the installation of 23.8 km of 2,400 mm and 1,800 mm iron cast water pipes, began in August 1990, and was completed in April 1992.

In the meanwhile citizens began to think that water should be boiled before drinking because it was not safe to drink right out of the tap, and many people resorted to bottled water or water purifiers. In order to regain public trust, the water authority heightened their efforts to improve water quality by taking measures such as installing
automatic measurement equipment and chemical injection equipment. With the launching of local autonomies in the 1990s, conflicts involving administrative restrictions placed on residents around upstream Paldang started to surface. In order to mediate differences and to effectively protect and manage water source, a consultative body, titled Han River Management Council, comprised of the Ministry of Environment, Gyeonggi Province, North Chungcheong Province and Gangwon Province was established in the 1990s. In addition a new system was introduced to have the residents of the autonomous bodies downstream pay for the installation of basic environment-related facilities.

Development-oriented policies taken up by local autonomies since their launching in 1991 very well demonstrated that it was impossible to protect the Han River as the City’s source of water unless there was cooperation from the local autonomous bodies and the people. Protecting the Han River versus respecting the rights of residents along the upper streams of the River became a serious source of contention.

Since the consultative body had limitations in coordinating conflicting interests, a new line of policy measures entitled ‘Comprehensive Measures for Water Quality Improvement in the Han River’ were introduced in November 1998, involving the Office for Government Policy Coordination under the Office of the Prime Minister, the Ministry of Environment, City of Seoul and other related ministries and autonomous governments. In September 30, 1998, an administrative consultation meeting of the metropolitan area was held, and agreed to launch the Han River Management Council. Subsequently in February 8, 1999, ‘Law on the Improvement of Han River Water Quality and Support for Residents’ was enacted and promulgated. According to the law, Han River Management Council shall: 1) be a juristic body comprised of the Minister of Environment, Mayors of Seoul and Incheon, Governors of Gyeonggi Do, Gangwon Do, and Chungcheongbuk Do, President of Korea Water Resources Corporation, and President of Korea Electric Power Corporation; 2) establish a comprehensive plan to reduce pollutants in order to improve Han River water system; 3) determine the rates for Water Improvement Charge; 4) coordinate the allocation of funds to support residents in Han River Water System Protection Zone; and 5) mediate conflicts between or among regions upstream and downstream the River system.

Management of the Jamsil water system below Paldang became an urgent issue to protect Jamsil water supply source, which provided 75% of Seoul’s water supply. To address the issue, Jamsil Water System Management Council was set up in September 27, 1999 to consult and decide on the issues pertaining to the water system, such
as installation and management of basic environmental facilities, regulation on pollution causing activities, pollution prevention, joint flood control measures, any pending inter-regional or inter-water system related issues that could influence water quality and equitable distribution of investment funds. Member of the Council included Director for Environment Management of the Seoul City Government, Vice Mayors of Guri and Namyangju, and Vice Executive officer of Pocheon County.

Along with the establishment of a region-wide body, various projects were launched to protect the water supply source. The Han River Environment Monitoring Board was established to keep vigil on pollution, and the Automatic Water Quality Measurement Network was set up at 13 check points to constantly monitor the 15 factors on the check list. Standard for drinking water was also strengthened as more factors were included for monitoring. Factors added to the list between 1990 and 1997 are summarized in Table 6.18.

**Status of water supply in the late 20th century**

Since the City was able to secure sufficient capacity for water production in the latter part of the 1990s, it began to close down parts of the aging purification facilities. One example was Noryangjin Purification Plant, which was the second oldest plant in the City. The Plant, whose first facility opened in August 1910, and second in March 1923, was in need of repair. But phase one completion of Gangbuk Purification Plant in 1998 with a capacity of 500,000m³/day rendered repair works unnecessary, and No. 1 and No. 2 facilities of the Noryangjin Plant were closed down, with No. 3 facility also scheduled for shut down at the point a No. 3 facility at Gangbuk Plant was opened. Measures to normalize water production were also taken during the period. As shown in Table 6.15, the focus had been on facility expansion and capacity maximization up to 1992, whereas from 1998 onward, focus shifted to normalizing production at overworked water purification facilities, using spare capacity made available after the completion of Gangbuk Plant. As a

<table>
<thead>
<tr>
<th>Date</th>
<th>Newly included elements for control</th>
<th>Number of elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990.01.11</td>
<td>THMs</td>
<td>28</td>
</tr>
<tr>
<td>1991.07.04</td>
<td>Diazinon, Parathion, Malathion, Selenium</td>
<td>33</td>
</tr>
<tr>
<td>1992.12.15</td>
<td>Carbaryl, 1,1,1-trichloroethane, TCE, PCE</td>
<td>37</td>
</tr>
<tr>
<td>1994.04.23</td>
<td>Aluminium</td>
<td>38</td>
</tr>
<tr>
<td>1994.07.01</td>
<td>Dichloroethane, Benzene, Toluene, thylbenzene, Xylene</td>
<td>43</td>
</tr>
<tr>
<td>1997.01.01</td>
<td>Carbon tetrachloride, 1,1-Dichloroethylene</td>
<td>45</td>
</tr>
</tbody>
</table>

### Table 6.19
Water treatment facilities as of the end of 2000

<table>
<thead>
<tr>
<th>Facility capacity</th>
<th>Total</th>
<th>Gwan-gam</th>
<th>Gueui</th>
<th>Tukdo</th>
<th>Bogwang</th>
<th>Seonyu</th>
<th>Noyangh</th>
<th>Young-daeungno</th>
<th>Sinwol</th>
<th>Amsa</th>
<th>Gang-buk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>730</td>
<td>100</td>
<td>113</td>
<td>100</td>
<td>30</td>
<td>40</td>
<td>15</td>
<td>60</td>
<td>10</td>
<td>162</td>
<td>100</td>
</tr>
</tbody>
</table>

|-----------------------|------------|------|------------|-----------|------|------------|------|------|------|------------|------------|

Result, production at Bogwang Purification Plant was cut from 320,000 m$^3$/day to 300,000 m$^3$/day, and Sinwol Plant from 120,000 m$^3$/day to 100,000 m$^3$/day. Capacity by purification plant as of the end of 1999 is summarized in Table 6.19.

Water supply in Seoul was improved significantly by the latter half of the 1990s thanks to the construction of a number of large purification plants in the 1980s. Water supply rate was increased from 92.3% as of the end of 1979 to 99.9% as of the end of 1998. Daily water supply per capita went up from 316ℓ as of the end of 1979, to 444ℓ as of the end of 1990, and to 457ℓ as of the end of 1999, reaching levels attained by advanced countries. Changes by year are shown in Table 6.20.

One of the unusual facts of the 1980-1998 period is that in 1998 daily water consumption was smaller compared to that of 1990, even when capacity was actually bigger. Normally water consumption is thought to increase as capacity increases, but not always. Records show that daily water consumption per capita dropped from 457ℓ in 1990 to 444ℓ in 1998. But this does not mean that the actual amount of water used had dropped. Since 1990 daily consumption of water increased from 4,841 million m$^3$/day to 5,137 million m$^3$/day until it dropped to 4,58 million m$^3$/day in 1998, which is 94.7% of the figure for 1990. But the actual use of water increased from 2.755 million m$^3$/day in 1990 to 2.971 million m$^3$/day in 1998, which is 107.8% of the figure for 1990. The 13.1% difference between 107.8% and 94.7% is the result of increase in the rate of accounted water. This is well proven by the fact that daily use of water per capita during the same period increased by 10.8% from

### Table 6.20
Improvement in water supply (1979 - 1998)


<table>
<thead>
<tr>
<th>Unit</th>
<th>Total population</th>
<th>Population supplied</th>
<th>Water supply rate</th>
<th>Facility capacity</th>
<th>Daily water supply</th>
<th>Daily supply per person</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,000 persons</td>
<td>1,000 persons</td>
<td>%</td>
<td>1,000m$^3$/day</td>
<td>1,000m$^3$/day</td>
<td>ℓ</td>
</tr>
<tr>
<td>1,000 persons</td>
<td>8,110</td>
<td>9,646</td>
<td>10,627</td>
<td>10,586</td>
<td>10,321</td>
<td>127.3</td>
</tr>
<tr>
<td>1,000 persons</td>
<td>7,490</td>
<td>9,404</td>
<td>10,585</td>
<td>10,584</td>
<td>10,319</td>
<td>137.8</td>
</tr>
<tr>
<td>%</td>
<td>92.3</td>
<td>98</td>
<td>99.6</td>
<td>99.9</td>
<td>99.9</td>
<td>99.9</td>
</tr>
<tr>
<td>1,000m$^3$/day</td>
<td>3,070</td>
<td>3,970</td>
<td>5,220</td>
<td>6,190</td>
<td>6,800</td>
<td>221.5</td>
</tr>
<tr>
<td>1,000m$^3$/day</td>
<td>2,367.6</td>
<td>3,394.7</td>
<td>4,841.5</td>
<td>4,958.9</td>
<td>4,585.8</td>
<td>190.7</td>
</tr>
<tr>
<td>ℓ</td>
<td>316</td>
<td>361</td>
<td>457</td>
<td>469</td>
<td>444</td>
<td>140.5</td>
</tr>
</tbody>
</table>

Sanitation in the 20th Century Seoul
Table 6.21
Water supply, consumption and accounted water rate in the 1990s

<table>
<thead>
<tr>
<th>Year</th>
<th>Daily water supply (1,000m³/day)</th>
<th>Daily water consumption (1,000m³/day)</th>
<th>Population supplied (Persons)</th>
<th>Daily supply per person (l)</th>
<th>Daily consumption per person (l)</th>
<th>Accounted water rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990(A)</td>
<td>4,641</td>
<td>2,755</td>
<td>10,612,677</td>
<td>457</td>
<td>260</td>
<td>56.9</td>
</tr>
<tr>
<td>1991</td>
<td>4,529</td>
<td>2,668</td>
<td>10,904,527</td>
<td>452</td>
<td>263</td>
<td>58.2</td>
</tr>
<tr>
<td>1992</td>
<td>5,012</td>
<td>2,983</td>
<td>10,969,862</td>
<td>457</td>
<td>272</td>
<td>59.3</td>
</tr>
<tr>
<td>1993</td>
<td>5,034</td>
<td>3,099</td>
<td>10,819,976</td>
<td>461</td>
<td>264</td>
<td>61.6</td>
</tr>
<tr>
<td>1994</td>
<td>5,137</td>
<td>3,207</td>
<td>10,791,862</td>
<td>476</td>
<td>297</td>
<td>62.4</td>
</tr>
<tr>
<td>1995</td>
<td>4,859</td>
<td>3,247</td>
<td>10,584,302</td>
<td>469</td>
<td>307</td>
<td>65.5</td>
</tr>
<tr>
<td>1996</td>
<td>4,891</td>
<td>3,237</td>
<td>10,459,075</td>
<td>478</td>
<td>309</td>
<td>64.7</td>
</tr>
<tr>
<td>1997</td>
<td>4,892</td>
<td>3,230</td>
<td>10,385,901</td>
<td>471</td>
<td>311</td>
<td>65.0</td>
</tr>
<tr>
<td>1998(B)</td>
<td>4,586</td>
<td>2,971</td>
<td>10,319,135</td>
<td>444</td>
<td>288</td>
<td>64.8</td>
</tr>
<tr>
<td>A/B</td>
<td>94.7</td>
<td>107.8</td>
<td>99.4</td>
<td>94.3</td>
<td>110.8</td>
<td>113.7</td>
</tr>
</tbody>
</table>

260l to 288l. In fact the increase in 1998 came amid considerable restraint exercised by major users of water, in the wake of the financial crisis.

For reference, accounted water rate went up from 56.9% to 64.8% from 1990 to 1998. And this was the reason behind the drop in daily water consumption per capita even in face of the increase in actual use. Now the City is at a point where it should make modifications to some of the methodologies it employed in managing water. For example, rather than dividing annual production by 365 to come up with daily water supply, daily consumption (adjusted amount) per capita should be used as the alternative administrative index. Related statistical analysis is in Table 6.21.

Table 6.22
Plans for the construction of new waste water conduits (1983 - 2001)

<table>
<thead>
<tr>
<th>Conduits</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing conduits</td>
<td>7,059,650</td>
</tr>
<tr>
<td>Conduits planned for construction</td>
<td>9,582,188</td>
</tr>
<tr>
<td>Total</td>
<td>1,667,249</td>
</tr>
<tr>
<td>Already completed</td>
<td>339,660</td>
</tr>
<tr>
<td>Planned construction of new conduits</td>
<td>1,186,440</td>
</tr>
<tr>
<td>Plan confirmed</td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td>1,105,020</td>
</tr>
<tr>
<td>Commercial</td>
<td>81,420</td>
</tr>
<tr>
<td>Total</td>
<td>441,149</td>
</tr>
<tr>
<td>Possible implementation</td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td>391,710</td>
</tr>
<tr>
<td>Commercial</td>
<td>49,439</td>
</tr>
<tr>
<td>Total</td>
<td>555,289</td>
</tr>
<tr>
<td>Planned construction of new waste water conduits</td>
<td></td>
</tr>
<tr>
<td>Already completed</td>
<td>10,834</td>
</tr>
<tr>
<td>Plan confirmed/ possible implementation</td>
<td>544,455</td>
</tr>
</tbody>
</table>

(Unit: m)

Sources:
IMPROVEMENT OF THE SEWER SYSTEM

Sewer System in Seoul had been greatly expanded between 1980 and 1990 to meet increasing demand for sewage treatment and to address polluting of the Han River. Conservation of Han River entered a new era in the latter half of the 1970s with the construction of Cheonggye and Jungrang Sewage Treatment Facilities. But their capacity to process was far behind demand and required continuous efforts for improvement.

Revision of the law on sewer system and the establishment of a master plan for sewage system improvement

Related law and regulations were revised as the environment deteriorated and people became more aware of the importance of sewage treatment. The Law on Sewer System, enacted in 1966 and revised for the first time in 1973, underwent a major revision in 1982 to accommodate the demands of a new era of sewage treatment. Under the revised law, mayors and governors of autonomous bodies in cities with Master Plans for Municipal Development were obligated to set up their own Master Plans for Sewer System Improvement; and local authorites, according to presidential decree, were entitled to charge citizens for using the public sewer system. With the revision of the law, the City of Seoul enacted the Ordinance on the Use of Sewer System in December 31, 1983, and started levying usage charges beginning October 1, 1983, which has become the main source of budget for the sewer system, as annual revenue from the sewerage charges increased from 49.5 billion won in 1985 to 132.2 billion won in 1998. The law was revised once again in 1994. According to the revision, a new master plan should be established for sewer system improvement every 20 years and the plan should be revised and supplemented every 5 years after feasibility review.

As it became mandatory for local authorites to establish master plans for sewer system improvement with the revision of the law in 1982, Seoul came up with its Master Plan in 1983. The Master Plan was different from plans of the 1970s in that it was legally binding, one of the very important changes of the 1980s. The City’s 1983 Master Plan for Sewer System Improvement called for wholesale extension of sewers, based on the estimation that the population would grow to 10,417 million by 2001. The plan was to increase the total length of conduits to 9,582,188m by 2001, by adding 1,967,249m of combined sewer, and 555,289m of sanitary sewer to
the 7,059,650m of sewer already in place. Meanwhile, the plan would also have the existing 612,300m of round culverts and 117,477m of box culverts repaired.

As for sewage treatment facilities, capacity for sewage processing would be increased to 4,551,900m³/day by 2001, by creating an additional 3,191,900m³/day capacity on top of the existing 360,000m³/day, based on the per capita per day sewage estimate of 235ℓ (Table 6.24). After reviewing the benefits of regional and area-wide approaches to building treatment facilities, the City decided to divide the entire drainage area into four zones, namely, Jungrang, Tancheon, Gayang and Nanji, to build four sewage treatment facilities (Figure 6.8).

The 1983 Master Plan for Sewer System Improvement, after the flooding in 1988, had to be revised to accommodate changes made to run-off coefficient and rainfall intensity probability. After reviewing the changes, the Plan was revised in 1992. The 1992 version,
however, was again revised in 1996 to accommodate cut in estimated population and the requirement to rearrange the sewage treatment zones. A summary of the revisions is shown in Table 6.25.

**End-point sewage treatment facilities**

Availability of end-point sewage treatment plants became crucial as the city's sewage further increased and the environment deteriorated. The City drew up the first phase plan slated for completion in 1986, 5 years after the project's initiation in 1982, with the 1986 Asian Games and the 1988 Olympics in mind. Knowing the two international events would draw the world's attention to Seoul, the City could not afford to host the games with the smelly sewage flowing into mainstream Han River through Tancheon Stream near the Sports Complex. The plan, incorporated as part of the Comprehensive Han River Development Program, was designed to increase processing capacity from 360,000 m³/day in 1981 to 2.60
<table>
<thead>
<tr>
<th>Year the plan is based on</th>
<th>Existing plan (1992)</th>
<th>New plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target year</td>
<td>1991</td>
<td>1996</td>
</tr>
<tr>
<td></td>
<td>2001</td>
<td>2011</td>
</tr>
<tr>
<td>Treatment district</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jungnang Dis.</td>
<td>Seoul</td>
<td>Seoul</td>
</tr>
<tr>
<td>Tancheon Dis.</td>
<td>Seoul</td>
<td>Seoul, Hanam, Gwacheon, Juam-dong</td>
</tr>
<tr>
<td>Geumgang Dis.</td>
<td>Seoul</td>
<td>Seoul, Gwangmyeong</td>
</tr>
<tr>
<td>Nanji Dis.</td>
<td>Seoul, Hengdong-cheon basin of Goyang City</td>
<td>Seoul, Changneung-cheon and Hangdong-cheon basins in Goyang</td>
</tr>
<tr>
<td>Changneung Dis.</td>
<td>Commissioned to Changneung-cheon Facility in Goyang</td>
<td>To be treated in Seoul City</td>
</tr>
<tr>
<td>Commissioned district</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oryu Drainage III, Doksan drainage</td>
<td>Commissioned to a separate treatment facility in Gwangmyeong City</td>
<td>Oryu Drainage III commissioned to Gwangmyeong City/ Doksan Drainage to Seoul City</td>
</tr>
</tbody>
</table>

| Planned population       |                     |          |
| Total population of Seoul| 11,062,000 persons | 10,470,000 persons |
| Population covered by Seoul's sewage treatment facilities | Seoul: 10,020,000 persons | Seoul: 10,467,000 persons |
|                          | Influx from outside: 397,000 persons | Influx from outside: 547,000 persons |
|                          | Total: 11,317,000 persons | Total: 11,014,000 persons |
| Population covered by commissioned treatment | Changneung drainage area: 39,650 persons | Oryu Drainage III tributary: 2,800 persons |
|                          | Oryu Drainage III tributary: 4,500 persons | Doksan drainage: 6,000 persons |

<p>| Target year               |                     |          |
| Total population of Seoul | 12,477,000 persons | 12,000,000 persons |
| Population covered by Seoul's sewage treatment facilities | Seoul: 12,425,000 persons | Seoul: 11,997,000 persons |
|                          | Influx from outside: 21,000 persons | Influx from outside: 430,000 persons |
|                          | Total: 12,477,000 persons | Total: 12,427,000 persons |
| Population covered by commissioned treatment | Changneung drainage area: 40,800 persons | Oryu Drainage III tributary: 3,000 persons |
|                          | Oryu Drainage III tributary: 4,900 persons | Doksan drainage: 6,000 persons |</p>
<table>
<thead>
<tr>
<th>Planned maximum daily sewage</th>
<th>Existing plan (1992)</th>
<th>New plan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year the plan is based on</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seoul</td>
<td>5,195,700 m³/day</td>
<td>5,195,700 m³/day</td>
</tr>
<tr>
<td>Influx from outside</td>
<td>130,200 m³/day</td>
<td>130,200 m³/day</td>
</tr>
<tr>
<td>Total</td>
<td>5,325,900 m³/day</td>
<td>5,325,900 m³/day</td>
</tr>
<tr>
<td><strong>Sewage treated through commission</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Changneung-cheon Facility in Goyang</td>
<td>14,700 m³/day</td>
<td>Gwangmyeong treatment facility: 4,500 m³/day</td>
</tr>
<tr>
<td>Gwangmyeong sewage treatment facility: 4,500 m³/day</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seoul</td>
<td>7,024,700 m³/day</td>
<td>7,3424,700 m³/day</td>
</tr>
<tr>
<td>Influx from outside</td>
<td>8,200 m³/day</td>
<td>202,000 m³/day</td>
</tr>
<tr>
<td>Total</td>
<td>7,032,900 m³/day</td>
<td>7,546,000 m³/day</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Target year</th>
<th>Seoul: 5,195,700 m³/day</th>
<th>5,195,700 m³/day</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sewage flowing into facilities in Seoul</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Year the plan is based on</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>451</td>
<td>581</td>
</tr>
<tr>
<td>Jungnang</td>
<td>145</td>
<td>171</td>
</tr>
<tr>
<td>Tancheon</td>
<td>60</td>
<td>110</td>
</tr>
<tr>
<td>Gayang</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>Nanji</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>694</td>
<td>755.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Plan for wastewater treatment</th>
<th>Seoul: 5,195,700 m³/day</th>
<th>5,195,700 m³/day</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Target year</strong></td>
<td>Seoul: 5,195,700 m³/day</td>
<td>5,195,700 m³/day</td>
</tr>
<tr>
<td><strong>Capacity of the treatment facility (10,000 m³/day)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jungnang Dis.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>222</td>
<td>242</td>
</tr>
<tr>
<td>Jungnang</td>
<td>196</td>
<td>201</td>
</tr>
<tr>
<td>Sinnae</td>
<td>26</td>
<td>41</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>694</td>
<td>755.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tancheon Dis.</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>110</td>
<td>136.5</td>
</tr>
<tr>
<td>Tancheon</td>
<td>110</td>
<td>120</td>
</tr>
<tr>
<td>Yangjae</td>
<td>-</td>
<td>4.5</td>
</tr>
<tr>
<td>Godeok</td>
<td>-</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gayang Dis.</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>262</td>
<td>256</td>
</tr>
<tr>
<td>Gayang</td>
<td>230</td>
<td>256</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nanji Dis.</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Nanji</td>
<td>100</td>
<td>121</td>
</tr>
</tbody>
</table>


Semitation in the 20th Century Seoul
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>2,690 million m³/day</td>
<td>4,059</td>
<td>404</td>
<td>1,591</td>
<td>1,593</td>
</tr>
<tr>
<td>Korean capital</td>
<td>Total</td>
<td>3,151</td>
<td>367</td>
<td>1,129</td>
<td>1,184</td>
</tr>
<tr>
<td>Foreign capital</td>
<td>Total</td>
<td>908</td>
<td>37</td>
<td>462</td>
<td>409</td>
</tr>
<tr>
<td>Total</td>
<td>1,152</td>
<td>198</td>
<td>438</td>
<td>484</td>
<td>32</td>
</tr>
<tr>
<td>Tancheon</td>
<td>Korean capital</td>
<td>777</td>
<td>161</td>
<td>260</td>
<td>315</td>
</tr>
<tr>
<td>Foreign capital</td>
<td>Total</td>
<td>375</td>
<td>37</td>
<td>166</td>
<td>169</td>
</tr>
<tr>
<td>Total</td>
<td>1,800</td>
<td>206</td>
<td>760</td>
<td>793</td>
<td>41</td>
</tr>
<tr>
<td>Jungrang</td>
<td>Korean capital</td>
<td>1,267</td>
<td>206</td>
<td>467</td>
<td>553</td>
</tr>
<tr>
<td>Foreign capital</td>
<td>Total</td>
<td>533</td>
<td>-</td>
<td>293</td>
<td>240</td>
</tr>
<tr>
<td>Total</td>
<td>1,800</td>
<td>206</td>
<td>760</td>
<td>793</td>
<td>41</td>
</tr>
<tr>
<td>Downstream</td>
<td>Korean capital</td>
<td>762</td>
<td>-</td>
<td>278</td>
<td>201</td>
</tr>
<tr>
<td>Nanji</td>
<td>Korean capital</td>
<td>345</td>
<td>-</td>
<td>115</td>
<td>115</td>
</tr>
</tbody>
</table>

**Table 6.26**

Phase 1 wastewater treatment facility expansion plan


million m³/day, by increasing complete treatment and primary treatment capacities to 1.2 million m³/day and 1.4 million m³/day respectively by 1986. More specifically, Jungrang Plant would be expanded to accommodate 1.06 million m³/day; a new 500,000 m³/day facility would be constructed at Tancheon Plant; and 900,000 m³/day and 500,000 m³/day primary treatment facilities would be built at Gayang (former Anyang) Plant and Nanji Plants respectively (Table 6.26).

The plan underwent some revisions along the way: the completion date was overall rescheduled to 1987 with some changes made to planned increases in capacity. After completion in 1987, Jungrang Plant was now capable of treating 1.11 million m³/day, 50,000 m³/day more than had originally been planned; Tancheon Plant opened in December 1987 with 500,000 m³/day treatment capacity; and the primary treatment facilities at Nanji and Gayang Plants both opened in June 1987 with capacities of 50,000 m³/day and 1 million m³/day (100,000 m³/day more than the initial plan) respectively.

Thanks to phase one implementation of the sewage system improvement plan, although completed a year behind schedule, Seoul was able to secure a wastewater treatment capacity of 3.06million m³/day as of the end of 1987, attaining self-sufficiency in processing sewage, granting part of the sewage underwent only primary treatment. The City, however, soon had to establish another plan for expansion, since primary treatment facilities had to be converted into secondary, or activated sludge, facilities and preparations were needed to meet increasing demand. A five-year sewage improvement
plan was established for the period between 1988 to 1992. The plan would invest 291.9 billion won to secure a secondary treatment capacity of 3.85 million m³/day by 1992. According to the plan, capacity for Jungrang and Tancheon Plants would be increased by 350,000 m³/day and 100,000 m³/day respectively, while capacity for Gayang and Nanji Plants, this time fully equipped with secondary treatment facilities, would be expanded by 170,000 m³/day each (Table 6.27).

The plan was again revised, completion year being advanced to 1991, and phase two expansion plan was established. As of the end of 1991, total capacity stood at 3.31 million m³/day. Jungrang and Tancheon Plants had a capacity of 1.21 million m³/day and 600,000 m³/day respectively, after each adding 150,000 m³/day and 100,000 m³/day to their treatment volume. Gayang and Nanji Plants, meanwhile, had all their facilities upgraded to secondary treatment facilities, without creating additional treatment capacity.

The second phase implementation, scheduled from 1992 to 1996, would increase sewage treatment capacity by 2.09 million m³/day from 3.31 million m³/day to 5.40 million m³/day and install 8Km of separate conduit lines. More specifically, the plan, with an estimated cost of 1.0582 trillion won, would increase the capacity of Jungrang Plant by 500,000 m³/day, Tancheon by 250,000 m³/day to 850,000 m³/day, Gayang by 1 million m³/day to 2 million m³/day and Nanji by 340,000 m³/day to 840,000 m³/day (Table 6.28).

Seoul was able to secure a wastewater treatment capacity of 4.55 million m³/day, 850,000 m³/day short of the planned objective by 1996. Specifically, Jungrang and Tancheon Plants, meeting their planned objective, secured 1.71 million m³/day and 850,000 m³/day respectively as of 1997, and Gayang and Nanji Plants 500,000 m³/day and 840,000 m³/day respectively as of 1996. Subsequently, Seoul increased its capacity to 5.81 million m³/day as of the end of 1998, thanks to capacity reinforcements in the four plants. Capacity objective for Jungrang Plant was reached in October 1997 and that

### Table 6.27
Wastewater treatment facility expansion plan (1988 - 1992)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>385</td>
<td>306</td>
<td>10 (34)</td>
<td>(50)</td>
<td>25 (88)</td>
<td>44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jungrang</td>
<td>141</td>
<td>106</td>
<td>-</td>
<td>10</td>
<td>-</td>
<td>25</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Tancheon</td>
<td>60</td>
<td>50</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gayang</td>
<td>117</td>
<td>100</td>
<td>-</td>
<td>(17)</td>
<td>(33)</td>
<td>(50)</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>Nanji</td>
<td>67</td>
<td>50</td>
<td>-</td>
<td>(17)</td>
<td>(17)</td>
<td>(16)</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>Separate sewer channel (km²)</td>
<td>320</td>
<td>228</td>
<td>42</td>
<td>13</td>
<td>10</td>
<td>18</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Cost (1 million won)</td>
<td>281,900</td>
<td>26,600</td>
<td>61,300</td>
<td>74,600</td>
<td>83,400</td>
<td>46,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Secondary treatment facility*
for Gayang Plant in 1998 (2 million m$^3$/day). Tancheon Plant added an extra 200,000 m$^3$/day to its facility to make the total for the Plant 1.1 million m$^3$/day in 1998, after achieving its initial objective in February 1997; and Nanji Plant was also able to increase its capacity by the end of 1998 to secure a total of 1 million m$^3$/day (Table 6.29).

The City’s sewage treatment system witnessed conspicuous improvement into the late 1990s since the construction of Cheonggyecheon Plant in 1976. Seoul, which produced 5.65million m$^3$ of sewage per day, had an access capacity of 160,000 m$^3$/day out of its total treatment capacity of 5.81 million m$^3$/day as of the end of 1999. Only Jungrang Plant, which was required to cover 2.04 million m$^3$ of sewage with the current capacity of 1.71 million m$^3$/day, was experiencing a shortage of 330,000 m$^3$/day. Tancheon, Gayang and Nanji Plants, meanwhile still had some room for additional demand.

Table 6.28
Phase 2 wastewater treatment facility expansion plan


<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Jungrang</td>
<td>141</td>
<td>100</td>
<td>-</td>
<td>-</td>
<td>10</td>
<td>25</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Tancheon</td>
<td>60</td>
<td>50</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Gayang</td>
<td>100</td>
<td>100</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(50)</td>
<td>(50)</td>
<td></td>
</tr>
<tr>
<td>Nanji</td>
<td>50</td>
<td>50</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(18)</td>
<td>(34)</td>
<td></td>
</tr>
<tr>
<td>Separate sewer channel (km$^2$)</td>
<td>220</td>
<td>320.4</td>
<td>54.6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investment plan (1million KWR)</td>
<td>339,800</td>
<td>26,520</td>
<td>52,500</td>
<td>63,100</td>
<td>63,700</td>
<td>66,500</td>
<td>65,400</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6.29
Increase in wastewater treatment capacity

| Sources: Seoul Metropolitan Government, Municipal Administration 1998, and 99 |

<table>
<thead>
<tr>
<th>Date of completion</th>
<th>Total</th>
<th>Jungrang</th>
<th>Tancheon</th>
<th>Gayang</th>
<th>Nanji</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep.'76</td>
<td>15</td>
<td>15</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Dec.'79</td>
<td>36</td>
<td>36</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Dec.'87</td>
<td>236</td>
<td>36</td>
<td>50</td>
<td>(Phase 1) 100</td>
<td>(Phase 1) 50</td>
</tr>
<tr>
<td>Jun.'88</td>
<td>311</td>
<td>111</td>
<td>50</td>
<td>(Phase 1) 100</td>
<td>(Phase 1) 50</td>
</tr>
<tr>
<td>Dec.'91</td>
<td>331</td>
<td>121</td>
<td>60</td>
<td>(Phase 1) 100</td>
<td>(Phase 1) 50</td>
</tr>
<tr>
<td>Dec.'92</td>
<td>356</td>
<td>146</td>
<td>60</td>
<td>(Phase 1) 100</td>
<td>(Phase 1) 50</td>
</tr>
<tr>
<td>Dec.'94</td>
<td>356</td>
<td>146</td>
<td>60</td>
<td>(Phase 1) 100</td>
<td>(Phase 2) 50</td>
</tr>
<tr>
<td>Jan.'95</td>
<td>371</td>
<td>146</td>
<td>75</td>
<td>(Phase 1) 100</td>
<td>50</td>
</tr>
<tr>
<td>Dec.'96</td>
<td>421</td>
<td>146</td>
<td>75</td>
<td>(Phase 2) 150</td>
<td>50</td>
</tr>
<tr>
<td>Dec.'97</td>
<td>455</td>
<td>146</td>
<td>75</td>
<td>150</td>
<td>84</td>
</tr>
<tr>
<td>Feb.'97</td>
<td>465</td>
<td>146</td>
<td>85</td>
<td>150</td>
<td>84</td>
</tr>
<tr>
<td>Oct.'97</td>
<td>490</td>
<td>171</td>
<td>85</td>
<td>150</td>
<td>100</td>
</tr>
<tr>
<td>Dec.'98</td>
<td>506</td>
<td>171</td>
<td>85</td>
<td>150</td>
<td>100</td>
</tr>
</tbody>
</table>
As for the problematic Jungang Plant, a plan for improving existing facilities was underway to cover an additional 300,000m$^3$/day of sewage treatment capacity, while another project was scheduled for 2000 to increase capacity by 300,000m$^3$/day, which would enable the Plant to safely meet its requirements by the end of 2001 when the project is completed.

**Projects for sewage conduit improvement**

One of the most urgent tasks for the City throughout 1980s and 1990s along with construction of new end-point treatment plants was the improvement of the sewage conduits that intertwined the city like a spider web. The Sewer Conduit Improvement Plan was designed to install 403km of new conduits, repair 574km of existing conduits and bury 250km of separate conduit lines from 1984 to 1987. Yearly breakdown of the Plan, whose estimated cost was 100.3 billion won, is shown in Table 6.30. The Plan, however, was revised almost every year in the process of implementation. Consequently, 2,071km of new conduits were installed as planned by 1996, 2,071km of existing conduits were repaired by 1997 and improvement works were completed on 229km of separate conduit lines by 1988, costing the City a total of 12.084 billion won (Table 6.31).

There had been efforts to improve sewage conduits in the previous decades, but projects in the 1990s were much more advanced in technical terms. Most conduits were hume pipes. These pipes, although strong enough to withstand time, had problems of ground water seeping into the conduits or wastewater leaking out of them due to bad connection with main pipes or other pipes blocking the insides of these pipes, causing soil pollution. Although the more desirable way would be to do away with septic tanks altogether and send wastewater directly to treatment plants through conduits, the tanks were still in use for lack of a complete conduit system to enable such a process.

In order to address the problem, the City had to have a clear picture of what it was actually like inside the conduits and be able to carry out engineering works without digging up the busy roads.

| Table 6.30 |  
| --- | --- | --- | --- | --- | --- |
| **Total** | 1,227 | 305 | 305 | 310 | 307 |
| **New installation** | 403 | 100 | 100 | 100 | 103 |
| **Repair work** | 574 | 145 | 145 | 145 | 139 |
| **Separate sewer** | 250 | 60 | 60 | 65 | 65 |
| **Cost (100million won)** | 1,003 | 299 | 234 | 235 | 235 |
These were made possible in the early 1990s with the introduction of detail survey using CCTV and a new method of construction that didn’t require excavation. Seoul’s first detail survey using CCTV was in 1991. The City of Seoul divided the city into 16 drainage areas, by which it did survey planning, and basic and detail designs to carry out the engineering projects. The City had already completed surveying 14 drainage areas and was planning to finish up the remaining two by 2001. Engineering work was completed in 1999 on 97.7Km of conduits for Wonhyo drainage zone, one of the zones whose surveys had been conducted early on; and more works will be carried out until 2011 to repair 2,168Km of conduits in Gangbuk area.27

Meanwhile, the trends of conduits between 1980 and 1998 show that more closed forms of sewer channels were being used, with growing awareness for public hygiene. More specifically, the proportion of box culverts increased from 8.8% to 12.2%, round culverts decreased a little from 88.3% to 84.9%, open channels went down from 2.0% to 1%, and U-shaped side gutters went up from 0.9% to 1.7%. The reason the figure for U-shaped side gutters increased, although in just a small scale, was that it was unnecessary to install closed forms of conduits in peripheral areas where separate sewer systems had been in place (Table 6.32).

In 1998, sewer conduit coverage for the City reached 100%,
Table 6.32
Composition of conduits by shape (1980-1998)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(m, %)</td>
<td>(m, %)</td>
<td>(m, %)</td>
<td>(m, %)</td>
<td>(m, %)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6,558,480</td>
<td>8,293,692</td>
<td>9,121,786</td>
<td>9,580,338</td>
<td>9,820,581</td>
<td>149.7</td>
</tr>
<tr>
<td>Closed conduits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Square</td>
<td>576,633</td>
<td>857,071</td>
<td>1,056,456</td>
<td>1,169,319</td>
<td>1,197,532</td>
<td>207.6</td>
</tr>
<tr>
<td>Round</td>
<td>5,792,085</td>
<td>7,183,736</td>
<td>7,808,766</td>
<td>8,140,404</td>
<td>8,342,762</td>
<td>144.0</td>
</tr>
<tr>
<td>Open channels</td>
<td>133,206</td>
<td>141,778</td>
<td>130,803</td>
<td>121,005</td>
<td>115,889</td>
<td>85.3</td>
</tr>
<tr>
<td>U-shaped gutters</td>
<td>56,556</td>
<td>111,112</td>
<td>125,961</td>
<td>154,724</td>
<td>166,676</td>
<td>294.7</td>
</tr>
</tbody>
</table>

Table 6.33
Maintenance of the sewer system (1979-1998)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Planned extension of conduits (m)</td>
<td>9,706,000</td>
<td>9,582,188</td>
<td>9,582,188</td>
<td>9,893,239</td>
<td>9,820,581</td>
</tr>
<tr>
<td>Conduits already installed (m)</td>
<td>6,210,509</td>
<td>8,293,092</td>
<td>9,121,786</td>
<td>9,580,338</td>
<td>9,820,581</td>
</tr>
<tr>
<td>Coverage rate (%)</td>
<td>63.6</td>
<td>86.5</td>
<td>96.2</td>
<td>96.8</td>
<td>100</td>
</tr>
<tr>
<td>Planned drainage area (km²)</td>
<td>316.0</td>
<td>316.21</td>
<td>323.10</td>
<td>383.2</td>
<td>352.0</td>
</tr>
<tr>
<td>Existing drainage area (km²)</td>
<td>196.1</td>
<td>294.3</td>
<td>318.67</td>
<td>376.0</td>
<td>352.0</td>
</tr>
<tr>
<td>Coverage rate (%)</td>
<td>62.0</td>
<td>93.1</td>
<td>98.6</td>
<td>98.1</td>
<td>100.0</td>
</tr>
</tbody>
</table>

and is summarized in Table 6.33. A notable fact is that the method of calculating coverage changed from ones based on length or area to ones based on population with access to wastewater treatment service or water tank toilets. In other words, the focus shifted from capturing quantitative change to qualitative change.

Treatment of excrements through the sewer system

Water tank toilets, first introduced in the early 1960s, became more prevalent in the 1980s. As of the end of 1980, water tank toilets took up 86.5% (1.51 million toilets) of the 1.746 million toilets in the City. Most excreta were treated through the sewer system when considering the fact that they went through secondary treatment in Jungrang Plant and that they were processed into wastewater to be carried into sewage treatment facilities through conduits. Statistics show that 94.2% of the population had access to water tank toilets in 1993, and 98.5%, in 1998, which demonstrates that 100% availability was not far away (Table 6.34). Another
Table E.34
Population with access to flush toilette

<table>
<thead>
<tr>
<th>Year</th>
<th>Total population (A)</th>
<th>Population using traditional toilette</th>
<th>Population with access to flush toilette (B)</th>
<th>B / A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1983</td>
<td>10,925,464</td>
<td>629,781</td>
<td>10,295,683</td>
<td>94.2</td>
</tr>
<tr>
<td>1984</td>
<td>10,796,700</td>
<td>572,057</td>
<td>10,224,643</td>
<td>94.7</td>
</tr>
<tr>
<td>1985</td>
<td>10,595,943</td>
<td>521,827</td>
<td>10,074,116</td>
<td>95.1</td>
</tr>
<tr>
<td>1986</td>
<td>10,489,852</td>
<td>369,296</td>
<td>10,100,554</td>
<td>96.5</td>
</tr>
<tr>
<td>1987</td>
<td>10,369,057</td>
<td>196,024</td>
<td>10,192,433</td>
<td>98.3</td>
</tr>
<tr>
<td>1988</td>
<td>10,321,496</td>
<td>154,004</td>
<td>10,167,492</td>
<td>98.5</td>
</tr>
</tbody>
</table>

A point worth mentioning is that, after improvement works on conduits were completed, the City would soon be able to do away with septic tanks, which were still being used for primary treatment due to bad connections in some of the conduits, and fully employ flush toilets that would enable discharging excreta straight to sewer conduits.

Thanks to the aforementioned efforts by the City, water pollution of the Han River improved dramatically in the late 20th century. BOD figures for water at Paldang, in comparison to the environmental standard of 1ppm, went down from 1.4ppm in 1981 and 1985 to 1.0ppm in 1990, and up again to 1.5ppm in 1998. Figures for Noryangjin, vis-a-vis its standard BOD of 3ppm, is now improving after going from 3.92ppm in 1981 to 4.7ppm in 1985. BOD for Gayang was also improving. The figure for 1998 went below the environmental standard of 6ppm at 4.8ppm, after going up to 11.4ppm in 1985 from 10.41ppm in 1981.
CLOSING REMARK

The City of Seoul witnessed eye-opening progress in sanitary conditions during the 100 years of the 20th century. Water and wastewater systems, both introduced at the early part of the century, have become a common feature in basic city infrastructure in the latter part of the century, meeting demands created by the explosive growth of the City. Developments in the City’s water and wastewater systems are truly phenomenal when given the fact that the space of growth Seoul underwent in such a compressed period of time and is virtually unheard of anywhere around the world among cities with a population of more than 10 million. The history of the water system in Seoul, ever since its establishment in 1908, was one of continuing challenges and challenges being met. The 1960s and the 70s, in particular, had been the most trying of all decades, as the City basically was at war to meet demands created by explosive population increases and higher living standards. Having met the challenges, the City of Seoul is now in the league of advanced nations in terms of water consumption. Seoul is no longer behind other metropolitan cities in advanced countries in terms of water supply rate or daily per capita water consumption, although factors such as weather and income would also have to be considered for just comparison. The issue now, along with meeting quantitative demand, is to conserve water quality and to be most rational and thorough in the manage of the water supply system. Looking ahead beyond 2000, the country has to start developing plans to prepare for water shortages expected from 2006 and introduce measures to restrain demand, such as the Wastewater Reclamation and Reusing System.

There has been significant progress also in the wastewater treatment system in the past century. Now the City boasts 100 percent conduit coverage, near 100 percent excreta treatment through the sewage system, and near 100 percent sewage treatment capacity. The author believes that Seoul is among the very few cities whose population grew to 10 million and whose sewer system coverage hit 100 percent in such a short period of time. Now remaining task for the future is to advance the level of sewage treatment by adopting tertiary treatment so that environmental standards could be met throughout the upper and lower streams of the rivers, and to complete implementation of the conduit improvement plan so that water tank toilets can be replaced by flush toilets that could be directly linked to the sewer system. It is the author’s belief that this is not too far away.
Japanese Government-General of Korea (1912), Water System of Korea.

2) The water guild began about 180 years ago when a student from Hanggyeong Province started delivering water to make money for his tuition. Since then many poor people from South and North Hanggyeong Provinces came to Seoul and made a living by delivering water. Many of them were from Bukcheong County, which is where the name Bukcheong ‘Water Merchants’ comes from. The guild was established to protect the rights of these merchants.


4) Gyeonggseong Bu (1939, 9). Waterworks in Gyeonggseong Bu.


7) Gyeonggseong Bu (1938), Waterworks in Gyeonggseong Bu.


9) Ibid.

10) Japanese Government-General of Korea, Documents on national subsidy.

11) Ibid.


13) ———. (1932). Approval documents for detail design on Han River improvement, and Yongan and Sin-Yongan pumping facility construction.

14) ———. (1928). Documents on national subsidy.

15) ———. Gyeonggseong Sewer Project for Poverty Relief, Documents on national subsidy.


17) ———. (1965). The History of Seoul Special City (City Administration after Liberation).

18) Ibid.

19) Ibid.

20) Ibid.


25) ———. (each year). City Administration Overview (Shi-jeong-gye-yo).


CHAPTER 7

Seoul's Parks and Green Spaces in the 20th Century:
From a City in Nature to Nature in the City

Keewon Hwang

Introduction

PARKS AND GREEN SPACES IN THE HISTORY OF SEOUL

In the small view, parks and green spaces exist outside the city, while if we look through a larger lens, they also exist within the city. To understand how Seoul's parks and green spaces have emerged and changed over the past century, therefore, it is necessary to first look at how Seoul itself has grown and changed. It is estimated that at the beginning of the Chosun dynasty, Seoul (then called Hanseong) had about 100,000 residents. It took about 250 years for this population to double, reaching 200,000 in the reign of King Hyunjong.1 The population of Seoul (then Gyeongsong) at the beginning of the colonial period was about 250,000 and doubled to 500,000 within twenty-five years. However, it only took another ten years for it to
double again to one million, fifteen years to reach two million, and only another ten years to hit four million. This population explosion was accompanied by increases in the jurisdictional area of Seoul: although dropping from about 250km² during the Chosun dynasty to 36.2km² in 1914, it rose to 134.0km² in 1945, 268.35km² in 1949, 613.04km² in 1963, and 627.06km² in 1973, and now remains fixed at the current size of 605.52km².²⁵

So what is the current status of Seoul’s parks and green spaces? As of 31 December 1999, the last day of the millennium, Seoul covers 605.52km² and has a population of 10.3 million people. One thousand three hundred parks cover 130,259,000m², and a further 1,423 parks, reaching an area of 154,228,000m², are in the planning process. And with 851,000m² of actual green spaces and 2,076,000m² of planned green spaces, Seoul’s parks and green spaces put together reach 131,110,000m², with 156,304,000m² being planned, totaling 156,435,110m², occupying 25.8 percent of the total area in Seoul.

Taking Seoul’s population into account, this is per capita ratio of 15.14m² of park or green spaces per person, a figure comparable to the major cities of other advanced nations. Of course, as the mountains surrounding Seoul account for 143.33m² of the total, the actual amount of park space people can take advantage of is limited. However, as people have recently come to regard green space as an important contribution to sound ecology, these mountains, which function better as green spaces than do parks, are valued very highly by people in Seoul. As of the end of 1998, most of Seoul’s green spaces are actually made up of green space zones (253.28km²) and green belt (Development Restriction Zone, 166.82km²), in which urban development is strongly restricted. In addition, it must not be
overlooked that although the Han River is legally classified as a waterway, the water itself and the riverside are widely used as park and green space. The purpose of this chapter is to examine how Seoul’s parks and green spaces have appeared and how they have changed during the past 100 years of rapid increases in the population and the metropolitan area.

By doing so, we will be able to look at the relationship between urban areas (built-up areas) and parks/green spaces (natural areas) in terms of a figure/ground relationship. Figure 7.1 shows the phases of Seoul’s urbanization in the twentieth century. The black figures show areas of urban development, while the remaining white background indicates the parks and green spaces. These maps testify how quickly Seoul has expanded in the twentieth century. On the other hand, they also show how quickly the white background—forests, fields, and paddies—has disappeared. In a cursory view, the eye is first drawn to the areas of urban development, but if we examine the background showing parks and green spaces, we can better see the city.

We can also glimpse the values of Seoulites over the last 100 years by looking at the creation and maintenance of parks and green spaces in the midst of demands for various material resources and fierce competition for land. While parks and green spaces have different purposes, they are also similar: both are space for people to spend their leisure time and provide an environment that keeps the city ecologically healthy. At the same time, parks and green spaces still have an important function in preserving the city’s scenery.

DISCUSSING PARKS AND GREEN SPACES

Brief though it is, a prior discussion of nature of parks and green spaces will be helpful in discussing the formation and change of them. In fact, parks and green spaces form an essential environment and public resource. Parks, which allow people to escape their busy daily work activities and take a break to recharge their batteries, and green spaces, which prevent or reduce air pollution and the effects of natural disasters, provide a "natural" environment and public resource that is planned, created, and managed by law and public programs.8

Because these important parks and green spaces exist in the cities nationwide—indeed, around the world—people tend to think that they date back a long way. In fact, they are relatively recent phenomena and products of modernization, only appearing in Western countries in the middle of the nineteenth century, and not in Korea.
until the end of the nineteenth and beginning of the twentieth centuries. Since Korea came under colonial rule, however, parks and green spaces, like other products of civilization, experienced a distorted modernization process.

The best starting point for discussion is the end of the nineteenth century. As is well known, this was a time of great turbulence and change for Korea, and in the midst of this, was the beginning of Seoul’s modernization as this time also marked the appearance of a kind of modern urban space—parks—in Seoul. In 1900, Hanseng (then name of Seoul), combining the area now known as “within the four gates” and part of the area outside the city walls, covered about 250 km² and had a population reaching 200,000. At that time, however, there were only three parks—Independence Park, Pagoda Park, and Hwaseongdae Park—and no green spaces were designated at all. This was because parks and green spaces were part of the Western culture that came with the Enlightenment—namely, it was the product of Western-style city making. Then, was nineteenth-century Seoul worthless in its lack of parks or green spaces? Did our forebears carry on miserable lives in a miserable space? And was the force of the great powers in opening Korea an unavoidable curse? Korea, despite having been economically poor, was a nation with dignity and a leisure culture that enjoyed and valued nature. The demand for leisure and enjoyment that is today satisfied in parks and green spaces then had to be satisfied somewhere. Those places were the natural environment—the mountains, valleys, and the Han River—that could later become modern Seoul’s parks and green spaces. In other words, although a century ago they were called differently, it is undeniable that Seoul had parks and green spaces.

HISTORY ALWAYS COMES WITH ASSUMPTIONS

Let’s suppose Korea had escaped from being colonized and had directed its own modernization—how would its cities appear today? And what would be the state of its parks and green spaces? We cannot say which would be better or worse, but in all likelihood Koreans would live in very different cities, with very different parks and green spaces.

Korea’s first parks appeared along the different paths. At the turn of the century, Seoul’s parks included Independence Park, a symbol of free Korea and an independent enlightenment led by Korea’s nascent civil society; Pagoda Park, a symbol of national awakening created under the auspices of the Daehan Empire; and Mt. Namsan Park, a symbol of aggression created by the Japanese.
From Korea's occupation by imperial Japan until the 1920s, construction of parks was begun in all the major cities, and with the enactment of the Chosun City Planning Decree in 1934, the term "park" first entered the legal lexicon. Although little progress was actually made, the plan itself was extensive. Under Japanese domination, however, colonial Korea was drawn into the turbulence of World War II and its parks and green spaces were left neglected and damaged. Immediately following Korea's liberation (1945) and during the period of confusion and disorder of the Korean War (1950-53), parks were destroyed, and as park land was taken over by refugees and turned into residential areas after war, the encroachment on parks began. New city planning laws were formulated in the 1960s, and until the construction of a new and modern city began, Seoul's parks and green spaces were reduced to a shamefully low standard.

Full-scale investment in parks and green spaces began in the 1970s when Korea began major efforts to invigorate its economy. In 1968, the Park Law, the mother of all park-related legislation in Korea, was promulgated and institutionalized in earnest. But as there were no appropriate park sites inside the city, except the existing historical sites and natural green spaces, these parks tended to be situated outer area of the city. These efforts, however, only served the short-sighted objectives of park administration of the city, and thus people living in Seoul felt little impact of the park developments.

Major changes in administration appeared with the hosting of the 1988 Olympics in Seoul. The Olympics brought the installation of related and accessory facilities, development of a river shore along the Han River, creation of many parks and green spaces, together with the construction of the Seoul Sports Complex, Olympic Park, and other full-scale facilities. After the Olympics themselves were over, efforts were concentrated on opening these facilities to local residents and providing opportunities for them to be utilized.

In the 1990s, while a new system of local autonomy was established and demands focusing on the quality of life increased, even more changes began to emerge concerning the configuration and scope of parks and athletic facilities. First, the new concept of "Environmentally Sound and Sustainable Development (ESSD)" appeared, supporting efforts to create an ecologically healthy environment, and amid calls to restore Mt. Namsan to its original state, the appreciation of scenery and landscape gradually gained prominence. Furthermore, in each autonomous local government constituency smaller-scale resources such as pocket parks or community squares (called maeul madang) were created and easily accessible neighborhood athletic facilities or sports centers near parks and mineral springs (called yak-su-teo) were expanded. These parks, green
spaces, and leisure facilities did not bring immediate, noticeable benefits. However, such spaces were made necessary by the increasing demand for leisure and recreation inherent in a modern society. Furthermore, with more and more people searching for more diverse things to satisfy their needs and tastes, they came to demand a greater variety of resources.

In this way, to understand the production and change of the parks and green spaces that have emerged throughout the past 100 years, we actually have to go back 130 years to when the first Western-style parks and green spaces appeared in Seoul.

Parks of the Enlightenment Era: ca.1870 - 1910

PARKS SEEN BY THE PIONEERS

It was not until the second half of the nineteenth century that Koreans, through exposure to the West, first came to know of and come into contact with the "public park." However, they were not that late, because even the advanced nations of the West first saw their public parks in the middle of the nineteenth century. In this respect Korea was only about twenty years behind Japan and China, which had begun their programs of opening and modernization earlier.5

The term "public park" first entered the national vocabulary in 1876. In this year, Korea signed a treaty (known as Jo-il-su-ho-jo-gyu) with Japan, unlocking its doors to international society, and after this opening it sent diplomatic missions and students to observe foreign countries; in this process Korea naturally came into contact with parks. The official report issued by Kim, Ki-su, chief of this project, titled Journal of the Delegation to Japan (1876) and his personal diary (1877), included detailed observations of Ueno Park
in Tokyo, and in particular the zoo and museum inside it.

If these were the first records of a modern park, Yu Kil-jun’s Observations of Western Europe (1895), which provide concrete descriptions and evaluations of his trips to parks over the course of his travels to many Western cities in 1885 and 1886, was the first serious record of an even more progressive discussion of the concept of the park. In addition, Yun Chi-ho’s Diary includes thorough descriptions and opinions on a variety of parks in many Western cities as well as Shanghai.\(^6\) The thoughts on parks that appear in these observations were exceedingly well versed in the concept of the park as it was being pursued in advanced countries, and can be organized as below:

1) A park is a public resource created for citizens by central or municipal governments on valued land using tax revenues.
2) A park provides citizens with a place to stroll or enjoy their leisure, and provides an atmosphere similar in comfort to the home.
3) A park is a modern resource that contributes to public hygiene and improvement of the natural environment.
4) A park’s main facilities include museums, zoos, botanical gardens, bridle paths, rest areas, aromatic gardens, and so on.
5) Some parks are off limit to some people (Philadelphia’s Glen-dale Park, Shanghai’s Huangpu Park, etc.).

What kind of places were the parks these men had observed, and how did people in the West regard them? In the mid-nineteenth century, some of the advanced Western nations viewed the industrial revolution that had been underway since the 1800s as full of benefits, yet at this time people were beginning to be troubled by new problems. The biggest change was the sudden increase in size and complexity of cities that came with industrial growth. This not only lowered the quality of the living environment but also brought with it socio-economic consequences such as decrease in labor productivity and spreading social unrest. Accordingly, thanks to the appearance of reform movements focusing on such things as amelioration of environmental damage and provision of housing for the working class as a welfare measure, the notion of the “public park” came into currency.\(^7\)

Naturally such parks were first created in England, which had first launched the industrial revolution and stood at the forefront of modernization, while the United States, close on England’s tail, came in second. Other advanced nations of the time—in Europe and South America and later modernizing Japan—rapidly developed parks as well.

In England, the opening to the public of the gardens and hunt-
ing parks in London once exclusive to the royal family and aristocracy, so that ordinary people could also enjoy themselves wandering and strolling through these grounds, appeared to mark the beginning of the modern park. St. James's Park, Green Park, Hyde Park, Kensington Park, Regent's Park, and Victoria Park had already been created by 1830. And in order to improve the environment within England's newly developing urban areas, parks built on purpose began to appear in the 1840s, a prime example of which is Birkenhead Park, opened in the major industrial city of Liverpool in 1847.

The need for parks was also keenly felt in the United States, which had won its independence at the end of the eighteenth century and was stepping forward as a rising industrial state. Full-scale parks appeared there from the mid-1800s on. Just as the Korean progressives toured through foreign countries and came into contact with the new culture of parks, Americans trveled to cultural and historical sites in Europe, especially England and France, and also visited and experienced brand-new parks that were rapidly gaining popularity at the time. The first example of this—Central Park—was built between 1858 and 1873 in New York, America's gateway to immigration that was exploding into a major city, and soon after big cities in all areas of the U.S. developed numerous parks as well.

In Asia, Japan, which had been undergoing full-scale Westernization and modernization since the Meiji Restoration in 1868, instituted its first system of parks in 1873, and in the same year the first park, Ueno Park, was built in Tokyo. In this way, whether in advanced or later-developing countries, parks were accepted and spread with great speed.

INDEPENDENCE PARK: CATALYST OF ENLIGHTENMENT AND SYMBOL OF INDEPENDENCE

Although Korea's first park was Manguk Park, opened in the foreign settlement in Incheon in 1883, the first park in Seoul was Independence Park, built as collaboration between Korean patriots and the government between 1896 and 1897. This park, built adjacent to the Independence Gate which stands on a major road running through Hyeonjeo-dong in Seodaemun-gu (west suburban area at that time), regrettably did not last long, but holds an important place in the history of the independence movement, as well as Seoul's history and the development of its parks. As a symbol of independence forged by and for Koreans, construction of this park cannot be separated from the Independence Gate. The gate should be discussed first because it was conceived and built first, and
because it has occupied an important place as a symbol of the independence movement from the time of Japanese colonialism until the present day.

The idea of building the Independence Gate first took hold in 1896, and so it is necessary to have an understanding of the fin-de-siècle circumstances of Korea during that year. While the Gabo Reform of 1894 and 1895 brought to the Korean state a certain degree of reform and new political systems, interference from the great powers, headed by an ever-strengthening Japan, intensified. Led by the progressives, many ordinary Koreans began to keenly recognize the imperative for independence of the nation and its people. As a symbol that directly represented the mentality and motivation for independence, the Yeongeun-mun (Welcoming Imperial Grace Gate) was torn down in February 1895. The gate had been constructed in front of the Mohwa-gwan (Hall of Cherishing China), where Chinese envoys were received and entertained, and so was clearly associated with that function, especially as its title boldly indicated Korea’s position of diplomatic subservience to China within the sadae (serving the great) relationship. Following the Gabo Reform a new cabinet was formed, largely staffed by moderates from the progressive group, which dismantled the diplomacy of subservience to Qing China and tore down its symbol—the Yeongeun-mun Gate.

However, the progressives did not judge this to be sufficient and launched a project to build a symbol that would more strongly represent independence. The first to put forward this idea was Seo Jae-pil. Upon his return to Korea from a long absence in the United States in December 1895, he suggested constructing the Independence Gate as a conceptual symbol of the complete sovereignty and independence of Korea and situating it in the very spot where the Yeongeun-mun Gate had stood. The timing of this idea was ideal and it received widespread support from not only the citizenry but also the king and the government, allowing the plan to be put into effect very quickly. In June of 1896, when Seo Jae-pil had been back in Korea for no more than six months, the plan for the gate was finalized and, having been granted royal approval, the government bureaucrats and the founders of the project reached a concrete agreement. Responsible for ensuring that the project proceeded in a systematic and continuous manner, the project founders established the Independence Club for this purpose on 2 July 1896.

Let us take a look at this construction process. Then, as now, it was not easy to build a park heavy on symbolism but with less utility than other facilities. This would have been particularly the case in the construction of the first park. Therefore, in order to discuss the construction process for the Independence Park, a few basic facts
should be set straight. First, the park was constructed by the Independence Club. Second, the work was carried out alongside the construction of the Independence Gate and the refurbishing of the Mohwa-gwan. Third, the funds did not come from the government budget or wealthy patrons, but rather from the voluntary donations of many ordinary Koreans. The first round of fundraising (fourteen months between July 1896 and August 1897) brought in 5,897 won (including a 1,000 won contribution from the crown prince and 510 won from the Independence Club itself). Fourth, although the total cost of construction remains unknown, the following costs are clear: the budget for the Independence Gate was 3,825 won and 2,000 won was put into work on the Independence Hall. There is no record for costs of the park itself. However, following completion all work was calculated to have cost 3,825 won, thus exceeding the budget allocation. This was resolved by supplementing the initial fund with an appeal for public donations. Fifth, after the cornerstone for the Independence Gate was laid on 21 November 1896, it was completed exactly one year later on 20 November 1897.

On 6 September 1896, barely two months after the founding of the Independence Club, all members pledged to build the gate under the direction of Seo Jae-pil and allocated a fund of 3,825 won for the project. The shape of the gate would resemble the French Arc de Triomphe and Seo Jae-pil received the assistance of Sabatin, engineer of the German Legation in Seoul, in drawing up the blueprints. Construction was overseen by the Korean engineer Shim Ui-seok, who was renowned for his expertise in Western architecture and was also a sponsor of the Independence Club. The stonemasons were all Korean, while most of the heavy work was done by Chinese laborers. The gate was built of granite 42 cheok (approximately equivalent to 1 foot) high, 33 cheok across, and 21 cheok deep, with the arch 17 cheok wide. A spiral staircase was built on the western side of the gate, while the south face pointing toward the city center was inscribed with Dongnipmun (Independence Gate) in Korean characters and the south face pointing toward China with the same in Chinese characters. The groundbreaking ceremony was held at 2:30 pm on 21 November 1896, attended by not only Independence Club members but also 5,000 to 6,000 ordinary citizens, government representatives from each ministry, diplomatic representatives and consuls, and foreign dignitaries. The gate was completed within only a year on 20 November 1897.33

The Independence Hall was created through a thorough renovation of the former Mohwa-gwan which stood nearby the Independence Gate. Although I use the term "renovation," the building was old and very rundown and the process of "restoring" it, which cost 2,000 won, is better described as a total reconstruction. Restoration
was completed on 23 May 1897, just ahead of the Independence Gate. The Independence Club requested the crown prince to inscribe a plaque with the words "Independence Hall" in Korean script in his own hand, and the plaque was hung in a special ceremony on the day of completion. Part of the finished hall was designated as the office of the Independence Club and another part was set aside for the club meetings held every Sunday at 3:00 pm. From 29 August 1897 there was a meeting held every week in the hall to debate such issues as autonomy, civil rights, and the efforts needed to realize them.

Independence Park was built in the open space surrounding the Independence Gate and Hall. It is a great pity that records indicating the precise location of the park have yet to be discovered, and all we can surmise is that it was in the vicinity of the gate. However, a lotus pond uncovered on the south side of the original Mohwa-gwan showed evidence of the cultivation of lotuses and willow trees, allowing us to suppose that the Mohwa-gwan and surrounding area were included within the park. If so, what was the purpose of the park? As no blueprints or reports on the park have been discovered, we must base our inference on the following materials.

An article published in the Independent reads that "there must be a symbol for communicating the independence of Chosun, and if we are to protect the well-being of the Chosun people, they must be granted clean air to breathe and a pure place with good scenery to take exercise." The first part is the symbolic function of representing independence, while the second part is the practical function of promoting and maintaining health and well-being. Slightly more tangible evidence can be found in an article printed in Korea’s first English magazine, The Korean Repository. Also, Seo Jae-pil made the following proposal to the Cabinet for construction of a park:

- creation of a park near the city where people could directly come into contact with fruit trees, woods, flowering plants, and many kinds of imported shrubs, and
- allocation of a section of the park to outdoor exercise facilities for tennis, soccer, cricket, and baseball, a section for public employees to enjoy fresh air and exercise after work, and another section for citizens from all walks of life to attend edifying lectures or speeches on contemporary issues once or twice a week.

It is important to note here that the specific function of the park was more practical than symbolic. The "symbolism" as mentioned in the Independent more closely corresponds to the Independence Gate, rather than the park. This practical function can be universally found in the parks which were already taking hold in the
West, and particularly those in the United States where Seo Jae-pil had spent ten years. However, these designs called for heavy expenditures, and with a lack of sufficient funds, the park could not be constructed according to its plan. Still, the park proceeded with construction of the Independence Gate and took the form of a park at least by July 1897.

With the Japanese annexation of Korea, hopes for independence were crushed and following colonization in August 1910 the symbolism of the Independence Gate and Hall took on even deeper meaning. During the March First Independence Movement (known as Samil Undong) of 1919, they became an important site in the independence movement and their symbolism grew. The Japanese, who viewed this site as a thorn in their side, tore down the Independence Hall and permanently closed the park, disposing of it to a private citizen and leaving no traces of where it had been. However, it is unclear whether leaving the Independence Gate as it stood was regarded as a strategic ploy, but regardless, it remained standing. The Japanese colonial administration suppressed the independence movement, and judging that colonial rule had put down firm roots, on 23 May 1936 designated the gate as a historical relic of the Gyeongseong Bu (colonial City of Seoul). Korea was soon liberated in 1945.

In 1979 the Independence Gate was moved from its original location to make room for a road expansion and the park was erased from public memory. Luckily, however, on 15 August 1992 the Seodaemun Independence Park was opened at the same site, reviving its historical significance. This park is actually the old site of the Seodaemun Prison and is organized around the theme of the history of Korean independence.

PAGODA PARK: SYMBOL OF ENLIGHTENMENT AND INDEPENDENCE

Many people believe that Seoul’s first park was Pagoda Park. It is not clear whether this is because The History of Gyeongseong Bu, written under imperial Japan, records that "in 1897 John McLeavy Brown, an English adviser and commissioner of customs, made a park, which he called Pagoda Park," and "Pagoda Park was the first park in Gyeongseong," or whether it’s the fault of later generations who took this as evidence and wrote historical textbooks and papers. However, the fact is that there are no records indicating precisely when this park was constructed. If we move beyond a simple interest in which park was "first" and see Pagoda Park and Independence...
Park, together with Namsan Park as the "early" parks in Seoul, it is enough for us to recognize this park's historical significance and important place in a history of Seoul's parks.20

It is widely known that this park was built on the site of the Buddhist temple Wongak-sa as a Western-style park. This temple was originally built during the Goryeo dynasty (918-1392) as Heungbok-sa, and restored in the fifteenth century and then renamed Wongak-sa. It was destroyed at the beginning of the sixteenth century, leaving only a thirteen-level pagoda and a stone monument. The site lay in ruins until the creation of the park at the end of the nineteenth century, and was almost completely covered with haphazardly and illegally built houses belonging to commoners.21 The first work to be done in the construction of the park was to clear away all the illegal dwellings. There was considerable resistance, and the clearing work began in earnest from June of 1899. Still, the building site was not secured without great difficulty. According to the records, the park began to take shape and new buildings were erected in 1910. Nearby was the lotus pond with an octagonal pavilion at its edge; on the north side was the pagoda and on the south the Wongak-sa stone monument. A military bandstand was built in the southwest corner of the park and there were no separate paths within the park. The edge of the park was ringed by stone wall with a main gate on the south side, a side gate to the east, and another gate to the west. The size of the lot once the houses were cleared away was only 3,300 pyeong (10,890 m²), making this a fairly small park. The park was arranged around the newly built pavilion and the already existing pagoda and stone monument. At first there were no trees and only a few saplings, but in photographs from the 1930s the park was encircled with lush trees and greenery.

Since the opening of Pagoda Park, however, it had not been a space freely accessible to ordinary people. It was owned by the royal family, and perhaps due to this fact, at first it was only open to the public on Sundays. In 1910, the year Japan colonized Korea, management of the park went from the Gyeongseong Bu into the hands of the colonial government, and from that time trees were first planted in the park and the space was divided into flower gardens, and paths, and benches and lampposts were installed. The park was made open to the public on weekdays from July 1913, but the park's hours are still limited to this day. At about this time people would have started going into the park to sit in the pavilion, rest in the shade of the trees, meet other people, and stroll along the paths to look at the pagoda and stone monument. Early on, people could also relax and listen to music performances at the bandstand, and although it was military music, this would have been the first chance
for most people to hear Western music in public.\textsuperscript{23}

More than anything else, however, Pagoda Park is historically meaningful as an expression of the Korean independence movement. It was here that Koreans gathered on 1 March 1919 to hear the reading of the declaration of independence and demand their freedom. In contrast to the closing and destruction of Independence Park after the March First Independence Movement, Pagoda Park fortunately lasted throughout the period of Japanese rule until liberation. We can read in this colonial government’s shrewd application of the colonial policy within its jurisdiction. First, as the area of Jongro (traditional main street of Seoul) where the park is located was associated with the scope of the Korean people’s power, it was likely judged better to indirectly maintain it than to directly shut it down. Second, the park was seen as a public welfare resource filling the gap between old northern Korean quarters and new southern Japanese quarters, a divide that Koreans protested against. Third, even if the park were closed, there were no alternative plans for use of the site. Fourth, as the only city park in the heart of Seoul, it was also needed by Japanese residents.

**NAMSAN PARK: BEGINNING AS A SYMBOL OF JAPANESE AGGRESSION**

Situated right in the center of Seoul and loved by all Seoulites, Namsan Park also first appeared in the Enlightenment period. Unlike Independence Park and Pagoda Park, however, Namsan Park hides a shameful past. It was first created by and for Japanese and became a sort of brainwashing center for forcing Koreans to be loyal subjects of Japanese Empire. Let us turn to the question of how Namsan Park was created.\textsuperscript{20}

After the signing of the Ganghwa Treaty of Amity in 1876, Korea was forced open and permission was granted for foreign envoys to be permanently stationed in the capital Hanseong. The first of these to take a position was the head of the Japanese mission, who came in 1880.\textsuperscript{20} After the 1882 military revolt, missions and consuls from China and the Western powers were stationed within the capital and in 1885 Japanese civilians were allowed to set up residence there. These Japanese residents were pushed into a designated residential zone (in the area that today lies between Yejang-dong and Juja-dong, and Chungmuro 1-ga in Jung-gu) on the north edge of Mt. Namsan, adjacent to the Japanese legation. This neighborhood had long been enjoyed by Seoul residents for its lush woods, especially cherry blossom trees, and as it was turned into the Japanese
residential district it came to be called Hwaseongdae (Japanese Fortress) or Waejangdae (Japanese General’s Platform).

Before the appearance of modern parks, ordinary Japanese residents relaxed and spent their time on the wooded grounds of shrines or temples. In 1897 the Japanese Residents Committee named it Hwaseongdae Park, and in 1898 a Japanese Shinto shrine was constructed with the improvement of access road. It was then renamed Namsan Park. Rather than a full-scale park, however, Hwaseongdae Park was seen as a protected or ornamental area surrounding the Shinto shrine. A park in name only, excluding some paths for strolling, it had no particular facilities or resources. However, considering the cultivation of cherry blossom trees and erection of a monument commemorating Japan’s victory in its war against Qing China (1894-1895), the Japanese regarded this place as their spiritual focus and as a base for their aggression against Korea.

Entering the twentieth century, Japan won the Russo-Japanese War in 1904 and signed the Treaty of Portsmouth in 1905, taking control of Korea’s sovereignty and diplomatic powers. In 1906 it installed the Residency-General and opened the Executive Bureau, suddenly increasing its power and proceeding quickly with its plan to colonize Korea. The resident-general conspicuously created and announced the Park Regulations, making clear the goal of reconfirming the park lands and claiming the grounds around the shrines as sacred sites. The following points were made with specific reference to Namsan Park:

- with the exception of the Jangchungdan (then Korean Memorial Hall), Office of Post and Communication, Japanese military headquarters, all lands attached to the Residency-General’s office, the Japanese parks and privately owned land, the entire area on the north side of Mt. Namsan in Gyeongseong will become “Gyeongseong Park,” and
- within the park, any injury to or cutting down of trees, picking of plants, or capture of birds or animals is forbidden.
While unilaterally enforcing these regulations, from 1907 the Japanese authorities actively rebuilt and expanded the facilities inside the park. In particular, the expansion of the park facilities was linked to the projects in honor of the Japanese crown prince's visit to Seoul for the Gyeongseong Exposition held from September to November 1907. 39

In addition to the Hwaseongdae Park and Gyeongseong Park, another one—Hanyang Park—was also established on Mt. Namsan. Work on the park was started in 1908, the year when Hwaseongdae Park was established, and was opened in 1910. This park can be seen as part of the Japanese scheme to take over Mt. Namsan. At the beginning of 1908, Japanese residents entered into an agreement with Song Byeong-jun, minister of agriculture and commerce, and Jo Jung-eung, minister of justice, to take over 30,000 pyeong (99,000 m²) of land on the northwest side of Mt. Namsan under a permanent lease at no cost, offering the justification of turning it into a so-called "Korea-Japan joint park." Thirteen promoters behind the project, including Ikeda Nakajiro, began to collect donations, and having received the authorization of Gyeongseong commissioner Miura Yakoro, began construction work for the park in the spring of 1908. The opening ceremony was held nearly two years later on 29 May 1910. However, the truly regrettable thing is that then Korean Emperor Gojong dispatched a royal envoy with a plaque naming the park "Hanyang Park." Although a denominating monument, two Korean-style pavilions, a rest area, and an observatory were constructed, the park was rather simple. With all responsibility and control over the construction and management of Hanyang Park undertaken by the Japanese residents, the site for the future Namsan Park was prepared.

Japanese residents took charge of both Hwaseongdae Park and Hanyang Park, planting more cherry blossom trees in the wooded areas to give the area the appearance of a park. Later both parks were combined to form Namsan Park, and in 1916 the Gyeongseong Bu put forward a plan to build Namsan Park. 40 According to this plan, in addition to an orchard, livestock zoo, and botanical garden, a wild botanical garden and several exercise areas would be created and the road leading to the park would be improved to make it suitable for vehicle traffic. However, by creating the Chosun Jingu (Shinto palace; Japanese shrine) over the entire area of Hanyang Park in 1925, the colonial government erased the plan completely. While expanding the grounds and sacred area of the Chosun Jingu and making it a sacred site, almost the entire northwest slope of Mt. Namsan became the shrine. At first the equation of "park = shrine" held fast, but gradually the park and shrine came to be strictly separate.
Under Japanese rule, NamSan Park presented the joys and pains to Koreans. Due to the increasing enforcement of worship at shrines throughout the 1930s, the park became an object of resentment. Yet, the park was also a place of enjoyment sought out by ordinary people. Right after liberation the buildings within the precinct of the shrine were torn down, leaving only the site, and later NamSan Park as it appears today was remade.

III

Parks and Green Spaces of a Colonial City:
1910-1945

BLOCKING THE LAND'S FLOW OF ENERGY

It has been well established that when Japan occupied Korea and established colonial rule, it also launched a kind of "aggression through geomancy." Many people had long made efforts to bring these facts out into the open, but it was a government-directed investigation in 1995 as national project of Commemorating Fifty Years After Liberation which revealed that metal stakes had been driven into vital energy points at thirty sites on South Korea's famous mountains, and that the names of 200 places had been intentionally altered. Most of these pernicious efforts to obliterate the spirit of the nation through geomancy by driving stakes into mountains to block the flow of auspicious energy were inflicted on Bukhansan, which had been the guardian mountain of Seoul. Twenty-two stakes, each 40cm long and 3cm thick, were driven into the peak rock of Baekundae Summit. In addition, the Japanese committed a range of other atrocities in their attempts to kill the nation's spirit, such as building roads along mountain ridges,
digging up holes and burning them, burying urns, and stabbing holes into the mountain.  

In this way, colonial policies relied on parks and green spaces as a means of breaking the will for independence and killing the national spirit. First, let us look at the atrocities committed by turning sacred Korean sites into parks. As described above, when Japan first launched its invasion of Korea, its first creation was Namsan Park. This park was a façade for the construction of a Shinto shrine, rather than a place for the rest and enjoyment of local citizens. Mr. Namsan was specifically chosen as the site for the Japanese shrine because it is one of Seoul’s cardinal mountains, commanding views in all four directions, and because it looks down on the royal palaces and is visible to people from all over the city. Furthermore, in 1925 the ancestral shrine (Guksadang) housing the defense of the nation spirit situated at the peak of Mt. Namsan was torn down.  

Such violence did not stop at Mt. Namsan, and must be seen within a larger context that included the damage inflicted on the Sajikdan Shrine and its change into a park. Sajik was a sacred site where the Guksadan, a shrine to house the guksajishin (national god of land), and the Gukjikdan, a shrine to house the gujkijishin (national god of harvest), had been built in 1394, as early as the third year in the reign of King Taejo, who was the founder of dynasty. For 500 years thereafter, this site was a spiritual center of the Chosun dynasty. However, in 1908 under pressure from imperial Japan, this sacred site began to suffer destruction and deformation when the Korean Emperor Sunjong reduced the number of Jesa rituals to only two per year. In 1922 Japanese imperial government deliberately desecrated this site by designating a bygone historic site, and constructed a new archery ground on it with the construction of the Hwanghaejeong arbor relocated from Gyeonghui-gung Palace. The project of defaming this once sacred site was completed in 1924 when it was turned into a park. The Gyeongseong Bu (colonial municipal government of Seoul) received jurisdiction over this area from the colonial government and installed roads around the mountain, a pavilion, benches, and lights, revamping it into a park. In 1932, even some 500 pyeong (1,650m²) of land on the north side was marked off from the park and given as the site for the Maedong Public Primary School. In 1940 the area was officially designated a park, but we have to regard this as another scheme on the part of imperial Japan to deny the legitimacy of the Chosun dynasty and break the flow of the land’s energy.  

Jangchungdan was also subjected to similar ordeals. Following the establishment of the Daehan Empire of Korea, Jangchungdan
was built as a state shrine in 1900 where 'jesa' or rituals could be performed for national martyrs and was central to instilling a sense of patriotism that was meant to safeguard Korea's ebbing sovereignty. In particular, that shrine was a direct provocation of the Japanese imperial authorities, since that was dedicated to the civil and military officials sacrificed during the 1892 military revolt perpetrated by the Japanese and the Eulmi Incident when the Japanese assassinated Myeongseong Empress and tried to establish a pro-Japanese government in 1895.

Therefore, in 1908 the Japanese Residency-General put pressure on the Korean Emperor Sunjong to cease performing 'jesa', and the stone monuments inscribed by the minister-martyr Min Yeong-hwan were left scattered around the forest. In June 1919, soon after the March First Independence Movement, part of this area was made into a park under the jurisdiction of the Gyeongseong Bu. The Japanese also planted several thousand cherry blossom trees—their national flower—and erected monuments eulogizing the services of Japanese subjects and statues of the naval heroes with the intention of effacing the Korean anti-Japanese feeling. Adding to the indignities, in 1931 on the east side of the Jangchungdan, Bakmun-sa Shrine dedicated to Ito Hirobumi who was a ringleader behind the invasion of Korea and the first Government-General, was erected by relocating buildings and gate of the royal palaces.

Jongmyo Shrine, which was one of most important state shrines and housed the ancestral tablets of the Chosun dynasty monarchs, was also made the subject of attack. Originally Changdeok-gung Palace, Changgyeong-gung Palace, and Jongmyo formed a single unit without connecting roads, but the Japanese city planning called for construction of a road (now Yulgokro) on the pretext of improving traffic conditions, with the result that Changgyeong-gung was cut off from Jongmyo. Not only did this move destroy the Korean impetus for independence by turning the palace into a zoo and botanical garden and directly challenge the authority of Jongmyo and therefore the monarchy itself, but it also marked the first step in cutting off Changdeok-gung Palace from the green spaces that extended out from Eunghong, the small mountain behind it.

The Japanese authorities even went as far as turning Korean royal burial sites into public parks. Hyochang Park is a prime example of this. This site was originally called Hyochangwon, and was a burial ground planted with lush pine groves. It contained the tombs of royal family members of King Jeongjo (1776-1800). Interest in this site began during the Sino-Japanese war of 1894 when Japanese military forces were billeted in front of Hyochangwon, and in 1924 a portion of Hyochangwon covering 81,460 pyeong (268,818m²) was designated park land, and with construction of a circling drive
and public washrooms, the park was opened to the public. Then in 1940 it was officially designated a park by city planning.

For the same reason, Chosun’s palaces with few exceptions suffered assaults throughout the period of Japanese rule. Whether it was the destruction of most of Gyeongbok-gung Palace and construction of office building of the Government-General in its place, the destruction of Gyeonghui-gung Palace for the construction of a Japanese-only middle school, or tearing down Deoksugung Palace and randomly putting up Western-style buildings instead—it was Changgyeong-gung Palace that suffered the most serious damage and insult. According to the city plan put forward by the Gyeongseong Bu in 1930, the palaces of Gyeongbok-gung, Changgyeong-gung and Deoksugung were to be turned into parks respectively named Gyeongbokwon, Changgyeongwon, and Deoksuwon. Converting the palaces into commonplace parks was an effective ploy in several respects. While we cannot ignore that it would have been “easy” to turn this land into parks, the policy of opening lands held by the royal family to the public fundamentally aimed at making clear the low status of colonial Chosun. At the same time, by providing the public with parks that symbolized modernity, it was an effective way of blinding them to the truth.

Changgyeong-gung Palace is a particularly good example of this process. The palace was originally the site of Sugang-gung Palace, built in the early Chosun dynasty, but throughout the dynasty it experienced successive fires and repairs. In 1907 when Emperor Sunjong ascended the throne after the forced abdication of Emperor Gojong, the official residence was changed from Deoksugung Palace to Changdeok-gung Palace, and refurbishing of the adjacent Changgyeong-gung was also begun. However, with the establishment of the Japanese Residency-General in September 1909, a project to turn Changgyeong-gung Palace into a museum and zoo-botanical garden was launched, and in October of the following year the first exhibition was completed and opened to the public in November. In February 1911 the name Eowon (royal garden) was changed to Changgyeongwon, and free entrance was granted the general public. In 1912 a Japanese-style structure was built and was subsequently used as the museum.

The zoo was built inside the Seonin-mun Gate and on the site of the Borugak, and the botanical garden at the Chundangdae. A pond was made in the demonstration farm at the front of the botanical garden, where lotuses were planted and fish were raised. As the lotus pond, also near the hothouse, was situated in front of the Chundangdae, it was named Chundangji. There was also a Japanese-style pavilion to the south of the hothouse and on the north edge of the lotus pond, which appears to have been used as a Korean restra-
rant (merrymaking place), and admission to it was restricted. This later became the most popular park and public garden in colonial Seoul. In particular, for the pleasure of the fallen emperor during his strolls, the cherry blossom trees transplanted from Japan around 1912 were in full bloom, and without fail every spring of the entire colonial period, especially in the evening, crowds would come to see the cherry blossoms.\(^{40}\)

**PARKS AND GREEN SPACES AND THE MODERN CITY PLANNING**

It is no exaggeration to say that modern city planning for Seoul made parks and green spaces by Japanese and for Japanese. Independence Park, Pagoda Park, and Namsan Park were all created at the end of the Chosun dynasty, but Independence Park was destroyed with the onslaught of Japanese imperial control. During the 1910s and 1920s city parks were established, albeit sporadically, and at the end of 1928 Seoul had seven parks covering 369,671 pyeong (121.9ha), and by the early 1930s there were altogether 21 parks covering 116 hectares. Table 7.1 lays out parks and green spaces of Seoul in 1928. At that point, Hanyang Namsan Park, as the site of a Japanese shrine, had not yet been integrated to form Namsan Park, and Pagoda Park, under the Japanese-given name Tappol Park, was first opened to the public, although admission was restricted. As mentioned above, Sajikdan Park, Jangchungdan Park, and Hyochang Park were all created a part of Japanese efforts to weaken the Chosun dynasty.

Of the parks created around this time, one worth noting is the Gyeongseong Stadium. While it is called a "stadium" (called undongjang, it probably corresponded less to our contemporary idea of a sports facility and instead was more like an athletic park. Rather like today's Dongdaemun Stadium, it was cutting edge for its day, including an athletic field with spectator stands for matches of Western sports, such as soccer, baseball, and tennis, which were making their first appearance. Another park, named Railway Park was situated on what is now Hangangro street, covering 7,588 pyeong (25,000m\(^2\)). Unfortunately, however, no traces of this park remain today. There was another park that had a particular character, and was presumably a green space with an open public square. Called Suwon, it was an area for walking situated along Taepyeongro street, and considering the area it covered and its facilities, it appears to have been a modern green space.\(^{41}\) There were also "walking ground" at Samgakji, which was presumed an open square and some
Table 7.1

Seoul's Parks in 1928

<table>
<thead>
<tr>
<th>Type</th>
<th>Name</th>
<th>Location</th>
<th>Area (pyeong)</th>
<th>Opened</th>
<th>Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Park</td>
<td>Hanyang &amp; Mt. Namsan</td>
<td>Namsan-jeong &amp; Waawoeung-dae-jeong</td>
<td>84,325</td>
<td>Aug. 1912</td>
<td>Bandstand, plaza, arbor, monument, fountain, excursion road, strolling paths, public toilets, cherry blossoms, shrubs</td>
</tr>
<tr>
<td></td>
<td>Jangchung-dan</td>
<td>Dongsae-jeong &amp; Seosae-jeong</td>
<td>140,104</td>
<td>Sep. 1919</td>
<td>Sports field, athletic center, pond, strolling paths, bridge, stream, arbor, lights, public toilets, lawns, cherry blossoms, shrubs</td>
</tr>
<tr>
<td></td>
<td>Sajikdan</td>
<td>Sajik-dong</td>
<td>68,832</td>
<td>May. 1924</td>
<td>Of the facilities in the park, the most important was construction of an excursion road</td>
</tr>
<tr>
<td></td>
<td>Hyoung-dong</td>
<td>Keum-jeong</td>
<td>28,246</td>
<td>Aug. 1924</td>
<td>Same as above</td>
</tr>
<tr>
<td></td>
<td>Pagoda</td>
<td>Jongro 2 jeongmok</td>
<td>3,333</td>
<td>1887</td>
<td>Bandstand, pagoda, flowerbeds, pond, stone monument, arbor, excursion road, lights, water, hothouse, cherry blossoms, evergreens</td>
</tr>
<tr>
<td></td>
<td>Railroad</td>
<td>Hangang-tong</td>
<td>7,558</td>
<td>Oct. 1915</td>
<td>Garden</td>
</tr>
<tr>
<td></td>
<td>Gyeongseong Stadium</td>
<td>Hwangseum-jeong 6, 7 jeongmok</td>
<td>43,031</td>
<td>Oct. 1925</td>
<td>Athletic field (baseball, soccer, tennis, etc.), grandstand, plaza, rest area, public toilets, lights, telephones, offices, etc.</td>
</tr>
</tbody>
</table>

| Walking grounds | Suwon (Arbor Garden)       | Taepyongro 1, 2 jeongmok | 543        | April 1923 | A sidewalk was laid down in the area of Suwon, and around the perimeter were triangular and circular drains emptying into the military camp. Three electric lights were installed in the middle of the grounds. |
|                 | Suwon                      | Taepyongro 1 jeongmok & Singyo Bridge | 1,250 | 1914 | Evergreens, public toilets, lights |
| Walking field   | Suwon                      | Sinjongsa, Hangangtong & Samgakji | 500 | 1908 | No plaza facilities |

Total Subtotal: 369,671

Walking grounds Subtotal: 2,292

Total: 371,964

green spaces in a rotary.
These parks listed in Table 7.1 represent the status of park in Seoul as of 1928, and were the product of city park plan at that time. They were the first, albeit inadequate, park plans. In October 1912 the colonial government announced the "a matter for local municipal improvement and expansion," and in November proclaimed the "Gyeongseong Municipal Improvement Plan" and the next year the "Building Supervision Regulations." The former was a project to expand and straighten the major arteries of the traffic networks that had fixed routes and widths, while the latter was a law to regulate the building construction. Until the promulgation of the Chosun City Planning Decree in June 1934, these plans provided a single system that dominated all planning and construction.
in Korean urban areas. However, from the early 1920s the Gyeongseong Bu public officials and people involved in Seoul’s economic circles emphasized the need to establish a city plan, and in 1926 wrote Seoul’s first—albeit informal—modern city plan, called the "Gyeongseong Bu City Plan." After some revisions, it was released in September 1928 as the "Survey Report of Gyeongseong City Planning." The plan designated 1,227,481 m² (about 371,964 pyeong) of land as "park district," as was the 1928 park plan mentioned above. Although this was the first park plan, parks that had been created until that point stopped short of being documented. What should be noted here is that unlike today’s parks, which are city planning "facilities," at that time they were considered a form of service area and thus were distinguished as park "district."

The "Gyeongseong City Plan (1929-1959)," announced in 1930, was a revised, supplemented version of the 1928 survey report. The plan, put forward by the Government-General and not by the Gyeongseong Bu, was finalized, but without any corresponding legislation it could not be implemented. The plans for parks in these city plans are as follows, and it is possible to see a considerable development in the concepts and methodology for planning parks. Furthermore, this was for the most part done with reference to Western precedents.

1) The concept and function of the park were clearly stated. The park was supposed to be a "free space" preserved within a dense urban area, and to have two basic functions. First, it served public health, and second, taking the example of the Great Kanto Earthquake in Japan, it could function as a refuge in the event of a disaster. The first is identical to the basic functions of parks as adopted from the West, but the second is clearly derived from a specific situation in Japan.

2) It established five categories of parks: playgrounds, neighborhood parks, athletic parks, city parks, and natural parks.

3) It established a standard park area and an area for each plan index. The amount of required park space was calculated according to a target per capita ratio. That basis differed according to the park category: for city parks it was 1.5 m² per capita, 2.0 m² for athletic parks, 0.7 m² for neighborhood parks, and 5.0 m² per child under the age of twelve. Park area according to this target totaled 3,065,000 m², with 1,065,000 m² of city parks, 497,000 m² of neighborhood parks, 983,000 m² of playgrounds, and 319,000 m² of athletic parks.

4) However, the area actually allotted as park space exceeded the target area calculated by this index. Including the three palaces — Gyeongbok-gung, Changgyeong-gung, and Deoksugung — and Namsan Park, Pagoda Park, and so on, a total

307 | Seoul's Parks and Green Spaces in the Twentieth Century
of thirty-eight parks were planned, covering a total of 5,528,600m². Moreover, about 14,750,000m² of woodland 70-meter above sea level was set off as a natural park, bringing the total to 20,278,600m², or 18.6 percent of the total city area.

However, at the time that this plan was made concrete, the department of public works in the Bureau of Home Affairs of the colonial government appears to have been getting ready to enact City Planning Decree while continuing with research. Accordingly, the plan was incorporated into the city plan of 1936 with very few changes. However, announcement of a legally effective determination took a few more years and was not made until 1940. The Government-General’s Public Notice No. 208 of 12 March 1940 was the first announcement of a planned city park in accordance with modern city planning. In this notification the categories and indices of parks had changed as follows.

1) The categories of parks had changed slightly from the previous plan. There were now four types: grand parks, neighborhood parks, playgrounds, and boulevard parks. The categories of city parks and athletic parks were removed and two new types — boulevard parks and grand parks — were added. Gyeonggunggung Stadium — previously an athletic park — was reclassified as a grand park.

2) As the city met with difficulties in purchasing large plots of land in the downtown area, it attached greater importance to the grand parks and neighborhood parks and planned the following. The city announced the creation of eighteen grand parks, ranging in size from 153,000m² (Singil Park) to 1,461,000m² (Eungbong Park); twenty-three neighborhood parks from 1,200m² (Sindang Park) to 234,000m² (Gaem Park), and eighty-six playgrounds. Boulevard parks linked parks together, and thirteen boulevard parks were announced, including the Mt. Namsan Boulevard that would join Namsan Park to Hannam Park. The total area of all these parks would reach 13,807,730m² (Table 7.2).

Of particular note is that together with the park plan, the first thing to be designated to preserve scenery was a “scenic district.” In 1941 about 29,268,000m² was set aside for this purpose. However, most of these parks did not make it past the planning stage and were never actually constructed. In the 1930s and 1940s Japan entered the Sino-Japanese War and the Second World War, and so the failure to create parks and green spaces in its colony according to plan was easy to see. By 1940 the Government-General had announced the expansion of 140 parks altogether, but by liberation had created only ten. However, the plan put forward at this time was not reviewed
and revised until the 1960s. Interestingly, some places benefited from the failure to create many of these planned parks. When the Japanese designated park land in 1940, they also included the land for private schools established and operated by Koreans, adroitly creating a scheme for exerting control. Typical examples of this plan include Boseong Middle and High School and Gyeongsan Middle and High School, which were placed inside Waryong Park, and Jungdong Middle and High School and Susong Vocational High School, which were put inside Susong Park.

PARKS AND GREEN SPACES DURING THE WAR

In 1940 new emphasis was placed on making new open space within the city as part of the evacuation policies designed to reduce wartime damage. Originally in Japan, parks and green spaces were designed as spaces for people to take refuge when earthquakes and other disasters occurred, but by the very end of the Second World War, as Japan faced continued defeats, it implemented the so-called "evacuation policy" in its major cities (Kim, In-ho: pp. 199-231). This policy was intended to minimize damage by providing shelter from war or natural disasters in the major cities for residents and their possessions, as well as for important materials and equipment, and in 1945 this policy was applied to the Korean peninsula and put into practice in Seoul. In order to reduce the damage inflicted on Seoul by U.S. air raids, the following evolutions were enforced: 1) evacuation of production facilities—moving munitions factories to other locations to prevent their destruction; 2) removal of buildings—removal of buildings from dense areas and creation of empty lots to prevent fires from spreading; 3) evacuation of people—moving the elderly not directly involved in production, children, and pregnant women to reduce casualties and prevent traffic congestion and public unrest; and 4) evacuation of necessities—moving all supplies necessary for

<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
<th>Area (m²)</th>
<th>% of Total</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grand Park</td>
<td>18</td>
<td>8,656,000</td>
<td>62.7</td>
<td>Namsan Park, etc.</td>
</tr>
<tr>
<td>Neighborhood Park</td>
<td>23</td>
<td>2,380,000</td>
<td>17.2</td>
<td>Pagoda Park, Sajik Park, etc.</td>
</tr>
<tr>
<td>Playground</td>
<td>86</td>
<td>427,000</td>
<td>3.1</td>
<td>Dorim Park, etc.</td>
</tr>
<tr>
<td>Bouleard Park</td>
<td>13</td>
<td>2,349,000</td>
<td>17.0</td>
<td>Namsan Boulevard Park, etc.</td>
</tr>
<tr>
<td>Total</td>
<td>140</td>
<td>13,812,000</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
the human evacuation.

Of particular note is the removal of buildings. In densely built and populated areas, buildings were pulled down to create large open areas known as "air defense spaces," and to control and prevent fires, long and wide "air defense zones" were made as roads for air defense and fire-fighting vehicles. The air defense zones were first designated near Jongro, Jongmyo, and Gyeongbokgung Station, and later were established in Jung-gu, Yongsan-gu, Jongno-gu, and other areas with a high concentration of government offices, public facilities, and commercial buildings. Around each facility, an area with a radius of 30 to 50 meters was designated as an air defense zone to protect the facility from fires or air raids. Therefore, areas within 50 meters of a major road or railway line within Gyeongseong were cleared of buildings. Empty spaces that appeared with this evacuation were largely intended to prevent fires, but from another perspective they also meant the creation of open space within the city. Although they originated as open space created by force, had they properly managed after liberation they could have been maintained as very useful open spaces. It is unfortunate that this resource was lost.

Parks and green spaces fell into use as supply sites for war commodities. At the close of the war, the Japanese were making desperate efforts to supplement the lack of war supplies, going so far as to take Koreans' household supplies. Many Koreans were conscripted and put in wooded or grassy areas and forced to gather pine wood and resin. Gyeongseong has less of this space than the provincial towns and villages but its residents were not exempt from such labor. Woodlands around the city became even more decimated.
Upheavals in Seoul and the Destruction of Parks: 1945-1960

FROM LIBERATION TO THE KOREAN WAR

As elsewhere, in parks and green spaces the vestiges of Japanese imperialism showed tenacity in the turmoil immediately following liberation. As seen above, the Western concepts of the park entered Korea during the progressive period of the late nineteenth century and the first legal clarification of the term "park" occurred in 1934 with the Japanese "Gyeongseong City Planning Ordinance (this is now the Seoul Metropolitan City Plan)." Based on the Chosun City Planning Decree, in 1940 the Gyeongseong Bu Urban Park Plan Notice was finalized, providing the first legal support for parks. Here, it was determined that parks "are the most important facilities to reach the planned goal of guaranteeing public health; contribute to public well-being, recreation, the education of our youth, and beautiful scenery; are indispensable as spaces of refuge that prevent fires from spreading; and in wartime are important for protection from air raids." This legislation emphasized the material aspect of parks and in particular mentioned their function as spaces of refuge during wartime or national emergencies.

Based on this legislation and in accordance with the Gyeongseong Bu Urban Park Plan Notice, a total of 140 parks were planned but due to the Pacific War and other extenuating circumstances, Korea was liberated without most of these parks ever coming into existence. The system and plans for parks, lacking equipment or improvement, followed the Gyeongseong Urban Planning Ordinance and the Gyeongseong Bu Urban Park Plan Notice, almost to the letter. Moreover, this legislation lasted without revision for twenty years after liberation, and it was only in 1967 that for the first time "Parks Law" was formulated. As such, the turmoil faced by Korea and by Seoul during those twenty years needs no explanation. The 1967 Parks Law stated that "a park protects natural landscapes, and contributes to the improvement of public welfare, recreation, and mental health," emphasizing a more ecological approach to health and welfare over the stability of former plans, and defining parks as passive public welfare resources. Still, it was a long way from the more modern concepts of parks as dynamic spaces for recreation.
Later in 1980 the City Parks Law stipulated that “city parks are a city planning resource created in accordance with the city planning laws, and contribute to improving public welfare, recreation, and mental health, and by providing spaces for city residents to utilize in their leisure activities, with the aim of soundly developing urban areas and maintaining public peace, order and welfare, they are the main green spaces created by local governments.” This is a comprehensive concept for a city park, including health and sanitation, recreation, cultural and social aspects, and public welfare (Table 7.3)

The legal definition of a park underwent changes, reflecting the
changing demand for parks in different decades. Table 7.4 shows the changes in the area of Seoul’s parks since liberation. Koreans now took control of designing and creating parks and green spaces according to their own needs and desires.

Liberation brought to Korea both opportunity and crisis. The names Hanyang, Hanseong, and Gyeongseong were removed in favor of Seoul, which once again became Korea’s capital. However, as it was the center of the turbulence that followed liberation, Seoul was still a long way off from becoming a settled and stable capital for Koreans. At liberation, the parks in Seoul had been created under Japanese rule. A total of 142 had been planned but only ten were actually made into parks. Of these, there were six ordinary parks, and excluding Pagoda Park, which was the legacy of the Daehan Empire of Korea, all were linked to Japanese colonial policy: Namsan Park, Jangchungdan Park, Hyochang Park, Sajik Park, and Samcheong Park. In addition, Seoul had one playground (Acheong Playground, now Inhyeon Park), two athletic parks (Gyeongseong Stadium, now Dongdaemun Stadium, and Railway Park), and one boulevard park.

Together with liberation, the return of overseas Koreans, northerners, and refugees from North Korea, Seoul’s population experienced a sudden increase. A profusion of unlicensed dwellings appeared, lending to Seoul’s disordered and uncontrolled expansion. Accordingly, parks that had been created or planned during the colonial period were encroached upon, or destroyed altogether.

PARKS IN TROUBLE

Seoul’s city planning sufficiently recognized the need to reorganize the government after it was established, but the chaos preceding the outbreak of the Korean War made it impossible to put this into action. However, rehabilitation required by war damage brought this opportunity, and in the midst of the war, the government was able to announce changes on 25 March 1952. However, parks underwent no change after the war was over, and from 1955 some sporadic changes began. In that year, Jangchung Park and Namsan Park were expanded in order to include the nearby forest reserve. In 1956 a portion of Yaksin Park of the Sayusin (6 sacrificed, loyal vassals) cemetery was designated a neighborhood park, although this was not a full-scale reorganization. Later, in 1958, the addition of Yongma Park and Ttukseom Park was announced, reflecting the rapid growth in the eastern sections of Seoul.

At the end of the decade in 1959, decisive action was at last
taken on parks planning. On 12 March the Ministry of Home Affairs released Public Notification No. 461, detailing its determination of changes to forty-two parks and specifically identifying unreasonable or anomalous parks. This included eliminating parks that, despite being designated as parks, had lost their park functions due to proximity to roads or commercial streets, turning private property into national or public government offices, or rezoning areas that required enormous funds to construct parks in densely built areas.

The task of building national cemeteries for the heroes who had been killed in action during the Korean War was pressing once the war was over. The national war cemetery, now called the National Memorial Cemetery, located on the slope of Gungjakbong in Dongjak-dong, is one of a handful of propitious burial sites. Construction began on 1 March 1954 and on 30 October 1954 the Tower for the Unknown Soldier and the Gate for the Unknown Soldier was completed, and on 20 July 1955 the Bongan-gwan (now the Memorial Hall) was completed. On 16 January 1956 the first Unknown Soldier was interred in the tower, and on 2 April 1957 191 soldiers were buried in the cemetery itself. Since then, the grounds have continuously been landscaped and improved.59

However, in looking at the 1950s, design and creation of ordinary parks that did not have a specific purpose at the national level was not just passive; parks were destroyed or partially dismantled. Some cases underwent a formal and legal decision-making process defined by city planning law, but in fact there were many cases of parks being resolutely taken over or damaged by presidential decrees or reference to government imperative. This shows not only the confusion and disorder of the post-war period, but also its political and social instabilities. The major causes of this were not just pressure applied by power elites, but also low awareness and administrative abuses on the part of the bureaucratic authorities and unorganized behavior and lack of awareness among the public.59 Furthermore, scarcely any financial resources were set aside for purchasing land and creating parks.

The first formal destruction of a park was in 1955, when a part of Cheongryang Park was removed to make way for reconstruction of a residential area, and part of Hannam Park was given for a foreigners' residential compound. In 1956 Gondeok Park was dismantled and replaced by a school, and in 1957 Namsan Park was also made into a foreigners' residential area. There were even more informal inroads into park space. Under Japanese colonial rule, if previously existing school lots had been designated as park land, in the 1950s previously existing parks were frequently turned into schools: Namsan Park, Jangchungdan Park, Wau Park, Sageun Park, Ahyeon Park, Geumhwa Park, Sajik Park, Banggwan Park, among others.
Furthermore, government agencies forcibly took possession of parks, turning Namsan Park into a military compound and broadcasting station, and Daebang Boulevard Park into another military compound.

No less than these encroachments upon parks and green spaces were refugees and the homeless. Refugees, other people who had suffered losses from the war, and poor farmers migrating from rural villages with nothing but the clothes on their backs, came to Seoul in search of a livelihood or the means to survive; they took over the parks and green spaces which had been set aside but left in a state of neglect, damaging them and crowding them with illegal make-shift shacks. These settlements grew into the so-called "moon villages" (poor settlements built on mountain slopes); although such settlements were inevitable, at this period the loss of a base that could help form a healthy environment in Seoul is to be deeply regretted.

Nationwide Modernization and the Emergence of a National Parks Policy: The 1960s-1980s

RAPID INDUSTRIALIZATION AND URBANIZATION

If we define parks as the product of Western modernization, with the introduction of parks into Korea we must take into account a different modernization process. The premodern West experienced the civil revolution and the industrial revolution, and as a basis that could give rise to such changes had already been laid, the origins of modernization can be found internally within Western societies. In Korea, however, the forces behind modernization were external. In
particular, as the majority of modernization processes were linked to Japanese colonial policies, modernization itself became the source of significant contradiction and inequity.

First, let us examine the 1960s. Following the successive waves of legislation for construction that came on the heels of the May 16 coup d'état in 1961, the history of Korea's city parks faced radical changes. Laws that had been enacted under colonial rule and continuously applied since were abolished and, as a part of the legislation of new laws, the City Planning Law, among others, was revised. This was not a just revolutionary reorganization of old, simple laws, but rather was a project to systematically plan and manage Korea's national space and urban environment as they underwent rapid changes. From 1962, a series of improvements were made to Seoul's city parks. This park improvement involved both destruction and redesignation of park land. Destruction was targeted at park land where there were important public facilities, and park land which had to be abolished due to projects creating residential areas as national or public land. In the former case, while much fault lies with the delayed construction of parks, but the greater blame rests on the problematic practice, common at the time, of indiscriminately building public facilities on park land.

Parks newly designated as neighborhood parks included the old palaces—Deoksugung, Gyeongbok-gung, Changdeok-gung, Changgyeong-gung—and Jongmyo Shrine. The reason behind this redesignation was that the old palaces had already filled the function of parks, but it is also worth considering the problems of consciousness that were a holdover from colonial times.\(^5\) The military cemetery in Dongjak-dong was promoted to the status of memorial park, a redesignation which should have come earlier. However, the point deserving attention is that at this time, many playgrounds or neighborhood parks began to be partially or completely destroyed.\(^6\) This is a vivid indicator of Seoul's rapid explosion.

The category of green spaces was also undergoing drastic changes at this time. Management of the woodland preserves, which had been handed down since the colonial era, radically changed. In an announcement made by the Ministry of Construction in December 1963, out of twelve woodland preserves covering an area of 6,682,220 m\(^2\), approximately three-quarters (4,988,690 m\(^2\)) was made into parks, and the remaining portion (1,693,550 m\(^2\)) into scenic zones.

In the mid-1960s many city development projects were initiated in Seoul. As a consequence, no small number of city parks were destroyed. In 1965, parts of Jangchung Park, Naksan Park, and others were given over to provide land for elementary schools, and Seorin and Sungin Playgrounds were demolished altogether.\(^7\) How-
ever, as new concepts were being introduced in city planning, in Seoul the idea of a "parks and green spaces system" first emerged in 1967. The idea of "using the natural terrain—Seoul's abundant mountains and valleys—as parks and green spaces" gained currency, and "in order for the arrangement of parks to protect the natural environment against devastation, first a system of large parks needs to be established, followed later on by neighborhood parks and playgrounds" (Ministry of Construction Public Notification No. 10, 16 January 1967). However, the failure to do so was not only because, as of 1965, there were no more than fifty-one equipped parks, but also that of the twenty-three neighborhood parks (covering 2,812,533m²), which were directly linked to people's daily lives, only fourteen (1,276,627m²) were actually equipped, and of eighty-five playgrounds (398,181m²), only thirteen (24,600m²) were equipped.

The destruction of parks continued well into the late 1960s. Some were removed to make space for public facilities; some were destroyed to redevelop illegal residential areas or build houses for the people who were forced to move; and others were destroyed to recognize existing development or make way for new development. The parks that suffered the greatest amount of disposal and destruction were the playgrounds. This was largely because playgrounds did not cover large areas and tended to be located in central districts like Myeong-dong, Namdaemunro, and Supyo-dong, and because they were not built or used as parks. Another reason was to make room for construction of public buildings for government authorities like the Central Intelligence Agency, the Bureau of Audit, and the military Chief of Staff. In addition, this was also the period when small apartments that have been or are soon to be removed were built all together on the sites of Naksan Park and Wau Park. Such trends illustrate the massive nationwide construction and urban development of the

<table>
<thead>
<tr>
<th>Year</th>
<th>1940</th>
<th>1955</th>
<th>1965</th>
<th>1969</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>No.</td>
<td>Area (1000m²)</td>
<td>No.</td>
<td>Area (1000m²)</td>
</tr>
<tr>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Grand Parks</td>
<td>18</td>
<td>8,656</td>
<td>20</td>
<td>20,533,043</td>
</tr>
<tr>
<td>Neighborhood Parks</td>
<td>23</td>
<td>2,380</td>
<td>23</td>
<td>2,710,273</td>
</tr>
<tr>
<td>Playgrounds</td>
<td>16</td>
<td>427</td>
<td>69</td>
<td>320,341</td>
</tr>
<tr>
<td>Boulevard Parks</td>
<td>13</td>
<td>2,349</td>
<td>12</td>
<td>2,071,000</td>
</tr>
<tr>
<td>Memorial Parks</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>140</td>
<td>13,812</td>
<td>124</td>
<td>25,734,657</td>
</tr>
</tbody>
</table>

| Seoul's Parks and Green Spaces in the Twentieth Century | 397 |
1960s. It even seems that regard of parks at that time was so low that they were seen less as indispensable resources for the urban environment and public welfare than as a kind of unused space.

Moving into the 1970s, the damage and destruction of parks continued unabated. However, in the midst of this a number of parks were reconstructed, including Seosomun Park in 1973, Dosan Park from 1973 to 1975, Nakseongdae Park and Dongmyo Park in 1975, and Yeouido Sisters Park in 1974. From the middle of the 1970s on, people experiencing an urban lifestyle that was rapidly becoming fuller and more complex began to awaken to a new environmental consciousness and developed slightly stronger values regarding the role of parks and green spaces. Reflecting these changes, in 1977 a more progressive parks plan was presented which was to manage Seoul's system of parks in accordance with a new concept of the park. The results of the new plan brought several important changes.

First, although they appeared as a result of changes to the city planning laws rather than the parks plan, the types of parks were modified. Previous categories—the natural park, common park, neighborhood park, boulevard park, memorial park, playground, and athletic park—were consolidated into four categories: the natural park, neighborhood park, memorial park, and playground. At the same time, a system giving each of these redesignated parks a number was instituted. Second, at this time a parks system that tried to adjust to the rapidly progressing urbanization was put forward. As city planning projects, such as infrastructure like roads and water systems and the creation of new urban districts, started to arise on a large scale, parks were consolidated, newly established, and abolished. Although the number of parks fell from 144 to 138, their area rose from 156,235.157m² to 173,796.382m² (A History of Seoul's City Planning: 585-598).

At first glance, however, it seems that parks and green spaces, as an important environmental resource for promoting healthy lifestyles, were rationally established and managed on the basis of scientific knowledge, but in reality they were determined according to the political exigencies of the power elite. The efforts to make and care for parks and green spaces in one period, and neglect, removal or destruction of them in another followed the dominant values of that time and the political and administrative decisions that enforced those values.

In the history of city parks, and even the history of the city itself, the latter half of the 1970s carried a special significance and could marked off as a specific era. This is because from this point, parks became invested with a more particular meaning and they started to be based on a specific theme. On one side, existing parks
were still removed to make way for new facilities demanded by national policy. For example, Seonyudo Park was replaced by a reservoir supplying the city’s water. Cheonggye Park was removed to make room for an expansion of the Korean Institute of Science and Technology, Yeoksam Park was replaced by the Korea Science and Technology Hall, and Bongcheon Boulevard Park was removed to make room for construction of an air force barracks. However, on the other side, for the first time some land was borrowed in order to create parks as required by national policy.

NORTH AND SOUTH KOREA IN COMPETITION

The great increase in Seoul’s parks and green spaces as a result of exchanges and comparisons between North and South Korea is a very interesting point. With the July 4 Joint Communiqué in 1972, the Park Chung-hee government initiated dialogue with North Korea for the first time since the armistice agreement in 1953. The South Korean public also came to know about the urban districts and cultural resources in North Korea, and particularly in Pyongyang. South Korea had economically pulled ahead of the North in the 1970s and the Park Chung-hee government, which had seized power through a coup d’état, wanted to demonstrate that the South did not lag behind in terms of cultural assets either. It was thus at this time that the children’s park first made its appearance.

The land for the children’s amusement park had the royal tomb of Emperor Sunjong’s queen, who was from the Min clan, but at the death of Sunjong in 1926, her remains were moved to Geumgok-ri, Hangeum-myeon, Yangju-gun in Gyeonggi Do in June of that year so that they could be buried together. That site was later used for the Seoul Country Club’s golf course, and in 1970 by presidential decree it became a family park that could be used as a training field by elementary schools. However, it should be seen as more of a theme park targeting children and families. Construction began in 1972 and the park was opened on 5 May 1973. Covered 720,000m², the park had a children’s hall, a zoo, a botanical garden, and a playground, and became the most popular place for children in the 1970s. There were many other facilities to satisfy a child’s curiosity—a swimming pool, skating rink, adventure play facilities, an education hall, outdoor amphitheater, space rocket, and simulated caves. The zoo boasted 700 animals and the botanical gardens had 4,300 species of plants. Today, this park is undergoing an identity crisis. In 1996 the Seoul Metropolitan Government set aside 18.9 billion won to turn it into an eco-park, but
with a new mayor and city council and the 1997 economic recession, the plan was put on the back burner. Some work on improving parts of the park began in 1998, but visitor satisfaction remains at a low level.

This park was not created according to a long-term, systematic parks plan and policy on the part of the municipal government; rather, it was the result of a direct order from the highest authority in the state. However, this became an opportunity and model for creation of comprehensive parks inside the city, and so had a great influence over the development of parks only in Seoul but also around the entire country. With the development of this park and its emergence as a full-scale comprehensive park, Seoul Grand Park was born. With Seoul's rapid development, space had to be found on the outskirts of the city to satisfy the public's desire for places to enjoy nature. Seoul Grand Park was thus designed as a large-scale, rural comprehensive park to provide a space for recreation just outside Seoul while becoming a focal point of that area.

In 1977, the Seoul Metropolitan Government announced its plan to create a park with a zoo and botanical garden that would cover 6,670,000m² on Cheonggyesan, Makgye-ri, Shiheung-gun, in Gyeonggi Do. That August, the basic framework for the park was established and in 1978 the Seoul Grand Park Office of Construction Operations was inaugurated with a ground-breaking ceremony. In May 1984 the park was officially opened. Complete with all the facilities and resources of a park, Seoul Grand Park is Korea's premier leisure space. Its prominent features include a zoo, botanical garden, an amusement park, a lake, a plaza, a youth campground, and the National Museum of Contemporary Art.

Following Seoul Grand Park came amusement parks like Dreamland, Lotte World, and Seoul Land; all built inside the city limits. As commercial amusement facilities, they are not parks in the strict sense, but by specializing in recreation and amusement—two of the functions of parks—they can be seen as a similar type of space.

If Seoul Grand Park and the parks like it demonstrate a cultural capacity, Yeoeuido Plaza was made as a display space of national defense. Construction was completed on 29 September 1971 and the square, which as able to accommodate the formal review of troops held soon after on Military Forces Day, was initially named "May 16 Plaza." While this showed the nature of the military government, which had declared martial law in December of that year and launched its Yushin (meaning Revitalizing Reforms) regime, the name was also a firm stance against the military threat from North Korea, reflecting that era and its strong calls for national defense.

Often rendered useless by floods, the face of contemporary Yeoeuido—meaning "your island" or "your way"—first appeared in
1966 with the Yeouido Development Project. In the initial stages of the project there was no plan to build a plaza, but President Park Chung-hee ordered construction of a plaza that would resemble Beijing’s Tiananmen Square. The square runs on a slightly tilted axis running northeast to southwest. Shaped like a rectangle with its long side stretching for 1,244 meters and the short side for 176 meters, the square covers 378,000m² (114,000 pyeong). Without a single tree or blade of grass, the entire surface of the square is a dreary stretch of asphalt. Except for military parades and large-scale religious gatherings, it has no particular use, but even so, it was brought it closer to the public with the construction of the Hangang Riverside Park in the 1980s. Its name was changed to Yeouido Plaza and it was presented as an open space for young people to ride bicycles or go roller-skating, taking on a new role as urban open space.

By the end of the 1990s and the inauguration of a civilian government, the Seoul Metropolitan Government deferred to public opinion and changed the square into a park. Construction of the new park, called Yeouido Park, began on 10 April 1997 and the park was partially opened on 31 October 1998, and completed in February 1999. It covers a smaller area than the previous square did—only 229,539m² (69,435 pyeong)—but includes a traditional-style forest, lawns, a cultural square, and a natural habitat.

PARKS AND THE DEVELOPMENT OF GANGNAM

In the 1960s the national population rapidly became concentrated in Seoul, Busan, and Daegu, with Seoul having an average growth rate as high as 8.5 percent. As a result, by 1968 fully 13.9 percent of all Koreans lived in Seoul. From 1969 the government began serious efforts to relocate some of the capital’s population and industry to Busan. The structure of Seoul’s urban spaces consequently underwent drastic changes, one of which was full-scale development of the south side of the Han River, which until then had remained relatively untouched, and incorporation of this area into the spatial structure of the city. In this way, restricted development zones were encircled by the city’s perimeter.

In 1970 a policy direction was set down for development of this area, now called "Gangnam (south of river)," to solve some of Seoul’s urban problems by responding to new demands for development, and in 1971 the plans were put into action. Plans for parks were incorporated into the city planning for Gangnam’s new urban districts. Gangnam’s parks built at this time included Dosan Park, Sinsa Park, Nonhyeon Park, and Hakdong Park, with a combined
area of 60,440m². Despite the development area covered fully half of the north of the river, the consideration given to parks and green spaces was extremely low.

Because the type of development in Gangnam relied on city planning projects or development of apartment complexes, there was a technical limitation in securing land in good locations for expansive parks, yet the fault also lies in a failure or refusal to recognize the importance of parks and green spaces. This situation was similar to the development of Yeoueuido in the same period.

In order to facilitate the development of Gangnam, many middle and high schools north of the river were relocated. As much of the population left the city center, the number of school-age children dropped and many elementary schools were closed down, leaving behind empty lots. Despite efforts to turn these empty lots into parks, except for a few new public facilities like libraries, the remaining land was sold to large corporations for office space and was zoned as commercial property due to high land prices. A special opportunity to expand much-needed open space in the city center disappeared.

Nevertheless, the fortunate thing is that in the middle of the 1980s the site of Seoul High School was made into Gyeonghui Park (98,470m²), Hwimun High School into Wonseo Park (10,000m²), and parts of Sukmyeong Girls' High School and Jungdong High School into Susong Park (3,521m²), making a great improvement in
the state of the city center’s parks. However, that lesson came at a high price.

Meanwhile, the first "Green Belt (Development Restriction Zone)" was set down around the perimeter of Seoul in 1971 and in 1973 around fourteen cities nationwide. Totaling an area of 5,397 km², it occupied 5.4 percent of the country. The need for this was made visible by the signs of the concentration of population and industry in the capital, and had been a subject of discussion since 1963 when Seoul’s population passed the 25 million benchmark, but without a legal basis or strong support of the authorities, it as not been realized during the 1960s. In 1971, the president ordered the minister of construction, the mayor of Seoul, and the governor of Gyeonggi Do Province to designate a Green Belt, finally making the plan into a reality. The goal of designating Green Belt at this time was to prevent uncontrolled urban sprawl, preserve the natural environment surrounding the city, and assist in national security. As a response to the frequent provocations threatening national security, such as the infiltration of North Korean commandos into Cheongwadae (President’s Residence) in 1968 and the landing of commandos in Uljin in 1968, these three goals were designed to secure combat space to prevent more of such incidents or to repel enemy advances, and thus were rooted in Korea’s unique political circumstances.

In 1971, the Green Belt (Development Restriction Zone) centered on Seoul city covered 463.8km² and the green belt within Seoul’s urban development district covered 129.4km². Seoul’s green belt was expanded by 23.8km² in August 1972 and again in April 1977, and has remained at 166.84km² since the end of the 1970s. The respective zones today are 167km² and 1,567km²; considering the rapid urbanization of Seoul inside the zone and of Gyeonggi Do outside it, its original size and form have been considerably well preserved. However, confusion ranging from the necessity of the system itself to the basis for designating and regulating it has continued. In 1998 revision of the system was opened for public debate, and at present measures to remove part of the zone and ease some of its restrictions are being put into action. While it is true that there the system infringes on private property rights, it cannot be denied that green belt provides invaluable green spaces.
Parks and Green Spaces for and by the Olympics: the 1980s

In 1982, as part of the campaign for hosting the 1986 Asian Games and the 1988 Olympic games, many projects to create a beautiful environment and living space for Koreans were developed. The environment in areas around the athletic arenas—parking lots, paths for strolling, and streets—and the streets along which the Olympic torch would be carried was improved, and projects to "green" the city and its streets were implemented, such as planting hedges along major streets, and around government buildings and schools.

Olympic Park is situated between the Han River and Namhansanseong Fortress 13 km southeast of downtown Seoul and 3km from the main Olympic Stadium. Its total area covered 1,674,380m². A distance from the Olympic Stadium with the third-century Baekje Mongchon Toseong Fortress at its center, the park was constructed to be a cultural space that gave visitors a feeling of ancient history and modernity.

The area of Olympic Park is shared between an athletic park complex encompassing five athletic facilities and a history park complex surrounding the Mongchon Toseong Fortress, bordered by Memorial Park, Pungnap Street Park, a sculpture garden, and so on. A special characteristic of this park is that it includes both a park and athletic facilities. Seen as a park, it is a pleasant space with athletic facilities nicely arranged inside it; seen as an athletic complex, it has sports facilities with space to exercise and enjoy recreation nicely arranged around it. There is a semicircular plaza with a radius of 150 meters between the Mongchon Toseong Fortress and the sports arenas, and the 88 Square, including a folk culture park, where open air events can be held. This space is organized into concentric circles like valleys and forms a transition zone between the fortress and the arenas, making a center to the park like a vessel that encloses and carries everything of the national sports arenas, symbolizing harmonized form and space or the Yin and Yang.

The Mongchon Toseong Fortress, an invaluable cultural relic of the Baekje era, was incorporated into the Olympic Park with the primary consideration of preserving and restoring it. The fortress
extends over 2,314 meters; on its southwest side it was encircled by
the remains of moat, which was restored to its original form. As a
part of the entire park’s waterscape, this moat effectively gives the
park’s visitors the feeling of a pleasant environment. The fortress
improves the landscaping and plant life of the park, preserving its
natural environment, and with the 100 to 200 meter transition zone,
it does not intrude on the sports arenas. At the same time, as an
important point in Olympic Park, the natural, earth form of the
fortress creates a visual openness and achieves a harmony between
the surroundings and the natural topography of the fortress, giving a
sense of continuity to the landscape. In addition to the scenic value
of the earth fortress, as an exhibition of Korean folk culture for the
entire world, it provides a rest area and every convenience and com-
fort for the park’s visitors.

The Friendship Commemorative Park situated on the western
corner of the park is the park’s primary entrance and as the face of
the park facing the city, commemorates the opening of the Olympics
and symbolizes the Olympic spirit of friendship. It also functions as
a meeting place away from the athletic games where cultural events
can be held. As 88 Square holds events that celebrate local culture
under the theme of harmonizing sport and culture, Friendship Com-

Figure 7.3
Plan of Olympic Park
memorative Park signifies an urban, modern expression of the "spirit of global neighbors." This space is not just the entrance and event plaza, it is also a global memorial park that symbolizes and expresses the culture of each country participating in the 1988 Olympics. The Pungnap Street Park on the northern corner of the park, is built over a frequently flooded area and covers a run-off reservoir; above there is an exercise plaza that offers a rest and recreation space for residents. On the south corner there is an open athletic park, which is Olympic Park's secondary entrance and was used as a training ground for athletes during the Games. Since then, it has become a neighborhood park for public use. The athletic school along part of the east corner is responsible for athletic education, and includes a middle and high school and university. In addition, as a visual element that provides city residents with a refined view, sculptures are arranged within the park to capture the visitor's gaze. There are a total of 191 statues on display--36 carved at the site and pieces by 155 artists from 66 countries chosen to represent each region participating in the Olympics--making a sculpture garden.

The power and potential of Olympic Park lies in the Mongchon Toseong Fortress and its 1,500 years of history, the Han River, and the rich waterscape of the Seongnaecheon Stream that runs through the park. Olympic Park is a space open to all people that unites sport with culture and man-made with natural. There can be no doubt that it has incorporated many elements borrowed from the concept of the park. But rather than an introduction of the epochal reform or quiet passivity of neighborhood parks, it is a dynamic park that encourages people to be active and to enjoy their recreation.

MAKING THE HAN RIVER INTO A PARK

Another area that went through great change with the Olympics was the Han River, which became a park. The riverside and fishing spots along banks of the Han River, which have been loved by the people of Seoul for 600 years as a place for spending their leisure, were turned into a public park. The river is not just a simple waterway, but rather is an open space and an axis cutting through the urbanized center of Seoul and linking its north and south areas.

The Han River, left in its natural state until the end of the nineteenth century, started to undergo change in the beginning of the twentieth century: reinforcement of its embankments to prevent flooding, accompanied by changes to the river itself (reclamation projects and modification of the river's course), construction of a riverside road, all which created enormous tracts of land for large-
scale urban developments in Shinyongsan, Yeouido, Jamsil, and Banpo. The river faced another series of changes in the early 1980s, the major motivation for which was undoubtedly preparation for the Olympics. Because the downstream of the river at that time was used for undirected collection of aggregate, the area was very uneven and treacherous, and had claimed a number of lives. Water pollution, waste dumping, and other environmental problems were also getting worse. A scheme for developing the area had been proposed, but had gone nowhere, then as part of the efforts to attract the Olympic Games to Seoul, the improvement plan started to get underway. On 18 November 1981, then President Chun Doo-hwan ordered that “a plan to utilize the aggregate of the river within the Seoul area and the river embankments be reviewed,” which led to the establishment of the Han River Comprehensive Development Plan and a series of development projects. Table 7.6 shows a selection of the basic projects involving parks and green spaces.

The point needing attention here is that excluding Ttukseom or the sections of river shore near Yongsan that had been used as public gardens until the end of the war, the Han River had been used to collect and drain rainwater and sewage and had emerged as Seoul’s predominant open space. At the same time, many Seoulites became aware of the importance of sightseeing in the city while going to the river’s edge, strolling along the embankment, and taking sightseeing

<table>
<thead>
<tr>
<th>Project type</th>
<th>Items</th>
<th>Project details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic projects</td>
<td>River bed clearance</td>
<td>- 36km long from Amsa-dong to Haengju Bridge</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 600-800m wide, 2.5m deep</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Excavation of 7,293m³ of aggregate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Sailable for boats</td>
</tr>
<tr>
<td></td>
<td>Riverside plateau</td>
<td>- Raise the natural alluvial deposits and secure 6.93 million m³ of high water ground</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Create 7 athletic parks (2,160,000m²), green field (3,860,000m²) and 74km of paths</td>
</tr>
<tr>
<td></td>
<td>Riverside road</td>
<td>- Build a 26 km riverside road on the south side (from Yanghwa Bridge to Cheoong Bridge)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Build a scenic expressway running east-west</td>
</tr>
<tr>
<td>Accompanied projects</td>
<td>Drainage culverts</td>
<td>- Construct 53.8 km of river drainage culvert (20.65km north of the river and 33.15km south of it)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Drain to direct sewage downstream to the treatment plant</td>
</tr>
<tr>
<td></td>
<td>Sewage treatment plants</td>
<td>- Expand existing treatment plant (Junggrang)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Construct 3 new plants (Tincheon, Nanjido, and Anyang)</td>
</tr>
<tr>
<td></td>
<td>Embankments</td>
<td>- Construct embankment from Yanghwa Bridge to Haengju Bridge</td>
</tr>
<tr>
<td>Related projects</td>
<td>Piers and loading docks</td>
<td>- Operate sightseeing boats and barges</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Build piers and ramps at Jamsugyo</td>
</tr>
</tbody>
</table>
ours on the river. However, it has often been pointed out that at this
time consciousness and technical standards remained low, regula-
tions were overbearing, and public access to the river was limited.
Despite this, throughout the 1990s the Han River improvement
project was used as a model for improving rivers in cities around the
country, spreading its strengths and weaknesses nationwide. The
Seoul metropolitan government today is thus implementing pro-
grams to supplement the river improvement.627

One of these projects related to parks and green spaces is the
Hangang (Han River) Citizen’s Park, created on the new high water
ground (riverside plateau). As the park along the river’s edge is wide
and flat, it is ideal for various exercise facilities, and was designed to
have the feel of a neighborhood park and a natural park at the same
time. The areas with superior environmental conditions and suitable
habitat for flora and fauna at the river’s edge have been preserved,
and accounting for points with low levels of flooding, a comprehe-
sive park maintaining a permanent arrangement of park and green
spaces was developed.

Strictly speaking the Hangang Citizen’s Park is not a park. Only
a temporary use of the river shore, it is a countermeasure against the
overflowing of the riverbanks and cannot have any trees that are
higher than 1 meter in height. Instead, there are lawns, green fields,
flowerbeds, all kinds of athletic facilities and natural playing grounds
so that people can actively use the space for strolling, bicycle riding,
and exercising. In addition, with the installation of overflowing dams
and sluice gates downstream from Jamshil Bridge and Haengju
Bridge, the river can be filled like a lake and used for sightseeing
boats, yachts, windsurfing, and a wide variety of other water sports.
Diversified Parks and Green Spaces: the 1990s and After

LEGISLATION OF THE CITY PARKS LAW AND DEVELOPMENT OF PARKS

Nationwide urban development, beginning in Seoul in the 1970s, progressed rapidly and the demand for parks began to diversify, increasing the need for legislation on parks management. In 1980 the Parks Law was divided into the Natural Parks Law and the City Parks Law, the former dealing with large-scale parks, like national parks, and the latter laying the basis for the City Planning Law. With the legislation of the City Parks Law, urban parks were not completely set aside from natural parks, but depending on their function and facilities, were categorized as children’s parks, neighborhood parks, urban natural parks, or cemetery parks. On the other hand, natural parks protected natural scenery and landscapes and were designated in order to design appropriate use of the parks and help improving public welfare, leisure, and mental health. They were designated and managed as national parks, provincial parks, and county parks. Green space was categorized as either a buffer green space or a scenic green space, and each was developed in ways suitable to its purpose.

The 1980s was in fact an era of creating, developing, and improving parks as part of the preparations for and hosting of the Olympics, but it also saw the public awareness of the standard of living increase and demands for leisure suddenly rise. Owing to the

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Location</th>
<th>Area (㎡, pyeong)</th>
<th>Invested Capital (100 million won)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1973</td>
<td>Children’s Park</td>
<td>Neung-dong, Gwangjin-gu</td>
<td>593,036 (179,708)</td>
<td>NA</td>
</tr>
<tr>
<td>1974</td>
<td>Korean Folk Museum</td>
<td>Yongin-shi, Gyeonggi Do</td>
<td>726,962 (220,292)</td>
<td>NA</td>
</tr>
<tr>
<td>1976</td>
<td>Everland</td>
<td>Yongin-shi, Gyeonggi Do</td>
<td>1,485,000 (450,000)</td>
<td>5,300</td>
</tr>
<tr>
<td>1987</td>
<td>Seoul Dreamland</td>
<td>Beon-dong, Gangbuk-gu</td>
<td>347,971 (105,446)</td>
<td>230</td>
</tr>
<tr>
<td>1985</td>
<td>Seoul Land (Seoul Grand Park)</td>
<td>Gwacheon-shi, Gyeonggi Do</td>
<td>819,209 (247,205)</td>
<td>437</td>
</tr>
<tr>
<td>1989</td>
<td>Lotte World Adventure</td>
<td>Jamsil-dong, Songpa-gu</td>
<td>82,866 (25,111)</td>
<td>NA</td>
</tr>
<tr>
<td>1989</td>
<td>Gwacheon Racetrack</td>
<td>Gwacheon-shi, Gyeonggi Do</td>
<td>1,155,000 (350,000)</td>
<td>NA</td>
</tr>
</tbody>
</table>

| Seoul’s Parks and Green Spaces in the Twentieth Century |
forestation and "greening" policy strongly pursued by the government since the 1960s, the 1980s also saw great improvements to the size and quality of woodlands throughout Seoul. Accordingly, creation of "real" parks and "real" green spaces began at this time. Through institutional politics and experiences surrounding the Olympics, the demand for parks quantitatively leapfrogged and qualitatively diversified, and the existing parks were not enough to satisfy it. Therefore, from the 1990s an even greater diversity of parks was created or expanded. In particular, around 1994-Seoul's 600th anniversary—in order to revive a historical identity for the city, a series of moves to recover the original form of Mt. Namsan were launched, and as the function of parks in protecting the health of the urban environment came into relief, eco-parks began to emerge.

APPEARANCE OF THEME PARKS

Of the parks that appeared in Seoul city and its outskirts after the 1980s, one worth particular mention was the amusement park and the theme park. The amusement park is a park requiring a great outlay of capital for the entertaining facilities and programs, like rides, to be enjoyed by a wide range of visitors—male and female, young and old. The theme park is a kind of amusement park that is organized around a particular theme. Although these parks put these kinds of facilities in a city park created in accordance with the City Planning Law and Parks Law, and despite the fact that they function as pleasure grounds, they are only referred to as parks in order to restore their image.


Most ordinary theme parks were developed with capital from private investors seeking profit, while some non-profit theme parks were created in the public sector. Olympic Park can be said to have been the first of such parks, but because its athletic facilities are referred to as a park, it is also possible to call Mok-dong's Parc Paris or Paris Park the first. This park, layering a theme onto a regular neighborhood park, was given its theme in commemoration of the 100 years since the treaty between Korea and France. It unites the
utility of a neighborhood park with the symbolism of a commemorative park. Although the category of park facility covering 30,000m²
was selected from among the facilities introduced to regular neighborhood parks, in the organization of space and form of the park’s
facilities, the traditional styles of both countries are harmonized. While satisfying the demand for a range of leisure activities, it incorporates many wholesome cultural activities on a large scale and serves as a central cultural space for the Mok-dong area and southeastern Seoul.

After Seoul National University was moved from Dongsung-dong in Jongro-gu to its current location in Gwanak-gu in 1975, part of its old site was used to make Marronnier (horse chestnut tree) Park, filled with cultural and art facilities, and part became the high-class residential district, which maintained a quiet atmosphere into the 1980s. However, in 1985 the Seoul metropolitan government suddenly began a project to turn part of Dachakro (University Boulevard) into Seoul’s predominant cultural space, and after that the entire area underwent significant changes. At first, Dachakro was made into a “traffic-free zone” on weekends. The street itself soon changed into a great festival space and it started to become a celebrated spot for young people. As performance culture centering on the Saemteo Theater, among others, started to develop, many small theaters appeared and youth culture developed spontaneously around this cultural environment. Accordingly, sophisticated cafes and restaurants catering to these visitors started to crop up, greatly

Figure 7.4
Plan of Paris Park

Seoul’s Parks and Green Spaces in the Twentieth Century
remodeling many of the residences. Today, many of the renovated or newly constructed buildings have been given a particular theme, and together with Martonnier Park, have become a kind of theme park.

PUBLIC PRIDE IN CREATING PARKS

Yongsan is a historical area and was the location of the headquarters of UN and the U.S. Armed Forces in Korea during the Korean War. After the Olympics were over, a plan to move the U.S. military base to somewhere outside Seoul and to turn the entire site into a grand park was proposed by then government. It was highly welcome by the citizens and professionals as well, since it could symbolize the restoration of a sort of national pride and improve the open space system of the whole metropolitan area. In particular, as a ring connecting green spaces in northern and southern Seoul, it is to be the center of a large-scale network of parks and green spaces. It is to be used not just by Seoul but by the entire metropolitan area, legally corresponding to a large-area neighborhood park while strongly taking on the character of a park at the city’s center.

The original plan was to make a park covering a million pyeong (3,300,000m²) between Gu-yongsan(old Yongsan) and Sin-yongsan (new Yongsan), but at the first stage 89,100m² that had been used as a golf course was made into a park and called Yongsan Family Park. On 31 May 1991 the golf course was moved to a new location and the park was opened in November 1992. In 1997 the new National Museum was proposed to be built in this park, reducing the park to its current area of 75,900m² (23,000 pyeong). Its main features include a natural forest and lawn used as a family play area, picnic ground, and rest area, created to offer the opportunity to be close to green spaces. In terms of recreation areas, the park has a children’s playground and a traditional games area, as well as exercise facilities connected by a walking path. This was designed for the convenience of people using the exercise area, and a jogging track links it with the forest and each facility, integrating exercise, scenery, and relaxation.

Another park that should be mentioned together with Yongsan in terms of restoring public pride is Namsan Park. The original shape of Mt. Namsan has undergone major damage: some intentionally inflicted by Japanese colonial policy and some arising from the chaos following liberation and the Korean War and rapid urbanization. In 1990 the Seoul Metropolitan Government began a "Recovering the Original Form of Mt. Namsan" project (1991-1998), intended to restore cultural relics and natural scenery and take back
Mt. Namsan as a symbol of Seoul. The project’s basic aim was to restore the natural landscape and symbolism by removing invasive facilities, to amplify Mt. Namsan’s role as a public park by turning the reclaimed land into park space, and to recover Mt. Namsan’s history and natural landscape by restoring the genuine form of Mt. Namsan as a symbol of Seoul, while expanding the space open to the public for leisure. Following this basic course of action, the project made and implemented detailed plans to remove the invasive facilities, preserve nature, restore cultural relics, and create more park space. Under the plan, eighty-nine invasive structures, including a military base, apartment houses for foreign residents, and the former headquarters of the Central Intelligence Agency, were taken down or transferred, and as part of the project to preserve nature, 10,000 pine trees, the symbol of Mt. Namsan, were planted. The beacon watch towers were rehabilitated, site sign for the Guksadang, the traditional national shrine, and elders’ pavilion were installed, and especially a traditional park was created around Namsangol Hanok Maetul (Traditional Korean Village), where the “ttalkakkabari” (penniless but rigorous) scholars used to live. To create more park space, Namsan Foreigners’ Apartments were torn down and the space was used to create an outdoor botanical gardens.

We must not leave out the rehabilitation of Seoul’s first park and the creation of its progressive pioneers—Independence Park. Popularly known as Seodaemun Prison, the site located at number 101 Hyeonje-dong in Seodaemun-gu was changed into Independence Park. Seodaemun Prison opened its doors in 1908 under the Daehan Empire of Korea and was closed in 1987,69 but the cultural relics had been preserved and the space was made into a park. As the main instrument of suppressing the anti-Japanese independence movement, the facility acquired a particularly bad name for eighty long years and had been suffused with the individual and national suffering of Korea’s modern history. In particular, this site is adjacent to the Independence Gate, built as a symbol of the Korean independence movement at the end of the Daehan Empire of Korea.

In 1987 Seoul Penitentiary was moved to Euiwang-shi in Gyeonggi Do, giving rise to the chance to reappropriate the facility for a different use. In pursuit of national sense of confidence, it was made into a commemorative park. In 1989 it was decided that it would become city park, and on 15 August 1992—Korea’s Liberation Day—the park was opened. The park covers 108,682m² (32,876 pyeong), and seven of the fifteen ward buildings, which are the execution chamber, exhibition hall, leper’s ward, and the underground cell which held the national patriotic martyr Ryu Kwan-sun are preserved. The Independence Hall contains a shrine for ancestor tablets and an exhibition hall.
DREAM OF AN ECOLOGICAL CITY

Of the diverse parks that have appeared in the 1990s, the ones that have received the greatest public acclaim have been the eco-parks and green spaces, whose importance is now beginning to be recognized. Interest in the environment has been gradually increasing since the Rio Summit in 1992. Sustainable development for the environment requires that we consider additional development not only in terms of monetary gain but also in terms of the economic externalities it produces. The importance of environmental protection and management is more and more coming to the fore, and accordingly issues such as management of water resources and improvement of the Han River management system are gaining attention. Together with these changes in awareness, the environmental aspect of parks is receiving ever more emphasis as a natural element within the extremes of man-made urban space, and as the "lungs" of the city that ecologically protect its health. Accordingly, the so-called "eco-parks" are making an appearance as a new kind of park in Seoul. In comparison with the indirect retention of parks of the city that exist as green spaces in the existing nature parks, these eco-parks are more actively created, managed, and protected.

Gildong Eco-park and Yeouido Tributary Eco-park, among others, have been created and given much care, and more of such parks are being built for Nanji-do and other areas around Seoul. These projects mark the transition of the Seoul's city planning to an environmentally sensitive outlook that prioritizes parks and green spaces. Not only is there an expansion of parks that are easily accessible to the public, but also efforts are being made to "green" the entire city and make it into an ecologically healthy environment.

However, if we go back in time we can find the very beginning of eco-parks. They were not officially referred to as eco-parks, but in effect the "citizen's forests" were the first parks to have this form. They began in connection with the new town development projects to demarcate Gaepo District in 1983. At about the same time, as part of the campaign to host the Olympics, a lush forest was created near the Yangjae Tollgate, the gateway to the city, and was intended to make Seoul into a city merging with the forest. Although that was the original aim, a large green belt covering 260,000m², accounted for 80 percent of the total area and about 100,000 trees were planted, making an impressive forest.

Gildong Eco-park in Gil-dong, Gangdong-gu was created through a similar process. In 1971 it was designated as a park, but had no special facilities. In accordance with the Seoul Metropolitan Government's five-year plan to expand the city's parks and green
spaces, in 1996 the city planning was changed and the park was completed in 1998. Accordingly, because it was created later than the citizen’s forest, it was able to become a more full-scale eco-park. This is a good example of how the form of parks can change with the development of social interest. The park is 80,683m² (24,487 pyeong), and contains a reservoir and stream, a bird observatory, and a nature walk. Being an eco-park, it is planted with many trees—about 30,000 in fact—and about 190,000 flowering plants.

Yeouido Tributary Park is situated on the tributary of the Han River that flows between Yeouido Island and Yeongdeungpo hinterland, and although the vicinity of the park is the extreme of man-made urban space, unflagging efforts have been made to restore the river to its natural state. The shores of the narrow, quietly flowing river are bordered with reeds and marshland, and two separate lotus ponds have been put in, reviving the ecological system of the marshland. As Korea’s premier eco-park, it was designated Natural Monument No. 323. Home to many rare animals and plants, the park restricts public access during the breeding season of kestrels.

DIVERSIFYING PARKS

Of the many new kinds of parks, one worth special attention is the "pocket park." As a park covering less than 10,000m² cannot be classified as a neighborhood park and the City Parks Law regulated the creation of children’s parks, making the parks in the center of the city that are barely used by children into children’s parks is unrealistic. In response, the Seoul metropolitan government has undertaken research on creating small parks, petitioning the central government to revise laws accordingly and is exerting other efforts to create many small parks. From August 1995 the metropolitan government has been selecting appropriate sites and has so far created ten village squares (called maeul madang). At the slightest provocation small plots of land can be turned into parking spaces or garbage dumps, but a village square can use this kind of space more effectively and become precious spaces of refuge within the unforgiving city.

Choosing winners from a contest to "Seoul Village Squares Plan," the metropolitan government has set an example by creating ten small parks around the city: Jongro-gu Tongui-dong, Gwangjin-gu Gwangjang-dong, Dongdaemun-gu Yongdu-dong, Jungnang-gu Sinnae-dong, Gwanak-gu Bongcheon-dong, Seocho-gu Yangjae-dong, Gangnam-gu Poi-dong, Songpa-gu Songpa-dong, and Gangdong-gu Cheonho-dong, with the goal that they will fulfill the func-
tion of the village commons that is "cared for and enjoyed together." Along with the village squares located in residential areas, small parks are also appearing in the heart of the city. Weaving together lifestyle and cultural development, these small parks secure much-needed green spaces in the city and link together parks and green spaces that have been cut off from each other.

Alongside the creation of small parks there are also plans to make the streets themselves into parks. Good examples of this include a traditional rest area complete with a melon-field lookout tower covering the entire open space at the Gwanghwamun intersection, making Doldam-gil (stone wall alley) beside Deoksugung Palace a pedestrian-only street and boulevard, and turning a small plot of land at Sadang-dong intersection into a small park. In this way, Gwanghwamun Public Square is a small park that combines the feeling of a boulevard and a square. About 9,000m² of land at the corner across from Gwanghwamun was opened as this square in January 1999, the spatial organization and landscaping of this park is compact yet highly symbolic. Another feature of this square is the operation of the "Seoul News Drum." Phones with a direct line to the mayor's office have been installed in the park so that the public can express their opinions to the mayor, suggest ideas, or lodge complaints. In addition, in 1995 the leveled bluff that used to be at the entrance of Guipabal station in Eunpyeong-gu Jingwanoe-dong and about 6,700m² of land that had been almost thrown away were made into the neighborhood park known as "Guipabal Waterfall."

Expanding these plans, the Seoul Metropolitan Government is searching out plots of land to turn into green spaces without creating a major hindrance to traffic flow.

Projects to make parks out of land left behind after facilities are moved are also slowly appearing and giving encouragement. Yeongdeungpo Park was built on the former brewery site operated for sixty years. In 1997, when the brewery was moved to Icheon, Gyeonggi Do, the Seoul metropolitan government bought the land as part of its five-year plan to expand parks and green spaces, and between 1997 and July 1998, developed it into a park. Boramae (Hawk) Park was created in 1985 when the city purchased the site of the Air Force academy in Sindaeang-dong, Dongjak-gu, and on 5 May 1986, Children's Day, reopened it as a children's park, preserving "hawk"--the symbol of the academy--in the park's name. Other examples include turning the old warehouse of the Monopoly Bureau in Dapsinmi-dong, Dongdaemun-gu into a 150,000m² the Gandeme neighborhood park in 1998 and making an old factory in Cheonho-dong, Gangdong-gu into a 27,000m² natural park featuring indigenous Korean plants, called Cheonho Park.

The prominent feature of this series of parks is that they have
been rezoned from commercial or residential areas to parks. These parks were also created in areas of Seoul that are relatively deficient in park space or have parks that are not readily accessible, serving to redress imbalances.

Another phenomenon has been the appearance of multi-purpose parks. In the city center, where real estate prices are steep and competition for land is fierce, it is not easy to make parks. The Hulryeonwon Park in Jung-gu Euljiro 5-ga has a park above ground and a parking lot underneath. The site of an military training office in the Chosun dynasty and subsequently a school from the 1920s, the constitutional court, and many other public facilities, it was designated as park land in 1989. It was then selected for an underground parking lot in 1993, and construction of the lot was completed in 1997. The point deserving attention here is that the cost of making the park was borne by the operator of the parking lot. This scheme is to be recommended for the multi-purpose use of land in the city core. However, under the name of "multi-purpose land use," there have also been moves to construct district offices in parks, which is in conflict with the stated goals of creating green spaces and expanding cultural resources. Some privately owned property is being designated as park land, but when the parks are not developed, and with no remuneration, the land gets neglected and the landowners complain. In response to this problem, the Seoul City has permitted private citizens to create parks, although it is experiencing friction with some residents who call profit-oriented, polluting golf practice ranges "park facilities."

It is clear that the creation and administration of parks and green spaces is changing. Compared with previous decades, the 1990s are seeing both qualitative and quantitative increases in parks and green spaces. The old administrative methods of creating and managing parks, as practiced by previous central government offices with a secretary responsible for parks and green spaces, have given way to professional knowledge, skills, and experience in the strengthened Parks and Green Spaces Management Project Offices, which now systematically and sustainably cultivate and care for the parks of the entire Seoul area. Another development accompanying these changes in government administration is the "parks service charter." This charter is a pledge from the city authorities to its citizens to realize and uphold parks service to a specified standard, and includes a concrete standard for park use, ways to correct and compensate for problematic service, and requests for the cooperation of park users. While all parks are different, it enforces a monitoring of each park and offers a channel for listening to and engaging in dialog with the public voices through a homepage.
How Green Will Be Seoul’s Future?

The last hundred years of the twentieth century have witnessed many changes unprecedented in world history, and Korea has been placed right in the middle of it. Hanseong—the capital of the fallen monarchy, became the Gyeongseong, the capital of colonial Korea, and after liberation was revived as Seoul, capital of the Republic of Korea—has undergone major alterations not only in its political and social structure but also in its urban environment.

There are very few descriptive writings or photographs of Hanseong from the turn of the century, but the urban environment seems to have been less pleasant than we may imagine. The majority of its residents lived in neighborhoods of thatched roof houses separated by muddy lanes, and ordinary leisure in these areas would have been scarce. While culturally speaking there could be no Western-style parks, outside the city walls it was possible to experience a beautiful and healthy natural environment. While the royal palaces and mountains were lush with trees, the hills and mountain edges were bare, and while the Han River ran clean, many of the streams (like Cheonggyecheon) were very dirty.

In the colonial period, parks, as a product of Western civilization, were introduced to Gyeongseong, and it started to take on the appearance of a modern city. However, it is nearly impossible to imagine that the colonial authorities would have created parks in the city of an anti-colonial state. And while no small number of parks were planned, but only a few were actually created; instead, mountains cherished by Koreans were damaged, and the Sajikdan and palaces were defiled.

In the midst of the social confusion and abject poverty between liberation and the end of the 1960s, parks tended to disappear. The parks planned under colonialism could not be created, let alone existing ones be protected from encroachment. In Seoul, recognition of the importance of parks and efforts to make them at a certain standard began in the 1970s as economic conditions rose above the poverty of the preceding period. Amusement parks and theme parks appeared throughout the 1980s and the hosting of the Olympics, and with the ecological parks (or eco-park), active operation of park programs, and systematic park management of the 1990s, Seoul began to acquire the parks system of an advanced city. In looking at the hundred-year history of parks and green spaces in Seoul, the following conclusions can be drawn.
CHANGES IN THE CONCEPT OF PARKS AND GREEN SPACES

Since the word "park" first came into use, it has been used not only a professional or academic term, but also as a kind of legal terminology; however, this is not the case for green spaces. As the creation and management of parks were given primacy, the basic premise was public use. In contrast, green space was not seen as important. Perhaps this was not only because the features of green spaces seem no different than nature, but also because it was a commonplace resource in the days when green spaces was abundant, and therefore in the days when it was scarce people had no interest as they were absorbed in their livelihoods. However, these ideas slowly began to change, and now parks are created, managed, and used in a wide variety of forms. Of particular note is that the importance of green space is gaining recognition. Green space is now well protected in its natural state rather than as an object of human use, and is able to fulfill its original function.

THE COEXISTENCE OF DEVELOPMENT AND CONSERVATION

The area of land and water in a city is fixed, as long as the borders are not expanded. In the development of modern cities, development brings an increase of the artificial and a decrease of the natural, making the relationship between development and conservation, and between the artificial and the natural, into a zero-sum game. Damage to green space in this relationship speaks for the eradication of nature, and parks are seen as existing for people to enjoy the delights of development and to restore the vitality of those who have suffered under development.

Accordingly, parks are another kind of supplementary development, and green space is put in the position of being a buffer to the shocks of development, a softening of the ugliness produced by development, or a section of land for future development or temporarily set aside on reserve. The shape of Seoul has been formed and changed according to this logic. However, since the 1990s, there has been a fundamental change. With the movement "Recover the genuine form of Mt. Namsan," the previously unimaginable act of removing an apartment block and restoring the site became possible, and the subsequent establishment and implementation of the five-year plan to expand parks and green spaces has accompanied a large budget set aside for the purchase of land and creation of parks. Given the limits in the amount of land and competition over use,
these changes show a transition in values and the beginnings of a public acceptance of the importance of parks.

ECOLOGICAL CITY OR ECOPOLIS: IT'S NOT A CHOICE

A series of changes to develop an ecological city is underway. Parks are being created in earnest and the public now recognizes the importance of parks and directly experiences their benefits. Natural parks in name only are being phased out and eco-parks are starting to attract attention, and projects to create eco-parks on the Han River, its tributary, and the abandoned Nanjido have begun, as mentioned before. Municipal authorities, academic circles, civic organization, and professionals have all begun to dream of Seoul as an ecological city. Whether it is better or not to make Seoul into an ecological city is not a choice; for the healthy lives of its citizens, and for Seoul to qualify as a world-class city, it is imperative.

FROM A CITY IN NATURE TO NATURE IN THE CITY

Seoul, which has lived through 600 years of history and 100 years of fundamental change, must not face any more unbridled development in the future. While parks and green spaces are a remedy for treating the damage inflicted by development, they must also be a barometer measuring how much the sustainable development is possible. Another opportunity to be anticipated is reconstruction and redevelopment. Previous reconstruction and redevelopment rested only on economic values, but now development must set down cultural, historical, and ecological values so that it can become sustainable. In this process, we can recover many parks and green spaces, watch over their condition, and thus make possible a beautiful city where people want to live. If the old Seoul was "a city in nature," the new Seoul has to pledge itself to "nature in the city."
Notes

1) According to records from 1666 (fourth year of the reign of King Hyeon-jong), Seoul's population was calculated at 194,030, putting it near the 200,000 mark for the first time. Although that figure subsequently increased, the population size was largely maintained at around 200,000 until the late nineteenth century (Rii Hae-un, Transformation of Landscape of Seoul, pp. 160-163).

2) The size of Hanseong in the Chosun dynasty was about 16.5km² within the city walls but included an area of 234.1km² extending for about ten li beyond the walls, totaling about 250km². This was the area in 1910, but in 1914 Seoul's position was been reduced to exclude the mountains of Gyeonggi Do, significantly reducing its size to 36.2km². The Chosun City Planning Decree, which again increased Seoul's area to 134km², was promulgated in 1936, and this size was maintained until Korea's liberation in 1945 (ibid. pp. 199-213; Kwon Tai-hwan, et al., Understanding Traditional Seoul, pp. 57-68).

3) According to the City Parks Law, city parks in Korea are "to be designated in accordance with the regulations of the city planning laws in order to contribute to the protection of natural scenery and improvement of public health, recreation, and mental life", while green spaces "preserves and improves the city's natural environment and prevents air pollution and natural disasters, and in order to plan the improvement of favorable urban scenery, must be determined according to the regulations of the city planning laws." It seems contradictory to each other that both aim at protecting and improving natural or urban landscapes.

4) In the West, parks were first created and popularized in the nineteenth century as a means of resolving the social and environmental consequences of rapid industrialization and urbanization, and parks in Korea are no exception to this pattern. However, as Korea was unable to autonomously direct its own modernization, parks and green spaces, like other urban development plans and resources, were seen as a kind of "import," leaving the problem that their importance could not be actually felt.

5) The translation of "public park" into the Korean "gongwon" appears to derive from Japanese and Chinese translations in the middle of the nineteenth century. In Japan, which had early on initiated its open-door and modernization policies with the Meiji Restoration, the Japanese governmental decree no. 16 announced on 15 January 1873 ordered the creation of parks in each ward and prefecture at selected sites, with most of them to be placed in shrines temples or famous sceneries and sites. Renowned parks that appeared at this time include Tokyo's Ueno Park and Osaka's Sumiyoshi Park. The first plans for parks borrowing a Western understanding date to 1885, and the first parks designed and constructed according these models, Hibiya Park in Tokyo, opened in 1905. However, the first of the Western parks was Higa Park, built in the foreign settlement at the treaty port of Yokohama in 1876 (citation in Japanese).

6) Yun Chi-ho kept a diary throughout his stay in Shanghai from 1884 to 1888, in it recording his park experiences. In the entry dated 27 February 1885 he wrote, "There is a park inside the British concession and men and
women from all countries come on excursions. The only thing is the pig-
rails (queue, Chinese) are not permitted inside. This fact hints at the
humiliation the Chinese must suffer. Wouldn't it be deplorable if there
were a foreign park such as this in Korea and Koreans were refused per-
mision to enter and enjoy themselves! On 11 May 1886 he wrote, "After
taking lunch I went for a stroll to look around the park. The deep shade
of the trees, the lush grass, and the beautiful flowers shone multicolored hues
at spring flowed softly around me, and the fishing boats came and went.
Sitting astride a bench, the scenery was gorgeous. However, I cannot help
regret and scorn them, when I saw those Chinese people, regardless of high
and low, are reluctant to enter."

5) Seen from a world historical perspective, the public park is an "invention"
springing from the modernization process—economic industrialization,
political democratization, and geographic urbanization. However, as
cities—at once the product of modernization and, as the quality of life took
a plunge as modernizing cities exploded in size, a threat to modernization
itself—faced increasing problems, parks became part of a solution. In other
words, "artificially making a natural environment" within the city started
to be called a park.

8) Parks created as the shooting grounds of the royalty and aristocracy were
opened to the public existed in London in the 1830s. Birkenhead Park was
not this form of park; instead, it was the first park for which land was
specifically secured and landscaped.

9) There were two parks in the foreign settlement in this newly opened outer
port of Seoul. Constructed in 1888, the public garden indicated in the
plan for the foreign settlement was called Manguk Park (or West Park),
which is today known as Jayu (Liberty) Park. The other was the so-called
"East Park," built on land purchased by Japanese in 1890 (Kang Shin-
yong, A History of Korea’s Modern City Parks, pp. 25-36).

10) For further discussion of Independence Park and the Independence Gate,
please refer to Shin Yong-ha, "The Building and Development of Indepen-
dence Gate, Independence Hall, and Independence Park," in Kang Shin-
yong, ibid.

11) Seo Jae-pil (1866-1951) was one of the major figures behind the Gapshin
Coup of 1884 and fled to the United States when it failed. He returned to
Korea in 1895 took a seat as an adviser in the Jungchuwon (then pro-
Japanese advisory institution), and while working in the government
administration headed by the Enlightenment Party he was heavily involved
in the independence movement. The major achievements of this period
include publication of the Independence Daily Newspaper, founding of
the Independence club, and creation of the Independence Gate Park.
However, Seo Jae-pil soon returned to the United States and worked from
there for Korea’s Independence until liberation from colonial rule in 1945.

12) The "Independence Club Regulations" written at the founding meeting
define the Club’s goal as “management of the project to construct the
Independence Gate and Independence Park.” However, a newsletter
released to the public stated that “constructing the Independence Gate
where the Yeongeunmun Gate stood, and repairing the former Mohwagwan to make an Independence Hall, we will wash away the shame of the past and erect a standard for the generations to come. As we cannot just leave the surrounding area empty we will also build an Independence Park to "preserve" the Independence Gate and Independence Hall." According to articles from the The Independent newspaper, "in place of the Mohwagwan we will build the Independence Gate and around it an Independence Park—a park that will carry the message of independence for ten thousand years." The project pursued by the Club was clearly the construction of the Independence Gate, repair of the Independence Hall, and the creation of the Independence Park.

13) Compared to the great success of the ground-breaking ceremony, the completion ceremony was either not conducted at all or was a very simple affair attended only by people directly related to the project. No records relating to this event have been discovered.

14) No design charts or sketches have been found. Fortunately, however, some pictures taken at the time are still in existence and give us a better idea of where the park was located.

15) The Korean Repository, the first magazine published in English in Korea, was founded in January 1892 by the Englishman F. Olinger. Publication was suspended in December of that same year and resumed in 1895 by H.G. Appenzeller, G.H. Jones, and H.G. Herbert. The final issue, no. 59, came out in April 1899. Although the purpose of the magazine was to inform missionaries about Korea, it also largely contributed to introducing Western culture to a Korean audience. The articles published in this magazine are indispensable to research on Korean modern history (Doosan World Encyclopedia and Eyclopedia).

16) Many Seoul citizens gathered in front of the Independence Gate to call for the independence of Korea, and some youths scaled the gate, newly colored the Korean flag (Taegukgi) flying on top of it, and unfurled a banner for Korean independence on the gatepost.

17) As the original location of the Independence Hall is presumed to be within present-day Seodaemun Independence Park, a replica of the hall was constructed there and completed on 28 December 1996. The grounds of the new hall cover 740 pyeong (2,442m²), with 66.7 pyeong (220m²) above ground and 100 pyeong (330m²) in the basement, totaling 166.7 pyeong (550m²). The hall is two stories and has a traditional tile roof, resembling the Independence Hall as it appeared in 1897.

18) There are no remaining documents that clearly describe John McLeavy Brown's role in making Pagoda Park. However, analysis of extant documents shows that worked from October 1893 as a commissioner of customs and from April 1896 as a financial adviser to the Korean government and in these capacities was able to exert considerable influence on financial affairs. He also had a close relationship with the Independence Club and was in charge of the financial business in the construction of the park. His involvement in taking surveys of the palaces and urban districts also seems fairly clear. While he was not an architect or landscape architect, he seems
to have been deeply involved in the design and construction of Pagoda Park.

19) It does not necessarily follow from the announcement, design, or planning of a park that it will actually be built and opened. It seems likely that Pagoda Park was announced before or at around the same time as Independence Park. It is very plausible that John McLey Brown, who was born in England, the birthplace of the park, and the royal family and members of the cabinet, who had read travel diaries and come to know about the move to turn royal parks and shooting grounds into public parks in Europe, would have made plans for the government to direct the building of a park.

20) Refer to Six Hundred Year History of Seoul.
(http://www.metro.seoul.kr/-seoul600/seoul-history/ munwhas).

21) Fortunately the Wongalsa monument was situated in a lotus pond and so was some distance from the commoners’ houses.

22) The military bandstand in the southwest corner of the park was constructed sometime prior to June 1906. It appears that Brown thought about having musical performances in the park at the planning stage, but the Independence Club seems to have been influenced by the performances proposed for Independence Park in 1896. The official ordinance for the construction of the Korean military bandstand was proclaimed in December 1900. Soon after a German named Franz von Eckert was brought to Korea and constructed the royal military bandstand. The bandstand was constructed in the park and the military band was moved there in June 1906. When the Korean military was dissolved in July 1907 the military band went with it, and the bandstand was left in ruin, although it was later used as a library.

23) Refer to Six Hundred Year History of Seoul.
(http://www.metro.seoul.kr/-seoul600/seoul-history/ munwhas).

24) At first Hanahusa Yoshisada, head of the Japanese mission, was stationed with forty delegates at the Gyeonggi military base outside the Seodaemun Gate. With the Ino military revolt in July 1882, however, the Japanese mission fled to Japan and the legation was burned down. In November minister Takeo Shinichiro was posted to Korea and entered the legation in the capital. At about the same time missions and consuls from China and the Western powers were stationed in Seoul.


26) When discussion of establishing a shrine started up in 1892 interested Japanese began to solicit donations for the project. In particular, Momoda Kumagichi offered his privately owned land as a site for the shrine, but as this land was marshy it was unsuitable. Instead, a more appropriate site at the base of Mt. Namisan, nearby the settlement, was selected instead.

27) In 1898 the Japanese Residents Committee took the initiative in constructing the shrine. One representative from the committee (Yamaguchi Tabei) visited Iseyamada in Japan (contemporary Iseshi, Mieken) and upon his return signed a contract for construction of the shrine. Design and engineering of the shrine was contracted to the architect Nakata
Sciemon, and design was modeled on the Ise Jingu Shrine.

28) Today's Japanese shrines are still attached to simple and crude garden areas. Turn-of-the-century Hwaseongdae Park would likely have been no exception.

29) It was decided that a rest area would be constructed within the park and decorated with potted plants. In addition, a rest area and a pond with a fountain were also installed.

30) The site surveys and design work were entrusted to Honda Seita and Tamura Zeyoshi, who had already made names for themselves through their participation in a range of projects on the Korean peninsula.

31) Chungang Ilbo, 1995.3.1

32) In the civilian sector, a group named 'Thinking of Ourselves' led efforts to remove the stakes from Baekundae in 1985. Outside of Seoul, organizations have succeeded in removing stakes from many other more hidden sites.

33) In addition to driving stakes into Mt. Bukhansan, at the junction where energy flows from Mt. Bukhansan, across Mt. Iwangsan and down to the Han River, the Japanese constructed a thermoelectric power plant, likely in order to cauterize strategic points of the nation's territory.

34) The Guksadang, also referred to as the mokmyeokshinsa (Namsan Shrine). The ancestral hall is believed to have contained a portrait of the muhakdaesa, who was the great Buddhist priest of help to capital building, and every spring and autumn a chesa ritual was held there. A part of the hall and a tablet contained within it have been moved to a new location below the western slope of Mt. Iwangsan, actually in Muakdongsan in Jongro-gu.

35) Damage continued to be inflicted even after liberation. In the 1960s, roads, libraries, local neighborhood offices, police stations, and a swimming pool encroached upon the park. At the present, the majority of buildings have been removed, and only the shrine and altar remain.

36) Fortunately, following liberation the park was able to recover a national spirit as Kim Ku, Yun Bong-gil, Yi Bong-chang, and Paek Cheong-gi were buried there.

37) That perhaps not being sufficient, the Chosun Exposition was held there in 1926.

38) Sugang-gung palace built as the residence of King Taejong when Sejong ascended the throne in November 1418. However, Queen Dowager and King Taejong passed away in 1419 and 1421 respectively, and the royal residence was moved, leaving Sugang-gung to fall into disrepair. In 1479 (tenth year in the reign of King Seongjong) after Seongjong's announcement of a move to Sugang-gung, reconstruction of the royal chambers was discussed and mostly completed by 1484. However, later fires (during the Hideyoshi invasion of 1592, the Injo coup, and Ri-gual's revolt brought repeated damage and repair. Another major fire broke out in August 1830 (30th year in the reign of King Seonjo), destroying most of the palace, but reconstruction was largely completed during 1833 and 1834. There was another large fire in 1876 (13th year in the reign of King Gojong) and
with successive disasters the king and royal family moved to Changdeokgung palace. However, with the military revolt of 1882 and Kapshin coup of 1884 right on its heels, in 1885 the King again changed residence to Gyeongbok-gung. Interest in Changgyeong-gung soon waned.

39) In 1909 creation of a bureau handling the administrative affairs of the royal botanical garden and museum was announced, with Komiyama appointed as president, and Misyo Kumaken as vice-president.

40) Chosun Ilbo and Dong-a Ilbo articles.

41) An outline of the facilities states the following, "Put in a gravel footpath around Suwon, install a triangular and round drain along the perimeter, and direct the flow to the main military encampment. At the center install three telegraph poles and plant evergreen trees, and install public toilets and electric lights." (The History of Seoul City Planning, 557).


43) Of the 1,227,481 m² of "park area," only 7,566.9 m² of it was newly designated and even this was not a formal park but rather three places set aside for walking.


46) This function can be interpreted as deriving from the Great Kanto Earthquake in Japan.

47) The planned parks were as follows: Gyeongbok-won, Changgyeong-won, Deoksugung-won, Namsan Park, Pagoda Park, Hyeoungchung Park, Jangchung-dan Park, Sajik-dan Park, Sungin Park, Sangdusan Park, Mulhak Park, Anam Park, Yongdu Park, Jeomnongui Park, Jeonggo Park, Sinchon Park, Hannam-ni Park, Yongsan Park, Dosan Park, Ahyeon Park, Nogosan Park, Singili Park, Noryangin Park, Dori-ni Park, Yeongdeunggo Park, Yeongnak Park, Chuicho Park, Kwangju Park, Chejiri Park, Munpyeong Park, Sangnyeong Park, Yeongcheolli Park, Danseong Park, Yanggyeong Park, Beondeuk Park, and Ichondong Park.

48) The majority of the mountains surrounding Seoul are 70 meters above sea level. Therefore, the fiction that Seoul does not fall behind other major world cities in the number of its parks begins with the inclusion of these mountains in the area of Seoul.

49) The city plan announced by the Gyeongchung Bu on 26 March 1936 was the first legislated city plan and so was a long-range plan designed to cover thirty years. It based on the Chosun City Planning Decree enacted on 20 June 1934 and the regulations for its implementation announced on 27 July of that same year.

50) Changes in Scenic Zones are as follows.

- In pre-modern Korea when population density did not undergo significant increases, natural or cultural scenery were well preserved. However, when the population suddenly increased and economic growth began to accelerate, natural and cultural resources began to undergo major damage.
- A scenic zone is designated as a fixed area within the city and within it
any activity deemed to have a negative impact on the preservation of scenery, such as construction of buildings or other structures, topographic alterations, extraction of earth and rocks, and so on, are restricted or prohibited.

- The objectives of designating scenic zones are 1) preservation and maintenance of landscape within that area, 2) enhancing landscape quality, 3) prohibiting construction beyond a certain elevation above sea level, and 4) prohibiting construction on slopes with an incline beyond a certain degree.

- The Seoul’s scenic zones originated in the designation of 29,268,000m² of land on 25 March 1941 in accordance with the 1934 Chousun City Planning Decree. This space is distinguished between first and second grade zones.
  1) First grade zones are protected areas, land more than 70 m above sea level, the precinct and vicinity surrounding shrines, land necessary for preserving scenery such as national treasures, historical sites, places of particular scenic beauty, and natural monuments, and all slopes with an incline greater than 20 degrees.
  2) Second grade zones include woodlands not designated first grade zones, farm land associated with first grade zones, open space protecting scenic views around housing developments, government and public offices, and company buildings, parks, the areas around parks, and proposed sites for parks.

- Woodland in colonial Seoul covered 2,891,2149 hectares, and is categorized as land owned by royal family, national forestland, public forestland, property owned by a shrine, and private property. About 2,600ha of this land was designated a scenic zone.

- Restricted and prohibited activities within a scenic zone include the following:
  - Changes to topography, any kind of construction or alteration or large-scale repair of existing buildings, additional installation of any structure
  - Cutting of trees and removal of earth or rocks
  - Any other activity deemed to have an adverse impact on the scenery
  - Construction of tombs, lighting of fires, and removal of any trees or earth and rocks designated by the provincial governor

51) In addition, spaces 10 to 20 meters wide called “minor air defense spaces” were designated as air defense roads.

52) The National Armed Forces Cemetery became an object of historical attention at the beginning of the 1960s. On 5 December 1961 a war memorial displaying war trophies and the personal effects of those who had died in the war was opened and on 1 December 1962 a new Bonganggwan (enshrining hall) was constructed, and on 30 September 1967 the Hyeonchung (Memorial) Tower, and on 15 August 1968 the Hyeochochungwan (now a photography gallery) and a rest area were built. Projects to improve the grounds continued in the 1970s, with construction of the Chungnyoldae, where the remains of national martyrs are interred, on 17 November 1971 and the Chungseong Fountain on 12 February
1977 and on 31 December 1980 the Hyeonchung-gwan was renovated. Its title and status were raised to National Cemetery on 30 May 1965, and on 1 June 1996 the title of the National Cemetery administrative office was changed to National Hyeonchung-gwan (http://www.metro.seoul.kr/~seoul600/seoul-history/sidesa).

53 In 1957 the mayor of Seoul announced that "conditional and temporal buildings are permitted within park land. When looking at state of Seoul's finances, I predict that this may take some time, and during that period there is a policy allowing for the use of privately owned land by the owner" (http://www.metro.seoul.kr/~seoul600/seoul-history/sidesa).

54 According to 1961 statistics, there were approximately 18,000 illegal shacks inside Seoul's parks, taking up 1,200,000m² in space. Moreover, including residential buildings that had been there before the land was designated as a park, about 2,000,000m² could not be used as a park. As these residences were situated in a close proximity to the park, they were a serious impediment to park use (http://www.metro.seoul.kr/~seoul600/seoul-history/sidesa).

55 At this time the palaces were exploited in a variety of ways. Gyeongbokgung hosted the Industrial Expo (1961) and the construction of the National Folk Museum (1969), Deoksugung's lotus pond was made into a skating rink, and the wall facing the City Hall plaza was torn down and replaced with a wrought iron fence. Changgyeong-gung was still the recreational park known as Changgyeong-won.

56 A good example of this was the destruction of Sogong Playground to make way for Namdaemun Library.

57 The cited cause for destroying these parks should be noted: "increasing the actual land use while designing the city's finance policy" (A History of Seoul's City Planning: 571).

58 This biggest change in this plan was the categorization of parks. The former categories of natural parks, neighborhood parks, memorial parks, and playgrounds were merged or eliminated.

59 On 20 January 1970, the president, on his New Year's inspection, issued the order to "establish a decisive city plan to restrict the population increase north of the river in Seoul and induce people to move to Gangnam."

60 In the 1964 "Capital District City Plan," (commissioned by the Ministry of Construction and prepared by the Korea Planners Association (KPA) and the 1967 "Seoul City Comprehensive Plan" (commissioned by Seoul City and prepared by the KPA), an surrounding Seoul within a radius of 15 to 25 km was proposed as a "green belt." In the 1971 "First National Development Plan" an area surrounding Seoul with a radius of 15km was established as a "development restriction zone (green belt)" (Kim Eui-won: pp. 843-845).

61 The Special Law on the Designation and Management of the Development Restriction Zone of January 2000 had an enforcement ordinance enacted in July of that year. The basis for designating the restricted development zone changed slightly in the enforcement ordinance, but reflects
the increased intricacy in city management. It aimed to prevent not only uncontrolled urban expansion but also overlapping of urban areas between adjacent cities, and protect not only the natural environment but also ecological systems. In particular, it introduced new bases for creating a civic identity and controlling growth in a suitable way.

62) Creation of an ecological park along Yeouido’s tributary of the Han River (Hangang in Korean) has had difficult results. Supported by the municipal government, a contemporary organization calling itself “People Who Love the Hangang” has initiated a project entitled “New Seoul, Our Hangang.” It states its goals to be “living breathing Hangang,” “enjoying the Hangang,” “being near the Hangang,” “the Hangang as the way of the future.”

63) Looking at the nature of the facilities, Changgyeong-won, an amusement park created by the Japanese, can be said to have been the first.

64) Historically, the first theme park would have been the Independence Park, planned by the Independence Club.

65) Construction began in 1907 according to Japanese blueprints and the prison was opened in 1908. At the time the facility cost 50,000 won. The prison covered 480 pyeong with an annex of 80 pyeong, and could accommodate 500 inmates. At first it was called Gyeongseong Jail, but in 1912 it was renamed Seodaemun Jail, in 1923 Seodaemun Prison, in 1945 Seoul Prison, in 1961 Seoul Reformatory, and in 1967 Seoul Penitentiary.


67) In the beginning, village squares were modeled on the “vest pocket parks” created in New York City in the 1960s. These small spaces were for office workers and passers-by to use, but soon became popular among the general public. After this kind of park was deemed a success, many countries worldwide have adopted this model. Seoul was relatively early in creating the first “mini park” in Supyo-dong, Jung-gu in 1975.
References


Lee, K. J. Seoul, 600 years of Capital Seoul (1set 4 books), Seoul newspaper company.


of Seoul Studies.


The Law of City Planning and Official commands.

The Law of City Park and Official commands.


http://www.metro.seoul.kr/~seoul600/seoul-history/munwhasa[600years of Seoul].

http://www.parks.seoul.kr[Park of Seoul].

http://100.naverc.com[Doosan Encyclopedia, EntCyber].
공 백
CHAPTER 8

Colonial City Planning and Its Legacy

Jung-Mok Sohn

I

Birth of Modern City Planning:
The Great Daehan Empire Period

History shows that from the distant past, men have tried to beautify
and organize their settlement so that they may live in comfort. Korea
is no exception. This effort is seen in the Bangjoje (which is a system
where the streets were laid out in a grid type pattern) that is still seen
in the Pyeongyang Fortress, which clearly illustrates the city plan-
ning during the Goguryo Period (BC 37-AD 668). The division of
land by grid shown on the land registration map of Gyeongju also
presents the features of the royal capital planning during the Unified
Silla Period (676-935). The streets layout in a grid type pattern
were passed on to succeeding kingdoms, and is found in Gaeseong,
the capital city of Koryo. Korean ideas of city making was further
elaborated in the city plans of the Chosun Dynasty in a more sys-
tematic form.

However, these earlier planning thoughts and features do not
entirely represent the origin of modern town planning theories of
Seoul. Nor Seoul's modern planning is based on the model of west-
ern planning, since there were already road and land divisions, prior to the import of western planning. It is generally agreed that in most civilizations, modern city planning theories are rooted in European culture dating back even to Greece and Rome. It is fair to say, however, that Seoul accepted western town planning ideas upon its prior Oriental or Korean type road networks and land divisions.

It is believed that this superposition took place around the end of the 19th century where modern civilization was first introduced in Korea. It was either after the 1876 Byungja Protectorate Treaty or the Reform of 1894 (Gabo Gyungjang) when various modern western conveniences were introduced to Korea such as electricity, streetcars, modern road (called shin-jak-ro), cars, telegram, and telephone system. Together with this modernization and the introduction of a new type of civilization in the late 19th century and early 20th centuries, western planning systems were also brought to Korea, and soon became the general practice. This chapter examines how and when modern city planning was introduced to Korea and how it became integrated with the existing road networks and land division.

CITY REDEVELOPMENT PROJECTS BY DAEHAN EMPIRE

The famous British traveler Isabella B. Bishop published the renowned book, Korea and Her Neighbor, based on her four trips to Korea in February 1894, January and October 1895, and October 1896. On her fourth and last visit to Korea from October 1896 to February 1897, she paid an amicable attention to bettered urban environment of Seoul: especially praised the redevelopment of Seoul in great esteem. She was impressed by the orderly look of Jongro Street which was renewed by the clean-up efforts of temporal houses. She continued to explain new construction and the expansion of the road networks in Seoul as follows:25

"The city redevelopment of Seoul is not limited to the main roads. Many small roads have also been expanded, roads were made smooth either by leveling or filling in with gravel, and boundary stones were placed along the edge of roads, private citizens financed some. A most notable improvement, more than anything else, was the disappearance of offensive odors. Various sanitary laws and regulations have been enacted and put to practice, and civic consciousness has improved to the point where when it snows all the families come out to sweep away the snow. If it were 1894, I could have taken a picture of a slum and included it in this chapter, but it is not possible in 1896. I am witnessing really a huge change."
One thing that needs to be mentioned here is that Seoul at this time was improved in Korean way, not in European manner. Jeong-dong, however, was an exception. Jeong-dong was allotted for occupation by foreign diplomacy offices and missionary organizations. Were it not for Gyeongungung palace at its center, it would look completely non-Korean. Most Korean residents who once lived there sold their houses and moved away. Wide roads were built and shops run by foreigners moved in. The French legation was built on a hill and competed in magnificence with the Russian legation building. A Methodist church of redbrick was erected by an American missionary organization around the time the legations were constructed; the church could be seen from all directions.

The Muakjae Pass, the road to Beijing, which resembled a scene from an Oriental painting, also underwent a significant change, losing its old charm. In the past, through Muakjae Pass, donkeys packing heavy loads toiled up the narrow gravel roads and the envoys of the Chinese emperor entered Seoul to be welcomed by the splendor of the king’s reception. This old scenery disappeared by new roadwork: Rugged rocks and cliff faces had either been removed or cut into so that roads with retaining walls and culverts could be built. Road were leveled off and widened under the supervision of the Russian officials.

Bishop noted that these changes in Seoul were brought about in only four months thanks to the outstanding ability and effort of the commissioner of the Office of National Tax Administration supported by Panyun of Hanseong Bu (Mayor of the City of Seoul), Lee Chae-yeon. The commissioner refers to John McLeavy Brown, British, who when he came to Korea in October 1893, assumed the responsibility for collecting national taxes, and held the additional office of advisor for the Takjibu (Ministry of Finance). Brown was in charge of tariffs, certainly the most important financial source of the country, and his presence and importance in Korean government was not to be dismissed. On November 11, 1897 he resigned from his position under the pressure of Russian minister, but in March 1898 he returned to his previous position and remained until November 1905. Lee Chae-yeon was assigned as a councilor and traveled to America accompanying Park Jeong-yang, who was then diplomatic minister to the US. Upon returning to Korea he served as Governor of Hanseong Bu from May 29, 1895 and September 6 of the same year and then served as mayor (then called Panyun) of Seoul from October 6, 1896 to March 10, 1898.

With the Eula Protectorate Treaty of 1905 between Korean and Japan and the establishment of Japanese ruling institution on February 1, 1906, the Korean government was virtually under the command of the Japan. This means that the Korean government (known
as Daehan Empire which succeeded Chosun Dynasty) was only in power for 10 years from its inauguration year of 1896 to 1905. It is believed that the above mentioned city redevelopment centering on the construction of new roads and road expansion as seen by Bishop took place at this time period. Beside what Bishop wrote, History of Gyeongseong Bu (Vol. 2) contains some information as to city reformation works during these 10 years.6

Beginning in 1895, the Korean government began repairing roads in the fortresses and banned the construction of homes to encroach on public roads except for those cases acknowledged as causing no inconvenience to traffic. However with complications arising within the nations affairs, the plan was left unfinished. In June 1897, the government hurriedly commenced road construction on Seodaemun Gate (West Gate) and around the Jeong-dong area. At the same time, the government announced a plan to expand the roads in the areas around Namdaemun Gate (South Gate) and sent notice to house owners in the areas, both Japanese and Koreans residents whose homes encroached upon the road. The Japanese councilor immediately conducted on-site inspections along with Chief Magistrate of Hanseong Bu and removed all those homes that encroached on the road to Namdaemun as of November that year.

It is evident from these records that over a 10-year period, 1896 - 1905, the Korean government forged ahead with extensive road rebuilding or expansion as well as new road construction both in and outside the city walls. According to Bishop and the History of Gyeongseong Bu, the streets around Jeong-dong where most westerners lived, and streets in the areas around Gwanghwamun Gate, Seodaemun Gate, and Dognipmun (the Independent Gate) were widened or new streets were built. According to the History of Gyeongseong Bu;

The Muakjae Pass from Hyunjoe-dong to Hongje-dong outside the Independent Gate used to be an unimproved roads with a 18 cheek high hill (cheek is a Korean measurement, one cheek is about one foot). However, at the suggestion of the Russian diplomatic minister, it was reduced to a 2 cheek high pass, and the old features of the road through the pass were completely changed to what we presently know.7

Kim Kwang-woo first reported this city improvement projects conducted by Korean government (Daehan Empire) from 1896 to 1905, those projects which were described in the writing of Bishop.8 In the follow-up research, Lee Tae-jin further elaborated these city improvement efforts by Daehan Empire.9 According to Lee, King Gojong took the initiative to redevelop the city of Seoul following
the 'Agwanpachon' of 1896 (the event that King Gojong and crowned prince avoided Japanese aggression at Russian Legation) and he entrusted supervision of the work to John L. Brown (the British general tax accountant) and Lee, Chae-yeon (Mayor of Seoul). The redevelopment of the city was a comprehensive, large scale project which included: 1) improvement of roads and streams, 2) construction of new central buildings, 3) provision of new parks, 4) introduction of new convenience facilities, and 5) designation of industrial complexes. Kim, Kwang-woo and Lee, Tae-jin argue that the main element of the plan was a scheme that constructed the radial road network extending from the new royal palace Gyeongungung (presently Deoksugung). As a result, they argue, new roads linking Gyeongungung to the Gwanghwamun crossroads, Namdaemun Gate (South Gate), and Wongudan were built.

However, although highly feasible, no concrete proof has been found to prove what Kim and Lee suggested. The truth about the construction of the radial road system by Daehan Empire still requires further research effort to find the records on the specifics of road construction. Instead of jumping into a hasty conclusion, this question could not help but be put on hold until the finding of historical materials supporting the fact.

ROAD IMPROVEMENTS BY JAPANESE RESIDENTS

It was from 1885 that Japanese began to reside in Seoul in earnest. Upon request of Japanese charge d'affaires Kondo to Kim Yoon-sik, minister of Foreign Affairs, The Korean government designated some area as Japanese residential area under Mt. Namsan which included Jinggaek, Yejang-dong, Juja-dong and Chungmuro 1-ga. 10) Hong Ryang-ho, a renowned minister and scholar during the reigns of King Youngjo (1724-1776) and Jeongjo (1776-1800) who named his house near Jinggaek hill as Niwa (mud cave) wrote that the origin of the name Jinggaek went as follows.

There is Jinggaek hill in front of Mt. Namsan. It is a narrow low land, and when it rains the water does not drain well and the roads get muddy causing trouble for passers-by. That was why the village there is called Jinggaek meaning 'a muddy hill.' My house was nearby Jinggaek, and I named my house 'Jingul' meaning 'a muddy cave.' 11)

The Japanese residents living in and around Jinggaek hill must have experienced tremendous difficulties. As a result, Japanese immigrants to Korea on the increase since the outbreak of the Sino-Japan-
ese War (1894-1895), chose to live near Namdaemun gate, the other end of Jingogae to avoid living in Jingogae, this caused a decline in the Japanese town. Finally, the Japanese residents and the Japanese legation in a joint venture launched the road improvement project between Jingogae and the Namdaemun gate. Road improvement started in late August in 1895 (the 32nd year of King Gojong’s reign) and was completed that year, funded by a loan of 3,0000 won from Japanese Jeil Bank (Seoul Branch Office) and special tax to Japanese residents. During that period, the homes on both sides of the road (mainly makeshift homes) were removed to allow expansion of the road and were dug deeper into the ground for drainage, public restrooms were built, street lights were put up, and the Lihoj Police Box (presently the Chungmuro Police Box) was first built. The foundation of the present Chungmuro 1- and 2-ga road was laid at that time. The Chungmuro road improvement by the Japanese took place again in 1904, expanding and repairing roads from the end of Chungmuro 2-ga to 5-ga where both Japanese and Koreans were living.

REMOVAL OF FORTRESSES AND EXPANSION OF ROAD

The removal of the fortresses proved a decisive turning point in completely changing the spatial structure of pre-industrial city of Seoul. And, as in the case of European countries, this radical transformation was executed under the excuse of expanding the roads.

The electric tramway from Seodaemun (West Gate) to Dongdaemun (East Gate) and to Cheongryangri was built in 1898 (October 17 - December 25), second year of the Gwangmu era. Construction of another tramway from Jongro to Namdaemun (South Gate) and to Wonhyoro 4-ga (the street was named after the great Buddhist priest Wonhyo) began at the end of the 2nd year during the Gwangmu era and was completed in January 1900, the 4th year of Gwangmu. During construction of the tramway, the fortress walls on both sides of the East Gate, West Gate, and South Gate should have been torn down however, strangely enough the walls remained and the trams had to run through the narrow gates. Due to the lack of understanding about street cars, thus far the least known product of the industrial era and the Korean people’s strong rejection toward this new machine, the Korean government could not dare to move ahead with the removal of the fortress walls.

Sungnyemun (‘respect courtesy gate’, official name of Namdaemun, South Gate) was already overcrowded with people and horses constantly flowing through the narrow gate. When streetcars were
added to the traffic and then passengers desiring to board trains after the completion of the Gyeong-Bu (Seoul-Busan) Railway in 1905 (9th year of the Gwangmu era), congestion at the gate defied the description. With the advent of these circumstances, on June 27, 1905, Hayashi, the Japanese diplomatic minister, sent an official note to Lee, Ha-yong, then foreign minister and suggested that fortress walls either side of Namdaemun gate be torn down to make two detours a large road to ease traffic congestion. He also suggested that Seoul’s mayor and the Japanese councilor get together to discuss details regarding the matter. However, the Korean government ignored the suggestion.

The Korean government did not want to remove the fortress walls fearing it might disturb the people of Seoul. However, given the traffic congestion, Korean government could not hold this attitude very long. Finally on March 30, 1907, one year after Japan took complete control over all domestic affairs of Korea, a high state councilor of the State of Council Park Jae-soon, Internal Affairs Minister Lee Ji-yong, Defense Minister Kwon Jung-hyun drafted an agenda titled Removal of fortress walls adjacent to Dongdaemun (East Gate) and Namdaemun (South Gate). The next day on March 31, King Gojong sanctioned the plan. The following is what was written by government officials to King Gojong.

The South and the East are the gateways to the royal palace and have long been the busiest where people bump their shoulders against each other and overflowed with cars and horses. A tramway has been built running through the gates and added more traffic to the already bustling area, causing more inconvenience. Due to this situation, it is deemed necessary to take urgent measures to ease transportation in this area. It is now necessary to remove 8 gan (gan is a unit of length equal to 180cm) from either side of the fortress walls at the gates for streetcars and the main gates will be for the exclusive use of pedestrians. This will greatly reduce problems due to the narrow roads and correct traffic flow. We hereby duly present this proposal with attached blueprint for approval by your highness.

The proposal was approved and the government drew up plans to remove the fortress walls and expand and construct new roads leading to Namdaemun gate. The government appropriated 135,595 won 93 jeon from the budget for the project using government bonds and began purchasing land, homes and relocating people to other regions. While the work was in the progress, a new cabinet moved in as of May 22, 1907 and petitioned King Gojong who gave his royal approval on June 22. The new petition reads as follows:
The removal of the fortress walls on both sides of Namdaemun (south gate) and Dongdaemun (east gate) have already been approved. The partial removal of the fortress walls will leave unsightly remains and the residual walls would be of no use in the defense of Seoul. We hereby humbly suggest that the remaining fortress walls be removed under the aegis of the Naebu (Ministry of Internal Affairs) and the Takjibu (Ministry of Finance), thus demonstrating to people that there would be no 'outside' in the king's mind.  

On July 20, 1907, King Sunjong succeeded King Gojong and on July 24, the new Korean-Japanese Treaty, also referred to as the Jeongmi Seven Treaty, was concluded. A Japanese was appointed as vice minister in the Korean government and the reign name was changed as of August 2 from Gwangmu (Martial Brilliance) to Yunghui (Abundant Prosperity). Amid this vortex of historical changes, the Cabinet Ordinance announced the establishment of the Fortress Wall Removal Committee on July 30th, and entrusted all matters regarding the removal of the fortress walls to the committee. The steering Committee was composed of two members from each of the following Ministries, the Ministry of Internal Affairs, the Ministry of Finance, and the Ministry of Defense (Article 2, Clause 2), its chairman was elected from among the vice ministers of the three organizations (Article 2, Clause 1), and officials from the three ministries were in charge of the removal of the fortress walls (Article 1). Judging Giuchi was appointed vice minister of the Ministry of Internal Affairs on August 8th, and September 6th, and Arai was appointed vice minister of the Ministry of Finance, the Committee is believed to have been organized after August 10th. The Committee Chairman was Giuchi, vice minister of the Ministry of Internal Affairs.

Many reasons can be speculated around the establishment of the Fortress Wall Removal Committee. First speculation is that the government wanted to avoid the possible negative public opinion regarding the removal of the 500-year-old fortress built at the beginning of the Chosun dynasty, delivering the role to the committee the majority of whose memberships were Japanese vice ministers responsible. Second speculation is that the committee was established at the request of the Japanese Colonial government and Japanese military that wanted the control of the work in preparation of the imminent visit of the Japanese Prince.  

At the beginning of September, construction teams filled Namji pond (the south pond) southeast of Namdaemun, the main body of the gate was left intact, the walls on both sides of the gate were removed to build a new 8 gans (1 gan equals 180cm) wide street (inclusive of the old road, the Namdaemun area eventually had three
streets). Detailed plans and execution of the plans were carried out by the committee: a stone wall was built around the gate, lawns and trees were planted inside the wall, stone pillars were put up at the four corners on top of which were placed jade electric lights. The Fortress Wall Removal Committee was dissolved on September 5th, 1908 when the planned construction was completed. Construction of the two roads at either side of Namdaemun gate was completed on October 3, 1908. Supplementary work continued however until May 30th into the next year.

The continued construction work further expanded these roads toward Namdaemun Station (presently Seoul Station), a total of 436m with 34.54-meter widening. Other roads such as Gurigae road (presently Euljiro), and road between Gwanghuimun gate - Wangsimni were repaired with a budget of 454,604 won. All this construction was in progress when the ill-fated, forceful annexation of Korea by Japan took place.

II

Urban Restructuring in the Early Colonial Period: City Improvement Projects and Zoning System

ORIGIN AND DETAILS OF CITY IMPROVEMENT SYSTEM

In August 1910 Japan completed the longed-for colonization of Korea and announced numerous ordinances in late September and early October, laying the groundwork for colonial rule. Rearrangement of the ruling organizations and maintaining public peace and order were their top priorities, and city improvements were naturally laid aside. On October 7, 1912, the Colonial government (Japanese colonial government) issued Decree No.9 to ministers of the
provinces and ordered the following: 29)

Any cities that want to either expand or rearrange their districts or street plans require permission. The proposals should be accompanied with detailed plans and blueprints. Small changes however, will not be subject to prior permission.

It was a totally unreasonable ordinance. Detailed explanations as to what and how, who would bear the expense and how were completely missing. The one page ordinance has been the main legal basis in effect for almost 20 years, dictating the city planning and improvement. As has been the case in any dictatorial rules, no further explanation was provided to the local authorities. Here we need to examine the concept of the city improvement called Shi-gu-ye-

jeong.

In July 1882, Yoshiwara, governor of Tokyo with joint appointment as an assistant secretary in the Ministry of Internal Affairs, felt an acute need for improving Tokyo, the capital city of Japan. For two years he had research conducted and based on results prepared in November 1884 a city improvement plan titled Draft Proposal for City Improvement and submitted the plan to the central government. Though it was titled as a proposal, it detailed the improvement of the city regarding roads, bridges, railways, waterways and other aspects of Tokyo complete with detailed blueprints, reference graphs and diagrams attached. He explained the background of his plans as follows:

...Since the introduction of western civilization to the Orient, wagons, rickshaws, telegraphic communications, and trains are overflowing Tokyo and the existing narrow roads of the city can no longer accommodate the increase in traffic. The situation has become serious to the point that passersby have to scurry about in order not to be run over by the wagons and cars, their lives are continually in danger. Some may find this proposal unsatisfactory as it pertains only to roads, transportation, and waterways, lacking any reference in the plans with regards to housing, plumbing systems, sewers and other features that are just as important for the welfare of a city. However, roads, transportation, and river bridges are essential to a city whereas plumbing systems, housing, and sewer systems would wither and die without the first essential features being of a robust nature. With this in mind, the framework of the city such as the roads, bridges, and rivers need to be attended to first, then the other aspects of the city will naturally find their place... (the rest omitted).

In drawing up the plans, he studied the city plans of London and Paris30) and based his plan on the work of G.E. Haussmann, the
governor of the Seine Prefecture, who restructured Paris in the mid 19th century under Napoleon III. His Tokyo plan were primarily focused on the arrangement of city streets, aiming at promoting Tokyo to be the political center of Japan as new power in the world stage.

The street plan included in Yoshigawa's proposal for the district of Tokyo is as follows.

Streets will be divided into 5 categories. First class streets are of two types. Type one street is 15 gans (gan is a unit of measurement equal to 180cm) in width, 9 gans for cars and wagons with 3 additional gans for pedestrian traffic on either side. Type two street is 7 gans in width for cars and wagons with 2.5 gans on either side for pedestrian traffic. Second class streets will be 10 gans in width, 6 gans for cars and wagons with 2 gans on either side for pedestrian traffic. Third class streets will be 8 gans in width, 5 gans for cars and wagons with 1.5 gans on either side for pedestrian traffic. Fourth-class streets are 6 gans in width with no distinction between vehicular and pedestrian traffic.

Governor Yoshigawa also suggested Tokyo City Improvement Ordinance, composed of 16 articles including agencies and budget to carry out the plan, and appealed to the government to adopt his proposal as national law. Following is the gist of it.

(Article 1) In order to plan and carry out the Tokyo City Improvement there shall be the Tokyo City Improvement Committee under the Minister of Internal Affairs. The organization and rights of the Committee shall be stated in a separate ordinance. The expenses for the committee shall be drawn from the expenses for the city improvement.

(Article 2) When the Tokyo City Improvement Committee prepares improvement plans, it shall report the plans to the Minister of Internal Affairs. After deliberation and cabinet approval, the deputy governor of Tokyo shall post it to the public.

(Article 3) In order to foot the expenses for city improvement, the following special taxes shall be levied in Tokyo.

1) land tax. Agricultural lands are exempt from taxation
2) business and other miscellaneous taxes, less than 4/10 of the local tax
3) housing tax, same as above.
4) Sake (liquor), other liquors imported into or sold in Tokyo, less than 50 jeon per 1 seok.

(Article 5) In order to support the city improvement project, government-owned land on Tokyo's riverside not currently in use shall be turned over to the city. Until completion of the city improvement project, income from riverside land cannot be spent for other purposes; riverside lands shall be exempt from land taxes.

(Article 13) The budget for city improvement shall be a special
Japan’s senate house, law-making body since up until then Japan had no National Assembly, discussed the ordinance. After three months of heated discussion, the senate house decided to scrap the ordinance. Two months after this decision, however, the Japanese government issued Royal Decree No. 62 on August 17, 1888 to enforce the plans. By this action, modern urban planning started in Tokyo, and Tokyo City Improvement Ordinance was in effect for 30 years until in April 1919 when Japan enacted new Urban Planning Law. The city improvement ordinance applied only to Tokyo and it was as late as in 1918 until the ordinance was accepted by other cities such as Osaka, Kyoto, Nagoya, Yokohama and Kobe.

As mentioned above, the city improvement intended to first provide the basic urban infrastructure such as roads, bridges, and river waterways. By doing so, it hoped that each city blocks would be modernized by subsequent building activity based upon the improved infrastructure. It was a rudimentary concept of modern town planning as well as an urban engineering concept.

The Japanese colonial government imported this planning technique and applied to Seoul. However, it did not have to employ a Korean version of Tokyo City Improvement Ordinance. The ordinance, a legal basis of project finance, was not needed in Seoul because the colonial government already had all the rights over inland revenues and property taxes of Korean peninsular.

CITY IMPROVEMENT OF GYEONGSEONG

The first phase road construction

As mentioned, the colonial government issued a decree on city improvement to the province governors, and one month later, the colonial government announced the improvement plan for 31 streets in Seoul in the form of the Colonial government Notice. No 78 on November 6, 1912. The 31 streets were: a 30-gan street from Gwanghwamun gate to Hwangtogyo (presently Gwanghwamun junction), a 19-gan street from Namdaemun gate to the Namdaemun bus stop, and three 15-gan streets (presently Taepyeongro, Jongro, Namdaemunro), five 12-gan streets (presently Yulgokro, Wujonggukro, Euljirro, Donhwamunro, part of Taehakro and
Hunryunwonro), six 10-gan streets and fifteen 8-gan streets. Of those, the 30-gan and 19-gan streets were wider than in Tokyo’s standard of first class road because these widths were already secured in Seoul during the Chosun dynasty prior to Japanese colonization.40) The improvement of the rest of the 29 streets were some modification of the existing widths, setting aside spaces for cars and wagons in the center and for pedestrian traffic at the sides of street in accordance with the standard of Tokyo (Figure 8.1).

Here, gan is a unit of length and is equal to 6 cheok. As 1 cheok is equal to 30.3 centi-meters, 1 gan equals 1.82 meters. However, 1 gan was often calculated as 2 meters, therefore 15 gans often meant 30 meters. What follows are the 31 streets included in Notice No. 78: their names were modified to reflect the present names.

1) Road from Gwanghwamun to Hwangohyon Plaza (presently Gwanghwamun junction): Width 30 gans
2) Road from Namdaemun gate to Namdaemun Station (presently Seoul Station): Width 19 gans
3) Road from Hwangohyon Plaza, via Daehammun Plaza, to Namdaemun gate: Width 15 gans
4) Road from Dongdaemun gate, through Jongro, to Gyeongheuiunggog palace: Width 15 gans
5) Road from Namdaemun gate, via Bank of Korea, to Jongro: Width 15 gans
6) Road from Gwanghwamun gate, via Angukdong Plaza, Donghwamun gate, Colonial government Hospital (presently Seoul National University Hospital), to Ehwa-dong: Width 12 gans
7) Road from Jongro to Songhyundong: Width 12-15 gans
8) Road from Daehammun gate plaza, through Euljiri, to Gwangheuiumun gate: Width 12 gans
9) Road from Donghwamun gate, via Euljiri Plaza, Chungmuro 4 ga, to Pildong: Width 12 gans
10) Road from Ehwadong, via intersecting Euljiri, to Chungmuro: Width 12 gans
11) Road from Changgyunggung palace, via Seoul National University Hospital, to Chungmuro 5 ga: Width 10 gans
12) Road from Hyehwa-dong to Ewha-dong: Width 12 gans
13) Road from the Bank of Korea, via intersecting the southern part of Chungmuro, to Sangnim-dong (presently Toegyero): Width 12 gans
14) Road from Daehammun Plaza to the Plaza in front of the Bank of Korea: Width 10 gans
15) Road from Gyeongheuiunggog palace (presently Sintmunro), via Seodaemun gate (west gate), to Dongnipmun (Independent Gate): Width 10 gans
16) Road from Gyeongbokgung palace to Naeja-dong: Width 12 gans
17) Road from Cheongundong near Bukmun (north gate) to Seosomun gate: Width 8 gans
18) Road from Dachanmun gate plaza, through Scodaemun road, to Dongnipmun (Independent Gate): Width 8 gans
19) Road from Gyobuk-dong, through Euijiru, to Mapo road: Width 8 gans
20) Road from Namdaeumun, via railway crossing toward Mapo, to Bongnae-dong 2-ga: Width 12 gans
21) Road from Mapo road to west of Seoul Station; Width 8 gans
22) Road from Namdaeumun gate, via Namchang-dong, to Huam-dong: Width 10 - 6 gans
23) Road from Eunhaeng-dong, west of Gyeongbokgung palace, via Hwangtohyun Plaza, to the crossroad of Namdaemun road and Euljiro: Width 8 gans
24) Road from Anguk-dong plaza to north of Hwasee-dong: Width 8 gans
25) Road from Anguk-dong plaza to Tappol Park: Width 8 gans
26) Road from Tapdong Park Plaza, via Euljiro plaza, to Chungmuro 8-ga: Width 8 gans
27) Road from Tapdong Park junction, via Euljiro and Jeo-dong 1-ga, to Chungmuro 3-ga: Width 8 gans
28) Road from near Botanical Gardens (Changgyonggung palace), intersecting Hyejiwa-dong, to Sangbak-dong: Width 8 gans
29) Road from Changgyonggung palace to Hyejiwa-dong: Width 8-4 gans
30) Road from Euljiro 2-ga to Jeo-dong 1-ga: Width 8 gans
31) Road from Dongdaemun gate (east gate) to Sungin-dong: Width 10 gans

Of the above 31 streets, the No. 1 road from Namdaeumun gate to Seoul Station (390.91 meters) and the No. 8 road from Dacha
mun gate to Gwanghuimun gate (presently Euljiro) already saw their expansion works begun in 1911 and completed in the same year. Because, construction work began in early 1912 on the No.3 road from Hwangtohyun Plaza (presently the Gwanghwamun junction) to Namdaeumun gate (presently Taepyongro 1-2 ga, length 1,099.10 meters), it also had been completed by the time the plan was announced. Road No. 27 was also already under construction with partial completion when the colonial government’s notice was announced in November 6, 1913.43

Of the 31 streets, excluding those already completed, construction continued for six years, from 1913 through 1918. The cost of the construction totaled 1,974,964 won and 34 jeon. Specifics on construction expenses were: road construction 514,523 won 3 jeon (about 26%), land compensation 1,349,405 won 34 jeon (about 68.3%), labor costs/office expenses 111,035 won 97 jeon (about 5.6%).

While construction on the 31 roads was in progress, the colonial government was also carrying out construction on new roads and expansion of the main arterials nationwide for over 7 years from
1911 to 1917. These were so called 'newly-made road (called Shin-jak-ra).' In other words, the first phase of the city improvement work in Gyeongseong (Seoul) was a part of the first phase of the nationwide road construction project. Of the 31 streets, construction on Numbers 23, 26, and 28 roads were unfeasible projects, because houses had been built tightly together throughout the area. The plan later had to drop the lines of these three roads.

Second phase road construction

The first phase construction work begun in 1913 was almost completed by 1918, and on June 25, 1919, the colonial government issued Notice No. 173 that canceled the construction of No. 23, 26 and 28 roads and added roads No. 32 through 46. Later the notice was revised to include road No. 47. Details on construction for roads No. 32 to 47, which were the second phase of road development in Seoul and part of the second phase of the nationwide road construction plan as well, are as follows:

32) Road from Naeja-dong, via Sajik-dong, to Euijuro and Gyoobuk-dong (Independent Gate): Width 8 - 4 gans
33) Road from Seoul Station to Galwol-dong: Width 15 gans
34) Road from Bongnae-dong 2 ga to Cheongpa-dong 3 ga: Width 10 - 6 gans
35) Road from Bongnae-dong 2 ga to Ahyon-dong: Width 8 gans
36) Road from Gyeongbokgung palace to Seodaemun gate (in front of the Gyeonghuigung palace): Width 8 gans
37) Road from Gyeongbokgung palace plaza to Jongro in a diagonal direction: Width 8 gans
38) Road from Chungjeongro 2 ga to Mapo-dong: Width 6 gans
39) Road from Euljiro 2 ga to Namsan-dong 1 ga: Width 8 gans
40) Road from Ewha-dong, via Euljiro, to Seogang-dong: Width 8 gans
41) Road from Bongnae-dong 2 ga to Singongbok-dong (presently Malii-dong): Width 8 gans
42) Road from Galwol-dong to Hangangro: Width 15 gans
43) Road from Galwol-dong, via Wonhyoro 3 ga, to Mapo-dong: Width 12 - 6 gans
44) Road from Wonhyoro 3 ga to Mapo road: Width 6 gans
45) Road from Wonhyoro 3 ga, via Ichon-dong, to Hangangro railway crossing: Width 6 gans
46) Road from Dongja-dong to Cheongpa-dong 1 ga: Width 8 gans
47) Road from Jeokseon-dong, via Gungjeong-dong, to Cheongun-dong: With 12 gans

The colonial government spent a total of 2,992,521 won and 55 jeon for the second phase of city improvement over a 11-year period.
(1919 - 1929) on the restructuring of Seoul's roads within and outside the four gates (East gate, West gate, South gate and North gate). Of the total amount spent, 1,319,943 won and 61 jeon (about 44.1%) covered costs for road construction, 1,487,126 won and 15 jeon (about 49.7%) for land purchases, 185,451 won and 78 jeon (about 6.2%) for labor costs and office expenses.43

Thus in total, the first and second phases of road construction over a 17-year period, 1913 to 1929, spent 4,967,219 won and 89 jeon to build 21,325 meters of roads, streets and a 225 square meters plaza. Other than the new road from Donhwamun gate to Ewha-dong, cutting between the Changdeokgung palace and the Jongmyo shrine, most of the roads and streets followed the existing roadbeds built during the Chosun dynasty. They were either straightened, widened, or divided into vehicular and pedestrian portions on the same streets that had been the existing major roads since the Chosun dynasty. In districts with heavy traffic, roads were paved with asphalt or by the Macadam method.44 The colonial government put the Gyeongseong Engineering Branch Office, an affiliated organization, in exclusive charge of the construction work until 1928 and in 1929 Gyeongseong Bu (Seoul City) was placed in charge but received some financial assistance. According to records, as of 1927, of the 44 roads, 21 were completed and the rest were under construction or waiting for construction to begin (Figure 8.1).45

The city improvement plan of Gyeongseong Bu gave particular emphasis to expansion and straightening streets in the downtown areas. They were patterned after the Paris Street Plans of G.E. Haussmann which had become a model for many modern cities throughout the world. Haussmann realized the need for road straightening and expansion when he saw that barricades built on narrow and meandering roads greatly hindered movement of the French army when laborers named the Commune de Paris revolted between March 18 and May 28, 1871.46 Presumably, the colonial government was particularly interested in Haussmann's road plan as it feared the possibility of an independence movement in Korea.

It is worthy mentioning that during the colonial period, the road construction for downtown Seoul was completed by these two phases of city improvement projects. Under the City Planning Decree in 1936, city improvement focused on land readjustment in the outer edges of Seoul, without including any projects in downtown area. In other words, city improvement of downtown area was completed by 1929; afterward there was little road expansion until restoration works after the Korean War (1950 - 1953).

There were various reasons that no further road expansion work in downtown Seoul took place after the 17-year (1913-1929) project was completed under the colonial government. First, the expanded
roads were able to accommodate the traffic volume at the time. Second, expenditure for the 44 road expansion projects was huge enough Japan could afford no more. After World War I (1914-1919) and around 1920, the whole world was struggling with economic depression: Japan and the colonial government were in extremely difficult budget situation. Any further city improvement would be a burden, and in fact, the huge expense for land remuneration was beyond what the colonial government could afford. As a result, after the second phase of road improvement, the colonial government spent little budget for road construction during the remaining colonial period.

**BUILDING CONTROL THROUGH ZONING SYSTEM**

Up to 1935, along with the city improvement (called *shi-gu-gye-jeong*), or road construction, the land use zoning system was also important part of city planning of Seoul. On February 25, 1913, the colonial government issued Ordinance No. 11 titled Regulations on Building Construction. The regulation was composed of 9 articles dictating the building coverage ratio (Article 3, Section 1), building lines (Article 3, Section 2), construction materials, supplementary facilities, aesthetic consideration and disaster prevention. In addition, it introduced a zoning system defining the fire prevention district and height control district (article 4), semi-industrial zone (article 6) and other injunctions to satisfy the minimum requirements for building construction and land use within the city. This ordinance was in force prior to the enactment of the laws of city planning and building construction later years.

On July 17, 1913, the colonial government issued Notice No. 2000 that greatly expanded the area subject to Regulations on Building Construction. The area included the entire region of east, west, south, and north within Gyeongseong Bu of Gyeonggi Do (Province), the entire area of Yongsan-myun and Hanji-myun, and part of Inchang-myun and Sungsin-myun. In addition, article 6 designated the following as industrial districts in which construction of factories was allowed: 1) the entire area outside the fortresses of Seoul excluding the area east of the railway line from the Seodaemun station to the Han River, 2) around the Mumyungscheon river within the fortress from the Bukmyo tomb to Singyo bridge in Singyodong, the east side area from Singyo bridge to Ueui-dong road and to the street at Dongdaemun gate.

Acknowledging that the scope of the regulation was too broad and the subject areas in Article 6 as being too specific, the colonial
government revised the regulations as of May 30, 1914 in Notice No. 89 and narrowed the subject areas in the regulations to Gyeonggi Do, Gyeongseong Bu. It also revised the semi-industrial zone (Article 6) as follows: 69

1) Outside-the-fortress areas excluding the eastside area of railway line from the Seodaemun station to the Han River.
2) Inside-the-fortress areas such as Hyehwa-dong, Dongsung-dong, Ehwa-dong, Chungsin-dong, Jongro 6-ga, Hwanggeumjeong (presently Euljiro street) 6-ga and 7-ga, excluding the southern area of the streetcar lines on Hwanggeumjeong (Euljiro) 6 ga and 7-ga.

This means that the areas in Seoul where factory construction was allowed until 1936 were 1) the western areas of the lines of Gyeong-Bu (Seoul-Busan) railway and Gyeong-Eui (Seoul-Sineuiju) railway both centered on Seoul Station, 2) the eastern portion of 6th and 7th streets of Jongro and Euljiro, and 3) the areas of Hyehwa-dong, Dongsung-dong, Ehwa-dong and Chungsin-dong. Of those areas, factory construction was restricted in the south side of streetcar line on Euljiro 6th and 7th streets because the Japanese built their homes in this area.

In addition, on July 17, 1913, the colonial government announced the revision of the regulation area of Article 4 (as to fire prevention and height control districts) notifying the entire region within the fortress walls of Seoul, most of Yongsan-gu, up to Independence Gate to the north, and Sinchon to the west as areas that were restricted as to the height that building could be constructed. 50 However, responding to the criticism that the area of the height restriction was too extensive, the colonial government narrowed the regulation area by excluding such areas as Hyunjeo-dong, Dohwa-dong, Mapo-dong, Amgeunjeong (present Cheongdam-dong) and Ichon-dong (May 30, 1914). 51

In relation to height control, there was a principle regarding the arrangement of official buildings in colonial planning. It was patterned after the "Westernization within 10 ri (4 km) in all directions from Nihonbashi (literally Japan Bridge)," a modern town planning principle introduced in Japan after the Meiji Restoration. 52 According to this principle, most of the major buildings either built by the colonial government or under its control were built within a 1 km radius of Gyeongseong Bu Hall (presently Seoul City Hall) Plaza: Examples are Gyeongseong Post Office, Oriental Development Company, Gyeongseong Ilbo (daily newspaper), Gyeongseong Court, Chosun Bank, Siksan Bank, Gyeongseong Industrial Products Pavilion, Gyeongseong Electricity, Gyeongseong Library, and
Chosun Hotel. It is presumed that the Japanese government concentrated those buildings in a small area for security reasons to protect them from riots, while promoting the visual grandeur for the authority of the colonial government and the beauty of the city.

Some City Planning Ideas in Colonial Period

ACTIVITIES OF THE GYEONGSEONG CITY PLANNING RESEARCH ASSOCIATION

Since the March 1st Independence Movement in 1919, various urban problems including rapid population increase arose in Korea. In several cities, including Gyeongseong (Seoul), there was a general understanding in the early 1920's that the city improvement projects (shi-gu-gye-jeong) alone could no longer keep up with these urban problems, and that there was an urgent need for some type of broader city planning and its legal basis such as a city planning law. This awakening stemmed from the fact that Japan enacted City Planning Law (Japanese Law No. 36) on April 4, 1919 and put into force as of January 1, 1920. With this law, Japan was better equipped to deal with its urban problems, freeing itself from the Tokyo City Improvement Ordinance that had been in force for 31 years.53

The Gyeongseong City Planning Research Association had its inaugural meeting on August 27, 1921 at the Gyeongseong Chamber of Commerce in Sogong-dong54 and its first general meeting on September 6th at the Gyeongseong Community Center. Advisors to the study group were Mizuno, director of political affairs for the colonial government, prominent pro-Japanese figures including Marquis Park Young-hyo, all ministers of the colonial government, and mayor
of Gyeongseong. The members of the association were mainly composed of prominent financial leaders such as managers of the Chosun Chamber of Commerce and Industry and bank presidents. It was an extensive organization having a standing staff of twenty, 60 councilors, and 150 researchers with 12 sections that included city planning, transportation, hygiene, economic, education, parks and others, the respective departments had managers and directors.55

On the surface, it was an organization of businessmen and financial leaders from Seoul: the 1st section chief of Gyeongseong Bu (Seoul) was the only member of public official. It was presumably, however, led and controlled by the young public officials from the Internal Affairs Bureau (Engineering Division) of the colonial government. It is believed that these young officials were in the same pursuit with the young public officials in Japan such as Ikeda Hiroshi and Inuma Kazumi, who drafted the city planning law and enforced it with high passion.

The Association was headquartered in the Gyeongseong Chamber of Commerce and held departmental or general meetings once or twice a month. They discussed city plans and their details that should be included in the plans, made recommendations to the government, and at times made them public through the media (mainly newspapers). For example, on May 3, 1922, the association decided on the following six points and assigned someone to carry the projects forward.56

1) Construction of Gyeongseong Bu building (City Hall of Seoul)
2) Expedite the Gyeongseong city improvement projects
3) Construction of 4 new streets in the Mt. Namsan area
4) Sin (new) Yongsan water-drainage construction
5) Construction of public facilities in the vicinity of the Han River
6) Establishment of a department within the colonial government in charge of city planning.

The heated discussion over Seoul’s city planning at the Gyeongseong City Planning Research Association from 1921 to 1922, spread to the colonial government, the city hall, and even to the general public. Reflecting this sentiment in the government and the people, Dong-A Ilbo (daily newspaper) carried an editorial on October 15, 1922 under the title "Gyeongseong City Planning - Remove the Surcharge Fare System Against Suburban Districts." This is believed to be the first newspaper editorial in Korea that discussed city planning.

Inspired by these enthusiastic efforts of private-sector organization of the City Planning Research Association, the public officials in charge of city planning in the colonial government and Gyeongseong Bu (the City of Seoul) were also very enthusiastic.
about the city planning. On December 12, 1922 a newspaper article was released informing that the Engineering Department, Internal Affairs Bureau at the colonial government completed the draft of city planning decree and referred them to other related departments.\textsuperscript{57} Other newspaper articles at the time inform us that Gyeongseong Bu was working on detailed city plans in close cooperation with the Gyeongseong City Planning Research Association, and by early 1923, the plan was almost completed.\textsuperscript{58}

It was the Great Kanto Earthquake of 1923 that accelerated the city planning efforts and expanded the movement to local cities in Japan. The Earthquake, the worst earthquake in the history of Japan hit central Japan on September 1, 1923 and in three days turned Tokyo and Yokohama to ashes. During the reshuffling of the cabinet the day after the earthquake, Koto Simbei was appointed to Minister of Internal Affairs concurrent with chairman of the Capital Restoration Authority. Within a month of his inauguration, he announced a daring ‘Capital Restoration Plan’ which stated that all roads in Tokyo would be expanded to over 50 meters in width and included the construction of a total 3 million pyeong (one pyeong equals 3.3 square meters) of parks.\textsuperscript{59} Due to the audaciousness of the plan and the astronomical budget, it was severely curtailed. Koto’s proposal, however, had the following effects: 1) it awakened public officials who had thus far neglected city planning to recognize the need of it; 2) it educated about city planning for citizens living in the cities nationwide, city planning related scholars, and persons in charge of city planning; 3) it ignited urban study boom both in the cities of Japan and its colonial countries.

The cities of Korea including Gyeongseong were not an exception. Due to Koto’s plan, Gyeongseong Bu city plan proposals of I, II, III and plans for Daegu and Wonsan were announced and discussed.

FIRST, SECOND, THIRD CITY PLANS OF GYEONGSEONG

The first plan

The Gyeongseong City Plan were taking shape around 1926. On the surface, the plan-making was led by the City Planning Research Association, but in reality it was by public officials at the Engineering Department, Internal Affairs Bureau of the Colonial government and at Gyeongseong Bu. By that time, an interim city planning division was newly established at Gyeongseong Bu, where an engineer
named Honma took charge of the city plans on May 1, 1926 after touring European cities for city planning ideas.\(^{60}\)

The first Gyeongseong City Plan was almost complete in the first half of 1926 and its contents were as follows: 1) Gyeongseong would be the center of commerce and Incheon the center of industry, 2) a canal linking Gyeongseong and Incheon and tramways on both ends would be built. Canal was for the transportation of cargo, and the tramways were to convey people, 3) the city planning area of Gyeongseong would be from the Jungangcheon river outside Cheongryangri to the east, to Anyangcheon river to the south and west, 4) Cheonggyecheon stream would be covered and a road built over it. In all, it was an energetic plan and overly ambitious. An engineer named Sakai working at the Department of City Planning of Gyeongseong Bu even thought of tearing down the Nandaemun gate from which radial roads would run towards six directions.\(^{60}\)

The first plan would cost at the time, an astronomical amount of 150 million won, this would mean an annual investment of 600,000 won and would take 250 years.\(^{60}\) The plan was too huge and unrealistic, and it was revised to 15 years with an annual investment of 17.5 million won, however it was still no more than a mere pipe dreams. The plan received so severe a bombardment of criticism that it was finally discarded.

**The second plan**

It is believed that planning on the second plan began in late 1926, was completed by late 1927 and was published in September 1928 under the title of Survey Report on City Planning (do-si-gye-hoeok-jo-sa-bu-go-seo) of Gyeongseong.\(^{63}\) The plan was to be put to work from 1927 to 1955, and the population in the last year of the plan was estimated at 700,000. The target area covered the entire Gyeongseong and included the adjacent areas such as Yonggang-myun and Hanji-myun both in Goyang-gun, parts of Sungin-myun, Eunpyung-myun and Yeonheui-myun. It would also include parts of Buk-myun of Siheung-gun, and Noryangjin-ri, Bondong-ri and Heukseok-ri, a total of 100 million square meters (about 30.3 million pyeong or 27,250 acres).

The second plan, or as it was sometimes referred to the 1928 plan, had designated four land use districts in the Gyeong-In region (Seoul-Incheon region): the commercial district, industrial district, residential districts, and special districts overlaid by park district and fire prevention district. One feature of the plan worth a special mention is that land readjustment project was planned on both sides Jon-gro street, around 480,000 pyeong, where Koreans concentrated. This planned land reorganization is close to today’s urban renewal.
(Figure 8.2, 8.3). It was as late as after the World War II when the concept of urban renewal was first introduced to Japan and it was transferred to Korea in 1971. Thus, the 1928 city plan was quick enough in employing this concept of urban renewal, and it was because of the following reasons:

First, land readjustment had been employed as an urban renewal tool in Empirical Capital Restoration Plan in Japan.

Second, the city improvement projects conducted from 1913 to 1929 mainly concentrated on Japanese residential areas, neglecting north of Jongro, Korean residential areas. This drew the sharp criticism on inequality between Namchon (literally South Village, Japanese quarter) and Bukchon (literally North Village, Korean quarter).

Third, the great flooding of 1925 (known as cul-chuk-nyun-bong-su) brought hard hit especially to the area of Bukchon (north of Jongro) such as Insa-dong and Nakwon-dong.

However, as to be mentioned later, this second plan was to be discarded as the public officials in colonial government had already lost their enthusiasm about the plan. Little possibility soon remained in securing the governmental subsidy so essential to implement the plan, resulting the second plan in no visibility.

**The third plan**

The third plan was released in March 1930, one and a half year after the announcement of the second plan. The third plan was announced under the title of ‘City Planning Report (do-si-gye-hoeck-seo)’ by Department of Civil Engineering, Bureau of Internal Affairs of the colonial government, while the second plan was by Gyeongseong Bu with the title of Survey Report on City Planning (do-si-gye-hoeck-jo-sa-bo-go-seo). It is speculated that the city planning of Seoul had been conducted by both the colonial government and Gyeongseong Bu: they did together on some matters and did independently on other issues. Presumably, the second plan was the result of the work of Gyeongseong Bu, and the third plan was new version combining the work of the colonial government. The differences of the second and third plans are as follows.

First, in terms of area, the latter plan’s was 2.66 million pyeong larger than the former. This was due to Youngdeunpo-myun and part of Buk-myun, both originally part of Siheung-gun having been added to the area of the second plan.

Second, while of both plans set the starting year of 1927 the second plan’s target year was 1955 while the third plan’s was 1959. Both plans anticipated a population of 700,000 by the time they were finished.

Third, while the second plan used pyeong and gan following the
traditional measurement system (called cheek-gwan beob), the third plan was based on the metric system using meters and square meters.

Fourth, besides a commercial, industrial, and residential districts, the second plan had a 'special district', while the third plan had an 'unspecified district' instead; reserving the land until later how to make use of it.

Fifth, the second plan had parks and fire prevention overlay districts, however the third plan did not list them separately, parks were included under sanitation facilities.

Sixth, while land readjustment constituted a large portion of the second plan, it was completely missing in the third plan.
Seventh, while a water and sewage plan was missing in second plan, the third plan dealt with it in detail.

Eighth, the second plan detailed financial resources and public-sponsored projects such as the public bus lines; the third plan made no mention of it.

Ninth, many maps were illustrated in the second plan, but, regrettably, the third plan was more a written text with a limited number of maps.

Tenth, in terms of planning methods such as forecasting population and land use; the third plan was more systematic and organized.

VICISSITUDES OF THE GYEONGSEONG CITY PLAN
IN THE 1920S

Encouraged by laws on city planning promulgated in April 1919 in Japan, the colonial government pushed through legalization of the rules and regulations regarding city planning in Seoul. By the end of 1922, a draft was prepared and as mentioned earlier, was referred to the government offices concerned. A newspaper article in February 1924 reads as follows:

After two years of careful deliberation of the Japanese laws on city planning, city planning law of Chosun were prepared and about to be announced . . . [6]

What this meant can be summarized in three points. First, a draft of the city planning law was prepared by the end of 1922 and after careful deliberation was completed in early 1924 and was about to be announced. Second, the title of this ordinance was Chosun City Planning Decree (called Chosun do-si-gye-hoeck-ryung). Third, the city planning law for Chosun was modeled after those of Japan with minor alterations.

Public officials in charge of city planning in the colonial government began basic studies on Gyeongseong and neighboring regions. The studies were completed at the end of 1924 and in 1925 land surveys were under way for the development of new town on the mountain slopes.[6] It was however, only a small group of Japanese businessmen that were advocating that the city planning ordinance for Seoul as well as other cities is Korea was a matter of urgency to which the public officials in engineering at the colonial government and Gyeongseong Bu responded. Most of the high-ranking public officials in Japan’s central government thought that "Agriculture is
the foundation of a nation and growth of cities would lead to the decline of a nation. City planning should not be over emphasized, not to speak of investing the national budget on such an extravagant project, this would be impossible."\(^6\) Many of high-ranking officials in the colonial government shared this view. On August 18, 1926 while the framework of the Gyeongseong City Plan were taking shape, representatives of the Gyeongseong City Planning Research Association including Ariga, president of the organization, visited deputy governor-general of the colonial government to ask that the government subsidize the project, but deputy governor-general tersely rejected the request saying "I am not against the project itself but large appropriations from government budget are not possible for that kind of project."\(^7\)

Meantime, representatives of the Korean news media including Dong-A Ilbo and Chosun Ilbo (both daily newspapers) consistently opposed the Japanese-led city reformation plans. They thought the city plan would only benefit Japanese and it would push most Koreans unable to afford the expense of the project to relocate to smaller cities and suburbs. With these sentiments being brought out in the open, in 1927 and 1928 as the turning point, the Japanese who had worked hard on the plans to this point grew less enthusiastic and city planners in the colonial government, Seoul and other cities finally relented, the plan fell through. Detailed reasons and processes for failure of the plan are as follows.

First, the Japanese government was not willing to provide government subsidy for colonial city planning that required huge budgets.

Second, high-ranking officials in the colonial government were not willing to use government-owned property, a major financial resource in ruling a colony, for city planning.

Third, Korean urban residents were poverty stricken and could not afford their supposed portion of the expense in return for the benefit of the city planning.

Fourth, due to these reasons, expense for the city planning would fall on the shoulders of the well-to-do Japanese businessmen dominating the Korean economy, however they were not willing to bear the burden.

Research plans, on-site surveys, promulgation of ordinances, all the city planning that had begun in early 1920, reached its peak around 1926 and continued until 1928, finally fell through in 1929, facing with such a negative response from both Koreans and Japanese and coupled with the financial difficulties.\(^8\)
Chosun City Planning Decree and Land Readjustment Projects

ANNOUNCEMENT OF CITY PLANNING DECREE AND LAND READJUSTMENT PROJECTS

The Chosun City Planning Decree was instituted and announced on June 20, 1934 as colonial government ordinance No. 18 and on July 27 of the same year, enforcement regulations were promulgated as colonial government ordinance No. 78. The public officials in the colonial government did not put out the city planning decree hurriedly instituted in early 1934. It was at the demand of Japan's central government in order to develop Najin, Hamgyungbuk Do province, their motive was that the city had to have proper road systems in order that to meet the heightened need for development of natural resources in neighboring regions; and it should be done with a minimum budget.

After the Manchurian Incident on September 18, 1931, a conspiracy was developed by the Japanese army to make a puppet state of Manchu in March 1, 1932 in order to fully exercise Japanese control over Manchuria. With the puppet state, Japan actually colonized a vast amount of land amounting to 800,000km², rich in natural resources. In order to transport the natural resources developed in Manchuria to Japan and to export Japanese industrial products to Manchuria, Tsugaru Port in Japan - the East Sea (known otherwise as Sea of Japan) - Najin (Korea) - Domun (Manchuria) - Gilim (Manchuria) - Singyung (Manchuria) was chosen as the closest, most economical route. Land readjustment projects were needed to develop Najin at minimum expense, and out of this needs, the Chosun City Planning Decree was instituted and promulgated.

The Chosun City Planning Decree was composed of a total of 50 articles divided into three chapters. Chapter one described objectives, planning procedures, time schedules, land expropriation and other general items (articles 1-14). Chapter two outlined the designation of land use districts and building regulations (articles 15-41). Chapter three ordained the matters concerning land readjustment project (articles 42-50).

The colonial government planned to develop a new road system on 3 million pyeong of land at the Port of Najin by employing the land readjustment project. As shown in the case of the Najin develop-
ment, the main apparatus of Japan’s city planning in Korea was land readjustment projects. In other words, other than a self-financing land readjustment technique, there were no other programs for city planning. No matter how good a plan was, there were no means of financing it and government subsidies were unavailable, land readjustment was the only option for urban development. The situation was no different in Japan. At the time Japan’s financial standing was weak; it was still an agrarian society with just the beginnings of industrialization. In addition to the limited national budget, it had earmarked large sums of money for military expenses to foot the cost of war expenditures; and it had no surplus financial resources to invest in urban development. Therefore, urban development in Japan relied heavily on land readjustment projects as well.

It was with the Imperial Capital Reconstruction Project begun in 1923 when land readjustment originating from Lex Adickes of Prussia was first introduced to Japan. It wasn’t until the great earthquake of 1923 (September 1) ruined Tokyo and Yokohama into ash that Japan successfully carried out restoration work on a grand scale and began urban development primarily through land readjustment projects. Urban development was also under way in Nagoya, which was expanding at a rapid rate. Patterned after the Nagoya development, urban development based on land readjustment expanded throughout cities in Japan. The urban development of Chosun (Korea) was heavily influenced by Nagoya example, making land readjustment a single dominant tool of urban development in Korea. As was the case in Japan, the land readjustment projects turned undeveloped areas into new residential sites with new road and sewage systems in Korean cities.

LAND READJUSTMENT PROJECTS IN GYEONGSEONG BU

Government-General Notice No. 180 was announced on March 26, 1936 and the Chosun City Planning Decree was to be put into practice. On February 24, 1936, one and a half months prior to it’s promulgation, the colonial government Ordinance No. 8 was announced and by April 1, the boundaries of Gyeongseong Bu had been extended from 36.18 km² to 136km², approximately 3.7 times its former size. The expansion of administrative districts equaled the limits of the city planning area.

As of December 26, 1936, in Notice No.722, the colonial government announced plans for road networks and designated 52,266,900 m² of land (around 15,816,800 pyeong) for land readjustment. The notice stated that:
The areas subject to the land readjustment project are mainly the less populated 16 million pyeong of land in suburban areas that in the future will be developed into either residential or urban areas. Taking into account the topography as well as other considerations, the areas targeted for land readjustment are divided into 30 districts, and construction will be conducted in the order of urgency.

The 30 designated districts and development schedule are as shown in Table 8.1. The 30 districts planned for land readjustment was phenomenal in their magnitude. It reached as much as 38.6 percent of the entire city planning area of Gyeongseong totaling some 135 million square meters. It was also equivalent of 1.45 times of the old Gyeongseong administrative area (some 36 million m²). This means that the colonial government intended almost all areas of Gyeongseong Bu to be developed through land readjustment technique excluding only the old districts of Seoul and non-residential areas such as forests and rivers. Starting with colonial government Notice No. 195 that was issued through its administrative office of Gyeongseong Bu (Seoul city) on March 24, 1937 to carry out land readjustment works for the Youngdeungpo and Donam areas, the colonial government issued a series of order to implement land readjustment project for a total of 10 districts until March 1940. These are as summarized in Table 8.2.

<table>
<thead>
<tr>
<th>Phase</th>
<th>District</th>
<th>Area (pyeong)</th>
<th>District and Area (pyeong)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>3</td>
<td>2,790,300</td>
<td>Youngdeungpo(1,577,900)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Daehyon(496,500)</td>
</tr>
<tr>
<td>2nd</td>
<td>3</td>
<td>1,909,500</td>
<td>Hannam(829,500)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Yongdu(306,400)</td>
</tr>
<tr>
<td>3rd</td>
<td>3</td>
<td>1,566,200</td>
<td>Majang(588,800)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Yongdeungpo Station(778,600)</td>
</tr>
<tr>
<td>4th</td>
<td>5</td>
<td>2,060,000</td>
<td>Jaeji(722,900)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Wangshimi Station(231,700)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sinseol(166,300)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Daehyeung(163,600)</td>
</tr>
<tr>
<td>5th</td>
<td>3</td>
<td>1,950,000</td>
<td>Huigyeong(515,100)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Beonndaebang(927,300)</td>
</tr>
<tr>
<td>6th</td>
<td>3</td>
<td>977,300</td>
<td>Sinchon Station(237,800)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Beonndaebang(491,200)</td>
</tr>
<tr>
<td>7th</td>
<td>3</td>
<td>1,238,700</td>
<td>Hongdae(409,200)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sangdo(396,100)</td>
</tr>
<tr>
<td>8th</td>
<td>4</td>
<td>2,078,300</td>
<td>Eumun(537,200)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Yeouheul(687,200)</td>
</tr>
<tr>
<td>9th</td>
<td>2</td>
<td>1,068,700</td>
<td>Geumho(455,600)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sangdo(386,100)</td>
</tr>
<tr>
<td>10th</td>
<td>1</td>
<td>180,000</td>
<td>Mangwon(798,500)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dongjak(270,200)</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>15,817,000</td>
<td></td>
</tr>
</tbody>
</table>

Table 8.1
Gyeongseong-bu land readjustment project phasing

Source: Refer to Notes 73.)
Table 8.2
Project enforcement order for Gyeongjeong-bu land readjustment

<table>
<thead>
<tr>
<th>District</th>
<th>Area (㎡)</th>
<th>Date of order</th>
<th>Project completion</th>
<th>Project cost (won)</th>
<th>Notice No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youngdeungpo</td>
<td>3,223,000</td>
<td>37. 3. 24</td>
<td>40. 3. 31</td>
<td>3,450,000</td>
<td>No. 284</td>
</tr>
<tr>
<td>Donam</td>
<td>2,363,000</td>
<td>37. 11. 10</td>
<td>41. 3. 31</td>
<td>2,342,000</td>
<td>No. 787</td>
</tr>
<tr>
<td>Daehyon</td>
<td>1,650,000</td>
<td>39. 3. 22</td>
<td>43. 3. 31</td>
<td>1,080,000</td>
<td>No. 236</td>
</tr>
<tr>
<td>Beondaebang</td>
<td>1,242,320</td>
<td>39. 3. 22</td>
<td>43. 3. 31</td>
<td>840,000</td>
<td>No. 236</td>
</tr>
<tr>
<td>Hannam</td>
<td>364,576</td>
<td>44. 3. 31</td>
<td>1,494,000</td>
<td>653,000</td>
<td>No. 263</td>
</tr>
<tr>
<td>Sageun</td>
<td>1,587,776</td>
<td>44. 3. 31</td>
<td>1,494,000</td>
<td>662,000</td>
<td>No. 263</td>
</tr>
<tr>
<td>Yongdu</td>
<td>1,364,304</td>
<td>44. 3. 31</td>
<td>1,494,000</td>
<td>653,000</td>
<td>No. 263</td>
</tr>
<tr>
<td>Cheongyangri</td>
<td>1,105,363</td>
<td>40. 3. 14</td>
<td>45. 3. 31</td>
<td>1,711,000</td>
<td>No. 221</td>
</tr>
<tr>
<td>Shindang</td>
<td>1,501,897</td>
<td>40. 3. 14</td>
<td>45. 3. 31</td>
<td>1,891,000</td>
<td>No. 221</td>
</tr>
<tr>
<td>Gongduk</td>
<td>1,475,190</td>
<td>40. 3. 14</td>
<td>45. 3. 31</td>
<td>2,206,000</td>
<td>No. 221</td>
</tr>
<tr>
<td>Total</td>
<td>15,880,226</td>
<td>40. 3. 14</td>
<td>45. 3. 31</td>
<td>16,326,000</td>
<td>No. 221</td>
</tr>
</tbody>
</table>

Source: The author's survey from Colonial Governments' official Gazette. Project cost is drawn from Nogish, "Land readjustment and land disposition", in Land Readjustment Nov. 1940.

Figure 8.4
Plan of Donam land readjustment district
The colonial government issued enforcement orders regarding land readjustment for 3 districts in 1937, 4 districts in 1939, and 3 districts in 1940. It was in response to rapid population increase and area expansion. According to a national census, as of October 1, 1935 which was taken prior to the expansion of the administrative area, Gyeongseong Bu’s population stood at 444,099. However, as of October 1, 1936, after the administrative area expansion and the announcement of the land readjustment plans, Gyeongseong’s population increased to 677,241. The increase in population continued and a national census conducted on October 1, 1940 stated that Gyeongseong Bu’s population had jumped to 935,464. As this trend continued, the development of residential areas equipped with road and other public facilities emerged as matters demanding the most immediate attention.

Gyeongseong Bu established a City Planning Team in the Engineering Department to carry out the afore-mentioned land readjustment in the 10 districts and in 1938 its status was raised to the City Planning Department. The number of employees working for the planning department was increased to 350 and urban development
plans were vigorously pushing forward. Despite such efforts, of the 10 districts with land readjustment plans, only the three districts of Donam, Youngdeungpo, Dachyoon had been completed by the end of 1940 and land readjustment for the remaining 7 districts including Beondaejang, Sajeon, Hannam, Yongdu were carried over to after Liberation of 1945. All the work in the 10 districts was completed as late as 1986.70 The roads and streets in Donam-dong, Youngdeungpo and the Dachyon district (presently Sinchon area) resulted from land readjustment plans drawn up during the colonization period (Figures 8.4, 8.5).

V

Gyeong-In Regional Development Plans

CONCEPT AND EXAMPLES OF REGIONAL PLAN

On January 19, 1940, the Colonial government announced the Gyeong-In (Seoul-Incheon) Regional Plan in colonial government Notice No. 25.70 This was a new kind of plan, being neither plan of Gyeongseong nor that of Incheon. According to its master plan, Gyeong-In Regional Plan covered an extraordinarily large geographical area encompassing 355.9 million m² (around 160.5 million pyeong) from the southwestern end Gyeongseong's city planning area to the northeastern end of Incheon's. The concept and background of this new type of plan needs an explanation.

Regional planning, or metropolitan planning, was first introduced to Japan through the International Town Planning Conference held in the Netherlands in 1924. At the conference, regional planning emerged as a new movement in city planning. The conference decided on the so-called General Principles of City Planning that are detailed as follows.77
A) Limitless expansion of large cities needs to be restrained. What is happening in large cities around the world can be a valuable warning to smaller cities.

B) Establishment of satellite cities is believed to be an effective way of checking the limitless expansion of large cities.

C) In order to prevent limitless urbanization, urban areas should be surrounded by green areas such as agriculture areas and stock farms.

D) Transportation problems, particularly the increase of cars and buses need to be carefully reviewed. It is necessary to plan ahead the movement of traffic in cities and from cities to outlying areas.

E) Regional planning is of utmost importance for the future development of large cities. It is particularly so when large cities are in close proximity or when many small cities surround a large city.

F) Regional planning should be flexible so that it can easily adjust to change. However, needless to say, adjustment of regional planning should only be in the benefit of public interest.

G) Both town planning and regional planning should be supported by zoning regulations.

As such, the 1924 International Town Planning Conference strongly promoted the necessity of regional planning. The background of this promotion can be found in many aspects. First, the haphazard result of excessive growth became obvious in large cities such as London, New York, and others in America and Europe. Second reason is the fact that E. Howard’s garden city concept was gaining increasing popularity. Third, as shown in the case of Boston and 37 neighboring cities, intercity organizations (such as Intercity Council) emerged and were expanding throughout America and Europe. And fourth impetus of the promotion of regional planning can be attributed by the movement of the association of town planning committee in England after WWI and the trend of employing regional approach to deal with unemployment policies, restoration of national power, and industrial rehabilitation in respective countries after WWI.78

It took awhile for the Amsterdam General Principle of City Planning in 1924 to be introduced to Japan’s town planning; presumably there was no immediate urgency at the time to adopt it. In 1924, one year after the Great Kanto Earthquake, Tokyo was still a city with a population of only 4 million.79 It is likely that Japan keenly felt the necessity of regional planning for its metropolitan area around 1933, about 10 years after the Amsterdam declaration. By then, Tokyo had grown to become an international city with a population of 6 million next in size only to New York and London.
The Japanese government revised town-planning laws in Regulation No. 22, which was promulgated in March 1933, until that time only large cities were subject to town planning law: Now all cities, towns, and villages were subject to town planning law, thus paving the way for metropolitan planning centered on large cities. In the same year, Itinaga Kazuma, then section chief of the city planning department at the Ministry of Internal Affairs published a book, Regional Planning, introducing theories and practice of regional planning.

Until this time, i.e. until the early part of the 1930s, regional planning as it had been introduced to Japan was actually a peaceful rearrangement of metropolitan areas to prevent and control the disorderly expansion of the city. However, as Japan began falling into the so-called 'a 15-year wartime period' from 1931, once peaceful local regional plans gradually became part of national land development plan placing emphasis on wartime matters such as energy, transportation networks, location of military industries, construction of supply bases, residential development for war industry employees, land needed for food supplies and other similar projects.

Nazi Germany's national land development plans gravely influenced Japan's national land development and regional plans; this was due to the defense agreement drawn up between the two countries. National and regional plans by their nature were bound to encroach on the rights of private property over an extensive area. However, in Japan where private ownership was firmly established, national and regional development were matters of gravity, going beyond easy discussion. On the other hand, in Korea, then a Japanese colonial state, the idea of private ownership was still vague and town planning was only at a beginning stage. Given the situation, public officials in the colonial government schemed to operate Chosun City Planning Decree as a tool for carrying out military-minded elements of national land development, a cunning trick to exploit Korean personal property. For example, the scope of city planning defined by the original enforcement ordinance of the Chosun City Planning Decree was later changed to reflect wartime purpose: In colonial government ordinance 193 announced on September 21, 1938, a manufacturing area development was added as an vital element of city planning. The revision made ways for providing wartime manufacturing site development through city planning that could take Koreans' property right. No Korean, even intellectuals and journalists, were aware of what the revision to the enforcement ordinance of Chosun City Planning Decree meant. No one could anticipate the results. In retrospect, we cannot help but sigh in relief that the end of the WWII and Liberation came early enough to evade the invasive urban planning that had been planned.

The colonial government was only able to announce the four
local plans from November 1939 to April 1941: 1) Sineuiju/Dasado Island Plan, 2) Bosan Regional Plan, 3) Gyeong-In (Seoul-Incheon) Regional Plan, and 4) Samcheok/Mukho Plan. These plans were primarily for construction of large-scale industrial complexes that would produce military supplies and a housing complex for those who would be working at the industrial complex.80

GYEONG-IN REGIONAL PLAN

Two months after announcing the plans for Sineuiju/Dasado on November 7, 1939, the colonial government announced the plan for the urban development of Gyeong-In area on January 19, 1940 (colonial government Notice No. 25).82 Judging from the blueprints, the Gyeong-In plan encompassed an area 355.9 million m² (160.53 million pyeong), a huge area that extended from the southwest end of Gyeongseo city planning area to the north-east end of Incheon city planning area. Administratively speaking, it included the following areas of Gyeonggi Do province: all of Dong-myun (east) and part of Seo-myun (west) in Siheung-gun; the entire area of Sosa, Ojeong, Bunae, Gyeyang-myun in Bucheon-gun, and part of Munhak-myun and Seogwan-myun (including Haemyundo island); the entire area of Yangdong-myun, Yangseo-myun and parts of Gochon-myun in Gimpo-gun (Figure 8.6). Comparing to today’s areas, these areas correspond to the entire districts of Guro, Geumcheon, Gangseo, Yangcheon and Bucheon City: the part of Youngdeungpo-gu, Gwangmyeong City; almost the entire area of Buk-gu and Nam-gu in Incheon; and parts of Gochon-myun and Gyeyang-myun in Gimpo-gun.

Two months prior to the announcement of the development plans for Gyeong-In, the colonial government already carried a piece in its official magazine Chosun, in the November 1939 issue, under the title ‘Regarding Gyeong-In Regional Plan,’ it was authored by Ootake, the bureau chief in the Internal Affairs Bureau and Mihashi, the police commissioner. The article introduced the plan in some detail, and stated that ‘as land price increases will hinder factory construction, strong eminent domain laws will be put in force and land prices will be based on the market price at the time the plan is announced.’ It also added a very forceful and coercive notice that ‘manipulation by unscrupulous land brokers’ shall be strictly curtailed.83

The colonial government had to run this article in its official magazine two months prior to the official announcement of the plan. The early announcement deemed inevitable to the colonial
government since the plans were leaked and land prices had begun to rapidly inflate. Gyeong-In Regional Plan was drafted in a hurry from the end of 1939 to 1940, and its implementation became a matter of great urgency for the following four reasons.

First, the Gyeong-In region was the backbone and geographical center for the Korean Peninsula. And it was an important nodal point linking Japan and China as well as major Korean cities and regions.

Second, the region was the industrial center for the machinery and shipping industries along with labor-intensive light industry that capitalized on the abundant labor force in the region. In particular, when the Hangang Hydroelectricity Company established on February 1, 1939 to be funded by Chosun Siksan Bank announced the plan to begin construction on the Hwacheon and Cheongpyeong dams in the upper reaches of Buk Han River (Northern Han River, a tributary of the Han River) that will generate 120,000 kilowatts of electricity, the Incheon factory of the Japanese High-Frequency Heavy Industry, a subsidiary company of the Bank, was established in Bupyeong adjacent to Incheon (on 2 million pyeong of land) and the Incheon Armament Factory that produces tanks for the Japanese army moved in the Gyeong-In region. Following the construction of two factories, applications for industrial land in the Gyeong-In region by related industries increased and large tracts of land for industrial use were needed.

Third, one of the key objectives of the Gyeong-In Plan was to prepare the housing sites for the anticipated population explosion stemming from the active development of industrial factories. As the plan stated, the issue was 'how to rationally bring housing development land in line with the national land development plan.'

Fourth, besides industrial and housing lands, those districts that had not designated land for a specific reason shall be reserved as either agriculture area or greenbelts where development would not be allowed. The purpose was to check indiscriminate expansion of urban areas. The Gyeong-In Plan also stated that Gimpo field would be the food supply base for Japan's advancement into the Asian continent.

The core of the Gyeong-In Regional Plan were the 7 industrial districts that included Guro and Bupyeong areas, 11 housing districts, and land readjustment districts totaling 2.75 million m² (about 832,000 pyeong) in the vicinity of Bupyeong station in Bunaemyun of Bucheon-gun. It is interesting to see that road construction plans were not included in the plan; this is presumed to be because of time restraints. Figure 8.6 shows the locations of these industrial and housing districts.

Regional planning by its nature is bound to encompass far more
than what is done in the planning of a town, this was particularly so with regard to the enormous scale of the Gyeong-In development. It extended from the east end of Siheung-gun (which now belongs to Guro-gu and Geumcheon-gu within the City of Seoul) to Bupyeong (now Incheon) to the west coast, reaching 30 kilometers in lineal distance. Not only in length but in terms of overall size, the Gyeong-In plan encompassed enormous areas. While the Gyeongsang Bu city plan covered 135 square kilometers, the Gyeong-In development covered a 350 square-kilometer area, a roughly 2.6 times the Gyeongsang Bu plan. Of the four regional plans, Gyeong-In was the largest; this was probably too ambitious of a plan for Korea in the 1940s. The person in charge of the plan at the colonial government seems to have believed that the development plan for such extensive areas was overly enthusiastic and unrealistic, and revised the plan on January 8, 1944 in colonial government Notice No. 12 stating that the entire region of Bun ae-myun in Bucheon-gun (presently the Bupyeong region of Incheon) and a portion of Munhak- and Seogwan-myun, approximately 129.84 million square meters, were to be incorporated into the Incheon city planning area, leaving the remaining 220.75 million square meters of land to the Gyeong-In Regional Plan.

As explained above, the development plan for Gyeong-In area
was in no way a town-sized plan but a regional plan, a plan of metropolitan region that constituted a part of the national development. Some points are notable regarding the materialization of the plan.

First, the colonial government designated Gyeonggi Do (Province) an authority to be in charge of implementation. Unlike local plans of which responsibility belonged to the mayors of respective jurisdictions, Gyeong-In Regional Plan included a number of cities and towns in its planning area. The colonial government issued Notice No. 716 on July 9, 1940 appointing the governor of Gyeonggi Do province to head the implementation of Gyeong-In Regional Plan.

Second, the plan of Gyeong-In covered huge areas including traditional agricultural areas that were less likely to be developed into urban areas in the near future. Yet there was a great chance that new construction in traditionally agricultural areas would be unduly hindered, as the regional plan applied strong building regulations to the entire areas uniformly. Therefore, traditional agricultural areas were to be excluded from many of the construction regulations defined in the regional plan. The colonial government Notice No. 460 dated May 7, 1940 announced that except for the Guro region, entire areas targeted for development should be exempt from 23 provisions on zoning and construction regulations stipulated in the regional plan, for example, regulations on bathroom construction and facilities, road width, building heights and other items.40

Third, one thing worth special mention with regard to the Gyeong-In Plan was about the construction of a highway. The colonial government Notice No. 12 dated January 8, 1944 announced the road network plan of Sosa area, which included a highway that was going to be 50-meter or 30-meter in width. Unfortunately, a blueprint of the highway doesn’t exist and no information is available to where it started, where it was meant to end, its length and other relevant features. The highway never saw its construction begin, as Korea was liberated from Japanese prior to beginning of the construction. However, it was the first highway that appeared even on the plan.49
VI

Anti-air-raid Laws and Evacuation Roads

ANTI-AIR-RAID LAWS AND EVACUATION ROAD SYSTEM

There is little dispute that the development of airplanes and extensive air-raid damage was the most distinctive feature of World War II from 1939 to 1945. The US's Boeing B-29 bomber boasted of a 7,700km range and Germany's V1 and V2 rockets that were unimaginable in World War I, appeared as new destructive weapons in WWII and their formidable power completely changed the face of the war. Air raids on rear areas generated huge numbers of casualties, and anti-air-raid measure to minimize the damage in the rear areas was a matter of tremendous urgency.

On April 5, 1937 Japan first instituted and promulgated its first air-raid law with Law No. 47. It was followed by enforcement regulations (Japanese Order No. 661) on November 17 in the same year that mandated Korea to be subject to the laws as well. Even in 1937 when the first air-raid laws were instituted, however, Japanese public officials had little idea of what an air-raid would really entail.

By 1941 Japan began to prepare for air-raids in a serious manner. On witnessing the outbreak of World War II on September 1, 1939 with the German Army and Air Force invasion of Poland, and Germany's bombing of England, and Britain's bombing in retaliation of the major cities in Germany, Japan became aware that their present preparations for air-raids were woefully inadequate if Japan was expected to survive a war with the United States and England. Based on this understanding, on January 10, 1941, the Japanese cabinet passed the bill 'Strengthening defenses against air-raids,' that was submitted by three organizations, the Ministry of Internal Affairs, and the Army and Navy. It was a big switch in Japan's attitude toward air-raids.

On November 25, 1941, the Japanese government made extensive revisions to the existing air-raid laws with Law No. 91, thus providing a legal basis for securing unoccupied ground for air-raid defenses or firebreaks. The revision is believed to have been in preparation for war against the US and England with an attack on Pearl Harbor that actually took place 10 days after the revision. The most distinctive feature of the revision was the revision and supplementation of Article 5. The previous article described construction materials and facilities: six additional clauses were added regarding prohibi-
tion of and restriction on new construction and partial removal or repair of existing buildings within certain districts.  

The core of the revision was the regulations regarding unoccupied ground or unoccupied firebreaks for air-raid defense. The majority of the buildings in Japan at the time were made of wood. The revision was based on the concept that in order to prevent an enemy's incendiary bombing from turning Japanese cities into sheets of fire, a certain amount of unoccupied ground or firebreak areas were needed. Based on the revised laws, the Japanese government announced the Ministry of Internal Affairs Notices No. 180 and 181 on March 30, 1943 stating that Tokyo and Osaka regions would have a total of 497 anti-air-raid area (about 550 ha) and 37 firebreaks.  

The Japanese government soon came to realize that designation of anti-air-raid areas or firebreaks based on the revised laws was not enough to stand against US air force raids. It was acutely felt that a more aggressive measure than the previous passive regulations that restricted new construction and renovation was needed, for example a measure that would allow removal of existing buildings by force. In the naval battle there from November 12 to 14, 1942 near the Solomon Islands east of Papua New Guinea and north of Australia, the Japanese Navy suffered a crushing defeat. With the defeat, Japan lost command of the air and sea, and US bombers without hesitation went to bombard Japanese territory. The Japanese government was also aware of the formidable magnitude of the bombing of Germany by US and British forces.  

A second revision of the laws took place on October 31, 1943 with Law No. 104. One distinctive feature of this revision was that it allowed removal of buildings by force if the owner refused to obey the government order. In addition, the revised anti-air-raid enforcement ordinances and enforcement regulations were both announced on the same day as the second revision, stipulating details of evacuation and removal of buildings and other items. On December 21 of the same year (1943), 50 days after the promulgation of the revised anti-air-raid laws, the Japanese cabinet decided to announce 'the Outline of City Evacuation Plan.' According to the Outline, large cities and regions that had a concentrated war industry such as Tokyo, Yokohama, Osaka, Kobe, Nagoya and their neighboring regions, Northern Kyushu, and 12 cities in four separate regions were subject areas. In January 1944 removal of buildings began in preparation for enemy air-Raids. In Tokyo, Yokohama, Osaka, Kobe, Nagoya and other cities, a total of 126 districts or 650,000 pyeong of land were designated as anti-air-raid areas and 16 districts had 290,000 pyeong of firebreaks and massive building removal took place.
REMOVAL OF BUILDINGS AND EVACUATION ROADS IN GYEONGSEONG BU

It was predictable that the measures in Japan to prepare for enemy air-raids was brought to the colonial Korea. Whenever Japan instituted anti-air-raid laws, the colonial government copied and applied them to Korea. Despite institution and revision of anti-air-raid laws, until the end of 1944, Korea remained relatively peaceful, being less concerned with air-raids, except for several blackout practices. The first appearance of a US Air Force airplane over the Korean Peninsula was on July 8, 1944. Since that time they continued to fly over the Peninsula at times, but were not considered a threat.

The Gyeongseong Ilbo editorial on February 8, 1945 titled 'Let’s hurry up evacuation' was the first social discussion regarding the need for wartime urban evacuation in the Korean Peninsula. The great air-raid on Tokyo on March 10 made high-ranking public officials in the colonial government and commanders of the Chosun Army Command Post extremely frightened and acutely aware of the seriousness of air-raids.

Except for the atom bomb, Tokyo bombing by US air forces at dawn on March 10, 1945 was the largest bombing event of World War II. The bombing continued for 142 minutes from 0:15 to 2:37 by 130 B29s and left 88,793 people dead, 40,918 wounded, 1,008,005 refugees, 267,171 houses totally destroyed by fire, and 971 houses damaged. It was tragic that about 40 percent of Tokyo, one of the world’s largest cities, was turned into ash in a flash. This large air-raid exposed the powerlessness of Japan’s anti-air-raid laws against modern air-raids.

In Korea, ‘An Outline of Evacuation in Cities’ was announced on March 31, 1945 and in five days on April 5 ‘An Action Guidelines of Evacuation in Major Cities’ followed. Again in two days on April 7 in colonial government Notice No. 196, the colonial government designated ‘Unoccupied Grounds for Evacuation’: 5 in Gyeongseong, 1 in Busan, 1 in P'yongyang. This was in accordance with Article 5 (regulations 7-10) in the Anti-Air-Raid Laws. Again on April 19 in colonial government Notice 225, 14 unoccupied areas for evacuation in Gyeongseong, 3 in Incheon, 3 in Busan, 7 in P'yongyang were added. The 19 unoccupied areas for evacuation of Gyeongsong are as shown in Table 8.3.

Unoccupied areas for evacuation were extensive vacant lineal land secured by clearing all buildings within an area 30-100 meters in width and about 1,000 meters in length. It was to create a new street. Evacuation included not only clearing buildings but evacuating people as well, particularly elementary school students. Both
building destruction and people evacuation needed some amount of expenses. According to Gyeongseong Bu’s plan as of April 27, 1945, the total budget for the project stood at 85,411,000 won. The main source for the budget was provincial subsidies (65,155,100 won) and the remaining expenses were to be provided by a national subsidy (9,598,275 won), and loans (9,800,000 won). Of the total expenses, only 16,916,500 won was for land acquisition and 46,018,800 won for purchasing buildings. It was tantamount to confiscation of an individual’s land and buildings.\(^\text{102}\)

The residents living in the area targeted for evacuation were forced to move out by the end of April. They were kicked out from where they lived in a very short period of time with unbelievably small remunerations for land and homes. Building evacuation in Gyeongseong Bu was carried out from May 11 by the emergency construction squad appointed by engineering/construction companies who led the work of clearing, supplemented by thousands of the government-mobilized volunteers including junior-high school stu-

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Start</th>
<th>End</th>
<th>Width (m)</th>
<th>Length (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jongro-Jangchung 2-ga Line</td>
<td>Jongro 5-ga</td>
<td>Jangchung 2-ga</td>
<td>50</td>
<td>1,100</td>
</tr>
<tr>
<td>2</td>
<td>Jongmyo-Pildong Line</td>
<td>Jongmyo</td>
<td>Pildong 2-ga</td>
<td>50</td>
<td>1,180</td>
</tr>
<tr>
<td>3</td>
<td>Gyeongundong-Namsandong Line</td>
<td>Gyeongundong</td>
<td>Namsandong 3-ga</td>
<td>50</td>
<td>1,800</td>
</tr>
<tr>
<td>4</td>
<td>Seoul Station-Chungjeongro Line</td>
<td>Seoul Station</td>
<td>Chungjeongro 3-ga</td>
<td>30</td>
<td>1,080</td>
</tr>
<tr>
<td>5</td>
<td>Seoul Station-Galwoldong Line</td>
<td>Seoul Station</td>
<td>Galwoldong</td>
<td>30</td>
<td>1,400</td>
</tr>
<tr>
<td>6</td>
<td>Pildong-Shindangdong Line</td>
<td>Pildong 2-ga</td>
<td>Shindangdong</td>
<td>40</td>
<td>1,680</td>
</tr>
<tr>
<td>7</td>
<td>Seoul Station-Hoehyundong Line</td>
<td>Dodong 1-ga</td>
<td>Hoehyundong 2-ga</td>
<td>40</td>
<td>1,080</td>
</tr>
<tr>
<td>8</td>
<td>Taepyungro Line</td>
<td>Taepyungro 2-ga</td>
<td>Taepyungro 2-ga</td>
<td>50</td>
<td>380</td>
</tr>
<tr>
<td>9</td>
<td>Dongjaedong-Huamdong Line</td>
<td>Dongjaedong</td>
<td>Huamdong</td>
<td>30</td>
<td>500</td>
</tr>
<tr>
<td>10</td>
<td>Galwoldong Line</td>
<td>Galwoldong</td>
<td>Galwoldong</td>
<td>40</td>
<td>300</td>
</tr>
<tr>
<td>11</td>
<td>Wonhyoro-Yongmundong Line</td>
<td>Wonhyoro 2-ga</td>
<td>Yongmundong</td>
<td>40</td>
<td>330</td>
</tr>
<tr>
<td>12</td>
<td>Cheonpapadong Line</td>
<td>Cheonpapadong 3-ga</td>
<td>Cheonpapadong 3-ga</td>
<td>40</td>
<td>190</td>
</tr>
<tr>
<td>13</td>
<td>Seogayedong Line</td>
<td>Seogayedong</td>
<td>Seogayedong</td>
<td>40</td>
<td>220</td>
</tr>
<tr>
<td>14</td>
<td>Cheonyeondong-Songwoldong Line</td>
<td>Cheonyeondong</td>
<td>Songwoldong</td>
<td>40</td>
<td>430</td>
</tr>
<tr>
<td>15</td>
<td>Naejaedong-Sajikdan Line</td>
<td>Naejaedong</td>
<td>Sajikdan</td>
<td>40</td>
<td>350</td>
</tr>
<tr>
<td>16</td>
<td>Jeodong-Gaohedong Line</td>
<td>Jeodong</td>
<td>Gaohedong</td>
<td>30</td>
<td>900</td>
</tr>
<tr>
<td>17</td>
<td>Cheongnyangri Station-Hoegidong Line</td>
<td>Jeonmungdong</td>
<td>Hoegidong</td>
<td>30</td>
<td>1,100</td>
</tr>
<tr>
<td>18</td>
<td>Youngdeungpo Station Line</td>
<td>Youngdeungpo Station</td>
<td>Shingildong</td>
<td>30</td>
<td>150</td>
</tr>
<tr>
<td>19</td>
<td>Dolrimdang Line</td>
<td>Dolrimdang</td>
<td>Dolrimdang</td>
<td>30</td>
<td>70</td>
</tr>
</tbody>
</table>
dents, and the pro-government organizations such as Gyeongbang-dan and Eguk-dan.\textsuperscript{103} The first period of building evacuation began on May 11 and was nearly finished by the end of June. Gyeongseong Ilbo dated June 15 carried an article titled 'Hurry people evacuation too' reporting that building evacuation in four cities of Chosun (Gyeongseong, Pyeongyang, Busan, Incheon) showed about 70 percent progress and was expected to be finished by the end of the month.\textsuperscript{104} Today, there is no way of knowing how many homes and buildings were demolished during the 50-day period from May 11 through June 30. In 1937 when the Sino-Japanese War broke out, imperialist Japan froze all the statistical materials as classified documents and opened no documents at all. Worse yet, right after the Liberation (August 15, 1945) they burnt all records from the 1940s and did not leave a single document behind. The colonial government pushed the first phase of building evacuation to the end of June. Afterward, they drew up a second phase building evacuation plan, announced it in mid August, and were working on detailed preparations.\textsuperscript{105} But they failed to put the plan to work because World War II ended on August 15.

\section*{VII}

\textbf{Legacy and Impact of Colonial City Planning}

\textbf{APPLICATION OF CHOSUN CITY PLANNING DECREE}

Korea was liberated from the Japanese in 1945 and the Korean government was established in 1948, however, Koreans instituted no new city planning law: the City Planning Decree made by the colonial government remained effective. The only difference was that under the US military administration 'colonial government' was
changed to 'Minister of Military Administration' and after the establishment of the Korean government to 'Minister of Internal Affairs.'

From Liberation in 1945 to 1950 was a tumultuous period when no administrative office had room enough in their mind to draw up new laws. To make matters worse, in 1950 the Korean War broke out. The first half of the 1950s when Korea was in war or right after the war, and the second half of the 1950s when it suffered from a corrupt government led by the Liberty Party racing toward their own downfall, no new plans or laws were possible. In addition, no one was interested in city planning law or building code, and in reality there was little necessity in instituting the law either.

However, the concentration of the population into the cities was requiring the responsive city planning based on the City Planning Decree. Many small and medium sized cities such as Pohang, Gimcheon, Gyeongju and Jeju began working on city plans. In Seoul's case, war restoration plans were urgently needed. The first and second Jangjeon district land readjustment projects (began 1952 and 1954 respectively) were carried out as part of war restorations and Seogyo district (began in 1960) and Dongdaemun district (began in 1960) land readjustment projects were put to work as part of the new housing land development project.

Toward the end of the 1950's, the urban situation remained, if not enough, manageable with the existing urban planning law, City Planning Decree. Going into the 1960s, however, the urban problems grew extremely serious, needing new measures to relieve the situation. In conjunction with the first National Economic Development Plan, new building law (called gun-chuk-beob) and city planning law (called do-si-gyeok-beob) have been instituted and they were promulgated on January 20, 1962 as Law No.983 and No.984, respectively.

SOME STORIES OF LAND READJUSTMENT PROJECTS

A total of 10 districts of land readjustment project that was planned by the colonial government, were under way when World War II ended. They include Youngdeungpo, Donam and Daehyun districts that began in 1937, and three more districts announced on March 14, 1940 (Table 8.2). Of the 10 districts, only two, Youngdeungpo and Donam districts, were finished with ground leveling, while Daehyun district showed 70 percent progress: the others had either only started leveling the ground or nothing had begun. Except Donam (a residential area) and Youngdeungpo (with many factories), most of the districts resembled a wilderness left in ruin.
During 1945-1949, these empty lands were gradually occupied by North Korean refugees, returnees from Japan and Manchuria and they built makeshift huts without government permission and settled there. According to Military Administration Ordinance No.2 'Of the Enemy Properties' dated September 25, 1945, former Japanese owned land became the property of the Military Government Office and by Property Management Ordinance No. 2 dated December 14 of the same year, the land was sold to those who were illegally settled there or to their relatives.

As the Korean War broke out, the unoccupied land subject to land readjustment projects became filled more rapidly with refugees and war victims. At first, they built makeshift huts but they gradually changed to cement-block houses with roof tiles. Administrative power was loose and could not stop the illegal settlements and war victims were overflowing. War victims and refugees were ignorant of road networks and lot division lines of the land readjustment plan. For about 10 years after the Korean War, the Land Readjustment Department of the city hall was desperately struggling with land readjustment work left undone by the Japanese colonial government. It was only in 1986, 41 years after the Liberation, that the department cleared out the matters of property registration in Cheongnyang and Sindang districts.106a

LIBERATION AND EVACUATION ROADS

Liberation from Japanese colonial rule (August 15, 1945) came prior to the completion of anti-air-raid building evacuation by the colonial government. The evacuation sites were left abandoned with the scattered remains of the homes strewn about. After the Liberation, through the US Military Administration period, even after the establishment of the Korean government, they were left abandoned until the Korean War. The unoccupied lands, so called 'evacuation roads,' were used as pedestrian walkways. When it rained, the paths turned muddy and during the dry season a cloud of dust filled the air. It was natural that the Korean War victims, North Korean refugees built makeshift huts and settled in the abandoned land. In Seoul's case, a great number of makeshift huts were built extending from Jongmyo shrine to Pil-dong and from Gyeongun-dong to Namsan-dong. Unclean environments prevailed in those areas and a portion of them became quarters for prostitutes. Prostitute quarters grew up centered with makeshift huts on both sides of the roads in the sections of Jongmyo shrine - Pil-dong, Jongmyo - Jongro, Gyeongun-dong - Namsan-dong. They gradually linked the east to
the west, and formed the biggest prostitute quarters, known as 'jongam' (literally the 3rd street of Jongro) where several hundred prostitutes strutted their wares from the 1950s and through the mid 1960s.197

Cleaning up of these areas and turning them into roads needed a long period of time. The first thing to do was to designate them as official city roads. For example, the Ministry of Internal Affairs Notice No.23 dated March 25, 1952 stated that the roads between Jongmyo and Pil-dong 2-ga (50m wide and 1,150m long), Gaehoe-dong and Namsan Park (40m wide and 3,100m long) and Cheongpa-dong 3-ga and Cheongpa-dong 4-ga (20m wide and 200m long) were to be designated as official city planning roads.198 The first road reformation work was done on evacuation road No.6 (from Pil-dong to Sindang-dong) and No.7 (from Seoul station to Hocheong-dong). In 1962, the construction of a 35-meter wide road in between No.6 and No.7 was completed, the entire road is now known as "Toegye-ro."199 Of the first circular road encompassing the downtown area of Seoul, the 30-meter wide road from Ewah-dong junction to Dongademun Gate, a part of now Yulgok-ro was completed in the early 1970s.

Of the roads from Gaehoe-dong to Namsan-dong, the road construction for the section between Gaehoe-dong and Jongro was delayed because of the numerous makeshift huts in the area. In late 1960s, the area west of Pagoda Park was cleared and the hut residents were relocated to the Gwangju Complex. A high-rise building was built on the site 'Pagoda Arcade' (also know as Nakwon Arcade) with private capital investment. Pagoda Arcade is an apartment with shops that straddle the road, with the lower floors given to shops and market and upper floors were apartments, still an object of criticism.

Regarding the evacuation road between Jongmyo shrine and Pil-dong, the huts in the area from Jongro to Pil-dong were removed in the 1960s and the shack dwellers were transferred to suburban Gwangju. On the site was built 'Seun Arcade', a group of high-rise apartments with shops built on private capital investment. The Arcade sits a south-north direction, blocking traffic flow and ruining the downtown cityscape. Based on a urban redevelopment plan in 1985, large parking lots were built underground between Jongmyo shrine and Jongro street.

It was in the early 1970s that all the shacks scattered along the sections between Wonhyo-ro and Yongmun-dong (No.11), Cheongpa-dong (No.12), and Seogye-dong line (No.13) were removed and a road was built, presently from Seoul Station (West Station) to the entrance of Wonhyo-ro.
LAND READJUSTMENT AS A PRIME MEANS OF RESIDENTIAL DEVELOPMENT

The only urban development method left behind by Japanese colonialism was the land readjustment technique. Urban development methods other than land readjustment was unknown even to the Japanese: If the knowledge was there, there was no financing. Amid the political and social confusion in the aftermath of the Liberation, the Korean government could not afford other than continuing the land readjustment project left behind by the Japanese imperialists. The restoration work in downtown Seoul that was almost reduced to ashes in the Korean War (1950-1953) was conducted by land readjustment (Central District I, Central District II). Since then, land readjustment methods had been the prime means to respond to an increased demand for new housing land due to the rapid urbanization of Seoul. The areas of Suyu, Bulgwan, Ttukdo, Myeongnok, Yonhui, Yeokchon, Hwayang, Mangu, Gimpo, Siheung, Dobong, Sillim, Youngdong and Jamsil, Garak, Gaepo and Yangjae had been replatted by land readjustment, turning once rural areas into urban and residential quarters. In all, a total of 41 districts, or 124,322,003m² (about 37.67 million pyeong) which corresponds to 47 times the size of Yeouido were developed by employing a single urban development technique known as land readjustment, making Seoul's urbanization a unique and unheard of example in the history of urban development in the world. In the 1990s, Seoul had its hands completely off land readjustment. In addition, by the 1970s, manpower that had learned urban planning and land readjustment from the Japanese had all been replaced, and the legacy of the Japanese colonial period faded into oblivion.

CONCLUDING REFLECTION OF COLONIAL PLANNING

In the late 19th century, Suh Jae-pil, Lee Chae-yeon, and Yun Chi-ho who traveled to the U.S. via Japan might be the first Koreans who were exposed to modern cities in the western world. Then high-ranking officials of Daehan Empire, they toured Washington D.C., Philadelphia, New York and other cities. It is expected that they carefully observed them, thinking of possible applications to Seoul. The Seoul's transformation, however, began with the city improvement projects by the colonial government. In 1910, the beginning year of colonialism, Seoul in reality was treated not as the capital city of Korea but just as one of many local cities in the Japanese colonies.
From the perspective of urban planning, Japan did not belong to the group of advanced countries that pioneered the grand plans and their realization. It is so in that Japan was only able to enact City Improvement Ordinance in 1888 and the first City Planning Law in 1919, while the Western countries already achieved remarkable urban planning such as Christopher Wren's London restoration plan (1666), Pierre C. L. 'Enfant's Washington D.C. plan for new capital of the US (1792), The governor of Seine Prefecture G. E. Haussmann's Paris reformation plans (the 1850s). Urban Planning lectures were first offered at Kyoto University in 1923, when the great earthquake shook Japan, under the subject title 'Urban Planning and Road/Engineering Work.' However, there was no professor specialized in the subject. It was not until five years later (1928) that Takei who studied at Harvard University and the University of Liverpool in UK and worked as a public official at the Ministry of Internal Affairs and Osaka Bu, was invited to teach city planning as a full-time professor. However, no record is found proving any national or private colleges other than Kyoto University offered urban planning courses until World War II ended in 1945, although some of urban planning related publications have been published either by those in charge of city planning or scholars. Even today, Japan is not an advanced country in terms of urban planning, falling not only behind western countries but Korea.

In all ages, the implementation of urban planning requires a great expense. When Japan colonized Korea in 1910, it was not a rich country and it was neither willing nor capable of making huge investments to urban development in its colonial state. During World War I when Japan briefly enjoyed an economic boom, it attempted city planning under the name of 'Gyeongseong City Improvement Projects' but it struggled due to financial stringency in the closing stages of the project. In addition, over a 15-year period from the 1920s to the early 1930s, the colonial government kept its hands off completely from urban planning of Korean cities including Gyeongseong. During the period, a great economic depression hit all the countries of the world, and Japanese economy was well as its worst. As a result, the colonial government had little financial means and was not be willing to develop plans for urban development in Korea.

After the 1931 Manchurian Incident, Korea was chosen to be a supply base for Japan's invasion into the Asian continent, and for the necessity for securing industrial and housing land, Japan had no choice but to employ urban planning in Korean cities. The 1934 Chosun City Planning Decree was instituted and promulgated out of just such a necessity. The Chosun City Planning Decree, however, was based on the principle that the beneficiaries paid the develop-
ment cost, and thus the colonial planning was dominated by land readjustment project that required a minimum government budget. Had Japan’s rule over the Korean peninsula continued longer, many of the suburban areas of Seoul would have been developed by land readjustment method. However, Japanese colonial government had only about 10 years in employing land readjustment project, and even after 1941 when the Pacific War was waged, the land adjustment projects were almost put on hold until the Liberation, due to shortage of manpower and resources.

In conclusion, during the 40 years of colonization from 1906 when Japan established Tongambu (predecessor of the colonial government) to the Liberation in 1945, Japanese colonial planning did leave little significant legacy to Seoul. Its legacy can be counted no more than 1) city improvement projects (si-gu-gye-su-sa-up), 2) land readjustment projects of the three districts of Youngdeungpo, Donam and Daehyon, and 3) land readjustment technique that Korean engineers learned.
Notes

2) Ibid. pp. 68-78.
4) Ibid. p. 435.
11) Pyguyip, Hong Yang-ho was a favorite with King Yeongjo (1724-1776). During King Jeongjo (1776-1800)’s reign he served as Daejehak (Director, Office of the Special Councilors) and Ijo Panseok (Minister, Board of Personnel).
12) Special tax rate was 10 jeon (1 tenth of 1 won) per person from elementary school graduates to those aged 60. Original plan was to improve the roads of Jingogae – Namdaemun, Chungmuro 1-ga – Myungdong 1 and 2-ga – Fuljiro 2-ga, Jeongdong 1-ga – Supyodong. Of the three, only one road was improved. *History of Gyeongseong Bu*, Vol.2, pp. 633-637.
15) The base of Namdaemun gate is 5-meter wide, 4.8-meter high. (measurement by the Culture and Information Department, the City of Seoul). It was never a wide space, however, there are pictures showing a trolley passing through the narrow gate. (for example, pictures in Chapter 3 of *History of Seoul Trolley 60 Years*)
17) Ilseongmok (Daily Reflection Records) Gwangmu ('Military Brilliance', King Gojong's reign name), 11th year, February 17, Official Gazette Gwangmu 11th year, April 3, as for building walls.
19) At the cabinet reshuffle, Lee Wan-yong who used to be the Minister of Education became the Minister of Politics, Im Son-jun became Minister of Internal Affairs, Lee Byong-mu Minister of Defense. The Official Gazette of the Daehan Empire (hereafter Official Gazette), an extra edition dated Gwangmu 11th year May 23.
20) Ilseongmun, Gwangmu 11th year May 12, Gojong shinok (Annals of King Gojong's Reign), the same year June 22, Official Gazette June 25.
21) Cabinet Ordinance No.1 dated Gwangmu 11th year July 30 regarding 'Of Citadel Walls Committee' (As of Gwangmu 11th June 14, Euijeongbu 'State Council' was changed to the cabinet).
22) Official Gazette, Yonhui (King Sunjong's reign tide, 'Abundant Prosperity') August 12 and September 11. Korean army was disbanded on July 31 and so was the military ranking system on August 26. As a result, the numbers of the Citadel Walls Committee were reduced.
23) Japanese crowned prince visited Seoul on October 16, 1907 (the first year of Yonhui) and left on October 20.
25) Namji (south pond) used to be in southwest of Namdaemun (Namdae-munro 5-ga), History of Gyeongseong Bu, Vol. 2, p. 51.
26) At the time, two police boxes and one telephone room were built.
27) Cabinet Ordinance No.9, dissolution of the regulations of the Citadel Walls Committee, Official Gazette, September 7, Yonhui 2nd year.
29) Official Gazette of the Colonial government (hereunder Official Gazette), October 7, 1912, No. 56.
30) Yoshikawa Akimasa. In the early stages of the Meiji Restoration, he visited western countries and served for the government. Minister of Laws, Minister of Education, Minister of Communication (2 times), Minister of Internal Affairs (3 times), died in 1920, knighted as count.
33) Ibid. p. 492.
34) Ibid. pp. 76-77.
35) Ibid. p. 79.
36) Diet was first established in Japan on November 29, 1890. Prior to it, the senate composed of representatives of the respective feudal territories deliberated on laws and regulations.
37) Gokura Koji. Ibid. p. 87 and History of Japan, Meiji 21st Year, p. 9.
39) Official Gazette, November 6, 1912, No. 81.
40) Of the roads of Choson dynasty, refer to Sohn, Jung-mok, A Study on Urban Society of Choson Dynasty, pp. 332-339.
42) Official Gazette, June 25, 1919, No. 2962.
44) Choson Engineering Works Gazette, pp. 1036-1046 and The 20 years anniversary publication of Gyeongseong City Improvement Projects,
Gyeongseong Engineering Branch Office of the Internal Affairs Bureau of the colonial government, published in 1930. It is written in the total expans-
es for Gyeongseong development stood in 5,792.180 won 69 jin.


Of the subject, refer to various books of Paris Commune and the autobi-
ography of G.E. Haussmann, Memoirs, Vol.3, published between 1890-
1893. Haussmann was German-French, and he is often called in German
pronunciation.

Official Gazette, February 25, 1913 No. 169.
Official Gazette, July 17, 1913, No. 289.
Official Gazette July 17, 1913, No. 289.
Ibid. City Structure and City Planning, p. 49.
Ibid. p. 494.

Dong-A Ilbo, page 2, August 29, 1921.
Dong-A Ilbo, page 2, October 30 and December 19, 1921.
Dong-A Ilbo, page 2, May 3, 1922.
Dong-A Ilbo, page 2, December 12, 1922.

Dong-A Ilbo, page 2, January 14, 1923 "Gyeongseong City Planning Under Way"; page 2 April 13 "Gyeongseong City Planning Making Progress"; page 2, May 19, 1923 "Gyeongseong City Planning Committee Established".

It is mentioned in an article of Dong-A Ilbo, page 2, September 24, 1923. Judging from it, it is believed the plan was announced on September 22.
above newspaper, page 2, May 19, 1926.
above newspaper, page 2, July 4, 1926.
above newspaper, page 2, March 3, 1927.

Dong-A Ilbo, page 1, February 2, 1924.
above newspaper, page 1, Mary 25, 1925; page 1, August 8; page 5 August 12.

Dong-A Ilbo, page 2, August 20, 1926.
Sohn, Jung-mok, A Study on Urban Planning During Japanese Coloniza-
tion, pp. 170-176.
Official Gazette, March 26, 1936, No. 2758.
Ibid. February 14, 1936, No. 2724.

Population numbers as of 1935 are based on Census Paper. Population in 1940 is based on Colonial government Ordinance No. 555 that was car-
ried as an extra in the Official Gazette dated April 18, 1941. Population in 1936 is based on the Statistical Yearbook of 1936 published by the colonial government.

75) Of the history of the 10 land readjustment projects, refer to Sohn, Jung-mok, op. cit. pp. 283-300.
76) Official Gazette, January 19, 1940, No. 3896.
78) Ibid. pp. 397-399.
79) As of 1924, the estimated Tokyo population was 4,185,500.
81) Of the above 4 city plans, refer to Sohn, Jung-mok, A Study on City Planning during the Japanese Colonization Period, pp. 221-243.
82) Official Gazette, January 19, 1940, No.3896.
83) Otake (Minister of Internal Affairs) and Mihashi (Police Director), (November. 1939), "Of the Gyeng-In Road Plans (in Japanese)", Magazine Chosun, pp. 80-81.
84) Of the three reasons for urgent execution of the Gyeng-In Regional Plan, refer to Kishi Ken's, "Electricity and transportation problems with the Gyeong-In Regional Plan (in Japanese)", Magazine Chosun, September issue, 1941, p. 22.
85) above Otake and Mihashi's article, p. 81.
86) Sincuiju and Dasado Plan covered 223 million m². Bosan plan 32 million m², Samchuk and Mukho plan 95 million m². The Osaka, November 6 and 7, 1939, April 5, 1941; April 16, 1941.
87) Official Gazette, January 8, 1944, No. 5076.
88) Official Gazette, May 7, 1940, No. 3985.
89) Official Gazette, January 8, 1944, No. 5076.
90) Official Gazette, November 22, 1937, No. 3257.
91) Sohn, Jung-mok, op. cit. p. 313.
92) Japan Official Gazette, November 25, 1941, No. 4465.
94) Japan Official Gazette, October 31, 1943, No. 5033.
95) Ibid.
97) Ibid. table on p. 17.
99) Gyengseong Ilbo page 2, March 31, 1945.
100) above newspaper, page 2, April 5, 1945.
101) Official Gazette, April 7 and 19, 1945.
102) Building evacuation schemes are mentioned in Maeil Daily, page 2, April 28, 1945.
104) above newspaper, page 2, June 15, 1945.
According to the survey conducted by Seoul City as of June 1962, so-called prostitutes working in 'Jongsam' area stood at 597, a third of prostitutes of Seoul. 'Jongsam' was removed in October, 1968.


Introduction to the History of City and Local Autonomy, The 50th Anniversary Collection Thesis of the Tokyo City Administration Survey Institute, 1972, pp. 110-129.

Japanese universities do not have a city planning department and the subject is taught at Architecture Department or Engineering Department. Tokyo University and Tsukuba University offers city planning courses as a major and yet their curriculum shows much emphasis on engineering aspects such as water, air pollution, sewage system, transportation, and others. They even use the name of 'Urban Engineering Department', which is not equal to a city planning department but only the new name of Civil Engineering Department. No university in Japan offers a Ph.D program in city planning. It reflects the academic conservatism in Japan and also shows Japan is not much advanced in terms of city planning.
CHAPTER 9

Evolution of Modern City Planning
in Seoul: 1950-2000

Sang-Chuel Choe

I

Introduction

With its central geographical location on the Korean peninsula and as an important region along Korea's largest river, the Han River, Seoul was a naturally evolved city taking on several names before it was chosen as the capital of Chosun Dynasty. However, Seoul's current shape can trace its origins back to 1394 when it was designated as the capital of the Chosun Dynasty (1392-1910). In other words, from the start, Seoul was a deliberately planned city rather than one naturally formed. At the time, Hanyang, as it was called, was a variation of the Chinese classical urban planning, which is to say that it modified the city planning of the capital of Tang to fit the geographical features of Seoul. With the Bukak Mountain in the north and the Han River along the south, or in other words auspicious geomantic topography of having the mountains behind and river in front of a city, the royal palaces were concentrated at the foot of Bukak Mountain, with Namsan Mountain as a front mountain.
(called jusan). With the royal palace in the center the royal ancestral shrines were placed on the left and an altar for the guardian deities of the state to the right. The royal court was on the south side of the palace, and by establishing the four main gates in each of the four directions, the city took on the shape of a walled city or a fortress. This city shape continued for 500 years without any great change. During the Chosun Dynasty, the population of Hanyang changed from between 100,000 and 200,000, so it was not likely to bring about a major change in the spatial pattern of the city. However, in the 19th century or late Chosun Dynasty, outside the city walls of Hanyang within a radius of 10 ri (1 ri = 0.4 km) developed naturally formed villages, and particularly near the Han River (then known as Gyeong-gang) and along the Mapo-naru (Mapo ferry), merchants were forming an urban district.

Hanyang changed its name to Hanseong as it entered the era of the Daehan Empire (1897-1910) in the late 19th and early 20th century, and the city started to change its shape with foreign influences flowing into the country. In 1899, as the railway from Seoul to Incheon opened, urban areas started to form around Seoul Station, Yongsan Station, Noryangjin Station and Youngdeungpo Station. After the Japanese annexation of Korea in 1910, effectively ending the country’s sovereignty, Japan began to conduct land surveys and initiate city planning as part of a strategic maneuver to rule over its colony. Japan abolished the traditional district system (named as 5-Bu and 49-Bang) which had been in effect since the days of Hanyang and adopted instead Japanese Dong-Jeong system. And, starting with road improvements from Seoul Station to Namdaemun (South Main Gate), city planning projects (known as Shi-gu-gye-jeong) concentrating on expanding and improving roads, were carried out. They took place around the vicinities of Namgwan where the Japanese population was concentrated, and around Seoul City Hall, Sogong-dong, Namdaemun, Gyeongbok Palace and Changdok Palace. The city pattern within the four gates and around today’s Wonhyo Street connecting the Yongsan and Mapo-naru was decided back then. The colonial government enacted the Chosun City Planning Decree in 1934 focusing on the repair and expansion of the road network, and thus Seoul’s first modern urban master plan (so-called Gyeongseong Shigaji Gyehoek) was crafted and officially adopted in 1936.

According to Figure 9.1, the city’s master plan covered not only Gyeongseong-Bu (the City of Seoul) but the surrounding Goyang-Gun, Siheung-Gun, and Gimpo-Gun, an area measuring 135.86 km². Land use and street plans were established for these areas. Five zoning districts were designated for the area: residential, commercial, industrial, street commercial, and undesignated areas. As an exten-
sion of the shi-gu-gye-jeong (city planning project), new routes were added to the existing road network including the route to Mapo and, outside Dongdaemun (East Main Gate), to Cheongnyang-ri, Hoegi-dong, and Wangshim-ri. In the plan, the population size was targeted for 1.1 million for the year of 1965, while the number of automobiles after 30 years was estimated only about 2,500. However, the plan had the inherent limits, albeit in hindsight, as it turned out that the actual population in 1965 reached over 3.4 million, and the number of automobiles reached more than 16,000. According to a survey conducted in 1935, it took more than two hours from City Hall to Suyu-ri, three hours to Ui-dong and the number of cars out on the road was only 679. In that sense, the plan appeared ambitious, yet the reality of the situation from the start had been developing disparately from the plan. The 1936 master plan, Gyeongseong Shigaji Gyehock, underwent several revisions in the course of its execution, but until Korea’s liberation from colonial rule in 1945, the plan saw no major structural changes and it continued to influence in shaping Seoul. However, the start of the Second World War in 1940 brought about the need to establish the special building regulations for civil defense, overrunning the Chosun City Planning Decree. This called for the shock-proof structure, emergency shelters, firefighting facilities, and fire lanes. What was also called for the provision of open space that was intended to separate the built-up area in order to prevent the fire spreading. The space was called ‘sogye-doro’, literally separator road, and this policy brought some changes in Seoul’s urban structure. One of the most noticeable road separators that opened was the 50m-wide one stretching from Jongmyo (Royal Alter) to the front of the current Daehan Theater. With the end of war, Korea gained its independence and Seoul’s population was already topping one million. The refugees resulting from the division of North and South Korea, and Korean émigrés returning to their homeland had no agricultural base and could not help but settle in the city. Moreover, with the population starting to concentrate in Seoul and the absence of an administrative authority, combined with the departure of Japanese officials in charge of city planning, Seoul, lacking experts in urban planning, entered into a period of great environmental disorder. The Chosun City Planning Decree changed its name to the City Planning Decree, but otherwise no other corrections were made to the content of the decree after liberation, and it continued to be enforced.

At the foot of Namsan Mountain, an unauthorized shantytown known as Haebang-chon (literally Liberation Village) formed by refugee people from the North Korea sprouted into existence, and in the river bed of Cheonggyecheon (main stream corridor in downtown and on the unfinished fire separator space, i.e. sogye
doro, the squatters occupied the territory on a first-come first-serve basis. This phenomenon continued for some time, aggravating the chaotic urban situation. The foothills of Geumhwa-san, Nak-san, Changshin-dong, and Geumho-dong which surrounded the old city center, also saw the emergence of an unauthorized shanty town. Furthermore, some people even occupied some of main arterials, small parks and squares and used for constructing makeshift shelters. Finally, in 1948, the government of the Republic of Korea (Daehan-min-guk) was inaugurated, bringing some stability to Seoul. As a result, and as can be seen in Figure 9.2, the City expanded its urban planning area in 1949, integrating four new districts of Eunpyeong, Guro, Songin, and Took-do. Thus, Seoul’s urban planning area increased almost twofold, covering an area of 268.4 km². However, as to these newly annexed districts, the land use plan and capital improvement plan had not yet been formulated and the Korean War broke out in 1950, suspending almost all city planning work. In 1952, there were minor planning efforts for these areas, but the bona fide land use plans were made fifteen years afterward, in 1966. This attests to how much Korean War delayed Seoul’s urban planning that were much needed for the orderly growth of the city at that time.

III

Evolution of Modern City Planning of Seoul

WAR RESTORATION AND PERIOD OF CHAOS: THE 1950’S

The population of Seoul, which had been 830,000 in 1944, was reported to be 1,260,000 just after independence in 1946, showing an increase of 430,000 people in two years. With the return of Korean émigrés that had been dispersed overseas during the colonial
Figure 9.1
City planning area and land use zoning, 1939
repression and the wave of refugees who moved south to escape the communist rule of North Korea, Seoul was undergoing rapid and intense changes. Korea at the time was experiencing a state of chaos from the aftermath of the Japanese rule and the political conflict among leftist, rightist and moderate factions. On September 19, 1945, the U.S. military government office was established, but the Korean people, having been oppressed until that time, demanded unlimited freedom with the onset of liberation, and in this atmosphere, the city was turning into a stage for disorder, unlawfulness and confusion. The fire-separator roads (sogye doros) and existing roads that had been opened partially in preparation against bombings during the war became the nests of illegal occupation. Unauthorized buildings started to appear inside the boundaries of the four inner mountains including Namsan, which surrounded the city center. They also illegally occupied the park sites. It was during this time that the huge unauthorized shantytown of Haebang-chon located in southern slope of Namsan Mountain emerged.

However, the liberation led to the abrupt departure of the Japanese officials who were in charge of Seoul’s urban planning, and there were little manpower of Korean experts who filled this administrative vacuum. The Chosun City Planning Decree enacted under the Japanese rule in 1934 was the sole institutional mechanism and continued to be applied. After liberation, Korea witnessed a major drop in productivity, paralyzed financial and communications function, soaring prices, and worsening poverty. To make matters worse, there were the U.S. military government system which did not fully comprehend the Korean situation, the heavy rains in June of 1949, spread of cholera, and the full-fledged start of communist North Korea which brought in a daily mass of defectors to the South. In September 1945, as part of an administrative organ of Seoul City, the Department of Urban Planning was established under the Bureau of Public Works, but in August 1946, the U.S. military authorities, following the American model, established a City Planning Commission under the direct control of the mayor. However, in October of that same year, it was reverted back to the Department of Urban Planning under the Bureau of Public Works, bringing about much confusion in the city planning function. Finally, on May 10, 1948, the Congress of the Korean Republic was established in South Korea through a general election on August 15, and the Government of the Republic of Korea was inaugurated. Yet, Seoul was at its apogee of disorder with the increase in unlicensed buildings, the unauthorized occupation and consequent illegal constructions on public sites including the area around Cheonggyecheon. In spite of this chaos, on August 13, 1949, Presidential Decree 159, called for the integration of four areas - Eunpyeong, Ttukdo, Sun-
Figure 9.2
City planning area, 1949
and land use zoning, 1952
gin, and Guro - into the urban planning districts of Seoul, thereby increasing the urbanization area almost twofold, from 135.4km² to 269.8km². At the time of the annexation, the population of these four areas was approximately 160,000. The areas were located within a 5km radius of the city center, most bordering the river or mountains. These areas were chosen based on their geographical potential for urban expansion. However, the outbreak of the Korean War effectively halted any urban planning for the four integrated districts, leaving them without capital improvement programs or land-use zoning plans. In addition to the incorporation of the four districts, Seongbuk Gu (Gu is a sub-administrative district of the city) was established, dividing Seoul further into nine Gu's from the previous eight. The land-use zoning plan for these districts was only established in 1964, leaving a void in urban planning for guided urban development for too long.

Dawn of June 25, 1950, the invasion of North Korea signaled the start of the Korean War (1950-1953). Two days after war broke out on June 27, the government moved to Daejeon City, and with the bombing next day of the Han River Bridge (Han Gang Indogyn) and Gwangjin Bridge, which crossed over the Han River, Seoul was completely captured by North Korea. The Government had to move from Daejeon to Daegu, and then to Busan on July 17, and Seoul City Hall moved to the temporary capital of Busan. Thus, one could not help but accept the administrative vacuum that had been created as a result. The population of Seoul dropped dramatically with almost 240,000 people estimated missing. Consequently, one of the biggest problems was the unauthorized buildings constructed on the private property of people who did not return and on the war devastated lands. Then mayor Lee Ki-bung continued to issue warnings on his intent to strictly police illegal buildings and expressed his firm will to rebuild the war-torn Seoul into a new city. The restoration plans were established under the name of Seoul Restoration Plan, but the details of the content are unknown. Nonetheless, in what little there is revealed about the plan, there seems to have been measures to use the vacant lots near the race tracks in Shinseol-dong and the unauthorized construction sites to build a temporary relief shelter for the victims of war in preparation for the coming winter. The Seoul City government returned to its feet, and it estimated that civilian damage, in particular loss of life or injuries, as of December 15 reached over 20,000 with 9,498 dead, 7,008 injured, and 4,020 missing. In terms of buildings, more than 20,000 were destroyed in the war, with 17,617 buildings completely destroyed, and 3,194 partially destroyed. But, on December 24, the government once again ordered the citizens of Seoul to evacuate the city. Thirty thousand people had to cross the Han River and were once again on the run.
On January 4, Seoul City Hall moved to Busan, suspending the operations of the municipal government once again. In February, the administrative office of the City of Seoul was established in the temporary capital of Busan. From there, the wheels were set in motion for the restoration of Seoul. Several administrative measures were taken, such as giving first priority of return to Seoul to the residents whose houses were not damaged and forming a Seoul City Public Construction Division (called Hengeong Gunseooldae) among others. Soon thereafter on March 14, Seoul was recaptured and Seoul City reopened under the name of Seoul City Public Construction Division. Citizens of Seoul returned, but as the front battle lines continued to be pushed back and forth for two years until July 27, 1953 when an armistice was reached, the city administration continued its operations in the temporary capital of Busan.

In the midst of such chaos that lasted three years and one month, Seoul's urban planning could not be carried out normally. Yet taking the opportunity to restore the city, there seems to have been an attempt at fundamentally reestablishing the planning of Seoul. This appears to have gone beyond the passive level of a simple repairing of war damages. The planners took an important lesson from London where Great Fire served as a turning point in fundamentally correcting London's urban landscape. To them, Seoul's situation was taken as a good opportunity to fundamentally restructure the urban planning of a war devastated city. Although there remain no written records or blue prints to this effect, according to the testimony of those that were involved in such projects at the time, one can sense that there had been a considerable motivated attempt at the central government level. Lee Bong-in and Oh Suk-hwan, the then director-general and director, respectively, of the urban planning department under the Civil Engineering Bureau at the Ministry of Interior, and Ju Won, an urban planning committee member, were at the center of the Capital Restoration Plan to establish a modern master plan befitting the capital of a new nation. Mayor of Seoul Im Tae-sun also established the Seoul Urban Planning Committee and a permanent body for the practical operation and appointed Ju Won to head the committee. It appears that the Capital Restoration Plan envisioned the location of the National Assembly either at Jongmyo or Namsan areas while covering Cheonggyecheon and opening of new roads. Despite such motivated attempts in Busan, when the government returned to Seoul, the plan had to face new reality. When the refugees returned to Seoul, they learned that their land had become off limits for the purpose of urban planning. Needless to say, the government was met with fierce resistance from landowners and others who had to find a temporary dwelling place. When President Rhee Seung-man ordered the construction of hous-
es at the expense of suspending visionary long-range restoration planning project, a truly strange phenomenon took place. In some cases, people would drive a stake through the existing roads and claimed it as their land. Under the express administrative condition that demolishment would eventually take place, a temporary construction was allowed in these illegally occupied areas. This temporary construction system may have succeeded in appeasing the disgruntled citizens and landowners but left a cancerous obstacles to the urban planning and civic projects that followed. In fact, as a result of all those unauthorized buildings and the over-issuance of temporary construction permits, the ambitious Capital Restoration Plan became no more than a paper plan.

However, as part of the war damage restoration project, housing construction and resettlement projects for war victims were initiated. In 1953, as part of the UNCTAD plan, 100 houses were built in Anam-dong and Jeonnung-dong and small-scale welfare housing complexes were developed, but this was merely a housing construction in name only and could not make any significant impact on the housing shortage and restoration project. Also, as part of the war damage restoration project, the Land Readjustment Project was carried out in the central part of the city. Reaching 19 districts covering 1.64km², the land replatting project was carried out mostly within the downtown area and in the Seodaemun, Mannri, Dohwa, Cheongpa, Wonhyo, Ahyun, Mapo, Seobinggo districts. As a part of these projects, were constructed Myeongdong, Supyo, Mukjeong and Seorin Children’s Parks. These parks were sold under the pretext of securing financial resources for the covering of Cheonggyecheon and the construction of an elevated highway above it in 1966 and no longer exist. In a sense, however, this land readjustment project had the effect of achieving a planned city repair. The Seogyo district and Dongdaemun district were included in the land readjustment project as part of an effort of the city restoration, although the completion of the project occurred much later in 1960.

Throughout the 1950s, the land use zoning underwent a significant change as shown in Figure 9.2: zoning districts were designated in four areas annexed in 1952, and residential zoning districts were reduced while commercial and industrial districts expanded. The most noticeable change was in the Scenic Overlay District (called Pungchi Jigu). The Scenic Overlay Districts, ever since its introduction by the Chosun City Planning Decree of 1934, had been under a tight building restriction. However, after the restoration of the capital in 1953, the continued rise in the price of land and the lack of land to build houses applied pressure on the lifting of the restriction on these districts and thus became the hotbed of administrative corruption. From 1954 to 1959, a 31% of the scenic districts, or 837
ha, was lifted, and with the building regulations eased, the wooded green corridors at the city center and the Gangbuk area were much destroyed. The destroyed scenic areas included the southern slope of Namsan Park and parts of Donam-dong, Seongbuk-dong, Hannam-dong, Eungbong-dong, Shindang-dong, Geumho-dong, and Oksu-dong. The result was the swift formation of unauthorized poor quality housing districts. Even within the urban planning districts, the lifting of restriction on the protected areas and permission to develop in those areas were the objects of political pressure and corruption. Added to this, the areas that were not under the land use zoning control had been managed by the Forestry Law. But, as the demand for city development grew intensely, the development was allowed in the areas' forest, resulting the destruction of Seoul’s greenery. From 1959 to 1961, the number of districts whose environment protection laws were lifted was 388, an area covering 363 ha. These newly lifted areas were used for building houses or schools. And today, they are the sites of the substandard housing redevelopment projects and the many hilltop school facilities that are damaging Seoul’s natural view. This large scale disappearance of the scenic districts and the lifting of the protective laws left an indelible scar in Seoul’s city planning. This speaks for the disorder of city planning in the 1950s and the realities of that time.

In retrospect, Seoul had the opportunity to carry out bold city planning in the 1950s amidst the tragedies of Korea War, but lost that chance. Rather, in 1952, by adopting the Mixed-use District as part of the land use zoning system, the mixing of the conflicting land use, such as residences and factories, was compounded. And with the introduction of the temporary construction system, the execution of later urban planning was almost impossible. The temporary construction system was in existence since the establishment of the Chosun City Planning Decree that it gave out construction permits on the condition that when demolition was needed as part of the urban planning project, it could be carried out without compensation at anytime. However, after 1953, this easy construction authorization led to the abuse of this system, allowing temporary constructions within planned areas such as streets, squares, and parks. This rendered the city planning virtually useless. The best examples of this disorderly construction at the time is the construction of Gukje Theatre in Sejong-ro, Pagoda Hotel in Pagoda Park, Sungeui Girls' High School in Namsan Park, and Shinshin Department Store in the public square of the Jong-ro intersection. These temporary buildings are no longer standing, but for more than 30 years until the 1980s, they were built on the site of public facilities, dominating the city view of Seoul in the 1960s. This temporary building system was greatly abused under the rule of the Liberal
Party (known as Jayu Dang) and showed the corruption and disorder of building permit administration.

As mentioned earlier, after liberation until 1960, Seoul’s inability to grab a decisive opportunity to carry out bold urban planning along with restoration of war damages is attributed to the shortsightedness of those in power, administrative corruption and the complacent attitudes of planning officials. But the reason can also be found in the failure of effectively settling properties and assets turned over to the government and the failure to secure land for the purpose of urban planning facilities such as parks, road, public squares, etc in the process of restructuring agricultural land. Properties turned over to the government was not being secured for the sites for public facilities and the revenues from the sale of government property was not being used for the purchasing of land for city planning but instead disposed of cheaply to those who had political and administrative relations illicitly. And, in order to raise the value of the land disposed, the restricted development in urban planning areas was dissolved or changed. Furthermore, as a result of the reform in farmland, a vast area covering 1/8 of the whole city could have been secured for the purpose of urban planning, but by distributing the land as small plots of farmland, the planned city development was impossible. The fault lay in thinking that the distribution of municipal land, government property, and farmland became concessions and was only considered a source of revenue that would fill the lacking municipal coffers. As a consequence, over 50 percent of the urban planning area of Seoul in the 1950s was abandoned and left with no actual plans, and, thus, the lifting of the environment protection law led to the disorderly development. Due to administrative corruption and the ignorance and complacency of officials in charge of planning, Seoul lost the great opportunity to plan and guide the land development towards an orderly modern city. In the case of Tokyo, after the Meiji Reformation, the land owned by Dai-myos was secured for park sites or other purposes for urban planning. After the Great Kanto Earthquake in 1923, under the plan to revive the imperial city system, Tokyo was able to fundamentally reform its city planning while Korea had to regress in its city planning by making compromises with the realities of resettling refugees in the midst of the devastations of war that destroyed more than half of the city. And, in the process of settling government-vested properties and reforming farmland, it lost the ultimate opportunity to secure land for city planning. There was nothing wrong with being cautious, but by abandoning over half of the urban planning area without any specific plans for over 20 years, a chaotic development ensued.
THE ERA OF STORMING URBAN TUMULT: THE 1960S

From the start, the 1960s carried tumultuous changes. On April 19, 1960, the social resistance to the corrupt presidential elections ignited the 4/19 student revolt whereupon the Liberal Party collapsed bringing in the interim government under Huh Jeong and then the Democratic Party led by Jang Myon. In December 1960, Kim Sang-don became the first popularly elected mayor of Seoul under a newly established local autonomy system. Yet Mayor Kim did little more than bashing the whole city officials as corrupted civil servants and could hold his office for only five months since a military coup on May 16 threw the municipal government under military rule. Yun Tae-il, a lieutenant general, became the mayor of Seoul and with the special legislation on the administration of the City of Seoul, unlike other local governments that were under the supervision of the Ministry of Interior, the status of Seoul was promoted to be under the direct supervision of the Prime Minister. Seoul’s population at the time was reaching over 2.5 million, but the spatial structure of the city maintained exactly that of the 1950s. Along with the launch of the Third Republic in 1962, a motivated and ambitious 5-year national economic development plan was established and a labor-intensive export industrial policy started the acceleration of population flocking to the city. First of all, the labor-intense export industry best represented by clothing, sewing and wigs increased the concentration of population to Seoul where the industry could best harness its abundant labor forces and industrial networks. The population of 2.5 million in 1960 quickly increased to 3.5 million in 1965, averaging an increase of 200,000 people per year.

However, still, Seoul’s urbanized area was largely confined within Gangbuk area (north of the Han River), where the unauthorized shantytowns were sprouting up after the Korean War. The poor people solved their housing problem in these makeshift towns on the slopes of Mts. Ansan, Naksan, Namisan, and Bukaksan surrounding old downtown quarter and in the side bed of stream corridors of Cheonggyecheon, Jeongneungcheon, Ukcheon that passed through the existing urban area. As a means for transportation, there were streetcars and some bus routes. But they did not go over the Muak-je hill in the northwest, and the same was true for the Mia-ri hill in the northeast and Shinchon and Mapo-naru in the southwest. In the east and in the northeast, Cheongryang-ri and Wangshim-ri, respectively, formed the physical limit of Seoul. One still faced a vast spread of farmland beyond Dongdaemun and Shinseol-dong, to Cheongryang-ri: only exceptions were the lumberyard and coal unloading dock of Majang-dong and the College of Education of
Seoul National University then located in Yongdu-dong. Except for the area around the street car route, Seoul was still largely a pedestrian city, and from the city center to places where one could walk, the disorderly establishment of unauthorized shantytowns were seen as an inevitable consequence.

The city planning function was not in place at this time. Although the city planning area expanded to include the Ttukseom district outside of Wangshim-ri, Eunpyeong past the Muakje hill, Sungin outside Dongdaemun, and Guro on the outskirts of Youngdeungpo, even land survey maps were not prepared for these areas due to the administrative incompetence under the Liberal Party government and the lack of city planning specialists. Without survey maps, thus, drafting city plans were impossible. Only some linear city development was taking place along the certain principal roads and at places that were designated for special purposes. In such an unprepared Seoul, the population increased by one million in five years. Instead of active measures, the authorities repeated the 1964 preventive measure on the population concentration, but it was like an empty slogan. The expansion of urban infrastructure such as urban development, transportation, and sewerage system to accommodate the increasing population was not feasible with the city's finances. Only developments that did not cost public money were being carried out: in other words, urban development through land readjustments. Examples of such land readjustment projects included Seogyo, Dongdaemun, Suyu, Bulgwang, Ttukdo, Myeongmok, and Seongsan in the first half of the 1960s. It was a period when urban planning meant little more than land readjustment. The Department of City Planning, once a mere division of the Bureau of Public Works, was raised to a more prominent position of a bureau in 1962. Thus, the new Bureau of City Planning had, under its wing, the Departments of City Planning, Land Readjustment and Building Permit. In 1964, a secretariat and a housing division were added to form five departments.

Yet, Seoul's urban planning function was ill-equipped and only reactive. It was this time that a former Busan mayor Kim Hyun-ok became mayor of Seoul on April 4, 1966 at the age of 38. Cha Il-seok, a professor of public administration at Yonsei University with a major in municipal administration and practical experience in city planning in Nassau County, New York, was appointed as vice mayor. Yun Jin-Wu, who had been working in the City Division at the Ministry of Construction was appointed as Seoul's city planning director while Choe Sang-Chuel, also from the Ministry of Construction, was transferred to fill the position of the head of general planning division in the Department of City Planning, thereby bolstering the lineup of administrative experts. Fitting with his nickname of "bull
dozer," from the start of his term, Mayor Kim Hyun-ok initiated the extensive construction of underground or overpass pedestrian walkways in an attempt to ease the traffic congestion. Meanwhile, aggressive road expansion efforts were launched making the existing 8-10 meters wide road to 35 meters arterial roads that connected Hongjae-dong and Galhyun-dong, Donam-dong and Mia-ri, Cheongryang-ri and Jungyang-kyo, Seongdong-gyo and Walker Hill. The construction of the Cheonggyecheon elevated road was started, and in order to make up for the lack of resources, the much-valued public children’s parks in Myeong-dong, Seorin, Ijeong, and Dongdaemun Market areas were sold to private interests. By pursuing such projects, the necessity for planning was raised. In particular, in extending and expanding the principal arterial road to the outskirts, the need for urban planning was all the more urgent for developing the areas adjacent to the road. However, as mentioned earlier, the accurate land survey as yet incomplete for the newly integrated city planning area, and thus it was impossible to propose official land use plan and capital improvement programs for the whole city. Nevertheless, Mayor Kim Hyun-ok pushed for not only drafting the comprehensive plan but also making it official within a short period of time.

The Korea Planners Association was commissioned with the task of proposing the citywide master plan while the land survey task was carried out by the officers of the Department of City Planning who stayed up many nights to complete the task. The work on these two tasks evoked a tense warlike scene as the deadline for the draft were set in time for the opening of the city planning exhibition on August 15, 1966. The Korea Planners Association’s working group was headed by Ju Won, who was the former Seoul City Planning Commission member and then a National City Planning Committee member as well as being the leading figure in city planning in terms of both theory and practice at that time. Other notable members who participated in this urgent job included Lee Il-byung (Hanyang University professor), Yoon Jeong-sup (Seoul National University professor), Kim Ui-won (Deputy Director, Ministry of Construction), Lee Seong-ok (senior member, Seoul City Planning Commission), and Lee Bong-in (President, Korea Civil Engineering Association). They worked day and night on the first floor of the Korea Civil Engineering Association’ office located in Myeong-dong, where Mayor Kim Hyun-ok and Deputy Mayor Cha Il-seok made numerous visit to encourage the members to finish the task in time for the city planning exhibition. Even before the master plan was completed by Korea Planners Association, it was handed over to professors Park Byung-ju and Kang Kun-hee of Hong Ik University to make a 1/3000 scale model. Meanwhile, professor Lee Seong-ok
who was a standing member of the Seoul City Planning Commission was working on an ideal model for city planning, one which was based on the premise of constructing a new capital from scratch. This plan was based on the shape of Korea’s national flower, the Mugungwha, or althea, and on the model of United States’ capital of Washington D.C. designed by Pierre L’Enfant. This so-called “Mugungwha City Plan” became the object of heated criticism and mockery at the time, and the architect Kim Jung-up denounced it as being like a children’s cartoon. The Mugungwha City Plan was based on a circular radiating network of streets, much like the US capital Washington D.C., with the White House at one center, in other words the administrative center; Capitol Hill with the Senate and Congress, or the legislative branch at another center; and the judicial center with the Jefferson Memorial as its axis. This particular city planning clearly embodied the balance of powers.

The reason for formulating this imaginary and unrealistic Seoul can be found in the concerns and problems that Seoul faced at that time. After liberation, the Republic of Korea was established, but the capital, Seoul, could not break free from the spatial structure of the Chosun Dynasty’s royal capital. The Government-General building constructed under the Japanese colonial rule still stood prominently in front of Gyeongbok Palace, a move to crush any national sentiment among the Korean people during the colonial rule by hiding the royal palace of the Chosun Dynasty. And still, the spatial structure for the constitutional democracy had not been established. The greatest task with the establishment of the Republic of Korea in 1948 was the building of a National Assembly Hall. The residence for the colonial Government-General was used as the presidential residence, the administrative branch of the government could be housed in the Government-General Building and the judicial branch could use the buildings that were used as courts under the Japanese rule and simply change its name to the Supreme Court. However, the National Assembly was using the what had been under the Japanese rule called the Gyeong-seong-bu-min-gwan (the current Seoul City Council Building). As the symbol of the constitutional republic, finding the seat of the National Assembly was the most urgent task at hand. In the Seoul Restoration Plan prepared in the temporary capital of Busan, the National Assembly was to be placed in Jongmyo (Royal Altar) with wide boulevard from Jongmyo to Toegye-ro. However, President Rhee Seung-man and Vice President Lee Ki-bung, both from the family branch of Jeonju Lee’s, could not counter the opposition and pressure from the Jeonju Lee royal clansmen of the Chosun Dynasty. The next site was the Namsan outdoor concert hall. However, the outdoor concert hall which was in an elevated ground would have meant that the legislative branch would
have looked down and reigned over the administrative and judicial branches, going against the political ideology of a checks and balance between the authorities. In addition, the fact that it was difficult to access quickly made that plan undesirable. After that, the Yongsan American Army Base golf course (now the Yongsan Family Park), the Air Force and Navy Headquarters in Daebang-dong were mentioned as possibilities but the plans never materialized and it was already approaching the mid 60s. Therefore, the Seoul Comprehensive plan of 1966 had as its greatest task the selection of the site for the administrative, legislative, and judicial branches of the independent nation. In this context, the so-called "Mugungwha City Plan" was proposed as an initial starting point in solving this dilemma and by itself could not be the formal city plan. However, the "Mugungwha City Plan" exerted an important influence on the city's comprehensive plan in proposing the site of the presidential, administrative, legislative and judicial branches: the presidential branch near today's Cheongwadae (President's Place) and Gyeongbok Palace, the administrative branch in the Yongsan Army Base, the legislative branch in the southern part of Seoul, and the judicial branch in Youngdeungsapo, although they were not realized as planned.

Meanwhile, the officers of the Department of City Planning were busy to make an official plan, a legal document representing city's capital improvement plan. Up until then, there had only been plans for the major roads and no designation made for supplementary and access roads. A 1/1,200 scale land survey map was required for this work, but, in order to meet the deadline of the city planning exhibition on August 15, a cadastral map was used for the areas that had not been surveyed. It is more accurate to say that it was an overnight drawing project rather than drafting a plan, a drawing of road lines based on contour lines, various land features and existing buildings. Finally on August 15, in the history of Korea's city planning, the first ever city planning exhibition took place in the public square in front of City Hall. What was revealed to the public was the map of the city that had been secretly locked away in the drawers and cabinets of the city planning authorities until that time. The pretext was to encourage the citizen's participation and opinions on the city planning, but the official city planning map made at that time in actuality became the starting point for completing the survey of all the land in the urban planning district of today's Seoul. The people of Seoul showed enormous interest, since they knew the map had an inseparable link with their property values. There was a saying that not even a puppy in Maljuk-geori (the current Yangje-dong area) would give a second glance at a 1,000 won bill; in other words, the price of land was skyrocketing on a daily basis after the release of official city planning map. At a time when there were no systematic
preventive measures against real estate speculation in Seoul, the land price between 1966 and 1969 jumped an average of 200 times. Under such circumstances, the city planning exhibition provided the citizens with an opportunity to get an answer on what had become of their land and an invaluable opportunity to gain information for speculators. The Comprehensive Plan of Seoul made by the Korea Planners Association was exhibited in a temporary building measuring 50m by 40m set up in the square in front of City Hall for 32 days until September 15. The exhibit had the large model built by Hong Ik University at the center and a total of 23 types of city planning model and maps including those of the houses built with the support of The Asia Foundation, the plan of Namsan park proposed by the Urban and Regional Planning Institute and the Geumwha redevelopment plan among others. The number of visitors to this exhibition reached 800,000, figuring 23% of Seoul residents and at least one person per family. August 15, 1966 was also the day when the first black and white TV broadcast was sent out across the nation. It attracted such a wide spread national interest that President Park Chung-hee paid a visit after the official Independence Day ceremony. During that time, the pamphlet of the comprehensive plan of Seoul (Figure 9.3) that was distributed to the public had the educational effect of instructing not only the people of Seoul but the nation as a whole what city planning was about, and more importantly, made the idea of city planning more accessible to the public.

Beyond the historic significance of the comprehensive plan of 1966, it was the starting point of determining the spatial structure of Seoul today. Despite the numerous corrections and supplementary measures taken since then, it served as the mother plan of the street network and the land use. With 1985 as the target year, it served as the blueprint of a modern city that was at once the capital of the nation and center of politics, economy and culture and with a population of 5 million. After defining the character of Seoul, as nation’s capital, as center of regional economics, and as an independent city, 21 sub-communities were established as shown in Figure 9.4, calling for a community plan that corresponds almost identically to the borders of the 25 districts of today. The following sections take a closer look at the details of the plan.

**Spatial structure and land use plan**

The plan laid out mono-centric spatial structure with the dominant city center (downtown area) and 20 secondary city centers. The land use plan was devised by grouping certain districts together as major sub-areas. In the northeast, it was Suyu, Chang-dong and Gongdeok; in the east, Cheongryang-ri and Mangwu; in the south-
서울은 이렇게 변한다
(都市基本計劃의 순서리)

1. 서울이 얼마나 발전한지(都市計劃의 과정)

2. 포도이(都市計劃의 방법)

3. 구조 및 계획

4. 현황 및 현안
east, Wangshim-ri, Ttukseom, and Cheonho; in the south, Youngdong, Gwacheon, and Naeok; in the northwest, Youngdeungpo, Guro, Shiheung and Gimpo; and in the northwest, Eunpyung, Shindong and Susaek. Each area was made to have a area center or secondary city center, and Seoul was largely divided into four sections of north, east, west, and south. And, the industrial districts were laid out in each area in order to ensure a manufacturing function and housing-job balance: the area running along the Jungjung-cheon in the northeast from Chang-dong to Ttukseom, in the southeast, the Suseo and Gaepo area where the Yangjae-cheon (Yangjae stream) and Tanccheon meet, and in the northwest, Nanji-do near the Bulguwang-cheon and the Susaek area. And in Nanji-do was to be built the Gyeong-In canal as well as the Seoul harbor. With the plan to one day host the Olympic Games, the Mongchon-toseong area which is located between Jamsil and Cheonho, was selected as a possible site for building national stadium measuring one million pyong in its rectangular shape (the current Olympic Park). The plan laid out the presidential branch in the Sejong-ro area, the administrative branch in the Yongsan army headquarters of the American armed forces base, the judicial branch in the naval and air force headquarters in Youngdeungpo, and the legislative branch in Youngdong (Gangnam area). The plan also proposed the relocation of major universities: Seoul National University to its College of Engineering site at the foot of Bulam Mt. near Taeneung as well as Yonsei and Ewha Universities to the Byukjae area. The plan even had Yongsan military base moving to the Songpa area at the foot of Namhan-sanseong.
Though not entirely identical, but it is possible to see that the presidential and administrative branch being in the Sejong-ro area, the legislative branch in Yeoeuido and the judicial branch in Youngdong find their roots in the Mugunghwa City Plan that modeled itself after Washington D.C. Although the plan to leave the small airfield in Yeoeuido and move the Yongsan military base to Songpa was never realized, the plan to reserve a million pyeong (830 acres) land in preparation for an uncertain probability of hosting the Olympic Games sometime in the future is seen as the greatest long-term view of the 1966 comprehensive plan. The plan to move Seoul National University from Dongsum-dong to Gungreung-dong was not carried out due to the proximity of the military academy. Instead, Seoul National University moved to the site of Gwanak Country Club located halfway up Gwanak Mountain in 1974 and it was the brain-child of President Park Chung-hee.

Transportation planning

The transportation planning focused largely on developing the plans for road network, rail and subway, floodgate, and an airport. Particularly, up until then, the official street plan covered only the existing urban districts in Gangbuk and the Youngdeungpo area. It was in 1966 that a street system was established across the whole of the Seoul urban planning area. Even before then, a radiating system of streets had been planned by Han Jung-sup who had been serving as the director of the Department of City Planning at the time. The 1966 plan was based on this system, adopting four ring roads and thirteen radiating roads that serve as the framework of Seoul’s street network to this day. The first ring ran through Seoul Station - Dognipmun (Independence Gate) - Dongdaemun - Gwangwhamun - Seoul Station; the second Samsun Bridge - Sungin-dong - Bogwang-dong - Yongsan-dong - North Ahyun-dong - Independence Gate - Shingyo-dong - Samsun Bridge; the third is North Gangbyun Road - Hapjung-dong - Sungsan-dong - Sachun-dong - Hongjae-dong - Bukak Tunnel - Chunghquareng-dong - Hawolgok-dong - Jegi-dong - Majang-dong - North Gangbyun Road; the fourth is Yangjae-dong - Guro-dong - Gimpo - Wondang - U-dong - sangye-dong - Jungyedong - behind the Military Academy - Donon-ri - Amsa-dong - Cheonho-dong - Yangjae-dong circle. The first circle, except for the expansion of Toegye-ro, linked the existing roads and conceptualized the beltway, and the second circle since then changed its shape considerably over the years and as it linked to Geumwha Tunnel, Sajik Tunnel and Samcheong Tunnel, it was seen to reflect the effort to keep the concept of a ring road alive. The third beltway had in parts sections that were not yet open, but during the past 30 years the
efforts have been made to complete these sections. Except for the section that runs from Wondang, from which emerged strong opposition in terms of preservation of nature, through Ui-ryung Tunnel to Ui-dong, the fourth ring road formed a loop in terms of its spatial structure. The thirteen radiating lines as shown in Figure 9.5 is based on the existing national route system which starts from the first ring to the outskirts and adds lines 2, 5, 6 and 12. These 13 radiating arterial lines formed the framework of the street system including the Gangnam area and influenced most importantly in the shaping of Seoul’s spatial structure.

The plan also envisioned the four subway lines, although their routes underwent considerable changes since then except for line 1
of today running from Seoul Station to Cheongryang-ri. As shown in Figure 9.6, though the basic skeleton for lines 3 and 4 had been made then, the beginning and last stops were different. Harbor plans were also established with the intent to build Seoul harbor in Nanji-do and at the same time initiate the construction of a Seoul-Incheon inland canal in order to transport cargo from the west sea to Seoul. But this one was not really a Seoul's own idea but a simple inclusion of the central government's plan devised by the Ministry of Construction in 1964 based on National Comprehensive Development Planning Act (known as Guk-to-geon-sul-jong-hap-gyeo-heocebo). The building of Seoul harbor and the inland canal were abolished in the revised plan of 1972, and the latter (the Seoul-Incheon inland canal plan) reemerged recently. Yet the situation has been changed since then. Nanji-do which was initially set for the building of Seoul harbor has become a landfill for waste in the first, and then become a site for Millennium Park and World Cup Stadium. Thus, there remain some site problems of building Seoul harbor. As for an international airport, the plan proposed to expand and continue to use Gimpo airport.
Urban improvement and renewal

The 1966 Comprehensive Plan influenced the subsequent plans for zoning change and street improvement. Industrial Districts were much reduced in the areas of Suyu, Seongsan, Youngdeungpo, Cheonho and Oryu, and new zoning for residential and commercial areas were made in Majang-dong area. In particular, specific plans to improve the symbolic squares at Hwanghoyn (today’s Gwanghwamun intersection), in front of City Hall, and around the central post office and Namdaemun were brought up, but due to the opposition and conflict of interest of the owners whose lands bordered on the squares, the plans never materialized. At this time, there were no institutional measures or a clear concept concerning the redevelopment of the city and improvement of housing, yet the plan provided the guidelines for the redevelopment of the city’s commercial/office district within the four main gates.

The redevelopment guidelines suggested that the downtown’s land use needed to be more efficient horizontally and vertically, but it did not necessarily require a single type of clearance improvement. Rather, the proposed redevelopment plan adopted various renewal methods such as land readjustment, clearance, and improvement. The plan also proposed the demolition and building apartment in the area of 134,000 pyeong that had been taken over by shantytowns, including the districts of Yeomcheon, Shindang, Hannam, Naksan, Gongdok, Yongsan, and Jongro-3-ga. This was seen as the first attempt of the city’s redevelopment policy that turned areas of illegal squatters into apartment complexes.

Participation and contribution of foreign city planning experts

Following the May 16 military coup in 1960, Korea experienced a rapid economic development and urbanization through an ambitious economic development plan. In particular, due to the labor-intensive export policy, Seoul attracted an influx of population in search of jobs. This was a turbulent era in which the city was changing on a daily basis. However, a systematic and organized urban planning and development methods that could absorb these vast changes were lacking, not being able to escape the vestiges of the Japanese colonial rule. The 1934 Chosun City Planning Decree was still adopted as the basic law and as mentioned earlier, the city planning functions were not well established in both central and local governments. There were very few specialists on city planning and no specialized schools to educate urban planning experts. With the inauguration of the Ministry of Construction in 1962, the Chosun City Planning Decree was separately legislated into the City Plan-
ning Law and the Building Law, and the urban planning duties were transferred to the Ministry of Construction from the Ministry of Interior without the significant institutional change of the city planning framework. Along with architecture, waterworks and sewerage sections, the city planning was only treated as a small sub-unit under the Department of Urban Affairs of the Bureau of the National Land Management (Guk-to-bo-jeon-guk).

Under these circumstances, there was a foreign organization that
viewed Korea’s urbanization and city development with concern. That was the Asia Foundation that in 1964 invited Oswald Nagler, a city planning specialist, and commissioned him to report on the actual conditions of Korea’s urban planning. After the findings of the report, the Asia Foundation emphasized the need for a professional research institute to tackle Korea’s city problems, and the following year, opened the Housing, Urban and Regional Planning Institute with Nagler as its head. The formal name of the institute was the Ministry of Construction Housing, Urban and Regional Planning Institute, but in actuality, the organization was operated under the financial support of the Asia Foundation. For almost three years until June of 1967, Nagler directed the institute and made an enormous contribution to Korea’s urban planning. As well, one cannot overlook the fact that those who were directly or indirectly involved in the work of the institute at the time, later would play a crucial role in the development and progress of Korea’s housing and urban planning. The institute participated in the planning tasks for east Daegu, Suwon and Ulsan among other cities, thereby opening up opportunities for the introduction of new city planning techniques and concepts. More significantly, it exerted an important influence in Seoul’s urban planning in the 1960s. In particular, their influence on the redevelopment of the massive unlicensed shantytown, a product of the 1950s, surrounding the heart of Seoul’s center can be seen as one example. As shown in Figure 9.7, the plan was to redevelop the collective low-rise densely populated shantytown area into a mid-level high-density apartments. The first example was the plan to redevelop Geumwha Park located between Seodaemun Rotary and Seodaemun Jail. This type of redevelopment concept was soon applied to the redevelopment of the large-scale unlicensed shantytown district. From 1967, thus, these apartments (called as Citizens’ Apartment) were built in the hilly areas surrounding the center of Seoul such as Cheongun-dong, Changshin-dong, Wawu-dong, and Geumho-dong. Up until the collapse of Wawu Citizens’ Apartment in April 1970 incurring the loss of 33 lives and the resignation of Mayor Kim Hyun-ok, the construction of apartments continued.

Another project carried out by the institute in relation to planning Seoul was the designing of Namsan Park. Namsan park is not only located in the heart of Seoul but it is a symbolically important park for Seoul as well as the nation. However, it was being devoured by the shantytowns, and on the two peaks of the mountain, military facilities and observation decks were being built without a coordinated site planning. As a result, Nagler prepared a blueprint for making Namsan Park into a space for culture, education and rest, and at the same time preserving the environment and making it more accessible
for the residents of Seoul, as shown in Figure 9.8. Naegler’s vision of Namsan Park had been left just as an idea, but it can be seen as Korea’s first park planning and design in the modern era. Also, the institute was active in conducting research on the housing problem. It contributed to the research on estimating the demand for minimum necessary housing as well as the introduction of the modern concept of building a housing complex.

With the inauguration of Kim Hyun-ok as mayor of Seoul in April 1966, the planning of Seoul faced a turning point. In particular, Mayor Kim recruited Cha Il-suk, a professor of the Yonsei University Department of Public Administration, to become a second vice-mayor. Having majored in city administration at New York University and worked on city planning in Nassau County, Long Island, the bold appointment of Cha Il-suk brought about a fresh wave to the city planning administration which had until then been considered simply an sub-area of civil and architectural engineering. Upon his inauguration, Cha appointed Yun Jin-wu and Choe Sang-Chuel, both having been working at the central government, as Director of the Department of City Planning and Head of General Planning Division of the Department, respectively. Cha requested the technical assistance concerning the establishment of a comprehensive plan for Seoul from the USOM, a US aid agency. The USOM sent a retired University of California Berkeley professor, Aaron B. Horwitz for six months as advisor to the City of Seoul. At the time that Horwitz was dispatched to Seoul, the draft of the comprehensive plan initiated by the Korea Planners Association was in its final stages. But not only was Horwitz not familiar with Seoul’s situ-
ation, the Korean planners were not ready, mentally as well as materially to work with foreign experts. Under these circumstances, Horwitz left Korea in March 1967 and left behind his opinion and several suggestions concerning the comprehensive planning of Seoul.

Horwitz pointed out that setting the plan of Seoul based on a population estimate of 5 million for 1985 was extremely unrealistic and that it allotted too many industrial areas in the land use plan. He also stated that spreading out the function of Seoul too much to the outskirts would weaken Seoul’s competitiveness and stressed the need to prepare a land use plan that could absorb the growth of non-manufacturing sectors. Furthermore, he advocated that the plan should not insist too much on the concept of road ratio and warned that the width of the road was being proposed overly wide. He stated the need for securing reserve public land, including parks, to adjust to the changing living patterns of Seoul residents, the building of an industrial complex near the airport. He also advised that Seoul need to educate more city planning experts. Although Horwitz’s opinions were not adhered to or reflected much in the subsequent Seoul’s city planning, they were seen as excellent pointers in relation to the development of Seoul today.

Besides Nagler and Horwitz, foreigners who have contributed much, both directly and indirectly, to the city planning in the late 1960s and early 1970s, were Tarik Carim and Mark Fortune. From 1966 to 1970, while working at the Seoul office of the United Nations Development Program, Carim was instrumental in founding and lecturing at the Housing, City and Regional Planning Institute and the City and Regional Planning Department at Seoul National University’s Graduate School of Public Administration. Originally from Turkey, Carim received training in city planning and majored in the physical planning in France. Mark Fortune was from USAID, formerly known as USOM, and invited to serve as the regional development advisor. He proposed his opinions on the city design and planning of the heart of Seoul and in particular, he emphasized the importance of the three-dimensional use and city design of space and the need to develop the areas surrounding the subway stations.

ERA OF CONFLICT BETWEEN GROWTH CONTROL AND UNBRIDLED DEVELOPMENT: THE 1970S

The problem of the overexpansion and overpopulation of Seoul reared its head in the 1960 as the population size started to reach over 3 million. However, as the population of Seoul went beyond 5
million around the beginning of 1970, it went beyond the level of a mere policy concern and into the dimension of mobilizing practical methods. With the collapse of Waewu Citizens’ Apartment in April 1970, and the riot as a result of forcing the squatter people to move out of Seoul to Gwangju in August 1971, the worsening inter-Korean relations and the emergence of the Revitalizing Reforms (known as Yushin), Seoul’s urban planning was approached from a security perspective. Since 25 percent of the population and 40 percent of the national competitiveness was exposed and vulnerable to the threat of an artillery attack by North Korea, Seoul’s city planning had to be changed for security reasons. Under these circumstances, the first city planning policy response in the 1970s was the introduction of the “Development Restriction Zone” (known otherwise as Greenbelt) system in 1971. Using England’s green belt system as a model, the Development Restriction Zone was designated along the city boundary in order to prevent the spatial expansion, to preserve the farmlands and natural habitat near the city and to ensure national security. Although it may have been an inevitable choice at the time, the land readjustment projects were heavily used nationwide to accommodate the phenomenal increase in urban population, encroaching upon an average of 2 million pyeong (1660 acres) of farmland a year. As a result, the real estate speculation reached its peak. For ten years through the 1960s, the price of land in Seoul skyrocketed 200 fold on average and there were no urban planning measures that could repress this trend. In 1971, thus, behind closed doors, the task of designating Development Restriction Zone was carried out during a short span of six months, lacking careful research on the city planning and socio-economic consequences. This covered a vast area measuring 1,566km² and encompassing 11 cities and 8 counties, or "Gun", around Seoul. Overall, it formed a ring with a width of 4-5km along the city limits.

The estimated population of 5 million for 1985 made in 1966 was already exceeding 5.5 million in 1970. With the construction of a third Han River Bridge (Hannam Bridge), the development of Gangnam (south of the Han River) area, including the 5 million-pyeong (4160 acres) Youngdong 1st District land readjustment, were being carried out. And, an embankment was constructed on Yeojuido which had remained as a sand island and small airfield. In this way, the center of Seoul was slowly moving southward from downtown in Gangbuk (north of the Han River) area. In 1971, as a result of President Park Chung-hee’s declaration of a state of emergency and the legislation of the National Security Law, the country began to freeze up. It appeared as though signs of inter-Korean reconciliation was in the air with the visit of Lee Htu-rak, Director of the Central Intelligence in 1972, but in the end, with the dissolution of the
National Assembly, martial law being proclaimed, call for revision of the constitution, and the indirect election of the president in October of that year, the October Revitalizing Reforms (Shi-wol Yushin) emerged. The relations with North Korea began to deteriorate and a notion of national security began to prevail the city planning of Seoul.

Under these circumstances, the City Planning Law was amended to integrate the greenbelt concept, and new laws concerning farmland use and preservation and the national land use management were legislated. Nationwide, city planning areas were reduced and more farmlands were designated to be preserved. Immediately following were the policies concerning the dispersion of the large metropolitan population and the control of overpopulation in Seoul capital region. As for Seoul itself, incidents such as the collapse of Wawu citizens' apartment and the riot of the squatter residents in Gwangju, Gyeonggi Province led to doubts concerning Mayor Kim Hyun-ok's municipal administration. And, more difficulties arose as the market demand of land space did not justify the development of Yeoeuido. Thus, in order to accommodate the changing situation and policies until then, Seoul's Comprehensive Plan was again commissioned to the Korea Planners Association for the revision. As in Figure 9.3, the revised plan was also a long-term, 20-year plan which set the population at 7.6 million by 1991 and there were slight changes in the planning of Yeoeuido and Youngdong District among others, but the basic framework was not much different from the 1966 plan. However, the 1972 revision, which assumed to accommodate the additional 2 million populations, would have stood in direct opposition to the government's basic position to control and decentralize the population of Seoul. So it could not follow the governmental approval process that was required legally. But, as one cannot suddenly stop a train moving at full speed, Seoul continued to grow despite the various population control measures of the central government. Therefore, this revision plan merely compromised with the realities through partial application to the city's current planning activities without ever becoming an official plan. Such was the disparate and crippling gap between plan and reality.

In 1974, a 9.4-km subway opened from Seoul Station to Cheonggyang-ri for the first time in Seoul. This subway line was connected to the existing railway lines along Uijeongbu -Cheonggyang-ri - Seoul Station - Incheon and Suwon. It ushered in a new era of mass public transportation. Furthermore, satellite cities began to grow between Gyeong-In (Seoul-Incheon) and Gyeong-Su (Seoul-Suwon), beyond the administrative boundary of Seoul City and the greenbelt. Along the Gyeong-In axis, Guro, Oryu, Bucheon, and Bupyeong were absorbed as direct school and commuting districts of
Seoul, while on the Gyeong-Su axis, it was Shiheung, Seokgye, and Anyang. Meanwhile, in the mid 1970's, Seoul's population control policy intensified and was turning into a more active socioeconomic policy. These series of population control and decentralization measures were culminated as a single, comprehensive governmental policy named as the government released the Population Redistribution Plan for the Capital Region (1977-1986) in 1977. But this plan attempted to reduce Seoul's population size to five million when it was already approaching 7 million. Thus the feasibility of the plan was already questionable. The logic behind the plan was nearly flawless, comprising measures to eliminate concentration, decentralize and ensure no return of the dispersed population, while discouraging rural people from leaving their region. Furthermore, what surprised the public more was the announcement made in February 1977 to build a new capital. By this bold national agenda, the status of Seoul as the capital city for 583 years was to change, and city planning
revisions were inevitable. Seoul, accordingly, pursued actively various actions to curb development in the Gangbuk (north of the Han River) region, transfer the function of city center to the outskirts of Seoul, and develop the Gangnam (south of the Han River) area as a secondary city center. In responding to this circumstances, Seoul began to formulate its the second comprehensive plan targeting for 2000.

To formulate the second comprehensive plan, the city held the idea competition in June 1977. Six planners were invited to participate in this event: they were Kahng Byung-ki (Hanyang University), Kim Hyung-man (Hong Ik University), Yun Chung-sup (Seoul National University), Choe Sang-Chuel (Seoul National University), Ahn Won-tae (Industrial Development Institute) and Han Chung-sup (Dankook University). Their ideas were unveiled in an open discussion on August 28 of that same year at the Seoul Plaza Hotel. And the competition result was that, rather than selecting one person’s plan, the six participants were appointed as advisors. The task was commissioned to a consulting firm, Daeji General Engineering Corporation, with a mission of integrating the ideas of six planners who participated in idea competition. Assuming that the population control measures would succeed, the draft of the second comprehensive plan estimated seven million as target population for 2001.

Accordingly, as shown in Figure 9.10, the plan contained the maintenance of the Development Restriction Zones, the drastic transformation of residential areas into green areas, the controlled development north of the Han River, the construction of satellite and new cities on the outskirts of Seoul, the introduction of a network of wide roads, and the restructuring the mononuclear city into a tri- or even multi-nuclear city. But Seoul’s population was already reaching over 7.25 million in 1976. Due to its unrealistic population estimation and the announcement of Capital Region Population Redistribution Plan, the second comprehensive plan drafted by Daeji General Engineering Corporation in 1978 was nullified even before it had a chance to be announced.

The social conditions changed yet again in a dramatic Copernican fashion. With the assassination of President Park Chung-hee in 1979, the plans to build a new capital city were practically abolished, and the ambitious measures to control and decentralize the population in Seoul metropolitan area started to lose steam. During this transitional phase, the City of Seoul consulted the Korea Environmental Planning Institute (KEPSI) in 1980 on devising a mid and long-term development plan for Seoul. Choe Sang-Chuel of Seoul National University was in charge of overseeing the project, teamed with other principal planners such as Kahng Byung-ki (Hanyang University) in land use planning. Lim Kang-won (Seoul National
University) in transportation planning, Hwang Myung-chan (Kunkuk University) in metropolitan planning, Kim Ahn-jae (Seoul National University) in the population estimation and economic and financial planning, and Park Chung-hyun (Seoul National University) in infrastructure planning. For about one year at the second floor of the Seoul municipal office annex, they completed a draft of the plan. But at this time, with the amendment to the City Planning Law in 1981, the comprehensive plan had become a mandatory legal plan that should follow the given legal procedure and format. Thus, even though a public discussion and international conference were held on this plan, the 1980 mid-term and long-term Seoul Development Plan did not see the light of day and was made to hibernate for the time being in the storage room of City Hall because it did not follow the legal requirement. However, in actuality, the mid- and long-term Development Plan for Seoul was carried out as an extension of the project to establish the second comprehensive plan that had been suspended in 1978. And it was a last minute measure to avoid a close inquiry by the auditing authorities that might have seen it as an unjustified task when repeatedly commissioned in 1978 and 1980 under the same project title. The 1980 mid- and long-term plan (Figure 9.11) had 9.45 million for its estimated population for 2001 based on the existing population, but the population size for facilities planning was set at 11.8 million. This plan included the element of metropolitan planning and proposed the south-north mountain axis running from Bukhan Mountain to Gwanak Mountain and Han River Water Corridor as major open spaces. It also proposed a series of communities comprised of 4 core centers and 17 secondary centers, along with the development of the city highway and subway lines. With the opening of subway line 2 and the new construction of lines 3 and 4, Seoul was about enter into a full-fledged subway era. The concept of developing the areas surrounding the subway stations in preparation for a subway era was fully adopted and the consequent changes in the spatial structure of the city had to be reflected in the plan. Meanwhile, as Korea entered an era in which the GNP reached US$5,000, the distribution of automobiles proceeded rapidly. As a result, the need to construct roads exclusively for automobiles was raised, and along the Han River and river tributaries such as Anyang-cheon, Jungang-cheon, Hongjae-cheon and Yangjae-cheon, a plan for the large-scale construction of a network of roads exclusively for automobiles and their link with overpasses that had been spottily constructed in Seoul were to be reinforced.

Not only were the end of the 70's and the beginning of the 80's politically turbulent times in Korea, but they were also a period of great transition for Korea's urban planning policy. In Seoul, a period
of Mayor Ku Ja-chun's municipal administration (September 1974 to December 1978) came to an end, and from December 1978, Mayor Jung Sang-cheon's administration was inaugurated. The second Seoul Comprehensive Plan that was started in 1977 during Ku's tenure was largely based on the leading 1970 national policies of population control and dispersion over the metropolitan area. Those policies included the designation of Development Restriction Zones in 1971, the development of nationwide growth centers (based on the 1st National General Land Development Plan in 1972), the freezing of admissions to universities located in Seoul and the establishment of branch campuses in the provinces, and the construction of a new capital in 1976, among others. These were all made into a comprehensive national plan and in 1977 it was announced as the Capital Region Population Redistribution Plan (1977-1986). This national plan set Seoul’s targeted population as 7 million and the estimated increase of 4.3 million people was to be dispersed in the form of 500,000 in new capital, 200,000 in the Banwol industrial city, 2.6 million in the five major cities of local growth center such as Daegu, Gwangju, Jeonju, and Masan, and 1 million in other heavy chemical industrial bases. Thus, in a time when extreme measures were being pursued to prevent overexpansion of Seoul, the second Seoul Comprehensive Plan had no choice but to accept these measures. However, as mentioned earlier, with Seoul's population already exceeding 7.5 million, the plan with a population target of 7 million for 20 years later was seen as unrealistic and was put on hold even before it had a chance to pass through the legal procedures. It was under these circumstances that Mayor Jung Sang-cheon was inaugurated as Mayor.

It was unimaginable for Seoul to devise its own plan based on the premise of continued growth, because it was in direct opposition to the President's strong determination to reduce the population of Seoul by constructing a new capital and pushing through with the metropolitan area population redistribution. However, the newly inaugurated Mayor Jung could not sit back and rely on an unrealistic plan in the face of Seoul's rapid growth. The growth was evident everywhere that the construction of subway line 2 was already in its final stages while the massive areas around Jamsil and Seokchon Lake were being developed, and the construction of Seoul Grand Park in Gwacheon was in progress. The development of Gangnam was also in full swing, along with the opening of Seonge Bridge and the start of the construction of a 2nd government complex in Gwacheon. Yet, Seoul still had not gone beyond the Gangbuk-centered mononuclear city structure and the need to confirm the route of subway lines 3 and 4 was also raised. It was only natural that Mayor Jung wanted the mid-term development strategies and longer term plans for man-
aging the municipal government in facing such realities. Under such circumstances, the Mayor established a Mid-term Development Plan Research Team composed of seven members (Kim Ahn-je of Seoul National University, Hwang Myung-chan of Kunkuk University, Lim Kang-won of Seoul National University - for the first two months, Yu Wan of Yonsei University participated - Park Chung-hyun of Seoul National University, Kahng Byung-ki of Hanyang University, Yu Byung-lim of Seoul National University), led by Choe Sang-Chuel, professor at the Graduate School of Environment at Seoul National University. The Korea Environmental Planning Institute (KEPSI) was made to serve as the research channel for the management of the research team but in reality it was a collaborative task of the Seoul City authorities and the research team. The team was situated on the third floor of the Seoul City Hall annex and reported to the Mayor and consulted the Seoul City officials in charge whenever necessary, thus operating as a type of special branch of the Seoul City government. Before working on establishing the plan, the research team was divided into smaller groups to make field visits to the United States, Europe and Southeast Asia to collect information and observe the city planning system and policies of major cities and started a full-fledged planning from September 1979. The theme of the research was the mid-term planning and long-term visioning for Seoul, but in reality, it was establishing the incomplete the 2nd Seoul Comprehensive Plan. However, even before the research team had decided on what direction to take, President Park Chung-hee was assassinated on October 26, 1979. Consequently, the strong determination of the President to build a new capital and redistribute the population of Seoul area was lost, and along with it, the momentum of carrying these plans out as national policies.


Despite President Park's sudden death, drafting the long-term and mid-term city development plan continued. The plan estimated the population of 9.45 million in the target year of 2001, while the population for facility planning was set at 11.8 million. The latter included the population that came to work in Seoul from the neighboring areas of Seoul. The mononuclear city functions and spatial structure concentrated within the historic four gates were made to become multinuclear, and the radiating street system where possible was made into a grid system. The essential features of the plan as
seen in Figure 9.11 included the development of catchment areas near subways and mass transportation, the construction of the expressway system, the introduction of the community zone (called Saeng-hwal-gwon) concept to standardize facilities and services for convenient living, the restoration of the city landscape and greenery, making the Han River more accessible and friendly to the public, and restructuring the city to become more energy and resource efficient. An international conference was held in which renowned experts from around the world were invited to discuss the plan and a public hearing was held. The 1980's experienced a political turmoil with the transitional government under President Choi Kyu-ha, the establishment of the National Security Emergency Committee (known as Guk-bo-wui), the resignation of President Choi and the inauguration of Chun Doo-hwan, and the emergence of the Gwangju democracy movement. Even in the midst of this confusion, the Seoul municipal government carried out administrative reforms by newly establishing Eunpyeong-gu, Gangdong-gu, Guro-gu, and Dongjak-gu. Despite the policy to prevent concentration of population in Seoul metropolitan area, the government of the 5th Republic enacted a law to promote the development of residential land and promised the construction of 2 million houses. The projects that had been on hold due to the population control policy started to reemerge. The land readjustment project in Gangdong and Garak districts began, and the construction began for subway lines 3 and 4. Garak and Ggoduk districts, which had been tied as greenbelt areas, were designated as residential land development areas. And as a candidate city for the 1988 Summer Olympic Games, Seoul was changing rapidly.

At the end of 1978, Seoul had 13 Districts or "Gu", and in 1980 this increased to 17. Although the "Gu" itself is bigger than a small to medium sized city, it had no decision-making or planning powers. There were indeed structural problems as even county magistrates governing over small farming villages with a population that barely went over 50,000 were given powers in city planning while the district head overseeing a population that reached over 500,000 were given no say whatsoever in the planning of a city. In particular, in order to prepare for an era of local autonomy that was to come eventually, there was a need for the individual District to prepare their own plan and vision. Therefore, as the follow-up plan for the Seoul's long- and mid-term development plan, Districts were ordered to establish a city planning guideline and city plan at a district level. This 1980 directive became the basis for establishing a comprehensive plan at a district level from 1981 to 1983. It also brought about a new turning point in the Seoul city planning in preparation for the era of local autonomy.
Second, Seoul had become too large to become effectively managed based on one comprehensive plan. Each district started to show individual growth patterns and characteristics in spatial structure. In some districts, the population decreased rapidly while in others the number jumped two fold. Compared to the established city centers around Jongro and Jung-gu, new commercial centers of Youngdeungpo, Yeouido, Youngdong and Jamsil emerged. With the designation of the Development Restriction Zones in 1971, the possible land that could be urbanized in the city planning districts ignited an internally destructive high-rise, high-density development, while encouraging Seoul's built-up area to jump beyond the Development Restriction Zone in the form of unguided metropolitan growth.

Seoul Comprehensive Plan was in reality incapable of absorbing these urban planning demands. That is why in order to maintain the individual characteristics of a District (gu) and accommodate the changing development needs, plans had to be made at the district level. Third, the long-term and macro comprehensive plan was far from accommodating the specific residents' demand for urban planning revision or the long desired projects. The very act of taking into consideration the opinions of the whole of Seoul’s inhabitants clearly had its limits, and in order to activate the participation of Seoul residents, there was a dire need for a development plan at the district level that closely adhered to the residents' daily lives. Finally, once the citywide comprehensive plan was established, the subsequent zoning change and new capital improvement programs plan had to follow upon it. Thus, for the urban planning authorities, working on the gu development plan was in a sense a preliminary task for this follow-up city planning actions.

Under the above-mentioned conditions, District (Gu) Development Plans were formulated for the whole 17 districts of Seoul. However, this plan raised another problem of the consistency with citywide comprehensive plan or the existing city planning measures. The otherwise neglected development demands at district level gushed forth at once and presented plans that obviously put the districts interest first, taking opportunity of the District Development Plan as a selfish means to push their district to become the center or strategic base for Seoul's development. These district level plans had, albeit, no legal weight, but it was the first decentralized attempt in the history of Seoul city planning. Although the plan engendered a positive feedback, it also had the effect of presenting a new task in the Seoul’s urban planning when each district used a self-centered logic. Each district demanded tremendously large commercial areas and asked for ambitious reforms in the spatial structure, almost rendering the framework of the existing citywide comprehensive plan useless. This demand was further accelerated by the decision to hold
the 1986 Asian Games and the 24th Olympic Games in Seoul in 1988. These two international events brought about an enormous turning point and fundamental changes in the planning of Seoul which had been based on controlled growth and population dispersion policies strictly adhered to since the 1960’s until the beginning of the 1980’s. Not only Seoul, but as the country faced its first international event, it could no longer justify an unrealistic growth control. At the same time however, Seoul was not in a position to openly advocate growth and development.

Being placed in such an ambiguous position, Seoul silently accepted a growth policy from the start of the 1980’s. In 1980, subway lines 3 and 4 went into construction, and with the legislation of Residential Land Development Promotion Act, massive residential development took place in areas like Gangdong, Garak, Gaepo, and Goduk that were released from the previously development restriction. Meanwhile, with the opening of Seongsan Bridge, Wonhyo Bridge, and the 2nd level of the Banpo Bridge, Gangnam and Gang-
Table 9.1
Restructuring of urban spatial structure and city centers

buk were put on equal footing in terms of population and city functions. The question, "Still living in Gangbuk?" implied that people still living north of the river were behind the times, showing how much Gangnam was outstripping Gangbuk in development. This is well demonstrated by the symbolic representation in Figure 9.12. In short, with the District Development Plans and in the preparation stages for the 1988 Olympics, Seoul was akin to a wild horse without reins in its growth and development, and with the 1988 Olympics close at hand, Seoul was pursuing massive two projects. First was the development of the Han River, and second was the preparation of Seoul Restructuring Plan for 2000 which aimed at turning Seoul into a multinuclear city in response to changing spatial structure. The latter task was commissioned to the Environmental Planning Institute of the Graduate School of Environmental Studies at Seoul National University and Korean Environmental Planning Institute (KEPSI) in 1984. Thus, when it was decided that Jamsil would become the site of the Olympic Stadium, it was no coincidence that the opening of a road from Gimpo Airport to the stadium and the athletes' residence and the improvement projects around that area emerged as pending problems. Other plans included the construction of Gangbyeon Road, the development of the Han River beds, the residential land development in the Mok-dong area, and the preparation of urban design guidelines for the Jamsil area and the area around Teheran Road. In particular, with the intent to prepare a theoretic and strategic framework for the rapidly
changing spatial structure, Seoul Restructuring Plan for 2000 was conducted. Through this research, the development of one main nuclei, three secondary nuclei, 13 sub-centers and 51 neighborhood centers was proposed. In other words, the existing downtown area within the four gates of Gangbuk was designated as a main nucleus, i.e. national political, economic and cultural center, while Yeouido, Jamsil, Jamsil, Jamsil, and Youngdeungpo were to be the secondary nuclei. And, 13 sub-centers including Gwanjeon outside Seoul were to determine the main spatial structure.

As a result of this research on new spatial framework of Seoul, changes in the city’s comprehensive plan were inevitable. However, the 1966 Comprehensive Plan and the subsequent revisions mentioned earlier had no legal base, since the concept of comprehensive plan became institutionalized in conjunction with the amendment of the City Planning Law in 1981. The City of Seoul needed a legal comprehensive plan, but there were practical difficulties in finding a clear justification for securing a budget for the work because it already spent a considerable amount of time and budget to devise the long- and mid-term development plan of 1980. It was the reason why the City of Seoul commissioned the research work on multi-centered spatial structure in 1984 to Environmental Planning Institute of Seoul National University: it was a research project on multi-centered city development on the surface, but a task of formulating legal comprehensive plan by integrating the mid- and long-term development plan of 1980 and the research work on multi-centered development of 1984. Therefore, the work had been conducted by Korea Environmental Planning Institute (KEPSI) and the Environmental Planning Institute at Seoul National University which conducted the 1980 development plan and the 1984 research project.

However, misunderstandings and confusion increased between the City of Seoul and the Ministry of Construction and its Central City Planning Committee. Seoul City, which was in the midst of preparing for the Olympic Games since the early 80’s, was announcing new development projects almost on a daily basis, and requested the approval of changes in city planning to the Central City Planning Committee whenever needed in order to pursue these development projects. Whenever changes that needed to be made were presented, the Ministry of Construction as well as the Central City Planning Committee would require the City to submit a comprehensive and long-term city planning to justify the partial changes. The City of Seoul pushed ahead with the changes and justified it with a lack of preparation time for the Olympics, insisting that the city had already formulated several different forms of unofficial comprehensive plan and the legal comprehensive plan (meaning Seoul Restructuring Plan of 1984) were on the drawing board. A tense
Figure 9.13
Proposed Seoul spatial structure and residential densities, 1990

Legend:
- High-density residential
- Mid-density residential
- Low-density residential
- Industrial
- Park and green space
- City center and sub-centers
- Future center (susaek)
relationship formed between Seoul City and the Ministry of Construction and the Central City Planning Committee. The latter expressed that it would even be satisfied with a draft and requested the explanation of the draft of Seoul's ongoing comprehensive plan that had been commissioned in 1984. On this occasion, the City of Seoul planning officials presented the draft of the 1984 plan to the Central City Planning Committee. Yet, the City of Seoul's position was that since the plan was still in the process of being formulated, the Committee would just better listen to the explanation and leave the draft of the plan behind. This attitude triggered the explosion of dissatisfaction that had been building up within the Ministry of Construction and the Central Planning Committee, and what started out with good intentions resulted in a shouting match and abrupt exit of the Committee members, deepening the conflict and mistrust.

The Seoul City authorities' position was not without understanding. In the process of establishing a development plan at the district (gu) level, the development ideas and plans unbeknownst even to the mayor would be publicized in the media, frequently placing the city authorities in a very awkward position. And as the residents' interest in the district development plans intensified, the publicizing of incomplete plans continued to act as unnecessary disturbances in the municipal management. In particular, then Mayor Yom Bo-hyun repeatedly stressed the importance of keeping the incomplete changes in the city plan as classified information. That was why the comprehensive plan that was in the process of being formulated could not be permitted to go outside. Ultimately, as a consequence of the dissolution of the explanatory meeting, Seoul comprehensive plan had to be corrected all over again to meet with the legal requirements. In other words, to meet the requirements of a legal plan, it had to go through a public hearing and contain content formalities required by the central government. Thus, in 1987, the City of Seoul commissioned again to Environmental Planning Institute at Seoul National University to formulate the Comprehensive Plan for the 2000's after the end of Yom's mayoralty and the inauguration of new mayor Kim Yong-rae.

Fundamentally, the comprehensive plan draft that was finalized at the public hearing in May 1988 was not all that different from the 1984 plan that was buried away due to the discord between the City of Seoul and the Central City Planning Committee and Ministry of Construction. In retrospect, the 1988 draft was not far off from the general framework of the Long-term Vision and Mid-term Development Plan of 1980, but the population size set for facilities planning for the target year 2001 was at 14 million. At this time, the population control policies for the metropolitan area were put aside and the
Urban development was in the boom as Olympic Games approached. Thus Seoul, being free from taboo on any indication on population increase in its planning, set a very ambitious population target. Since the population target for 2001 had been set at 14 million, a land use and transportation plans to meet this change had to follow. The commercial zones were extensively expanded to accommodate the proposals of District Development Plans, and plans were made to promote the high densification of the residential areas for the 12 million inhabitants and the redevelopment of the existing urban area (Figure 9.13). Also included in this plan were 325 km subway and city railway system with 13 lines and the city expressway network reaching 276 km. The plan saw the inner densification inevitable, given the Development Restriction Zone surrounding the city. Thus it emphasized the necessity of the redevelopment of the city centers and development of the catchment areas of the subway stations.

While Seoul comprehensive plan was undergoing a public hearing in 1988, the final preparations for hosting the Olympic Games was under way, and Korea was transitioning from the 5th Republic to the Roh Tae-woo Presidency. Mayor Yom Bo-hyun stepped down after 4 years and 2 months, and the one-year tenure of Kim Yong-rae as Mayor began. Seoul’s population increase rode the waves of the Olympic boom and led to the sharp increase in the demand for housing. Residential land within Seoul was being exhausted and with the growth in gross national income and the increase in overseas transfer of money into Korea from construction workers working in the Middle East, all the savings were being put into realizing the dream of buying their own homes. Apartment prices skyrocketed, and the so-called rent war led to socioeconomic and political dissatisfaction. As a result, residential land was being developed in the Suseo, Daechi, Umyeon, Gayang, Wolgye areas while the government ultimately announced plans to build new towns in Bundang and Ilsan. Five new districts (gu’s) were created in Seoul: Junggangu, Nowon-gu, Yangcheon-gu, Seocho-gu, and Songpa-gu. In 1988, the population of Seoul finally broke through 10 million. After going through the public hearing in 1988, the Seoul Comprehensive Plan was established as the first legal plan in 1990. As the legal comprehensive plan was determined, the amendment of the existing zoneings and capital improvement followed. It was certainly no easy task to do the amendment for the whole of Seoul: until then, there had been only piecemeal amendment in city planning. So, the task was commissioned to two consulting firms, Environment Group and Sconjin Engineering, each covering Gangbuk and Gangnam respectively. The project started with the double difficulties of trying to actively accommodate the demand for city planning changes raised.
during the District planning process and positively adjusting to meet
the citizens' increased awareness and interest in city planning.

GREAT TRANSITION IN URBAN PLANNING TOWARD LOCALIZATION AND GLOBALIZATION: THE 1990S

The year of 1991 was the beginning of a local autonomy era, which had been suspended for 30 years. Seoul City Council and 25 District Councils were formed and thus in this manner the long period of centralized government system came to an end. Under Roh Tae-woo's regime, an extension of the military dictatorship, the 1988 Olympic Games were held. And, with China opening up to the world and the old Soviet regime collapsing, the international situation was changing very rapidly. Korea established diplomatic ties with Russia in 1990 and with China in 1992, and the strong tides of new ideology and globalization were approaching rapidly. In the 1990s, a new international economic order started to emerge. In 1990, at the final stage of Mayor Goh Kun’s administration (1988 - 1990), the Seoul Comprehensive Plan was finally adopted as the first legal plan. Here, a legal plan signifies that it was the first such plan to be legally instituted according to the requirement of the City Planning Law of 1981. In fact, however, as mentioned earlier, the comprehensive plan had been established already and been in existence for quite some time: the versions of 1966, 1972, and 1978. Since the introduction of the comprehensive plan system as a legal plan in 1981, the draft of the comprehensive plan was completed in 1984. But due to various reasons mentioned earlier, the legalization of the plan were delayed: such reasons included the conflict between the City of Seoul and the Ministry of Construction, the concentration of short-term projects with the approaching Olympic Games, and Mayor Yom's passive attitudes on urban planning.

Finally in 1990, under the administration of Mayor Goh Kun, the Comprehensive Plan acquired a legal statute. The 2000 population target was set at 12 million, and the contents of the plan included the balanced development of Gangnam and Gangbuk (north and south sides of the Han River), the reorganization into a multi-nucleus spatial structure proposed in 1984, the restoration of parks and green areas, and the development of the station catchment areas. This comprehensive plan was commissioned to Environmental Planning Institute at Seoul National University. Those who participated in this planning were Yu Byung-lim (principal planning director), Kim Ahn-je, Kwon Tae-joon, Lim Kang-won, and Park Chung-hyun of Seoul National University and Kahng Byung-ki of Hanyang Uni-
versity. As a landscape major, Director Yu Byung-lim’s park planning greatly supplemented the 1984 draft. Succeeding Mayor Goh Kun was Park Se-ik but his term lasted only two months, and in 1991, Lee Jae-won was inaugurated as the Mayor of Seoul. Lee was a university professor turned politician and as a former minister, he had a passion for the theoretical aspect of urban planning and public policy that he majored in. However, once in office, he realized that the city’s comprehensive plan had already been decided upon a year ago and since it was the ten-year long-term plan, his short tenure posed institutional limitations in terms of pursuing his personal vision for urban planning. However, Seoul would soon face tremendous changes, both domestic and international. It turned out that the blueprint-like long-term plan had its limits in accommodating this rapidly changing urban situation. In May 1991, Mayor Lee Jae-won had Choe Sang-Chuel of Seoul National University and Kahng Byung-ki of Hanyang University work on a policy research with the assistance of the City’s city planning research team known as Seoul City Planning Commission Task Force (Do-shi-gye-hoeoc-sang-im-gji-hoeok-dan). This research work was entitled as “Seoul City Planning and Improvement: Rationale and Tasks at Hand.” This report included not only the elements of comprehensive plan but also the pending tasks and policy direction for the overall development of Seoul, acting as a type of unofficial city planning guideline during Lee’s tenure. The report contained 35 policy tasks and was organized according to the mid- to long-term pending tasks facing Seoul. This report was published as the first research report of the Seoul Development Institute that was founded as the city’s think tank in 1992. As one of the 10 major cities in the world, Lee stressed the need to establish a permanent research institute in Seoul. Accordingly, Lee finished the preparations to launch the Seoul Development Institute in February 1992 and even secured the budget, but as a result of the delay in the approval process by the Ministry of Interior and the delay in cooperation from the Ministry of General Affairs concerning the appointment of the Institute’s first director, Lee could not see the opening of the Seoul Development Institute. However, as then the Minister of General Affairs Lee Sang-bae succeeded Lee Jae-won, the City’s long-desired project became a reality with the opening of the Seoul Development Institute on October 1, 1992. With the opening of SDI, the comprehensive planning of Seoul, not to mention the overall research and consultation on pending issues regarding Seoul’s urban planning that had until then been entrusted to outside experts or consulting firms were moved over to SDI. As such, from 1993, SDI worked on revising the 1990 Comprehensive Plan, and after going through the legal procedures, the first revision of the legal comprehensive plan with a target population of 12 mil-
lion for the year 2011 was approved by the central government. From the time SDI first started working on the plan in 1993 until 1997 when it was approved, various changes occurred in the Seoul city government.

In February 1993, President Kim Young-sam ushered in an era of civilian government. Under this civilian administration, the first appointed mayor, Kim Sang-chul lasted only one week after having incited public criticism over illegal property changes in Development Restriction Zone. Kim Sang-chul was succeeded by Lee Won-jong, governor of North Chungcheong Province. Having formerly served as a Seoul City official, Lee was more than capable of overseeing the Seoul city government and came into office at an important moment when President Kim Young-sam was pursuing globalization strategies and when the 600th anniversary of the capital in 1994 was fast approaching. At a major turning point from the past 600 years and the transition from the 20th to the 21st century, Seoul was in search
of new ideas to become more globalized for the future. Looking at the emergence of a mega borderless urban corridor between Seoul, Beijing, and Tokyo in increasingly prosperous Northeast Asia, the so-called four major strategic projects were being concretized in order to enhance Seoul’s competitiveness and status on the world stage. The major strategic projects included the large-scale development for Sangam, Yongsan, Trukseom, and Magok areas where the large chunk of undeveloped or blind spots remained. Sangam area was planned for the exchange site between South and North Korea as well as an information and industrial complex in preparation for reunification. Yongsan area around the 8th U.S. army base was planned as the center for international business and the central station of Gyeong-Bu (Seoul-Busan) express railway while the Trukseom area was to be developed into a leisure-centered waterfront complex. And for Magok area, plans were made to build an international cargo center for the shipment of goods and a high-tech industry. With the resignation of Mayor Lee Won-jong, these four major strategic projects remained merely as ideas, but eventually in 1997, they were reflected in the city’s comprehensive plan for 2011 with some minor corrections and additions. At the same time, a more detailed city planning and design in order to preserve the historical heritage of the old city center was under way in 1994 in relation to the 600th anniversary commemoration project. In addition, there were the restoration of Gyeonghui Palace, and in an attempt to restore Namsan Mountain, the city demolished the high-rise Namsan Oen Apartment that were ruining the natural landscape of Seoul’s important symbolic mountain.

As a result of the collapse of Seongsu Bridge on October 21, 1994, Mayor Lee Won-jong stepped down, and the North Gyeongsang Province governor, Wu Myung-kyu stepped in. However, his mayoralty was short-lived due to issues of his moral responsibility in having been the director-general in charge of Seongsu Bridge’s construction. He was quickly replaced by Choi Byung-ryul. From the time of Lee Won-jong’s resignation in 1994 to the first popularly elected Cho Soon on June 27, 1995, the work of comprehensive planning for 2011 continued at Seoul Development Institute amid confusion and disruption with the less than one year terms of Mayors Wu Myung-kyu and Choi Byung-ryul. Yet, even the popularly elected mayor Cho Soon’s term was marked by a national tragedy; he took his office on the site of the collapse of Sampoeng Department Store on June 29, 1995, leaving 458 people dead or missing, and 307 wounded. The need to carry out immediate emergency measures to put the situation under control left Cho with no room for long-term planning, but as an economics professor turned mayor, he revealed a passivity bordering on refusal to establish long-
term urban planning. As a result, the four major strategic projects in addition to Seoul's long-term planning and development went into a temporary lull. However, under Cho Soon, Yeouido Square was converted into a park. Furthermore, Mayor Cho focused on the relocation of Seoul City Hall, although it only ended with the decision of the location of the new City Hall. In 1998, the second elected mayor Goh Kun came into office. However passive Cho's position may have been concerning long-term urban planning, it is worth noting that comprehensive plan for 2011 which had been labored over and mapped out since 1994 by Lee Hak-dong, the urban planning research director at the Seoul Development Institute (currently a professor at Gangwon University) was promulgated as a legal plan on January 7, 1997.

The 2011 Seoul Comprehensive Plan took into consideration of what was proposed by the District Development Plans in 1991. The plan also placed the importance on the planned management of the changes in the city's spatial structure in response to globalization and localization and took a wider spatial perspective that integrated Seoul and the surrounding cities and counties. Moreover, from the more passive multinuclear strategy of one city center and five secondary centers of the 1990 plan, the plan took on a more active strategy of establishing a one city center, 4 secondary centers, 11 area centers and 54 neighborhood centers as seen in Figure 9.15. The targeted population was set at a maximum of 12 million for 2011 establishing a stationary population and changed the direction of the plan from a growth-oriented to an internal improvement plan. From 1966 to 1990, the comprehensive planning was based on a spatial expansion strategy such as the development of new urban areas and expansion of arterial roads and subway routes. But the comprehensive plan for 2011 had for its fundamentals, enhancing the living environment for citizens, building a traffic management system and transit-centered city, preserving the environment for sustainable development, public safety, building a risk management system, restructing the physical space in preparation for reunification and globalization. The plan, as seen in Figure 9.15, actively adopted a new paradigm of the time such as globalization, urban growth management, sustainable development, public safety and risk management. Taking 1991 as the point of departure, Seoul started to show an absolute decline in population and entered into a stable growth stage. On the outskirts of Seoul beyond the greenbelt, the vast metropolitan area started to grow. In addition to the planning and development of the new cities like Bundang, Iksan, Jungdong, Pycong-chon and Sanbon, the Seoul area started to develop into a large metropolis.

In the midst of such structural changes, Seoul faced new chal-
lenges for the future. It needed to venture beyond the logic of domestic development to an international competitiveness and address concerns on whether it would be possible for a 10 million city to be environmentally sustainable. In particular, with the collapse of Seongnam Bridge and Sompung Department Store, maintaining and managing the safety of existing buildings and facilities was a more urgent task than new developments. With the outward dispersion of the manufacturing industry, a new industry to become the alternative economic base needed to be found. At the same time, high tech and venture businesses started to form. As external expansion become impossible, an internal development rationale was needed. Specifically, in the late 1990's the mid-level, high-density housing increased as a multi-family residence. The demand rose sharply for the reconstruction and redevelopment of the apartments that were built during the early 1970s and 1980s. As the second phase of subway construction was almost finished, a new spatial structure was forming due to the active development around the station area. The number of automobiles rose to over 1 million, and the traffic and housing problems intensified. The economic growth paradigm changed after undergoing the 1997 foreign currency crisis, which led to the financial aid from the IMF. Although the nation and the city felt the limitations in growth, the public, used to the era of rapid economic growth, maintained high expectations and the demand for social welfare. In particular, with the era of the Kim Dae-jung administration, the participation of non-governmental organizations and the public dissatisfaction concerning the planning restrictions were intensified. One of those is the start of reforms on the Development Restriction Zone (greenbelt) that had been designated in 1971 and maintained for 27 years under five different administrations. In 1998, a national reform committee was established, and suggested to lift the greenbelt designation in seven cities, among 14 nationwide, where they were no longer deemed appropriate for restriction. Although its greenbelt is till in effect, Seoul is now working hard on the environmental evaluation upon which it is to be adjusted even in partial manner. Since Seoul's greenbelt lies on multiple jurisdictions, Seoul is approaching this task from the regional perspectives. Thus, it is becoming increasingly more important to formulate a regional plan for the Seoul metropolitan area and consequently the need to revise Seoul Comprehensive Plan also appears unavoidable.
References


Nagler, Oswald (1967). *Departure Report, Housing, Urban and Regional Planning Institute, Ministry of Construction.*


(1962). *Past and Future of Seoul City Planning.*


Urban Renewal and Change of the 20th Century Seoul

Kwang-Joong Kim & Il-Sung Yoon

Introduction

Seoul witnessed one of the world's most aggressive redevelopment programs during the twentieth century. Founded some 600 years ago as a capital of Chosun Dynasty (1392-1910) and built rapidly through the post-Second World War years of poverty, Seoul has undergone a constant renewal, at the scale of both individual parcels and larger assembled sites, to meet the ever-growing needs of urban spaces. It was, however, two public redevelopment programs that brought forth a striking new appearance of the city in the course of the late twentieth century: one was the residential redevelopment program that turned Seoul's numerous substandard housing areas into apartment forests, and the other was downtown redevelopment program that changed the traditional historic core into a modern city center. Both these two programs were the public response to urban condition accumulated in the poor years of the first half of the twentieth century. These public actions were perceived as necessary in the 1960s and adopted as official public policy in the 1970s. Since then, they transformed Seoul's urban form in a radical manner, giv-
ting it a wholly different appearance from the large cities of neighboring Asian countries as well as other developing countries.

Thus, without knowledge of these redevelopment programs, one cannot fully understand the visual reality of Seoul—one of the most rapidly-developed, densely-populated human settlements. Although there is a considerable body of work on these public policies, there has as yet been little effort to bring policy dimensions and urban manifestations together. Combining social history, public policies, and the resulting physical consequences, the chapter presents how Seoul's residential and downtown renewal programs have evolved and what social values and planning implications they entail.

Redevelopment of Residential Areas

The residential redevelopment program altered Seoul's housing condition and urban landscape in a dramatic fashion during the late twentieth century. As of the end of 1998, more than 100,000 squatters and substandard houses underwent a radical replacement to build some 217,000 new units in 228 renewal districts under the program. Originally conceived as squatter clearance in the early 1970s, the program had evolved into a more general residential redevelopment in the course of the late twentieth century. The new construction was mostly of high-rise apartment flats on the hill slopes. Scorned as textbook land-use principles that recommended intensive use of infrastructure-supported flat land while preserving environmentally-sensitive hillsides, they present a striking contradiction to, or juxtaposition with, low-rise residential 'carpet' on the lower part of Seoul's 625-km² area. Since they are so dominant and pervasive, one might call Seoul, the capital of Korea with some 10-million inhabitants, an apartment city.
HISTORICAL ROOTS OF RESIDENTIAL REDEVELOPMENT

The residential redevelopment program was devised in 1973 in an effort to renew the squatter settlements, which were a product of social change at the national level caused by Japanese colonial ruling (1910-1945), Korean War (1950-1953), and the rapid urbanization during the 1960s to 1970s. The colonial period, particularly the 1920s, was when the first sizable squatter settlements in Seoul were developed. Social historians report that various colonial rural policies led to ordinary peasants losing their land and falling into extreme poverty; and thus a large number migrated to Seoul, hoping for better living conditions. The high inward migration rose still further as Seoul became increasingly industrialized as a result of wartime colonial requirements for the manufacture of military materials. Both push and pull factors from rural areas and Seoul itself contributed to a tremendous population growth. Once a walking city with some 200,000 inhabitants throughout the later 300 years of the dynasty, Seoul's population grew by five times during the 36-year colonial era, reaching more than one million, with housing shortfall of some 40 per cent (Table 10.1).

Although many in-migrants secured their living space in the middle-class areas through employment as domestic servants, some had no choice but to occupy any vacant land, both private and public, such as river basin, railroad yard and hillside around the city center (Figure 10.1). They built shelters with clay and wood and lived in overcrowded and insanitary conditions, described as 'unimaginable.' There were some 1,500 squatter shelters housing 5,000 people in 1925, rising to 4,000 units for 20,000 people in 1939.

The massive influx of population to Seoul continued as the nation celebrated Independence in 1945. The first national census of 1949 counted 650,000 more people than the one million estimated in 1944. Although half of them returned from the asylum abroad, the remaining half had left the provinces to follow their predecessors'

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Household</th>
<th>Housing (unit)</th>
<th>Housing Shortage (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1926</td>
<td>306,363</td>
<td>68,682</td>
<td>64,889</td>
<td>5.8</td>
</tr>
<tr>
<td>1931</td>
<td>365,432</td>
<td>77,701</td>
<td>69,453</td>
<td>10.6</td>
</tr>
<tr>
<td>1935</td>
<td>630,995</td>
<td>131,239</td>
<td>101,767</td>
<td>22.5</td>
</tr>
<tr>
<td>1939</td>
<td>930,547</td>
<td>154,223</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1944</td>
<td>1,078,178</td>
<td>220,938</td>
<td>132,000</td>
<td>40.3</td>
</tr>
</tbody>
</table>

* Housing shortage means housing units/household

545

Urban Renewal and Change of the 20th Century Seoul
Thus Seoul's housing shortfall remained at some 40 per cent. Multi-family occupation of a single house was, and still is, a popular mode of living; but even formal renting was not affordable to the lowest echelon of people, who chose squatting.

Further, many came to Seoul from the communist-governed North during the Korean War (1950-1953). The war damaged 28.8 per cent of Seoul's housing stock. Continuing severe rural poverty also led many towards the large labor market of Seoul. By 1955, two years after the Korean War, the city's wartime-shrunken population had exceeded 1.5 million, rising to 2.4 million only 5 years later, in 1960. Providing cheap labor to the increasingly industrialized Seoul, the poor continued to build their illegal shelters on open land, mostly on the hillside around the city center (Figure 10.1).

In 1961, more than 40,000 illegal shelters were counted. As Table 10.2 shows, modernization in the 1960s and 1970s led to unprecedented rapid urbanization in the country, which then had a per capita GNP of some $100-200. A growth-minded military government employed an export-oriented economic development agenda based on cheap labor force. This, they thought, could only be maintained by the equally cheap price of agricultural products.
<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Households</th>
<th>Housing Units</th>
<th>Illegal Units</th>
<th>GNP/capita (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>1,693,224</td>
<td>318,673</td>
<td>-</td>
<td>-</td>
<td>67</td>
</tr>
<tr>
<td>1960</td>
<td>2,445,402</td>
<td>446,874</td>
<td>275,436</td>
<td>40,000</td>
<td>79</td>
</tr>
<tr>
<td>1970</td>
<td>5,433,198</td>
<td>1,096,871</td>
<td>600,367</td>
<td>200,000</td>
<td>253</td>
</tr>
<tr>
<td>1980</td>
<td>8,364,379</td>
<td>1,849,324</td>
<td>968,133</td>
<td>-</td>
<td>1,597</td>
</tr>
<tr>
<td>1990</td>
<td>10,612,577</td>
<td>2,820,292</td>
<td>1,430,981</td>
<td>94,974</td>
<td>5,833</td>
</tr>
<tr>
<td>1995</td>
<td>10,595,943</td>
<td>3,448,466</td>
<td>1,863,466</td>
<td>73,500</td>
<td>10,037</td>
</tr>
</tbody>
</table>

Given the near monopoly of opportunities towards the upper social ladder and the deepening gap between the city and country, Seoul, as the nation’s prime industrial city, was once again a central magnet for this rapid urban migration. The population doubled from less than 2.5 million in 1960 to more than 5 million in 1970. Not all of them were poor, but a significant portion of in-migrants came to Seoul without job skills and thus remained jobless or provided cheap labor in the informal sector. The 1966 survey counted some 130,000 illegal houses, increasing to a peak of about 200,000 units in the early 1970s. According to a Western observer (Meier, 1970), few cities have experienced such a condensed urbanization. As Seoul grew equally rapidly, using an aggressive annexation policy, the squatter settlements thrived in outlying suburbs as well as around the city center (Figure 10.2).

**EVOLUTION OF RESIDENTIAL REDEVELOPMENT PROGRAM**

**Early policy response to squatters**

The early policy response to the squatters centered on the notions that they were illegal structures, an urban illness, visual eyesores and obstacles to orderly urban development. From the early period of squatter formation, every effort was made to prevent the squatting, although there was frequent legalization in conjunction with national elections (SMG, 1983). Once identified, the illegal houses were under strict demolition policy, which often confronted the violent protest on the part of the residents.

At the same time, the City was actively relocating exiting squatters around the city center to public land on the outskirts, which were then mostly sleepy suburban hillsides and river basins (Figure 10.2). Relocation sites were laid out with small parcels (33-66 m²)
and narrow streets (1-2 meters wide) without adequate utilities. People had to build their own houses, although there was some limited aid of building materials etc. The houses were still illegal; however, since land was under public ownership, and the streets and parcels did not satisfy planning and zoning codes. The area was simply another squatter settlement.

As this suburban public land was no longer available by the late 1960s, the relocation policy faced termination. Instead, the city government attempted to rehabilitate the squatter areas by building public low-income apartments on site or facilitating self-help improvement. However, one of the 5-story public apartments collapsed, with thirty-four deaths, in 1970, owing to poor construction methods and architectural fault. In the following year, the City also suffered a riot over an ill-prepared, untimely massive relocation project on the outer barren field of Gwangju, which was
planned as a new town accommodating 550,000 with labor-intensive industries. With its ambitious goal to extirpate its 200,000 or so illegal squat houses by 1981, Seoul needed a new, effective apparatus.

**Birth of residential redevelopment program**

Thus the residential redevelopment program was developed. It was in 1973 that at the request of the City of Seoul, the national law was passed to introduce the current residential redevelopment program. As Seoul's city management wished, it was a time-limited law, to expire after 1981. This Temporal Action Law for Facilitating Substandard Housing Improvement enabled the City of Seoul to designate the squat area as "Substandard Housing Redevelopment District" (hereafter SHR district). Once designated as a SHR district, the public, both national and local, ownership of land was to be transferred to squat occupants at far below the market price. The law also stipulated automatic zoning change into residential use in SHR districts, while giving generous relief from the building code to facilitate new house construction. Based upon this law, the City of Seoul designated the first 196 SHR districts covering 1,472 ha in 1973.

In the early years of the SHR program, both the City and the residents participated in squat settlement renewal. The residents, now the legal owners of the property, were supposed to rebuild their houses, while the city government provided public facilities such as roads and utilities. The city government was the primary agent of change for improving these residential communities, assuming the role of initiator, planner, capital improver and controller with financial commitment.

The new law, however, did not guarantee the success of squatter improvement as had been hoped by the City of Seoul. Despite the generous land transfer by the national government, there had not been sufficient development finance for the complete program. The issue of finance has required new development methods, and the extent of project implementation has fluctuated.

The City of Seoul first employed a 'self-help' approach. While the City provided adequate roads and other utilities to the area, property owners were expected to assemble 2-4 lots and build new multiplex houses (usually two stories). To this end, a land readjustment technique was employed: lots were assembled into a more orderly shape, while dedicating some portion for public use (usually for 4-6 meter roads). Using the dedicated land, the capital improvement was carried out by the City with public finance, which was acquired in part by the income from public land transfer to squatter
occupants and in part from the city budget.

However, this method did not stimulate active redevelopment project. In 1974, only four districts were at work, followed by three in 1975. Although it was used to some extent in fifty-one SHR districts, this method had never been popular, despite additional aid measures in the shape of some tax exemptions, building material subsidies, and architectural design service. The squatter residents were too poor to build their own houses and to find temporary housing during the construction period. The City also found itself in search of more resources.

Thus, in 1976, the City of Seoul borrowed a total of $5 million from American Federal Housing Bank under the credit of Korean government and the United States Agency for International Development (USAID). This enabled the City to provide construction loans to the residents while helping public capital improvement. This method is notable in its participatory and incremental approach, which was required by USAID. Seemingly the reflection of a then-emerging American planning attitude against slum clearance, this approach sought the rehabilitation of existing houses, minimizing the demolition and relocation of residents. The residents, however, were still hoping for the improvement of their economic status rather than living conditions. Between 1976 and 1981, only ten districts accepted loans for house refurbishment. On the other hand, the city officials were not satisfied with this face-lift approach, worrying that the area might continue under the squatter situation.

Wishing to encourage more rapid and evident change, the City of Seoul redirected its residential redevelopment approach in 1978. Existing buildings were to be demolished and lots assembled into some 1,000m² parcels, on which to build 3-5 story walk-up apartments. For this the SHR needed a property owners’ association and construction firm to implement this large-scale joint development. This concept was applied only to nine districts, and was not well received, as the residents could not afford to bear some portion of the project cost. What was popular, however, was protest against the demolition approach, which caused the City to decrease its ambitious SHR districts designated in 1973. Far from being terminated in 1981, the law had to be incorporated into the Urban Renewal Act to support the City of Seoul’s continued effort to modernize its built legacy of the poor years. The city required a still more innovative approach.

Privatization of residential redevelopment program

In 1983, Seoul devised new method that changed the whole mecha-
nism and pace of SHR. It was indeed revolutionary, in that no financial commitment from the City or property owners was required, while entire SHR districts were cleared and new high-rise apartments built. Known as 'partnership (Hapdong in Korean) renewal', this is based on a voluntary contract between a property owners' association and a construction company; the former providing land and the latter the redevelopment cost from clearance to construction. In return for the land provided, each property owner was given a new apartment unit, and the construction company secured its profit through sale of the remaining units.

The role of the City in SHR was now lessened; it was essentially a controller with no financial commitment for public capital improvement. Allowing more volume (i.e. higher floor area ratio [FAR]) to guarantee the project feasibility, the city gave the property owners' association a role of the executor of the project. The association would hire a construction firm and build new high-rise apartment and necessary common facilities as required by the approval standard. The SHR was no longer a public development: it became, by and large, a private enterprise.25

In Seoul's booming housing market, this method gained momentum: active residential redevelopment occurred. Property owners rushed to form their associations, to assemble their lots and to hire construction companies. Since its inauguration in 1983, partnership renewal has been the single dominant method in residential redevelopment in Seoul. The total of 778 ha was cleared in 155 districts, providing 184,900 new apartment units.26

What made this approach so feasible was closely related to the changing social profile of the nation. After some two decades of aggressive industrialization, a large middle-class body emerged in the social strata of the rapidly-growing country. Now materially fulfilled, they created an explosive demand for decent owner-occupied home. Believing that the middle-class housing problem was the key to maintaining social stability, the national housing policy mandated local government to secure the assigned target number of housing units. Given the limited supply and high price of land, the City of Seoul looked to high-density SHR to meet its share of this national housing policy. Further, the growth-minded government viewed housing construction as keeping its accelerated economy working through the creation of jobs and domestic material demand.

Construction firms also had their own reasons for supporting it. Since the collapse of the Middle East construction boom in 1979, most construction firms had returned, and had to survive in narrow domestic markets.27 It is believed that they lobbied for active housing construction in order to utilize their labors and construction equipment.28 Thus, the interests of national and local government,
construction industry, and property owners led to the adoption of partnership renewal method from the early 1980s. The program became not just for squatter renewal, but also a vital means of increasing the general housing supply.

PHYSICAL CONSEQUENCES AND EMERGING PLANNING ISSUES

Physical outcomes

Despite a slow start in its early years, SHR was well on the way to eradicating substandard housing and building new units to modern standards. As of 2000, among 279 SHR districts scattered throughout the city (Figure 10.3), 128 districts had now completed their projects and 100 districts were in progress, leaving fifty-one districts still intact. As has been discussed, partnership renewal method should take most of the credit. High-rise apartments built by this method accounted for 88 percent of total 217,000 units built or being built since the inception of SHR program in 1973, and some 20 per cent of Seoul’s housing supply in the 1990s.

As a result, the visual manifestation of partnership renewal was evident in Seoul’s urban landscape and housing reality. What contributed most to this is the location, scale and relationship to their surroundings of many of the projects. Mostly situated on the hillside and covering nearly 5 ha on average (although the largest project covers some 32 ha), demolition and clearance are common and striking scenes. Projects usually involved significant cutting and filling to provide stepped flat building sites. For example, in one of the larger projects, the lowest point of the site was 75 meter lower than the highest.

Once constructed, the impact of these large-scale projects was more evident as they appeared as massive building clusters on the upper hillside, visually dominant and in competition with the distant mountains (Figure 10.5). Given the increasing monetary value of land and governmental condominium price control, the partnership renewal resulted in the building of increasingly higher apartments to secure economic feasibility. During the 1980s, the apartment buildings of 10-15 stories were common, while in the 1990s more than 20 stories had been usual, the tallest thus far being of 29 stories. Springing up throughout the city, they were remaking Seoul’s urban form in a radical manner.

Not only did they change the skyline of Seoul, but created an
abrupt image of the unmanaged city. Once a fine-grained area has been transformed into a striking juxtaposition of several partnership renewal districts and the remaining ordinary residential area. Erasing the low-income communities and disconnecting the street network, partnership renewals provided sharp contradictions to traditional forms in terms of physical grains and spatial compositions.

Since they were produced by private enterprise targeting the general housing market, the houses built by SHR were little different from those supplied in the free market. As Figure 10.4 shows, they offered independent units, having bath, flush toilet and hot water, Western-style kitchen and dining area—all combined to constitute a dream home to which the middle-class Koreans had aspired. Neither was the building plan different: like other high-rise apartments in non-redevelopment housing complexes, a tall and bulky envelope contained an array of individual units connected by an elevator hall or long corridor.

What made an SHR site unique was the configuration of its boundary. Reflecting the unguided growth of the area, the site boundaries were irregularly defined to include the property ownership that participated in the process of the designation of the SHR district. The site plan sought the maximum use of this assembled large and oddly-shaped parcel in order to secure project feasibility in the privatized partnership renewal model. Apartment buildings were carefully placed to produce FARs that were as high as possible, while meeting various planning codes such as the distance between buildings for sunlight. More often than not, the required communal facilities were placed at the residual corner space of the site. The remaining outdoor space was mainly dedicated to circulation and vehicle parking; additional underground parking was often installed to meet the tightened parking standard in the 1990s.

**Emerging planning issues**

A range of planning issues was emerging from this form of development. As has been discussed, Seoul's SHR program had evolved from squatter renewal in the poor years to more general substandard housing improvement aiming at supplying explosive housing needs for an enlarging body of the middle class. The social justification of this remarkable housing improvement program, however, was never apparent: a sharp distinction emerged between the supporters and opponents of the program. While the supporters recognized the program's contribution to housing supply and urban renewal, the opponents addressed various planning issues such as low-income housing, growth management, and urban design.

First, 'housing for whom' was at the center of the issue. To the
advocate, the program should be praised for its remarkable contribution to housing supply: 217,000 new units (including those under construction) were more than double the perceived substandard 100,000 units that had been demolished. Indeed, it accounted for some 10 per cent of new housing starts since the inception of the program in 1973, and some 20 per cent in the recent 1990s, when partnership renewal flourished. Thus it was argued that the program had significantly ameliorated Seoul’s chronic housing shortage. Largely comprising housing planners and economists in the government, the supporters maintained that the program had enhanced the overall quality of Seoul’s housing stock, which would eventually benefit low-income people through the filtering effect of the housing market. They also contended that the remarkable housing supply had contributed to keeping housing and general consumer prices stable for the general public.

The critics pointed out, however, that although the number of new units was double that of those demolished, the latter accommodated more households. This was because each new condominium unit served one single middle-class household, while two or three poor households commonly lived together in the single substandard units as shown in Figure 10.4. This effect was emphasized by the fact that the size of the substandard units was far smaller than SHR units (see Figure 10.4). Many critics thus believed that the program had diminished Seoul’s low-income housing stock.

In fact, the loss of the substandard housing units was critical to the tenants of SHR districts. Being excluded in the partnership formation between property owners and construction firms, they had little chance to maintain their housing opportunity - despite some assistance to do so. The small relocation subsidy was insufficient to provide temporary housing during the construction period. The tenants were given an opportunity to rent the newly-built small units or to move to public low-income rental housing, but this was neither affordable nor a good location for their livelihoods. It was estimated that some 55 per cent of the households in SHR districts were tenants.

It was not the case, however, that partnership renewal benefited the property owners in a fair manner. In fact, more than half of them were believed to be speculative absentee landlords, who bought or kept ownership as the SHR districts were quickly incorporated into the formal property market after the transfer of the ownership. This explains why the majority of property owners’ portion of new units were either rented or sold to middle-class people, as was clearly indicated by the fact that only some 20 per cent of the existing residents reoccupied the new housing units constructed. This also suggested why the tenants had staged such a desperate protest against
SHR, at the expense of sixteen lives including one protest suicide. Furthermore, partnership method, in essence a speculative venture, resulted in the erosion of social ties in once-harmonious communities: the property owners, tenants and construction firms often came into conflict, bringing frequent lawsuits against each other on such matters as the rent tenure, association corruption, and cost and benefit sharing. In short, critical academicians, religious leaders, and civic activists alike questioned whom the SHR program served.30

In addition, a host of new critics addressed the impacts of these projects on the quality of urban environment, in terms of various classic planning issues such as density, infrastructure, transportation, environment, and urban design. As has been shown, partnership renewal inevitably seeks high-density development to ensure project feasibility. As a creator of this method, the City of Seoul was forced to allow greater density to promote the project. The standard floor area ratio (FAR) of 1.8 at the time of the birth of partnership renewal was modified to 2.5 in 1985. As both the price of land in Seoul and the government's desire to develop more housing increased, the zoning code saw a dramatic increase of FAR to 3.0 and 4.0 in 1990 alone. To encourage more active private investment to housing, such regulations as ground coverage ratio, and distance between buildings and from the adjacent lots, were also relaxed.

The response to these measures was evident in the increasing number of redevelopments in the 1990s. The density reached was as high as FAR 3.0 on average with the highest being 3.98. This was a significant increase from an average FAR of some 2.0 in the formative years of partnership method. Accordingly, building height also increased continuously. On average, buildings were of 12 stories at the inception of the scheme in 1983, and 22 in 1996. The tallest apartment built by partnership renewal method was 29 stories.

Looking at the increasing density and building height, planners and designers called for more sensible development.39 As the density increased, the area's already congested road network became gridlocked. The water and sewer infrastructure also had to be re-examined for consideration of the collective consequences of individual high-density projects. Schools, parks, and other communal facilities were lacking as the projects were developed without responsibility for their long-term impact on the area.30

Tall apartment buildings also brought urban design issues to the forefront. Since they were largely located in the hillside residential communities, they competed with mountain backdrops, blocked scenic view corridors and dominated surrounding fine-grained communities. Thus Seoul's overall urban form lost its former stability and beauty. The sense of community also endured a significant change as the area lost its tightly-interwoven network of streets, land
uses, and public spaces. Walled and gated, the new apartment complexes only fostered the sense of enclaves and of indifference to the adjacent neighborhoods. Neither was the apartment complexes themselves viewed as a good living environment. The self-sufficient financing mechanism was not able to employ good-quality design, resulting in unattractive outdoor space covered mainly by parking lots, access roads, poorly-treated slopes and meager landscaping.

Nonetheless, the program’s supporters viewed these issues as aesthetic and romantic complaints at best. They thought that, given the nation’s housing reality and economic capability, it was not the time for unduly high quality urban environment, because many people were in the desperate need of home ownership. The critics and advocates alike agreed upon the necessity of residential redevelopment in Seoul. They do not agree, however, on how fast, in what magnitude, with what form, with what government role, and for whom the program should be conducted.
Redevelopment of Downtown Area

While the substandard residential areas were changing into a forest of apartments, the downtown area of Seoul was concurrently experiencing rapid change as well. The traditional city structure inherited from the Chosun dynasty was dismantled and was replaced by a modern downtown. Irregularly-shaped small plots, narrow roads, and old buildings were completely removed and replaced by modern high-rises, new roads, and parking lots. Through the process, the downtown area of the old Seoul, which up until the early part of the 20th century was surrounded by fortress walls, was transformed into a modern city center. Thus the old features of downtown Seoul can hardly be found except for those cultural properties such as the royal palaces and gates. This drastic change was made possible by downtown renewal program of the city government.

OLD DOWNTOWN AREAS

Seoul’s aggressive spatial transformation under the downtown renewal policy is in large part closely related to the history of development in central Seoul. In the late 14th century, around 600 years ago, Seoul was reshaped in order to become the capital city of the Chosun dynasty (1392-1910) and the physical condition of the downtown area took shape over the next 550 years. Except for a number of public buildings and mansions belonging to high ranking public officials scattered, downtown area was primarily composed of small homes packed together in no particular order and other than the main roads all other roads were extremely narrow. According to records written by foreigners, up until the late 19th century Seoul had only three main roads, Jong-ro, Sejong-ro, and Namdaemun-ro: other roads were narrow even for pedestrian comfort, not to mention for wagons, cattle- and horse-carriages. Based on such a hodge podge of road condition, the plot pattern also took a traditional form evolved over the 550 year period of Chosun dynasty. Lots, usually 100-200 square meters, were small and irregularly shaped. Thatched roof houses and roof-tiled homes were built along the meandering, 1-2 meter wide roads. This city structure remained unchanged until the early part of the 20th century. Around 1900 at the turn of the 20th century, Seoul began incorporating modern
ideas and for the first time railways and trams were built, electricity was introduced to Seoul, which in turn resulted in population increase. Such changes however, were limited in scale as it was basically based on the existing city structure, and the downtown areas composed of small plots, narrow roads, packed housing remained the same without a significant change.

During the Japanese colonization period (1910-1945) that took up the first half of the 20th century, there was significant urban growth due to both industrial expansion and population increase. Through land readjustment projects, new urban districts were developed in the outer areas of Seoul while large construction such as various public buildings, department stores, and financial organizations were built on the former large sites that used to be occupied by public buildings and the homes of high ranking public officials. New main roads such as the Taepyeong-ro, Yulgok-ro, Eulji-ro and Chungmu-ro were newly installed, and the 30m wide anti-air raid zones in the Seon Sangga, Toegye-ro and other locations were built. These brought the significant change to downtown Seoul. Despite such changes, however, the majority of the traditional features in the area remained unchanged. Amid western-style public buildings built by the Japanese colonial government and commercial buildings that changed the skyline of Seoul, most of the downtown area was still packed with narrow alleys and Korean homes built on irregularly-shaped small lots.

In the mid 20th century during the Korean War (1950-1953), the downtown area of Seoul was the site of numerous battles and the destruction was phenomenal. This destruction of homes and buildings in the area however, provided an opportunity to build new roads and building sites based on a land readjustment plan. Eight districts including Gwanchoel-dong, Myeong-dong, and Mukjeong-dong were replatted in a grid pattern based on the land readjustment plan. However, although the majority of buildings were destroyed during the Korean War, the roads and lot division remained unchanged from that of the Chosun period. After the War, Korea was extremely poor and was in great confusion both politically and socially, and over time the general features of the downtown area deteriorated. Between the 1950s and 1960s a large part of downtown Seoul came to be occupied by illegal construction built by the poor who had moved to Seoul, fleeing from abject poverty. Their illegal occupation of the anti-air raid zones and illegal construction around the downtown area turned many places into slums. Other buildings as well were in poor condition due to the extreme national poverty, building owners could not afford decent construction and construction materials were scarce. For these reasons, the downtown areas at the time were in a condition that could only be
described as a poor country’s disorderly slum. It was packed with dilapidated old buildings, roads were narrow, and the whole area was devoid of basic public and sanitary facilities. In other words, the downtown area of Seoul between the Korean War and the 1960s remained largely unchanged from the traditional city structure inherited from the Chosun dynasty. It was still crowded and without adequate sanitary facilities.

EVOLUTION OF DOWNTOWN RENEWAL PROGRAM

Recognition of the need for downtown renewal

In the mid 1960s, after the Korean War, Korea was gradually overcoming the social confusion and launched national economic development the city government began to pay its attention to redeveloping the downtown area of Seoul.\(^3\) The City Administration Outline (called Si-jeong-gye-yo) of 1965, a comprehensive annual report of Seoul city, first showed that there first emerged an increasing interest in the downtown renewal at that time.\(^4\) The report did not use the term of ‘downtown renewal’, however, it recognized that developing the dilapidated downtown area became an important issue for the
city's administration. Seoul's administration understood that in order for a city to function properly and to keep it from slipping into a slum, its downtown area should be equipped with modern buildings and facilities. They were aware of the need to replace the existing wooden buildings that were susceptible to fire and without proper sanitary facilities with modern buildings. At the time, given the rising cement industry, Seoul's officials in charge of city planning thought that to build individual fire-resistant buildings would not be a difficult matter. For them, the most challenging problem was to overcome the finely fragmented land ownership to provide the modern building sites with modern infrastructure. Given the circumstances, Seoul came to recognize that the downtown area redevelopment required more than simple construction of individual buildings, and thus, the 1963 City Administration Outline recommended immediate enactment of the 'Urban Restructuring Laws.'

Introduction of urban renewal district within city planning law

It was in this context that the 'redevelopment' concept was first introduced in City Planning Law in 1965. In revising the City Planning Law, the concept of a 'redevelopment district' was introduced into a kind of zoning district. In addition, in October of the following year (1966), based on this law, the area around the Seun Arcade (Seun Sanga) was first designated as a redevelopment district. It's mandate was to clear unauthorized shacks built haphazardly during the Japanese colonial days within the 50-meter-wide anti-air raids zones and to redevelop the area. On appearance the development of Seun Arcade resembled the urban renewal because the project involved removal of unauthorized shakes and buildings. However, as the City was the owner of the anti-air raid areas, it was in reality more like a large scale city land development, rather than a urban redevelopment project. Due to the City's land ownership, designation of the area as a redevelopment district was enough for the Seun Arcade redevelopment. In other areas where civilians owned the land, redevelopment took on more the designation of a redevelopment district. In other word, the designation as a redevelopment district only meant the spatial boundary where redevelopment may take place. It did not provide any means to assemble fragmented lots of numerous owners into a replatted building lot. This was the reason why Seoul did not designate any further redevelopment districts other than the Seun Arcade over a 5 year period, even though it did make some efforts drawing up redevelopment plans in 1967 to the areas of Mugyo-dong, Da-dong, Scolin-dong, Cheonggyecheon 4-5...
According to Sohn Jung-Mok, downtown renewal emerged once again as an important issue at the time of US President Johnson’s visit to Korea in 1966. With the President’s visit as a turning point, systematic supplementation had been prepared to facilitate the development of the downtown area. The welcoming ceremony for President Johnson took place in front of the city hall plaza, the area around which at the time resembled a slum. A view of far less than desirable capital city scene from Bukchung-dong to Mt. Namsan was shown on TV throughout the States, and Korean-Americans who felt ashamed enough of their homeland image strongly demanded that the President of Korea improve the downtown areas. This petition earned the sympathy and attention of then President Park Chung-hee who was pushing forward the national development plan named “Modernization of homeland” with emphasis on economic development. To President Park Chung-hee who then was wielding dictatorial and centralized ruling power, modernization of the downtown area of Seoul was a matter of national importance and the redevelopment of the downtown area became suddenly a high priority of Seoul’s administrative policies. For the first time in 1971, “modernization of city functions” and “downtown area redevelopment” emerged as some of the key priorities for Seoul’s administration, and it was officially announced that the redevelopment of the downtown area would be a part of the official duty for the City Planning Department of the City. In the same year the downtown redevelopment was included in the Comprehensive Plan of Seoul. The comprehensive plan of Seoul was a 20-year, long term plan ending in 1991 that envisioned the aggressive redevelopment of the downtown area, turning it into an area with super high-rises and sufficient urban support facilities, such as decent road networks, communal facilities and other modern amenities. By this time, downtown redevelopment went beyond merely the planning stage or just a matter of its designation of redevelopment district, it had come to the point of finding financial means and implementation tools; it became a matter of urgency to put the plan to practice. Seoul’s public officials were sent to Japan to look into how Japan’s downtown area was redeveloped. They returned learning Japan’s technique of the collective clearance of existing buildings. To Seoul officials, it was an innovative technique that the fragmented land ownerships were integrated into one large building site by later dividing the building ownership vertically in proportion to each share that each owner had put into the project. Such management of the many small landowners in the redevelopment process is believed to have made a decisive influence in developing urban renewal program in Korea.
Downtown renewal as urban development project

Amid the circumstances mentioned above, in 1971 in conjunction with the complete revision of City Planning Law, an additional article regarding urban redevelopment was introduced in the law, authorizing various project implementation tools for downtown renewal. With the revision, thus, downtown redevelopment district became more than a mere district in a land use plan: it was now a district of the 'urban development project' where detailed rules and regulations were first set regarding redevelopment conditions, schedule, management and clearance of old buildings and others. In other words, standards and detailed processes as to how to incorporate small landowners to build one large building on a site, and how to divide ownership of the building were set in place. Downtown redevelopment now came to have a practical means to implement its plan.

With these improvements of legal support system, Seoul pursued vigorously forward the redevelopment of the downtown area. First, 12 downtown redevelopment districts were designated in 1973. They were Sogong-dong, Doryeom-dong, Jeokseon-dong, Euljiro 1-ga, Seoul Station-Seodaemun gate, Janggyo-dong, Mungyodong, Seorim-dong, Namchung-dong, Namdaemunro 3-ga, Taepyeongro 2-ga. In 1975, the two districts of Gwanghwamun and Sinmunro were added and in 1976 Cheonggyecheon 7-ga district was designated as a redevelopment district in order to redevelop Pyeonghwa Market. Indeed, it was a remarkable and enthusiastic designation of renewal districts in the sense that it covered many of downtown core area stretching from Gwanghwamun to City Hall to the Namdaemun gate areas.

Despite such ambitious district designations, the realization of downtown renewal was quite limited during the 1970s. Only those who owned large amounts of land and had financial means carried it out: they were usually large landholders or conglomerates. These early downtown renewal projects include Plaza Hotel by Hanwha Corp., Samsung headquarters building by Donghang Life Insurance, and Saerona Department Store by Sangdong Church. While being a viable option in the law, redevelopment by property owners association incorporating many small landowners had not yet been realized due to the lack of experience and financial means. Of all the early redevelopments, Sogong-dong area with its 22-story Plaza Hotel across from city hall was the first. Being a Chinese community, it was one of the representative of the substandard residential areas of Seoul for a long time, and, as mentioned earlier, had become a target of criticism from Korean-Americans in conjunction with the visit of American President Johnson in 1966. The city hall being acutely aware of the needs for redevelopment suggested the Chinese com-
munity in the area to take charge of the redevelopment. As Chinese community was unable to do it, Hanwha Group who owned a large chunk of land in the area bought our lands from Chinese, received development permission from the city in 1974 and completed the redevelopment by 1979.\textsuperscript{50} It was the first case of Seoul's downtown redevelopment project.

Of the large conglomerates, insurance companies took the lead in the initial stage of redeveloping the downtown area in the 1970s.\textsuperscript{54} Dongbang Life Insurance (presently Samsung Life Insurance), Daehan Education Insurance, Daehan Fire & Marine Insurance and other insurance companies made investments in real estate in the downtown areas as a means to safely manage their insurance money. Of these insurance companies, Dongbang Life Insurance who had built the present Samsung headquarters building during the redevelopment of the 2nd district in the Taepyeongro area made a particularly significant influence by prompting other insurance companies to invest in the redevelopment of the downtown areas. Because "owning a large, tall building was tantamount to advertising an insurance company's financial power and credibility," insurance companies bought land piece by piece over a long period of time until they became a single dominant owner of the renewal district, a enough prerequisite to proceed the downtown renewal.\textsuperscript{55} In this way, large conglomerates carried out several downtown redevelopment projects either singly or in partnership.

However, in most of renewal areas where land ownerships were finely divided, the designation as a downtown redevelopment district did not automatically proceeded into actual development because it involved a complicated procedure of land assembly and enormous investment. In an attempt to activate redevelopment, the downtown redevelopment district was also been designated as a "Special Improvement District."\textsuperscript{56} The Special Improvement District was a measure to facilitate the renewal dictating that the renewal project should be completed within a designated time period set by the City and in case of failure to comply to the designated deadline, either the City or a third party could take over. In addition, financial benefits were also made available to facilitate downtown redevelopment. "The Provisional Law for Facilitating the Development for Special Regions" enacted in 1972 provided various tax incentives for the development projects in target areas nationwide which included downtown redevelopment project. Four districts in the downtown areas, the districts of Bando, Keummundo, Sejongro, and Euljiro 5-ga and 6-ga were designated as special development districts where acquisition tax and transfer income tax were exempt for land and buildings in the areas.\textsuperscript{57} In addition, by 1975, 6 additional districts of 120,000 pyeong (some 100 acres) were added to the downtown
redevelopment districts. They were Euijuro, Janggyo, Doryeom, Seorin, and Dadong areas. With the inauguration of mayor Ku Jachoon in 1976, Seoul's major policy was to secure the so called "three major spaces," i.e. roads, parks, and parking lots. Under new policy orientation of the City, downtown renewal had been regarded as an important means to achieve this goal. [66]  

Institution of urban redevelopment law and the adoption of master plan

Despite the above-mentioned supplementary measures, the redevelop-ment of downtown Seoul showed no distinct progress for some time. Yet, institutional reform for more systematic redevelopment had been added. Downtown renewal that had been stipulated in the City Planning Law now came to have an independent legal status as new Urban Redevelopment Law was enacted in 1976. The new Urban Redevelopment Law aimed at, in its terms, the "modernization of city functions" and "efficient use of land." According to the law, the areas were to be subject to urban renewal—areas where sub-standard buildings were packed together, and more efficient land uses were needed due to over-concentration of population and industry. The law also detailed the procedures with respect to the adoption of redevelopment plans, decision-making process, and execution of plans. The law also laid out the basic framework of responsibility of public and private parties involved: the national and local government were in charge of devising renewal policies and approving the individual redevelopment projects while actual implementation was to be done by the private sector. In other words, the laws made it a rule that redevelopment shall be done by the private sector unless there was a pressing reason to do otherwise: the redevelopment project was to be carried out by landowner(s) or a landowners' association, however, if needs be, either local government or a third party may assume responsibility. The law also required that the cities with a population of over 1 million, if it sought downtown renewal, should formulate a citywide "Redevelopment Master Plan" which should be in line with the city's long term comprehensive plans. The institutional foundation of urban renewal was further settled as the government further specified the Urban Redevelopment Law in its lower-level act (Si-haeng-ryung in Korean) in August 1977, and Seoul instituted its own 'Redevelopment Project Ordinances' in November of the same year.

In accordance with the law, Seoul drew up its first Urban Redevelopment Master Plan in 1978 which with some revisions was confirmed in 1979 with the approval of the central government. Seoul's
first redevelopment master plan aimed at a "restoration of downtown functions as being the center of Seoul, the capital city of Korea," "qualitative improvement of urban facilities in consideration of future city development" and "formation of recreation and cultural spaces for the people." These objectives were in line with the general direction of redevelopment policies that Seoul had already been maintaining. In other words, as before, redevelopment was intended to bring complete change to the existing poor downtown conditions, equip Seoul with quality urban facilities, thus making it a modern city center with enough open space. Thus, the first master plan employed the aggressive redevelopment of "sub-standard areas" to modernize the downtown areas as a center of business and commerce. The plan clearly stated what "sub-standard areas" meant: the areas where old buildings and small businesses were concentrated, the areas devoid of even an absolute minimum of open space and basic public facilities, the areas of unqualified types of businesses (undesirable to modern downtown), the areas where residences and commercial functions co-existed in confusion, and the areas where the facilities damaged the urban beauty. The plan stated that the general direction of the redevelopment policies should continue to reduce building coverage, aggressively securing space for roads, parks, green tracts of land, a public plaza, parking lots and the expanding of basic urban facilities. Irregularly-shaped individual building lots were made regular, and they were also required to
include enough open space. And three-dimensional use of the land in the form of high-rises was strongly recommended. Regulation as to land use was set so that a building coverage ratio was to be less than 50 percent, floor area ratio for the commercial district was set at 800 percent, and floor area ratio for residential areas was set at 250 percent. Figure 10.7 shows what had been envisioned in the redevelopment plan, a downtown with a group of modern high-rises arranged in good order, enough open spaces, and enough urban facilities including roads, parking lots and other amenities.

Accordingly, the redevelopment master plan of 1979 suggested that the majority of downtown Seoul, a total of 7.48km² (about 2.26 million pyeong) would be subject to redevelopment either by clearing old construction or renovation. In addition to the inner areas surrounded by Yulgok-ro, Euiju-ro, Toegye-ro and Heunginmunro, Yang-dong and part of Hoehyeon-dong were added to the redevelopment district and the peripheral areas away from downtown, for example, up to the Sinseol-dong intersection to the east were also included (Figure 10.8). It was indeed an ambitious plan in that it considered virtually the whole downtown areas as “areas subject to downtown redevelopment” in addition to 910,000-square-meter areas (about 280,000 pyeong) that had already been designated as

---

Figure 10.8
Target area of downtown renewal in 1979 master plan

---

568

Hi Seoul
Soul of Asia
redevelopment districts. Other than the Jeong-dong and Sejong-ro areas that had been excluded from the subject areas of the redevelopment project and historical places such as Insa-dong, around the Jongmyo shrine, and Hyoje-dong for which either conservation or rehabilitation had been suggested, the plan envisioned that almost all the remaining areas be subject to step-by-step redevelopment by clearing old construction (Figure 10.9). \(^{62}\)

**Conflict between aggressive district designation and restraining policies**

Based on the city's ambitious downtown renewal policy and the corresponding institutional support, the 1970s marked a period of extensive designation of the redevelopment districts in downtown area. Of the total redevelopment districts as of the end of 1999, some 70 percent had been designated in the 1970s.\(^{63}\) However, just one year after the announcement of the first urban redevelopment master plan that demonstrated a Seoul's strong will for the ambitious redevelopment, the 1979 City Administration, an annual report of the City, showed a different policy orientation toward redevelopment.\(^{64}\) Thus far, heavy emphasis had been given to aggressive clearance in the old downtown areas; however, the new policy empha-
sized 'a selective, deliberate redevelopment.' It was a clear change in the downtown redevelopment policies from the previous plan: the development of hotels, department stores, and entertainment facilities that caused the population to concentrate in the downtown areas would be restrained and building coverage ratio, floor area ratio and building heights would be subject to stronger regulations. Such a change of policy direction, however, did not mean a general denial of 'clearance-redevelopment' ideas. While acknowledging the need for downtown redevelopment, the new policy was in response to the central government's 'population concentration restriction policies,'565) The central government's effort to discourage population concentration in downtown areas was out of concern for national security. Seoul, being as it were, within shooting distance, experienced serious tension with North Korea, and the overpopulation in Seoul presented a serious national security concern. With this in mind, the government tried to decentralize the population and city functions of the Seoul metropolitan area to other regions. The government then enforced the population decentralization policy through the development of the Gangnam area (south of the Han River). In addition, in April 1979, the government's Metropolitan Area Problem Supervising Committee passed a move that demanded strong building regulations to Seoul's downtown area, such as building height and floor area ratio (FAR).

As shown in Table 10.3, in an attempt to restrain development within downtown area, Seoul was divided into five areas in which different building coverage ratio and floor area ratio were applied: the areas along the main roads within downtown, and other areas within downtown, the Gangbuk area (north of the Han River) outside downtown, and the Gangnam area (south of the Han River), and Yeouido area. The areas along the main roads within downtown area where the majority of the downtown redevelopment took place, they limited building height to less than 15 stories, the floor area ratio (FAR) to less than 670%, and building coverage ratio (BCR) to less than 40%. Compared with the maximum FAR of

<table>
<thead>
<tr>
<th>Table 10.3 Building regulation by sub-areas in Seoul, 1979</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Building regulation by sub-areas in Seoul, 1979</strong></td>
</tr>
<tr>
<td><strong>Source</strong>: Seoul Development Institute, 1995, A Study on Designation of Downtown Redevelopment District, p.35.</td>
</tr>
<tr>
<td><strong>Downtown along main street</strong></td>
</tr>
<tr>
<td><strong>Building height</strong></td>
</tr>
<tr>
<td>Less than 15-floor</td>
</tr>
<tr>
<td>Less than 12-floor</td>
</tr>
<tr>
<td>Less than 15-floor</td>
</tr>
<tr>
<td><strong>FAR (%)</strong></td>
</tr>
<tr>
<td>Less than 670</td>
</tr>
<tr>
<td>Less than 670</td>
</tr>
<tr>
<td>Less than 800</td>
</tr>
<tr>
<td><strong>BCR (%)</strong></td>
</tr>
<tr>
<td>Less than 40</td>
</tr>
<tr>
<td>Less than 45</td>
</tr>
<tr>
<td>Less than 50</td>
</tr>
<tr>
<td><strong>Gangnam area</strong></td>
</tr>
<tr>
<td><strong>General</strong>: Less than 20-floor</td>
</tr>
<tr>
<td><strong>Exception</strong>: Higher than 20-floor</td>
</tr>
<tr>
<td><strong>FAR (%)</strong></td>
</tr>
<tr>
<td>Less than 1000</td>
</tr>
<tr>
<td><strong>BCR (%)</strong></td>
</tr>
<tr>
<td>Less than 60</td>
</tr>
<tr>
<td><strong>Yeouido area</strong></td>
</tr>
<tr>
<td><strong>Less than 20-story</strong></td>
</tr>
<tr>
<td><strong>FAR (%)</strong></td>
</tr>
<tr>
<td>Less than 1000</td>
</tr>
<tr>
<td><strong>BCR (%)</strong></td>
</tr>
<tr>
<td>Less than 50</td>
</tr>
</tbody>
</table>
900% allowed at the beginning stage of downtown redevelopment, the FAR of 670% represented a significant turn-around toward the government policy against a concentrated development of the downtown area. This new policy appeared as an obstacle to the downtown redevelopment in the late 1970s.

The conditions for downtown redevelopment were strengthened further, as new Urban Redevelopment Law was enacted in March 1981. Previously, agreement by more than half of the landowners was the prerequisite to be a developer: however, under the new law, conditions became stricter so that any developer had to own more than two-thirds of the land, and should acquire agreement by more than two-thirds of the landowners and more than two-thirds of the building owners. The City of Seoul as well required that a public hearing be held so that the project plan considered the residents' opinion. Frequently in the past, a wealthy landlord would buy out the whole block concerned and become a developer. But with the new policy of the City, the practice was changed to communal redevelopment with the full participation of landowners. The new policy also required that the existing residents be accommodated before preceding the clearance. All these measures were geared to foster more selective and deliberate redevelopment of downtown.

Promotion of active downtown redevelopment for international events

Despite the aggressive designation of project districts in the 1970s, the downtown redevelopment had been slow up until the early part of the 1980s due to conflicting government policies that restrained the renewal projects. Only a handful of projects received permission, such as The Korean Education Insurance Co. building, the Kolon building, Daehan Fire & Marine Insurance building, and Hilton Hotel. Among them, only some of the buildings were completed.

However, the redevelopment of the downtown area became quickly once again a matter of special policy attention in the 1980s. As Seoul was chosen as the host city for two important international events, the 1986 Asian Games and the 1988 Olympic Games, downtown renewal deemed essential in preparing for the events to make Seoul presentable to international community. Seoul had to implement an immediate policy changes to improve the poor conditions found in the downtown area as described below.

"Seoul at the time was too shabby and dirty for foreigners visiting Korea either as a participant in the two international events or as a tourist during the occasions.... streets were old, dirty, and shab-

571
by: Along Seoul's main streets of Jongro, Euljiro, and Toegyero—many old, small buildings and the alleys that were one step behind the main roads were full of disorder, dirty, and inhabited by bad smells.49

To present Seoul as a modern city to Asian countries and the world at the two events became a matter of supreme importance, and the redevelopment of the downtown area was considered the means to achieve this goal. In particular, the 1988 Olympic Games was the biggest international event in the history of Korea and improvement of the urban environment was an important national issue. In preparation for the 1988 Olympic Games the "5-Year Downtown Redevelopment Plan" was adopted.49 A total of 124 districts, along the arterial roads, about 600,000m² (180,000 pyeong) were selected as target areas for improvement, as well as the downtown areas of Mogyo-dong, Euljiro 2-ga, Yang-dong and the areas along Mapo road where foreigners would pass on their way to and from the airport. The old buildings in these areas were to be removed within a 5-year period, between 1982 and 1986. Under these circumstances, the central government and the City of Seoul developed various measures to facilitate the redevelopment of the downtown area. This represented another turn around from the restriction policy, which was to decentralize the population and urban functions in the downtown area, to the facilitation policy.

In support of this policy change, the government revised the Urban Redevelopment Law in late 1982. The most notable change was that the right to expropriate land was given to private developers. Land expropriation had been acknowledged only as an exception for the inevitable public projects. For example, thus far only the local governments, the Korea National Housing Corporation, special corporations, and designated third party developers had the right to expropriate land for designated projects. The revised Urban Redevelopment Law, however, allowed the expropriation of land by such private developers as landowners or an landowners' association. It was an unprecedented extraordinary measure that was enacted to prevent any possible delay in redevelopment projects due to objection on the part of landowners. The second distinctive aspect of the revision was that the conditions in becoming a third party developer were made less difficult. Previously, a third-party developer had to deposit 20% of the total amount of the development cost to the city, however it was reduced to 10-20%. In addition, in case the third-party developer owned more than half of the redevelopment area, they were exempt from a reserve deposit. Such changes greatly relieved the burden on third-party developers, and they already began to receive project permission from 1983. As a result, the third-party developers
initiated redevelopment projects in 3 districts in 1983 (the 5th District in Euljiro 1-ga, Mugyo-dong 2nd district, Sorin 12th district), 2 districts in 1984 (Seosomun 4th district, Yangdong 1st district), 3 districts in 1985 (Sogong 2nd district, Seoul Station-Seodaemun 3rd district, Dongja-dong 2nd district), and 1 district in 1986 (Da-dong 1st district).

The third distinctive aspect of the revision of Urban Redevelopment Law was that it allowed Korea Land Corporation to participate in the redevelopment of the downtown area. This change added one more government-affiliated public development organization, besides the Korea National Housing Corporation, involved in urban renewal. Strengthened by this legal support, the government-affiliated organizations participated in three downtown redevelopment projects such as the 10th and 17th districts in Euljiro 2-ga in 1983, and Yang-dong 4-1 district and 5th district in 1984.

Following the revision of law by the central government, the City of Seoul announced in February 1983 the downtown redevelopment facilitation measures offering tax incentives and relaxing the zoning regulations. Previously, under the decentralization policy, floor area ratio (FAR) in commercial districts within downtown area was 670%, however it had been relaxed to a maximum of 1,000%. It was a special FAR applied only to downtown redevelopment project (for other general building construction, FAR remained at 670% in downtown area, and 900% in Gangbuk area outside downtown).70 Tax exemption was also given to downtown redevelopment projects. Based on the Tax Reduction and Exemption Law, capital gains tax was not applied when landowners sold land to developers or when developers sold land and new construction to new owners after completing the projects. In addition, local tax benefits were also provided to facilitate the downtown renewal: acquisition tax and registration tax were exempt as well as property tax and city planning tax for the period from project approval to project completion.

These measures contributed enormously to facilitating the redevelopment of the downtown areas in the 1980s. The change to a maximum FAR up to 1000%, and various tax incentives including the exemption of capital gains tax must have been a strong inducement, taking into account a study at the time argued that the downtown redevelopment would be profitable even with FAR 670%.71 In particular, the then booming economy coupled along with active real estate investment by large corporations further accelerated the redevelopment of the downtown. In the early 1980s, in an attempt to break through the economic recession, the Korean government employed such aggressive economy stimulation policies as low interest rates and currency expansion. This pushed up land prices, and land prices in the downtown redevelopment areas in particular, and
was the main reason for increased investment in real estate. In other words, surplus capital made available by the government policies flowed into the real estate market because it produced higher return rather than investing in the capital market or manufacturing. Coupled with an increased demand for offices in Seoul, it brought forth an office building construction boom in the guise of redeveloping the downtown area. The demand for offices began to increase in 1981 and the trend continued for about 10 years period thanks to the unprecedented economic growth of Korea which in part was helped by the so called “three-lows” (low crude oil price, low international interest rates, high yen/low won) During this period, the per capita income in Korea increased four fold and this explosive economic growth increased demand for office space which in turn greatly facilitated the redevelopment in downtown Seoul.

The government and Seoul’s efforts in preparation for the 1986 Asian Games and the 1988 Olympic Games also contributed to the active downtown renewal. As mentioned earlier, the government revised the Urban Redevelopment Laws in order to enable the government-run development organizations such as Korea National Housing Corporation and Korea Land Corporation to participate in downtown renewal in preparing for the international events in 1986 and 1988. Korea National Housing Corporation became a principal developer of the 16th and 17th districts of Euljiro redevelopment area where now headquarter buildings of Hanwha group, Jungso-giup Bank are surrounding inner-block open space known as Jang-gyo Madang. The area previously known as ‘printers’ alley’ where numerous small printing-related businesses were packed within such a small area that it was beyond the ability of private developers to negotiate the purchase of land and compensate the individual landowners adequately. As a result, redevelopment of the area has been put on hold for over 20 years. Redevelopment of the area would not have been possible if Korea National Housing Corporation had not been asked to be in charge at the government’s request. The development of the 4th and 5th districts of Yang-dong area near Mt. Namsan was also carried out by Korea Land Corporation at the request of the government. Korea Land Corporation cleared the slum area and completed development in time for the 1988 Olympic Games.

In the final analysis, the City of Seoul granted the project permissions for as many as 76 districts in the downtown area between 1983 and 1986. This was possible due to surplus capital made available by the unprecedented economic growth of Korea at the time. This capital went into the redevelopment of the downtown area riding on the government’s aggressive renewal facilitation policies including generous FAR allowance, various tax incentives, an
Figure 10.10
Time period of district designation and project completion of downtown renewal

increased demand for office space and the government’s positive participation in the development using its affiliated organizations. Thus, the four year period represented the peak of downtown renewal and by the 1988 Olympic Games, many impressive buildings had been completed: Dongbang Life Insurance Building in Taepyeongro, the Press Center Building adjacent to the City Hall, the Jungang Ilbo Building in Sunhwa-dong, the Chamber of Commerce Building next to Namdaemun gate, the Gyobo building at the Gwanghwamun junction, the Samsung Fire Insurance Co. Building, the Doosan Building in Euljiro, the Jeil Bank in Jongro, Taehwa and Hanaro Buildings in Gongpyeong-dong, the Daewoo Building and Lawyers Hall in Doryeom-dong, the Korean National Tourist Center and LG Building in Da-dong, the Hanwha Headquarters, and Jung-so-giup Bank of Korea in Euljiro. As a result, a remarkable transformation had been made in the downtown areas as an urban historian, Sohn Jong-Mok, described as follows:

"Under rapid economic growth and the overriding need to make the 1986 Asian Games and 1988 Olympic Games a success, the downtown area of Seoul underwent tremendous changes. Euljiro, Taepyeongro, Mugyo-dong, Da-dong, Seorin-dong, Doryum-dong, Gongpyeong-dong, Yang-dong were completely transformed. (omission of middle part) 'Space revolution' might be a little exaggeration to describe the magnitude of the changes, however, it was surely an enormous change."[10]

**Downtown redevelopment in the 1990s**

After the 1988 Olympic Games, downtown redevelopment was no longer at high priority on Seoul’s policy agenda and the demand for business space in the downtown area stood at a low. Accordingly the number of the redevelopment project did not increase by much: from 1990 to 1998, the project permission had been issued to only 39 districts, which meant that downtown renewal significantly lost its vigor in the 1990s compared with that of the 1980s. All completed in the 1990s were the Hanmi Bank headquarters, the Dong-A Life Insurance Co., and Dongbu building in Da-dong, Sinyeong Securities in Myeong-dong, the Daeil building at the entrance to Insa-dong, the Byucksan building in Dongja-dong, the Youngpoong building in Jongro 2-ga, the Gwanghwamun building (previously the site of the Gukje Movie Theater) at Gwanghwamun junction, Seoul Financial Center in Mugyo-dong. In the 1990s however, various social debates were heightened as to the downtown environment and in this regard several changes were made in Seoul’s downtown renewal policies.

First, criticism arose against the clearance-based redevelopment.
The criticism stated that creating a whole new district through wholesale clearance of the existing traditional urban pattern and old buildings damaged the historical identity of the downtown areas and brought only high-rise and high-density. In response in July 1990, the government introduced some concept of redevelopment methods emphasizing more preservation and rehabilitation. The new method suggested the improvements to public facilities and buildings while maintaining the existing city structure and preserving the cultural and historical heritage. However, this concept failed to be put into practice due to the lack of detail. It was even unclear whether this method would be profitable from a business perspective, given the fact that downtown renewal was entirely dependent on private investment. Furthermore, Seoul’s redevelopment master plan stopped as well at the vague mention of the need for those methods, not providing details as to what and which buildings and areas should be subject to the restoration and/or preservation type of redevelopment.

The second change in policy was a residence inducement measure to prevent the phenomenon of a cavity in the downtown area. Over the 20 years during the redevelopment of the downtown area, residences in the area had been rapidly reduced and the redevelopment areas were almost empty at night. Faced with such an unwanted side effect, in April 1990 the City adopted a new policy offering a preferential land use density for new buildings that included residential space. A maximum floor area ratio (FAR) of 1,000 percent (FAR 10.0) being applied since February 1983 was reduced to the previous level of 670 percent (FAR 6.7), however the special FAR bonus was given to residential space under the maximum limit of 1,000 percent (FAR 10.0). In other words, the new policy introduced the different application of FAR to office buildings and office-residence mixed buildings in an effort to bring residential units in the redevelopment areas, thus securing a downtown population. Accordingly, in January 1991, Seoul revised the downtown redevelopment master plan based on this policy change. It designated eight ‘mandatory’ and three ‘recommended’ areas for residential inclusion in downtown renewal. New buildings in the mandatory districts were required to have a minimum of a third of the total floor space as residential space. And in recommended districts, a FAR incentive was provided to the buildings that included residential units voluntarily in the building, although this density incentive did not produce visible results.

Due to a slowing demand for downtown offices and residences after 1988 Olympic Games, the 1000 percent privileged FAR for residential space turned out to be less than a strong incentive. Under the circumstances, in an effort to facilitate downtown redevelop-
ment, in April 1993, Seoul again revised the zoning ordinance to increased the base FAR to the 800 percent and FAR bonus up to 1,000 percent was provided for residential space in the commercial districts. It also turned out that the mandatory residential inclusion only restrained downtown redevelopment given the weak demand for downtown housing at the time. Thus, in August 1996, Seoul revised the downtown redevelopment master plan to abolish the designation of the 'mandatory' residential inclusion districts whole downtown area became 'recommended' districts where downtown housing would be provided by the developers on a voluntary basis.

**PHYSICAL CONSEQUENCES AND POLICY IMPLICATIONS OF DOWNTOWN REDEVELOPMENT**

Through the above-mentioned process, since 1965 when the idea of downtown redevelopment district was first introduced in City Planning Law up to 1999, Seoul has designated almost the entire downtown areas as a 'Redevelopment Candidate Area' covering a total of 7.75 million square meters (2.35 million pyeong or 1958 acres). Of the Redevelopment Candidate Area, a total of 37 districts, about
1.47 million square meters (about 450,000 pyeong or 375 acres), being equivalent to a fourth of the total commercial downtown district, were designated as ‘redevelopment areas’ that were subject to actual redevelopment by removal of old buildings. The size of the "redevelopment areas" varies from as small as 1,000 pyeong (less than an acre) to as large as 60,000 pyeong (50 acres) and the areas were systematically divided into building sites, roads, parks, and parking lots (Figure 10.11). Each building site constituted one ‘project district’ and redevelopment work was carried out respectively. The size of the project districts varied from 600 pyeong (half an acre) to 2,000 pyeong (1.7 acres), averaging 1,200 pyeong (one acre) per district. As of January 1999, a total of 331 districts have been designated as building sites. Of them, construction work has been completed in 86 districts (26 percent), redevelopment is under way in 34 districts (10 percent), and redevelopment work has yet to begin in 211 districts (64 percent) (Table 10.4).

| Table 10.4 Progress of downtown redevelopment (as of Jan. 1999) |
|---------------------------------|--------------------|----------------|
| Completed                       | Districts          | Area (m²)      |
| 86 (26%)                        | 434,000 (30%)      |
| Under progress                  | 34 (10%)           | 167,000 (11%)  |
| Not yet started                 | 211 (64%)          | 871,000 (59%)  |
| Total                           | 331 (100%)         | 1,472,000 (100%) |

**Remarkable physical transformation**

The downtown redevelopment, since it was first introduced in the late 1960s, played the catalyst in Seoul’s reformation effort, and has completely changed the features and configuration of downtown Seoul. It changed the traditional pattern of downtown that had been formed over a 600-year period into a loose grid-patterned form of modern city. A downtown area that previously presented the image of a slum often found in large cities of poor countries was transformed into a modernized downtown with numerous high-rise buildings (Figure 10.12). Through downtown redevelopment, a 6 million square meters (about 1.8 million pyeong or 1500 acres) of old quarters were completely demolished and 127 modern buildings were built on the site. They were the main impetus that supplied modern high-rise office buildings in the center of Seoul in the late 20th century. They provided 3.5 million square meters (around 1.18 million pyeong or 980 acres) of office and commercial space, meeting the space demand for downtown amid the rapidly changing social and economic profile of the city.

As Seoul aspired, the downtown redevelopment provided new
roads, parks, and parking lots, which would not have been possible by other general city management methods. In 1985, Seoul required that the public facilities such as roads, parks, and parking lots in the redevelopment districts were to be built at the expense of individual developers and donated to the city as a civic gift. Accordingly, as shown in Table 10.5, the urban redevelopment plans secured a total of 19.5 km of roads by the end of 1998. Of this total, 3.9 km of the roads have either been completed or space for them has been earmarked. Most of them are 6-to-12-meter wide access roads that could not have been secured if it were not for the overall demolition of the old quarter. A total of 49,500 square meters for parks are planned; of this, a total of 11,880 square meters has been secured as sites for parks. Out of a total of 1,400 parking lots planned, so far only 320 parking lots have either been completed or the land secured for that use.

**Table 10.5**

<table>
<thead>
<tr>
<th></th>
<th>Planned</th>
<th>Accomplished</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building</td>
<td>457 bldg</td>
<td>127 bldg</td>
</tr>
<tr>
<td>Road</td>
<td>19.5 km</td>
<td>3.8 km</td>
</tr>
<tr>
<td>Park</td>
<td>15,000 pyeong</td>
<td>3,600 pyeong</td>
</tr>
<tr>
<td>Parking</td>
<td>1400 lots</td>
<td>320 lots</td>
</tr>
</tbody>
</table>

These are no less than a remarkable achievement to a city that went through the devastation of Korean War and difficult period as a capital city of such a poor country. Despite the lack of public financial resources, this has been possible by utilizing the private sector, as was the case with substandard housing redevelopment. Most of the redevelopment was done by such civilian sectors such as private corporations, property owners’ associations, or third party developers: with a few cases conducted by Government affiliated corporations. Among the civilian sector, big conglomerates were the prominent leaders in the redevelopment effort. They carried out various developments either as landowners by purchasing land in the targeted redevelopment areas or as a third party developers. Big conglomerates constitute 60 percent of the total redevelopment projects completed; however, considering that most of the third party development was done by big conglomerates and they were also the biggest shareholder in the cases of development by property owners’ association, it could safely be said that 80-90 percent of the downtown redevelopment in Seoul has been done by the big companies including the Chaebol group. This was because redevelopment by its very nature required enormous capital and revulsion of capital takes a long time to recoup, and small and medium developers could not handle the project.

What the City of Seoul did was to designate the redevelopment district and then to wait the private investment carrying out the actual development. In other words, the city first froze individual development through designation of redevelopment areas and then prepared ‘redevelopment plans’ for building sites and other infrastructures in the designated areas, and then invited private investment in to realize the plan. Public facilities such as roads, parks, and parking lots were secured by requiring the individual projects to provide their share (typically some 20 percent of individual project site) at their expense. In short, the redevelopment of downtown Seoul has been carried out in the following way: 1) compulsory designation of redevelopment areas for lot assembly, 2) establishment of redevelopment plans delineating the building sites and public facilities, 3) project-by-project individual development by private investment, 4) provision of public facilities by individual projects. However, this clearance-based, market-centered development method brought criticism centering on various unwanted, negative effects.

**Adverse effects of clearance-based and private-led renewal**

The most controversial criticism brought against the clearance-based redevelopment was the loss of historical identity and uniqueness of downtown Seoul. As mentioned earlier, Seoul designated an enor-
nous area of around 1.47 million square meters (450,000 pyeong or 375 acres) in the downtown sector as 'redevelopment areas' believing that only the clearance renewal could modernize the downtown area. It represents a total of 25 percent of the downtown commercial areas and in addition Seoul equipped itself with laws that even the entire downtown commercial area could be designated as a redevelopment area. The areas designated for redevelopment are subject to wholesale clearance of the existing plot patterns and buildings to create an entirely new city structure. The alternate concepts of "restoration redevelopment" and "preservation redevelopment" was suggested, however, no clear definition as to the conceptual and practical ways to carry them out was prepared and thus far all the redevelopment in downtown has utilized the wholesale clearance method. Such a redevelopment method applied uniformly to thus far around 120 development projects brought forth the unexpected problems occurring from the loss of Seoul's unique sense of place and history. Overall redevelopment wiped out many of cultural heritage, historical charms, and humanistic atmosphere of old city center. In its place, what sprang up were huge tasteless high-rise buildings scrapping 600 years of Seoul's history. Loss of liveliness in the streets was also pointed out as an unwanted negative effect. The pleasant and vital experience people get from small retail shops and small service industries lined one after another and the bustle of pedestrians had been replaced by parking lots and landscaped areas and at night the whole area becomes an empty neighborhood devoid of human activities.

Historical character and uniqueness in the downtown area was inseparably associated with the downtown's old physical features. They presented the richness, variety, and vitality of downtown environment stemming from traditional street networks, irregular plot patterns, and small old buildings clustered together. These features could not be found other than in the downtown area and they were the result of long years of gradual change. When growth-oriented development constituted the top priority on the national agenda, the redevelopment of downtown Seoul could not afford careful consideration of these fragile qualities of downtown. With a renewed cultural and economic awareness of downtown Seoul, the belief that modern downtown could only be realized by clearance renewal became under critical attack.

Another criticism was that private-sector-led downtown redevelopment, by its very nature, was profit-oriented and thus the public interest was bound to suffer. It was true that regarding whether to participate in any of the redevelopment project, the private sector enterprises made business decisions based on profitability. There were numerous considerations that required an enormous invest-
ment in money, time and effort: purchase of land, negotiation with landowners and lessees, getting the development approval from the authorities, removal of the existing buildings, construction of new buildings and required public facilities, and other items. As such, any project should have produced a decent, enough profit for the developer to be compensated for the above expenses and the risk accompanied. In this mechanism, the high density development deemed essential to ensure business profitability, and the City of Seoul continued to increase FAR to 800 percent and then to 1,000 percent. Once downtown overdevelopment became an issue, the city lowered it back to 670 percent but then in an effort to promote downtown redevelopment, it was soon restored to 1,000 percent. And then in the 1990s the rate was increased to over 1,200 percent taking into consideration of floor area incentives for various perceived public benefits such as mixed office-residence development. The average FAR of the downtown redevelopment completed stood at around 600 percent, however, that of more recent buildings of the 1990s was higher than 900 percent.

Increased FAR set to secure business profitability resulted in high-rise buildings. Although the average number of floors of the earlier stage of downtown redevelopment was around 15 stories, that of the 1990s had increased to around 30 stories. Such high-rise, high density development attracted the high level of criticism concerning the destruction of the historic character of the downtown area. Also at issues were traffic congestion and lack of infrastructure and public facilities that were typical of the problems of such high-density development.

Restraining building renovation and private investment in the downtown areas

Another criticism against the downtown redevelopment was that it had ironically long abandoned aging downtown areas. As the downtown redevelopment relied primarily on private investment, the designation of redevelopment districts did not automatically lead to immediate actual development, which would rather be subject to the demand of the real estate market (Figure 10.10). In other words, redevelopment took place when there was a demand for corporative headquarters, general office space or commercial development. In the case of Seoul's downtown, it usually took 9 to 15 years from the district designation to completion of the redevelopment. Development in some districts took as long as 22 years. Besides, there were over 200 redevelopment districts in the downtown areas where redevelopment has not even been undertaken yet. The majority of them
were designated as redevelopment districts in the 1970s and over 20 percent of them had been left undeveloped for over 25 years. This restrained building renovation and new investment in the downtown area because once an area was designated for redevelopment no new construction was allowed in anticipation of wholesale clearance in the future. Partial renovation of old buildings and homes was possible, however, not knowing when the redevelopment would take place, it had been the general practice among land and building owners to shun renovations, major repairs, and even decent management for buildings. Under these circumstances, once an area had been designated as a redevelopment area, it was bound to deteriorate and left in its dilapidated condition for long time before any actual development takes place.

It was arguable that the wholesale clearance redevelopment could never be a single option for downtown renewal: rather downtown growth could be sustained by voluntary joint development and reconstruction or renovations of the existing buildings. Indeed, the majority of new construction, extensions, and remodeling, and major repairs in the 1990s took place actively outside the designated redevelopment areas. Over 50 percent of the buildings higher than 20 stories, and around 75 percent of the buildings higher than 10 stories were built outside the designated downtown redevelopment areas. With these examples, the critics also argued that the incremental, small-scaled, and gradual renovation of the downtown could be a better way to vitalize the downtown area in physical and economic terms than conducting the redevelopment by wholesale clearing of the area. In other words, they maintained that these individual, voluntary improvements were the private investment through which the downtown areas could have been renovated, maintained the competitiveness and sustained tax bases for the city. This view was persuasive judging from the fact that while in non-redevelopment areas such as Myeong-dong, Chungmuro, Gwanheol-dong, new construction and renovation to old buildings were active, thus maintaining viable active economic activity and adding attraction to the area, buildings in the designated redevelopment areas either had their roofs covered with tent materials or were left in a dilapidated condition with only the minimum of repairs conducted.

Those who were in favor of the idea of clearance-based downtown redevelopment however, demanded that such a period of stagnation was inevitable for a total renovation of downtown area in the long run. They argued that only clearance renewal could turn the traditional urban structure of downtown into modern one which made in fact possible to accommodate the changing functions of modern city center.
Issues of social conflict and equity

Some critics argued that the downtown redevelopment caused social conflict and violated the principle of equity, since it was, more often than not, against the interests of shop renters or small landowners. In their view, the downtown renewal projects better served the interests of large corporations than the interests of shop lessees who had to give up their business or small landowners who were forced to sell their lands. Behind this perspective were the profit-seeking mechanisms of large real estate investors. For example, they viewed that the huge scale of the downtown redevelopment in the 1980s was prompted because the large conglomerates wanted to accumulate capital through the land rent. In other words, under the excessive currency expansion and the government policy of maintaining the lower interest rates, the commodity price increase reduced profits for manufacturers which in turn produced idle money which failed to be put into manufacturing, and the idle money naturally flowed toward the more profitable venue of speculative investment to real estate.

Furthermore, to these real estate investors, the downtown redevelopment policy was beneficial as it provided systematic support and unfair privilege to expropriate lands to push forward the redevelopment. As proof of this, the critics pointed out that the expropriation rights were given to the private developers involved in the downtown redevelopment, one that originally could only be given to the public authorities conducting the redevelopment projects. In addition, the procedure and method of land expropriation was unfavorably beneficial to developers, because authorization for redevelopment automatically provided developers with the right to expropriate the redevelopment lands concerned and with the agreement of two-thirds of the land and building owners, developers could go ahead with redevelopment projects without regard to the opinions of the remaining a third of the land and building owners. In addition, contrary to the land expropriation laws which stated that compensation for the expropriated lands was to be made in cash at transfer of registration of the ownership, compensation for downtown redevelopment was to be made in kind either in land or buildings after the development was completed. In other words, compensation was made for general land expropriation in the course of an official purchase; however, post-development compensation was allowed to downtown redevelopment at the expense of the advantage of transfers. Considering that in most cases land price increased after the redevelopment was completed and all the profit went to the developers, this practice was considered unfavorable to previous land and building owners. The critics contended that it was a violation of the
principle of social equity.\textsuperscript{120}

As discussed, there were pros and cons about Seoul’s downtown redevelopment depending on how one viewed it. Policy makers and some city planners who valued economic development more than preservation supported the clearance-based downtown renewal. Those who were critical about the downtown redevelopment did not deny the necessity of it, however, they supported the idea that clearance redevelopment should have been kept to a minimum and that more emphasis should have been given to preservation of historical and cultural uniqueness of downtown area. Amid the pros and cons, Seoul is meeting new 21st century without changing the existing method of downtown redevelopment—clearance-based, marker-driven, and private sector-led urban renewal.

\section{Conclusion}

Due to urban policies of substandard housing redevelopment and downtown redevelopment, Seoul has experienced enormous spatial transformation in the course of the late 20th century. Under the substandard housing redevelopment programs, numerous unauthorized makeshift huts and the squatter ‘moon villages’ that were formed in the early to mid 20th century have been changed into massive modern high-rise apartment complexes. Downtown areas also underwent a radical transformation turning its, centuries-old city structure into modern lattice network through downtown redevelopment policies in the late 20th century. Based upon these two urban renewal programs, an enormous amount of land, approximately 2.5 million pyeong, along with the existing structures and social communities, was entirely cleared and replaced by new buildings, street networks and totally new environment. Perhaps, Seoul is one of those cities in the history that have employed the most aggressive clearance redevel-
opment in their city-making process. The downtown areas of Tokyo were completely rearranged and redeveloped, however, this was due to a natural disaster named Great Kanto Earthquake that left the downtown area of Tokyo in absolute ruins.\(^\text{103}\) In Hong Kong, 2 million people had to move out of the housing renewal area, however, this was a public redevelopment program that accommodated all the people in some kind of new public housing.\(^\text{104}\)

Redevelopment through wholesale clearance led by private investment was the distinctive feature of Seoul’s urban redevelopment policies. At the initial stage of housing redevelopment program, the renewal projects were mainly carried out on a small scale and in a gradual manner by the public sector. However, in the 1980’s, due to a lack of city funds, the redevelopment method was changed to a joint renewal method in which property owners’ association and the construction company played a main role in their profit-making endeavor. Downtown renewal also went through a similar path in regard to public sector’s role. In the initial stage, downtown redevelopment was to be carried out by the public sector. In the beginning years of the late 1960’s, Seoul considered an American style public-sector-led redevelopment method where the city would first purchase the land, then carry out building demolition, land rearrangement, and the construction of the infrastructure prior to selling building sites to private developers.\(^\text{105}\) But due to of lack of public financial resources, Seoul could not afford to go ahead with this method and had to rely on private capital. Through this market-driven, private-led method, Seoul has been able to achieve this magnitude of urban redevelopment without investing public funds.

Such a radical change in urban landscape and spatial structure that Seoul produced through its renewal policies has been made possible by the rapidly changing social and economic conditions of the 20th century. The aggressive national economic development policies of the 1960s and 1970s and the resultant rapid growth brought forth an explosive demand for urban space in the late 1980’s. And it was this rich soil upon which both housing and downtown renewal programs flourished. The explosive increase in demand for decent housing by the middle class had rapidly emerged in the 1980’s, and this in turn prompted the housing redevelopment. At the same token, the increased demand for office space due to economic growth activated downtown redevelopment by private investment. Ultimately, through such methods, Seoul has modernized its sub-standard housing and traditional downtown spaces without public investment. Seoul’s role in the redevelopment process was that it set up the redevelopment framework plans, designated redevelopment areas, and then waited private investment to supervise the execution of those plans. In order to induce private investment, it had to allow
high-density development that ensured profit for the developers.

Due to the very characteristics of the redevelopment method, however, Seoul’s urban redevelopment was subject to various criticisms regarding its validity as public policy which was supposed to serve public interests. In particular, in the 1990’s when the livable urban environment began to emerge as a social issue, which would not have been a problem if Korea were still poor, the redevelopment policies became under serious social debate around its social contributions. Criticism arose stating that the housing redevelopment projects contributed to the benefit of the middle class and construction companies rather than to those in the low-income brackets who used to reside there. Downtown renewal was also subject to heavy criticism in that it damaged the identity and historical aspects of downtown Seoul and restrained voluntary renovation in this unique urban fabric. In addition, criticism arose against both the housing redevelopment and downtown redevelopment in that they brought about the excessive dense, high-rise development and thus damaged the urban landscape. The principle of equity was another serious question regarding the redevelopment led by the large conglomerates.

As of the late 20th century, after over 30 years of urban renewal practices, the general urban condition of Seoul presents a stark contrast to that of the late 1960s where urban redevelopment policies were first introduced into Seoul’s administration. Urban structure, infrastructure, and the overall condition of individual buildings have remarkably improved. The economic capability of the land and building owners as well shows a wide difference from those of the 1960s, the era of poverty for Korea. Furthermore, there emerges a higher demand for better environmental quality in more civilized urban community. Looking at this change, Seoul is pondering whether it should continue its urban redevelopment programs they way it has done thus far.
Notes


5) ibid. pp. 254-266.

6) ibid.


9) ibid. p. 1177.

10) ibid.


20) ibid.
22) Kim, Yong-ho, 1994, op. cit.
24) ibid., pp. 100-101.
37) Seoul City History Compilation Commission, 1990, Seoul 600 Years History: Folk, pp. 385-386.
42) Prior to the mid 1960s, the first City Planning Law of 1962 already contained a clause on squatter area improvement providing a room for public downtown renewal. The law, however, was vague in its implementability and it was in the law that the central government instituted. It is hard to view this clause as a policy concern of Seoul Metropolitan Government.
44) ibid.

| Kwang-Joong Kim & II-Sung Yoon |
46) ibid. pp. 139-141.
47) ibid.
48) ibid.
49) Seoul Metropolitan Government, 1971, '71 City Administration Outline.
50) ibid. p. 148.
51) ibid.
52) Sohn, Jung-mok, 1998a, op. cit.
54) Sohn, Jung-mok 1998c, op. cit., pp. 119-121
55) Sohn, Jung-mok 1998c, op. cit., p. 120.
57) Special tax reduction was given to Lotte Hotel that has been built on the sires of old Bando Hotel and the National Library. Late President Park Chung-hee is believed to have a particular interest in the construction of Lotte Hotel.
58) Seoul Metropolitan Government, 1978, '78 City Administration Outline, p. 211.
60) ibid. p. 17.
61) ibid. p. 12.
62) ibid. p. 4 and p. 30.
64) Seoul Metropolitan Government, 1979a, '79 Seoul City Administration, p. 149.
65) ibid.
70) In addition to commercial districts, the floor area ratio (FAR) was relieved for semi-residential areas and general residential areas in downtown area. For example, in case of the semi-residential areas, the FAR were 450% for the Gangbuk area (north of the Han River), 500% for Gangnam area (south of the Han River), and 750% for downtown redevelopment areas. In case of general residential areas, Gangbuk 250%, Gangnam 300%, downtown redevelopment areas 400%. Seoul Development Institute, 1995, A Study on District Designation in Downtown Redevelopment Areas, p. 30.
72) For example, the land prices of Mugyo-dong area jumped 3-4 times,

73 ibid. p. 49.
75 ibid. pp. 105-107.
77 Revelopment Ordinance (Article 3 Clause 2) of the Urban Redevelopment Law stipulated the downtown redevelopment master plan should, if any, specify the renewal methods of "rehabilitation renewal" in which building owners were held responsible for the renovation of individual buildings and "preservation renewal" where traditional buildings and other buildings worth preservation kept intact, so that the developer could make a choice of renewal method.

81 For incorporation of residential function, a privileged floor area ratio (FAR) was to be applied as an incentive in varying degrees for respective areas. For example, neighborhood commercial districts was given a maximum FAR of 900%, general commercial districts 1,000%, central commercial district 1,200%. As neither neighborhood commercial district nor central commercial district were designated in downtown areas, a maximum FAR of 1,000% which was for the general commercial district was applied unilaterally.
83 'Redevelopment Candidate Areas' refers to a spatial limit within which the 'downtown redevelopment' is allowed. If an area was designated as 'redevelopment candidate area', only collective redevelopment was possible to the prohibition of individual construction.
84 In some cases, though very rare, one redevelopment district may involve only one building (for example, Gyobo building), however in most cases one redevelopment area was consist of many sub-redevelopment districts: in most cases one redevelopment area was composed of 10 sub-divided districts plus roads, parks, and parking lots.
86 ibid. p. 23.
87 From 1985, civilian developers were made responsible for the construction of public facilities, both land and facilities, within the downtown redevelopment areas.
89 Big conglomerates 'chaebol' actively participated in the downtown developments. Samsung carried out 6 downtown developments, Hyundai 4, and 3 for each Daewoo, Kolon, and Lotte. Sohn, Jung-mok, 1998b, ap. cit., pp.104-105; Seo, Chung-won, 1998, A Study on the Public Institutions-
90) Downtown redevelopment provided various advantages to big conglomerates. It was an excellent chance for them to build headquarters in downtown areas which would free them from rental charges, plus rental incomes from renting remaining spaces, and capital increase from real estate investments. Yoon, Il-sung, 1989, "Methodology of Urban Studies from Capitalistic Perspectives", Sabore Bipyong (Society Criticism), Vol. 2, pp. 127-128.
93) An average number of floors of the buildings built between 1976 through 1998 was 15 floors. In the 1970s it stood at 13 floors but in the 1980s it increased to 17 floors and 1990s to 19 floors. Seoul Metropolitan Government, 2001, op. cit.
95) Up until 1985, renovation (renovation and a large scale restoration), not to mention new construction was not allowed.
97) ibid.
100) ibid, p. 44.
101) ibid, p. 58.
102) ibid, pp. 59-61.
References


594


———. (1999). "Government-led partnership as the subject of downtown redevelopment" in *Space and Society,* No.11.

Seoul Development Institute and Institute of Seoul Studies (University of Seoul). (2000). *Seoul, Twentieth Century: A Photographic History of the Last 100 Years,* Seoul Development Institute · Institute of Seoul Studies.


———. (1971). *71 City Administration Outline.*

———. (1973). *73 City Administration Outline.*

———. (1974). *74 City Administration Outline.*


———. (1979a). *79 City Administration.*


———. (1983). *83 City Administration.*


595
Timeline of Spatial Transformation of the 20th Century Seoul

This chronology describes the major spatial transformations that happened in Seoul during the 20th century. To provide historical context around the turn of the century, it begins in 1890. Some noteworthy social events were added in Italic.

1890  • Russian Legation building completed

1892  • Yakhyeon Cathedral (first Catholic church in Mallyeong) completed

1894  • Japanese began military-purpose electric power line work

1895  • Yeongeunmun Gate removed
      • First electric lights in Korea installed at Deoksugung Palace
      • First generation of modern elementary schools opened
1896
- The Independent Arch’s Groundbreaking Ceremony (outside the Seodaemun Gate)
- The Independent Newspaper (first private newspaper) founded

1897
- Wongutan Pavilion completed
- The Independent Arch completed
- Hwaseongdae Park was built on the slope of Mt. Namsan
- The first Kerosene street lamp appeared in Seoul
- Namdaemun Market formed
- Gyeong-In (Seoul-Incheon) Railway construction began
- Hangang Railway Bridge (the first bridge over the Hangang River) construction began
- Tappal Park (Pagoda Park) opened

King Gojong’s Inauguration Ceremony was held at Wongutan
Empress Myeongseong (King Gojong’s wife) was assassinated

1898
- Electric streetcar line construction began
- Hanseong Electricity Co. established
- Jonghyeon Cathedral (now Myeongdong Cathedral) completed

1899
- Hwang-gung-u was built North of the Wongutan
- First electric streetcar line completed. (Seodaemun gate to Cheongryangri)
- First railway (Gyeong-In Line: Seoul-Incheon) opened
- First streetcar line extended to Yongsan
- Law on Prevention of Contagious Diseases proclaimed

Court officials began wearing western style clothes

1900
- Seoul population stood at around 200,000 - 300,000
- Hanseong Electricity Co. installed the first 3 electric streetlights in Jongno.
- Electricity made available to civilians at Jingogae Hill (presently Myeongdong)
- Hangang Railway Bridge opened
- First long distance phone call between Seoul and Incheon

1901
- Electric lamp lighting ceremony for homes in Seoul
• Ground breaking in Youngdeungpo for the northern Gyeongbu (Seoul-Busan) Railway
• High-rise construction banned in the vicinity of Gyeongwungung Palace
• Haeminwon Hospital (First modern style hospital) opened

First Korean emigrant to the U.S.

1902
• First telephone lines for civilian use (Seoul-Incheon, Seoul - Gaeseong)
• Construction of the Gyeong-Eui (Seoul-Shineuiju) Railway began
• Sotnack Hotel in Jeongdong, first western style hotel in Korea, opened.
• Road improvement around the Gyeongwungung Palace began
• Honggyo Bridge was built, linking Gyeongwungung Palace and Gyeongheuigung Palace

Korea’s national anthem adopted

1903
• First automobiles (For royal families only) appeared
• First water facility installment allowed to American Kolbran
• First telegraph service made available (Seoul-Mapo, Seoul-Suwon)
• A trolley accident with children led to demonstration for 'no trolley'

Hwangseong Young Men’s Christian Association (YMCA) established
Hanseong Electric Company showed first motion picture

1904
• Jejungwon Hospital (Now Yonsei Severance Hospital) completed
• Public restroom installed
• Sinjeong red-light district opened
• Sanitation laws enforced

 Russo (Russian)- Japanese War broke out
Korea-Japan Agreement signed - Japan occupied Yonguan as its military base
1905
- Drinking water supply facility built
- Entire Gyeong-Bu Railway Line completed
- Gyeong-Eui Railway Line put in operation
- Japan seized a 3-million pyeong plot outside Namdaemun Gate for military use
- Train factory built in Yongsan
- Dongdaemun Market (East Gate Market) established by rich Bobusong (Peddlers)
- Gwangjang Market opened
- Seoul Station was renamed Seodaemun Station
- The Yangjeong Parisuk, Roseong High Schools opened

*Japanese army took charge of maintaining public order in Seoul

*The Enba Protectorate Treaty between Korea and Japan concluded

1906
- Japan proclaimed regulations on land and house registration, and street management
- Japan proclaimed regulations on road control and housing construction
- The Japanese Residency-General of Korea was built on Mt. Namsan overlooking the Jongmyo Shrine and Gyeonggwungung Palace
- Mitsukoshi Department Store (Savoy Hotel) was built by Japanese in Myeong-dong
- Road Management Bureau established in Naebu (Ministry of Domestic Affairs)
- Water Utilities Bureau established in the Takijibu (Ministry of Taxation)
- 8 elementary schools opened (including Gyedong Elementary School, Jaedong Elementary School)
- The Jung Dong Public School, Jin Myung Girl's School, Hwimun High School established
- First baseball game played
- First fire insurance business began

*Japanese policemen assigned at each police station

1907
- Wongudan Pavilion (Korea's symbol of the independence of the Daehan Empire) was removed
- Demolition of castle walls at Namdaemun Gate (South Gate) and Dongdaemun Gate (East Gate) began in preparation for the Japanese prince's visit to Korea
- The Japanese Residency-General of Korea moved to
Hwasongdae near Mt. Namsan
- Road improvement works around Namdaemun area began
- Barbershop opened in royal palace
- Gyeongseong Meteorological Station established
- Mapo Brick and Roof tile Factory opened
- Hanseong Prison built
- Scollin Vocational High School established
- Gyeongseong Exposition held

King Gojong abdicated from the throne and King Sunjong succeeded him

1908
- Kolbran completed water supply facilities
- Hanseseong Bu (City Hall) moved to a new building
- Gyeongseong Prison moved to a new building
- Dachan Hospital (Seoul National University Hospital) opened
- Wongaksa Theater built
- Rickshaw (two-wheeled vehicle pulled by 1-2 persons) Business Regulations enacted

Oriental Development Company (Japanese Trade Company) established

1909
- Zoo and botanical garden built on the Changgyeonggung Palace grounds, and opened to the public
- Construction of the Gyeongseong Court House began
- Gyeongheugung Palace was removed, Gyeongseong Middle School opened

Cholera widely spread

1910
- Hanseseong Bu renamed to Gyeongseong Bu
- Construction of the Gyeong-Won (Seoul-Wonsan) Railway began
- Hanyang Park opened at Mt. Namsan
- Gyeongbokgung Palace opened to the public
- Electric lamps installed on Donhwamun Gate (main gate of Changdeok Palace)
- Gwanghwamun Post Office completed
- Seokjojeon of Deoksugung Palace completed
- Saemunan Church completed
- Gyeongsong Movie House (first permanent movie theater) opened
Trolley began running on the Sin Yongsan Line (Yongsan Hangang)
Proclamation of regulations on land measurement
Proclamation of regulations on the Temporary Land Survey Bureau

Korea annexed to Japan (subornation without rights)
Finger-print regulation started
Decree on Structures of the Residency-General announced
Decree on Korean Company proclaimed

1911
Reorganization of the administrative districts in Gyeongseong Bu (5-bu, 8-myun)
Decree on Land Survey announced
Decree on Land Expropriation announced
Regulations on road announced
Regulations on water supply announced
Tree planting for city beautification
Northern wall of Dongdaemun Gate (East Gate) removed
Railway between Yongsan-Euijeongbu City (part of Gyeong-Won Railway) opened
Gyeongseong city improvement project began
Hwanggeumjeong improvement project began
Streetcar double-tracking project between Seodaemun and Dongdaemun completed

Education Decree for Chosun proclaimed.
Seonggyeungwan (National Confucian Academy) abolished

1912
Proclamation of the Decree on Land Survey and Enforcement of Regulations (land survey began in earnest)
Gyeongseong city improvement project (sigu-gye-jeongsu-up) began
Taepyeongtong road improvement projects
Streetcar line along Euljiro (then Hwanggeumjeong Line) began operating
Gyeongseong Prison built in Mapo
Japanese began operating taxi businesses in Seoul
Gyeong-Won (Seoul-Wonsan) Line opened
Construction of the Chosun Bank completed
Danseongsa Art Theater opened
Regulations regarding road maintenance and repair instituted
Regulations on cargo trains proclaimed
- Regulations on grave yard/crematory, burial /cremation announced

All public officials were ordered to wear military uniforms

1913
- Expansion of administrative boundary of Gyeongseong Bu
- Regulations on buildings along the roads announced
- Gyeongseong city improvement project continued
- Gyeongseong land survey completed
- Land grading and land classification of Gyeongseong completed
- Wondan removed and the site was occupied by the colonial government’s Railway Hotel (3 stories above and one underground)
- Hwanggeumjeong - Ttulseom tramway construction began
- Double-tracking of the Hangang Railway Bridge began
- 19 public burial grounds announced

1914
- Abolition of the 5-bu and 8-myun system, Bu system introduced
- Road originating point signs installed at the Hwangro-lyeon Plaza (Now Gwanghwamun junction)
- Abolition of the Water Sellers’ Association
- Honam Railway opened
- Urban Area Tax Ordinance proclaimed
- Regulations on horse carts instituted
- Great fire at the Gwangjang Market

Regulations on commercial markets announced

1915
- Some of buildings in Gyeongbok Palace removed or sold in preparation of the first modern trade fair titled ‘Chosun Mulsan Gonjinhoe’ (Korean Products Fair)
- Double-tracking the streetcar line between Gwanghwamun-Independence Arch began
- Gyeong-Chun (Seoul-Chunchon) road completed
- Gyeongseong Post Office completed
- Colonial government’s Museum completed at Gyeongbok Palace
- Regulations on cars announced

Korean Products Fair, first modern trade fair in Korea at Gyeongbok Palace held
1916
- Construction of new colonial government building at Gyeongbok Palace began
- Night market opened in Jongno

Yeouido airfield completed
Severance Medical College opened

1917
- Hangang Bridge completed
- Gyeongseong Bu completed land survey project
- First fire watchtower built at the Namseongjeong Fire Station
- Regulations on rickshaw (two-wheeled vehicle pulled by 1-2 people) announced

Chosun Industrial Bank established

1918
- Streetcar began operating in the Gwanghwamun area
- Danseongsa Theater remodeled into a movie house

King Yoongchin married a Japanese imperial family member

1919
- Jangchundan Park opened
- Double-tracking the Gyeong-Eui Railway began
- Yongsan 20th Division Command established
- Gyounseong Taxi began rental business with two 'Dodges'

King Gojong passed away
Korean leaders protested with Declaration of Independence at Taehwagwan
March 1st Independence Movement erupted
The first Korean movie was shown at Danseongsa Theater

1920
- Streetcar between Seodaemun (West Gate) and Namdae-mun (South Gate) opened
- Railway line opened between Namdaemun and Susaek
- Part of the Gyeongbokgung Palace sold to private owner
- Gyounseong Chamber of Commerce building completed

Daily papers of Dong-A Ilbo and Chosun Ilbo founded and magazines of Gaebyeok and Pyehee began publishing
1921  • Dongdaemun - Gwanghwamun streetcar began operating
      • Speed limit system enforced
      • Gyeongseong Municipal Housing completed
      • Sajik Park opened
      • Keep-to-the-left system for pedestrians enforced
      • Georgia Department Store (Midopa) opened

YWCA founded

1922  • Gyeongseong Housing Relief made housing available to the homeless

Kim Sang-ok threw hand grenade at Jongro Police Station
Boys Scouts established

1923  • Taepyongro-Gwanghwamun road improvement began
      • Cheonggyecheon stream expansion project began
      • Gyeongseong Telephone Office established
      • Jongro - Anguk-dong streetcar began operations

Chosun Mulan Jangnyohoe (Movement to make and use Korean Products) founded
National Women's Tennis Tournament

1924  • Sajikdan (altar to honor national deities) was changed to Sajik Park
      • Hyochangwon (grave of the first son of King Jeongjo) was changed into Hyochang Park
      • Gyeongseong Ilbo Building (at the current Press Center site) completed.
      • Hullyeonwon's Military Training Grounds expanded to 20,000 pyeong

Basketball, baseball tournaments held at YMCA
First radio broadcast successfully aired

1925  • Gyeongseong Station (Seoul Station) built
      • Gwanghwamun Road expansion
      • Double-tracking of the streetcar line in the Gwanghwamun area opened
      • Shinto Shrine built on Mt. Namsan
      • Gyeongseong Gymnasium opened
      • Gyeongseong Bu City Hall scaffold raising ceremony
      • The Hangang's 1st Steel Railway Bridge collapsed due to flood
1926
- Colonial government office moved to Gyeongbokgung Palace
- Gyeongseong City Hall completed
- Chosun Trade Fair held at Gyeongbokgung Palace
- Public Transportation Bus Services first appeared
- Gyeongseong Imperial University opened
- Dong-A Ilbo office building completed (old Myeong-wongwan)
- Ahyeon-ri citizens demonstrated against a sewage disposal system built in their neighborhood

King Sunjong passed away
June 10th Mansei Movement (Citizens begin to shout Mansei, long life to Korea)

1927
- The Old Gwanghwamun Gate was removed and a modern stone gate built in its place
- Mitsui Co.’s large department store opened (currently Shinsegae Department Store)
- Gyeongseong City Planning Research Institute established

Gyeongseong Radio Station began airing

1928
- Taepyegongtong - Namdaemun streetcar line opened
- Gyeongseong City Bus Service began operations
- Yeouido Airport opened

Umigwan Movie Theater showed a talking picture

1929
- Squatter village in Songwol-dong cleared
- Gyeongseong Tenants Confederation established

Gyeong-Pyeong (Seoul-Pyongyang) Football Competition held in Seoul
Schools in Seoul went on strike, following the Gwangju
Student Movement

1930  • First comprehensive city plan drawn
      • Gyeongseong Electricity Company completed the Dang-inri Power Plant
      • Squatter village in Sindang-ri cleared
      • Squatter village in Ichon-dong cleared
      • City crematory built in Hongje-dong

1931  • Hwasin Department Store opened

1932  • Chosun Stock Exchange established
      • Seoul bus drivers went on strike

1933  • Seoul-Tokyo direct telephone line installed
      • Commercial Electricity Ordinance proclaimed
      • Anti-Erosion Work Ordinance proclaimed
      • City graveyard built in Mangu-ri
      • National ordinance for preservation of the places of natural beauty and historic interest,
        national treasures, natural monuments proclaimed
      • Censorship Laws on phonograph records enforced

1934  • Chosun City Planning Decree announced
      • Squatter village in Bangsanjeong cleared
      • Seoul sewage collectors went on strike

1935  • Chongryang-ri, Wangsim-ri, Mapo, Noryangjin, Heuk Seok-dong, Youngdeungpo incorporated into Seoul
      • Gyeongseong Bumingwan (performance hall) completed
      • Ewha Women’s College moved to Shinchon

      First Korean talking movie Chunhyang-jeon showed

1936  • Seoul population reached 500,000
      • First City Planning Commission meeting held
      • Conference on Chosun City Problems held
      • Taximeters system introduced
      • Gwangjin Bridge completed
      • Gyeong-Bu express train ‘Akashi’ trial run
      • Hwasin Department Store completed
      • Ordinance of Sewage Collectors’ Clearance announced

      Ahn Ick-tae composed the national anthem of Korea

607 | Timeline of the 20th Century Seoul
Son Ki-jung won gold medal in marathon at the Berlin Olympic Games
Dansungsa showed a movie 'Arirang'

1937
- Namdaemun Gate closed to traffic
- Active land readjustment projects began
- Hwasin Department Store reconstructed after fire (Architect, Park Kil-ryong)
- Gyeongseong Traffic Safety Association founded
- Dongdaemun - Icheon wide-gauge railway construction project began

Schools were asked to post Japanese emperor's picture
Shinto Shrine visit on 'the day of patriotism' was made compulsory

1938
- Circular Plaza built in front of Namdaemun Gate
- Dongsomun gate removed
- Deoksu Palace Museum opened
- Bando Hotel completed
- Taehyeon area (500,000 pyeong) land readjustment
- Gyeong-In Industrial Complex area was designated
- Regulations on road use revised, Chosun Road Ordinance instituted
- Gasoline rationing system enforced
- Chosun Land Registration Association formed
- Sookmyung Women's College established

Promulgation of National Mobilization Order issued

1939
- Gyeongseong Bu decided to create 20 anti-air raid park
- Gyeongseong Bu, 4-Year Road Pavement Plan
- Plan for covering Cheonggyecheon Stream to build a roadway proposed
- 300,000 pyeong industrial complex designated in Youngdeungpo
- Sanggakji Rotary (Intersection) completed
- Squatter area in Donamjeong cleared
- Gyeongseong Land Development Company established
- Double-tracking the Gyeongseong - Daejeon railway completed
- Gyeong-Chun railway opened

National Draft Order proclaimed
Koreans were ordered to change their names to Japanese
1940
- Regulations on air-raid building construction proclaimed
- Namsan parkway designated
- Hannamjeong land readjustment, high-quality housing area formed
- Land and Building Control Ordinance proclaimed
- Laws on graveyard regulations revised (to a license system)

*Chosun Ilbo, Dong-A Ilbo forced to close
Blackout trainings and wartime living system enforced*

1941
- Chosun Housing Corporation established
- Chosun Housing Corporation began first large scale public housing construction project in Dolim, Sangdo, Bongdaebang areas
- Train began operating on the double-tracked railway between Gyeongseong and Sinchon (part of the Gyeong-Eui Line)

*Science and Engineering Departments introduced at Gyeongseong Imperial University*

1942
- Seoul population reached 1 million
- Express streetcar began operation in downtown Gyeongseong
- Jungang Railway completed

*Physical examinations for military draft began
National registration of young people conducted*

1943
- Branch office system annulled, district (Gu) system enforced

*Medal Scraps Collection Ordinance proclaimed*

1944
- 5 evacuation locations announced
- Mapo-gu (administrative district) newly created
- Gyeong-Bu, Gyeong-Eui lines double tracking completed

*Evacuation policy enforced after the Tokyo Bombing
Korean student soldiers drafted
General drafting began
Voluntary Service Corps Ordinance (women entertainers for Japanese soldiers) proclaimed*
1945
- Seoul population once 1 million in 1942 reduced to 900,000
- Seoul land size 136km², total road length 927km (only 21% were paved)
- Some 5,000 cars counted
- Gyeongseong renamed as Seoul
- Shinto Shrine burned and removed
- Gyeongseong City Library opened
- Double tracking of the Busan–Sineuiju Railway completed

Liberation from Japanese colonial rule
Radio broadcasting in Korean resumed

1946
- Seoul population grew to 1.26 million
- Gyeong-Bu Express Train began operating
- Seoul National University (formerly Gyeongseong Imperial University) established
- Name of dongs (neighborhood units) of Seoul were changed

Anti-trusteeship civic demonstration
First Soviet-US Joint Commission

1947
- Meiji Theater renamed to Sigonggwan
- City Health Center opened
- Citizenship certificate system

1948
- Seoul insignia chosen
- Jongro night market revived
- Elementary schools in Seoul adopted a 3-shift system for 1st and 2nd grade students
- Electricity transmitted to homes by rotation
- Seoul City commissioned civilian city-cleaning works

Member of the Constituent Assembly election, Constitutional Assembly held
Constitution and Laws on Government Organization proclaimed
Establishment of the Republic of Korea
Yun Bo-sun became Mayor of Seoul
1949
- Seoul administrative boundary expanded (twice the existing size)
- The four districts of Eunpyeong, Ttukdo, Sungin, and Guro incorporated into Seoul City Planning Area
- Seongbuk-gu newly created
- A campaign "Make a Clean Sweep of Japanese Manners" conducted to remove Japanese manners and language from Korean society
- Bumingwan renamed the National Theater
- KNA (airline) began servicing the routes of Seoul-Gangneung, Seoul - Gwangju- Jeju, and Seoul - Ongjin

The Local Autonomy Law proclaimed
Kim Gu assassinated, National funeral service held

1950
- Seoul population reached 1.5 million, but dropped rapidly due to the Korean War
- Names of the neighborhood unit unified as 'dong'
- National Theater opened
- Hangang Bridge, Gwangan Bridge bombed
- US fighter planes bombed Seoul

The Korean War occurred, 40% of Seoul's population left Seoul

1951
- Seoul restoration projects conducted
- Gyeong-Bu Railway reopened
- Cheonggyeong-ri - Chuncheon railway reopened
- Hangang Railway Bridge restored
- Seoul - Busan direct passenger train began operating
- Tiukseng reservoir began supplying water to homes
- Double tracking the Yongsan-Cheonggyeongri Railway began

Double-tracked Seobinggo-Wangshimri Railway began operating
January 4th Retreat of South Korean troops from North Korean Territory and Seoul recaptured
Elementary schools in Seoul reopen for classes
Banks in Seoul back to normal operation

1952
- Downtown land readjustment projects began for Eulji, Chungmu, Gwancheol, Jongro 5-ga, Mukjeong areas
- Seoul Restoration Plan after Korean War announced (First city plan by Koreans)
Double-tracked railway between Wangsimni and Cheongryangri began operating
Double-tracked Gyeong-Bu Railway began operating
40 public health centers established
Seoul-Busan wireless telephone business opened

Amendments to the Constitution
Elections for president and vice president
Syngman Rhee elected as president

1953
- Seoul’s population (650,000) grew back to over 1 million
- Evacuated government returned to Seoul
- Nine principles for the restoration of Seoul announced
- Headquarters of the U.S Armed Forces in Korea moved to Yongan
- 8,000 homes in Seoul flooded due to heavy rainfalls

Truce agreement concluded

1954
- Seoul’s public bus service began operations
- Express train ‘Tongilho’ began operating on the Gyeong-Bu Line
- Gyeongbokgung Palace opened to the public
- Seoul Taxi Union founded
- Great fire at the Namdaemun Market

‘Freedom Woman’ by novelist Chung Bi-suk became a social issue
‘Sa-so-a-ip’ constitution amendment happened

1955
- The Ministry of Restoration finalized a 10 Year, 1 Million-Housing Construction Plan
- Seoul City began building 240,000 houses
- Unauthorized buildings in downtown areas cleared
- ‘Dong’ (neighborhood) administrative district system introduced in Seoul
- Regulations on road signs announced and put to work
- Myeong-dong Children’s Park opened
- Shinsegae Department Store (then Donghwa Department Store) opened
- Great fire at the Youngdeungpo public market
- Air Force took charge of Yeouido K-16 airfield

The National Assembly passed a National Dress Code Bill
1956
- Six-million home renovation plan announced
- National road pavement plan completed
- Great fire at Dongdaemun Market (East Gate Market)
- Seoul urged temporary building residents to move on a voluntary basis
- Seoul City Library opened
- Daehan Stock Exchange (Korea Stock Exchange) opened
- International Airport building completed

_The 3rd President and Vice President Election
Election of the members of the Seoul Municipal Assembly_

1957
- Seoul’s 'dong' (neighborhood) administrators elected
- Korea House opened
- KBS (Korea Broadcasting System) hall opened
- Seoul Station’s south wing completed

_Headquarters of the UN Forces Command moved from Tokyo to Seoul
First Miss Korea Contest held_

1958
- Hangang Bridge that was bombed during the Korean War rebuilt
- Seoul Baseball Stadium opened
- 24-hour electricity for homes in Seoul began
- Yeouido Airfield turned into a military airfield
- Supyo Children’s Park opened
- Seoul Station - Cheongryangri subway plan completed
- Changdeokgung palace, Jongmyo shrine opened to the public
- Great fire at the Dongdaemun Market

_Enccephalitis temporarily closed Elementary Schools nationwide
AFKN TV station opened_

1959
- Seoul’s population reached 2 million
- Seoul took charge of Jangchung Gymnasium from the army
- Korea UNESCO center completed
- Ground breaking ceremony for the National Assembly Building in Namsan area
- Typhoon ‘Sarah’ swept the country, the water levels at the Hangang River swelled to dangerous levels
- Dangin-ri Thermoelectric Power Plant began operation
1960
- Gimpo International Airport completed
- Traffic signal installed in Gwanghwamun area
- Mukjeong Children's Park, Seolim Children's Park opened
- Hyochang Playground completed
- Wongaksia Temple was completely burnt down
- Elections for Seoul Mayor and Municipal Assembly members held
- Gyeongmudae (presidential residence) renamed Cheonghwadae (Blue House)

April 19th Student Revolution, President Syngman Rhee resigned
Kim Sang-jin inaugurated as mayor of Seoul

1961
- Seoul population exceeded 2.5 million
- The Road Traffic Control Law instituted
- Mapo Apartment (first apartment complex) built
- Guro Housing Complex (2,500 homes, first large-scale housing complex) built
- Great fire in Changsin-dong burned down 225 shacks
- Gimpo Airport watchtower completed

May 16th Coup d'Etat, dissolution of the Seoul Municipal Assembly
Anti-Communism Law proclaimed
Youn Tae-il inaugurated as Mayor of Seoul

1962
- Building Law, City Planning Law proclaimed
- Cultural Property Protection Laws instituted
- Mr. Namsan was designated as a natural park
- Namsan cable car built
- Walker Hill Hotel completed
- Drama Center opened
- 400 Saenara Taxis put to business
- Diesel Power Plant in Wongsim-ri began operation
- Seoul City Officials Training Institute established
- Seoul - Busan express train Jaegeonho ('Restoration') began operation
- Public pay phone installed
- National Science Center opened
• Freedom Center ground breaking ceremony
• Disturbances regarding the clearance of the shacks in Hongje-dong

_first National 5-Year Economic Development Plan announced
Saenara Car, first assembled car put out to market

1963
• Seoul population reached 3 million
• Seoul boundaries expanded
• Jangchung Gymnasium opened
• Hangang Circuit Road opened
• Seoul Circular Road opened
• Namsan Outdoor Music Hall built on the site of the Shinto Shrine
• Laws on the Comprehensive National Land Development Plan proclaimed
• Laws on the Housing Fund Operation proclaimed

_The Democratic Republican Party founded
Nationwide Martial Law declared
Presidential Elections
Youn Chi-young became the mayor of Seoul

1964
• Prevention policy of population concentration into Seoul area prepared
• Seoul - Incheon Express bus began operating
• The Mangu line opened
• Namsan City Library building completed
• Overpass built in front of the Namsan Elementary School
• 5,000 flood victims left by heavy rainfalls in downtown areas
• Clearance of squatters in Bulgwang-dong brought a big social uproar

1965
• The 2nd Hangang Bridge opened
• Guro Industrial Complex completed
• The double-tracked Gyeong-In (Seoul-Incheon) line opened
• The 2nd Hangang Bridge freeway opened
• First large public buses (a.k.a. Sit-in bus) began operation
• Ministry of Construction announced a 25-year Road Development Plan
• Seoul - Chunchon national road pavement project completed
1966
- Seoul population reached 3.5 million
- New Seoul Comprehensive Plan announced
- Cheonggyecheon Stream Covering Project started
- Nakwon Arcade, Sewun Arcade completed
- Laws on Land Readjustment Project instituted
- Yanghwa Bridge opened
- Streetcar Removal Plan announced
- Underground walkway built in front of the Bank of Korea
- Underground shopping arcade at the entrance of Myeongdong opened
- Sejongro underground passage opened
- Underground pedestrian walks opened in front of Seoul Station, Commercial Bank, and Dongdaemun Gate
- Great fire at the makeshift huts in Namsan-dong
- Aesthetic Overlay District designated in downtown area
- Gwanghwamun and Seodaemun Gate restoration plan announced
- Ministry of Construction decided on the basic road network of Seoul
- Taeneung Training Center (athletes training center) completed
- Anti-pollution laws put to work in Seoul
- Construction of lighting facilities completed in the Seoul baseball stadium

First TV broadcast aired
Rice, briquette, and famine became political issues
1,000 flood victims of Siheung rioted
Kim Ki-soo (boxer) won World Champion title for the junior middleweight division
Kim Hyon-okc became the mayor of Seoul

1967
- Yeouido development groundbreaking ceremony
- Cheonggye elevated road completed
- Riverside No. 1 Road, the first toll road (Hangang Bridge-Yeouido) opened
- Guro-dong Export Industrial Complex completed
- Samgakji rotary opened
- Sajik tunnel opened
- The Guest House opened in Pil-dong
• UNESCO center completed
• 154 houses in a shanty quarter in Siheung collapsed due to spring rains
• City public bus services put in operation
• Underground pass at Uijuro Road and Taepyeongro Road completed
• Gyeong-In Expressway opened
• Streetcar tickets increased by 100 percent
• Underground arcade in front of City Hall completed
• Gyeonggi-do provincial office moved to Suwon
• Seun Arcade completed
• Road between Sajik-dong and Central Government building completed
• Park Law instituted
• Improvement plan for 30,000 unauthorized building announced

Student demonstrations denouncing the unfair 6th presidential election
The Second 5-Year Economic Development Plan announced

1968
• Seoul population reached 4 million
• Yeoeuido circling bank completed
• Gwanghwamun Gate restoration completed
• Gangbyeon (riverside) Road 2 completed
• Bugak Skyway opened
• Streetcar lines completely removed after 70 years operation
• Gwangju complex development plan announced
• Hangang River Management Authority established
• Barneun Island explosion conducted
• Gyeong-Bu Highway completed
• Double-tracking for the Seoul-Yeongdeungpo section of the Gyeong-In Railway completed
• Seoul began levying City Planning Taxes
• Capital Region Committee established at the central government
• Real Estate Speculation Control Laws established
• Statue of Admiral Yi Sun-sin unveiled
• Koreana Hotel opened
• The Cultural Property Management Authority at the central government decided to move the Daehanmun Gate backward 22 meters
• Yongbong-dong, Bongcheon-dong squatters removed
• Great fire at Namdaemun Market
Great fire in the village of makeshift huts in Dapsim-ri and Sinsel-dong
Underground pass in front of Chosun Hotel opened
Seoul-Suwon section of the Gyeong-Bu Expressway opened

North Korean armed commandos infiltrate into Seoul to assassinate the President of Korea
Sunday Seoul magazine began publishing
Citizen Card / Provincial Resident Card were replaced by Resident Registration Card
10-million won prize offered for an invention that counteracted against briquette gas poisoning
Clearance of the jongno 3-ga Red Light Districts under the so called Butterfly Operation
Hyundai Mobile began producing a passenger car 'Cortina'

1969
Samil Elevated Road completed
Namsan Tunnel No. 1 opened
The 3rd Hangang Bridge (Hannam Bridge) opened
Yeoeuido Comprehensive Development Plan formulated
Construction of Riverside Roads 1, 2 and 3
Construction projects commence for 100 citizen apartments in 16 places around Seoul
Entire section of the Gyeong-In Expressway completed
Seoul-Cheonan section of the Gyeong-Bu Expressway opened
Inwangsan Skyway opened
Laws on the Korea Highway Corporation announced
Seoul Station's west wing completed
Hankook Ilbo building completed
Daeyeongak Hotel completed
Great fire at the squatters in Sinsel-dong
Seoul Fortification Plan devised (Including Namsan Tunnel, Hangang River underground tunnel etc.) following the invasion of the armed brigade (Kim Sin-jo and others) of North Korea and North Korea's kidnapping of the US aircraft carrier, 'Pueblo.'

Constitutional Amendment for the third term of President Park Chung-hee
1970

- Seoul population reached 5 million
- National per capita income reached $250
- Yeoungdeungpo-gu population reached 1 million
- President Park Chung-hee ordered an establishment of Development Restriction Zone known as Green Belt
- Gangnam Development Plan announced
- Entire section of the Gyeong-Bu Expressway completed
- Wau Citizen Apartment collapsed, construction for citizen apartments put on hold
- Namsan Second Tunnel opened
- Riverside Road 4 completed
- Mapo Bridge completed
- Hangang Bridge completed
- Seoul Bridge completed
- Four subway lines decided
- Seoul Subway Construction Authority established
- Land survey began for the construction of the Subway Line 1
- Chosun Hotel opened
- Samil building completed
- Hangang Mansion Apartments completed
- Call taxi appeared in Seoul
- Dongdaemun Market completed
- Namdaemun-ro, Euiju-ro expanded
- Seoul National University’s move to Mt. Gwanaksan area announced
- Great fire at the shacks in Yongdu-dong and Seouichon-dong
- Crematory in Hongje-dong moved to Byeokje in Gyeonggi-do province
- Total ban on the discharge of wastewater into the Hangang River announced
- 15 air pollution measuring instruments installed in Seoul
- LNG Company founded, briquette shortage crisis in Seoul

*Yang Tae-sik become Mayor of Seoul*

*Zip code system introduced*

*Everyone over 18 required to have a Resident Registration Card*

*Chun Tae-il, a labor movement pioneer at Pyeonghwa Market burned himself to death*
1971
- Green Belt (Development Restriction Zone) designated
- Commencement of construction of the Subway Line 1
- Construction of the Yeouido 5.16 Plaza began
- The 3rd Hangang Bridge completed
- Jamsil area development began
- Revolt at the Gwangju complex
- City Planning Law incorporated articles on urban renewal project
- China Town removed, Sogong-dong area redevelopment
- Yeongdong Public Officials’ Apartment built to facilitate Gangnam area development
- Yeouido Sibum Apartment, the first high-rise apartments in Korea completed
- Bugak Tunnel opened
- Riverside Road 5 opened
- Traffic TV installed at major interchanges in downtown Seoul
- Manguri Public Cemetery was closed to additional burials
- Tongilro Road (Unification Road) opened
- Double-tracked Cheongryang-Seongbuk railway put to operation
- Seoul finalized the 8 Year Gas Pipeline Construction Plan
- 10-Year Comprehensive National Land Development Plan finalized and announced

\[ Fire at Dayeongak Hotel \]
Dong-A Ilbo reporters announced 'the declaration of protecting the freedom of speech'
Total blanket crackdown on people with long hair and hippy-style

1972
- Seoul population reached 6 million
- Housing Construction Facilitation Law instituted
- National Land Use and Management Law instituted
- Green Belt expanded in Seoul metropolitan area
- Comprehensive Yeongdong/Gangnam areas development promotion plan drawn up
- Gangnam development launched with South Seoul land readjustment projects
- Gangnam-gu newly created
- Jamsil Bridge opened
- New buildings in downtown area became subject to a height limitation of 35m (12 floors)
- Bando Hotel demolished and a 36 story building, tallest
at the time, built on the site
- Seoul set up a plan to remove 24,000 unauthorized buildings
- Aerial photographs began to be used in the crackdown on unauthorized buildings
- Crackdown on the disposal of wastewater in the upper part of the Han River
- Children's Grand Park construction began
- Heavy rainfalls in the central part of Korea left 200,000 flood victims
- Riverside Road No.6 opened
- Manguri Road expansion and straightening completed
- Seobu Sanitary Disposal Plant completed

*July 4th South-North Joint Communiqué announced*
*The October Reforms known as Si-wol-yu-sin announced*
*Pledge of Allegiance to the National Flag instituted*
*Housing lottery tickets put on sale*

1973
- President Park ordered an aggressive population decentralization policy
- Seoul announced that no new development be allowed until 1976
- National Land Planning Committee established under the Ministry of Construction
- Yeongdong, Jamsil Development Plan announced
- Yeongdong was designated as a Development Promotion District
- Yeongdong Bridge opened
- 1st AID Apartment built on loans from AID
- Dobong-gu, Gwanak-gu newly created
- An main terminal building of the Gimpo Airport completed
- Seoul's first downtown redevelopment areas designated (12 districts including Sogong-dong and Mugeo-dong)
- Guidelines for selection of squatting improvement prepared
- New Road and Traffic Laws proclaimed
- A new building of the National Theater built in Jangchung-dong
- Children's Grand Park opened
- Plan drawn to clear 40,000 unauthorized buildings on city-owned lands
- The Juangang Electric Railroad (Cheongryangri-Jecheon) opened
Long hair, super-mini skirts were banned
Simplified Family Ritual Standards (GaJeong Euirae Junchic) instituted

1974
- Seoul population reached 6.5 million
- Subway Line 1 opened
- Jamsil development plan announced
- Ministry of Construction announced no construction of apartments larger than 40 pyeong
- Seoul decided to restrain construction of new high-rises in the downtown areas
- Redevelopment plan for 11 poor housing areas announced
- Cheonho Bridge construction began
- National Library (at the previous Children’s Center) opened
- Nakseongdae Park completed
- Jeokseokchong Tomb (stone brick tomb) excavated in Seokchon-dong
- Great fire at the Daewang Corner left 88 dead

Gu Ja-choon inaugurated as Mayor of Seoul
Emergency measures issued by Government to ban anti-gov
ernment student movement
Assassination attempt against President Park Chung-hee
killed first lady Yuk Young-jo

1975
- Population ratio between the North and South of the Han River stood at 69:31
- Population restraining measures including move of City Hall to Gangnam area announced
- No new public buildings, schools, or department stores allowed North of the Han River
- Government designated 250 million pyeong in Gangnam area as Apartment Districts
- Height of apartment buildings restricted to 12 floors
- Namsan Tower completed
- Seoul decided to restore fortress walls
- National Assembly building completed in Yeouido Island
- Seoul National University moved to Gwanak campus
- Myeongdong Art Center closed
- Road expansion between Jongro 5 ga and 6 ga
- Road expansion projects completed from Central Gov-
ernment building to Anguk-dong

_Civil Defense Headquarters established
So called 'Unhealthy popular songs' banned from broadcast

1976
• Seoul population reached 7 million
• Cheonggye Elevated Road completed
• Urban Redevelopment Law constituted
• Samsung Headquarters in Taepyeongro completed
• Traditional Korean House Conservation District designated.
• Government designated 11 Apartment Districts including Banpo, Ichon, and Jamsil
• Road expansion between Sejongro and Jongro 1-ga
• Mogyoro Road expansion projects completed
• Downtown traffic countermeasures drawn up (move of traffic related businesses to suburbs)
• Jamsugyo Bridge opened
• Cheonho Road opened
• Yeouido Bridge opened
• Restoration project for the fortress walls at Samcheong-dong and Sukchongmun Gate completed
• KBS buildings in Yeouido completed
• Cheonho, Jamsil, Haengju, Seongsu Bridges built

_Last day of the month was decided as 'Community meeting day' known as Bansanghoe
First Korean brand car 'Pony' produced

1977
• Seoul population reached 7.5 million
• Seoul drew up a plan to have 3 sub-centers
• Central government adopted the Capital region population redistribution plan
• New apartment construction banned in the northern part of the Han River (Ganbuk area) to restrain population increases in downtown areas
• Seoul School District ordered 48 private lesson institutes in downtown move to Gangnam
• Ministry of Education banned local college students from transferring to colleges in Seoul
• Jeongdok Library opened on the site where Gyeonggi High School used to be
• 'Dong' (neighborhood) office established for each 'dong'
• 17 traditional Korean houses in downtown designated as cultural properties
Energy saving regulations announced limiting the use of lightings including neon signs
• Nanjido Island selected as a waste dumping site
• Gangseo-gu newly created
• Bus token system introduced
• Apartment height restriction (12 floors) abolished (later increased to 15 floors)
• Environment Conservation Law instituted
• Housing Construction Facilitation Law instituted
• Cheongryangri Station extension for passengers of the Gyeong-Chun line completed

Medical insurance system first introduced
Ban on rice wine lifted for the first time in 14 years

1978
• First Downtown Redevelopment Framework Plan drawn up
• Subway Line 2 construction began
• Namsan No.3 tunnel opened
• Gwacheon New Town development began
• Haengju Bridge opened, Wonhyo Bridge construction began
• 17 types of business were ordered out of Gangbuk (North of Seoul) according to the downtown function redistribution plan
• No new wedding halls to be allowed within 5 km from downtown area
• Transfer of local high school students to Seoul banned to control Seoul population
• Government finalized the Comprehensive Housing Land Provision Measures
• Sejong Cultural Center opened
• Municipal Children’s Hospital opened
• Sayuksin Park (built in memory of the six martyred royal subjects) opened
• Seoul Grand Park construction began
• Seoul National University Hospital completed
• Underground arcades built in Sogong-dong, Jongro 2-ga, Hochoyeon-dong, and Myeong-dong
• Road expansion (beginning section of the Euljiro road-Sinsin Department Store)
• Road expansion between Jongro 2-ga and Jongro 3-ga
• Sculptured Water Fountain built in the plaza in front of the Bank of Korea
• Sheraton Walker Hill Hotel main building opened
- Seoul announced local cultural property preservation areas
- Jongro-gu, Jung-gu were declared to be 'briquette free zone'

*Jung Sang-chun became Mayor of Seoul
A rally, 'Denouncing the North's Infiltration Tunnel', held at the 5.16 Plaza
Long distance public phones appeared

1979
- Seoul population reached 8 million
- 4 gu(s) newly created
- Strong regulations on building height, floor area ratios, building coverage ratio to curb population and traffic increase of Capital region
- Government banned news hotels, department stores, entertainment places in downtown
- Improvement plans for substandard housings in Seoul announced
- Gujibinro Road in Mapo included in the downtown redevelopment areas
- Ministry of Construction finalized New Town Development Plan for Gwacheon
- Gangnam Expressway Bus Terminal built
- Seongsu Bridge opened (11th bridge over the Han River)
- Jamsil Railway Bridge completed
- Korea Stock Exchange opened in Yeouido
- KOEX opened in Samsung-dong
- Plaza Hotel, Lotte Hotel, Silla Hotel, Hyatt Hotel opened
- Jamsil Gymnasium completed
- Road expansion from Sajik tunnel to the Central Government Building
- Road expansion from Sinsin Department Store to Anguk-dong Rotary
- National Land Development Corporation established

*President Park Chung-hee assassinated*

1980
- Seoul population reached 8 million
- Gangbuk vs. Gangnam population ratio stood at 60: 40
- Gwacheon New Town construction began
- Seoul sub-divided 44 dongs with a population of over 40,000
- Seongsan Bridge completed
First section of Subway Line 2 opened
- Moving and restoration works of the Independent Arch completed
- Ministry of Internal Affairs prepared the Population Concentration Prevention Measures for Large Cities
- Urban design system introduced in Building Law
- Urban Park Act, Natural Park Act, Forests Act enacted
- Housing Land Development Facilitation Law enacted

President Choi Gyu-ha resigned from presidency, Chun Doo-hwan replaced him
School Uniform Codes liberalized
Color TV airing began
Park Young-soo became Mayor of Seoul

1981
- Seoul population reached 8.5 million
- Yeongdong District 2 land readjustment project completed
- Seoul Metropolitan Subway Corporation established
- Lotte Hotel completed
- Comprehensive Han River Restoration Plan prepared
- Wonhyo Bridge completed
- Building height within downtown limited to 15 floors
- City Planning Laws revised to mandate a Comprehensive Plan and public hearings

Gukpung 81 held (a nationwide traditional arts & popular music festival)
Seoul selected as a venue for the 24th Summer Olympic Games at IOC meeting

1982
- Large parks planned in Dunchon-dong for commemorating the Seoul Olympics
- Government enacted the Capital Region Management Planning Act
- Government finalized Regulations restraining the building of public offices and large construction projects in the Capital region
- Banpo Bridge completed
- Jamsil Baseball Stadium completed
- Comprehensive Han River Development Project began (to be completed by 1985)
- Second section of Subway Line 2 opened (Jamsil Gymnasium-Seoul National Univ. of Education)
- Munhwa Broadcasting Company building completed in
Yeouido
- Hyundai Headquarters built in Gye-dong downtown

Kim Sung-bae became Mayor of Seoul
Midnight Curfew lifted
Professional baseball games first played

1983
- Seoul population reached 9 million
- Seoul decided to create Mokdong New Town with first application of new land development method known as Toji-gonggyenyum
- Eulchiro - Seongsu section of Subway Line 2 opened
- Downtown redevelopment facilitation measures announced to prepare Olympic event
- Restrictions on building height, FAR, and building coverage in downtown abolished
- Bond bidding system introduced for apartment purchases
- Seoul Olympic Games Organizing Committee established
- Namsan Scenic District (450,000 pyeong) was designated as a park district, and new construction in the area totally banned
- Urban Design Guidelines for the Jamsil District drawn up
- Hilton Hotel opened
- Gyobo building, Doosan building completed

Yeom Bo-byun became Mayor of Seoul
First Cheonha Jangja ('matchless warrior') Sireum (Korean wrestling) match held.
Football (Soccer) Super League opened

1984
- Seoul population reached 9.5 million
- Entire section of the Subway Line 2 completed
- Olympic main stadium completed
- Dongjak Bridge completed
- Seoul Art Center construction began
- Building Law introduced new housing type of multi-households (dasaedae) house
- Capital Region Management Framework Plan formulated
- Restrictions on new buildings in the Gangbuk area abolished
- Floor area ratio for the buildings alongside trunk roads relieved
Judicial Complex developed
Korea Export Center (KOEX) built
Daejaksu street design implemented
Seoul Grand Park opened
National Museum of Modern Art completed
Dongbang Life Insurance building completed

1985
Subway Lines 3 and 4 opened
Plan for 13 Hangang Riverside Parks finalized
The 63 building of the Korea Life Insurance Co. in Yeouido completed
Yeouido riverside athletic park completed and opened to the public
Plan for large scale housing complexes in Mok-dong, Sanggye-dong, Junggye-dong established (first attempt to build high-rises over 20 stories)
Restoration of the Gyeongbokgung Palace began on the former Seoul High School site
Press Center building completed
Korean Chamber of Commerce building completed
Dongho Bridge completed
Garak-dong Agricultural and Fishery Products Wholesale Market opened
Chain explosions of LNG gas lines in 14 dongs of Seoul
Jungbu Expressway construction works began
Comprehensive measures for housing construction facilitation prepared
Traffic impact assessment system introduced

The Lunar New Year was made a National Holiday
‘Hometown Visiting’ delegations from North and South Korea visited each other

1986
Han River Comprehensive Developments Project completed
Olympic Park completed
Olympic Highway (Daero) opened
Apartments for the players of the Asian Games completed
Han River Tourist boat began running
National Museum of Contemporary Art in Gwacheon opened
Jamsugyo Bridge improvement works completed
Shack dwellers of Sanggye-dong and Hawangsimri-dong staged demonstration
• A group of ancient tombs excavated in Seokchon-dong
• Changdeokgung Palace, Changgyeonggung Palace restoration projects completed

_The Asian Games held in Seoul_

1987 • Han River became completely free from untreated sewage disposal
• The Junbu Expressway opened
• LG's headquarters 'Twin Tower' in Yeouido completed
• Printemp Department Store opened in Euljiro Road
• Swiss Grand Hotel opened
• Guksagwan (Korean History Archive) opened
• Heavy rainfalls in Seoul area

_Kim Yong-rae became Mayor of Seoul
6·29 Declaration by Roh Tae-woo_

1988 • Seoul population reached 10 million
• Government finalized the plan of building 2 million housing units before 1992
• Seoul announced 'Seoul Comprehensive Plan for the 2000s
• Olympic Players Apartment and Reporters' Apartment completed
• Lotte World opened
• Inter-Continental Hotel, Ramada Renaissance Hotel opened
• Euljiro 2-ga redevelopment works completed
• Yangjae-dong grain wholesale market opened
• Sajik Daeje (Ancestral Worship Ritual at Sajik Shrine) restored
• Seoul Land (amusement park) opened

_The Seoul Olympic Games held
Goh Kun became Mayor of Seoul_

1989 • Seoul population reached 10.5 million
• Government announced New Town development plans
• A plan to build 180,000 apartments and houses in Bundang and Ilsan announced
• A plan to build 80,000 permanent public rental housing units in Seoul announced
• Olympic Bridge completed
• A plan to convert the US 8th Army Post site into a park
announced
- Seoul Horse Racing Track opened

*Pope John Paul II visited Korea*

1990
- Namisan Restoration Plan ("Restoring the original look of Mt. Namisan Campaign") finalized and announced
- Subway Line 5 construction project began
- The Namisan Circular Road construction project began
- New Town development began (Bundang, Ilsan, Sanbon, Pyeongchon)
- Seoul Comprehensive Plan first secured the legal basis
- Migratory Bird Preserve was designated near the Han River
- Seokchon Lake Park opened
- Bond ceiling system for apartment purchases introduced
- Dongseomun substandard housing redevelopment works began
- Korean house preservation district lifted in Samcheong-dong and Gahoe-dong
- Jayuro (Freedom Road) construction began
- Bugak Tunnel opened
- Floor area incentive introduced to facilitate housing in downtown redevelopment projects

Park Se-jik became Mayor of Seoul
10-day shift system (Sip-bu-jae) introduced for limiting the use of private cars

1991
- Namisan Tunnel 1 opened
- Seoul City Council founded
- Unhyeongung Palace restoration projects began
- Yeouido Saetgang park planned announced

South Korea, North Korea simultaneously joined the UN
Local autonomy system put to practice
Lee Hae-won became Mayor of Seoul

1992
- Number of private cars in Seoul reached 1 million
- Separate waste collecting system introduced
- Yongsan Family Park developed
- Construction projects began for the Gyeong-Bu Express Electric Railway
- "Gimpo Reclaimed Land Project" began by using wastes from Seoul and Incheon
• The Independence Park at Seodaemun Gate opened
• Sejongro underground parking completed
• Gyeongbui Palace restoration plan finalized
• Construction projects began for the Incheon International Airport in Yeongjongdo Island
• The Gyeong-In Oil Pipeline completed
• Construction projects began for Gimpo-IlSan’s section of the Seoul Outer Ring Road
• Regulations on floor area ratio and building coverage ration of the Gangbuk area relieved
• Haengju Bridge collapsed

Diplomatic relationship with China established

1993
• Seoul population reached 10.9 million (all time peak)
• Removal of the old colonial government building at Gyeongbok Palace began
• Gwanghwamun Building completed on the site of the old Gukje Theater
• Roads in front of Cheongwadac (the Blue House) and Mr. Inwangsan opened to the public
• Seoul Opera House opened
• Seoul City Museum construction project began
• Sanggye-Danggogae’s section of Subway Line 4 opened
• The 4th phase of the Capital region water works construction completed

President Kim Young-sam took office
Real name banking system enforced
Lee Won-jong became Mayor of Seoul

1994
• Seoul declared its 600th Year as national capital
• Seoul Citizen’s Day first designated on October 26th
• Namsan Foreigners’ Apartment removed by explosion
• Namsangol’s Korean House Village opened, 1000-year time capsule buried
• Seoul fortress wall restoration completed
• The Han River underwater tunnel of the Subway Line 5 opened
• Bundang Subway Line opened
• Unhyeongung Palace restoration projects began
• Construction of the Circular Highway along the Jeongneung Stream completed
• The Samgakji Overpasses removed
• Restoration of the fortress walls near the Haehwamun
Gate completed
- Highway from Jangji-dong to Bundang opened
- Seoul's public graveyard in Yongni-ri completed
- Seongsu Bridge collapsed
- Ahyeon-dong LNG gas storage tank exploded

Kim Il-sung died
Choi Byung-ryul became Mayor of Seoul

1995
- Seoul population reached 10.23 million
- Seoul population decreased for the first time in 37 years
- Number of cars in Seoul reached 2 million
- Reorganization of administrative districts: Gwangjin-gu, Geumcheon-gu, Gangseo-gu newly created
- Disposal of wastes in priced plastic bags enforced nationwide
- Private cars banned from driving on the date corresponding to the last figure on the owners license plate (Sip-buje)
- UNESCO designated the Jongmyo Shrine as a World Heritage
- Seoul announced a development plan for 5 strategic areas
- 2011 Seoul Comprehensive Plan drafted
- Citizen's park created on the site of the removed Foreigners' Apartment
- The removal of old colonial government building completed
- KCIA (Korea Central Intelligence Agency) on the slope of Mt. Namsan moved to Gangnam
- Seongsu Bridge restoration projects began
- Sampung Department Store collapsed

Cho Soon elected as Mayor of Seoul

1996
- Namsan Tunnel 1 and 3 began to collect 'traffic congestion toll'
- Public Bus Card system introduced
- Seongnam section of the Subway Line 8 completed
- Part of Subway Line 5 opened
- Ilsan Lake Park completed
- Construction projects for the Incheon International Airport in Yeongjongdo Island began

Korea, Japan selected to co-host the 2002 FIFA World Cup
Korea/Japan
1997
- Dangsan Railway Bridge repairs began

**IMF financial crisis**
**Kim Dae-jung elected President**

1998
- Yeoueuido Park opened
- World Cup Stadium construction began
- Milleore shopping arcade opened in Dongdaemun Market area
- Number of apartment residents exceeded single family housing residents

**Goh Kun became Mayor of Seoul**

1999
- Seoul population stood at 10.32 million
- The Inner Circular Road opened
- 'New Seoul, Our Han River' plan established
- Amsa-Jamsil section of the Subway Line 8 opened
- Bus token system discontinued
- Gangbuk's water purifying plant completed
- Dangsan Railway Bridge reopened

*Movie 'Shiri' made a huge success*