The Making of Chang-Shin District:

A Study in Top-Down and Bottom-Up Urban Development

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Author's Declaration

"I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public."

Abstract

This thesis studies the process of urban development as a mass phenomenon involving top-down and bottom-up paradigms, which work as a whole to achieve distinct characteristics seen in urban neighbourhoods. In this study, the top-down paradigm describes the ways in which the governing authorities frame a neighbourhood's development by controlling major urban factors affecting the overall city, whereas the bottom-up paradigm describes the ways in which individuals collectively build up their own neighbourhood through emergent patterns resulting from the decisions of each resident. In the final analysis, the workings of top-down and bottom-up urban development can be described as a cooperative process, where the on-going dialogue between the two paradigms allow them to work synergistically.

As a key place of industry and commerce throughout Seoul's history, Chang-Shin has maintained its historical and cultural characteristics even in the midst of the powerful forces of modernization that have changed the face of the city as a whole during the twentieth century. Remarking on the district's unique characteristics and its complex urban structure, this thesis probes around three questions: how did the district come to be? How does it function now? And how could the existing urban characteristics be effectively utilized to enrich the urban life in the district?

The intent behind the thesis is to analyze the rich and intricate urban phenomena observed in Chang-Shin, and further, to propose a modest design strategy that could improve the use of the district as a whole through working with local, small-scale components within the existing urban environment. The urban analysis categorizes the informal characteristics of Chang-Shin into programmatic and spatial types, within which the design proposal distinctly focuses on public space types as key urban elements where both the urban characteristics and social functions of the district are vividly manifested. At a time when the cultural authenticity of Seoul's urban environment has diminished drastically, acquiring clearer knowledge of Chang-Shin's urban structure and development process is critical for successfully managing the meaningful cultural heritage in the city.

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Chapter 1:

Theoretical Framework for Top-Down and Bottom-Up Urban Development

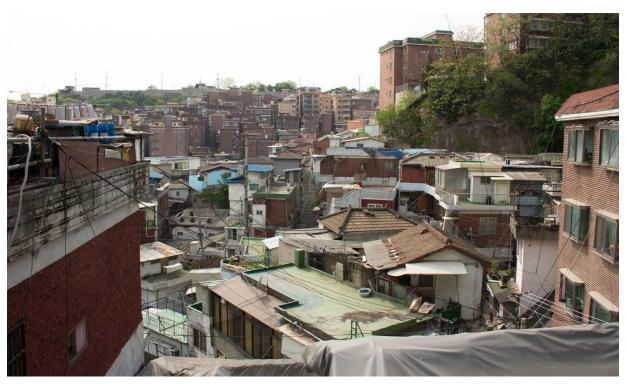


Figure 1.1

Introduction:

Encounters with Chang-Shin

Looking at Chang-Shin from above is an intriguing experience. Even from an outsider's perspective, it is evident that the houses in the milieu have been built independently of each other: they vary richly in size, shape, and colour. Yet, despite these differences, the buildings still appear coherent in their characteristics. As in a mosaic, observing the conglomeration from a distance dilutes all the varied details of individual houses, until only the common characteristics of the whole are distilled. In addition to the apparent harmony, there is also a sense of orderliness. Even without clear street patterns or a visible framework that would indicate traces of urban planning, it is reasonable to imagine informal hierarchies in the midst of the seemingly disordered mass of buildings.

The manifestation of order is not unique to Chang-Shin, but is common to many other city districts, and is in fact necessary for their proper functioning. What is intriguing about Chang-Shin District, however, is that many of its coherent characteristics and much of its patterning and order emerged without the involvement of conventional urban planning. Rather, as people migrated to the district throughout its considerable history and built their houses one by one, a complex city district formed, one that is

as fully functioning today as it has been for the past six hundred years. Out of this seemingly unlikely scenario, two questions become apparent: "how did Chang-Shin form, and how does the district work today?"

Chang-Shin is not a glamorous district inundated with visitors and tourists. In fact, the precinct goes unnoticed most of the time, thought of by many as an outdated neighbourhood. Nonetheless, its historical and urban significance within the city is monumental. The district retains a history as old as the city itself, having endured since the time Seoul was a small, newly established city.1 As the city around it expanded, Chang-Shin District developed with it. Within walking distance there are historical monuments renowned in Korea, alongside recreational and commercial infrastructures typical of a major city. The district of Chang-Shin itself consists of a variety of building types that have accumulated over time, developed within old street patterns and alleys, making for an eclectic exhibition of the city's urban history. The district

^{1.} Joo-Hyung Lee, Theories of Urban Form. (Seoul: Bo Sung Gak, 2001), 270. Seoul became the capital of Jo-Sun dynasty shortly after the dynasty was founded in 1392. The city plan was conceived in 1394, and the municipal boundaries and land division according to social class were established in 1395.

also serves a significant industrial role. Embedded within the residential fabric, there are thousands of small sewing factories that manufacture clothes day and night. This decades-old network of private factories was a driving factor that led the nation's economic boom in the 60s and the 70s, and continues to manufacture clothes for one of the biggest clothing markets in Korea today.

In the twenty-first century, many of Seoul's historical districts have been demolished by uncompromising redevelopment projects². Neighbourhoods once full of traditional houses have been replaced by high-rise apartment complexes. The traces of ancestral cultural livelihoods, along with the old alleys in which they were inscribed, have disappeared. At such a present time, Chang-Shin District and a few other remaining historical districts offer a unique sense of place and provides urban functions that are valuable cultural assets for the city. However, they too have been facing the ongoing pressures of redevelopment.

Only on the verge of erasing these last remaining historical artifacts, did the popular view of these neighbourhoods begin to change. The city's announcement of the proposed redevelopment of apartment complexes in

Chang-Shin and other historical districts in 2003 met with substantial resident opposition and were abandoned. Given recent legislation allowing the cancellation of redevelopments opposed by a significant number of residents, the city decided to implement urban revitalization plans that would preserve, enhance and utilize the existing industrial and cultural characteristics of the districts. Such intentional and systematic efforts that values cultural preservation over redevelopment, is unprecedented in Seoul.3 This change of attitude was not limited solely to government policy. Contrary to previous attitudes of indifference among the general public, the municipal offices, the media, and the public alike have been gradually recognizing the value of such districts. At the same time that the Seoul Museum of History began a series of projects documenting the cultural aspects of the districts in great detail, artists drew murals on the walls of these neighbourhoods as part of government-initiated projects, turning the areas into favoured tourist destinations. Prior to this time, some of the well preserved districts had already been serving as motels for foreign

^{2.} Hong-Bin Kang, The Republic of Apartments. (Seoul: Seoul Museum of History, 2014), 160. Under the centralized government that focused on industrialization and modernization in the 1960s, the city of Seoul demolished many slums and built apartments. The rapidly increasing population of Seoul also made it necessary.

^{3.} Yong-Gun Lee, "Seoul Switches from Newtown Redevelopment Plans to Helping the Socially Weak", Seoul Wishes, January 30, 2012, 1–4. In 2012, Mayor Wun-Soon Park proposed a radical redevelopment policy which prioritized livelihoods of the local community and the people, rather than the business interests of developers and property owners. Defending the rights of the weak and poor tenants and merchants, he announced measures of minimizing gentrification and reflecting the voices of the local community in the decision making process.

tourists who were looking for authentic places to stay overnight. Film producers also have been featuring the cultural urban environments as sets for popular movies and TV shows. Through such activities, districts such as Chang-Shin are being recognized as places of value and rarity, rather than of neglect and contempt.

Although the net changes have been positive, they are not without shortcomings. Although small-scale renovation projects such as art installations can significantly improve the atmosphere of urban space and attract tourists, they are of limited benefit to the residents and do not fundamentally improve the use of any particular place in the long term.

The present is a critical time for the preservation of the cultural identity of Seoul. Current management of these last remaining historical districts could lead either to the gain of a heterogeneous, vibrant urbanity for the city or the loss of its meaningful cultural heritage.

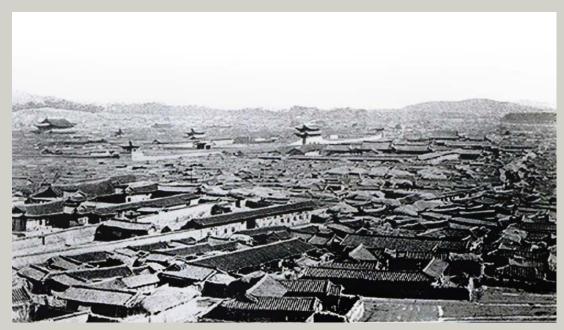


Figure 0.1 An aerial view of Seoul, 1900.



Figure 0.2 An aerial view of 21st century Seoul.



Figure 0.3



Visual Introduction:

Urban Characteristics of Chang-Shin



Figure 0.4 An aerial view of Chang-Shin District, seen from the eastern edge. In the foreground are older buildings, with newer buildings beyond.





Figure 0.5 Northern part of Chang-Shin District. Visible are rows of double-storey houses with pitched roofs, built along natural topographical lines and surrounded by multi-family houses.





Figure 0.6 A stark edge condition along the northern periphery of Chang-Shin. Seoul's mountainous landscape is in the distance.





Figure 0.7 East Gate, seen from a street along the city wall in Chang-Shin. On the left, a motorcycle store, which seems to account for the many motorcycles parked along the wall. They are a vital instrument behind the success of Chang-Shin's garment industry.



Figure 0.8 Further up the same street. The street eventually becomes the City Wall Park, where a large number of people visit on each weekend.





Figures 0.9–0.10 A pavilion and visitors on the other side of the city wall. Chang-Shin is seen in the background (top). A part of the city wall in Nak-San Park, located just north of Chang-Shin (bottom).



Figure 0.11 A moment of threshold from the city wall to Chang-Shin District.



Figure 0.12 For the most part, green space is hard to come by in Chang-Shin. Planters are an important means of fostering green spaces.



Figure 0.13 Entrance to Chang-Shin Street, the main street along the north-south axis with a high concentration of commercial activities.



Figure 0.14



Figure 0.15





Figures 0.16-0.17





Figures 0.18–0.19 While old-style markets have by and large been replaced by large chain stores in Seoul, many remain in Chang-Shin and serve important roles in the local neighbourhoods (top). A traditional shading device used on a grocery store on Chang-Shin Street (bottom).



Figure 0.20



 $\label{eq:Figure 0.21} Figure \ 0.21 \ \text{As the streets of Chang-Shin are too narrow and congested for trucks, motorcycles serve as a vital means of transportation for Chang-Shin's garment industry.}$





Figures 0.22-0.23





Figures 0.24–0.25 A carpenter's shop (top), and a laundromat (bottom).



Figure 0.26





 $\label{lem:figures} \textit{O.27-0.28} \text{ A pedestrian alleyway with some commercial and industrial programs near Chang-Shin Street.}$





 $\label{lem:figures 0.29-0.30} \textit{A} \textit{ street that crosses Chang-Shin Street perpendicularly, brimming with cars, motorcycles, and pedestrians, as well as heavier commercial functions.}$



Figure 0.31 Barren planters lined up along an alley in winter.



 $\label{eq:Figure 0.32} \emph{In Chang-Shin, the traditional and contemporary co-exist in close proximity: a western-style church building and a traditional house side by side.}$





Figures 0.33-0.34 A narrow alley of traditional houses during a late afternoon (top). The same road continued: the distant signage indicates the presence of an inn in this residential area.



Figure 0.35 "Garbage to be placed in front of one's own house". Garbage tends to pile up around street poles, troubling the nearby residents.



Figure 0.36





Figures 0.37-0.38





Figures 0.39–0.40 Scenes around taller residential buildings of 5–7 storeys.

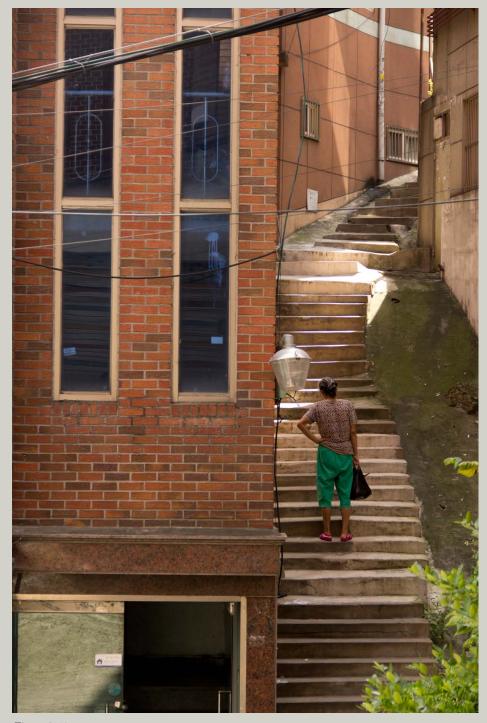


Figure 0.41



Figure 0.42 A building exhibiting unconventional ways of accommodating uneven topography.





Figures 0.43-0.44 Residential scenes in the northern parts of Chang-Shin.



 ${\it Figure~0.45~Interstitial~condition~between~new~apartments~and~older~houses.}$





Figures 0.46-0.47 Roof conditions in Chang-Shin.

Boundary Conditions of Chang-Shin

The city district can have two meanings: in one sense, city districts may refer to urban regions within defined municipal boundaries. In another sense, however, the word may refer to regions that are much more informally defined by their characteristics, which may be used interchangeably with the term, "neighbourhood". In this thesis, the word "district" is used as the second definition.

The city of Seoul is divided into twenty-five municipalities called, *Gu* (sometimes also referred to as "district" in English translations), and each Gu is further divided into *Dong*.

Located in Jong-No Gu, Chang-Shin Dong consists of three sub-districts: Chang-Shin Dong-1, Chang-Shin Dong-2, and Chang-Shin Dong-3. Among the three, Chang-Shin Dong-2 is directly adjacent to both the East Gate and the city wall, and is also the least redeveloped because of regulations limiting improvements along the city wall. Historically, the particularly steep slopes in the area also discouraged private companies from executing large-scale redevelopments.

Chang-Shin-2 is delineated from the surrounding regions by a few urban infrastructures that act as boundary conditions. On the southern side, there is Jong-No Street; on the west, a lengthy park built along the city wall. The park becomes more substantial on the northern end of the district, and the upper portion of its eastern side is separated by less prominent green spaces and a large parking lot.

These separations from the neighbouring districts give some degree of independence to Chang-Shin Dong-2 as an urban system. In this way, the unofficial boundaries of Chang-Shin, defined by its urban characteristics, coincides with the official boundaries of Chang-Shin Dong-2. As it is the primary focus of the thesis, the name, Chang-Shin District, refers specifically to Chang-Shin Dong-2.



Figure 0.48 National and municipal boundaries.

Urban Context of Chang-Shin

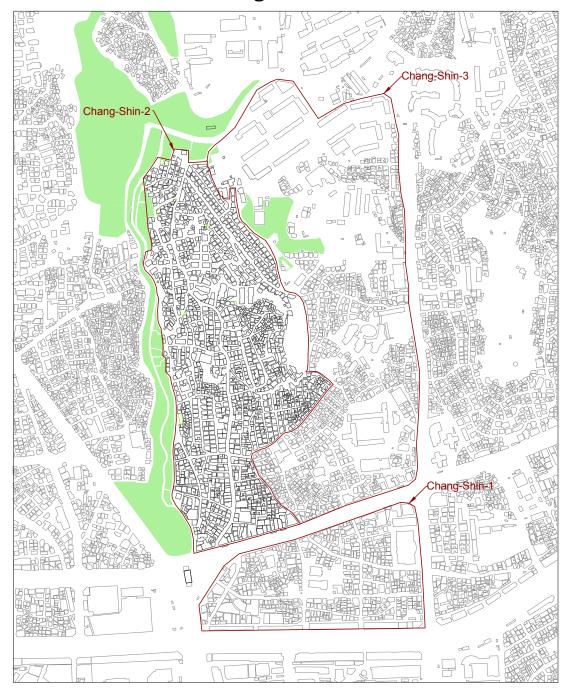


Figure 0.49 Site context around Chang-Shin





Figures 0.50–0.51 City wall in Nak-San Park, just north of Chang-Shin (above). East-Gate Design Plaza, designed by Zaha Hadid and completed in 2014, located south of Chang-Shin. This new landmark of Seoul reflects the city's recent interest in design (below).

Natural Characteristics of Chang-Shin: Topography

Chang-Shin's steep topography is an influential factor behind its unique characteristics seen today, as manifested in the building types, street patterns, and programmatic distributions of the district. Such a quality also explains its lack of development to date.

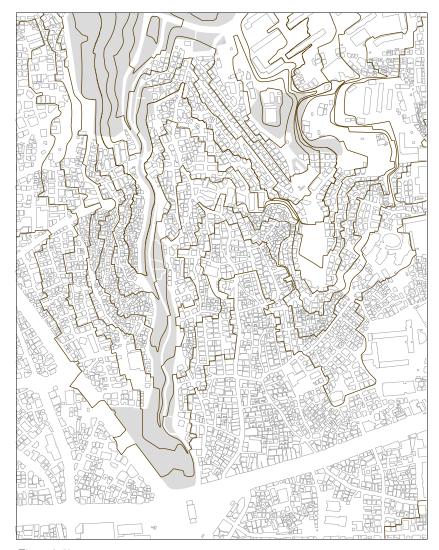
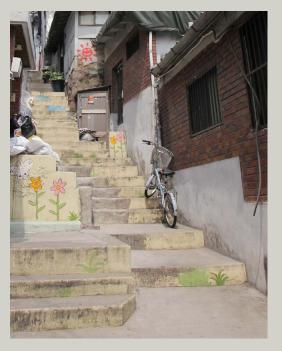


Figure 0.52







Figures 0.53–0.55 An elderly man makes his way up a steep slope with difficulty (top left). The residents call this particularly steep and winding road, "Tornado Hill". A sloped residential alley has been turned into a long set of stairs (top right).

Theoretical Framework

Mass Phenomenon

A city district's formation can be understood as a *mass phenomenon*. Principally, a mass forms when myriads of individuals operate together as a group. This concept finds expression in a wide variety of examples in the world: from a colony of ants to a galaxy of stars, masses can form on many different scales, and from various kinds of individual entities. And because of the concept's wide inclusiveness, masses also feature a wide variety of characteristics.

Among such phenomena, there is a specific kind of mass that is large and particularly complex—the city. "The city" describes a mass that is inherently social and spatial. It is a place where a mass of people gather, and a concurrent mass of political, industrial, economic, and cultural activities thrive, which in turn manifest in a mass of buildings. Under closer examination, the circumstance may be more suitably described as a conglomeration of various masses, rather than a single mass.

The city district, while embedded within a city in a way that implies similarity of form, nevertheless forms a distinct place where its own unique characteristics emerge from within the confines of the city. Although it carries a sense of informality and has nebulous boundaries, a district nonetheless has distinct characteristics. As a city district is firstly a social gathering of people who share similar characteristics and

purposes, its built environment also takes on a particular social nature, and expresses the inhabitants' collective identities, activities and relationships. Ultimately, a complex dynamic emerges whereupon relational attributes among the district's inhabitants are manifested in its built environment, and the built environment in turn influence the relationships among the inhabitants.

Defining Coherent Characteristics

Coherent characteristics are a key trait observed in all mass forms. Taking parades as an example, different kinds of parades exhibit different characteristics and atmospheres. There are celebratory parades that are festive and gregarious, and there are ceremonial parades for mourners, silent and somber. An audience at a sports arena is loud and boisterous, but an audience at a lecture hall is quiet and contemplative. Such demonstrations of unique atmosphere and rules are not limited to groups of people, but can be seen with groups of animals, as well. A flock of sheep drifts with meekness and slowness, but a herd of wildebeests charges aggressively with force. A scenery of red flamingos on a still lake is a beautifully coloured pattern, whereas a murmuration of starlings dynamically moving to and fro in the air gives a pulsating impression.

In addition to the unique atmospheres, animals also vividly exhibit the practical advantages that come with congregating as a mass: a flock of migratory geese travel in strategic V-formation for a long flight, and a flock of penguins huddle as tightly as possible for maximum insulation on arctic glacier. Perhaps one of the greatest advantages of the mass can be seen in locust swarms: though each grasshopper is miniscule and is hardly a threat to anybody, thousands of them moving in one accord is a formidable and dreaded army.⁴

As illustrated in these examples in nature, the coherent characteristics of a mass often give practical benefits as well as exhibiting atmospheric qualities. Many of these collective qualities are possible due to the capacities of the individuals that make up the mass. Nevertheless, the mass exhibits new qualities as a whole, and

performs new functions as a system, which were not seen in the individual level. These new qualities and functions become manifest only with the formation of the mass, and disappear as soon as the mass scatters. They are critically beneficial to the well-being of the social mass, and consequently, for the individuals who for their own advantage are incentivized to stay.

The city district is no exception, as it offers its inhabitants valuable practical benefits. Without residential districts, there would be no distinct neighbourhoods. An ethnic district provides a place of familiarity and convenience to a particular minority group. Popular districts with shops or restaurants provide advantageous value to the place which benefits both to the business owners and the visitors. Districts of small-scale factories are often organized in ways that well accommodates the manufacturing process of the goods, a factor crucial to the very survival of the industry. Similarly, firms and offices that are in close proximity in downtown or in financial districts profit by agglomeration economies. A well-preserved historical district that attracts tourists from overseas becomes a valued asset to the larger nation.

Thus, city districts operate on the basis of exhibiting distinct characteristics, which occur as individual buildings and programs with similar traits and purposes gather together. In other words, a city district often has coherent characteristics in its functions and appearance, which make it distinct from the rest of its

^{4.} Proverbs 30:27, Holy Bible (ESV). The thesis began with a reflection on verse 27 of the Proverbs chapter 30, which illustrates locusts' ability to march in an orderly manner without having a commander over them, and commends them as being wise: "the locusts have no king, yet all of them march in rank;" Although the term, "bottom-up", is not explicitly used, the model consists of weak individuals collectively achieving greater effectiveness through voluntary cooperation. This picture is contrasted in the following section with examples of individuals that singularly exhibit impressive vigour. One such is "a king whose army is with him." (Proverbs 30:31b), who by his top-down command of military force personifies monumental power and authority. Pondering on these two illustrations led to further considerations of mass phenomena and their top-down and bottom-up organizations as described in this chapter; their preponderance was particularly influential in establishing the detailed definition of "bottom-up" in the "Theoretical Context" section.

urban environment. When this separation and localization is successfully carried out, there can then be effective cooperation and interactions among the districts within a vibrant city.

Mass Rules: Top-Down and Bottom-Up

There are two different mechanisms through which a mass achieves coherent characteristics and order: top-down and bottom-up. Topdown formations occur when a governing authority over a social mass imposes rules or order for particular purposes—resulting more immediately in the manifestation of coherent characteristics and organizational patterns in the mass. On the other hand, bottom-up formations do not involve such authority. Developing over time, coherent characteristics and organizational patterns gradually become manifest in the mass, as the individuals of the mass cooperate with each other. Whereas the top-down formation is often pursued by a singular authority with a preconceived purpose for a particular end, for bottom-up formations, such singularity of purpose is not enforced. Rather, its requirement is that the objectives of each individual in the mass be in voluntary accord with each other.

Illustrations of Top-Down and Bottom-Up

The two formational methods can be illustrated by considering two kinds of crowds. In the previous example of a military march, orderly formations are achieved by strict top-down rules imposed on individual soldiers. Precise rules are given as to which personnel should be involved in the march, where each soldier's position should be, in what manner their hands and feet should coordinate with each other, how fast they should travel, and what the spacing among the soldiers should be. In contrast, visitors at a crowded fair gather largely on a voluntary basis, and there are fewer rules restricting their movements. Despite their individual freedom, certain orderliness underlies the travel of the crowd as a whole. Each person in the crowd moves harmoniously with each other, exhibiting bottom-up formational characteristics as they maintain a relatively consistent direction, speed and buffer between members.⁵

In addition, the above demonstrates two examples of responding collectively to a given necessity. In both situations, the soldiers and the visitors are in need of orderly travel. The solution for the former is achieved by rules imposed on the individuals; the solution for the latter is achieved by voluntary cooperation among the individuals. The former group anticipates the necessity in advance, and the governing authority provides instructions to the mass in order to meet the need, whereas the latter merely responds to the stimulus of perceived necessity, as the codependent necessity and the mass emerge simultaneously.

The two means of mass formation also apply to the development of city districts.

^{5.} Michael Hensel, Achim Menges, and Christopher Hight, Space Reader: Heterogeneous Space in Architecture (West Sussex: Wiley, 2009), 136.



Figure 1.2 A herd of blue wildebeests. The photographs depict the local interactions among the individual members of the herd, and their relationship to the movement patterns of the overall mass. Photographs by Andy Rouse (above) and Clem Haagner (below).



Figure 1.3 An aerial view of a flock of flamingoes. Photograph by Yann Arthus-Bertrand

For example, a suburban residential district built by a developer is designed in a top-down manner. Decisions as to where the site should be, the type of houses within, locations of individual houses, efficient arrangement of the houses, and the layout of the streets are predetermined, before the actual construction of the district. On the other hand, slums and informal settlements are not as directly influenced by previously made decisions. Rather, the decisions and the formation of the district are an on-going, correlated process.

There is no site designated by an authority, yet people self-select an area to build their houses. Without a developer, numerous buildings built by numerous builders nonetheless exhibit relatively consistent characteristics as a whole. Without an urban planner, arrangements of the houses and the streets nonetheless follow general orders and patterns. Without a blueprint, the residents are able to come to a global and implicit agreement on how the neighbourhood should be built over time.

Systems Theory

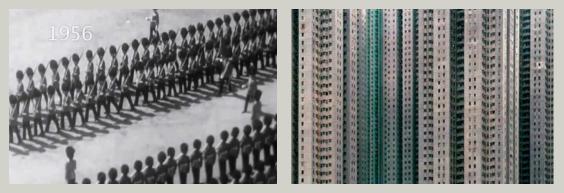
Current Discourse on the Bottom-Up Urban Development

Throughout history, the urban discourse has been dominated by top-down theory, an established field that does not need substantial references to other disciplines to validate itself. On the contrary, bottom-up urban theory has only been recognized in recent years, and is embedded within a much larger context of scientific theory.

Emergence Theory accounts for much of the contemporary theoretical discourse on bottom-up urbanism. The theory of emergence is itself situated in a yet larger context of Systems Theory, which bears explanations as an epistemological antecedent for this discussion. Systems Theory, proposed in the 1940s by the biologist Ludwig von Bertalanffy,⁶ portrays a holistic universe operating as an open and interactive system. Subsequent theories also developed as scholars considered its implications: Chaos Theory became prominent in the 1980s,⁷ which deals with the highly unpredictable occurrences resulting from relatively simple rules, such as the irregularities of the heartbeat and turbulent air flows, a well-known example being the "Butterfly Effect". Out of Chaos Theory developed

^{6. &}quot;What is Systems Theory?" Principia Cybernetics Webs, Accessed July 08, 2015, http://pespmc1.vub.ac.be/systheor. html.

^{7. &}quot;Chaos Theory, Complexity Theory and Emergence," Inclusional Research, Accessed July 08, 2015, http://www.inclusional-research.org/comparisons4.php



Figures 1.4–1.5 A ceremonial march in Britain and high-rise apartments in Hong Kong, both of which are rigidly governed by top-down rules. Photograph by Michael Wolf (right).



Figures 1.6–1.7 A flock of sheep in Argentina and a village on the bank of the Niger River, organized more freely in a bottom-up manner.

Complexity Theory,⁸ which describes complex systems where sophisticated global phenomena result from the interactions of local agents, each following relatively simple rules. As a sub-category of these complex systems, Emergence Theory describes the phenomena of recognizable patterns emerging out of seemingly disordered chaos, manifestations of higher-level sophistication out of lower-level rules.⁹

There are two underlying assumptions which are common to these theories: that these complex phenomena are completely bottom-up, and entirely cross-disciplinary in nature. These propositions suggest that there are "principles common to all complex entities",10 regardless of their substance, type, or scale, and that they are entirely self-creating in the substance and intelligence involved. These views have inherent ties with the Theory of Evolution, proposed by Charles Darwin in 1859.11 Contrary to traditional Creationism, or contemporary Intelligent Design, evolution theory suggests that the universe and the life forms in it have emerged through the combined processes of random chance and natural selection. And

since it suggests that all complex systems in the universe together evolved from simple matter, it also presupposes that all systems are inherently interrelated, and share a mutual development process. Such views made it common in the discourse of Systems Theory to treat many different complex phenomena as sharing common formative and operative principles, whether the systems in question are cells, neurons, colonies of ants, flocks of birds, cities, natural ecosystems, capitalist economies, or galaxies.¹² In the urban discourse as well, many advocates of bottom-up urbanism, such as Frei Otto and Jane Jacobs, have described urban developments as being similar to living organisms or natural phenomena.13

This thesis, however, recognizes the theory of evolution as an inaccurate model to explain the origin of life and the universe, 14

^{8.} Ibid

^{9.} Steven Johnson, Emergence: The Connected Lives of Ants, Brains, Cities, and Software (New York: Scribner, 2001), 20.

 [&]quot;What is Systems Theory?" Principia Cybernetics Webs.

^{11. &}quot;How did Evolution Theory Develop?" Natural History Museum, Accessed July 10, 2015, http://www.nhm.ac.uk/nature-online/evolution/how-did-evol-theory-develop/.

^{12.} In his book, "Emergence", Steven Johnson suggests the ways in which ants build colonies, settlers build city districts, and neurons perform in human brains, are akin to each other.

^{13.} Frei Otto, Occupying and Connecting: Thoughts on Territories and Spheres of Influence with Particular Reference to Human Settlement (Stuttgart; London: Edition Axel Menges, 2009), 9–15. In his book, Frei Otto also likens the formations of cities to the natural phenomena, such as formations of water droplets on spider webs, or cracking of ground due to dehydration.

^{14. &}quot;A Look at Lucy's Legacy" Answers in Genesis, Accessed November 24, 2015, https://answersingenesis.org/human-evolution/lucy/a-look-at-lucys-legacy/. Although various evolutionary theories are held by the majority in the scientific community, there is no evidence for particles-to-people evolution as proposed by macroevolution (one kind of living being changing to another kind) or organic evolution. Many scientists in various disciplines

and postulates that the entirely bottom-up and cross-disciplinary processes inherent to evolutionary worldview is an inadequate model to describe bottom-up urban developments. Instead, the thesis holds that only the social systems truly exhibit bottom-up, emergent qualities, that is, they are self-organized by autonomous individual agents. Here, the term "social" is used in a broader sense, which includes the animals and insects that form visible communities as well as the non-living systems that operate within human society, such as economic systems and urban systems. It also presupposes that no social systems operating in a governed city can be exclusively bottomup. Therefore, even those urban districts that appear to have developed predominantly in a bottom-up manner, have in fact their roots in certain top-down influences, to varying degrees. With these considerations in view, the thesis portrays emergent, bottom-up urbanism as a cooperative process where pre-existing local intelligence and matter are effectively harnessed without discord, rather than a selfcreating process where what was non-existent comes into being. Similarly, the term, "selforganization" used in the thesis, is here defined

have proven that even the most widely claimed proofs for macroevolution—e.g. radiometric dating, geologic column, ice cores, fossils, mutations, and genetic variations—are in fact heavily dependent on preconceived evolutionary assumptions, without which these supposed proofs have no validity. Similar and even greater challenges face other kinds of evolutionary theories such as stellar evolution (evolution of stars) or cosmic evolution (evolution of time, space, and matter). Evolution theory still remains today an unsubstantiated hypothesis.

as the ability of a community to work voluntarily and to implicitly agree on a global decision over time, apart from authoritative obligations.

These presuppositions may be further described as follows:

Pertaining to the Cross-Disciplinary View

Although it can be plainly seen that various kinds of complex systems interact with each other in many ways, not all of them share common principles as their formative and operative process. Instead, clear distinctions fundamentally differentiate them.

Passive versus Active Systems

Complex systems can generally be divided into two categories: passive systems and active systems. A passive system is a group comprised of agents that are non-decision makers, and are only capable of reacting to prescribed laws, whereas an active system is a group comprised of autonomous agents involved in decision making, and are capable of acting outside of prescribed laws. The respective results may seem very similar in their superficial appearances, and often are treated as the same type of phenomena, but in reality, they operate based on two entirely different natures. Nonliving natural systems, such as air molecules, are passive systems: although there are many ways in which movements of the molecules can take place, in all cases, the individual air molecules are merely reacting to a given set of circumstances, and are neither active nor conscious of the changes that take place.

They strictly follow a given set of physical and chemical laws, and other determinant external factors—such as temperature, wind, etc.—to the extent that there are no deviants or exceptions to the effect of these conditions due to input from any individual molecule. On the other hand, an active system, whether it is a crowd of people, or a flock of sheep, consists of autonomous individuals that freely participate in the decision making process. A defining characteristic of the active system is that it is social. They are capable of forming relationships and interacting with each other, not merely as a result of any overarching laws, but as unique and local phenomena owing to their autonomy. Although passive systems involve many agents, they cannot be seen as being truly bottomup, since these agents are not autonomous.

Distinction of Entities

Since the discovery of single-celled organisms, there has been much blurring of what traditionally constituted an individual being. The widely accepted view is that the multi-cellular organisms seen today are the evolutionary results of what were once many single-celled organisms. The more recent Gaia hypothesis suggests that even the Earth itself is a singular living organism. Similarly, in the urban discourse, scholars such as Patrick Geddes have suggested that, akin to how a body is made up of cells, a society is made up of people, with the family being the central "biological unit

of human society". In contrast to the above views, particularly to Geddes, this thesis holds the traditional definition of an autonomous individual, recognizing that the social phenomenon of bottom-up urban development is fundamentally different from the biological phenomenon of cellular operations. For example, since all the cells in a body are highly controlled by a single strand of DNA, they cannot be seen as being truly bottom up, unlike the agents of emergent urban development who work much more autonomously.

Known versus Unknown

There is a tendency to attribute largely unexplained complex phenomena to the Emergence Theory. However, complex phenomena that are largely unexplained by modern science cannot be treated in the same way as systems that are relatively well documented, even if they may share some resemblance in their outer appearances. For example, the ability of the ant colony to use pheromone trails to find food sources, is understood to be a locally driven, global phenomenon. The ants' ability to collectively build an intelligently designed colony structure without a coordinator, however, cannot be explained by the same logic, and is beyond the grasp of modern science. Although this

^{15. &}quot;Patrick Geddes Theory," Slideshare, accessed July 21, 2015,

http://www.slideshare.net/macshivalkar/patrick-ged-des-theory.

is implied as an emergent phenomenon in the field, ¹⁶ there is no verifiable evidence indicating the behaviour as driven primarily by a set of simple, local rules. Similarly, while the synchronization of the fireflies is a valid emergent phenomenon, the synchronized patterns in neuron behaviour—a similar phenomenon in appearance—are insufficient to explain the workings of human consciousness, and cannot be assumed to be emergent. Bottom-up urbanism, however, is by and large a traceable and verifiable social phenomenon with emergent qualities.

Cooperative Relationship between Top-Down and Bottom-Up Development Paradigms

Top-down and the bottom-up developments are two paradigms that are opposite conceptually, but have proven cooperative and complementary in their practical roles in the development of Chang-Shin District. There

are two ways in which the top-down and bottom-up paradigms have together constituted Chang-Shin: *spatially*, and *systematically*.

In a literal sense, the present-day Chang-Shin is spatially divisible into the areas where top-down mass-production have taken place, versus the areas that have been developed without such explicit influences, but manifest the bottom-up character more evidently.

However, in a more holistic sense, having in view the overarching time and space encompassing the district's development history, top-down and bottom-up paradigms have been intricately woven together as a single development system. For instance, it is difficult to isolate the roots of a particular urban phenomenon in Chang-Shin as being solely top-down, or bottom-up in motivation, since both paradigms have worked in junction with each other in shaping the district as a whole.

^{16.} "Emergence," Radiolab, accessed November 11, 2015, http://www.radiolab.org/story/91500-emergence.

Chapter 2:

Top-down Developments in the History of Chang-Shin



Figure 2.1 East Gate, located just across the street from the southern edge of Chang-Shin. The buildings of Chang-Shin can be seen on the left-most side of the photograph.

Chapter Introduction:

Political Authorities in the Making of Chang-Shin District

The top-down formation of a city district involves a hierarchical structure of influence. Since the urban built environment is a constructed expression of the social life of the city, the top-down agents of the built environment also follow the socio-political hierarchy of the city. The socio-politics of a city district is framed within the socio-politics of the overall city, as a part within the whole. In this way, the development of a city district's built environment is closely related to the cultural, commercial, and industrial affairs of the overall city, and the top-down agency of a city district can be traced back to the influences of chief political authorities over the city and the nation.

In the twentieth century, the government of Korea went through tumultuous and rapid changes that were far more drastic than it had undergone at any other point in history. The ruling authorities were frequently replaced by new leadership, and each leadership regime had a drastically different character than its predecessor, exercising different degrees of top-down controls in their policies that aimed for different political and economic agendas. The changes of political authorities and subsequent changes of the main top-down agents who directly influenced Seoul's urban environment in the 20th century, can be summarized into five phases:

- 1. Feudal Society under the monarchy, who exercised centralized control over industry and commerce (1392–1897).
- Development of independent industrial and commercial affairs under the monarchy (1897–1910).
- 3. Colonial government by a foreign country with strong top-down controls over urban development, for the sake of foreign economic agendas (1910–1945).
- 4. Authoritarian, centralized government with strong top-down controls over urban development, for the sake of national economic interests (1961–1979).
- 5. Democratic government and the distribution of top-down controls to municipal governments and business corporations (1979–present).

Sometimes the authorities were directly involved in urban planning initiatives and the construction of primary urban infrastructure. At other times, they exercised indirect influence by controlling Seoul's industrial and economic conditions, which in turn affected the urban environment of Seoul. These authorities were largely responsible for the urban environment of Seoul today, as their pursuit of national agendas became the driving force behind the transformation of the city.

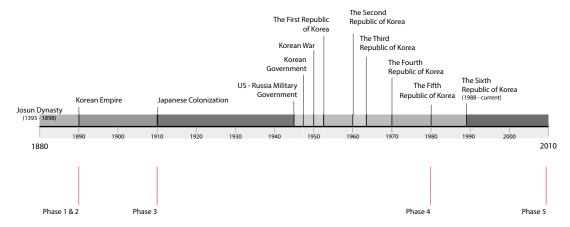


Figure 2.2 Timeline of Seoul in the 20th century.

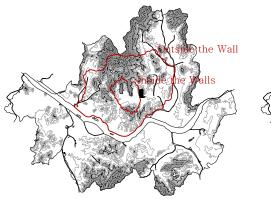


Figure 2.3 Boundaries of Seoul during the Josun Dynasty.

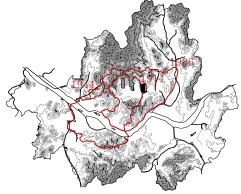


Figure 2.4 Changes of Seoul's boundaries during the colonial period.

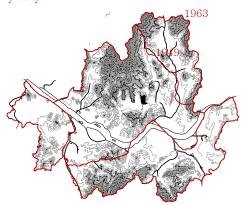


Figure 2.5 Changes of Seoul's boundaries during the authoritarian regime.

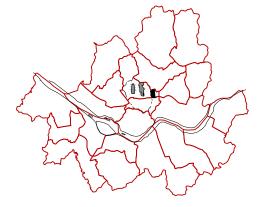


Figure 2.6 Municipal boundaries of current-day Seoul.

Timeline

This timeline was adopted and modified from "Livelihood and Space of Chang-Shin".

| Political Era | Year | Policies and Urban Plans in Seoul | Year | Events around Chang-Shin |
|--------------------------|----------------------|---|--------|--|
| Josun Dynasty | 1392 1394 1396 | Founding of Josun Dynasty Move of Capital to Seoul Completion of the city wall, four main gates and four minor gates | | |
| | 1884 | Revolution against the Chinese authorities in Korea | | |
| Empire of Korea | 1898 | Streetcar route installed across Seoul | 1899 | Streetcar in Operation through the East Gate Development of residential districts along the street-car route |
| | | | 1905 | Establishment of the first corporation-based East-Gate Market |
| Japanese Colonial Era | 1921 | Land Survey Project (Colonial Agricultural Policy) | 1916 | 8-years long construction of the Colonial Government Building began, quarrying construction materials from Chang-Shin |
| | | Urban Renovation Project | | Establishment of public elementary schools |
| | | 1934 Josun Urban Planning Act | 1930's | Railcars in operation |
| | | 1945 Demolition of slums within East Gate Market | 1945 | Concentration of population of returning war refugees |
| | | | **** | Slum developments along the city wall |
| | | | **** | Gentrification of slum dwellers |
| | | | **** | Sales of Japanese fabrics began |
| | | | **** | Early developments of manufacturing industry |





Figures 2.7–2.8 Yuk-Jo Street in front of the Royal Palace in the late 19th century (left), and Jong-No Street in 1905 (right).





Figures 2.9–2.10 Streets of Seoul in the 19th century (left), and in the early 20th century (right).





Figures 2.11–2.12 Seoul Station (left) and wooden slum houses along Chung-Gye Creek (right) during the Japanese Colonization.

| First and Second Republic | 1954 | Announcement of unauthorized buildings demolition policy | **** | Slum developments in the war affected areas |
|------------------------------|-------|--|-------|---|
| | 1957 | Permission of constructing unauthorized buildings on the lands planned for parks | *** | Clothes manufacturing along Chung-Gye-Chun, near Chang-Shin |
| | 1961 | Legalization of 16 unauthorized markets, including those around East Gate and Chang-Shin | | |
| Third and Fourth Republic | 1966 | Plan for construction of highways and demolition of trains | *** | Mass developments of slums along Nak-San |
| | | Developments of clothing, sewing, and wig export-oriented industry | **** | Mass constructions of Urban Han-Ock along Nak-San |
| | 1967 | Plans for mass production of citizen houses, and the review of illegal buildings | 1962 | Construction of a park in Chang-Shin |
| | 1967- | Construction of Chung-Gye-Chun | 1963 | Construction of 3 Chang-Shin |
| | 1969 | elevated highway | | Apartments |
| | 1969- | Construction of Citizen | 1968, | Establishment of East-Gate retail |
| | 1972 | Apartments | 1971 | stores and merchants |
| | 1971 | Newly established Urban Redevelopment Policies | -1969 | Demolition of illegal houses |
| | 1972 | Plan for demolition of illegal buildings | 1969 | Construction of Nak-San Citizen Apartments |
| | | Designation of fire hazard zones | 1964 | Chang-Shin recognized as a danger zone because of bad sanitation |
| | 1973 | Metropolitan Population Distribution Policy in effect | 1969 | Chang-Shin Elementary School: controversy about hyperpopulated |
| | 1973, | Designations of redevelopment | 1971 | Inter-city bus terminals in |
| | 1976 | zones | | operation |
| | 1974 | East Gate Station of subway line 1 in operation | 1977 | Pavements of alleys in Chang-Shin |
| | 1976 | Enactment of Urban Redevelopment Laws | *** | Increase of sewing industry by the migration of factories to Chang-Shin |
| | 1978 | Plan the move of schools in city centre to the periphery | *** | Controversy about the demolition of slums in Chang-Shin, and gentrification |





Figures 2.13–2.14 U.S. troops in Korea, 1945 (left). Seoul in ruins because of the war (right).





Figures 2.15–2.16 Slums in Chang-Shin in the 60s (left). One of the early high-rise apartment buildings in Seoul (right).

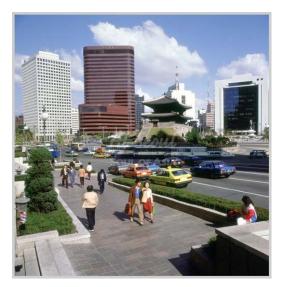




Figures 2.17–2.18 Beautification project in the 60s (left). Urban environment around the East Gate (right).

| Fifth Republic | 1980 | Leniency on the policies on multifamily houses | **** | Developments of multi-family houses |
|----------------|------------------------|--|------|---|
| | 1984, 1985, 1994 | Operation of the second, fourth, and fifth Subway lines in East Gate Stadium station | 1983 | Roads expansions of some alleys in Chang-Shin |
| | | Expansion of East Gate underground stores | **** | Expansion of sewing factories in Chang-Shin |
| | | | 1987 | Protest by the tenants in Chang-Shin |
| | 1986 | Hosted Asian Games | **** | Expansions of multi-family houses and single-occupancy rooms |
| | | Planned the redevelopment of the slums in Chang-Shin-1 | *** | Construction boom of large-scale shopping malls around East Gate |
| | 1988 | Hosted Seoul Olympics | **** | Developments of labour-deal market in Chang-Shin |
| | | Abolishment of the previous height restrictions around East Gate Stadium | 1995 | Doo-San Apartments |
| | | | 1997 | Developments of school supplies / shoes market |
| | 1996 | Planned redevelopment on 21 region around East Gate | | Establishment of Jong-No Community Centre |
| | 1997 | Planned the review of Citizen Apartments | | Demolition of Citizen Apartments along Nak-San, and the construction of a park along the city wall |
| | | Designation of Chang-Shin-1 as Residential Environment Improvement Zone | 2008 | Demolition of East Gate Stadium |
| | 2000 | Announcement of East Gate districts plans | 2010 | Opening of East Gate Design Plaza |
| | 2002 | Designation of East Gate Touristic Zones | *** | Establishment of East Gate Sewing Organization |
| | 2005 | Chang-Shin designated as the potential 3rd New-town Redevelopment | **** | Incoming foreign labourers |
| | 2007 | Chang-Shin/Soong-In designated as Urban Maintenance Zones | | |
| | | Establishment of Comprehensive Urban Redevelopment Plans | | |





Figures 2.19–2.20 Urban environment of Seoul in the 80s. There is a notable increase of traffic and density.





 ${\it Figures~2.21-2.22~Gate~of~Peace,~built~for~the~1988~Summer~Olympics~(left)}.~Seoul~World~Cup~Stadium,~built~for~the~2002~FIFA~World~Cup.$





Figures 2.23-2.24 A residential district (left) and a business district (right) in contemporary Seoul.



 $\label{eq:Figure 2.25} \emph{King Seung-Gye Lee, founder of Josun Dynasty.}$

Josun Dynasty (1392-1897)

Inception of Chang-Shin under the Monarchical Government

The Josun Dynasty founded by Sung-Gye Lee in 1394, was a monarchical government that ruled over a feudal society.¹⁷ The dynasty was founded upon Confucian principles,¹⁸ which decidedly influenced various governing policies regarding infrastructure, economics and the social structure of the nation. Lee also established Josun's new capital, Seoul, a pre-industrial city with an agricultural basis and incipient commercial functions.¹⁹ Although the region of current-day Chang-Shin had already been inhabited prior to this period, it was only during the Josun Dynasty that notable developments began in the district, alongside those of the city of Seoul.²⁰

^{17. &}quot;Josun," Encyclopedia of Korean Culture, Accessed March 31, 2015, http://terms.naver.com/entry.nhn?docId=795518&cid=46622&categoryId=46622.

^{18. &}quot;Confucius Philosophies," Encyclopedia of Korean Culture, Accessed April 1, 2015, http://terms.naver.com/entry.nhn?docId=575537&cid=46649&category-Id=46649.

^{19.} Gi-Suk Lee, "Urban Development of Seoul in the Twentieth Century: From a Pre-Modern City to a Global City," in Spatial Transformations of Seoul in the Twentieth Century, ed. Gwang Joong Kim et al. (Seoul: The Seoul Institute, 2001), 29.

^{20.} Seoul Museum of History Research Department, Livelihood and Space in Chang-Shin District (Seoul: Seoul Museum of History, 2011), 23.

Urban Infrastructure

Upon founding the Josun Dynasty, Sung-Gye Lee decreed the construction of Seoul's main urban infrastructure, namely the royal palaces, major government buildings, city wall, city gates, and the major street grid. These acted as the fundamental framework around which the rest of the city developed in the ensuing centuries. Chang-Shin was at a critical location in relation to these urban elements, particularly to the East Gate, a factor that profoundly invigorated the development of the district.

The city wall, constructed in 1396,²¹ acted as the primary municipal boundary, by which Seoul was divided into two regions: *Sung-Ahn* and *Sung-Juh*. Sung-Ahn, which means, "inside the walls", acted as the urban centre, which encompassed only about 16 km² of area.²² Sung-Juh, which means, "outside the walls", included the rural regions that lay within 5 km radius outside of the walls.²³ The East

Gate was one of the Four Major Gates that provided entry points into the city, along with the Four Minor Gates .²⁴ The major street axes provided direct connection routes between the gates, then smaller streets around them formed a small grid system.²⁵ One particularly notable street was Jong-No Street, which constituted the eastern portion of a major axis between the East Gate and the West Gate.

Although Chang-Shin District was technically located outside of the city wall, its direct adjacency to both the East Gate and Jong-No Street, caused it to function much like the city centre. As the city urbanized further out along the major streets, beyond the main gates, Chang-Shin also began to develop as an important urban settlement. Records show that King Sae-Jong distributed the plots of lands in Chang-Shin to the homeless in 1424, indicating evidence of urbanization in the region.²⁶

^{21. &}quot;City Wall of Seoul," Doosan Encyclopedia, Accessed October 7, 2015, http://terms.naver.com/entry.nhn?do-cId=1111300&cid=40942&categoryId=33383.

^{22.} Lee, Theories of Urban Form, 274.

^{23.} Seoul Museum of History, Livelihood and Space of Chang-Shin, 22.

^{24.} Lee, op, cit., 275.

^{25.} Ibid., 270, 276.

^{26.} Seoul Museum of History, op. cit., 23.

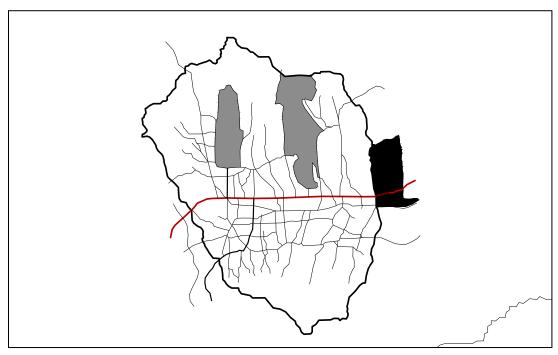


Figure 2.26 The streets of Sung-Juh, with Jong-No Street in red.

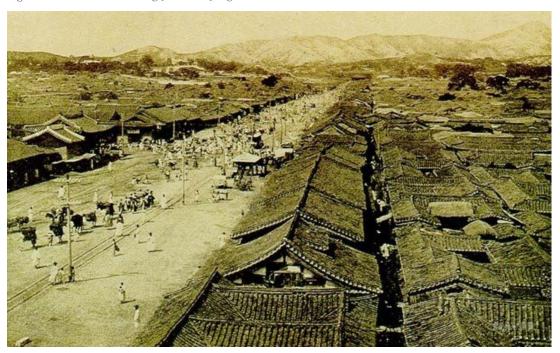


Figure 2.27 Jong-No Street. The dark and narrow alley on the right, called "Pi-Ma-Gol", which means, "horse-avoiding alley". Many people preferred walking in this alley rather than Jong-No Street, in order to avoid bowing duties to the government officials on horseback.

Commerce and Industry

As Confucian teachings highly valued agriculture, but despised commerce, economic affairs in the early Josun were bleak;²⁷ only the bare minimum of manufacturing and commercial facilities operated, both owned by the government. Such a strictly controlled economy proved to be unsustainable by the 17th and 18th century, and consequently, economic agencies gradually transferred from the Josun government to the people.

Prior to the mid-17th century, the manufacturing industry of Josun mainly consisted of government-owned factories that supplied for the needs of the government. These factories declined, however, due to a shrinking government treasury, and drafted workers began to manufacture goods independently to sell them in the markets. Moreover, increasingly complex production processes required cooperation among multiple factories, ²⁸ eventually leading to the privatization of the manufacturing industry.

Similar changes also took place in the commercial industry. The Josun government owned the only major marketplace in Seoul, called, *Shi-Jun*, which consisted of a series of two-storey wooden structures. These stalls were leased to government appointed merchants, who in turn paid a special tax, as well as supplying goods for use in the palaces and government. The government also legally enforced a monopoly among the merchants

Contrary to how European markets were located mainly in the city centre, Asian markets were located typically around the main gates of the city wall.³² These stalls were built first along certain portions of Jong-No Street, but eventually extended to the East Gate and South Gate, featuring prominently on these streets. Naturally, East Gate became the commercial hub of Seoul, where crowds of people gathered and scattered day-in and day-out. The farmers in the rural regions outside the city wall also brought various agricultural goods inside the walls,³³ and the development of commerce and transportation along Jong-No Street and East Gate caused further population increase in Chang-Shin District.

within Seoul,²⁹ who formed guilds of specific traded goods, such as tobacco, leather, rice, grains, seafood, utensils, ceremonial attires, and shoes, supplying the people with their necessary daily goods,³⁰ while banning other private merchants from selling the same goods. Despite the legal prohibition, private merchants thrived as the city population increased. Eventually, the government legalized the private merchants' activities in 1791, and commerce in Seoul began to flourish.³¹

^{27.} Joo-Hyung Lee, Theories of Urban Form, 269.

^{28. &}quot;Diminish of Government-Run Industry Due to Poor Treasury," Encyclopedia of Culture, Accessed November 10, 2014, http://terms.naver.com/entry.nhn?docId=1741666&cid=49211&categoryId=49211.

^{29. &}quot;Nan-Jun," Doopedia, Accessed October 7, 2015, http://terms.naver.com/entry.nhn?do-cId=1074741&cid=40942&categoryId=31667.

^{30. &}quot;Shi-Jun," Encyclopedia of Korean Culture, Accessed November 10, 2014, http://terms.naver.com/entry.nhn?do-cId=559754&cid=46622&categoryId=46622.

^{31. &}quot;Gap-In-Tong-Gong," Encyclopedia of Korean Culture, Accessed November 10, 2014, http://terms.naver.com/entry.nhn?docId=565203&cid=46622&categoryId=46622.

^{32.} Joo-Hyung Lee, Theories of Urban Form, 276.

^{33.} Seoul Museum of History, Livelihood and Space of Chang-Shin, 23.



Figure 2.28 Shi-Jun

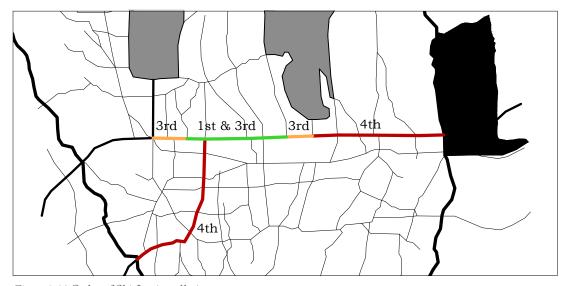


Figure 2.29 Order of Shi-Jun installations.

East Gate is one of the most significant historical artifacts in Chang-Shin. It has been a significant landmark in Seoul for 600 years, serving as the main portal of the city. The adjacent East Gate Market has thrived for centuries and remains the largest market in Korea to this day. Of the numerous goods sold there, clothing is one of the main sales items today.

City Wall

District of Chang-Shin

East Gate

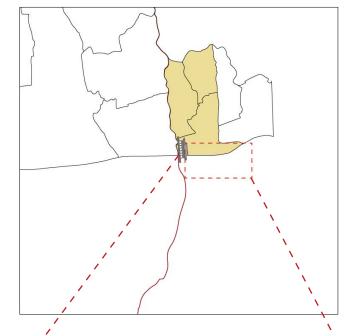




Figure 2.30 East Gate, 1902.



Figure 2.31 East Gate Market, 1920.



Figure 2.32 Modern-day East Gate.



Figure 2.33 Modern-day East Gate Market.



 $\label{eq:Figure 2.34} Figure 2.34 \ {\rm A} \ {\rm drawing} \ {\rm depicting} \ {\rm Jong\text{-}No} \ {\rm Street} \\ {\rm in} \ {\rm the} \ {\rm late} \ {\rm Josun} \ {\rm Dynasty}$



 $\it Figure\,2.36$ Jong-No Street, after the installation of the street car.



Figure 2.38 Jong-No Street, 1967.



Figure 2.35 Jong-No Street, 1890s. The street is occupied by additional commercial buildings.



Figure 2.37 Jong-No Street, 1950s.



Figure 2.39 Jong-No Street, 2005.

Social Classes

Confucian tradition imposed strict social class structures that largely determined one's residential circumstances, both the type of housing and the neighbourhood one resided in, which consequently determined the pattern of urban settlement within Seoul.

The social classes were hereditary,³⁴ and generally consisted of four types:³⁵ nobility, middle-class, peasants, and slaves. The nobility were entitled government positions and land ownerships; the middle-class possessed expert knowledge or skill for practical and economic endeavours, such as law and merchantry; peasant populations worked at farms owned by their landlords, and bore the load of taxes and military duty; slaves belonged to their masters, to whom they offered various services. Later, these social distinctions gradually disappeared as the country modernized.

Each social class was designated particular neighbourhoods of residence. ³⁶ The higher-rank nobility resided in the northern part of the city, where palaces and main government buildings were located; the lower-rank government officials lived in the southern part of the city; the middle-class concentrated along Jong-No Street, which was positioned in the middle of the city, while the peasants resided outside of the city wall. ³⁷

Procuring residency within the city wall was difficult, due to the high density of existing residents and the strict procedures involved. As Chang-Shin district was located directly adjacent to the city wall and the East Gate, it became a convenient place of residence for the middle-class who were unable to find settlements within the walls, and also for servants and maids who worked in the palace. In the 17th century, the king issued alleviation policies in response to a severe famine and natural disasters throughout the land, and lent out crops to destitute farmers, a policy which caused the rural population to migrate to Seoul.⁴⁰ The population of Chang-Shin significantly increased at this time.

Law also restricted different types and sizes of houses to different social classes. Seoul's urban landscape consisted primarily of two types of single-storey houses: tiled-roof houses, called, Han-Ock, for mid- and upper-classes, and thatched roof houses, called, Cho-Ga-Jip, for lower-classes.

^{34. &}quot;Social Classes," Encyclopedia of Korean Culture, Accessed April 1, 2015, http://terms.naver.com/entry.nhn?docId=560256&cid=46634&categoryId=46634.

^{35. &}quot;Social Classes of Josun," Encyclopedia of Modern Korean History, Accessed April 13, 2015, http://terms.naver.com/entry.nhn?do-cId=919562&cid=42958&categoryId=42958

^{36.} Joo-Hyung Lee, Theories of Urban Form, 276

^{37.} Ibid.

^{38.} Sae-Gwan Son, "Transformations of Seoul's Residential Environment in the Twentieth Century," in Spatial Transformations of Seoul in the Twentieth Century, ed. Gwang Joong Kim et al. (Seoul: The Seoul Institute, 2001), 229.

^{39.} Ibid., 226.

^{40.} Seoul Museum of History, Livelihood and Space of Chang-Shin, 23.

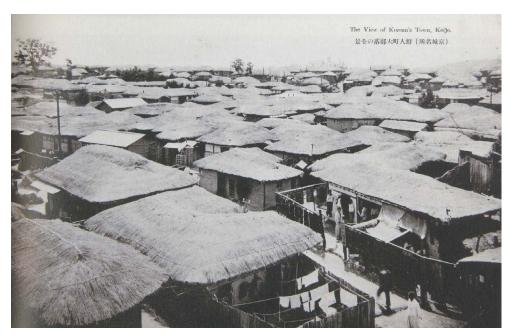


Figure 2.40 Thatched roof houses for the lower class.



Figure 2.41 Tiled roof houses for the upper class.



Figure 2.42 Emperor Go-Jong.

Empire of Korea (1897–1910)

Early Influences of the Western Culture and Modernization

At the turn of the twentieth century, new influences from the western world began to change Seoul's urban environment. Contrary to the traditional closed-door foreign policy, King Go-Jong issued the first open-door trade policy in 1876, ⁴¹ which introduced to Seoul western technologies such as electricity (street lamps), railway, street cars, urban parks, water pipes, ⁴² and road expansions. ⁴³ Foreign influences lead to a break from the historic subservient relationship with China based on a Confucian worldview, and allowed the elevation of Go-Jong's status to become emperor, alongside the change in the national title to become the Empire of Korea in 1897. ⁴⁴

^{41. &}quot;Gang-Hwa Treaty," Encyclopedia of Korean Modern History, Accessed April 1, 2015, http://terms.naver.com/entry.nhn?docId=919483&ref=y&cid=42958&category-Id=42958.

^{42.} Gwang-Joong Kim, "Developments and Transformations of Seoul," 13.

^{43.} Gi-Suk Lee, "Pre-Modern City to a Global City," 31.

^{44. &}quot;Empire of Korea," Encyclopedia of Korean Culture, Accessed April 1, 2015, http://terms.naver.com/entry.nhn?docId=543173&cid=46623&categoryId=46623.

Westernization of the Built Environments

Go-Jong permitted foreigners' residency within the city wall in 1880, and Christian missionary works in 1884,45 thereby initiating the westernization of Seoul's urban environment. Churches, missionary hospitals and schools, foreign embassies and residences introduced Koreans to western architecture, along with the use of sewer systems, modern toilets and bathing facilities, heating/cooling systems, more effective accommodations of natural daylighting and ventilation.46 New building materials such as cement, paint, glass, and brick were also used.⁴⁷ In response, people started to move away from the rigid traditional styles emphasizing functional practicality, and began to build in western styles. Vertical urban developments also began, causing twostorey structures to become more common for residential and commercial uses.48

As strict divisions in the social hierarchy gradually blurred, the legal impositions on the size and the styles of houses for various social classes also became obsolete. Wealthy middle-class citizens were able to build houses that had hitherto only been allowed for the upper-classes, expressed in the styles of gates and baths, which eventually spread to the lower classes, as well.⁴⁹

Constructions of railways and streetcars around the main gates drastically changed the pattern of urban development, and diminished the functions of the city wall. The early installation of the street car routes which passed through the East Gate, passed by Chang-Shin and extended far out even to the rural regions. As a result, new urban districts developed outside of the city wall (including Chang-Shin).⁵⁰

^{45. &}quot;Missionaries," Encyclopedia of Korean Culture, Accessed April, 2015, http://terms.naver.com/entry.nhn?do-cId=574921&cid=46647&categoryId=46647.

^{46.} Sae-Gwan Son, "Transformations of Seoul's Residential Environment," 233–235.

^{47.} Gyoo-Mok Lee, "Reading Modern Environments of Seoul," 125.

^{48.} Ibid., 233-235.

^{49.} Ibid., 231.

^{50.} Gi-Suk Lee, "Pre-Modern City to a Global City," 35–37.

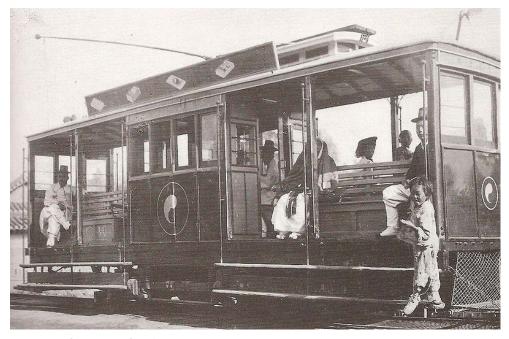


Figure 2.43 Streetcar in Seoul, 1903.

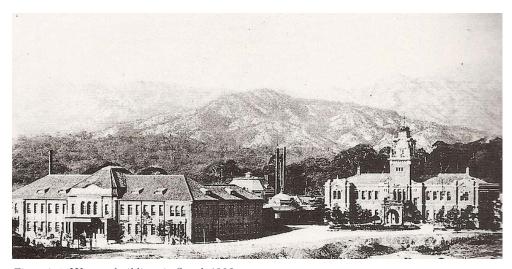


Figure 2.44 Western buildings in Seoul, 1908.



Figure 2.45 Japanese colonial government headquarters.

Japanese Colonial Period (1910-1945)

Industrialization and Urbanization under the Colonial Government

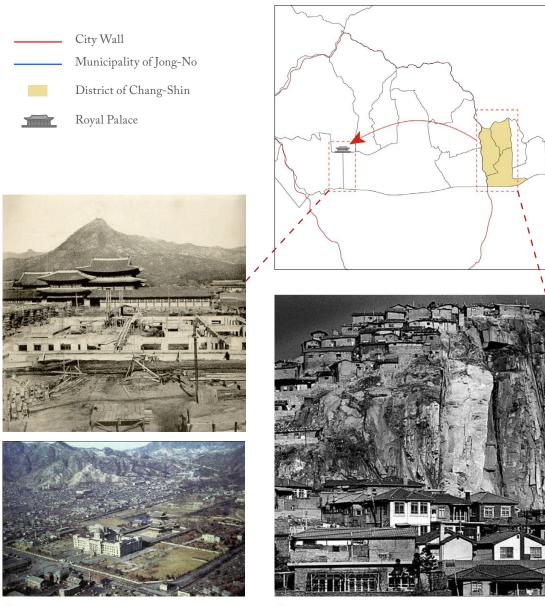
Since pressuring Korea to open foreign trade in 1876 with modernized military powers, Japan continued to increase its influence in Korea. The Treaty of Ul-Sa was made in 1905, by which Korea became the protectorate of Japan. Japan also assumed administrative and judicial rights in the ensuing years, 51 and in 1910 started the official colonial rule in Korea. As Japan went through the First and the Second World War, and a major economic depression over the subsequent thirty-five years, the colonial government endeavoured to maximize the agricultural, industrial, and economic output from Korea for Japan's needs. The resulting policies initiated notable urban changes in Seoul. 52 The colonial policies operated through systematic urban planning and management, which affected the agriculture, economy and manufacturing industry of Seoul. Modern planning methods such as urban planning, land readjustments, and zoning laws were introduced. 53

^{51. &}quot;Tong-Gam-Bu," Doopedia, Accessed November 22, 2014, http://terms.naver.com/entry.nhn?docId=1153313&cid=40942&categoryId=33384.

^{52.} Gi-Suk Lee, "Pre-Modern City to a Global City," 50.

^{53.} Gwang-Joong Kim, "Developments and Transformations of Seoul," 13.

Around 1920, Japanese demolished the Royal Palace of Korea, and built a Japanese government building that stood as a symbol of oppression. In order to build it, they quarried the stones in the district of Chang-Shin which was right outside of the city wall. The mining community that was built at the time, still remains today. After the defeat of Japan, the government building was demolished, and Royal Palace was rebuilt.



Figures 2.46–2.47 Figure 2.48

Fragmentation of Land Lots in Chang-Shin

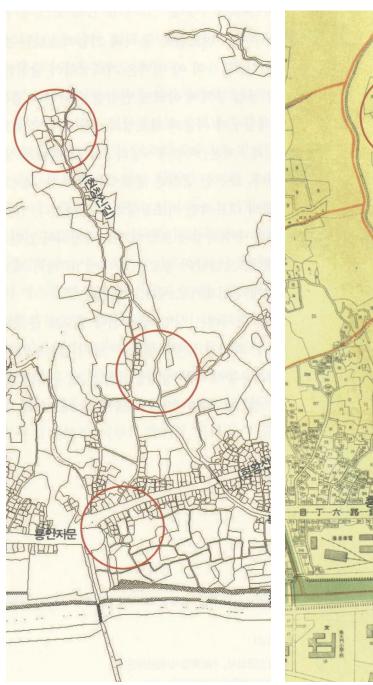


Figure 2.49 Seoul Land Information Map, 1912.



Figure 2.50 Map of Seoul, 1936.

Lands Survey Project

One of the most notable urban transformations in Chang-Shin during the colonial era, was the first major slum developments, due to major migrations initiated by the colonial agricultural policy. Although slum housing existed in Seoul before the Japanese Occupation, it was in the 1920s that slum districts became a notable urban phenomenon for the first time.⁵⁴

As a part of the larger agricultural policy, the Lands Survey Project collected Korean land information for tax purposes, such as its ownership, location, and area. In the process, the colonial government deemed as unqualified 62% of the total land, seizing them under Japanese possession.⁵⁵ Millions of farm owners who lost their land became tenant farmers, bearing increased the tax burden that required more than two thirds of all their produce.⁵⁶ Furthermore, a subsequent agricultural policy in 1920, the Grains Increase Plan, sought to alleviate the problems associated with the decrease in farming population in Japan by increasing the grain production in

As the farming industry collapsed, many rural peasants moved to Seoul and worked as day labourers, forming large scale slums on the hills, along the railroads and creeks, and under the city wall and bridges where they sought residency. In 1925, it was reported that about 5,000 people lived in 1,500 precarious houses.58 As a district located just outside the city wall, adjacent to a major traveling route and close to a major creek, Chang-Shin was a reasonable settlement for the new migrants who could not live within the city wall, as well as the people who were pushed out from the city centre due to the expansion of Japanese districts. From 1927 to 1938, while developing as a major slum district,59 the population of Chang-Shin increased by 1,534 households, ranking as the thirdhighest native population density in Seoul,60

Korea and sending it to Japan. More rice was sent to Japan, however, than the amount of increase in the grain production, while the tax burden on the peasants became even heavier,⁵⁷ further depriving the rural populations with endemic poverty and starvation.

^{54.} Gwang-Joon Lee, Il-Sung Yoon, "Urban Redevelopment and the transformations of Seoul in the Twentieth Century," in Spatial Transformations of Seoul in the Twentieth Century, ed. Gwang Joong Kim et al. (Seoul: The Seoul Institute, 2001), 561.

^{55. &}quot;Japanese Occupation," Encyclopedia of Korean Culture, Accessed November 25, 2014, http://terms.naver.com/entry.nhn?docId=537253&cid=46623&categoryId=46623.

^{56. &}quot;Japan," Encyclopedia of Korean Culture, Accessed November 25, 2014, http://terms.naver.com/entry.nhn?do-cId=537140&cid=46627&categoryId=46627.

^{57. &}quot;Grain Increase Plan," Encyclopedia of Korean Modern History, Accessed November 25, 2014, http://terms.naver.com/entry.nhn?docId=919897&cid=42958&categoryId=42958.

^{58.} Gwang-Joon Lee, Il-Sung Yoon, op. cit., 561

^{59.} Ibid., 35, 38

^{60.} Seoul Museum of History, Livelihood and Space of Chang-Shin, 35

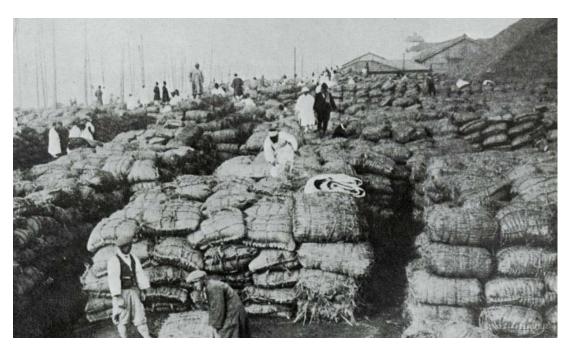


Figure 2.51 Rice being shipped to Japan

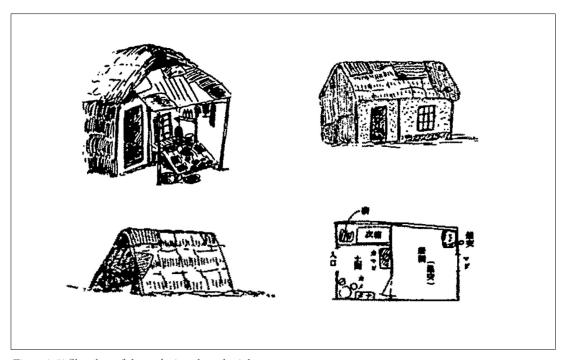


Figure 2.52 Sketches of slums during the colonial era

Company Regulation

The colonial era was a time of struggle for Korean businessmen. Colonial business policy, the Company Regulation, required government approvals for all starting businesses, while applying unfair criteria as a means to suppress Korean businesses. Even when the policy was abolished in 1920, Japanese businesses expanded their market to Korea with less restrictions. Since Korean business corporations were not well developed at the time, they could not compete with Japanese retail and department stores that dominated Seoul's market. 61

Similarly in the construction industry, Koreans were prevented from participating in large-scale projects, and they sought for available places to build with smaller capital. Small-scale residential development was ideal, due to great demands for affordable housing to accommodate Seoul's increasing urban population. For the first time, Korean companies acted as developers who purchased plots of land, divided them into smaller plots, and mass produced houses on them for sale.

As the industrialization of Seoul further increased the urban population, and Japan's involvement in Pacific War led to further exploitation of Korean resources, the housing shortage escalated from 5.5% in 1925 to 40% by 1944.65 The developers mass-produced Urban Han-Ock throughout Seoul, and Chang-Shin became one of the districts where Urban Han-Ock were built the most in Seoul.66

These first-generation developers in Korea designed a new housing type, Urban Han-Ock, by modifying the traditional Han-Ock to suite Seoul's urban environment. Maintaining its traditional form, the new housing type was significantly smaller, and incorporated beneficial western housing features, such as electricity, glass windows, bricks, and galvanized steel⁶³, as well as better accommodating daylight, natural ventilation, and outdoor garden, all the while substantially lowering the construction and maintenance fees. Urban Han-Ock appropriately addressed newly surfacing needs of the developing city, while preserving the traditional architectural style.⁶⁴

^{61.} Gi-Suk Lee, "Pre-Modern City to a Global City," 49–50.

^{62.} Sae-Gwan Son, "Transformations of Seoul's Residential Environment," 242.

^{63.} Ibid., 244.

^{64.} Kyung-Min Kim and Jae Min Park, Rethinking Seoul: Cities, Speculations of Future from the Past (Pa Ju: Seo Hae Moon Publishing, 2013), 40–47.

^{65.} Sae-Gwan Son, "Transformations of Seoul's Residential Environment," 235.

^{66.} Seoul Museum of History, Livelihood and Space of Chang-Shin, 36.

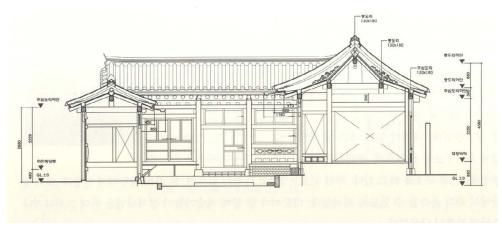


Figure 2.53 Section of Urban Han-Ok



 ${\it Figure\,2.54\, Mass\, produced\, Urban\, Han-Ok\, in\, Chang-Shin}$

Military Supply Base Policy

Japan initiated the Military Supply Base Policy in order to turn Korea into an industrial supply base for Japan's war against China, and their involvement in World War II.67 Josun Urban Planning was announced in 1934,68 which laid out a systematic urban work to carry out the policy. The plan involved Land-Use Zoning Plans, which established five zones in the city: residential, commercial, industrial, commercial situated along streets, and undetermined zones. It also planned for new expansions of Seoul, with extension of the existing road network.⁶⁹⁷⁰ The completion of the national railway network centred around Seoul⁷¹ prompted the development of commercial and industrial functions of the city. Many factories were built in and around Seoul, first around its central regions, but as the Japanese residential districts expanded in the area, they expanded more toward the periphery of the city. From 1917 to 1937, the number of factories increased from 318 to 1002.72 Much

of the city wall was demolished during this time, except for parts of it on mountains.⁷³

Regions outside of the city wall developed mainly along the railways and street car routes. Since Jong-No Street was an important transportation route, developments beyond East Gate occurred linearly along Jong-No Street,74 and the regions around East Gate developed as a commercial centre and a manufacturing district.75 Since large-scale factories were located on the outskirts of the city,76 the manufacturing industry around Chang-Shin—close to the city centre—mostly consisted of small-scale, domestic factories that dealt with formal attires, printing, book-binding and clothes manufacturing. Out of these, the clothes manufacturing industry stood out. In contrast to the traditional markets, corporatebased markets appeared in Seoul. The first of such markets was Gwang-Jang Corporation, the current day East-Gate Market.⁷⁷

^{67. &}quot;Urban Planning — Josun City Planning," How Seoul was Planned, Accessed April 14, 2015, http://terms.naver.com/entry.nhn?docId=1386512&cid=42937&category-Id=42937.

^{68.} Gyoo-Mok Lee, "Reading Modern Environments of Seoul," 124.

^{69.} Gyoo-Mok Lee, op. cit., 121.

^{70.} Gi-Suk Lee, op. cit., 44-46.

^{71.} Gi-Suk Lee, op. cit., 49.

^{72.} Gi-Suk Lee, op. cit.,48.

^{73.} Gyoo-Mok Lee, op. cit.,121.

^{74.} Ibid., 51.

^{75.} Seoul Museum of History, Livelihood and Space in Chang-Shin, 37.

^{76.} Seoul Museum of History, Livelihood and Space of Chang-Shin, 37.

^{77.} Gi-Suk Lee, "Pre-Modern City to a Global City," 49–50.

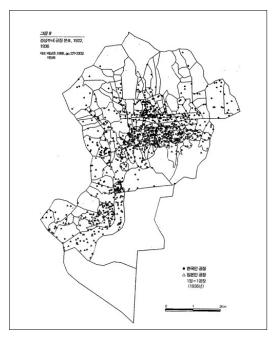


Figure 2.55 Locations of factories in Seoul in 1936

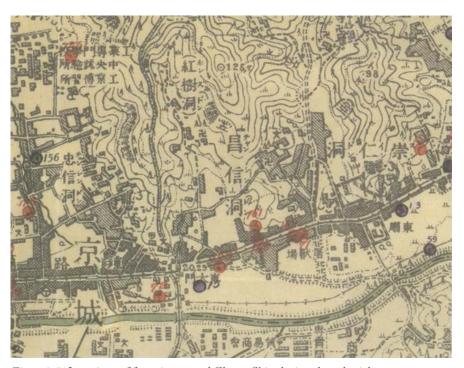


Figure 2.56 Locations of factories around Chang-Shin during the colonial era

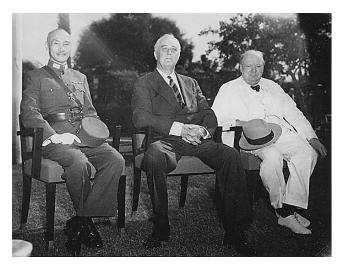


Figure 2.57 Yalta Conference

U.S. Trusteeship, the First and the Second Republic of Korea (1945–1961)

Proliferation of Slums amid Political Instability

Upon Japan's surrender in the Second World War and their subsequent evacuation from Korea, an international trusteeship was co-established by the United States and the Soviet Union, which lasted for three years. The First Republic of Korea was established in 1948. The government faced many difficulties, as the society was in a state of disorder and desperate poverty. The Korean War broke out in 1950 and lasted three years, worsening the turmoil. Seoul faced imminent problems of poverty, sanitation, employment, and housing.⁷⁸ The First Republic was eventually overthrown in 1960 by a civil revolt. The following Second Republic ruled only for a year, before it was again overthrown by a coup d'état.

^{78.} Gwang-Joong Kim, "Developments and Transformations of Seoul," 14.

Social Disorder and Proliferation of Slums

Independence from Japan caused massive migrations to the city, which in turn caused severe housing shortages in Seoul. In the first year of the liberation alone, nearly half a million people moved to Seoul, many of them being the colonial refugees such as soldiers, drafted labourers, and farmers returning from overseas. Without any agricultural basis of their own, they had to settle in the city. All the while, migrations from the rural farms still continued, altogether resulting in 40% of the population experiencing housing shortage. Furthermore, bombings during The Korean War turned parts of the city into ruins, destroying 30% of existing houses. As a consequence, people built slums with various scrap materials from the war, 20 on any available open space in the city.

Despite the population increase, Seoul's economic, industrial and urban functions halted at the time of independence, ⁸³ and there was no industrial production due to political instability and the national poverty. During the three years of U.S. trusteeship, Korea's economy mainly depended on the U.S., who

Slums developed with hubs being established across the networks of bus stations and their final stops, the city centre, and inter-city bus terminals. Since its proximity to East Gate markets and to the city made it an ideal residential location for low-income labourers, Chang-Shin continued to develop as a major slum district. Slums near Chung-Gye-Chun began selling clothes in the 50s by altering the U.S. military uniforms. Sewing factories

assisted in the supply of food, ⁸⁴ and constructed welfare housing, along with providing 460 million dollars in aid. ⁸⁵ Even after the establishment of the First Republic, the government focused primarily on national security and legislation, and housing policies were not developed adequately. ⁸⁶ The government instead resorted to enacting Temporary Building Policy, which permitted the people to build temporary houses on public lands under the condition that they had to be demolished upon request by the city. It was a time when welfare housing and slums shaped the overall city, and rendered urban planning efforts ineffective. ⁸⁷

^{79.} Sang-Chul Choi, "Transformations of Modern Urban Planning in Seoul," 510.

^{80.} Gwang-Joon Lee, Il-Sung Yoon, "Urban Redevelopment and the transformations of Seoul in the Twentieth Century," in Spatial Transformations of Seoul in the Twentieth Century, ed. Gwang Joong Kim et al. (Seoul: The Seoul Institute, 2001), 562.

^{81.} Seoul Museum of History, Livelihood and Space of Chang-Shin, 48.

^{82.} Gi-Suk Lee, op. cit., 57.

^{83.} Gi-Suk Lee, "Pre-Modern City to a Global City," 61. From 1946 to 1954, employment of manufacturing industry was reduced by 50%.

^{84.} Gi-Suk Lee, op. cit., 57.

^{85. &}quot;Corporations," Encyclopedia of Korean Culture, Accessed March 5, 2015, http://terms.naver.com/entry.nhn?docId=657707&cid=46623&categoryId=46623.

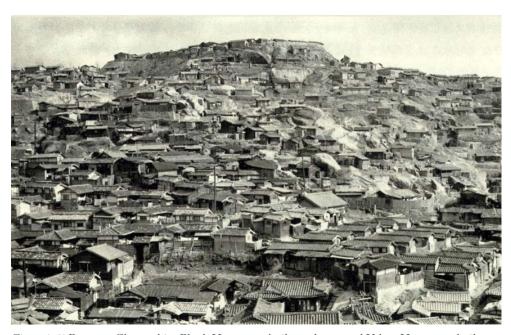
^{86.} Sae-Gwan Son, "Transformations of Seoul's Residential Environment," 251.

^{87.} Sang-Chul Choi, "Transformations of Modern Urban Planning in Seoul," 514–515.

^{88.} Gi-Suk Lee, "Pre-Modern City to a Global City," 59–61.



Figure 2.58 Post-war Seoul in ruins



 $\label{eq:Figure 2.59 Post-war Chang-shin. Plank Houses are built on slopes, and Urban Houses are built on relatively flat areas.$



Figure 2.60 General Park and his supporters on the day of the coup d'état

The Third and the Fourth Republic of Korea (1961–1979)

Rapid Economic Developments under the Authoritarian Government

Perpetual state of disorder in the society heightened the attitude of discontentment against the government. In 1961, General Park led a military coup d'état and overthrew the Second Republic government, seizing the legislative, judicial, and administrative authorities. Exercising drastic measures against corrupt practices in society, he was eventually voted into presidency in 1963. The Third and the Fourth Republic of Korea were thus characterized by the highly centralized and authoritarian leadership of President Park, who led significant economic developments in Korea with a series of Five Years Plans. He ruled for the entire duration of the regime, until he was assassinated by his close associate, bringing the Fourth Republic to a close.

The centralized government had an exceptionally strong and strictly top-down influence on the urban environment of Seoul. President Park directly controlled Seoul's urban developments, and the government-appointed mayors of Seoul either directly carried out his orders, or merely interpreted them at the municipal level, barely exercising any autonomous authority. In such a context, the president's primary agenda was to economically develop and modernize Korea through the means of export-oriented industrialization. Rigorous development projects were thus pushed forward in a military-like manner under a characteristic slogan, "Construction Battle".

^{89. &}quot;Jung-Hee Park," Encyclopedia of Korean Culture, Accessed March 29, 2015, http://terms.naver.com/entry.nhn?docId=556135&cid=46626&categoryId=46626

^{90.} Gwang-Joong Kim, "Developments and Transformations of Seoul," 22, 25. 18th century London, Early 20th century New York, post-World War II Tokyo also had rigorous redevelopments, but it was rare to find an example as strictly top-down, determinant and focused development paradigm in a short period of time.

^{91.} Ibid., 22-23, 25

^{92.} Ibid., 14.

^{93.} Ibid., 15.

Export-Oriented Industrialization

The export-oriented industrialization policy caused garment industry to flourish in Chang-Shin. The export-oriented industrialization model was based on the import of raw materials and the export of processed goods. In order to keep export prices low, the government also kept wages for industrial workers and the prices of agricultural goods low.94 This caused a drastic imbalance between the manufacturing industry in Seoul and the agricultural industry in rural regions. Rapid industrialization focused employment opportunities in Seoul, further accelerating the migration and urbanization rates.95 From 1960 to 1979, employment in the mining and manufacturing industry nearly doubled from 17.5% to 32.8%.96

Export-oriented industry mainly consisted of clothing, sewing, and wig-making.⁹⁷ Labourers at sewing factories in the urban centre and in the industrial districts on the outskirts of the city carried out the bulk of the drastic economic developments during the 1970s.⁹⁸ Since the 1950s, wholesale clothing markets had been developed along Chung-Gye-Chun, a creek near

As larger corporations took over the clothing market in Korea since the late-1970s, and the formations of labour unions no longer permitted low wages and long work hours, the sewing factories around Chung-Gye-Chun moved to nearby residential districts. Since Chang-Shin was close to both the East Gate and the markets, many factories moved to the area.¹⁰¹

Chang-Shin, and naturally, small-scale sewing factories also gathered around them.⁹⁹ Since the founding of Pyung-Hwa Market (Part of the larger East Gate Market) in 1961, sewing factories around Chung-Gye-Chun expanded further, and were responsible for manufacturing 70% of ready-made clothes in Korea.¹⁰⁰

^{94.} Gwang-Joong Kim, "Developments and Transformations of Seoul," 14.

^{95.} Gwang-Joong Kim, "Developments and Transformations of Seoul," 14.

^{96.} Gi-Suk Lee, "Pre-Modern City to a Global City," 72.

^{97.} Sang-Chul Choi, "Transformations of Modern Urban Planning in Seoul," 518.

^{98.} Gwang-Joong Kim, op. cit., 15. GDP of \$250 in 1970 increased to \$1000 in 1977.

^{99.} Seoul Museum of History, Livelihood and Space in Chang-Shin, 55.

^{100.} Seoul Museum of History, Livelihood and Space in Chang-Shin, 55.

^{101.} Seoul Museum of History, Livelihood and Space in Chang-Shin, 63.



Figure 2.61 Sewing factory in Chang-Shin during the authoritarian regime



Figure 2.62 Modern day sewing factory in Chang-Shin

Changes in Housing Policies

Alongside the economic developments, housing policies also went through a series of changes, further transforming Chang-Shin's urban environment. In the 1960s, the urban fabric of Seoul still consisted of old street networks and land divisions inherited from the Josun dynasty, layered over with the accumulation of slums. Overall, the urban environment of Seoul was spaced narrowly, wom out and disordered, without basic sanitation and public infrastructures. 102 Slums continued to expand due to industrialization, and there was 54.6% shortage of housing in 1966, 103 along with 30% of houses either designated as slums or illegal in 1970. 104 The government needed to find a new way to accommodate increasing population of Seoul.

The government mainly accomplished this task by thoroughly and directly conducting Seoul's urban developments. In 1967, the Second Five-Year-Plan announced the mass production of residential units, with the goal of supplying one housing unit for every household. In 1969, the city built cheap low-rise apartments on the slum sites, where the previous slum residents could live in. Within a single year, the city built four hundred apartments, but encountered catastrophic structural failures in 1970 due to hasty construction processes, which put an end to the development plan.

The development policies themselves went through a series of changes, and despite the government's efforts These policies significantly affected Chang-Shin, which was a notable slum district in Seoul. In the early 1960s, 593 slums in Chang-Shin were demolished. ¹⁰⁵ In 1969, the Second Five-Year-Plan led to the construction of 30 apartments in Chang-Shin, which in 1998 were demolished and replaced by parks. ¹⁰⁶ In 1970, five hundred slums were demolished in Chang-Shin. The pre-existing buildings' owners were given apartment units, and the tenants were relocated to the periphery of the city, Gwang-Ju. ¹⁰⁷

In 1975,83% of residents were still single houses.¹⁰⁸ It was only towards the late 1970s that the majority of these houses were converted to two-storey structures,¹⁰⁹ which accommodated more efficient land use in the midst of the housing shortage. Typically, the ground floor was occupied by the owner , and the second floor by the tenant.¹¹⁰

to find a plausible solution that addressed both the needs of slum dwellers and the housing needs of the city at large, many strategies were met with challenges due to their lack of both public and private money. Providing adequate housing supply inevitably involved clearing the lands occupied by slums and gentrification.

^{102.} Kim and Yun, "Urban Redevelopments and Transformations of Seoul," 588.

^{103.} Sae-Gwan Son, "Transformations of Seoul's Residential Environment," 260.

^{104.} Gi-Suk Lee, "Pre-Modern City to a Global City," 65.

^{105.} Seoul Museum of History, Livelihood and Space in Chang-Shin, 52.

^{106.} Ibid.

^{107.} Ibid., 53.

^{108.} Sae-Gwan Son, "Transformations of Seoul's Residential Environment," 272.

^{109.} Ibid., 260.

^{110.} Ibid., 273.



Figure 2.63 Demolition of slums in Chang-Shin

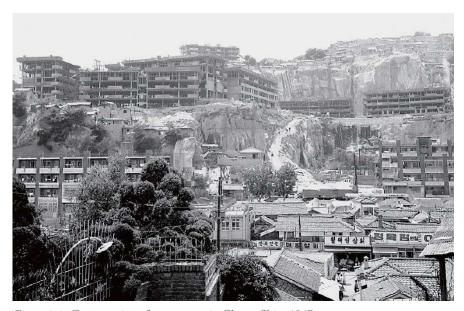


Figure 2.64 Construction of apartments in Chang-Shin, 1967



 $\it Figure~2.65$ President Yung-Sam Kim, who established local autonomy in Korea

The Fifth and the Sixth Republic of Korea (1979–Present)

Decentralizations under the Democratic Government

After the long years of military-based authoritarian rule, another military coup d'état established the Fifth Republic, but it too was eventually replaced by the Sixth Republic in 1988.

The new government gradually accommodated the people's desire for a democratic government. Local autonomy was established in 1992, giving political autonomy to the twenty-five wards (*Gu*) within Seoul, and the mayors were no longer appointed by the presidents, but instead were voted into the office. The urban planning and administration processes accommodated residents' participation.¹¹¹

Service industry, industrial restructuring, and satellite cities developed, aided by the standardized use of automobiles. The government decentralized city functions, halting the rapid increase in urban population. New redevelopment policies and the expansion of the middle class population caused apartments to become the standardized housing type in Seoul.

^{111.} Gwang-Joong Kim, "Developments and Transformations of Seoul," 20-21.

^{112.} Ibid., 30.

Decentralization Policies and Economic Restructuring

The government conducted the economic restructuring that generally decreased the number of businesses and employees but increased added value in the manufacturing industries.113 Conventional mining and manufacturing industries yielded less added-value than in previous decades, diminishing their employment.114 Instead, the info-communication industry and the electronic industry developed rapidly in Seoul, particularly the production of semiconductors. Despite such developments in the manufacturing industry, by the late 1980s, Seoul was undergoing post-industrialization, while moving towards increasing concentration in the service industry. 115 The Urban Decentralization Policy effecting industrial restructuring in the mid-1980s that caused major government, industrial, and private business facilities to move to the metropolitan outskirts, slowing down the rapid population increase.116

The Urban Decentralization Policy had been an effort made by the government since the late 1970s which attempted to prevent the over-concentration of urban functions and populations in the traditional urban centre, rather distributing it throughout the city. Development plans of Yeoido, Gang-Nam, and satellite cities had been undertaken and largely completed by the 80s. Efforts by the government to alleviate traffic problems by expanding roads and constructing new highways, along with more parking areas, contributed to the standard usage of automobiles and led to the development of satellite cities and improvements in the outskirts of the city.¹¹⁷

Since the mid-1980s, what was once a central concentration of employment moved beyond the city walls and became polycentric. ¹¹⁸As Seoul went through its post-industrialization phase, the number of manufacturing employees decreased by 56.2% between 1988 and 1998. ¹¹⁹ Due to the changes in economic structures after the late 1980s, the garment industry declined in Korea, and as a result, sewing factories in Chang-Shin also declined. ¹²⁰

^{113.} Ibid., 80.

^{114.} Ibid.

^{115.} Gi-Suk Lee, "Pre-Modern City to a Global City," 76.

^{116.} Ibid., 64.

^{117.} Gwang-Joong Kim, "Developments and Transformations of Seoul," 19.

^{118.} Gi-Suk Lee, op. cit., 83.

^{119.} Ibid., 80-81

^{120.} Gyoo-Ah Park, "A Study on the Role of the Art and Culture in Communities for Urban Regeneration: Based on Changshin-dong, Seoul" (MA thesis, Hongik University, 2014).

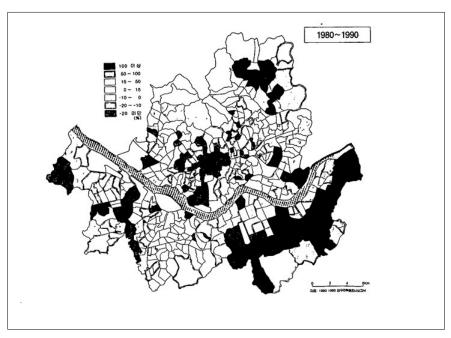


Figure 2.66 Population changes in Seoul during 1980–1990

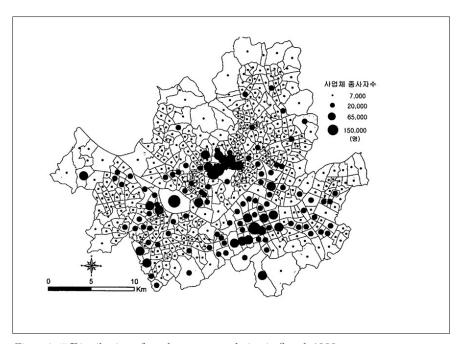


Figure 2.67 Distribution of employment population in Seoul, 1999

Change in Redevelopment Policies

Due to the expansion of the middle-class, those families with means to seek home ownership, housing demands drastically increased, and the development policies became quantity-driven. The government announced the Two Million House Construction Policy, which was mainly responsible for turning Seoul into an "apartment forest". Contrary to previous struggles with the housing policies during the Third and the Fourth Republic, two new housing policies led to significant successes in supplying for Seoul's housing demand, and also fueled the proliferation of three housing types that became dominant in Seoul and Chang-Shin: multi-family houses, Villas, and apartments.

The first policy was the Cooperative Redevelopment, which began in 1983. Contrary to the previous policies which were led and controlled by the government, this redevelopment model allowed voluntary agreements between the residents group and construction companies. The residents group provided the land for the construction company to build high-rise apartments on. As a result, each resident household got a unit in the new apartments, and the construction company sold the remaining units. The role of the city diminished, other than in zoning and directing the project, while more bottom-up oriented development paradigms began to thrive, as the residents and construction businesses gained

more control of the redevelopment projects. The construction company benefited by easy procurement of the land, in a context of chronic shortages in both land and housing. This policy significantly activated the redevelopment scene in Seoul, and maintained its popularity even through the late 1990s, supplying for 184,900 households.

However, such high housing demands resulted in a "whatever is built, sells" mentality. Since the builders did not need to build a quality environment for it to sell, they could instead maximize their profits by simply building it in the cheapest way possible. ¹²² Apartments were viewed as a profit-making commodity, ¹²³ and a new trend settled in, in which people bought newly built apartments in order to sell them in a few years at higher prices, only to buy another new apartment and sell them again. While these policies significantly benefited the property owners, the poorer tenants often had to bear losses in the process.

As apartments became the norm, older districts were left behind in development. Following the development policies of decentralization, new apartments were concentrated in Gang-Nam, and Gang-Buk; (including Chang-Shin), by contrast, where there were concentrations of single family houses, was not as developed.¹²⁴

^{121.} Gyoo-Mok Lee, "Reading Modern Environments of Seoul," 145.

^{122.} Ibid., 145-146.

^{123.} Sae-Gwan Son, "Transformations of Seoul's Residential Environment," 280.

^{124.} Gi-Suk Lee, "Pre-Modern City to a Global City," 87–88.

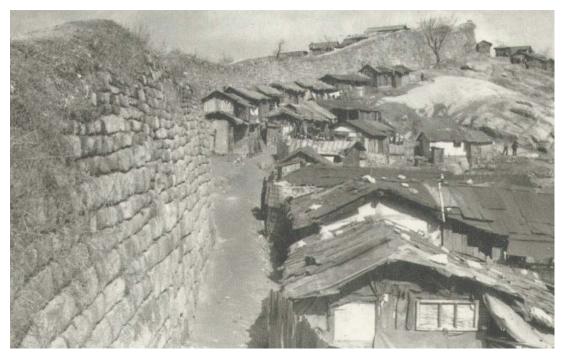


Figure 2.68 Slums beside the city wall in Chang-Shin, 1962

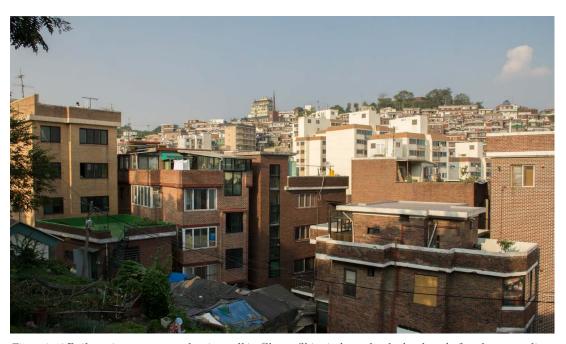


Figure 2.69 Built environment near the city wall in Chang-Shin, independently developed after the new policy.

Regulations regarding Multi-Family Houses

Multi-family housing was first introduced in 1984. As the single-family houses were illegally being used by multiple families, the government legalized the phenomenon with an official policy, and the regulations regarding the size, number of storeys, and the number of residing households were changed. 125 The government gave various incentives and financial aid, and multi-family houses spread widely as a way to make financial profit. Owners of singlefamily houses could make substantial profit by upgrading them to multi-family housing and renting out to tenants. Although this made a substantial contribution in meeting the housing demand, it largely disregarded any considerations for aesthetics or quality of the space, as the owners tried to build the maximum allowable floor areas and number of storeys in order to maximize rentable areas. The multi-family house was only allowed to be three storeys or less with a 330% floor-to-area

ratio, but later changed to be four storeys or less with 660% floor-area ratio. 126 More than 50% of housing construction was multi-family housing in 1985, and more than 65% in 1990s. 127 Eventually, multi-family houses became the most common housing type in Chang-Shin.

As it became more difficult to procure land for construction in the 80s, due to the lack of available lands and high prices, another housing type was developed, the "Villa". It was aimed to be a high quality environment version of multi-family housing, yet significantly smaller than apartments. Since the businesses were able to build only on smaller plots of land and yet continue to sell them at expensive prices, especially as quality developments were in demand by the wealthier classes, Villas became popular. Though not as elaborate, Villas were built along the city wall in Chang-Shin, forming by their conglomeration a district of their own.

^{125.} Sae-Gwan Son, "Transformations of Seoul's Residential Environment," 291.

^{126.} Ibid., 292-293.

^{127.} Ibid., 292.

^{128.} Ibid., 294.



 ${\it Figure~2.70~Multi-family~houses~surrounding~older~houses~in~Chang-Shin.}$



Figure 2.71 Villas in Chang-Shin

Aerial Maps of Chang-Shin

Transformation of Urban Organization: Top-down to Bottom-Up

In 1972, at the brink of major modernization about to take place, Chang-Shin could be distinguished into three main regions: a region of Urban Han-oks constructed by private developers, a region of double-storey houses built by developers, and the remaining region of bottom-up neighbourhoods with single-storey houses. However, over the next few decades, these clear boundary conditions constituted by the top-down developments become blurred and eventually disappeared. In their stead, an entirely new set of boundaries appeared, due to an overlay of new bottom-up developments over the existing urban fabric. To trace back further, it is reasonable to speculate that even this existing top-down urban fabric had already been informed by the pre-existent, bottomup urban fabric. Given that the district had been active for six hundred years, many parts of the developed areas lacked strongly rigid and linear qualities which would otherwise be uniquely common to top-down developments¹²⁹

^{129.} While the Japanese-developed districts display strong rigidity and linear patterns, the districts developed by Koreans show a certain irregularity despite their top-down methods, resulting from following the pre-existent urban fabric,

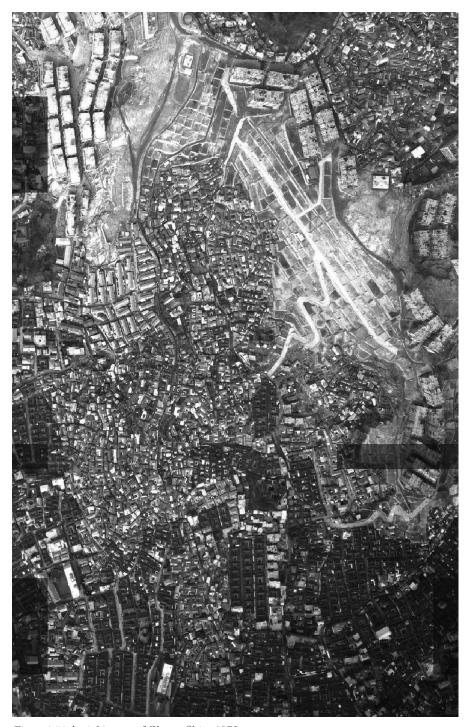


Figure 2.72 Aerial image of Chang-Shin, 1972

Chapter Conclusion:

Characteristics of Seoul's Top-Down Urban Developments in the 20th Century

Seoul's urban development history is characterized by manifestations of strong top-down controls, even more so than other cities in the world that also underwent highly centralized governments. 130 Over the years, the predominant top-down agency over the urban environment of Chang-Shin and Seoul have shifted from the highly centralized and authoritative governments, to more dispersed municipal governments and private businesses. Even after the monarchy was abolished in Korea, there remained strong control over the economic and urban affairs of the city by the authoritarian governments. At this point, the centralized government acted as the decision makers, and the newly developing business corporations acted as the investors of development capital. As the centralized government collapsed and a fully democratic government was established, more top-down control became delegated and available to the municipalities and business corporations, which had become fully developed at this point. The national and the municipal government no longer had as direct and detailed control as it used to, and instead set the overarching policies within which the business corporations and private property owners could work. While the shift towards democracy and capitalism distributed the top-down control at the hierarchical level, modern technology enabled a single agent to exercise an immense amount of control in a given area, by means of mass-production.

Top-down influences on Chang-Shin may be categorized into four types:

1. Direct Intervention

Perhaps the most literal and comprehensive form of top-down development, Direct Intervention take control of the totality of design and construction of a given area. This form of development has historically been managed both by public and private agents. Examples include mass construction of Urban Han-Ocks during the Japanese occupation, mass construction of welfare housing in the 50s, construction of apartment complexes in the 80s, as well as road expansion during the Empire of Korea.

2. Indirect Intervention

Indirect Intervention controls only the initial phase of design and construction in a top-down manner by placing key urban elements in strategic locations with the purpose of promoting subsequent bottom-up developments, or at least with the anticipation of such phenomena. Examples include: urban infrastructure such as the city wall, city gates, and major street grid, as well as railways, highways, and public transit routes and stations. Institutional buildings such as government headquarters, major universities, and libraries are considered in their

^{130.} Gwang-Joong Kim, "Developments and Transformations of Seoul," 22.

placement as well. So too are recreational facilities such as large-scale parks and shopping centres.

3. Direct Urban Policies

Direct Urban Policies describe rules and regulations designed to directly manipulate built environments. Examples include the Temporary Building Policy which legalized the slums during the First Republic, the greenbelt established during the Third Republic in order to constrain urban expansion, the leniency of regulations regarding the floor-area ratio of multifamily houses during the Fifth Republic, or the Cooperative Redevelopment Policy leading to the proliferation of apartments during the Fifth Republic.

4. Indirect Urban Policies

Indirect Urban Policies describe rules and regulations that deal primarily with the general welfare of society, but have indirect consequences on built environments. Examples include the legalization of private commercial activities during the Josun Dynasty, the permission of foreign residency and missionary work by Go-Jong during the Empire of Korea—which had the effect of introducing western architecture in Seoul—and export-oriented industrialization policy that proliferated sewing factories across Chang-Shin.

Throughout distinct phases in Korean history, it can be observed that the economic structures were closely knit with the political changes. For the most part, the urban developments of Seoul strongly reflected the economic interests of these agents. Although economic and financial interests similarly and significantly influenced the world's urban developments in general, such interests have been overtly dominant in Korea

since the time of its modernization. Historically, the Japanese colonial government's priority was to gain maximum resources from Korea, and subsequent authoritarian governments disproportionately prioritized economic development of the country. This pattern also continued in the 80s and the 90s, when the government purposely devised the quantity-driven development policies to allow financial interests to be maximally pursued by development agents. Their overall effect was to foster a culture pressured to produce a large quantity with haste, which resulted in a serious compromise on the design quality of the built environment.¹³¹ Part of these consequences were due to the severe shortage of housing which needed to be addressed quickly, but a deeper underlying cause can be found in the general culture preoccupied with financial gain. Unlike the modern capitalist developments of Western society, in which the harmful effects of capitalism could be restrained to certain extents by the laws and constitutions informed by strong Christian virtues, in Korea, the Confucian traditions of blind submission to higher authorities bolstered the abuse of authority in the government,132 making it easier for economic and financial interests to take priority in the public and private agenda. Ignoring the existing urban fabric, quantity-oriented developments damaged the diversity and sense of history in the urban networks which accumulated over thousands of years. 133

^{131.} Gyoo-Mok Lee, "Reading Modern Environments of Seoul," 137.

^{132.} Ibid., 131–132.

^{133.} Ibid., 134.

Chapter 3:

Bottom-Up Developments in the Urban Analysis of Chang-Shin



Figure 3.1 Han-Ocks redeveloped into commercial buildings at the southern edge of Chang-Shin, along Jong-No Street

Chapter Introduction:

Bottom-up Rules

Whereas top-down development described how the political authorities exercised control over urban environments, bottom-up development focuses on how relationships among individuals constitute the urban environments. Whereas the top-down development involves a "vertical paradigm" of politics that manifests as rules such as regulations and policies, the bottom-up development involves a "horizontal paradigm" of politics that manifests as tacit agreements among neighbours. To put it simply, bottomup development describes the ways in which individual residents "get along" with each other, which subsequently becomes expressed through the relationship between each of their individual built environments, and how the neighbourhood as a whole works as a large network of these individual relationships.

In 20th century Chang-Shin, top-down government policies have in many ways set up the basic premise for bottom-up developments. Even the smallest components of the bottom-up, whether the popular individual building type or the economic and industrial circumstances which caused particular programs to flourish in particular locations, have been the direct results of the top-down policies. The bottom-up developments of Chang-Shin by and large can be interpreted as either those stemming from direct responses to top-down constructions,

or those developments already anticipated by the larger intended scope of the mandated and top-down policies which were merely played out in the local context, at later points in time than the policies' inceptions.

The influence of top-down mandates notwithstanding, when it comes down to the finer details of development, it is evident that the bottom-up has indeed played a significant role.



 $\label{eq:Figure 3.2} \emph{Figure ground of the built structures in Chang-Shin-2}.$

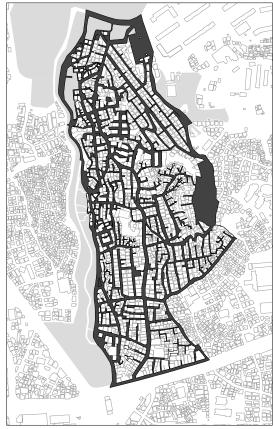


Figure 3.3 Figure ground of the publicly accessible spaces in Chang-Shin-2.

Districts Designed by Individual Agents

Primary and Secondary Urban Elements

A defining urban characteristic of Chang-Shin is that its urban fabric is determined mainly by the impromptu organization of its individual buildings. Rather than being designed and constrained primarily by the layout of street grids, a series of open public spaces, or a set of walls, ¹³⁴ within Chang-Shin district, there is a sense in which the primary elements which have characterized the urban fabric's design are the individual, nameless buildings themselves.

Consequently, there appear two urban components which contrast each other: primary elements and secondary elements. Primary elements are those spatial and programmatic components for which developmental capital is primarily invested, and the secondary elements are those spatial and programmatic components, for which the development capital is not invested, and thus become secondary concerns of the development agents. As the primary elements manifest, the secondary elements manifest simultaneously: primary elements manifest initially by claim and construction, whereas secondary elements manifest initially by their omission. The primary elements tend to be designed, whereas the secondary elements tend to be ad-hoc. The primary elements have a

134. Zhu Jianfei, "The Social Space of the City" in Chinese Spatial Strategies: Imperial Beijing 1420–1911 (London and New York: Routledge Curzon, 2004), 50. more fixed usage, whereas secondary elements are comparatively more transient in usage.

Primary and secondary urban components form simultaneously as a single structure, and yet constitute two distinct urban entities.

Programmatic and Spatial Elements

Both the primary and the secondary elements can be divided into two aforementioned categories: programmatic and spatial. If the primary spatial elements are buildings, then the secondary spatial elements might be the intermediate ad-hoc space left in between the buildings. If the primary programmatic element is residential occupancy, then the secondary programmatic element might consist of the ad-hoc uses that accompany the primary residential function, such as gardening, or parking.

Mass Phenomena: Patterns and Organizations

Typically at the mass scale, both the programmatic and spatial elements tend to gather according to similar kinds. For example, particular building types and programmatic types tend to be concentrated in certain areas. Consequently, since the secondary elements manifest as derivatives of the primary elements, it may also follow that concentrations of particular typologies of ad-hoc public space exist in certain areas, in the categories of both programmatic and spatial aspects.

Simultaneous Formations of the Primary and the Secondary Elements

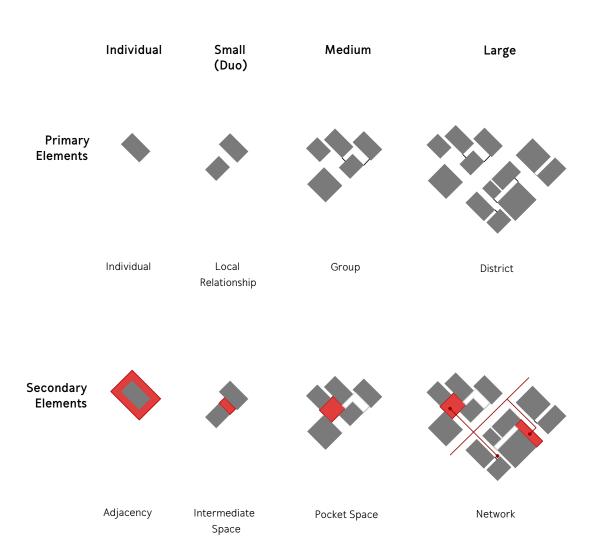


Figure 3.4

Sections Outline

In order to further illustrate the bottom-up nature of Chang-Shin, the ensuing sections present Chang-Shin as a set of smaller groups that make up the district as a whole. Each subsequent section incrementally increases the scale of the groups, starting from the individuals and moving then to small, medium, and large groups. In doing so, this exercise elucidates the correlations between the individual builders and their impact on the overall design of the district.

- 1. Individual Units:
 - a. Primary Elements
 - i. Programmatic Types
 - ii. Spatial Types
 - iii. Derivative Types
 - b. Secondary Elements
 - i. Programmatic Types
 - ii. Spatial Types
- 2. Impermeable Groups
 - i. Formational Types
- 3. Building Organizations & Alley Patterns
 - i. Organizational Types
- 4. Districts
- i. District Characteristics

Individual Units

The primary and the most basic building blocks of Chang-Shin are the individual structures built by individual agents. Each of these buildings can be categorized into different types, spatially and programmatically.

Figure 3.5 Catalogue of all the built structures on the ground in Chang-Shin-2. The smallest structures include secondary additions to larger buildings, and the largest structures include apartments several storeys high.



Figure 3.6 A clothing retailer in Chang-Shin.

Primary Elements: Programmatic Types

An individual program is equivalent to an individual building's function, and similarly, a group of programs indicates the particular function of a conglomerate within the district. Programs in Chang-Shin can be categorized into five types—residential, commercial, industrial, religious, and social—each of which are distributed throughout the district in distinct patterns. These patterns are informed by the topography, practical benefits of their locations, and the benefits due to various densities.

Even without a central planner, the inhabitants of Chang-Shin—that is, its bottom-up development agents—have found what appears to be the ideal organization of programs within the district. Although there have been some direct, top-down influences in some areas, such a distribution of programs seems to have occurred as certain urban and natural circumstances proved to be ideal for particular programmatic aims, and each owner made decisions to build or renovate accordingly.

To paint a general picture, the central north-south axis, where a creek once flowed along the region's lowest elevations, is now occupied by the main street and has become the most public area. More private programs increase steadily as one moves towards the general periphery of the district, as the altitude gets higher. Similarly, the southern half of the district is more public in its usage, due to the relatively flat terrain which allows for ease of access, and due as well to its proximity to Jong-No Street. Its functionality becomes more private towards the northern half, where it gets too steep for public access.

1. Residential

Although residential programs exist throughout Chang-Shin district, areas along the northern periphery of the district exhibit a particularly residential character . This is due to the concentration of commercial and industrial programs along the Chang-Shin Street in the middle, as well as in the Southern area of the district, where the terrain is relatively flat.





Figure 3.7–3.8 Locations of residential programs (top right). A double-storey house in a northern residential area of Chang-Shin-2 (bottom).

2. Commercial

Commercial programs of Chang-Shin includes restaurants, cafes, pubs, karaoke bars, bookstores, internet cafes, bakeries, cell phones retailers, clothing stores, cosmetic stores & beauty shops, hair shops & barbers, school supplies outlets, supermarkets, convenience stores, optical shops, realtors, inns, music & academic tutoring, laundromats, drug stores, sewing suppliers, heating/cooling & home appliance outfitters, and electronics stores. These are concentrated along Chang-Shin Street, as well as in the southern half of the district, where the relatively flat topography gives the ease of access for the public.

Commercial programs are on primary roads only.

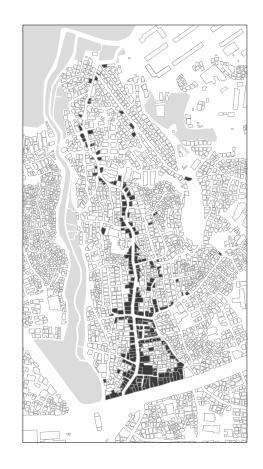




Figure 3.9–3.10 Locations of commercial programs (top right). A toy store on a relatively busy street. A group of elementary school children are gathered around a small video game station (bottom).

3. Industrial

Industrial programs can be categorized into four subtypes, each of which are concentrated in particular locations within the district. Factories that operate with teams of 5–6 make up the most heavily industrialized areas in the southern parts near Chang-Shin Street. In-house domestic factories reside in the northern residential district. Small-scale, specialized factories reside along the northern part of Chang-Shin Street. Sewing-related supply stores reside in the southernmost part. These maps' legends mark the general vicinities where each sub-types are concentrated, rather than their exact locations. Although the exact number is unknown, it is estimated that there are around three thousand sewing factories in the greater Chang-Shin district.

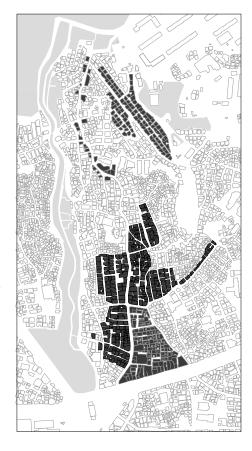




Figure 3.11–3.12 Locations of industrial programs (top right). A series of sewing factories lined up in a row (bottom).

4. Religious

Christian Churches tend to be dispersed throughout the district, and vary greatly in their sizes. They host community events, such as flea markets, and services for the poor. As well, it is common for larger churches in Chang-Shin to operate daycare centres. There are a small number of Buddhist temples in Chang-Shin, although there are no visible traces of community events and services associated with them.

5. Social

Programs that deal primarily with the social affairs of Chang-Shin include police stations, the municipal government's office for Chang-Shin Dong-2, and community centres. Daycare centres also constitute an important social function of the community.

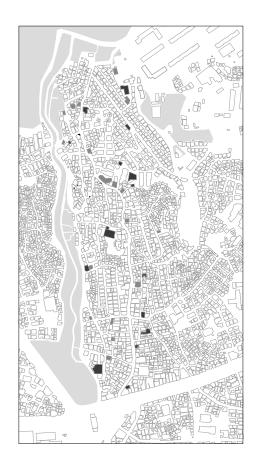




Figure 3.13–3.14 Locations of religious programs and social programs (top right). A multi-functional building where the ground floor is occupied by Chung-Ahm Church, and the upper floors are occupied by Chung-Ahm Daycare. On this particular day, both the lower and upper levels are used for a flea market that the church is hosting (bottom).



 $\label{thm:continuous} \emph{Figure 3.15} \ Urban \ Han-Ock, \ an important link between the traditional and contemporary housing typologies of Seoul.$

Primary Elements: Spatial Types

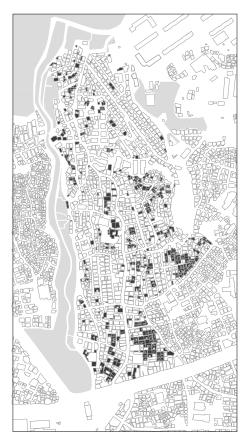
Like programmatic types, building types also find concentrations within their similar kinds, a predominantly bottom-up phenomenon with minor top-down influences.

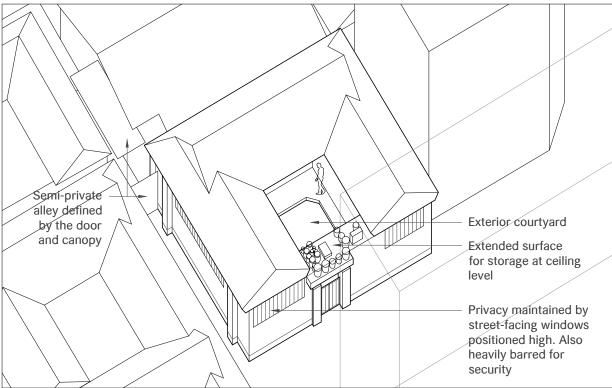
The buildings in Chang-Shin can be categorized into five general types, each type proliferating from a specific point in history that formed its cultural and historical background. Despite the demarcation of only five types of buildings within the body of theory, virtually every building is unique in reality. Each builder of the same building type has interpreted its application differently, as pertaining to the uniqueness of its use and the immediate context.

1. Urban Han-Ock

Urban Han-Ock is the oldest housing type in Chang-Shin, a modernized version of the traditional Han-Ock inherited from Josun Dynasty. Since private developers initially constructed Urban Han-Ocks, individual residents have furthered modified them over the years. Changes consist of modern bathroom installations, extensions of interior space over the outdoor courtyards in the centre, newly added rooms, and rentals of existing family rooms. The overall transition process, from the traditional Han-Ock of Josun Dynasty to the current-day's Urban Han-Ock, involved the increase of interior and rental space, in relation to the decreasing outdoor and personal living space of the owner.

The alleys between Urban Han-Ocks tend to be narrow, but the single-storey height still allows sunlight into the alley. Such alleys usually contain no parking accommodations for cars. Sometimes Han-Ock alleys have doors for circulation control, as they tend to be more private as one moves further in from larger streets.





Figures 3.16-3.17 Locations of single-storey buildings (top right). Axonometric of Han-Ock (bottom).



Figure 3.18 Urban Han-Ock. A closed courtyard makes up the exterior wall on the right side. While the alley on the right is more private, and has more of the resident's belongings along the wall, the alley on the left is more public, and has a simple painting drawn on the wall for passersby.

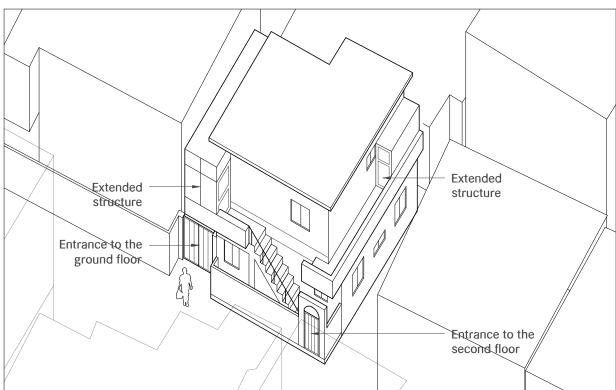


Figure 3.19 An assembly of Urban Han-Ock. There is little space between them, except for narrow alleys. Most roofs are old and in poor condition. Covered by sheets to prevent leakage during rains, the sheets indicate the extended interiors below, where outdoor courtyards used to be.

2. Double-Storey Houses

Double-Storey Houses became the popular housing type of Seoul during the 1970s. In Chang-Shin, they are located primarily on the North-East side, where they were mass-produced by a wave of development during the early 70s. Residential use of this type is most common, but many of them also contain single-person, in-house factories. The primary reason for the standardization of this type was its capacity to house two or more households in the same building, with the upstairs unit often having a separate entrance. This form is characterized by exterior stairs and balconies, which tend to be taken over by horizontal expansions of the living quarters, or else enveloped by partition walls, resulting in semi-private zones for the residents.





Figures 3.20-3.21 Locations of two-storeys buildings (top right). Axonometric of Double-Storey House (bottom).



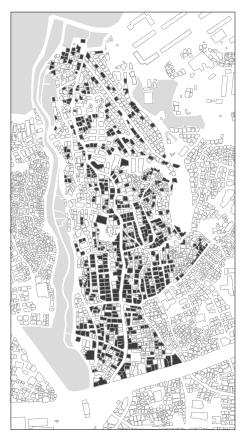
Figure 3.22 The secondary entrance on the right side leads only to the second floor, while the entrance to the ground floor is present on the left side of the building. This particular house was used as the set for a popular television show in 2010, as the home of a main character living in a poor neighbourhood.



Figure 3.23 An assembly of double-storey houses. Combinations of exterior stairs, corridors, extended structures and partition walls provide for a complex appearance.

3. Multi-Family Houses

Multi-Family Houses typically consist of 3–4 storeys, and became the most common building type in Chang-Shin during the late 1980s and 90s. The form is also the most versatile, as it is the standard type for commercial and industrial functions. The ground floors is commonly used for a function different than the upper floors (e.g. commercial on the ground and industrial above, or industrial on the ground and residential above). Their locations are concentrated particularly in the heavily industrialized and commercialized areas of Chang-Shin. Many have vertical extensions above their top floor, possibly due to leniency in the government restrictions of Multi-Family Houses allowing owners to increase their size for greater space and rental profit.



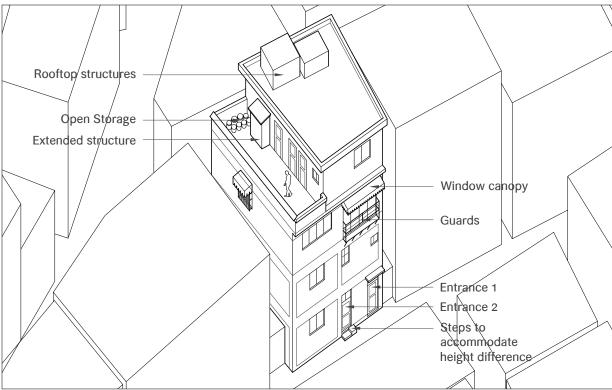
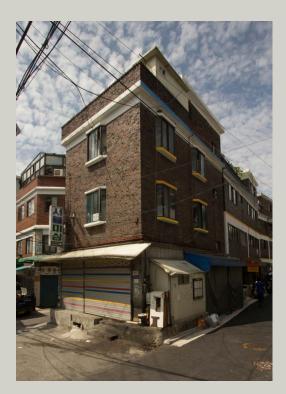


Figure 3.24–3.25 Locations of three and four storeys buildings (top right). Axonometric of Multi-Family House (bottom).





Figures 3.26–3.27 Multi-family houses used as factories.



Figure 3.28 An assembly of multi-family houses, many of them serving commercial functions. Multi-family houses tend to have the most accessible and utilized roof spaces.

4. Villas

Villas are considered to be the higher-end version of Multi-Family Houses. Typically consisting of five storeys or more, they tend to have more accentuated circulation-core features than Multi-Family Houses, and accommodate parking at ground level. Villas can be found almost exclusively on the west side of Chang-Shin, along the city wall. Since the region has steep topography, many Villas incorporate Elevated Bases, or Cross-Level variations. They are used mostly for residential purposes, and only a small number have commercial or industrial functions on the ground floor. As a newer type, they have also generally undergone fewer modifications, except for small portions of the balconies and window sills.

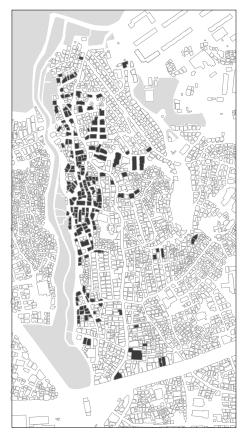




Figure 3.29–3.30 Locations of 5+ storeys buildings (top right). Axonometric of Villa (bottom).





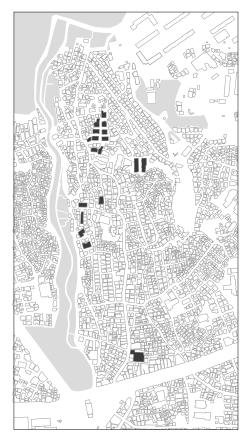
Figures 3.31–3.32 Villas with relatively elaborate circulation cores, roofs, decorative facades (left), finishing materials, and parking accommodations on the ground level (right).



Figure 3.33 An assembly of Villas with nearby parking lots.

5. Apartments

Apartments are the largest and the newest housing type in Chang-Shin, and the only type that accommodates elevator cores. It has the highest density and the greatest parking accommodation. While apartments became the standardized housing type of greater Seoul during the 80s and the 90s, they came to constitute only the smallest group among other housing types in Chang-Shin, an indicator of how Chang-Shin had been left out of the major corporate redevelopments in Seoul.



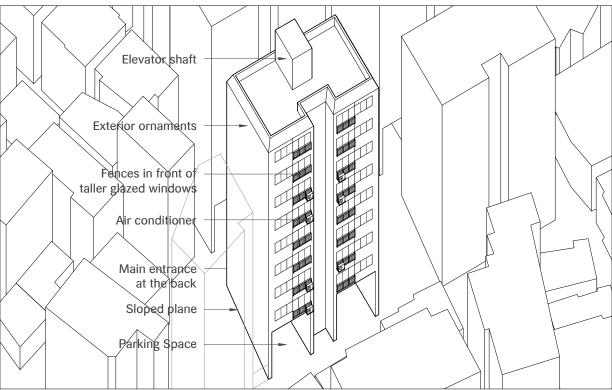


Figure 3.34-3.35 Location of apartments (top right) Axonometric of apartment (bottom).



Figure 3.36 Apartments in Chang-Shin are differentiated from typical apartment forms in Seoul by their parking garages on the ground floor.



Figure 3.37



Figure 3.38

Typological Derivatives ⊗ Variables

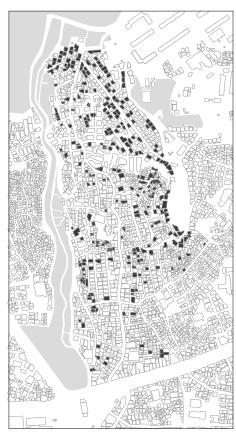
Spatial types rarely exist in their standard form in Chang-Shin, as most buildings are distinguished by further typological variables. Certain variable conditions would have been incorporated into the buildings at the time of their construction, while others have been later added onto existing buildings. The numerous ways in which the variable types can be combined further diversifies the urban makeup and landscape of Chang-Shin.

1. Exterior Circulations

Exterior circulation is predominantly found in Double-Storey Houses in Chang-Shin, and secondarily with Multi-Family Houses of 3–4 storeys. Since Double-Storey Houses typically have the tenant household living on the second floor, there is an appeal to providing a separate circulation route not interfering with the interior private space of the residents downstairs.

Exterior circulations can generally be categorized into two types: ones that connect directly from a public zone, and ones that connect from a buffer private zone. More varied types include exterior stairs combined with exterior corridors and balconies, as well as systems that use changes in topographical elevation as leverage to overcome height difference.

Many of these systems provide access from the ground floor up, but there are also instances of providing access from an upper floor to a higher location. (E.g. from the third floor to the roof).



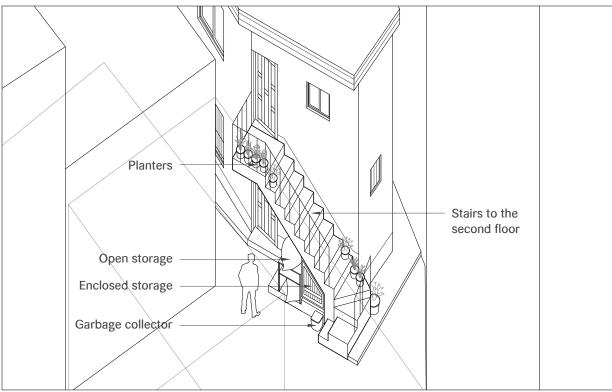


Figure 3.39-3.40 Locations of Exterior Circulations (top right). Axonometric of Exterior Circulation (bottom).





Figures 3.41-3.42 The exterior circulation to a multi-family house (left). An exterior circulation to a two-storey house (right).

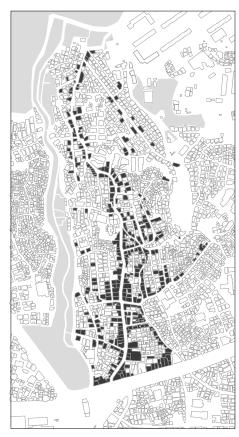


 $\it Figure\,3.43~A$ shorter set of stairs connecting the alley to the second floor.

2. Prominent Ground Facades

It is common for buildings of three storeys or higher to have distinguished uses for their ground floors, which are expressed through their facades. These ground facades are composed typically by combinations of three elements: glazed facade, canopy, and overflow items. They are used predominantly for commercial and industrial functions. While the use of a glazed facade and canopy are similar with both functions, the overflow items can vary significantly from building to building. Overflow items for the commercial programs include extended sales booths, sales items, cooking facilities, and small accommodations for seating or eating. There are fewer overflow items presented by industrial programs, which include newly arrived/left-over fabrics. These items are good indicators of the buildings' interior programs, and are usually situated along the boundary between the public and private zones.

Yet another separate category of ground-floor use is parking, which can be found predominantly within higher density residential buildings, such as Villas and Apartments. (pg. 114, 116)



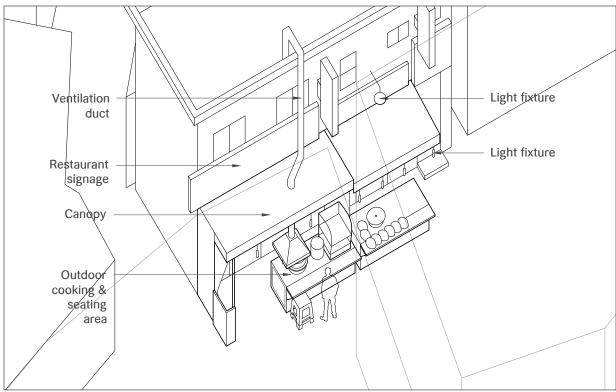


Figure 3.44–3.45 Locations of Prominent Ground Facades (right). Axonometric of Prominent Ground Facade (below).



Figure 3.46 Large glazed surfaces on store-fronts often accompany simple canopy structures.

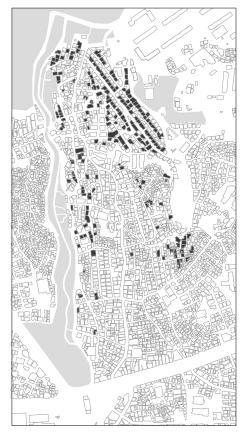


Figure 3.47 The frontage of a restaurant covered with signage and menus.

3. Elevated Bases

Elevated bases primarily serve the structural purpose of providing a level construction plane over potentially steep topography, but also act as a privacy buffer for the ground-floor residential units by elevating them above typical sight lines from the public street. In some areas, a series of elevated bases following the topography line raise their respective buildings above the street level. The elevated height can range from less than two meters to several meters tall. The construction of these bases predominantly accompanies residential programs, since the height difference above street level makes it inefficient for commercial or industrial use.

Since the elevated bases have no doors or windows, they provide useful space for urban side-hobbies or functions, such as gardening, and parking.



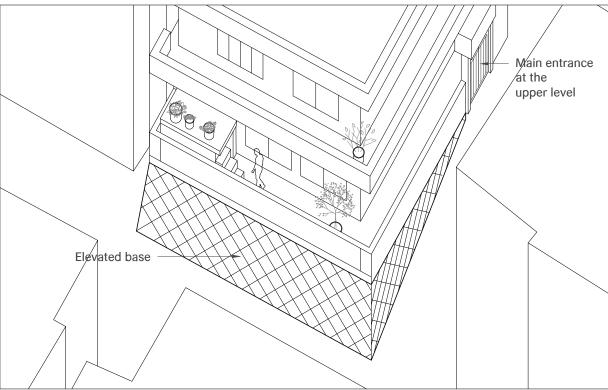


Figure 3.48–3.49 Locations of Elevated Bases (top right). Axonometric of Elevated Base (bottom).





Figures 3.50–3.51 Examples of elevated bases.

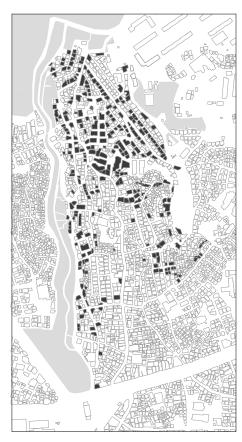


Figure 3.52 A continuous row of elevated bases on the right.

4. Cross-Level Conditions

Another way of building on uneven topography involves embedding the building into the sloped terrain, often resulting in a full-storey level-difference around the building. Sometimes the continuous slope wraps around the building, or in other instances, the building is the only connection between the two levels on the opposites sides. Such a condition allows two entrances at different levels, causing difficulties in defining which is the ground floor and which is the basement. In one instance, this situation became a point of dispute between the landlord and the tenant, when the tenant argued that his unit was in the basement of the building, whereas the landlord saw it as the ground-floor.

Sometimes the cross-level conditions are combined with elevated bases to accommodate sectional differences. There are also instances where the rise of the slope continues along multiple buildings, such that the slope which began at the ground floor of the first building, climbs two full storeys across a few buildings, to reach the roof of the last building. This allows automobile access to the roof for parking.



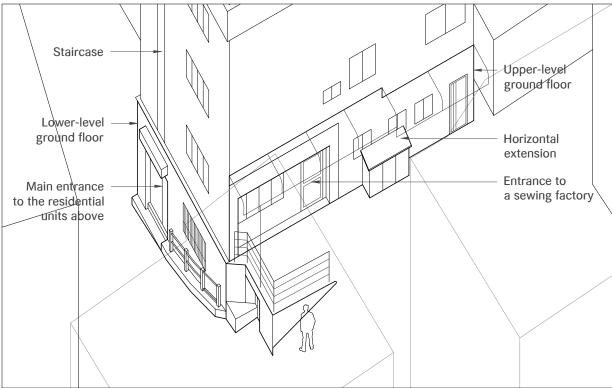


Figure 3.53-3.54 Locations of Cross-Level Conditions (right). Axonometric of Cross-Level Condition (below).

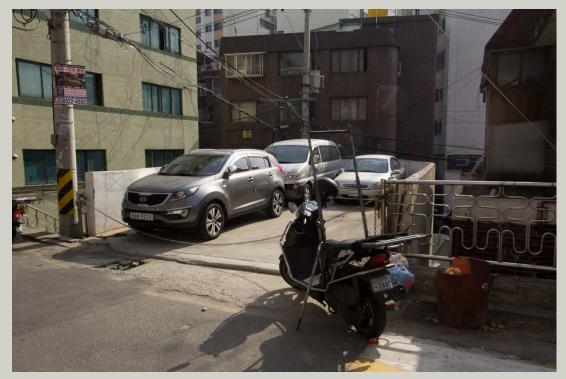


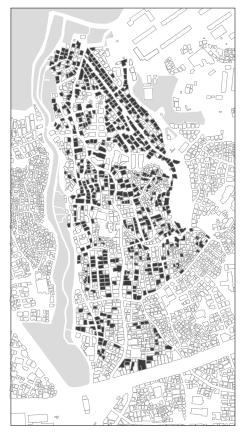
Figure 3.55 Roof of a building meets a road, and is used for parking



Figure 3.56 The same building relates to the road differently on the other side, due to the difference in level

5. Horizontal Extensions

Many in Chang-Shin have extended their interior space by adding extra structures on the sides of their buildings. There are many variations of this type. Commercial and industrial users in the southern part of Chang-Shin have relatively larger structures extended on the ground, or extended into the narrow gaps between buildings, many of which are built as a separate structures. Residential multi-family buildings of a few storeys sometimes add extensions on every floor of the building, making the extensions a multi-storey structure of its own. In the northern part of Chang-Shin, Double-Storey Houses tend to extend their structures over existing balconies (this is also done with some multi-family houses). Villas accommodate minimal amounts of horizontal extensions, and apartments accommodate almost none.



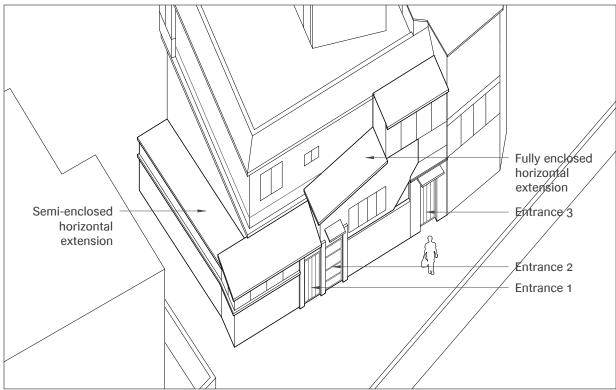


Figure 3.57–3.58 Locations of Horizontal Extensions (top right). Axonometric of Horizontal Extension (bottom).



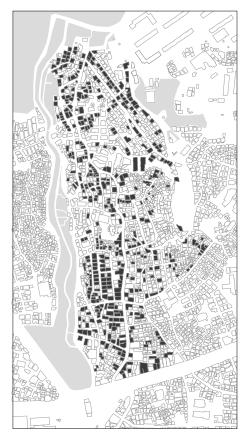
Figure 3.59 Different and less sturdy material suggests a horizontal extension. Railed balconies wrap around, connected by stairs built with similar materials.



Figure 3.60

6. Roof Spaces and Vertical Extensions

In the highly dense environment of Chang-Shin, many have taken advantage of roof spaces by making them easily accessible. There are mainly two categories of this type: roof spaces that support outdoor use, such as gardening, outdoor storage, and drying laundry, and roofs used primarily for building additional structures, which are then used for interior storage or rental. These latter vertical extensions can further be categorized into two types: partial extensions, which take up only parts of the roof and are typically accessed from the remaining exterior space of the roof, and full extensions, which can be seen as a full-storey additions to the building, and are typically accessed directly from inside a lower floor. The vertical extensions are mainly found in the southern and eastern parts of Chang-Shin, whereas the outdoor roof spaces are mainly in the northern and western parts of the district.



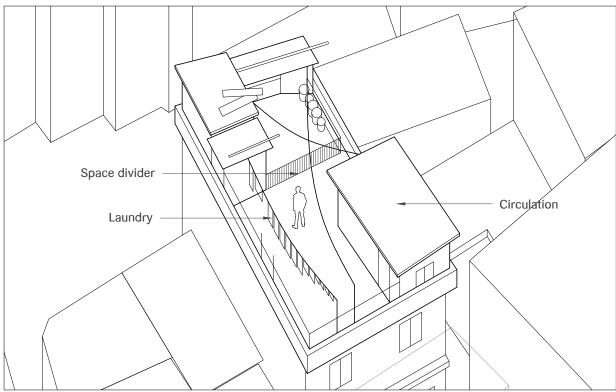


Figure 3.61–3.62 Locations of Vertical Extensions (top right). Axonometric of Roof Space and Vertical Extension (bottom).



Figure 3.63 A small ad-hoc garden on the roof and a chair.

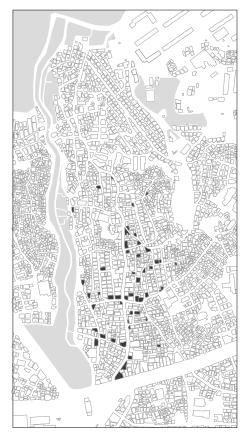


Figure 3.64 Three separate structures on a roof make a small alley and a courtyard of their own.

7. Trimmed Corners

Buildings in highly dense and busy intersections have corners cut on angles, which allow smoother circulation of fastmoving traffic, such as motorcycles, in addition to making the intersection more open and inviting for pedestrians.

Since this type accompanies busy intersections, it is seen predominantly with commercial buildings. Store-owners also benefit by having larger display areas around the corners.



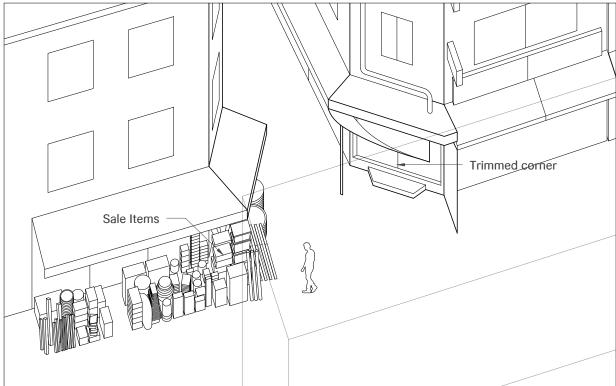


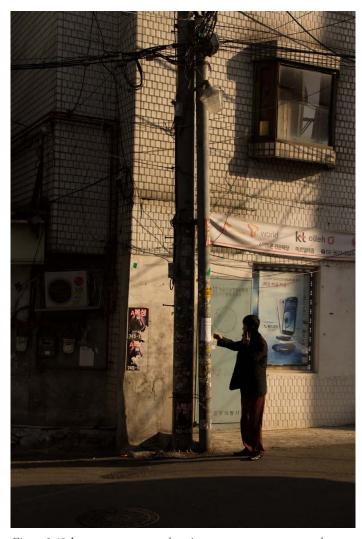
Figure 3.65–3.66 Locations of Trimmed Corners (top right). Axonometric of Trimmed Corner (bottom).



 $Figure 3.67 \, \mathrm{A}$ grocery store located around a multi-faceted corner, allowing for a continuous display area at the intersection.



Figure 3.68 Some buildings appear to have trimmed corners mostly for the public traffic's sake, with little or no advantage to the building's owner.



 $\it Figure\,3.69~A$ man gazes at an advertisement post on a street pole during a phone conversation.

Secondary Elements: Programmatic Types

Ad-hoc and transient, secondary programs are urban activities that happen outside of a building. Contrary to the primary programs of the associated buildings, many of these programs were unintentional at the time of their buildings' construction, but came into place as the buildings began to be used. Some of them have become a fixed construct over time, whereas a portion of them are simply events that take place for a moment and disappear.







Figure 3.71 Rest taken by passersby

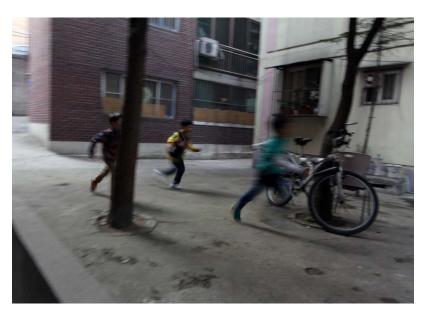






Figure 3.73 Break from work



Figure 3.74 Street merchants' activities

Figure 3.75 Parking



Figure 3.76 Storage



Figure 3.77 Domestic chores



Figure 3.78 Gardening

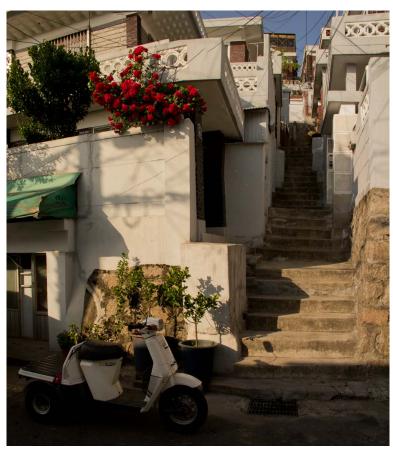


Figure 3.79 A narrow space in front of a double-storey house hosts a row of planters and a motorcycle, at the intersection between the descending stairs of an alley and a larger street.

Secondary Elements: Spatial Types

Secondary programs take place in various types of secondary spaces. Many of these were initially conceived as "left-over" spaces at the time of construction but were assigned unique functions at later points in time. Their use tend to be flexible, informed by the immediately adjacent primary programs.

1. Adjacency

Adjacency occurs when a narrow delineation of open space immediately in proximity to a building, one leading to a larger public space such as a street, is claimed by the building's owner as semi-private space. These delineations are sometimes made explicit by yellow road markings drawn by the municipality, and support a wide variety of functions such as storage, motorcycle parking, ad-hoc gardening, seating, laundry drying, garbage pick-up, or commercial display. In some instances, a series of buildings collectively exhibit Adjacency in a row, constituting a larger entity of this phenomenon (e.g. a row of sales items and placed in front of commercial buildings, or a row of motorcycles parked in front of industrial buildings).

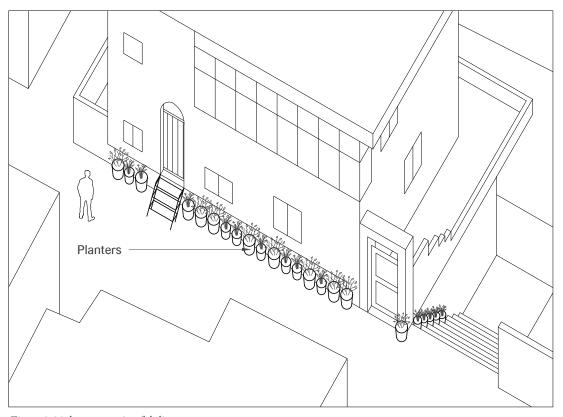


Figure 3.80 Axonometric of Adjacency.



Figure 3.81 The spatial gap between a multi-family house and the outer boundary of a road, serves opportunistically as a storage space for some planters and a bicycle, and also as a motorcycle parking spot. The small set of steps that leads to the planters might be the remains of the previous building, possibly an Urban Han-Ock.



Figure 3.82 Rolls of new fabrics lean against a sewing factory, until a worker from the inside comes and picks them up.

2. Programmatic Associations

Sometimes, the public use of a secondary space occurs around the needs and qualities of existing public programs, which in and of themselves have the public characteristics, typically a commercial program. Some of these larger spaces form not only as a result of one public program, but as a combination of programs in close proximity.

Examples of the programmatic associations might include the following: a public bench in front of a convenience store, where passersby can sit for a break from climbing a steeply sloped street; steps in front of a seniors' recreational centre, where elderly residents can sit out in groups on a summer day; or the main entrance to a steam bath, where the guests can converse for a while. In some cases, even the main entrance of a residential building can function as a public space, should it be equipped with a chair in front, a small junk shop across the street, and a few industrial buildings around, from which sewing factory workers might occasionally come outside for breaks.

It can be noted that these spaces typically are accompanied by basic seating arrangements, however insignificant they may be. Even minor accommodations, such as a plastic chair or even just a few steps, appear to be of significant support to transient social gatherings.

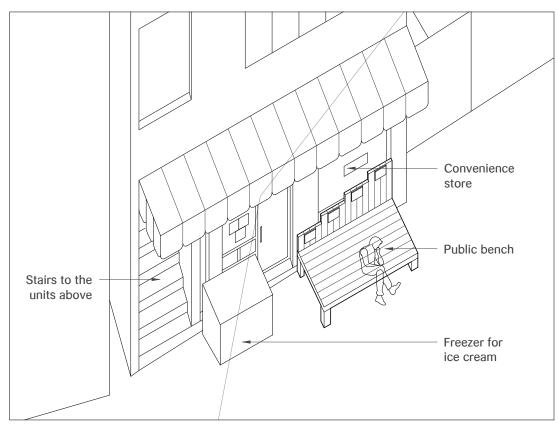


Figure 3.83 Figure 3.83 Axonometric of Programmatic Association.



Figure 3.84 The chair behind the entrance of the public steam bath, seemingly an important factor behind the social use of the space. Just moments before, the circle of conversation involved a man sitting on the chair, who eventually went back inside.



Figure 3.85 This particular convenience store, located on the steeper part of the busy Chang-Shin Street, made the kind gesture of putting a public bench in front, where passers by could take a break without necessarily making a purchase at the store.

3. Linear Extensions

A Linear Extension forms when two buildings are off-aligned from each other, and the resulting gap is claimed as a semi-private space by an adjacent building owner. Linear Extensions generally have two basic forms, rectangular and triangulated, although variations also exist. Some Linear Extensions are marked by distinct paving materials, while territories of others are implied simply by their spatial composition and usage. Overall, they tend to be more defined and legitimized spaces than Adjacencies. Many function as parking spots for cars, and ad-hoc gardens.

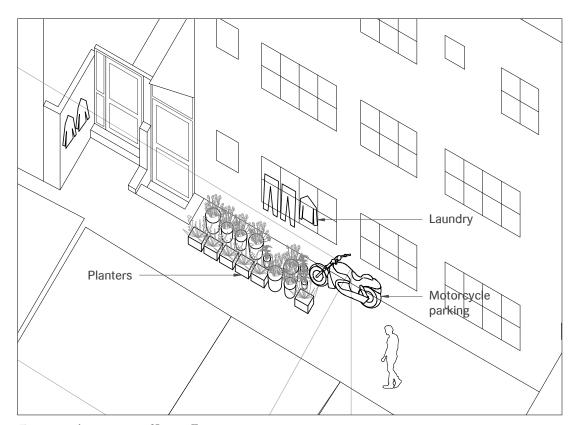


Figure 3.86 Axonometric of Linear Extension.



Figure 3.87 Situated in a heavily industrialized area, this ad-hoc motorcycle parking lot is a rare example of a decorated and better maintained secondary spaces in Chang-Shin.



Figure 3.88 Even a narrow gap can constitute a Linear Extension, making a difference in the quantity of planters placed in the space.

4. Interstices

Buildings in Chang-Shin tend to be spaced very closely. While there are almost no gaps between many of the buildings, a few buildings have narrow gaps in their midst which are utilized in various ways. As a general pattern, the larger the buildings, the wider the gaps tend to be. Naturally, areas with a high concentration of older buildings tend to be denser at street level, and therefore contain less interstitial spaces. Typically, Urban Han-Ocks and other single-storey buildings are built closely together with barely any gaps in between, and the gaps between the Double-Storeys Houses, tend to be used as circulation routes (e.g. stairs that lead directly to the second floor). Multi-family houses and Villas generally have different sizes of interstitial spaces that support various functions, such as airing of laundry, storage of unused furniture or left-over fabrics from sewing factories, circulation routes, or small gardens. Many of them are not utilized extensively, likely due to the narrowness of their confines.

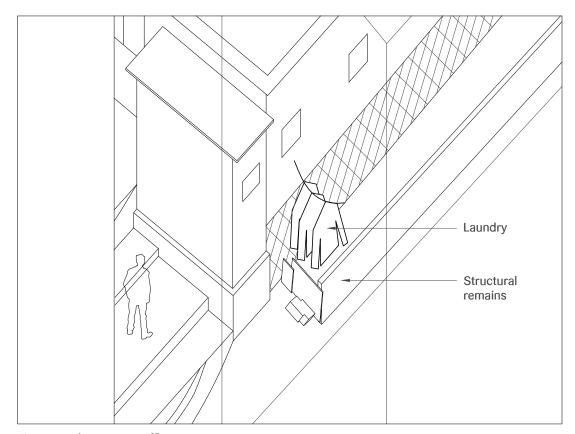


Figure 3.89 Axonometric of Interstice.





Figures $3.90-3.91~\mathrm{A}$ gap between two multi-family houses with industrial functions, used for drying the laundry (left). A gap between two Villas used as an ad-hoc garden (right).

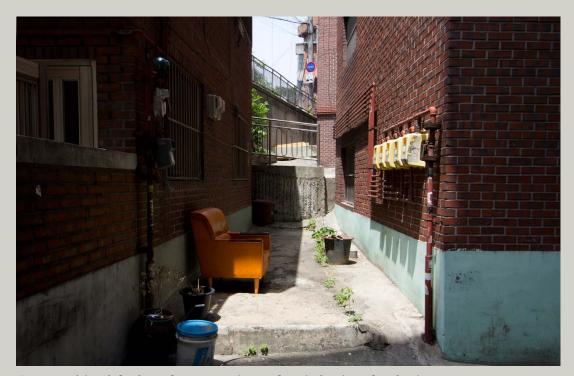


Figure 3.92 A less defined use of an interstitial space, furnished with a sofa and a planter.

5. Intermediate Space

Intermediate spaces are generally wider than the interstices and tend to be more actively used, supporting important functions for adjacent buildings, such as car and motorcycle parking, larger storage space for incoming industrial goods, and circulation routes to the main entrance of buildings. Many of them are taken up by horizontal extensions which function as indoor garages, storages, or small factories.

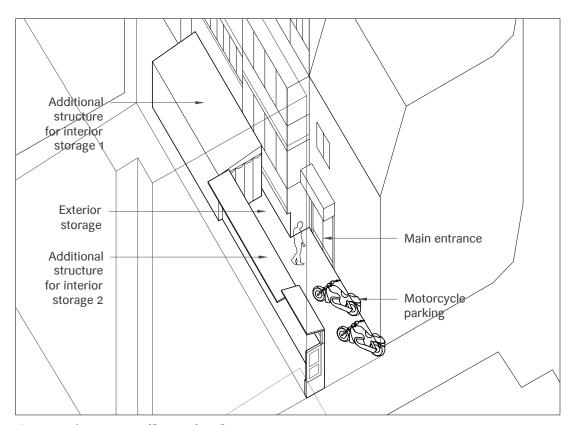


Figure 3.93 Axonometric of Intermediate Space.



Figure 3.94 A heavily industrialized multi-family house on the left, and a predominantly residential Villa on the right. This intermediate space, however, seems to be much better connected to the industrial building, because of a side door that leads directly to the space, and an exterior corridor overlooking it.



Figure 3.95 A multi-storey daycare, on the left, and a residential Han-Ock, on the right. While this intermediate space seems to act mainly as a small outdoor foyer for the daycare due to the side entrance at the back, the bicycle flush against the wall on the right seems to belong to the Han-Ock, and the thin row of planters down the middle seems to indicate the boundary between the two.

6. Pocket Space

Pocket Space is formed by three or more buildings enveloping an open space. Some of them are simply left as empty spaces, without any defined usage, while others support similar functions as the intermediate spaces and the linear extensions, only at a slightly larger scale. They are used for sizable storage, parking for multiple motorcycles and cars, relatively substantial gardening, or combinations of these functions.

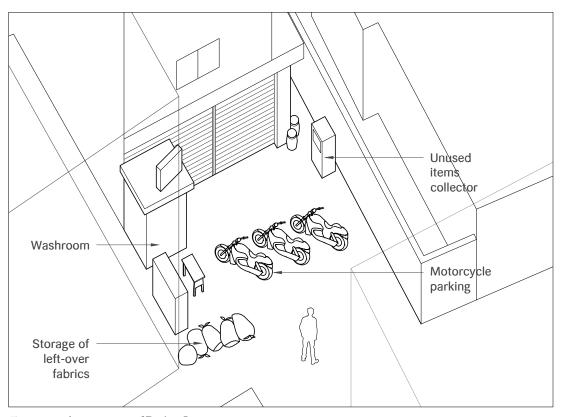


Figure 3.96 Axonometric of Pocket Space.



Figure 3.97 An unusually spacious secondary space with very little use by either public or private parties, even despite the trees, which are hard to come by in Chang-Shin. Small red flowers on the window sill and a small set of planters on the ground beside it accompany the trees.



Figure 3.98 A Pocket Space devoted to private storage, occupied mostly by a large cart.

7. Alley Appropriations

Alley appropriations may be defined as the usage of a significant portion of the width of the alley as supporting functions to the primary programs nearby. While they share similar characteristics with the phenomenon of Adjacency, such appropriations are differentiated in that they tend to occupy more substantial proportions of the alleys, whereas Adjacency occupies only the edge. The examples include a group of people occupying a narrow alley for a brief conversation, grocery and convenience stores storing or displaying their goods on either sides of the adjacent alley, street vendors occupying about half of the width of the thoroughfare, or advertising signage of nearby restaurants hung above an alley. These claims of space happen in ways and places which do not become disruptive to public circulation, such as the end of a dead-end alleys, or on limited portions of the overall street width. They generally support the planned, long-term uses.

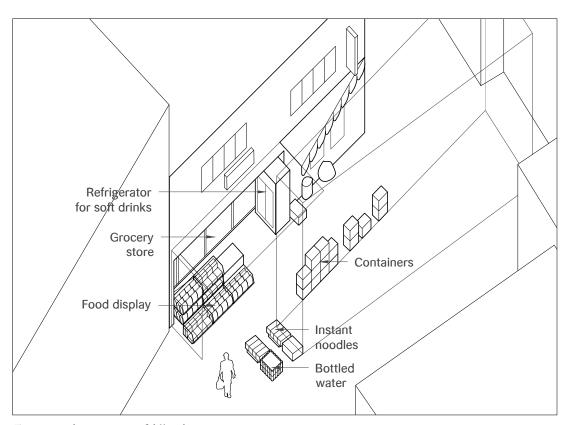


Figure 3.99 Axonometric of Alley Appropriation.





Figures 3.100–3.101 A series of signage above a narrow alley, aimed at the passersby of Jong-No Street. Right. Extended display stands from the grocery store, occupying two sides of an alley.



Figure 3.102 Near the end of a blind alley, the full width is occupied by laundry lines.

8. Street Intersections

Street intersections are the most active public spaces in Chang-Shin. They tend to have the high amount of traffic flow, yet the quantity of traffic also attracts other users, such as street vendors looking for a place with great public exposure, suppliers for grocery stores along the street looking for a place to park and unload their goods, or the promoters of the mayor candidates looking for visibility during campaigning seasons. Naturally, these spaces tend to be quite dense, and even congested at times.

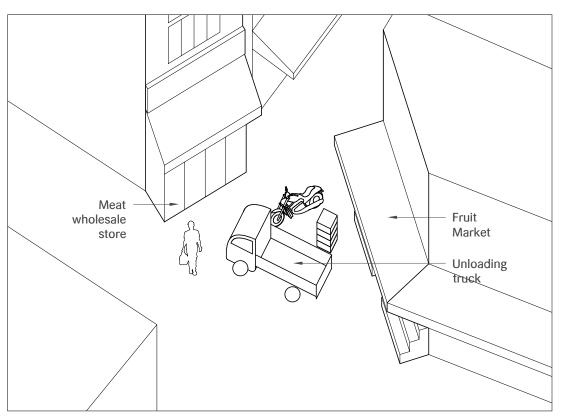


Figure 3.103 Axonometric of Street Intersection.



Figure 3.104 During the day. A busy intersection of two major streets, occupied by a street merchant's truck that sells peanuts. Although somewhat blocking the display facade of a bar that specializes in fried chicken, the owner seems willing to overlook it. The space also shares its use with motorcycle parking, presumably for the delivery service of fried chicken. Despite their co-usage of a small space, their target customers are different, so competing for business is unlikely.



Figure 3.105 In the evening. The same intersection is temporarily being used as an informal gathering space for a group of youths. Automobile and pedestrian traffic constantly flow around, making it a very busy spot.

Urban Blocks

The first level of grouping among the individual buildings can be distinguished by the characteristic of impermeability to the public. The groups in this class do not allow public circulation through the structures, as they form closed enclaves by their tight proximity to each other and by their partitions walls that connect multiple buildings. The size of impermeable groups vary from a single stand-alone building to a complex of substantial size with multiple alleys within.

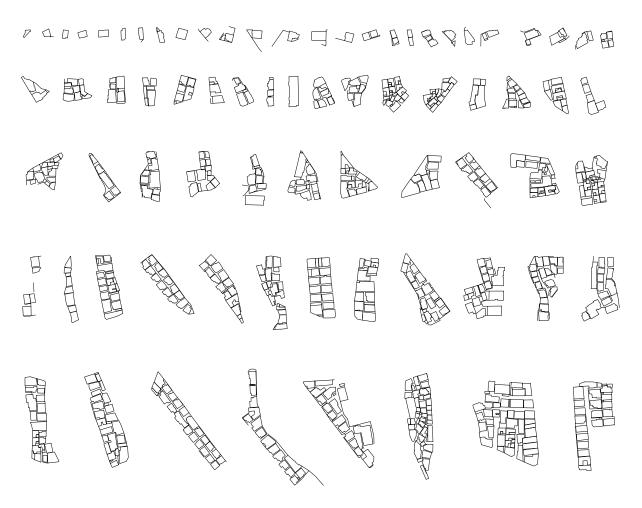
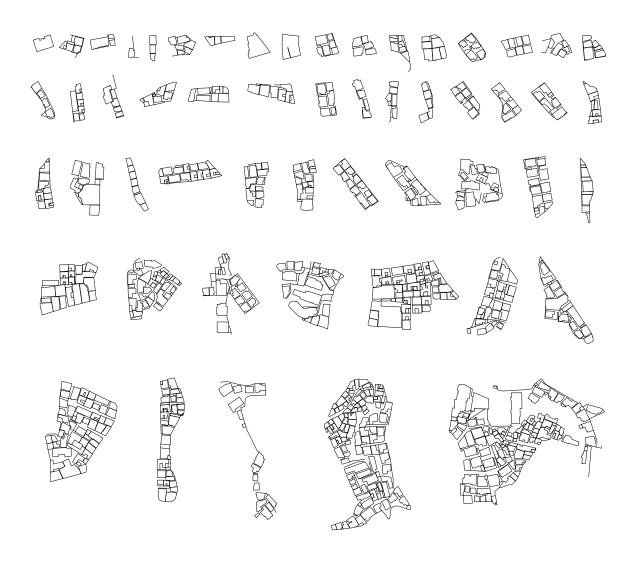


Figure 3.106 Impermeable urban blocks in Chang-Shin.



Partition Walls

Partition walls are important apparatuses for making spatial divisions which define private or semi-private spaces that are closed to the public. Longer partitions are seen mostly in the North of the district, and shorter ones in the South. This indicates the more closed spatial character of the residential areas which contain more semi-private zones, and more openness in the industrial and commercial areas.

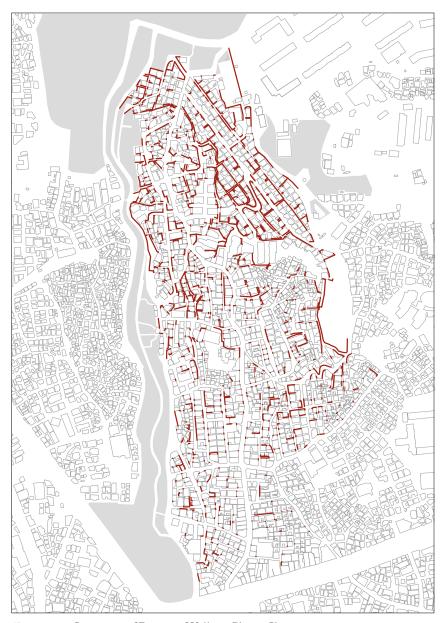


Figure 3.107 Locations of Partition Walls in Chang-Shin.



 $Figure 3.108 ext{ A partition}$ wall encompasses the small garden to a multi-family house, separating it from the public street.



Figure 3.109 A partition wall divides the semi-private zone of a multi-family house, on the left, from a public alley, on the right, beside a row of Han-Ock.

Organization & Alley Patterns

The second sub-level of grouping describe different combinations of impermeable blocks, each of which exhibit visible patterns in terms of building organization and the alley distributions.



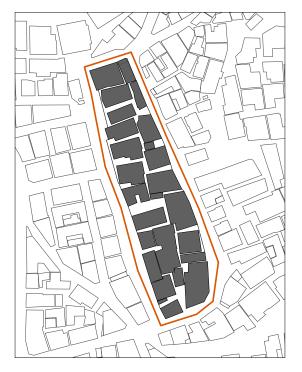
Swerving

 $\label{eq:Figure 3.110} Figure 3.110 \ {\rm Commonly \ found \ in \ the \ areas \ without \ top-down \ mass \ developments.}$



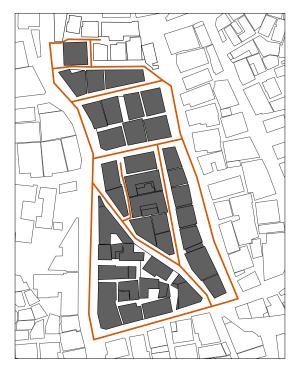
Grid

Figure 3.111 Commonly found in areas with top-down mass developments. The buildings are more intentionally aligned, but likely based on existing street patterns.



Closed

Figure 3.112 A substantial amount of buildings forming a completely closed periphery, where there is no public pathway permeating through it.



Open

 $Figure~3.113~{\rm A~collection~of~smaller~conglomerations~of~buildings, around~which~the~public~traffic~has~free~access.}$

Districts

Districts may be defined as the largest grouped unit within Chang-Shin. Each of these districts portrays certain distinctions in character, taking into account various factors such as constituent buildings, programs, and street types. Predominant factors for establishing distinctions between one district from another include presence of public programs, permeability of public circulations, and its location in relation to Chang-Shin Street.

Making Distinctions

Walking through Chang-Shin district, it is easy to discern the diverse patterns that existed in the neighbourhood. These patterns can be found in various aspects: in some areas, certain types of houses are dominant, while in other areas dense conglomerations of industrial or commercial programs can be found. Moreover, each area exhibits unique patterns in the ways buildings and alleys have been organized. These distinctions allow one to imagine Chang-Shin as divided into smaller sub-districts, each with its own sense of place.

Nebulous Boundaries

In making distinctions between the subdistricts within the district of Chang-Shin, any distinguishing boundaries must be seen as nebulous, rather than concrete in nature. For example, a sub-district distinguishable by its residing concentration of commercial programs may not strictly be contained within definitive boundary lines, but instead transitions gradually, fading out toward the periphery. Nonetheless, clear distinctions in boundaries can be made to reasonable degrees based on the analytical types.

Majority Rules

Similarly, a sub-district of a particular kind of individual urban element, although not 100% homogenous, can still be classified by a notable majority.

Incremental Break-Down

Even once a sub-district is distinguished, further distinctions can usually be found within that entity, breaking it down to incrementally smaller sub-sections. For example, a sub-district that has been distinguished based on its predominant building type can be further broken down based on organizational patterns of said buildings.



Figure 3.114 Informal districts in Chang-Shin.

D01

Commercial programs encompass this residual Han-Ock residential district. Jong-No Street runs along its southern edge, across which the East Gate can be found. Of all the districts, D01 contains the highest density of commercial programs and Urban Han-Ocks. Alleys tend to form right angles to each other, making sharp turns. The terrain is predominantly flat, so much so that there are no cross-level conditions or elevated bases, which makes the area ideal for commercial activities. On the eastern side, there is a notable alley containing a street market. Naturally, there are many prominent ground facades in the general area due to heavy commercial functionality. A stark contrast exists between the busy commercial zone and the quiet residential area, and the transition between the two happens instantly, as one turns around the corner. Frequent trimmed corner conditions accommodate the busy traffic flow in the area.

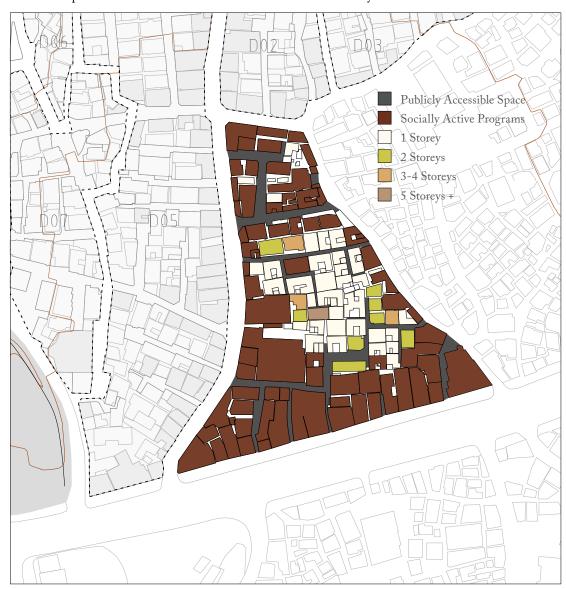


Figure 3.115



Figure 3.116 A view from Jong-No Street into an alley with a few restaurants. The prominent frontage, on the right, is a jewelry store, a renovated Han-Ock. A portion of the pitched roof belonging to the original Han-Ock still remains at the back of the building.



Figure 3.117 An alley where the remaining Han-Ocks are concentrated. The proportion between the width of the alley and the height of the Han-Ocks seems appropriate, unlike other alleys where the Han-Ocks were replaced by multi-storey houses.

DO2

The district is characterized by its porous organization, forming many alleys that free the public circulation through the district. Consequently, there are many trimmed corner conditions. The terrain begins to slope slightly at this point, and there are only a few cross-level conditions and elevated bases. Both commercial and industrial functions in the area are made visible by many prominent ground facades. Multifamily houses form the dominant type, with a few Han-Ocks among them. As the district is immediately adjacent to the busy Chang-Shin Street, and located in the central part of Shang-Shin, it also houses important civic programs, which includes a police station and the municipal office of Chang-Shin-2.



Figure 3.118



Figure 3.119 An intersection where Chang-Shin Street and a major pedestrian alley meet. In the morning, many commuters who walk down from the northern part of Chang-Shin diverge at this point to the quieter pedestrian alley, which takes them down to the subway stations on Jong-No Street without the hassle of dodging the cars and motorcycles on Chang-Shin Street.



Figure 3.120 A great amount of traffic flow occurs at this intersection, where the highest number of alleys converge in Chang-Shin—five alleys directly, with even more converging into these five within a small radius of the intersection. Consequently, there are commercial programs in each of the five corners: a thread shop for the garment industry, a sewing machine repair shop (right), a carpenter's shop (left), a shoes repair shop, and a small restaurant.

DO3

This residential district has a noticeable street grid. There is a continuous slope rising from the West to the East of D03, which starts gradually in the West, but increases steadily towards the centre of the district. There are some industrial functions on the west side of the district, an overflow from D02, as well as on the southern edge along a well-travelled street. However, the remainder of the district is predominantly residential; the steep slopes prevent these areas from carrying out industrial functions effectively, because of the difficulty in motorcycle access. There is a visible grid pattern to the alleys' layout, the development of which may have first been informed by the topographic patterns, and then reinforced further when Han-Ocks were mass-produced in the area. With the exception of an enclave of Han-Ocks still remaining in the central area, the rest are predominantly multi-family houses. There is a consistent line of prominent ground facades along the busier and more public street on the southern edge, and the overall district has a high density of elevated bases and cross-level conditions, due to the drastic slopes.

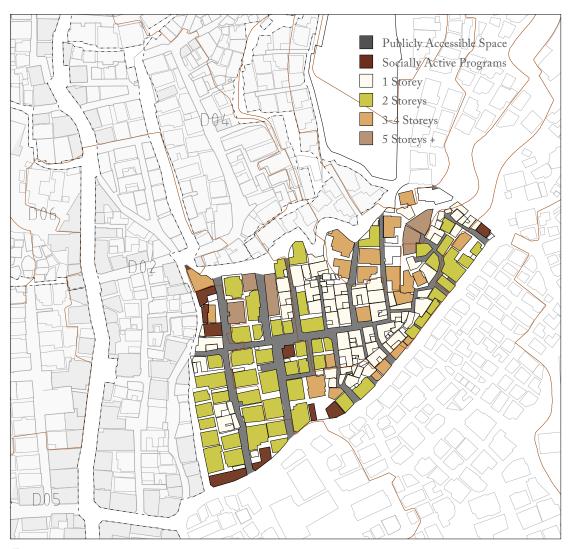


Figure 3.121



Figure 3.122 The lower part of the slope, where multi-family houses are concentrated. The convenience store, on the right, is situated at the junction where the industrial area, on its relatively flat topographical plateau, ends and the predominantly residential area begins, with its topographical slope. The shopkeeper seems fairly well acquainted with the residents, who pass by the store daily as they walk up the slope.



Figure 3.123 Further up the slope, a concentration of Han-Ocks appears, many of them supported on Elevated Bases. An elderly lady, who seems to have come outside for some fresh air, stops at the bottom of the slope and gazes up at a passerby traveling down the hill.

D04

An area with an absence of top-down development and where old, irregular street patterns have been preserved is characteristic of D04. Substantial variation to the topographical levels is present, and as such, a moderate amount of elevated bases and cross-level conditions can be seen among the buildings. There are but a few prominent ground facades.



Figure 3.124

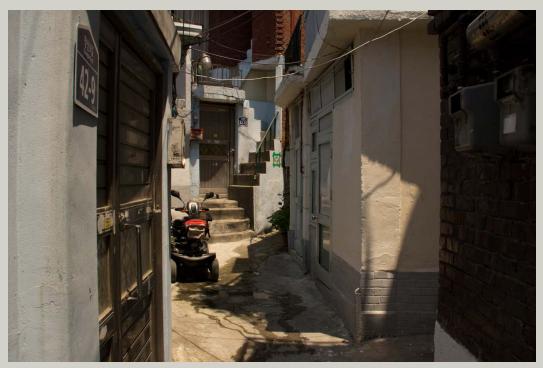


Figure 3.125 Winding stairs at the end of a narrow alley. The lower height of Han-Ocks allow daylight to seep in.



Figure 3.126 At noon, strips of sunlight reach one of the narrowest alleys in Chang-Shin. Even the midday sun can scantily penetrate into the alley shut in by the taller multi-family houses.

DO5

D05 is the most heavily industrialized district in Chang-Shin, proliferating with linear alleys intersecting at right angles. The alleys have distinctively industrial atmospheres, with frequent traversals of motorcycles, sounds of sewing machines, and workers coming outside for breaks. Given its location along the flatter part of Chang-Shin, and its adjacency to Jong-No Street, the district also carries significant commercial functions. There are many prominent ground facades on its eastern edge facing Chang-Shin Street, and a few elevated bases and cross-level conditions.

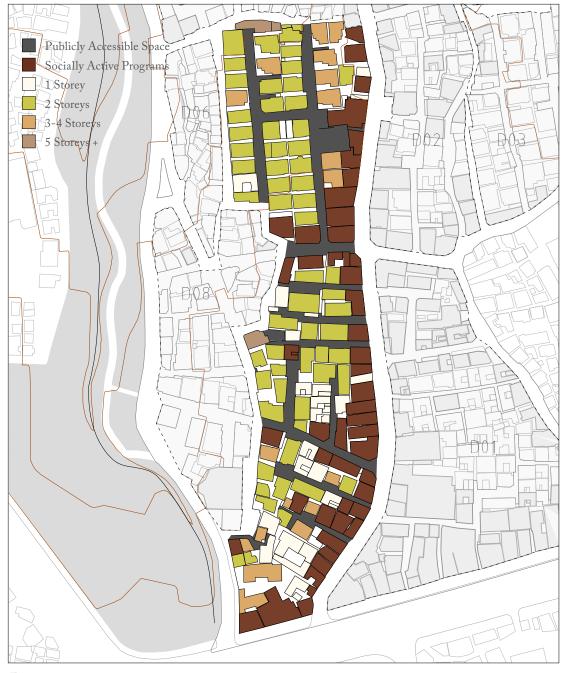


Figure 3.127



Figure 3.128 A few of the several factories that were developed together in the 90s. All of these buildings were once Han-Ocks, but only one remains (right). The factories in this particular area tend to have more defined loading and parking zones in front of the buildings.



Figure 3.129 The buildings in this industrial area tend to have the widest frontages among the multi-family houses of Chang-Shin, an attribute which heavily shades the alleys. The function of this local area seems to be almost exclusively industrial, which is unusual even for Chang-Shin.

The interior consists of another highly irregular organizational pattern, due to the absence of top-down development. Unlike D04, a few Villas have taken residence, while there are no Han-Ock in the area; the district's function is primarily residential with fewer industrial activities. The visibly large empty space in the north-eastern area indicates a closed, privately-owned outdoor space.

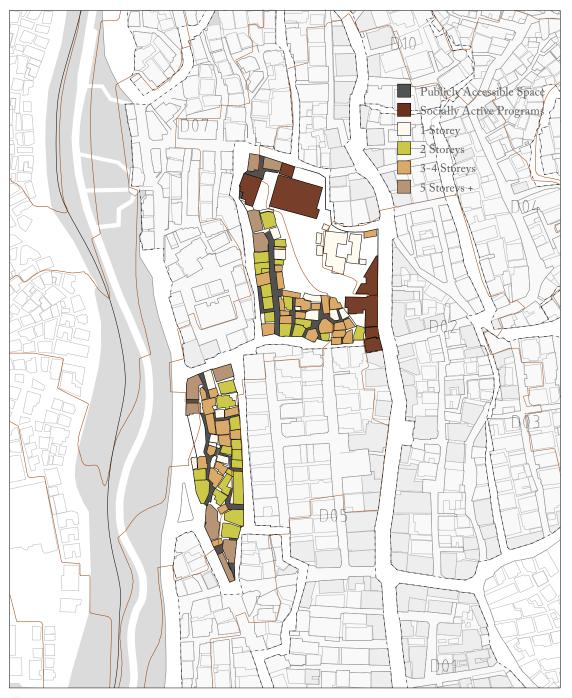


Figure 3.130



Figure 3.131 Multi-directional doors, windows and stairs around a narrow space. Unlike typical linear alleys, which make for long and continuous spaces, this zig-zagging alley breaks up the space into segments, isolating each part not only from the larger public street, but also from neighbouring sections. As a result, each segment exhibits more distinct spatial characteristics, and also a greater sense of privacy.



Figure 3.132 Another private environment isolated by a sinuous alley. The shading mat, bicycle, and stored items indicate the domestic and private character of the space. The concrete stairs in the centre leads to the rooftop of the single-storey house on the left. The atmosphere is quiet and comfy.

A residential district with Villas as the predominant building type. Relatively spacious public circulation routes flow around these higher-density buildings. Interior terrain slopes up steeply from South to North, and consequently many buildings feature elevated bases and cross-level conditions. There reside a few commercial programs, such as daycare centres. A major street cuts across the district, along the east-west axis.

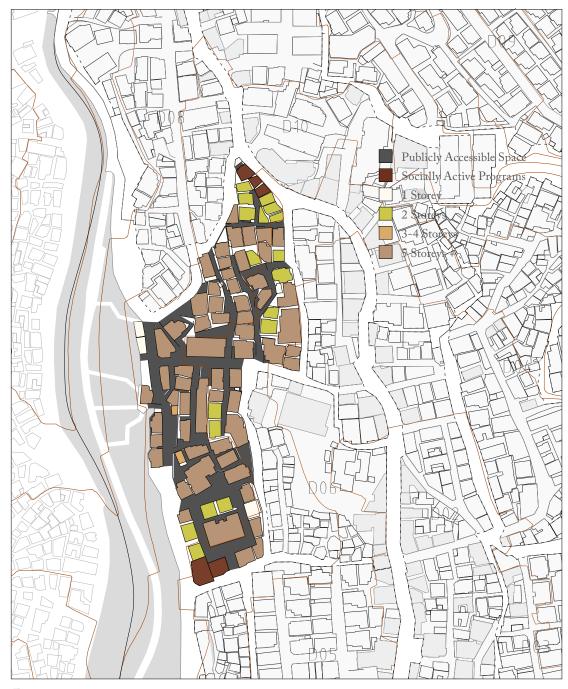


Figure 3.133



Figure 3.134 Villas built on a hill. This area was once completely filled with single-storey houses, even as late as the 90s, but went through rapid changes after the application of new housing policies. It now has some of the tallest and newest buildings in Chang-Shin. Between the Villas facing the public street are entrances to the more private alleys that lead further into the district of Villas (right).



Figure 3.135 As multiple single-storey houses merged into one Villa, density "stacked" vertically, and there formed wider public zones between the buildings.

A mixed-use district with residential and industrial functions, including both Multi-Family Houses and Villas as the typical building type. The terrain slopes steeply upward from east to west, and a major street crosses the district along the north-south axis. The eastern edge faces Chang-Shin Street, and still contains some commercial programs, albeit far fewer than the southern districts, likely because of its longer distance from Jong-No Street, and the steeper slopes which inconvenience visitors.

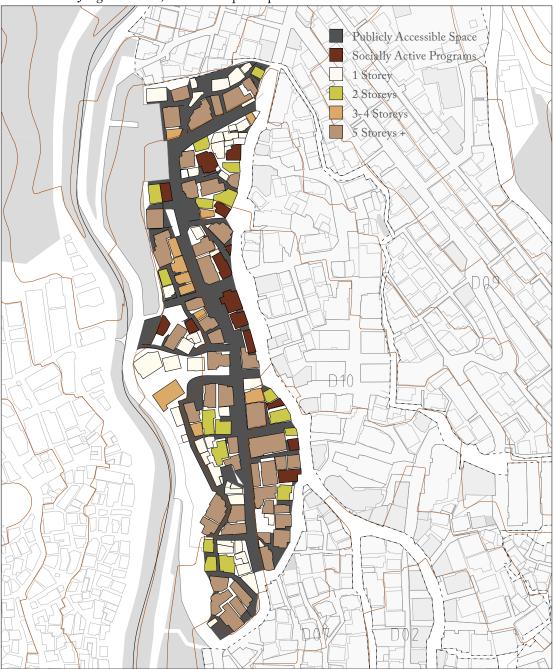


Figure 3.136



Figure 3.137 Single-storey houses in the midst of taller Villas, lined up along an alley that travels parallel the north-south axis.



Figure 3.138 An unusual urban condition in Chang-Shin, where a narrow alley hosts multiple parking garages. High-density Villas built along Chang-Shin Street with direct access from the main traffic route make this a necessary condition.

DO9

The interior terrain slopes down from Northeast to Southwest, and the buildings are built linearly according to the slope in a step-form. This district is characterized by having the largest amount of double-storey houses and elevated bases. Meanwhile, where terrain is more irregular, the houses follow a similarly irregular pattern, resulting in a more discontinuous and intermittent public space. Commercial programs consisting of a few convenience stores and a barbershop are scattered throughout the district. All the buildings were built when the area was redeveloped in the 1970s.



Figure 3.139



Figure 3.140 An area where double-storey houses are built on drastically steep slopes. Consequently, elevated bases are built higher in order to overcome the height difference, making the buildings float above one's head.



Figure 3.141 A nearby area where the organization of double-storey houses follows a strictly linear pattern due to the topographical form. This resultant street consistently has a parking lot on one side, beside the elevated bases (left). What appear to be single-storey buildings, on the right, are actually double-storey buildings with only their second floors visible due to the downward slope of the topography.

A district characterized by some of the largest buildings in Chang-Shin, a small apartment complex, and Multi-Family Houses filling the region around them. Commercial programs in the area include electronics and appliances stores.



Figure 3.142



Figure 3.143 A small apartment complex, containing the highest density of households in Chang-Shin. Notably, its residents' cars have a dominant presence in the public space. A drastic boundary condition along the periphery can be seen in the background, where other housing typologies appear.



Figure 3.144 Urban Han-Ocks, the oldest remaining building typology in Chang-Shin, are seen in the foreground, while the multi-family houses and apartments are seen in the background. The apartment in the centre appears domineeringly over the huddled Han-Ocks, perhaps an accurate metaphor to describe Chang-Shin's development history.







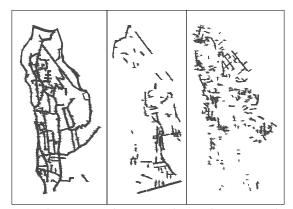
Figures 3.145–3.147 Examples of the three hierarchical street types in Chang-Shin, categorized according to their degree of connectivity, and by implication, their levels of public usage: primary (top), secondary (middle), and tertiary (bottom).

Street Types and Hierarchies

Since streets in Chang-Shin by and large have emerged over time as the residents each built their own houses, they do not have planned hierarchies or specified uses. Nonetheless, such patterns appear as the bottom-up responses to given topographical circumstances, necessities of life and work, as well as the relational responses among the neighbours. These emergent orders are critical for the urban functions of Chang-Shin District.

Street Types: By Traffic Types

The streets in Chang-Shin are generally be distinguishable into three types: automobile roads, motorcycle roads, and pedestrian roads. With the absence of official rules on the streets of Chang-Shin that limiting their usage, roads can technically be travelled by all modes of transport. However, there are a few factors that dictate street usage. Firstly, the street width generally determines the viability of cars on any particular thoroughfare. Streets wide enough for cars are well distributed throughout Chang-Shin, and are almost completely interconnected. It is clear that the other two types—motorcycle and pedestrian roads—by and large exist as smaller and disparate alleys that diverge from these automobile roads. Although the width of the road can in some cases factor into distinguishing these two latter types, there are few streets so narrow that motorcycles cannot travel through them. Rather, motorcycle transit is often prevented by steep slopes and stairs, which render the streets exclusive to pedestrians. The location of any particular street within the district also plays a role. Since motorcycles are used predominantly in industrial applications, they tend to employ streets in the industrial zones occupying the central area of Chang-Shin, and much less so the streets on the peripheries of Chang-Shin. In fact, it seems probable that topological limitations on the travel of motorcycles are what motivated sewing factories to conglomerate on flatter plateaus in the first place.



With Cars With Motorcycles Pedestrians Only

Figures 3.148-3.149 (above & below).



■With Cars ■With Motorcycles ■Pedestrians Only

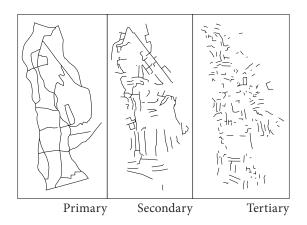
Street Types: By Connectivity

A complex street network can be analyzed by noting the number of intersections on each street, ¹³⁵ which correlates to their length. Any given street with many intersection points with other streets can be seen as a more publicly used thoroughfare with higher amount of traffic, while a street with a fewer intersections can be seen as a more privately used street with smaller amounts of traffic. Grouping streets that intersect with 1–3 other streets in the category of "tertiary", those that intersect with 4–7 streets as "secondary", and with 8–49 as "primary", shows a hierarchy in the street network. The primary streets are fully interconnected with each other and form an independent network, whereas the secondary and the tertiary streets are much less interconnected and are dependent on the primary network for circulation.

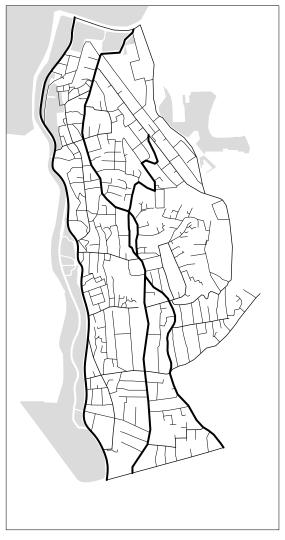
The primary streets can be further distinguished by noting the number of internal intersections among their network.

There are three primary streets that have seven intersections with other primaries, running vertically throughout the district. Such an observation suggests that most streets in the district are hierarchically nested into one of these three streets, and that most circulation in and out of the district ultimately flows through them.

The three main streets are highly distinct in their characteristics. The first main street on the western side runs through an area where higher-end Villas are concentrated, and also skirts the park along the city wall. The second main street, Chang-Shin Street, running down the central axis, is by far the busiest street in the district, shared by equally high amounts of cars, motorcycles, and pedestrians. Many commercial and industrial programs are concentrated along this street. The third main street which forms the eastern artery, may be described as a mix of the previous two streets. It appears less active and prominent than the first, but is at the same time more commercialized and industrialized than the second. It is particularly well-used by pedestrians, particularly during the peak commuting hours.



Figures 3.150-3.151 (above & below).



─Main Streets **─** Primary ─ Secondary & Tertiary

^{135.} Zhu Jianfei, "The Social Space of the City", 54-57.

Chapter Conclusion:

Characteristics of Seoul's Bottom-Up Urban Developments in the 20th Century

The complex nature of a city district necessitates continual revisions, as it were, of its design. As much as the "top-down" is valuable, the limitations of the human mind simply do not allow a single designer to take into consideration all the scenarios that occur in a given city district. Bottom-up design, on the other hand, is able to address those complex aspects of the city, by way of input from numerous designers who are also users constantly assessing and making revisions to the design of the district over time. The bottom-up rules found in Chang-Shin, may be summarized as follows:

Maximum Density, One Access Point per Building

The bottom line for any urban district, is that every building needs at least one access point from a public street. With this general "rule", the district gains a framework around which its general organizational pattern of buildings and layout of streets can simultaneously be worked out locally, to reasonable degrees of orderliness (e.g. "double-loaded" building organizations being common, "triple-loaded" being rare, and "quadruple-loaded" almost non-existent). As the built density increases, the necessity for orderliness also increases, as such complex systems require the most efficient use of space as possible. Although not an official

regulation, it works as an implicit, commonsense guideline among the individual residents, for the self-organization of the district.

Street Hierarchy

Similarly, there needs to be a reasonable degree of hierarchy in the street network for a district's proper functioning. And such hierarchy does emerge indeed in Chang-Shin, without a planner. Although detailed documentation of the emergent process over the entire six hundred year duration is not available, early maps of the district give important clues: they suggest that the district's development was first concentrated along the prominent Jong-No Street, which ran East-West through the East Gate, before it developed the north-south axis along a creek, the current-day Chang-Shin Street, and then expanded outward from there. This pattern shows that the most important hierarchical element was already established from the start, and therefore, not only was the resulting structure hierarchical, but the development process itself was to some degree, the hierarchical unfolding of elements of the urban fabric, since it closely followed the hierarchical proximity to the major urban infrastructures and topographical advantages.

Topographical Considerations

Topography had significant influences on the district's overall development. Apart from the development of Chang-Shin Street in a way that followed the topography, the concentration of commercial functions along the main street caused the quieter residential neighbourhoods to concentrate along the steeper peripheries. Also, much of the major commercial and industrial functions were concentrated on the relatively even terrains on the southern half of the district, and by contrast, the higher northern half was occupied by the quieter residential functions, resulting in a general pattern of programmatic distribution across the district. The topography also dictated much of the local street forms and building organization patterns.

Use of Partition Walls

The self-organization of Chang-Shin was significantly aided by the partition walls, which were used to establish semi-private boundaries around a set of buildings, at the same time defining the publicly accessible paths by closing off much of the interstitial space in between the buildings to the public.

The bottom-up rules may be distinguished into two categories: *mutual agreement*, and *collective response*, both of which produce coherent patterns. The mutual agreement describes the rules that are derived from the internal relationships among the designing agents, whereas the collective response describes the rules that are derived from the

collective response to external factors. For example, "One Access Point per Building", and "Use of Partition Walls", are explicit mutual agreements, since these patterns emerge primarily as the result of each agent's premeditated architectural choices in relation to the other agents. Each gives consideration as to how their building activities will not interfere with the functions of other agents and the community and subsequently presents these considerations as to be agreed upon by collaborators. On the other hand, "Streets Hierarchy", and "Topographical Considerations", are collective responses, since patterns of building density and type emerge as the result of many agents making similar decisions in response to the common factors externally encountered by the group, whether these include the urban infrastructure, or topography. Not all mutual agreements involve mutual responses, but all mutual responses need mutual agreements for the proper functioning of urban districts. It remains that rules formed through mutual agreements uniquely characterize social systems, including urban districts.

Chapter 4: **Adaptability and Redevelopment**



Figure 4.1

Chapter Introduction:

Redevelopment of Chang-Shin

As a city district, Chang-Shin is a concrete manifestation of the neighbourhood's culture and history. In a city where most of the old has been replaced by the new, the district affords a rare glimpse into Korea's past. The fast and compressed developments of the twentieth century transformed Seoul from a small, pre-industrial, feudal city into a modern metropolis, and these changes were recorded in the urban fabric of Chang-Shin itself, where the streets themselves have become a museum.

The redevelopment of Seoul has been ruthless. It took only a few decades to change from mostly single-storey houses to standardized apartments in the neighbourhood. There was a severe housing shortage after the colonization and war, and in the midst of industrialization, and the Korean government executed the fastest and cheapest development methods available to supply for housing needs. In the process, very little attention was given to the culture or historicity of the existing city environment, or for the poorer tenants of the development sites. Nonetheless, aside from the negative effects, it could be said that such drastic redevelopment measures to accommodate large quantities of housing were in some ways a necessity at the time.

However, circumstances changed substantially in the 21st century. There is now no longer

a chronic housing shortage in Seoul, and the city population has been decreasing in the recent years. Regardless, similar kinds of redevelopments still continue, with on-going threats of gentrification facing underprivileged residents of the older neighbourhoods. In such a situation, many have questioned, "For whom do the redevelopments really benefit?"

In 2007, the city of Seoul zoned over 20 regions in Seoul for redevelopment, which covered nearly all remaining historical neighbourhoods. Chang-Shin, which up until that point had not been developed due to the steep slopes and close proximity to the city wall, was also included in the plan. This time, however, the decision was put to a vote by the residents, in accordance with the new redevelopment policy, and the redevelopment plan for Chang-Shin was cancelled by majority vote in 2013.

By this time, the city of Seoul began to see the value of these older districts. This realization was a turning point for the city's redevelopment policies. For decades, there had been social stigma associated with districts like Chang-Shin, which were viewed as being outdated with slum-like environments. These conditions were once considered common and mundane in Seoul. However, as apartments became the standard housing type, and as older districts became rare, people found a new attraction toward these

districts. The older generation found themselves attracted to the neighbourhoods of their childhood memories. Younger men and women were attracted to the unfamiliar, yet authentic districts they knew embodied hardships that, though they never personally experienced them, were reality only a couple of generations prior.

It was in this context that the city of Seoul recently announced a new policy for the urban revitalization of thirteen regions in Korea, Chang-Shin being the only neighbourhood selected in Seoul, with twenty million dollars to be invested over the course of four years. However, detailed plans have not yet been announced, and questions remain as to how to work with these sites.

Unlike certain slums, Chang-Shin has basic necessities for the most part, including such requisites as water, electricity, and sanitary systems. Though some of the buildings are old, they are largely functional. The needs of Chang-Shin have more to do with public space, rather than private needs.

There have been previous efforts to improve older communities in Seoul, involving changes to public spaces to varying degrees. On the bottom-up side, much of it was motivated by commercial interests, as entertainment and recreational programs such as clothing shops, restaurants, and cafes, moved into existing residential neighbourhoods. Though they significantly invigorated the public life of these neighbourhoods, they also entailed gentrification

that affected previous tenants, as the owners of housing complexes increased the rent, and the whole function of the neighbourhood changed. In some ways, this approach simply continued the old, profit-driven development pattern that shaped the urban environments of Seoul over previous decades, by overly prioritizing the private rather than the public.

On the other hand, the top-down, government-initiated community improvements were largely limited to drawing murals on the walls along the alleyways, or similar kinds of surface treatments which did not deeply infiltrate the residents' livelihoods. Rather, these approaches were effective in attracting tourists, which in some cases proved to be of serious inconvenience for the residents.

The above examples portray two rather extreme ends of top-down and bottom-up spectrum of interventions seen in Seoul's urban revitalization efforts, both of which have had limitations in effectively influencing the domain of public realm in the city. However, recently, there have been instances of more moderate involvements of both top-down and bottom-up prerogatives, where local community leaders, planners, and artists effectively led the participatory designs of public spaces in various neighbourhoods.

Such top-down led, bottom-up based community designs have in fact been observed throughout the world, and have been aptly named as "Tactical Urbanism".

Characteristics of Public Space in Chang-Shin

Public-Private Transitions

The switch in character between the public and semi-public space occurs as a gradient. Without any signs, thresholds, or boundaries to indicate the transition, the sense of communal openness decreases, while the sense of the privatized isolation increases.

Moments of Thin Separations

In some instances, only a single row of small buildings divide two public spaces with greatly differing qualities. Because there are hardly any gaps in between the buildings, they act as boundaries, making a subject completely unaware of the space opposite, only several meters away. Although the physical separation is short, the qualitative separation in the sense of place is long.

High Density and Disconnected Open Space

Figure-ground map of Chang-Shin shows that the built density at ground level is close to its maximum capacity. Apart from streets and some inaccessible green spaces, there is very little empty space on the map left for public space. A high density of buildings crowds out the sense of connectivity between one open space and the other.

This high density was partly caused by the rapid increase of population in Seoul during its industrialization, but is also reflective of Seoul's development policies that disproportionately promoted economic gains over the quality of

urban environments, as a way to deal with the historic housing shortage. Rather than imposing restrictions to procure a fair amount of open space in the district, which could potentially be developed as quality public spaces, previous policies allowed property owners to upgrade their buildings to be larger and higher on a given plot of land, thus incentivizing the maximization of rental space by which greater financial profit could be made.

Small Buildings and Fragmented Space

Not only is the district dense, but its buildings are also relatively small in size, and the result is a highly fragmented urban fabric. Its fragmentation lies in ownership: for any given area, Chang-Shin would have a relatively higher number of owners. Its fragmentation lies in space: the spatial composition and network tend to be complex and broken up, rather than continuous and homogenous. Similarly, it also allows more variety in programmatic make-up in the district. There is a sense of consistency in the size and character of public space.¹³⁶ Other than a few exceptions, no exceptionally large open-space of a singular use exists, since such a space would require a consensus among all the residents from the start, an event which usually made possible only with a top-down input. Hence, public spaces in the districts remain small in

^{136.} Zhu Jianfei, "The Social Space of the City", 52.

size, and differences in their character are very subtle. Functions and characteristics of public space are largely determined by their adjacent building conditions and their programs, and so the typological variations of public spaces also derive from their conditions in relation to the adjacent buildings, rather than any inherent qualities per se.

Folded Space

For any given linear street edge, having a collection of small buildings facing the street, as opposed to one large building, offers more intermediate gaps between the buildings, opportune for public use. Similar to how a folded surface offers more surface area than a smooth surface, "fragmented-therefore-folded" space is also able to offer more space. This becomes advantageous for Chang-Shin, where there is a shortage of public space.

Ad-hoc Public Space: Layered Functions

In a highly dense urban district such as Chang-Shin, ad-hoc spaces become rather advantageous. On top of being inexpensive and easy to maintain, they also can serve multiple functions. Where there is a shortage of space, it is essential that an already small area of open space is given efficacy to support multiple events at different times. In a way, a less defined and transitory public space, one that can be informed by adjacent buildings and various residing activities, is more useful, rather than having a fixed-program public space with limited adaptability. Moreover, since the buildings themselves and the programs hosted therein tend to change relatively frequently in Chang-Shin, it is necessary that

the public space is able to adapt to such diverse requirements. Public Space as Secondary Elements In the case of Chang-Shin district, the distinction between primary elements and secondary elements can almost be directly translated as the distinction between private space and public space. Development capital is mostly invested in privately owned space, whereas hardly any investments are made in communally available spaces.

Challenges for Public Spaces

Both the top-down and the bottom-up developments of Chang-Shin district have, in the context of Seoul's greater development, mainly been driven by the economic interests and concerns of the larger city. Financial prosperity has been a major motive behind top-down policies and constructions, and the lack thereof was a limiting factor for the bottom-up. In either situation, the primary concern of building agents has been orbiting those urban elements around which financial transactions can occur—namely, disproportionately oversized private space—while the quality of public space is largely overlooked. This has been the case for virtually all programmatic types, whether residential, industrial, or commercial (though commercial interests have a slightly greater interest in providing some forms of public space, due to business-exposure concerns). People have been reluctant to invest in the public space, when they have relatively lower income.

Issues Regarding Redevelopment of Chang-Shin

For preservation of such communities, there needs to be incentive both for the residents and the city. As of now, Chang-Shin holds much cultural and historical value to the city. The individual buildings in Chang-Shin may not be impressive in and of themselves, but it is the collective mass of these nameless buildings and their characteristics as a whole that are of cultural value. It also is necessary to have a residence for low-income workers in the vicinity of the city centre. However, Chang-Shin may be an intriguing urban spectacle to an outsider, but is far from ideal as a place of everyday life for an insider. In fact, the residents could not understand what was there to be of an interest. Both to enhance its cultural

The Need for Redevelopment in Chang-Shin District

Redevelopment

Even though the term, "redevelopment" is often associated with the large-scale, top-down developments accomplished at corporate levels, in a more literal and broader sense, it covers the whole sum of activities by which urban environments change, including even simple and small activities such as the placement of a flower

potentials, and to provide the needed

improvements for the residents, Chang-

Shin is in need of a new development plan.

pot on one's window sill that face to a busy pedestrian street, or putting a bench in a place where people tend to gather.

Political Context of Seoul: Awareness of the Values of Chang-Shin and Changing Policies

In 2003, the city of Seoul designated over twenty regions in the city for redevelopments. Virtually all the remaining regions where apartment construction had not yet taken place, were scheduled to be redeveloped. Inevitably, this included the rare and historic neighbourhoods in the city. However, at that point a new law had been enacted which allowed residents to repeal redevelopment plans if 30% of them were opposed. Eventually, the residents cancelled the redevelopment plan for Chang-Shin through a vote in 2013, and instead of apartment-style redevelopments, the city of Seoul changed the agenda to urban revitalization plans. It was proposed that the urban environment of Chang-Shin should be maintained, and the city would spend twenty million dollars in improvements.

Trends in Similar Neighbourhoods

Various smaller scale redevelopments have been made to similar neighbourhoods, employing both the top-down and bottomup prerogatives to varying degrees.

The city of Seoul commissioned a group of university Art students to draw murals in Ehwa Village,137 and the neighbourhood became a successful destination for youths and foreign tourists to visit. Similarly, in Dong-Pi-Rang Village, the residents underwent a series of art projects in the village, rendering the village a popular tourist spot, but they also remodeled the economy, opening cafes and shops to make profit for the residents. In another neighbourhood nearby, Jang-Soo Village, residents formed a group of community builders who went around the village and made renovations to old and precarious structures in houses. In some cases, such as in Hong-Dae, an entire residential neighbourhood turned into a vibrant commercial and entertainment district over the course of several years.

Problems with the Current Trends

Suh-Chon is another historical district with many traditional houses called, "Han-Ock", built in the 1930s, and the street patterns from Josun dynasty. The neighbourhood has been a popular tourist spot since 2012, as cafes and restaurants moved into the area. Buk-Chon, on the other hand, became a popular place for motels, where foreign tourists typically look for an

authentic atmosphere. However, these recent development are becoming a disturbance to the residents in the neighbourhoods, because of increases in numbers of tourists. The streets are increasingly littered with trash, and the little parking space that the residents have are taken up by tourists. Tourist traffic escalates in the weekend, and the loud noises hinder the residents from resting. As the neighbourhood becomes more popular, the increasing rent also becomes a burden for the residents. For instance, an elderly resident who lived in Suh-Chon for thirty-five years was forced to move out as the rent increased six-fold. Another five elderly residents who lived in the same building also had to move to senior homes, or to a basement unit elsewhere. Not only do the residents experience the effects of gentrification, but small shop owners also feel the pressure. As the neighbourhood becomes a popular place for cafes to congregate around, shop owners who rent the buildings have to bear the burden of rapidly increasing rent, or in some cases, are even directly asked to leave to make room for a higher-paying tenant. These cases show the need for there to be a balance between the activation of the neighbourhood for the larger city, and returning benefit to the existing residents.

Artists and Planners in Chang-Shin

Positive trends have been taking place in Chang-Shin. A group of artists called,

^{137. &}quot;Ehwa Mural Village," Korea Tourism Organization, Accessed October 2014, http://korean.visitkorea.or.kr/kor/inut/where/where_main_search.jsp?cid=1102845&out_service=Y.

"000-Gan", (a Korean play on words with the same syllables as the word "public space") and an urban planning studio called, "Urban Hybrid", have their studios the neighbourhood, actively engaged in research supporting, and small-scale designs of, Chang-Shin. Both groups exhibit efforts to overcome the prevalent shortcomings of recent trends.

Tactical Urbanism

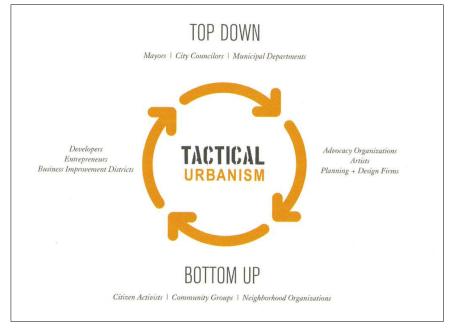
Tactical Urbanism is an appropriate means of resolving the issues surrounding Chang-Shin's redevelopment. It is a relatively recent global trend in urban planning, which takes "an approach to neighbourhood building and activation using short-term, low-cost, and scalable interventions and policies". 138 Its examples can range from painting simple visual languages on the sidewalk, to closing off an entire street for a public event. While bearing similarities with what is known as DIY urbanism, it is distinguished in its more conscious involvements of the top-down agencies, such as municipal departments and developers. If mass-produced redevelopments by the top-down agencies and the bottom-up DIY urbanism are seen as each being at the ends of the spectrum, Tactical Urbanism may be seen as being situated in the middle, where the top-down developers may research on the

local neighbourhoods in order to plan more sensibly to the existing urban conditions, and the bottom-up, locally initiated ideas could obtain proper sanctions from the authorities, for legitimacy and greater efficiency. In this way, Tactical Urbanism differs from the view held by de Carteau in his seminal book, "The Practice of Everyday Life", which argues that authorities of the governments continually compete against the means of the citizens. 139 Rather, it is an effective cooperation between the government and the citizens, between the top-down and the bottom-up.

139. Ibid., 10.

^{138.} Mike Lydon and Anthony Garcia, "Tactical Urbanism: short-term action for long-term change," (Washington: Island Press, 200), 2.





Figures 4.2–4.3 Diagrams describing the involvements of the top-down and bottom-up paradigms in tactical urbanism. From the book, Tactical Urbanism: short-term action for long-term change, by Mike Lydon and Anthony Garcia.



Figure 4.4 "Espacios de Paz" (Spaces for Peace)—Venezuela. A group of architects' efforts to turn what were perceived as dangerous zones, into "zones of peace".

Tactical Urbanist Types

In an attempt to identify and categorize some of the commonly recurring characteristics of tactical urbanism, various examples of tactical urbanism around the globe have here been categorized into eleven types. These cases focus on local, small-scale examples, rather than the network-scale, broadly strategic cases. Similar to previous typological categories, each type is not exclusive, rather, there may be overlapping and combined cases between these various types (e.g. an urban park may be seen as a combination of the categories of Urban Furniture and Green Space).

While many of the examples below can be defined as tactical urbanism which involve top-down agencies (e.g. the local government) to various degrees, not all of them are strictly tactical, in that some are chiefly bottom-up initiatives with little or no top-down involvements. Nonetheless, they express helpful considerations for tactical implementations.

1. Commercial Activities

Commercial programs are able to attract people and mobilize the local economy, and also impart the business incentives to provide more pleasant public environments.





Figures 4.5–4.6 A street market in Chinatown—NYC (left). An international food festival called, Restaurant Day, where anyone can set up a food booth for a day—Helsinki, Finland (right).

2. Public Events

Includes various scales of events, ranging from a single piano concert to a summer festival. They are less driven by commercial motives, but instead require another kind of hosting agent (e.g. the local government, NGOs, arts and cultural organizations, or religious organizations).





Figures 4.7–4.8 A participatory project for a neighbourhood dinner event—Lecce, Italy (left). A man playing the street piano—Montreal (right).

3. Urban Installation

Differentiated from Public Events in many cases, installations are categorized by the absence of an active hosting agent, but exhibit (an installed object). More for the sake of "art" inherent to the installed object, rather than the object's function or usability. Thus differentiated from the "Public Events" in that they do not require active participants in order for them to work. Even when it includes interactive components, user participation is limited, or is secondary. Spatially, it tends to be more substantial than the "Layered Fabrics".





Figures 4.9–4.10 "Hypertube", part of the Land Tetuan Project which promotes the improvements of public spaces through participatory designs—Madrid (left). "El Cubo", an installation during an event called, MIO14—Quito, Ecuador (right).

4. Urban Furniture

While sharing similarities with the "Events", urban furniture support much less defined and in some ways more passive activities, such as sitting, talking, and "hanging-out".





Figures 4.11–4.12 Parklet, a parking spot turned into a mini-park—Philadelphia (left). "Galeriaballindamm", an alley activation through the placement of furniture—Queretaro (right).

5. Green Space

Commonly combined with Urban Furniture, Green Spaces provide the much desired natural environments in the city.





Figures 4.13–4.14 2000m² of grass turf installed on a square—Florence (left). Laneway Puncture Project—Toronto (right).

6. Layered Fabric

Using the word, "fabric", as a metaphor for thin layers of unobtrusive interventions. It tends to be non-interactive, and primarily decorative rather than functional.





Figures 4.15-4.16 "Okuplaza Recycling"—Valparaiso, Chile

7. Graphic Overlay

Graphic overlays are used to improve the existing visual environment. Sometimes their roles double as subtle signage or utilitarian amenities by bringing more directly practical benefits, as well.





Figures 4.17–4.18 "Project: EDSA"—Manila, Philippines (left). A place-making project, using polka dots to extend the curbs and shorten the crosswalks—Chicago (right).

8. Utilitarian Amenities

While the other types prioritize the entertainment factor, or aesthetics, Utilitarian Amenities primarily operate on specific pragmatic necessities.





Figures 4.19–4.20 "Project GREGORY", using a homeless shelter as an advertising billboard (left). Public space intervention on a natural terrain—Halifax (right).

9. Signage

Whereas the purpose of Graphic Overlay is mainly decorative, the role of the Signage is communication. Whether it is a way of informing newly established boundaries, or a conventional form of signage, it changes the intended use of space





Figures 4.21–4.22 Three sided football during the International Street Art Festival—Sapri, Italy (left). "Watch Your Step". Signage used to alert pedestrians of tripping hazards—Tucuman, Argentina (right).

10. Mobile Agents

Mobile agents move freely within a city in order to provide various services. Examples of mobile agents include food trucks, library on wheels and mobile parks.





Figures 4.23–4.24 "Room-Room", emergency shelter for the homeless and victims of natural disasters. Paris, Beijing, Barcelona, Munich, and Strasbourg (left). Dabbawalla, lunch box deliverers—Mumbai (right).

Cases in Korea





Figures 4.25–4.26 An event organized by the Ministry of Culture, bringing Korean traditional music to a low-income residential area in Chang-Shin-1.





Figures 4.27–4.28 Flea market held by the residents group of Jang-Soo village, located near Chang-Shin.





Figures 4.29–4.30 A garbage dump turned into a large planter by the residents group of Jang-Soo village.





Figures 4.31–4.32 A party table/chair constructed by the residents group of Jang-Soo village.





Figures 4.33–4.34 A former garbage dump in the municipality of Gu-Ro, remodelled as a small garden by the residents group and the municipal government.





Figures 4.35–4.36 A small-scale urban design group called, "Loud", drew a signage in front of a bus stop, to procure a gap in the waiting line for passersby.





Figures 4.37–4.38 A popular shopping street in the district of In-Sa, hosting a special parade.





Figures 4.39–4.40 Dong-Pi-Rang village, where the murals initiated by an arts organization attract many tourists, and the residents-run shops bring profit to the local population.

Design Principles for Chang-Shin

The redevelopment strategy for Chang-Shin employs the previous urban analysis as a basis for the design proposal. Taking four districts that each manifest unique characteristics, the proposal portrays how the tactical urbanist types can appropriately be incorporated into the secondary spatial types in the context of each district's primary functions. The overarching principles for the designs are as follows:

Maintaining the Existing Urban Characteristics

Recognizing the unique characteristics of Chang-Shin, the design proposal aims to take advantage of the existing urban conditions as much as possible, and enhance what is already present with cost-efficient designs, rather than demolishing and constructing something new.

Unique Local Conditions

Rather than proposing a grand scheme at the larger scale, the proposal aims to address small-scale, local conditions as unique design problems, so that they can then serve as spaces that are useful and relevant to the local surroundings.

Providing Public Spaces

In an urban context where the profit-driven development paradigm maximized the amount of private space and minimized the number of publicly accessible spaces, the design proposal aims to utilize the remaining secondary spaces for public use, rather than private. Nonetheless, since many of these spaces are immediately adjacent to residential buildings, there remains the necessity of balancing the public usage with subtlety, moderation and quietness.

Main Spatial Types

The design proposal focuses only on certain spatial types which have ideal conditions to be utilized as public spaces. Linear Extensions and Pocket Spaces are ideal because of their larger sizes, while Programmatic Associations, Prominent Ground Facades, Alley Appropriations, and Street Intersections may also be fitting, because of the public nature of these spaces.

Refurbishments

Although existing secondary spaces exhibit compelling potential to be public spaces, it may be speculated that they tend to be neglected and under-used, partly because they lack basic standards of aesthetics such as cleanliness, proper finish-materials, replacement of old materials, or repairs of cracks in the ground. These spaces could benefit simply by making them more pleasant environments, particularly those commercial spaces where the old shop-fronts and alleys give unpleasant impression.

Emphasis on Green Spaces

In the overall city of Seoul, the lack of green space has been a major urban issue. In Chang-Shin as well, despite the large park along the city wall, green space is not easily encountered in residents' everyday lives. Therefore, the proposal prioritizes providing green elements in the public spaces of Chang-Shin.

Network of Public Spaces

A series of small-scale public spaces can form a network, where each space supports the other, and the overall effectiveness of the public spaces are amplified as a cooperating collective.

Design Elements: Vernacular Types

In order to maintain and enhance Chang-Shin's historical urban characteristics, the design proposal employs vernacular object types found either currently in Chang-Shin or in the history of Seoul. The vernacular objects used in the design are as follows:





Figures 4.41–4.42 Chung-Sa-Cho-Rong. This traditional lantern type was initially used for wedding ceremonies during the late Josun Dynasty. In contemporary Seoul, they are occasionally used in public space for special events and ceremonies. An ideal application of this object would be for commercial streets.





Figures 4.43–4.44 Pyung-Sang. Prior to the Josun Dynasty, earlier models of Pyung-Sang were used as beds inside of houses. However, the modern type emphasizes its seating function, and is mostly used outdoors, often for social gatherings. This object is ideal for more spacious secondary spatial types.





Figures 4.45–4.46 Jjok-Maru. Literally translated as "side-floor". In traditional Han-Ocks, Jjok-Maru referred to extended floor space built independently of the main Han-Ock structure. This type of expansion could be suitably applied to busy and narrow streets with little seating space.





Figures 4.47–4.48 Po-Jang-Ma-Cha. A type of street vendor built typically out of precarious materials, providing a semi-interior space. Commonly used as street-bars or fast-food stands, although those found in Chang-Shin are employed as fruit markets as well. This vendor establishment adds to the commercial activities of Jong-No Street.





Figures 4.49—4.50 Planters. Planters can easily be found throughout Chang-Shin. Though usually distributed sparsely, gathering together a substantial number magnifies their effect. While their current usage already effectively adorns the otherwise stark urban environment, both the quality and quantity of the planters could be improved for a more pleasant environment, as could be the use of more varied colours and types of vegetation in the planters themselves.

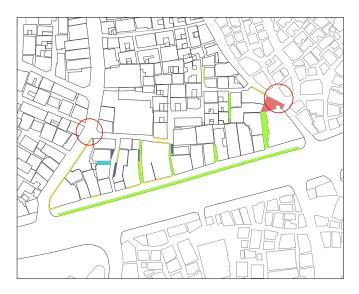




Figures 4.51–4.52 Road Markings. Simple road markings already exist in Chang-Shin, and function primarily as signage. However, in an environment where a street may be shared by a variety of travel modes—cars as well as pedestrians—visual languages on roads have the potential to be developed into more elaborate graphics, ones which would trigger further social interactions in strategic locations.

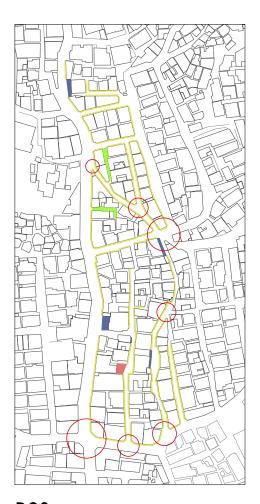
Patterns of the Secondary Spaces in Each District





D01

Figure 4.53 Secondary spaces in D01. Busy commercial streets and alleys at human-scale mainly provide potentials for Alley Appropriations. Slight tilts and setbacks of buildings provide the necessary room for some Linear Extensions.



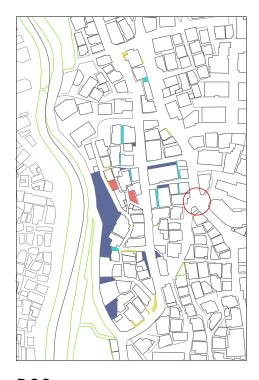
DO2

Figure 4.54 Secondary spaces in D02. This highly porous, industrial district has its blocks enveloped by continuous Adjacency Conditions, many of which are already utilized for motorcycle parking and outdoor storage. Well-travelled alleys frequently cross each other, making for important Intersections.



D07

Figure 4.55 Secondary spaces in D07. Occupied predominantly by Villas, this residential district offers an even mix of Pocket Spaces and Linear Extensions, both of which are considered spacious relative to other types of secondary spaces. These features are interspersed along with Adjacencies and Interstitial Spaces.



DO8

Figure 4.56 Secondary spaces in D08. While this district also contains many residential Villas, it is distinguished by a large swath of Linear Extension, one of Chang-Shin's largest green spaces.

DO1: Network of Commercial Alleys

The redevelopment scheme for D01 proposes the installation of Chung-Sa-Cho-Rong that hovers over Jong-No Street, as an accompaniment to the historical East Gate across the street. One of the smaller commercial alleys is also lit with Chung-Sa-Cho-Rong, while Jjok-Maru provides seating for pedestrian traffic.



Figure 4.57 Axonometric of D01.



Figure 4.58 Proposed design in D01: 1.



Figure 4.59 Proposed design in D01: 2.

DO2: Network of Intersections

The redevelopment scheme of D02 proposes interventions at two significant intersections in Chang-Shin. The first is at Chang-Shin Street's crossing with a popular pedestrian alley. The scheme proposes that the municipality purchase a small, vacant corner building for use as a public space with Pyung-Sang added, while maintaining the main structure of the building. The second intersection contains the highest number of converging streets in Chang-Shin. There, significance of the locale and influence of the regional industry are heightened by a visual intervention on the ground.

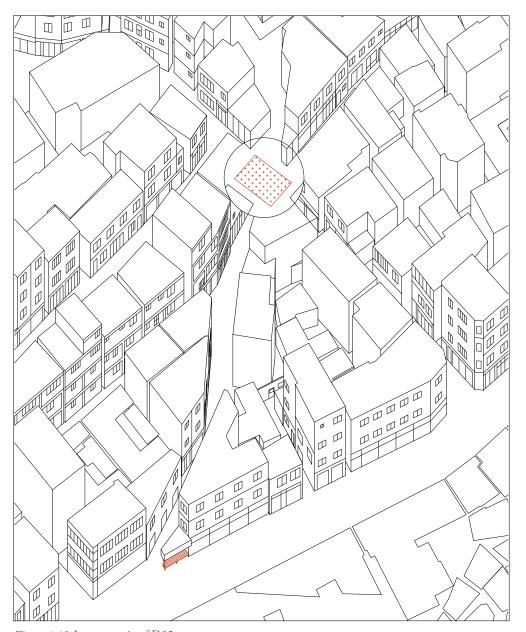


Figure 4.60 Axonometric of D02.



Figure 4.61 Proposed design in D02: 1.



Figure 4.62 Proposed design in D02: 2.

DO7: Network of Linear Extensions and Adjacencies

The redevelopment scheme takes advantage of the relatively generous secondary spaces, which exist among the Villas and apartments of D07. Various combinations of seats and planters are provided throughout this residential district.

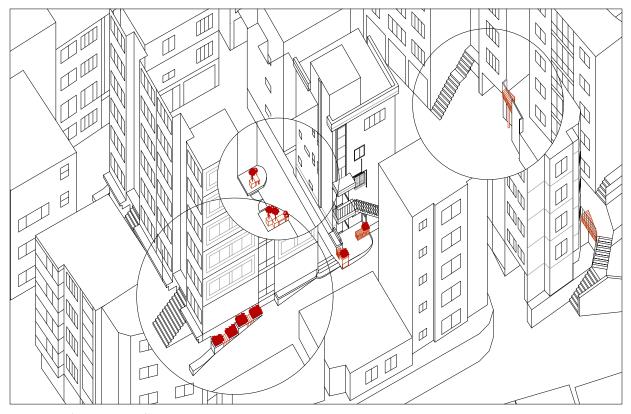


Figure 4.63 Axonometric of D07.



Figure 4.64 Proposed design in D07: 1.



Figure 4.65 Proposed design in D07: 2.

DO8: Network of Pocket Spaces

The redevelopment scheme regarding D08 takes advantage of the substantial green space within the district, by situating intensified vegetation in two Pocket Spaces nearby. Each space is designed as either an urban forest or an urban garden.



Figure 4.66 Axonometric of D08.



Figure 4.67 Proposed design in D08: 1.



Figure 4.68 Proposed design in D08: 2.

Conclusion:

An urban neighbourhood is a concrete manifestation of an abstract culture, and its development processes and functions are closely related to the various social aspects, such as its history, politics, and economics. As a result, an urban neighbourhood has complex and unique characteristics that cannot easily be defined. It may give a sense of simplicity to the sensate impression, but also present an intricate complexity in its physical composition.

As Chang-Shin underwent a series of changes in its six hundred years of history, new developments were added to the existing urban fabric, layers upon layers, and the result, as it appears today, is a rich mixture of building types and street patterns from various historical eras: it retained both the highly complex organization patterns unique to historical alleys, as well as rich cultural varieties expressed through different building types.

As both the top-down and bottomup paradigms addressed the necessities in the urban environment throughout its history, the top-down paradigms set the overarching principles for the city, and the bottom-up paradigms in effect interpreted the principles in the local context, as well as fostering self-organized patterns unique to the district. Whereas top-down rules are conceived at the city scale, bottom-up rules are conceived at the individual, local scale, before incrementally building up to larger magnitudes with increasing complexity. In the overall analysis, the top-down and bottom-up are two distinct paradigms that systematically cooperate as a hierarchical system, a relationship in which the top-down has the authoritative influence.

In the 20th century, the urban developments of Chang-Shin have been led by government policies which largely neglect the quality of urban environment. As the result, the majority of public spaces in Chang-Shin exist as secondary spaces, that is, the left-over spaces after the individual buildings maximized their allowable footprint. These predominantly bottomup spaces have the advantage of transient uses, but the same ad-hoc nature offers only minimal-quality spaces for a given use.

Today, Chang-Shin attests to both the advantages and the limitations of the bottom-up development paradigm. It has uniquely rich cultural characteristics and variety, in stark contrast to the ubiquitous environments seen in apartment complexes found in other areas. However, each agent of the bottom-up invests the majority of resources in private properties. Inevitably, public spaces are persistently left out of the development process. After all, the bottom-up agents can achieve only as much as its members are willing to agree on—i.e. in making

mutual decisions and voluntarily investing their resources—and inescapably, there are limitations as to how far it can progress in the world's society. It is at this point where the top-down authority should be regarded as necessary, in order to consolidate the necessary decision-making processes and resources, or to simply take initiative.

In the recent years, the city of Seoul has recognized both the values and needs of the districts similar to Chang-Shin, and has taken some major steps to invest in their potential. This is not unlike the recent world-wide trend, Tactical Urbanism, which aids the minimal-scale, bottom-up urban activities—such as "guerilla urbanism", or "DIY urbanism"—with appropriate top-down authorities and resources.

The development model that takes into account both the top-down and bottom-up paradigms is a fitting strategy to address Chang-Shin's complex urban condition in an effective and coordinated way.

Study of a historical neigh¬bourhood such as Chang-Shin informs not only about the cities' past developments, but also gives valuable suggestions on the cities' future developments. The kind of urban analysis done in this thesis finds its significance in categorizing and quantifying the otherwise nebulous and qualitative characteristics of informal urban neighbourhoods. Categorizing and mapping secondary spaces serve as

good indicators of available ad-hoc spaces in the neighbourhood, and categorizing and mapping the larger informal districts give a quantitative overview of local characteristics. The information gained through such analysis gives a useful framework through which a top-down-derived, bottom-upsensitive redevelopment can be managed.

In a larger scope, the analysis method taken in this thesis could be applied to study the development processes and functions of other urban neighbourhoods in the world. The approach of placing self-organization of urban neighbourhoods in the context of topdown policies and controls has been helpful in painting a holistic picture of Chang-Shin's development process. Applying this method to other neighbourhoods may give interesting variance, since each city and neighbourhood has different degrees and characters of top-down forces acting on it. For example, political context of Favelas in Brazil would be vastly different than the one of vernacular villages China. Likewise, the set of policies that motivates the development of informal settlements may be inherently different in character than the one that motives the development of financial districts or shopping districts. Accumulating such data could lead to identifying certain political, social, geographical, and urban factors that commonly underlie the self-organization of urban neighbourhoods. These factors

elucidate the intelligent and rational processes involved in the self-organization, as opposed to attributing the phenomenon to mere chance, which is the common tendency in the field of emergence today, one that limits the prospect of further investigation of value.

The analytical framework of delineating the urban fabric into primary and secondary elements could also be useful in studying other urban neighbourhoods; having a consistent framework of analysis may prove to be beneficial in studying multiple neighbourhoods with vastly different characteristics. Each neighbourhood would be made up of primary elements different from another: a neighbourhood may consist of high-rise office towers built on a level terrain, or it may consist of single-storey vernacular houses built above water. Difference may also be found in the secondary elements: some neighbourhoods tend to have their buildings spaced tightly together, whereas other neighbourhoods may have their buildings spaced further apart from each other. Analyzing such unique features of each urban neighbourhood through the framework of primary versus secondary elements could then allows effective categorization of each element into a set of types.

In the era of mass-production at global scale, proper management of the old and vernacular neighbourhoods holds significant cultural values for modern cities. On the other hand, in the era of rapid urbanization, proper

management of newly emerging informal neighbourhoods also holds significant economic values for modern cities. In such context, proper understanding of urban self-organization through effective frameworks of analytical observation is critical.

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