

# Adaptation of Western Modern Concepts in Modern Korean Architecture in the Early Twentieth Century: Through the Perspective of Science, Efficiency, and Hygiene<sup>1</sup>

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## Abstract

This research explores the characteristics of Korean early modern architecture in the early twentieth century. Modern Korean architecture experienced conflicts and continuities between tradition and modernity from the late nineteenth to the early twentieth centuries. To evaluate these various influences, this article considers Korean early modern architecture through the perspective of such modern concepts as “science,” “efficiency,” and “hygiene.” These modern concepts emerged first in the West before the nineteenth century, and they played significant roles in constructing a modern society in the West and the East. By investigating how these modern concepts were adopted in Korea in the early twentieth century, this research scrutinizes not only individual architects such as Park Gilryong and Park Dongjin but also newly constructed buildings such as *kwansa* (official residences of Japanese ministries) and *sat'aek* (company housing), especially during the Japanese colonial period. Furthermore, this research goes beyond Korean architecture to encompass regional and cultural differences. This research enables early modern Korean architecture to find its identity through the approach of social and cultural contexts, and by comparison with Western architectural culture.

Keywords: Tradition and Modernity, Modern Korean Architecture, Science, Efficiency, Hygiene

## Introduction

After the opening of its ports in 1876, Chosŏn Dynasty Korea not only began to face social and cultural changes but also experienced cultural encounters between the West and the East in the context of modernity. In this complex situation, Western culture began to encounter and mix with Korean tradition. In the late-nineteenth and early-twentieth centuries, Korean intellectuals persistently sought new cultural identities. These were reflected in architecture because architecture is a kind of vessel that contains many different elements of society. Examining other cultural phenomena of the modern Korean period helps to comprehend the characteristics of modern Korean architecture.

In this context, this research examines the origins of modern Korean architecture through cultural encounters and social aspects beyond architecture or individual architects. The overall research is informed by the new Western modern concepts, which emerged first in the West before the nineteenth century, such as “science,” “efficiency,” “hygiene,” and so on.

Science, efficiency, and hygiene in the modern period are the key concepts forming and understanding modernity. Above all, science had been continuously asserted by rationalists as premodern society transitioned into modern society.<sup>3</sup> In the early twentieth century, the more concrete concept of “scientific management” started to be discussed, centering on architecture. Scientific management was a theory of management in industrial engineering that was internationally affected, focusing on the United States of America.<sup>4</sup> Although the term “Taylorism” or “Taylor system” is commonly used according to the name of Frederick Winslow Taylor (1856–1915), who was the most famous in his field, Taylor himself preferred the term “scientific management.”<sup>5</sup> The most significant ripple effect that scientific management left in modern society in the early twentieth century was disseminating “efficiency.” Efficiency was recognized as the clearest standard to judge labor input vs. productivity and has become a means and an objective for all types of productivity improvement. It was when the value of “micro-time,” which had hardly existed in traditional society, emerged as the modern period approached.<sup>6</sup> Moreover, in this period, “hygiene” was regarded as an indicator of modernization. Modern hygienic work is essentially required in the early stage of modern urbanization. Damage to city dwellers due to infectious diseases in European or Japanese cities that started modernization, as well as Chosŏn’s Hansŏngbu (the

former name of the city of Seoul during the Chosŏn Dynasty), urgently demanded modern hygienic work above all.<sup>7</sup> As such, the concepts of “science,” “efficiency,” and “hygiene” can be the most essential concepts in understanding modern cities and architecture around the twentieth century in the West and the East.

By scrutinizing these modern concepts, this research explores how they were adopted into modern Korean society, especially in architecture and urban contexts, not only through the West but also through Japanese or Japanized Western influences. This research examines how the three concepts were understood and interpreted in the West and the East from the end of the nineteenth century until the early twentieth century, focusing on their origins. It also investigates how these three concepts emerged concretely in Korea in the early twentieth century based on their origins. This research looks at not only the efforts of individual architects (Park Gilryong; 1898–1943 and Park Dongjin; 1899–1981) but how efforts to achieve modernity were revealed in newly constructed buildings such as *kwansa* 官舍 (official residences of Japanese ministries) and *sat'aek* 舍宅 (company housing).<sup>8</sup> This research helps to demonstrate the various influences from Western concepts as they created the new cultural identity of modern Korean architecture in the late nineteenth to the early twentieth centuries.

Moreover, this research explores beyond architecture to encompass regional and cultural differences. Examining differences from the perspective of comparative studies between not only East Asian countries, such as Korea, Japan, and China but also the East and the West can provide a new interpretation of Korean early modern architecture and urban contexts.

## Eastern essence and Western means

In the late nineteenth century, the Chosŏn Dynasty began to accept modern Western civilization gradually, and the Kaehwadang 개화당 開化黨 (Enlightenment Party) recognized the superiority of Western science. Particularly from the opening of the ports in 1876 to the Japanese annexation of Korea in 1910, the government of Chosŏn claimed to advocate the concept of *Tongdo Sŏgi-ron* 東道西器論 (Eastern Essence and Western Means).<sup>9</sup> This referred to the maintenance of traditional spiritual culture while adapting to Western science; keeping Eastern traditions and adapting to Western technical foundations.

In contemporaneous China, there was a similar concept—*Zhongti Xiyong* 中體西用 (Chinese Essence and Western Methods).<sup>10</sup> This modern Chinese concept between the East and the West is related to the Chinese Daoist sage Laozi's idea about the relationship between “[shaped] mass” (*qi* 器) and “void” (*wu* 无). Laozi's

statement about the essence of space is given in Chapter 11 of *Tao Te Ching* (道德经). The text reads as follows:

Thirty spokes are integrated into one by holes in a hub,  
Through voids, they are jointed for a wheel's use.  
Clay is molded for creating pitchers,  
The pitcher's use comes from its void.  
Doors and windows are built for a house,  
Their emptiness defines the use of the house.  
Thus, a shaped mass can be useful,  
It is all because of its contained void.<sup>11</sup>

三十根辐条汇集于车毂而造车,有了其中的虚空,才发挥了车的作用;糅和陶土制作器皿,有了器皿内的虚空,才发挥了器皿的作用;开凿门窗建造房屋,有了门窗四壁内的虚空,才发挥了房屋的作用。所以,“有”之所以能给人便利,是因为它营造的“无”发挥了作用。<sup>12</sup>

As Laozi observed, the wheel's use depends on its emptiness (vacancies). The use of clay also lies in its emptiness (void). The emptiness does not indicate a nihilistic nothing; it provides something essential for use. In the process of constructing Eastern modernity, the insufficiency of Eastern essence is filled with Western means, which are the pragmatic and tangible things originating from science and modern civilization. By “Chinese Essence and Western Methods,” Chinese intellectuals intended to maintain Chinese essence but with the help of Western means.

The Chosŏn government began to formulate policies for adapting advanced Western culture to the Korean context. For instance, Western technology, such as the telephone and electricity, had been flooding into Chosŏn. Western music, arts, and religious ideas were also introduced to Chosŏn. Thus, all aspects of life and culture experienced changes. During the Japanese colonial era, it was difficult to sustain traditional culture because of the cultural assimilation policies of the Japanese rulers and their desire to obliterate the Korean nation. However, Chosŏn made steady and persistent efforts to maintain Korea's authentic culture and to safeguard the national culture movements.<sup>13</sup>

In this context, in the early-twentieth century, tradition and modernity came into conflict, and new ideas began to appear in modern Korean architecture. It is important to explore the impacts of modern concepts such as “science,” “efficiency,” and “hygiene” on architecture, because these concepts played a significant role in shaping the characteristics of Korean early modern architecture.

## Adoption of modern “scientific concepts”

Scientific historian and philosopher Alexandre Koyré analyzed with insight the mutual coexistence and duality between human phenomena and nature that are embodied by modern natural science: “the world of science—the real world—became estranged and utterly divorced from the world of life, which science has been unable to explain—not even to explain away by calling it ‘subjective’.”<sup>14</sup> In the same vein, as architectural historian Dalibor Vesely argues, “the most important influence on the idealization of architectural physiognomy was the emergence of modern science.”<sup>15</sup> In this way, architecture began to adopt key concepts from modern sciences into its designs, both functionally and aesthetically.

It is necessary to clarify the origins of modern science and the relationship between science and art. Following Heidegger’s theory on the relationship between art and technique, in the Greek sense, works of art originated from *techné*, and art and *techné* are strongly related to the human act of making objects. Ancient artists and craftsmen were called *technites*.<sup>16</sup> In this sense, architecture and art were also the representation of *techné*, and *techné* was considered creative knowledge. More significantly, *techné*’s emancipation is strongly related to the origins of technology, which, according to Heidegger, comes from modern science and aesthetics.<sup>17</sup> Even if science and technology have been considered the opposite of aesthetics for the past few hundred years, science, technology, and aesthetics originated from the same conceptual root and belong together.<sup>18</sup> As Heidegger emphasizes, “because the essence of technology is nothing technological, essential reflection upon technology and decisive confrontation with it must happen in a realm that is, on the one hand, akin to the essence of technology and, on the other, fundamentally different from it. Such a realm is art.”<sup>19</sup> The essence [nature] of technology thus concluded in the essence of art. In this sense, technology and art are identical in their Greek semantic root. Just as architecture could be an art, so architecture and technology are also related because art and architecture have been close throughout modern times.<sup>20</sup>

Many scholars consider early mechanics, medieval optics, and the Renaissance concept of perspective to be modern sciences.<sup>21</sup> Since architecture made use of medieval optics and Renaissance perspective, which were considered sciences in the modern period, architecture began to adopt the concept of science through these ideas. As architectural historian Sigfried Giedion states: “Thus in the Renaissance the dominant space conceptions found their proper frame in perspective, while in our period the conception of space-time leads the artist to adopt very different means.”<sup>22</sup> Thus, the invention of perspective in the Renaissance period triggered the unity between art and science; the invention of perspective enabled the unification of architecture and science.

In Korean history, Western science was accepted in Chosŏn during the opening of the ports, and the arrival of missionaries in Chosŏn played a significant role not only in theology but also in the development of science. Chosŏn society had already begun to recognize and accept Western science beginning in the seventeenth century. Before the opening of the ports, Chosŏn mainly imported Western science, such as new machines for making cloth and weaponry. At that time, the adaptation of Western science was not a significant influence on society and economic life. Nevertheless, the understanding of Western science opened up people's viewpoints.<sup>23</sup>

After the opening of the ports, the Chosŏn Dynasty tried to adopt "Western technology," and its products were seen more frequently. Chosŏn sent the Sushinsa 修信使 (envoys dispatched to Japan after the opening of the ports), and they examined weapons-making facilities, which enabled them to widen their perspectives. Chosŏn also assigned 96 young Korean students to the Yŏngsŏnsa 領選使 (envoys to the Chinese Qing Dynasty to learn their developed culture) to look at weapons factories. Koreans were educated in mechanical engineering, electrical engineering, and chemical engineering as a part of the broad context of *yangwu yundong* 洋務運動 (Self-strengthening Movement). Meanwhile, the Chosŏn Dynasty sent various technological trainees to Japan to acquire modern Japanese technology.<sup>24</sup>

Even though new philosophies and modern technologies were adopted during the opening of the ports, there were limitations in adopting Western technology because of conservative beliefs and the imperialist aggression directed toward the people. Western philosophy and technology were not accepted from the West directly; instead, modern ideas were transferred from skewed modern ideas through China and Japan before coming to Korea. Furthermore, imperialist powers employed the theory of social evolution to control Korean society. These were the limitations of the acceptance of the new philosophy and technology during the opening of the ports.

In the early-twentieth-century, the Palmyŏng hak'oe 發明學會 (the Society of Invention) played a significant role in adapting the concept of "science" to a public that was not familiar with scientific life at that time. The Society of Invention, which was the first association that promoted scientific life in Korea, was founded on 1 October 1924.<sup>25</sup> Its purpose was to spread scientific knowledge and guidance on industrial technology to the public. Even though it held an inaugural conference on 1 October 1924, the society's activities were stalled due to lack of response from the public. In June 1932, the first meeting of the board of directors was held, and Park Gilryong (1898–1943), who was the first generation of Korean modern architects during the Japanese colonial period, became the chairman of the board of directors for the Society of Invention.<sup>26</sup>



Figure 1 Cover of *Science and Korea*.

Source: Park, *Science and Korea 2* (July–August 1933): 1.

Park Gilryong was a representative Korean modern architect who actively practiced during the Japanese colonial period in Seoul and tried to amalgamate Western modernism and Korean traditional characteristics into Korean architecture. In the early twentieth century especially, Japanese and Western architects designed most modern buildings in Korea. However, Park, as a Korean architect, actively designed various modern buildings, and participated in various social activities in architectural fields and beyond. The Society of Invention was one of his social activities outside of architecture.

The Society of Invention, led by Park Gilryong, also published *Kwahak Chosŏn* 科學朝鮮 (Science and Korea) from June 1933 to October 1943 (for a total of 38 issues), which was the first magazine to focus on science (Figure 1). This magazine deals with general science, such as the history of the formation of the earth, thoughts about the universe, identity of materials, and so forth. As Park mentioned in the first issue:

It is fundamental to use natural resources in our life. We should make our own daily supplies and systems of civilization by ourselves. We should support inventors (scientists) to improve our future, and should stimulate the public to increase their spirit of invention. For these reasons, to achieve our purpose [to overcome our social problems using science] Palmyŏng hak'oe 發明學會 (the

Society of Invention) founded this magazine *Kwahak Chosŏn* 科學朝鮮 (Science and Korea).<sup>27</sup>

In this magazine, architect Park Gilryong published several articles about general science concepts, such as “Chigu saengsŏngsa 地球生成史” (History of the Earth’s Formation), in July and August 1933, “Uju e taehan koch’al 宇宙에 對한 考察” (Thoughts about the Universe) in March 1935, and “Mulchil ūi chŏngch’e 物質의 正體” (Identity of Material) in April, 1940.<sup>28</sup> Additionally, he wrote generally on scientific life, such as the “Saenghwal ūi kwahak’wa e taehayŏ 生活의 科學化에 對하여” (About the Life of the Scientific Movement), several times.<sup>29</sup> In particular, the concept of “Saenghwal ūi kwahak’wa 生活의 科學化” (Life of the Scientific Movement) came from the motto of “Saenghwal ūi kwahak’wa, kwahak ūi saenghwal hwa 生活의 科學化, 科學의 生活化” (Life of the Scientific Movement and Science of Life), which originated from the objectives of *Kwahak chishik pogŭp’oe* 科學智識普及會 (Association for Supplying Scientific Knowledge). This association was aimed at promoting the popularization of science.<sup>30</sup> Park argued that:

We [Korean people] should develop science, and the knowledge of science should be accumulated. Our society not only cannot develop without the development of science, but [it] also [cannot] survive or persist in this competitive society.<sup>31</sup>

Park gave a radio lecture about the life of the scientific movement on 16 April 1935.<sup>32</sup> He focused on scientific fundamentals such as the “universe,” “earth,” and “materials,” and he also tried to apply these pure scientific concepts to formulate a more practical approach for the public.

After the March First Independence Movement in 1919, when the Japanese colonial government professed cultural politics, newspapers and magazines were published in the Korean Peninsula. Intellectuals made efforts to disseminate lifestyle improvement awareness using the press. The lifestyle improvement movement discussed in the 1920s was an extensive effort encompassing residential life, as well as clothing and food.<sup>33</sup> The movement of improvement in the period was related to the life of the scientific movement and changed residential life from men-centered residential life to home-centered residential life. In addition, the space of women and children began to appear as the center of the home.<sup>34</sup>



## The application of efficiency in Western and Korean architecture

The idea of “efficiency” in spatial layouts can be aligned to Jacques-François Blondel’s theory of the “distribution of spaces” in French hotels. In late-eighteenth century France, Blondel scrutinized spatial distribution and the disposition of various types of buildings in his treatise *Cours d’architecture* (1771).<sup>35</sup> Blondel explored not only the connections between spaces (rooms) but also their relationship to the land.<sup>36</sup> In the plan of the main floor of the *Maison à l’italienne* (1737–38), the arrangement and the partition of rooms were aligned correctly between the private and public spaces in a hierarchical fashion (Figure 2).<sup>37</sup> Each door helps to maximize the efficiency of movement between rooms. Therefore, the compact plan of tightly clustered rooms and hierarchically distributed spaces increases the efficiency of communication in the building.

The French hotel (Figure 2) in Jacques-François Blondel’s book can be comparable to the Korean institutional building *Taehan üiwön pon’gwan* 大韓醫院本館 (Taehan Hospital’s Main Office, 1907) in the early twentieth century (Figure 3). As in French

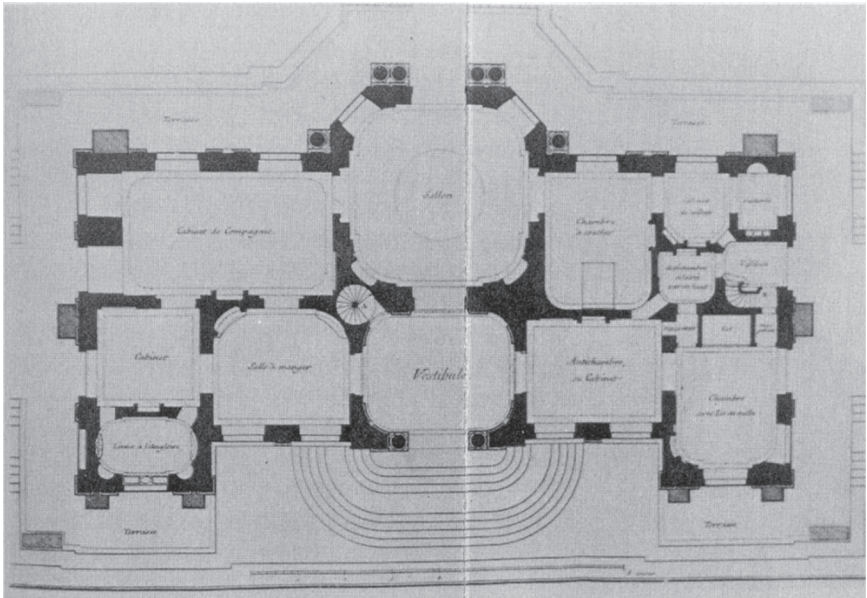


Figure 2 Jacques-François Blondel, Plan of the main floor of *Maison à l’italienne*, 1737–38.

Source: Bastide, *The Little House: An Architectural Seduction* (New York, NY: Princeton Architectural Press, 1996), 25.

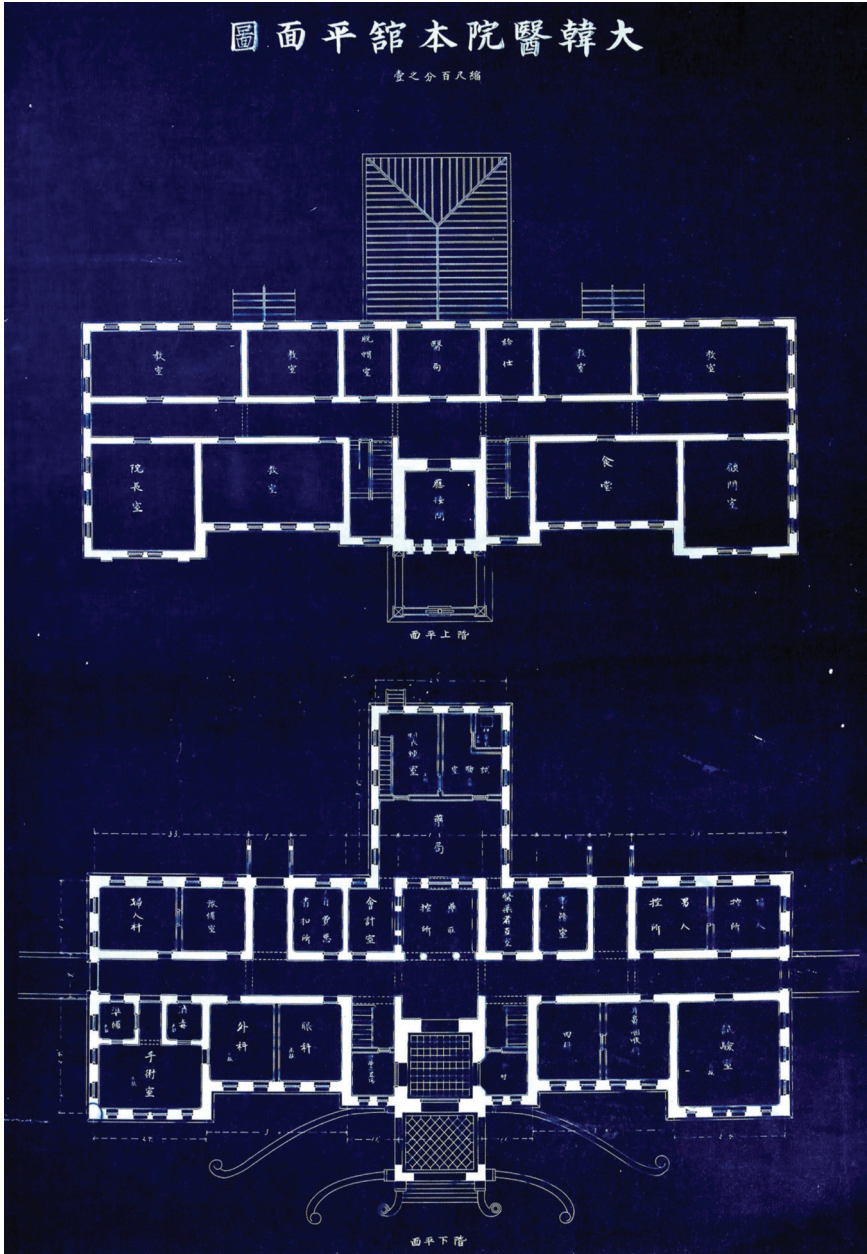


Figure 3 First and second plans of Taehan Hospital's Main Office, ca. 1907.

Source: Kyujanggak Institute for Korean Studies Archive, Seoul.

eighteenth-century rational plans, Blondel focused on modern concepts, such as system, logic, hierarchy, and efficiency. The basic principles of the Taehan Hospital's Main Office also pursued these modern concepts in its plans. The Taehan Hospital's Main Office is composed of a systematic plan: each space is hierarchically organized in a system for efficiency based on the frequency of use. The stairs are located in the front entrance to help people move easily and quickly through the building. Concerning spatial circulation, the middle hallway in the Taehan Hospital's Main Office plays an important role in connecting each room for easy circulation and communication. Although in Blondel's French hotel there is no central hallway, the rooms are connected by doors through a circular circulation of a door-to-door body movement. This helps residents move efficiently and effectively within the hierarchically distributed spaces based on the relationship between sociality and privacy. With subtly different spatial layouts, these two buildings pursue their efficiency of use and organization. The buildings also demonstrate the common social phenomenon of institutionalizing life through the efficient distribution of spaces. Although these Eastern and Western building plans originated in different historical periods and locations, they shared some common scientific building concepts, which emerged in their respective cultures when life began to be modernized.

Moreover, interest in efficiency in the twentieth century offered the foundation of mass production persistently appearing in modern society. Such an aspect is shown in buildings including *kwansa* 官舎 (official residences of Japanese ministries) and *sat'aek* 舍宅 (company houses) built in Korea in the early 1900s. These buildings reveal efficiency based on scientific concepts and show the image of an emphasis on hygiene.

There were plenty of *kwansa*, built for Japanese who were assigned to Korea after the Japanese occupation began, incomparable to *yanggwan* 洋館 (legations of the Western countries) built for Western people after the opening of a ports.<sup>38</sup> *Kwansa* were built in the center of large cities, and they became familiar architectural forms over time which had a considerable effect on Korean housing history. As *kwansa* were built collectively, building *kwansa* became an opportunity for a new modern residential area planning technique, which can be called complex planning. Handing down *sat'aek* that had followed the Japanese Government-General of Korea's *kwansa* standard was no different.<sup>39</sup> In 1923, a report that 6/10 of the entire city of Seoul were the *kwansa* zones<sup>40</sup> could be found in a magazine, although it was difficult to check if it was true or not.<sup>41</sup>

In the Japanese Government-General of Korea's *kwansa* building, the standardization of plan design and mass production, the engineering principle of modern industry, was applied. Change in residential recognition by family-centered private spatial composition appeared, and the aspect putting the importance of individuals

and privacy also emerged. Hygienic living environments, concentration through spatial integration, lattice-type sitting, and the loss of a relationship between land and housing also appeared.<sup>42</sup> It was a principle pursuing the maximization of efficiency through the collectivization of *kwansa*, and it resulted in the shaping of complexes and concentration. This was also the adoption of a large amount of duplication, not specifying housing occupants.

In the early twentieth century Korea, when architect Park Gilryong designed various types of buildings, he tried to embody such basic scientific ideas in his designs. Park applied the concept of efficiency to traditional Korean housing known as *hanok*. For example, he suggested the Movement of Housing Improvement in the layout of *hanok*: he believed that the “Courtyard Housing Plan” used in traditional *hanok* was very inconvenient because individual rooms, such as the kitchen, living room, toilet, and bedrooms, were not linked to each other (Figure 4). In particular, Park argued that the problem of the relationship between a kitchen and other places focused on efficiency, because Korean housewives spent most of their time there.

Not only that, the kitchen is a working space for our housewives. So, well-equipped kitchens enable housewives to work with a very delighted feeling, and this good condition helps housewives to work more efficiently and effectively. An incomplete kitchen not only makes the workers feel unpleasant, but also produces a lot of ineffective movement. ...

The relations between a kitchen and other rooms are not clearly connected, and this inefficient connection between a kitchen and other places make us feel more uncomfortable.<sup>43</sup>

Therefore, Park Gilryong suggested the exclusion of an enclosed courtyard, which was called the “Centralized Housing Plan” for the “Movement of Housing Improvement” (Figure 5). Park believed that the “Centralized Housing Plan” was more efficient and effective for movement within one building. However,

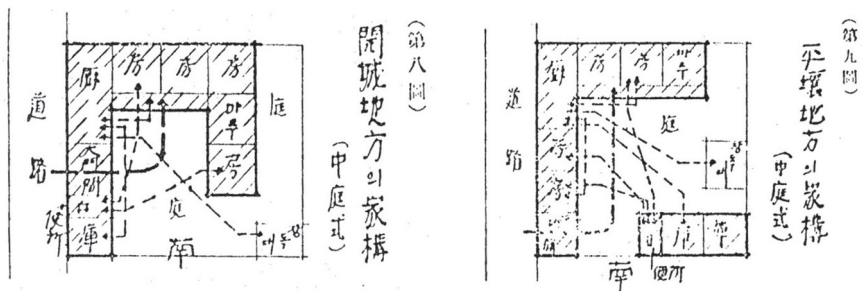


Figure 4 Park Gilryong, A Study of House Layout about “Courtyard Housing Plan.”

Source: Park, *Chaeraeshik chuga kaesön e taehaya:che il pyön* (Seoul: self-published, 1933), image no. 8 and 9.

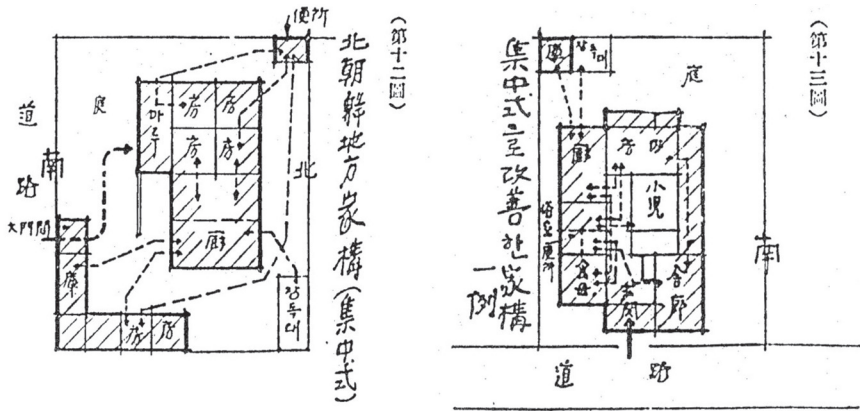


Figure 5 Park Gilryong, A Study of House Layout about “Centralized Housing Plan.”  
 Source: Park, *Chaeraeshik chuga kaesŏn e taehoya:che il p’yŏn* (Seoul: self-published, 1933), image no. 12 and 13.

although he suggested a new plan, he insisted on including *ondol* (a Korean traditional under-floor heating system) in the middle of the plan. Therefore, his modern dwelling was an advanced modern building constructed based on Korean traditions such as *ondol*.

It is called a modern dwelling. The structure and general atmosphere are Western style, and it is installed with the Korean traditional heating system *ondol*. Windows and the interiors are of the Korean style. But each room’s arrangement goes beyond traditional patterns. One room was covered by a wood floor and looks like a Western room. In general, my new housing improvement plan is like this kind of arrangement.<sup>44</sup>

In the early twentieth century, a representative Korean architect Park Gilryong tried to apply Korean tradition to modern architecture while carrying out housing improvements. However, he made endless efforts to maintain traditional Korean elements, such as *ondol*, in the process. *Puragungi* (Fireplace) in the houses of Min Ikdo (1938) and Jeon Joonsoo (1930) was newly devised by Park Gilryong, and its management was much easier in comparison with existing *puragungi* exposed outside.<sup>45</sup>

The conceptualization of hygiene in Korean urban contexts  
 Modern cities in the West adapted the concept of hygiene to solve their urban problems, enacting various laws, such as building codes, and town planning and zoning acts to regulate their cities’ hygienic requirements, such as fresh air, water,

a place to wash clothes, and so on.<sup>46</sup> In Seoul during the Japanese colonial period, the hygienic issues were the most significant agenda of the Japanese empire in the early twentieth century. This is because, at that time, this issue represented a challenge between Korean tradition and modernity, and between Western and Japanized modernity.<sup>47</sup> Not only in Korea but also in Japan and European cities, the harm done by infectious diseases stimulated countries to legislate more hygienic regulations and engage in urgent discussion.<sup>48</sup> In this sense, modern hygienic affairs and systems were necessary for the early stages of Korea's modern urbanization process.

After the mid-nineteenth century, exotic infectious diseases, such as cholera, disseminated among the public quickly, and populations were gravely affected in Korea.<sup>49</sup> Cholera was first detected in Korea in 1821, and hundreds of thousands died that year.<sup>50</sup> In 1859–1860 and 1862, there were further epidemics of cholera, and outbreaks occurred more often after the opening of the ports in 1876.<sup>51</sup> The epidemics peaked during the outbreaks of 1859–60, when 400,000 people died, and in 1895 when 300,000 people passed away.<sup>52</sup> According to *Keijō fushi* 京城府史 (History of Keijō or Seoul), 3,600 people died in Hansōng-bu 漢城府 (the former name of the city of Seoul during the Chosŏn Dynasty) in ten days in 1886; and when cholera spread in 1902, around 300 people died every day in the Sōsomun and Kwanghwamun areas.<sup>53</sup> Poor hygiene, in addition to the absence of any cholera treatment, primarily accounted for the outbreaks and the deaths.

These epidemics (cholera in particular) spurred national momentum toward the adoption of modern hygiene systems and hygiene facilities in Korea. Cholera is a waterborne disease, and it was essential to quarantine the sick from others. The first quarantine station and an isolation hospital were installed in the Hansōng-bu area in 1895. In general, the occurrence of infectious diseases gave rise to isolation hospitals and hygiene facilities in Korea. In particular, the Japanese, who lived in Japanese residential areas in Korea, made persistent efforts to overcome these infectious diseases through changing the isolation hospitals from temporary to permanent organizations, installing the first hygiene facilities, and expanding the public health system.<sup>54</sup>

Japan experienced a similar situation during this time, but its responses were different. After the Meiji Restoration (1853–1877), Japan was suffering from serious urban problems, such as a rapid explosion of the population, architectural and environmental problems resulting from structures like *nagaya* 長屋, frequent fires, and infectious diseases. The *nagaya* was a Japanese-style townhouse and multiplex house comprised of multiple units sharing outer walls, and consisting of one long building separated into several family units. Under such circumstances, the Japanese medical doctor Nagayo Sensai 長與專齋 (1838–1902)

introduced the term “hygiene” (*eisei* 衛生) from Europe to Japanese society. Japan installed the Imukyoku 醫務局 (Medical Board) in the Monbushō 文部省 (Ministry of Education) in 1873 and finally changed the name of the Imukyoku (Medical Board) to the Eiseikyoku 衛生局 (Board of Health or Sanitary Board) within the Naimusho 内務省 (Home Ministry).<sup>55</sup> Nagayo Sensai served as a doctor with the Iwakura Mission 岩倉使節団 (Iwakura Embassy)<sup>56</sup> to Europe to survey developed Western cultures. After he returned to Japan, he translated the German term *Gesundheitspflege* (health care) to “衛生” (*eisei* or hygiene). Hygiene in the East was a different concept from “sanitary” or “health,” which were concepts used in England and America. Nagayo Sensai borrowed the concept of hygiene from the chapter “Geng-sang-chu-pian” (庚桑楚篇) in *Zhuangzi* (莊子), a Chinese Daoist scripture.<sup>57</sup>

In *Zhuangzi* (莊子), the author Zhuangzi used the term “衛生” (*weisheng*), the same as “hygiene” in the modern sense:

行不知所之，  
居不知所為，  
與物委蛇，  
而同其波，  
是衛生(*weisheng*)之經已。<sup>58</sup>

Going without knowing where we are going,  
Living without knowing what we are supposed to do,  
Accommodating things like a meandering snake,  
Following the flow of natural things,  
This is the way of *preserving life*.<sup>59</sup>

Based on *Zhuangzi*, the East Asian traditional concept of “*weisheng*” is very different from the Western concept of “hygiene.” The meaning of *weisheng* is “preserving or protecting life” or “cultivating life.” Even if the concept of “hygiene” was a social movement and a modern concept in the West, the concept of *weisheng* in *Zhuangzi* dealt more with the individual cultivation of harmony with nature; there was no government involvement, and it was not related to society. In the East, the concept of *weisheng* was more related to individualism and did not refer to the imperative to protect the health of society, which was emphasized by the modern term “hygiene.” Conversely, in the West, the concept of hygiene involved the idea that the government should take responsibility for the public through specific administrative organizations. The traditional concept of *weisheng* in the East concerns the bodily balance between a person’s interior and exterior, whereas the Western understanding of hygiene focused more on cleaning or purifying the physical environment.

Beginning in the late nineteenth century, Korea began to conceptualize hygiene further, and Japan influenced Koreans in adopting a hygienic life in their everyday routines. In the late Chosŏn Dynasty, hygiene was considered one of the best ways to demonstrate national prosperity and defense. In the early 1880s, the Kaehwap'a (Enlightenment Party) members such as Kim Okkyun (1851–1894), Park Yŏnghyo (1861–1939), and Yu Kilchun (1856–1914) tried to adopt the Japanese concept of hygiene in Korea after they returned from Japan as members of the Sushinsa (envoys dispatched to Japan since opening the ports). They argued for the adoption of a vaccine against smallpox in 1882, and Kim Okkyun wrote the *Chido yangnon* 治道略論 (On Good Administration of a Nation) in 1883 under the orders of Park Yŏnghyo, in which Park Yŏnghyo argued:

The most significant thing[s] for a nation's essential policies. ... is *hygiene*. The second is agriculture and commerce, and the third is roads. There are no differences between these three policies and laws of ruling in Asian nations.<sup>60</sup>

In the *Chido yangnon*, Kim Okkyun emphasized the necessity of ruling through a consideration of hygiene, the prevention of epidemics, and the development of agriculture. After Park Yŏnghyo returned to Korea in 1883, he became a Hansŏngbu-panyun (漢城府判尹), which was at the same administrative level as the mayor of Seoul in modern times. Park also tried to put his ideas into practice: based on the *Chido yangnon*, as a leader of Hansŏngbu, he argued in favor of similar efforts relating to hygiene, the prevention of epidemics, and agricultural development.<sup>61</sup> Moreover, Yu Kilchun moved one step forward: he founded the Wisaeng kwansa (Hygiene Department), and he was interested in establishing a systematic administration of hygiene.<sup>62</sup> Yu Kilchun believed that hygiene was important enough to merit government interventions into public and private affairs to prevent diseases.

However, in the 1880s, the Korean government failed to enact a hygiene policy due to the failure of the Kapshin chŏngbyŏn (Kapshin Coup, 1884). After the Kabo kaehyŏk (Kabo Reform, 1894), Korea began to establish the Wisaengguk (Board of Health) and finally constructed a modern hygiene system. At that time, the Japanese doctor Sewaki Hisao (瀨脇壽雄) was hired as an advisor regarding hygiene in Korea, and when cholera spread in Korea in 1895, Japanese doctors participated in hygiene inspections there. Thus, the Japanese government participated in inspecting areas in Korea before the establishment of Japanese resident areas. In this sense, Korean hygiene affairs were strongly influenced by Japan's hygiene policy in the early stages of adoption in the late nineteenth and early twentieth centuries.<sup>63</sup> After the establishment of the Han'guk T'onggambu (Japanese Resident General) in 1905, the overall hygiene system was reorganized



by Japan and controlled by Japan directly, with the Japanese resident areas serving as a model for the rest of Hansŏngbu.<sup>64</sup> However, even if the Seoul government attempted to assimilate (integrate) modern sanitary practices from 1883, Korea still had to handle problems caused by the resistance of citizens in Hansŏngbu.<sup>65</sup>

## Exploring hygienic issues in Western and Korean architecture

In the late eighteenth century, in this transitional period in the West, European architects heatedly explored multiple key issues: tradition, modernity, aesthetics, science, and so on. Each architect interpreted these ideas or concepts differently based on their philosophies and situations, and they tried to materialize these thoughts in their architectural projects. Moreover, under the broad roof of modernized life, Western architects also began to consider the hygienic issues in their architectural representations. Jacques-François Blondel (1705–1774) was a pioneering architect who explored the concept of “hygiene” by adopting the latest flushing toilets in his designs. In his hotel design entitled “De la distribution des maisons de plaisance” (Distribution of entertainment houses) in 1738, Blondel introduced not only small storage rooms for commodes and clothes but also described the plans and sections of the latest flushing toilets (Figure 6).<sup>66</sup>

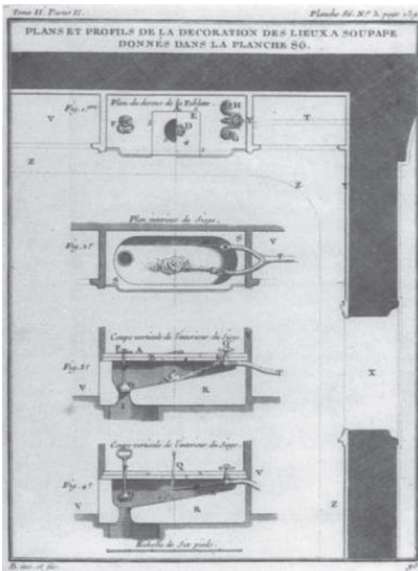


Figure 6 Jacques-François Blondel, Plan and sections illustrating a flushing toilet. Source: The Getty Center for the History of Art and the Humanities, California.

By providing detailed drawings of the toilets, Blondel demonstrates their use for improving hygiene, which other architects were not interested in at that time. Eventually, he tried to incorporate the recent flushing toilet into his building designs. This drawing indirectly showed his interest in addressing hygienic matters in the first half of the eighteenth century.

In early twentieth century Korea, the hygienic conditions of Japan's Sogaichi 租界地 (the Japanese residential area in Korea) were considered to be more progressive than other areas in Korea. These advanced hygienic systems came to affect other areas in Hansŏngbu. Because Japan had already experienced epidemics, especially cholera, before colonizing Korea, they recognized the significance of modern hygienic systems, which Japan only deployed in Korea's Japanese residential areas.<sup>67</sup> One of the Japanese resident areas, the Chin'gogae district in Seoul, conducted hygienic maintenance from the beginning, such as building public bathrooms along the streets in 1895 and crematoriums in 1907.<sup>68</sup> Regarding hygiene innovations, the Chin'gogae district served as a pioneering area compared to other places in Hansŏngbu. Hygiene affairs in Japanese resident areas in Korea were not only held to a higher standard, as evident in the enactment of laws and the establishment of different organizations, but also through more practical acts, such as constructing cleaner roads, water and sewage systems, and the installation of hygiene facilities. These movements played an important role in the changing aspects of modern architecture and urbanism in early-twentieth-century Korea.

In particular, the Chosŏn government began to create modern environmental streets. From 1895 in the Chin'gogae area, they began to regulate houses, creating rules regarding the location of houses so as not to invade the road line, specified the interval between houses, required a level road of sand and pebbles, and installed public bathrooms and lights.<sup>69</sup> Also, the government began to make new roads and water drains next to roads. They installed water and sewage systems from 1895 in earnest, preventing the public from placing garbage and sewage in the drainage systems. In particular, in the Japanese residential area, Japan installed public hygiene facilities, such as public bathrooms, barber shops, dumping grounds, and crematoriums. This represented a major change in urban life in which, previously, most Koreans used riversides or streams to wash their hair or bathe.

Japan continuously improved roads within their settlement in Korea from the end of the nineteenth century until the beginning of the twentieth century (from 1895 until 1910). The improvement of roads was directly related to the Japanese people's efficient entry into the new settlement in Korea. Another reason why the road improvement was urgently needed was to resolve hygienic problems related to drainage within the Japanese settlement. For example, Chin'gogae district, a

typical Japanese settlement, was muddy to the extent that travel was impossible in summer when it rains heavily, so the solution to the drainage problem was essential for an effective traffic and transportation system. However, drainage and sewer problems were correlated with hygiene rather than road management.<sup>70</sup>

The efforts of exploring hygienic issues were seen in newly constructed buildings in Korea during the Japanese colonial period. *Kwansa* and *sat'aek* were built and distributed based on modern patterns or types, technology, methods, materials, facilities, furniture, and fixtures accompanied by modernity.<sup>71</sup> Housing lot development and awarding individual numbers, which are the basis of modern spatial work, belonged to this category. Japanese attitudes and methods supplying the *kwansa* or *sat'aek* were different from general work to build Korean houses. As stated above, easy accessibility to use public transportation and road construction based on public works and modern hygiene theory, waterworks, and drainage, and gas supply facilities were important considerations for their design.

With the increasing social concern for healthy living environments in cities, the two Korean architects Park Gilryong (1898–1943) and Park Dongjin (1899–1981) began to consider hygienic issues in housing. They believed that there were many problems to overcome in traditional Korean houses to answer to the needs of modern life. Among those problems, the most urgent and significant matter was sanitation and hygiene. In particular, Park Dongjin strongly argued that traditional kitchens and bathrooms should be improved for sanitation and hygiene:

Kitchen: The kitchen is the most difficult place to design in a housing plan. It is the place where we generate our family's energy and affect our family's life. ... [In terms of the kitchen] the whole area of the kitchen should be managed in a hygienic way. It should be not only well-lit and ventilated, but also prevent the decomposition of plants and dust.

Bathroom: In our housing, we have not recognized the importance of the bathroom; instead, we have scorned it. ... We should improve the *sanitary structure and facilities* [emphasis added]. A Western flush toilet is perfect and ideal for us.<sup>72</sup>

Park Gilryong also indicated the problems of traditional Korean kitchens. Park published articles entitled “Kaesŏn ũi p'iryosŏng 개선의 필요성 (The Need for Improvement)” in the *Tong-A Ilbo* in August 1932. When Park discussed the improvement of kitchen spaces, his analysis of traditional kitchen spaces focused on “hygiene,” because kitchens are strongly related to the foods which we have in our everyday life. To solve the hygienic problem in traditional kitchens, Park insisted on modernizing Korean traditional kitchens' ventilation and lighting systems, because kitchen spaces were infected very easily by pathogenic germs

and bacteria. Park insisted that a better ventilation and lighting system would help kitchens be a better hygienic space.

A kitchen is an organization rather than just a place to preserve the foods that support our lives. ...

Incomplete kitchens influence our family's hygienic matters and take away our housewives' happiness. ...

As I already mentioned, our traditional kitchens are incomplete. It is easy for germs to breed because the lighting and ventilation are imperfect.<sup>73</sup>

In this sense, from the early twentieth century, a few advanced Korean architects began to consider hygienic issues in the context of modern architecture and urbanism, and they tried to overcome such problems in the construction of their architecture, paying particular attention to kitchens and bathrooms, which were the most important in addressing hygienic concerns in the early twentieth century.

## Conclusion

From the late nineteenth and early twentieth centuries, in Korean society, there were continuing conflicts between tradition and modernity. In particular, a few modern concepts, such as “science,” “efficiency,” and “hygiene,” were implemented into Korean architecture and urban contexts, and these concepts were important in forming new characteristics of modern Korean architecture and urbanism.

In the early twentieth century, active efforts to adopt the three concepts shaping modernity in Korean architecture were revealed not only through individual architects, but also from newly constructed buildings. A few Korean architects began to adopt the concept of science in architecture in earnest. In earlier times, Korean traditional architecture was not built to consider the framework of science. For example, the traditional Korean house (*hanok*) was built by carpenters who were educated in their construction skills by their elders through their own experiences. However, the concept of efficiency began to be implemented in traditional Korean house design through the “Centralized Housing Plan” of the “Movement of Housing Improvement”. Therefore, considering scientific methods related to efficiency in architecture represented a paradigm shift from tradition to modern times. The late Chosŏn Dynasty also began to adopt the concept of hygiene in architecture to solve urban problems, such as exotic infections. Even if the hygienic concept was applied and discussed in the Japanese residential area first, modern Korean architecture began to adopt hygienic matters through their understanding of the context of Korean culture, and a few innovative and detailed realizations of hygienic ideas were embodied in modern Korean housing and urban contexts.

The details of efficiency and hygiene were also concretely embodied in *kwansa*, or *sat'aek*, which were extensively constructed in the early twentieth century before and after the Japanese occupation of the Korean Peninsula began. It can be ascertained that these three concepts shaping the modern period were extensively revealed in newly built buildings in Korea during the Japanese colonial period and Korean architects' efforts towards the three concepts were adopted in Korean architecture and cities.

The development of modern ideas in modern Korean architecture enabled Korean society to solve its social and cultural problems, which had not been addressed by traditional methods. These Western concepts were adopted into Korea and into other non-Western societies, which began to adapt Western ideas in architecture. Even if architecture was a slow reflection of social changes, these changes were nevertheless embodied in modern Korean architecture and urbanism. These phenomena constructed the aesthetic of modern Korean architecture, and it made an authentic Korean society different from Western or Japanese modernity.

## Notes

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2. Assistant Professor, Hankyong National University, Gyeonggi-do, Korea, Email: seomyeng@gmail.com, seoms@hknu.ac.kr
3. Alberto Pérez-Gómez, *Architecture and the Crisis of Modern Science* (Cambridge, MA: The MIT Press, 1983), pp. 285–291.
4. Sungsoo Song, "Teillörjüm üi hyöngsöng kwajöng e issösö kisu üi wich'i," *Han'guk kwahak sahoe hak'oeji* 16. 1 (1994), p. 67.
5. Christine Frederick, *New Housekeeping: Efficiency Studies in Home Management* (Garden City, N.Y: Doubleday, Page & Company, 1913), pp. 3–13; Christine Frederick, *Household Engineering; Scientific Management in the Home* (Chicago, IL: American School of Home Economics, 1920), p. 8.
6. Youn Jung Do, *Kündae puökk üi t'ansaeng kwa imyön* (Seoul: Spacetime, 2020), p. 71.
7. Ryüichi Narita, *Kündae toshi konggan üi munhwa kyönghöm*, trans. Mingyo Seo (Seoul: Puripari, 2011), p. 32.
8. The classification of the examples of *kwansa* 官舎 (official residences of Japanese ministries), *sat'aek* 舍宅 (company house), and *sat'aek* 社宅 (rental house) provided in Chosön before and after the Japanese occupation of the Korean Peninsula was not strict. *Sat'aek* 舍宅 (company house) refers to a house built for public officials of public institutions or employees of public companies, and it was used as containing *kwansa*. Meanwhile, *sat'aek* 社宅 (rental house) primarily refers to a rental house where the employees or laborers of private companies that entered Chosön to make money or collaborate on the expansion or development of the

- Japanese colony. *Sat'aek*, in this paper, is defined as *sat'aek* (舍宅) which means a company house. For the definition and classification of the above words; see the following research: Myung-Sook Kim, "Ilche kangjömgi Kyöngsöng-bu Sojae Ch'ongdokpu kwansa e kwanhan yön'gu." Masters thesis of Seoul National University, 2004.
9. Mangil Kang, *Han'guk kundaesa* (Seoul: Changbi, 1984), pp. 281, 284.
  10. Harold Miles Tanner, *China: A History* (Indianapolis, IN: Hackett Pub. Co., 2009), p. 397.
  11. The author translated this quote. For a questionable published translation; see Laozi, *The Way of Life: According to Lao Tzu*, trans. Witter Bynner (New York, NY: TarcherPerigee, 1962), pp. 30–31.
  12. *Tao Te Ching* (道德經) is a classic Chinese text originally created by Laozi in the sixth-century BC. This modern Chinese version is translated from the classic version of Laozi, Chapter 11, *Tao Te Ching* (道德經).
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  16. Martin Heidegger, "The Origin of the Work of Art," *Basic Writings* (New York: Harper & Row, 1977), p. 184.
  17. Ernesto Grassi, *Kunst und Mythos* (Hamburg: Rowohlt, 1957); Ernesto Grassi, *Die Theorie des Schönen in der Antike* (Cologne: DuMont, 1980).
  18. Vesely, *Architecture in the Age of Divided Representation*, p. 249.
  19. Martin Heidegger, "The Question Concerning Technology," *The Question Concerning Technology and Other Essays*, trans. William Lovitt (New York, NY: Garland Pub., 1977), p. 35.
  20. Vesely, *Architecture in the Age of Divided Representation*, p. 307.
  21. Vesely, *Architecture in the Age of Divided Representation*, p. 292.
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  24. Kang, *Han'guk kundaesa*, p. 285.
  25. Don-son Woo, "Kwahak undong kwa üi kwallyön üro pon Pak Kilyong üi chut'aek kaeryang-non," *Taehan köñch'uk hak'oe nonmunjip* 17.5 (May, 2001), p. 82.
  26. Wonbok Hyeon, "1930 nyöndaeh üi kwahak kisurhak chinhüng undong," *Minjonk Munhwa Yön'gu* 12 (1977), p. 270; Kyungah Lee, *Kyöngsöng üi chut'aekchi*. House: Seoul, 2019), p. 74.
  27. Gilryong Park, "Ch'anggan e chehaya," *Kwahak Chosön* (June, 1933), pp. 3–4.
  28. Gilryong Park, "Chigu saengsöngsa," *Kwahak Chosön* (July and August, 1933), pp. 37–38, 40; Gilryong Park, "Uju e taehan köch'al," *Kwahak Chosön* (March, 1935): pp. 7–8; Gilryong Park, "Mulchil üi chöngche," *Kwahak Chosön* (April, 1940): pp. 21–23.
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  30. Woo, "Kwahak undong kwa üi kwallyön üro pon Pak Kilyong üi chut'aek kaeryang-non," p. 83.
  31. Gilryong Park, "Saenghwal üi kwahak'wa e taehaya che 3," p. 9.
  32. Hyeon, "1930 nyöndaeh üi kwahak kisurhak chinhüng undong," p. 261.
  33. Changbok Lim, *Han'guk üi chut'aek, kü yuhyöng kwa pyönch'önsa* (Seoul: Dolbegae, 2011), p. 237.

34. Hana Kim, "Kündaejök örini kaenyöm üi hyöngsöng kwa chugö üi pyönhwa," Master thesis of Seoul National University, 2006.
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38. Chulsoo Park, *Han'guk chut'aek yujönja 1* (Seoul: Mati, 2021), p. 23.
39. Bong-Hee Jeon and Yongchan Kwon, *Hanok kwa Han'guk chut'aek üi yöksa* (Paju: Dongnyok, 2012), p. 173.
40. Sochun, "Yero pogo chigüm üro pon Söl chungshim seryök üi yudong," *Gaebyeok* 48 (1924), pp. 58–59: The typical *kwansa* zones in this paper are the present Pil-dong, Namhak-dong, Mok-dong, Ju-dong, Inui-dong, Anguk-dong, Bukchang-dong, and Yongsan.
41. Park, *Han'guk chut'aek yujönja 1*, p. 27.
42. Myung-Sook Kim, "Ilche kangjömgi Kyöngsöng-bu Sojae Ch'ongdokpu kwansa e kwanhan yön'gu," p. ii.
43. Gilryong Park, "Chu e taehaya sam," *Tong-A Ilbo* (August 11, 1932), p. 5.
44. Gilryong Park, "Chosön chut'aek chapkam," *Chösen to kenchiku* 20.4 (April, 1941), p. 15. The Translation was adopted from the author's previous conference presentation paper: Myengsoo Seo, "The Recognition of Tradition in Early Modernity: A Cross-Cultural Approach to Korean Modern Architecture," *Proceedings of the 13th Docomomo International Conference Seoul* (2014): p. 403.
45. When Korean architectural historian Changbok Lim conducted a research project titled "A space analysis of modern hanoks in Seoul area," Lim had a chance to explore Ikdo Min's house. At that time, Lim found a very unique *ondol* system in Ikdo Min's house. Lim was told from the owner of this house that it was designed by Gilryong Park. Lim argued that Park was the only Korean architect who had ability and techniques to design this kind of building at that time. From Changbok Lim, *Han'guk üi chut'aek, kü yuhyöng kwa pyönch'önsa*, p. 153.
46. Leonardo Benevolo, *The Origins of Modern Town Planning* (Cambridge, MA: The MIT Press, 1980), p. 130.
47. Todd Henry, *Assimilating Seoul: Japanese Rule and the Politics of Public Space in Colonial Korea, 1910–1945* (Berkeley, CA: University of California Press, 2014).
48. Ryüichi Narita, *Kündae toshi konggan üi munhwa kyöngghöm*, p. 32.
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50. Dongwon Sin, "Chosönmal k'ollera yuhaeng, 1821–1910," *Han'guk kwahaksa hak'oeji* 11.1 (1989), p. 57.
51. Cholera occurred seriously in 1879, 1885, 1886, 1888, 1890, 1891, 1895, 1902, 1907, 1909 and 1910.
52. Sin, "Chosönmal k'ollera yuhaeng, 1821–1910," p. 57.
53. Keijō-fu, *Keijō fushi 2*, pp. 582, 705.
54. Hyungwoo Park, *Chejungwön* (Seoul: Body and Mind, 2002), p. 89.
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56. "The Iwakura Mission was a visit to the United States and Europe between 1871 and 1873 by many of the top officials of the new Meiji government." It originated from Emperor Meiji to President Grant on Iwakura Mission, 1871, Adopted from the official translation as reproduced in *The New York Times* (5 March, 1872).
57. Jongchan Lee, "Meiji Ilbon esö kündaejök wisaeng üi hyöngsöng kwajöng, 1868–1905," *Taehan üisa hak'oe* 12.1 (June, 2003), p. 36; Yunjae Park, "Hanmal Ilche ch'o kündaejök

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58. William Hung, *A Concordance to Chuang Tzu* (Cambridge, MA: Harvard University Press, 1956), p. 62.
  59. Translated by author, with an advice by Hui Zou.
  60. Minsu Lee, *Han'guk ũi kũndae sasang* (Seoul: Samsung Publishing, 1992), p. 89. Originated from Okgyun Kim, Chido yangnon, p. 1882.
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  63. Park, "Hanmal Ilche ch'o kũndaejõk ũihak ch'egye ũi hyõngsõng kwa shingmin chibae," pp. 11–17.
  64. Lee and Kim, "1885–1910 nyõndae Hansõngbu nae Ilbonin kõryuji ũi kũndaejõk wisaeng saõp ũi shihaeng kwa toshi pyõnhwa," p. 221.
  65. Henry, *Assimilating Seoul: Japanese Rule and the Politics of Public Space in Colonial Korea*; Lee and Kim, "Modern Sanitary Work and Urban Changes in Japanese Populated District in Seoul from 1885–1910," p. 215.
  66. Nicolas Le Camus de Mézières, *The Genius of Architecture, Or, the Analogy of That Art with Our Sensations*, trans. David Britt (Santa Monica, CA: Getty Center for the History of Art and the Humanities, 1992), p. 39.
  67. Lee and Kim, "1885–1910 nyõndae Hansõngbu nae Ilbonin kõryuji ũi kũndaejõk wisaeng saõp ũi shihaeng kwa toshi pyõnhwa," p. 217.
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  70. Please see the following research about Chin'gogae: Yeonkyong Lee, *Hansõngbu ũi 'chakũn Ilbon' Chin'gogae hokũn Ponjõng* (Seoul: Spacetime, 2015): 204–229.
  71. Myung-Sook Kim, "Ilche kangjõmgi Kyõngsõng-bu Sojae Ch'ongdokpu kwansa e kwanhan yõn'gu," pp. 56–69.
  72. Dongjin Park, "Uri chut'aek e taehaya sibo," *Tong-A Ilbo* (4 April, 1931), p. 4.
  73. Gilryong Park, "Chu e taehaya sam," *Tong-A Ilbo* (11 August, 1932), p. 5.

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