A century ago, Korean architecture made its world debut through international expositions in Chicago, Paris and London, influencing Frank Lloyd Wright’s ideas on heating.

The appearance of Korean architecture in the modern West

Hyon-Sob Kim

Although the general influence of the architecture of East Asian countries on the formation and development of modern architecture has been widely recognised, detailed evidence about the extent and nature of this influence has been accruing through a growing body of research.1 This began with Chinoiserie, a Chinese-style fashion around the eighteenth century in Europe, which was imprinted in the Rococo interior as well as in the jardin anglo-chinois with its Chinese pavilions.2 Then in the late nineteenth century there was a European zeal for Japanese art, Japonisme, which appeared in the Arts and Crafts Movement and Art Nouveau.3 Consequently, East Asian influences came to be reflected in the concepts and designs of numerous modern architects. The representative figure is the American master Frank Lloyd Wright, who adopted the spatial concept of Laozi (or Lao-Tzu) and the organic characteristics of Japanese architecture.4 China and Japan had also appeared in various publications and architecture played a typical role in the interchange.5 Also, some notable Westerners had visited China and Japan.6

Compared with China and Japan, Korea appears insignificant for architectural interchange with the West and, until recently, the architecture of Korea has attracted no significant interest in the West. Distracted by more urgent political and economic matters, Korea had hardly been in a condition to display her architecture to outsiders, for when compelled to open her doors to foreign powers in the late nineteenth century, Korea was concerned about her own survival more than anything else. Then, between 1910 and 1945, Japan occupied the Korean peninsula, so Korea lost any opportunity to argue for her own cultural identity. Meanwhile, the West had gained its sense of East Asian culture from China and Japan, leaving Korean architecture to appear superfluous. Even the designation of Korea as the ‘hermit kingdom’ or ‘hermit nation’ reflects the negative sense of passiveness and primitiveness.7

Even though Korean architects are now working across the world and internationally renowned foreign architects are designing buildings in Korea, it seems true that Korean architecture does not yet wholly reveal itself on the international stage. Furthermore, publications on Korean architecture in Western languages are seemingly not well circulated among Western architectural circles. So far, the best introductory books on traditional Korean architecture for foreigners might be An Introduction to Korean Architecture (1991) by Sam Y. Park and Hanoak: Traditional Korean Homes (1999) by Jin-Hee Chun et al.5 Several articles have also been published in English, notably in Korea Journal5 and it seems that similar publications have been increasing recently.10 However, these have been largely undertaken within the domain of Korean Studies, or directly translated from their original Korean versions with little consideration for foreign readers. The fact that no internationally recognised architectural publishers have been involved in the publications is also an important reason for Western architects to have little awareness of them.11

Some of the history therefore needs filling in. The presence of Korean building on the Western stage began with pavilions for international fairs, such as the World’s Columbian Exposition in Chicago in 1893, the Paris Universal Exposition in 1900, and the Japan-British Exhibition of 1910 in London. Perhaps the single most significant fact for modern architectural history is that Frank Lloyd Wright experienced the ‘Korean room’ in Tokyo in the mid-1910s. Were these events meaningful to Western architectural circles? And how can we interpret them in terms of architectural history? Even though the pavilion architecture and Wright’s story look largely unrelated, they need to be studied together because the two commonly signify Korean architecture’s initial relationship with the West. This paper attempts to integrate events that have been only fragmentarily mentioned so far even in Korea into one narrative concerning the first appearance of Korean architecture in the modern West. Moreover, these interactions are expected to complement the lack of satisfactory publications on Korean architecture.
Unveiling the hermit kingdom

The history of the Korean peninsula goes back to the Palaeolithic period when mankind appeared for the first time, according to general history books on Korea. The first country, Old Joseon, believed to have been founded in 2333 BC, received ironware from China in the fourth century BC and developed its own civilisation. Various dynasties arose and fell before the Joseon Dynasty was established in 1392, lasting until the beginning of the twentieth century; it was renamed Daehanjaeguk, or the Empire of Korea, in 1897 to emphasise its sovereignty and independence. Then in 1910 Japan annexed the country and ruled her until the end of the Second World War.

Throughout her history, Korea was influenced by China in all areas including its political system, religion and culture, and it played an important role in transferring the continental civilisation to the Japanese isles. But despite the homogeneity of the Chinese cultural area, the three countries developed their own ways of living within their different climates, as seen in their buildings. According to Nam-Chull Joo (1997), they all used timber-frame structures, but with remarkable differences in the compositional elements and spatial concepts. If Chinese superhuman scale illustrates a continental grandeur and the islands of Japan assume an acute taste, Korean architecture in the peninsula connotes a moderate beauty as an intermediary.

The traditional way of building in Korea started with baechi and jwahyang, or locating and orientating a building, which was influenced by the pungsu (fengshui in the better known Chinese Romanisation) philosophy. They preferred baesanimsu, or a backing mountain and a facing stream, and generally let a building face south. The building was always constructed on a platform, with columns placed on bases and the wood frame forming the skeleton of the whole. The set of brackets, named gongpo (dougong in China), which supports the roof, is important structurally and visually. The roof, whether tiled or thatched, dominates the impression of the building, characterised by natural curvilinear lines in the ridge and eaves. The plan of a building is divided by gan, or the space between two columns (similar to the Japanese ma that refers to both space and time), and windows and doors – papered over wooden lattice – occupy much of the wall. Rooms have two types of floors: the ondol (literally ‘warm stone’) or heated floor finished with paper, and the maru or wooden floor. As Dong-Uk Kim (2007) explained, the ondol spread across the Korean peninsula in the thirteenth and fourteenth centuries, becoming the defining element of Korean architecture.

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It is uncertain when Korean architecture became known beyond East Asia. A description of Silla, a former Korean kingdom (57 BC to 935), appears in a ninth-century book by an Arabian geographer, and the Dutch Hendrick Hage’s book of the seventeenth century records a simple but interesting account about the house of Joseon. Following a series of commercial treaties with foreign powers in the late nineteenth century, many Westerners visited and numerous publications appeared in the West, but most were either travelogues or introductory books dealing broadly with Korean history, geography and culture. Descriptions of architecture, if present, remained superficial, reflecting the authors’ personal impressions. Even seemingly professional books about Korean art and architecture published decades later, such as Otto Kümmel’s Die Kunst Chinas, Japans und Koreas (1929) and F. M. Trautz’s Japan, Korea und Formosa: Landschaft, Baukunst, Volksleben (1930), were superficial, tending not to focus on Korea but merely adding a short chapter for the sake of balance in East Asia. This treatment contrasts with Western appreciation of Japan and China, on which publications proliferated in the first three decades of the twentieth century. The politically unstable situation of Korea seems to have discouraged researchers, even within the country itself. Against this background, the exemplary Korean buildings built in the West at the turn of the century gain in significance.

Korean pavilions in Chicago (1893), Paris (1900) and London (1910)
The first Korean pavilion in the West was built at the World’s Columbian Exposition in Chicago in 1893, the occasion when Wright encountered the Japanese pavilion Ho-o-den. Following the American invitation to participate, the Korean King Gojong (reigned 1864–1907) decided to send an exhibit to the fair. Although the organisers sought an air of cosmopolitan variety and exoticism through the participation of non-Western countries, not to mention commercial profit, Gojong saw a chance to hold China and Japan in check by enhancing his

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3 Ho-o-den, the Japanese pavilion at the World’s Columbian Exposition in Chicago, 1893, which was the most popular building at the event and made a strong impression on Wright

4 Bird’s-eye view of the exposition site: the largest building at the centre is the Manufactures and Liberal Arts Building
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relationship with the United States. However, Korea could not afford to erect a proper building owing to the tightness of budget and schedule, and there was no carpenter in the Korean delegation, which consisted of only three officials and ten musicians. The allotted space for the exhibit was one corner within the Manufactures and Liberal Arts Building, not an outdoor site, so the Korean pavilion was no more than a hastily improvised display booth, and no accurate resemblance to Korean architecture could be recognised either in its columns and beams or in its roof structure. The corner of the roof was slightly curved, but this did not help to improve the coarse fabrication. Hubert H. Bancroft (1893) describes it as a ‘toy-like pavilion’ in his book on the Exposition. It made an unfortunate contrast not only with the imposing Japanese pavilion and additional teahouse, among the most attractive places in the exposition, but also with the Chinese twin-towered building, a privately funded entry. The Korean participation focused more on the displayed objects and musical performance than on the building, and a member of the Korean intelligentsia, Yoon Chi-Ho, wrote of his disappointment after observing the exhibit for several days. Nevertheless, a ‘Questions Answered’ sheet attached to the booth summarised Korean architecture briefly but appropriately: ‘Koreans live in comfortable tile-roofed houses, heated by flues under the floor.’

The first proper Korean building in the West was the pavilion for the 1900 Paris International Exposition. Korea’s participation resulted from an active effort from the French side, both diplomatically and financially. As with the Chicago fair seven years earlier, King Gojong (who had become Emperor Gwangmu in 1897) had an underlying purpose. This was to show the will to preserve his vulnerable country’s independence amid the imperial countries’ power struggle in that part of the world. The initial design of the pavilion, planned and financed by Baron Delort de Gléon, was entirely different from the executed pavilion. His ambitious idea was to make two distinguished parts in the Korean section, ‘one official, the other a picturesque attraction’, on a remarkably huge site of 1,368m² on Avenue de Suffren.

The official portion will be taken up by a grand pavilion (in the style of the summer palace of the Emperor Li-Hi [Gojong’s name]), which will enclose the government collections, modern and traditional arts, the products of mining, agriculture, industry, commerce, etc. [...] The second portion will recreate an animated corner of Korea – a street in Chemulpo [Jemulpo] with its houses and buildings occupied by numerous authentic families selling (and in some cases even making) their wares, altogether a most animated street with a teahouse, open air performers and acrobats, etc. [...] with the inhabitants being in type, and dressed in manner, most diverse and unusual.

Looking at the official pavilion, it is not clear which building de Gléon meant by the Gojong’s summer palace. But the remaining drawings, certainly made by de Gléon’s architect, strongly reflect the Westerner’s preconception of Chinoinerie for the Korean pavilion. The drawings suggest that there were at least two versions of the initial design. One dated 12 March 1899 illustrates a long horizontal three-storey building, except for one-third of the left part symmetrical with twin tower gates. But this multi-storey idea was not common in Korea, and both the straight ridge and the sharp curves at the ends of the roof were more suggestive of China. The other drawing, dated 1 June 1899, had a more articulated and diversified front facade, but still deviated from authentic Korean architecture. Construction started on the basis of this plan. The proposed street of Jemulpo – the port city to Seoul now called Incheon, which was meant to give an impression of Korea – looks more exciting because of the seemingly vivid representation of Korean everyday life, but it would also have distorted reality towards an Orientalist view. Delort de Gléon had earlier been involved in the production of ‘Cairo Street’ for the Egypt exhibit at the 1889 Paris Exposition, which had been harshly criticised by Egyptians as an Orientalist caricature of their native culture. The street was intentionally made dirty and chaotic, and a building with a mosque facade was used as a coffee shop. ‘The Egyptian visitors were disgusted by all this and stayed away’, as Timothy Mitchell (1988) put it.

After Delort de Gléon’s sudden death in November 1899, the organisation of the Korean section was taken up by another patron, Count August Mimerel. He markedly curtailed the initial design, rejecting the Jemulpo street idea and reducing the pavilion to approximately one-third of its initial size. Eugène Ferret was employed as architect, probably...
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Korean exhibit within the Manufactures and Liberal Arts Building

Champ-de-Mars area in the site plan of the Paris Universal Exposition, 1900: a plot facing Avenue de Suffren was allotted for Korea. The initially huge site for Korea was divided into three sectors after Delort de Gléon's death. (From Albert Quantin, L’Exposition du Siècle, 1900, p. v. with the dotted circle added by author.)

Initial designs of the Korean pavilion by Delort de Gléon, with Chinoiserie flavour

a) First version, dated 13 March 1899
b) Second version, dated 1 June 1899

Construction was started on the basis of this plan. c) Construction work, which was soon stopped owing to the death of Delort de Gléon

Image of Jemulpo as published in Le Monde Illustré (1894). Thatched roofed houses at the Korean village contrast with foreign buildings of the concession territory

Geunjeongjeon, or the Royal Audience Hall of Geongbokgung Palace, Seoul
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due to his former design of the Saigon Theatre (1897) in French Indochina. The Royal Audience Hall of Gyeongbokgung Palace was chosen as the model for the Korean pavilion. It is not known how the decision was made, but with the abrupt design change and the tight schedule, it was an easy solution, and prominent in retrospect.

The Gyeongbokgung was the first and major royal palace of the 500-year-long Joseon Dynasty, and the Royal Audience Hall, named Geunjeongjeon [9], is the centre of the palace. It was appropriate to symbolise Korean dignity and independence and drawings for this pavilion – plan, front and lateral elevations, section, etc. on the same sheet [10] – were approved for the construction, stamped 29 January 1900.

Perhaps Ferret relied on indirect materials such as photographs and sketches, without direct experience of Korean architecture. Certainly discrepancies arose between the original Geunjeongjeon and Ferret’s imitation. It was half of Geunjeongjeon in size and the platform was narrow in ratio, but these were perhaps inevitable choices for the reduced site. Although the curves at the ends of the eaves are slightly sharper than on the original, the architect tried to follow the natural curvilinear lines of the Korean roof. The boarding on the gable looks sound, and the design of the wooden balustrade on the platform, though not imitating the original stone design, is of a pattern frequently used in Korea. The significant deviation from genuine Korean architecture is the skeleton of the building as a whole. The framework of column, beam and bracket was simplified and a Western truss adopted to support the roof. Perhaps they did not feel the necessity to complete the complicated structure for a temporary exhibition space, but the triangulation of a truss was fundamentally at odds with East Asian practice. At the end of February, two Korean workers arrived in Paris with Min Yong-Chan, the Korean Commissioner, to help out, but the design was executed with little change.

The exposition ran from 14 April to 12 November. Located on the margin of the exhibition district, the Korean pavilion [11] was easily missed by fairgoers.
Once noticed, however, it produced a strong impression. As a journalist noted: ‘Done entirely in wood, painted in a vivid display of colors, and covered by a large roof with the upturned eaves characteristic of Far Eastern architecture, the structure captures the attention of the passerby. The design of the unique inner chamber finds its inspiration in the audience hall of the old royal palace.’

Maurice Courant, a prominent scholar of East Asia and one of the committee members of the Korean exhibition, also left a lively and positive description about the pavilion, making his own comparison of Chinese, Korean and Japanese architectures.

Not only recorded in written accounts, the memory of the Korean pavilion was also kept in visual media, notably the illustration in *Le Petit Journal Supplément Illustré* (16 December 1900). One significant point that this picture indicates is the existence of *gongpo* (bracketing), which was omitted from the approved drawings. Arguably, it was not shown in Ferret’s elevations because the roof – whose structure was too simply, and so too thinly, designed – covered up the series of brackets. However, his section does not indicate any hint of its existence either. We may therefore assume that it was added later, possibly by the Korean workers, just as the gargoyles were put on the roof. The *gongpo* seems to have been merely ornamental without accomplishing its true structural purpose, as an essential part of the conception of the East Asian roof. On the other hand, the gargoyles, namely *yongdu*, were rather exaggerated and, in fact, they replaced *japsang*, or the small statues of animals normally found on the edge of the roof. Despite these inauthenticities the addition of *gongpo* and *yongdu* meant that the realised pavilion came one
step closer to authentic Korean architecture. Though not highlighted in this event, the pavilion played its role in informing the world of Korean culture and architecture, placed as it was in the central metropolis of Europe.

Korean architecture appeared unexpectedly once more in Europe a decade later, but not as the product of an independent nation, rather as part of the Japanese empire. The Japan-British Exhibition in London in 1910 included sections on Korea, Manchuria and Formosa, obviously intended to show off the growing empire’s new territories. The Korean section named ‘Residency General of Japan in Korea’ [13], shows a noble gate with the paljak roof style as adopted for the most dignified buildings in the Geunjeongjeon. Ironically, this small structure was a perfect representation of Korean architecture. It must have been constructed by skilful Korean carpenters, probably helped by some scholarly reports on Korean architecture by Japanese researchers such as Tadashi Sekino. While the curve of the roof is natural, the usage of gonggo and wood frame was accurate; dancheong, or colouring on the wood frame, was deliberately applied; and even japsang was correctly placed. Visitors could experience genuine Korean architecture through this structure, but the Korean identity and nameplate were shadowed by a Japanese curtain that wrapped the upper part of the gate columns and a veil of the ‘rising sun’ that hung over the Korean section. Its effect on visitors has yet to be investigated.

Wright’s adoption of the ondol, Korean floor heating

We do not know if influential Western architects visited the Korean buildings as Wright visited Ho-o-den. However, considering the minor status of Korea on the international stage and her limited participation in the events, it is unlikely that the Korean buildings made a serious impression on architect visitors. If the buildings confirmed the existence of a unique Korean architecture, it would suffice. For Korea to make a clear footprint in Western modern architecture, several more years would need to pass. The event came indirectly and by chance, through Frank Lloyd Wright’s visit to Tokyo for the New Imperial Hotel project (1913–23). It is unnecessary to reiterate the importance of Wright in modern architectural history and also of the inspiration that he received from East Asia, especially Japan. However, his relationship with Korea is relatively unknown and rarely studied. Julia Meech (2001) showed that he collected Korean craftworks such as ceramics and folding screens along with Japanese and Chinese arts. She wrote, ‘Wright also liked the clean lines and colourful, decorative designs of Korean painting,’ but his collection of Korean works of art is peripheral to this paper. More essential is Wright’s encounter with Korean floor heating, the ondol. He left vivid reports about the experience in his autobiography (1943) and in The Natural House (1954).

In his books, Wright tells how he was invited in the winter of 1914 to dine at the Tokyo house of Baron Okura, an important patron of the Imperial Hotel project, but he could not enjoy the dinner owing to the cold weather. After dinner, however, he was led to the ‘Korean room’, where he was soon warm and felt comfortable. There was no visible heating device. The room was heated from the floor. To him, ‘it was really a matter not of heating at all but an affair of climate.’ The principle was explained: ‘The Korean room meant a room heated under the floor. The heat of a fire outside at one corner of the floor drawn back and forth underneath the floor in and between tile ducts, the floor forming the top of the flues (or ducts), made by the partitions, the smoke and heat going up and out of a tall chimney at the corner opposite the corner where the fire was burning.’

This encounter with the Korean ondol was significant for Wright because this method of heating was not just a mechanical system but was ‘creating climate’. It is ‘healthful, dustless, serene’, terms well-fitted for the modern architectural ideal. Wright did not hesitate to apply this ‘discovery’ to the ongoing project, and a trial of electric floor heating for the Imperial Hotel bathrooms was successful. It was a matter of course that he attempted to realise such floor heating in further projects, starting with the Nakoma Country Club (1923, unexecuted), the Johnson Administration Building (1936–39) and the first Jacobs House (1936–37). It is interesting to discover how the floor heating of the Jacobs House was accomplished. When conceiving the design, Wright persuaded the Jacobs family with a detailed explanation of the Korean floor heating system and challenged them with the question: ‘Would you like to be the first people in America to try this kind of heating in a home?’ This illustrates his fascination with the new heating method, which he called ‘gravity heat’. But we have to keep in mind that what he adopted was the principle of the ondol, not its technical character. From the principle, he conceived a modern application, using steam or hot water piping. The Jacobs kept a photograph that captured Wright’s test of the heating pipes for their house [16]. By 1943, over thirty Usonian buildings had floor heating installed, as described in his autobiography, and probably many more buildings with this Korean-influenced heating method were completed by the architect before his death in 1959.

What kind of ‘Korean room’ did Wright experience in person? It could just have been an ondol room made in Okura’s Japanese house. Okura might have constructed a rather complex installation of fireplace-flue-chimney with a raised floor. However, there is also the possibility that it was a separate Korean building. We know that in September 1916, Okura built a Korean building in his Tokyo residence, named Chosenan (Joseon-gwan in Korean pronunciation) or Korean House [17]. It involved the removal of an existing building, named Jaseondang, from the Gyeongbokgung Palace, a process carried out under the Japanese cultural despoliation policy in colonised Korea. Despite the discrepancy of timing between the winter of 1914 in
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14 Part of Wright’s collection, a nineteenth-century Korean folding screen displayed at the Malcolm Willey House he designed in Minneapolis, 1937. In the 1930s, Wright gave the screen to his son David, who loaned it to Willey when the house was photographed.

15 Structure of the Korean ondi (from Nam-Ung Kim, 1994, p. 110, with English descriptions translated from the original German by author).

16 Jacobs House I, Madison, 1936-37: the first American building that realised the floor heating method inspired by the Korean ondi.

16a Exterior view of stepped corners.

16b Wright testing floor heating pipes.
his own description and the reconstruction of Jaseondang in 1916, it was plausibly the Jaseondang that Wright had come across because the architect sometimes mixed up the years of his visits to Japan. Some studies clarify that he was in Japan in 1913 and in 1917, but not in 1914. If this was true, his experience of Korean architecture was more integral because he observed one whole Korean building. In any case, it is certain that Wright’s contact with Korean architecture inspired his later designs.

It is worth mentioning that other Westerners also perceived this floor heating as one of the most conspicuous characteristics in Korean architecture. Since Hamel’s seventeenth-century record of it as ‘more like an oven rather than a room’, accounts about the Korean dwelling, if any, have mentioned it in general. When asked, the Korean delegate in the Columbian Exposition explained it with the tiled roof as key feature of Korean architecture. In China, too, a similar heating method, named kàng, has been used, but its heated area is limited to the lifted bedding part, in contrast to the Korean ondol that warms up the entire room. Moreover, while the kàng exists normally in northern parts of China, the ondol is a universal element of Korean architecture, which had been adopted by most Korean houses by the fourteenth century as already mentioned. These points also form a striking contrast to the Greco-Roman hypocaust that had been used mainly for the bath. Ironically, this unique heating method that so inspired the American master architect, had once been criticised by the first generation of professional architects in Korea for matters of hygiene, fuel consumption, spatial behaviour, etc. The degree of criticism varied from a mild suggestion of its modernisation to its complete removal from the house. Notably, Dong-Jin Park (1899–1980) maintained that the ondol should be eliminated from the Korean house to improve the way of living. though this extreme argument soon lost its validity. The Korean ondol was adopted by Wright but rejected by the native people, who later inversely received from the West the modernised floor heating system that uses hot water piping. At this point, we witness an example of transfer, conflict and intersection of architectural elements via cultural exchange.

**Conclusion: Korean role in modern architecture**

In conclusion, we need to re-examine the meaning of this investigation in terms of the first appearances of Korean architecture in the West. On a fundamental level, this research confirmed the existence of Korean architecture, as distinct from Chinese and Japanese architecture, that has however never been seriously illuminated in the international arena. This is the underlying premise that makes the research possible. However, this study is chiefly meaningful in that it clarified the situation of Korean architecture’s presence in the modern West. Korean architecture, mentioned sporadically but superficially in Western publications since the late nineteenth century (and so publications on Korean architecture available to Western Modernists seemed scarce), for the first time materialised on the Western stage through the world exhibitions of Chicago in 1893 and of Paris in 1900. It is this fact that is remarkable, even though the pavilions could not perfectly represent Korean architecture. In fact, Korea’s participation in the events was more political and commercial than cultural and architectural. Likewise, the Korean gate in London in 1910, this time built up in quite an authentic manner, was used as propaganda of the Japanese empire.

The value of Korean architecture was at last confirmed by Frank Lloyd Wright, who had already appropriated Chinese and Japanese ideas. In contrast with the world’s fair pavilions, Wright’s experience of Korean floor heating was far from a political intention. Also, it is noteworthy that the event took place not in the West but in Tokyo, plausibly through the Korean royal palace building that was rebuilt at the Okura residence. His encounter with the Korean ondol in his late 40s was a fresh discovery and, after all, meant a sublimation of architectural conception transcending a merely mechanical function. He applied the idea to the modern American condition, as typically exemplified in the moderate design of Usonian houses. This vividly illustrates how one culture meets and influences another. Especially, Wright’s adoption of the Korean floor heating method could also be thought about in terms of the East-West exchange in architecture. Korean architecture, which has been totally excluded from the discussion about East Asian contributions to modern architecture, now comes to prove its proper position in the play. No matter how small the role may seem, it is clear that Korean floor heating inspired the American master, although its influence on architects other than Wright has not been reported and actually looks implausible from the present research context. Therefore, we can conclude that Korea also participated in developing modern architecture in her own way, not to mention that the appearance of Korea’s pavilions in the modern West was meaningful in itself.
Notes


5. John Lust catalogued some 900 works on China published in Western languages between 1550 and 1850 in Western Books on China Published up to 1850 (London: Bamboo, 1987). In the catalogue, there are various books depicting Chinese buildings as a matter of course, such as Sir William Chambers, Designs of Chinese Buildings, Furniture, Dresses, Machines and Utensils (London, 1757) and Thomas Allom, China in a Series of Views, Displaying the Scenery, Architecture and Social Habits (London & Paris, 1843). As for Japan, publications in Western languages had remarkably increased since she opened her doors to the West in the 1850s. Yuko Furukawa and Hiroshi Adachi catalogued 48 publications on Japanese architecture and gardens from the late nineteenth century to the end of the Second World War in ‘Information of Japanese Architecture in the Western World since Recent Nineteenth Century’, Nihonkenchukakai-Kinkishibuh Kenkyuukokokai (2000), 941–44.

6. For example, Edward Morse’s and Bruno Taut’s visits to Japan and Osvald Sirén’s and Ernst Boerschmann’s visits to China enabled them to write memorable books on the countries’ architecture and landscape. See Kim, 2009, op. cit.

7. This term originated in William E. Griffis, Korea: the Hermit Nation (London: Allen, 1882), and was often adopted by Western writers for a while. The underlying idea was used as the justification for the Japanese invasion into Korea.


9. For example: ‘Korea’s Traditional Architecture’ (July 1972) by Chong-Gi Kim; ‘Two Styles of Korean Wooden Architecture’ (February 1975) by In-Rook Chung; and ‘The City and Architecture of Seoul during the Late Choson Period’ (Autumn 1994) by Dong-Uk Kim. Korea Journal is widely recognised in the Korean Studies area.

10. For example, Hollym International Corp. published Seowon: The Architecture of Korea’s Private Academies (2005, Sang-Hae Lee), Palaces of Korea (2006, Dong-Uk Kim), and Buddhist Architecture of Korea (2007, Sung-Woo Kim) as Korean Culture Series sponsored by the Korea Foundation. Though these were written for foreigners by authoritative scholars, the themes are rather specific. Kim Bongryol’s The Secret Spirit of Korean Architecture (London: Saffron, 2005), of which the original Korean version (three vols, 1999) was superb for Korean readers, is not user friendly to foreigners in general, as are Seok Jae-Yim’s series of books of A Study of Korean Architecture (Seoul: Ewha Womans University, 2005).

11. For example, Tetsuro Yoshida’s Das Japanische Wohnhaus (1935) had a stronger impact on Western architectural circles because it was published by the influential Verlag Wasmuth in Germany, which had published Wright’s portfolio 25 years earlier. See Hyon-Sob Kim, 2008, op. cit.

12. Various books on Korean history have been published in English for international readers. For example, Dyon Kil Kim, The History of Korea (Westport CT: Greenwood, 2003) is intended for high school students, while Ki-Raik Lee, A New History of Korea (Cambridge MA: Harvard University Press, 1984) and Keith Pratt, Everlasting Flower: A History of Korea (London: Reaktion, 2006) might be suitable for more informed readers.


14. In Korea, the most popular textbooks on traditional Korean architecture are Joo, op. cit., and Dong-Uk Kim, Hangukgeonchugui Yoksa [History of Korean Architecture] (Seoul: Gimundang, 2007).


17. The original Dutch version (1668) has been translated into several languages so far. But the most authentic English version was published quite recently as Hamel’s Journal and a Description of the Kingdom of Korea 1653–1666, trans. by J. P. Buis (Seoul: Royal Asiatic Society Korea Branch, 1994; rev. 1998). Concerning the Korean house in the revised edition, see pp. 62–63. Hamel’s description of the ondol is also cited in note 54.

18. The treaties were made with Japan (1874 and 1878) and America and China (1875), Britain and Germany (1885), Italy and Russia (1884), and France (1886), etc.

looks remarkable owing to the dedicated chapter of ‘Architecture and Building’ (pp. 241–51) and illustrations from photographs. Kummel devoted only five pages to Korean art, with four figures (three Buddhist statues and one ceramic vessel), and Trautz’s publication is merely a compilation of photographs.

21. The notable books on Japanese architecture are, for example, Japan: its Architecture, Art, and Art Manufactures (1882) by C. Dresser; Japanese Homes and Their Surroundings (1886) by E. Morse; Das Japanische Haus (1903) by F. Baltzer; and Das Japanische Wohnhaus (1935) by T. Yoshida. Concerning Chinese architecture, Chinese Architecture and Its Relation to Chinese Culture (1912) and Chinesische Architektur 2 vols (1925) by E. Boerschmann; and The Walls and Gates of Peking (1924) and The Imperial Palaces of Peking (1926) by O. Sirén are remarkable. Also, see note 5.


24. It seems that the installation of the pavilion was directed by Horace N. Allen, the missionary and diplomat to Korea, and Yi Chae-Teon, the chargé d’affaires of the Korean Legation in America at that time. Min-sik Lee, Chicago Columbian World’s Exposition and Korea Exhibits (Seoul: Baeksanjaryowon, 2006).


26. Corea has a corner where are found the crude productions of the Corean skill or rather dullness. While I could not help blushing at the poverty of Corean arts etc. the sight of the Corean flags had a strong attraction to me. ‘Yoon Chi-Ho, Yoon Chi-Heo’s Diary, 3 [Seoul: National History Compilation Committee, 1974], p. 169.


29. There were a series of tragic events in Korea: Sino-Japanese War, 1894–95; Japanese murder of Queen Min, December 1895; and King Gojong fleeing to the Russian legation in February 1896, etc.

30. Delort de Gléon’s letter to Delaunay-Belleville, the Director General of the Exposition (25 November 1898), which was published in Hanbulsanggyeajo [Compilation of Korea-France Diplomatic Documents], ed. by Pyeong-Seon Pak (Seoul: National Institute of Korean History, 2001), pp. 256–57. The insertion in [ ] was by the author and the English translation follows Kane, 2004, p. 55.

31. They were published in France/Corée 1886–1905: Souvenirs de Sóul, ed. by Elisabeth Chabanel (Paris and Seoul: École française d’Extrême-Orient and Korea University Museum, 2006).

32. Delort de Gléon’s initial idea was researched by Kyung-Don Jin and Mi-Na Park, ‘A Study on the Construction Process and Design Characteristics of the Korean Pavilion in Paris 1900 Exposition Universelle’ (text in Korean with English abstract), Korean Institute of Interior Design Journal, 68 (2008a), 3–14. But they studied the first version (12 March) only without detecting the existence of the later version (1 June).


34. August Minnere’s design was also studied by Ryung-Don Jin and Mi-Na Park, ‘A Study on the Construction Process and Design Characteristics of the Korean Pavilion in 1900 Paris Universal Exposition’ (text in Korean with English abstract), Korean Institute of Interior Design Journal, 69 (2008b), 11–22.

35. See the section in Figure 10 and compare it with the section of Gaesimsa in Figure 1.

36. Hanbulsanggyeajo, pp. 289 and 293.


40. The photograph of Figure 11a also illustrates this situation.

41. The aim of this exhibition was ‘to spread information about the new Japanese Empire and thereby win friends’ after her victories in the wars with China (1894–95) and Russia (1904–05). In short, ‘it was “PK”’, Yonasuke Ian Mutsu, ‘Preface’, in The British Press and the Japan-British Exhibition of 1910, ed. by Hirokichi Mutsu (Melbourne: University of Melbourne, 2001), pp. i–iii (p. i). This intention was clearly revealed in a remark by Masano Matsudaira, the Vice-President of the exhibition: ‘There are some, however, who are of the opinion that the Japanese are merely a warlike nation not capable of contributing to peace of the civilized world. … But unless something be done to remove this absurdity from the minds of Europe and America, matters of a grave nature might arise out of it.’ Kotaro Mochizuki, Japan Today: A Souvenir of the Anglo-Japanese Exhibition held in London 1910 (Tokyo: Liberal News Agency, 1910).

42. See note 12.


44. Recently, one research paper was published in Korea about Wright’s encounter with the Korean floor heating system. Nam-Ung Kim, et al., ‘A Study on Frank Lloyd Wright’s Experience of the Korean Traditional Floor Heating System Ondol’ (text in Korean with English abstract), Journal of Architectural Institute of Korea: Planning and Design, 203 (2005), 155–166.

45. The two books have a chapter.

46. Wright, 1943, p. 495.

47. Ibid.

48. An excerpt of Wright’s explanation: ‘The economical Koreans used the floor as part of the chimney and thus extracted all the heat from the smoke that would otherwise have gone outdoors. The Koreans wound a flue in a snake-like channel just under the floor surface before leading it to an outside wall. … It is a delightful form of heat. … After outdoors. The Koreans wound a flue in a snakelike channel just under the floor surface before leading it to an outside wall. … It is a delightful form of heat. … After the winter, a fire is lit every day under the floors, so that the rooms are always warm, more like an oven than a room.’ Hamel, 1998, p. 62.

49. Wright revised the number of the floor-heated Usonian buildings: ‘Some thirty or more’ in the autobiography (1943) to ‘Many’ in *The Natural House* (1954).


51. Nute, p. 132.

52. Most studies regard that he travelled to Japan for the Imperial Hotel project, first in January to May 1913 and then in December 1916 to May 1917. See Nute, pp. 185–86; Kathryn Smith, ‘Frank Lloyd Wright and the Imperial Hotel: A Postscript’, *The Art Bulletin*, 67 (1985), 296–310 (especially p. 309); and Meech, p. 100.

53. The possibility of Wright’s visit to Korea in 1913 was raised by his descendants (Meech, p. 193), but it needs more evidence.

54. ‘During the winter, a fire is lit every day under the floors, so that the rooms are always warm, more like an oven than a room.’ Hamel, 1998, p. 62.


56. Concerning the Korean heating method in comparison with kang, hypocaust and others, see Nam-Ung Kim, *‘Stehendes’ und ‘liegendes’ Feuer* (Darmstadt: Beispiel, 1994).

57. In his early writing (Dong-A Ilbo, 27 March 1931), he praised the ondol and argued for an improvement and rationalisation of it. But later he came to assert its total abolishment. Dong-Jin Park, ‘Jeonsiha juseongtagekgaehyeongon’ [Reformism of the Korean house], *Chunchu*, 2 (1941): ‘Jeonsiha juteakgywa yeollonymunjae’ [Matters of house and fuel in the war period], *Jogwang* (Jan. 1943).


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### Biography

Hyon-Sob Kim, Ph.D., is Assistant Professor of Architectural History at the Korea University. He completed his doctoral thesis on Alvar Aalto at the University of Sheffield in 2005 and his post-doctoral research on East-West exchange in architecture (AHRC Research Grant) followed over the next two years at the same institution. His studies on these and other subjects have been published in various countries, including Finland, UK, Italy, Japan and Korea.

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