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Hand-crafted flowers and Joseon palanquins showcase the aesthetics of life in the past

Kkot & Gama

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ON THE COVERS



During the Joseon Dynasty (1392–1910), royal banquets and ceremonies were extravagantly ornamented with artificial flowers, or *chaehwa*. The hand-crafted flowers at these royal occasions were more than simple decoration: They represented the authority and dignity of the king and the royal event itself. Master Hwang has dedicated her life to the mission of restoring the traditions of royal silk flower making. The front cover features one of her artworks, a recreation of *Hongbyeok dohwajun* (*Vase of Peach Flowers*), one of the traditional floral fittings at Joseon palace events.

The back cover features a photograph of candy flowers by Koo Seong-youn. Koo makes these flowers out of candies and then captures images of her creations. Her candy artwork was inspired by the folk painting peony motif that was used to convey universal human wishes.

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FEATURED ISSUE

Hand-crafted flowers and Joseon palanquins
showcase the aesthetics of life in the past

Adornment

치장하다 : [Chijanghada]

FEATURED



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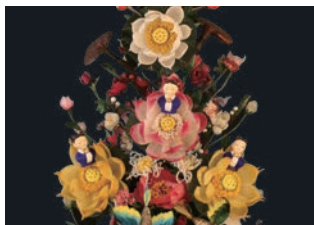
Traditional Korean palanquins, or *gama*, reflected the standing and dignity of their high-born passengers



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Noble Transportation in *Gama*

Text by Chung Yeon-sik, Professor in History, Seoul Women's University
Photos by the National Palace Museum of Korea, National Museum of Korea,
and Onyang Folk Museum

Depicted against a background of the Roman Empire, the movie *Ben-Hur* features the main character racing in a chariot drawn by four horses. Films set in the Spring and Autumn and the Warring States period of China also highlight horse-powered carts, while Hollywood Westerns frequently show covered wagons drawn by horses or oxen. Carts can be found portrayed in tomb murals from the ancient Korean kingdom of Goguryeo. However, Korea's mountainous terrain prevented wheeled vehicles from ever becoming a preferred means of transport. Koreans of the past frequently rode on the back a horse or donkey, but they also relied on *gama*, a Korean type of litter. *Gama* palanquins did not roll on wheels and were powered by humans rather than animals.



Yeon

This is a royal palanquin reserved for the king, his wife, or a crown prince or princess (collection of the National Palace Museum).



Deong

Lavishly ornamented with motifs of flowers, vines, bats, and the “seven treasures” (*chilbomun*) on all sides, the *deong* is a palanquin used by royal princesses (collection of the National Palace Museum).

Flamboyant Palanquins for People of Lofty Status

The *gama* was not an efficient vehicle. As Park Je-ga, a scholar of Practical Learning (Silhak) from the late Joseon Dynasty (1392–1910), pointed out in his book *Bukagui* (Discourse of Northern Learning), a *gama* required the labor of multiple people for the transportation of just a single one. In the hierarchical Joseon society, however, it was considered improper for a person of high status to be seen on foot. The king, standing at the peak of the social pyramid, walked little even when inside a palace, moving about instead in a small roofless palanquin called a *yeo*. Outside a royal residence, he rode a horse or took an outdoor palanquin called a *yeon*. A *yeon* for the king was lavishly decorated. A dragon-carved column supported each of its four sides, and the enclosed sedan was ringed with beaded curtains and other ornamentation. Each end of the carrying poles was ornamented with a dragon head and the entire palanquin was painted red, a color reserved to the royal family. More carriers meant greater stability and less disturbance to the royal passenger, so around 20 people normally carried a *yeon*.

Yanggyo

In *Painting of the Life of Modang Hong I-sang* by the 18th-century painter Kim Hong-do, Hong I-sang is accompanied by a 20-strong entourage while riding in a *yanggyo*, a palanquin exclusively for state councilors (collection of the National Museum of Korea).



State councilors, the highest-ranked Joseon civil servants, moved about in *yanggyo*. This type of *gama* was carried by four porters, one each at the sides, front, and back, shouldering straps tied to the support poles. A *yanggyo* is portrayed in *Painting of the Life of Modang Hong I-sang* by the 18th century painter Kim Hong-do.

In the picture, Hong I-sang, the Second State Councilor, rides on a palanquin at night with a large droopy fan held over him. His assistants clear a path by shouting, followed by the entourage of about 20 people clustered around the palanquin. An intact leopard hide covers the seat of the chair. A leopard tail hanging loose from a palanquin was considered an element of style at the time.

Palanquins with Wheels and Horses

Equally as flamboyant as *yanggyo* were *ssanggyo*. Two long poles were hung lengthwise from the saddle of one horse to the front and one to the rear of the sedan. Two short poles placed at right angles to the longer poles were held by porters at either side to balance the weight between two sides and maintain stability for the noble passenger inside. *Ssanggyo* were reserved for royal secretaries and ministers of rank two or above. *Yanggyo* were allowed only outside the city walls of Hanyang for those not of royal descent. Synchronized movement by the two horses was essential to the speed and stability of a *yanggyo*, so an additional servant walked alongside singing a rhythm that encouraged the horsemen, carriers, and horses to stay in pace.



Ssanggyo Alleungsinyeong, a depiction of the procession of a newly appointed civil servant by Kim Hong-do, features a *ssanggyo*. Reserved for civil servants of rank two or above, *ssanggyo* were driven by horses but balanced by human carriers (collection of the National Museum of Korea).

Another type of palanquin worth mentioning is the *choheon*, a peculiarly shaped sedan chair that was used by officials of the ministerial level or above. A seat was set high above a single wheel and supported by two long poles. Another pole was fastened across them at the front and back to be gripped by the porters. Invented during the reign of King Sejong (r. 1418–50), the *choheon* was a unique Korean version of a litter and sparked curiosity among visiting Chinese envoys who would be invited to try one for short distances. In general, though, the most popular kind of palanquin for civil servants was a *namyeo*, an open chair carried on two long poles and equipped with a stepping board, arm rest, and back support. *Namyeo* were predominantly ridden by ministers and royal secretaries of advanced age, but were not necessarily reserved for them. The king would sometimes use one for transport within the palace or for short distances outside it. Heads of local governments would ride in them as well. A *namyeo* could be made simply by just fixing a stepping board and poles to an open seat. It could be made of bamboo or decorated by wrapping kudzu vines at either end of the poles.

Women’s Palanquin, Inconvenient but Ornate

Starting around the 16th century, Joseon women began to be transported in *yuok gyoja*. As a palanquin reserved for women, a *yuok gyoja* was distinguished by its delicate and aesthetic

Gama palanquins did not roll on wheels and were powered by humans rather than animals.



Choheon
Distinguished by its peculiar appearance with a seat fixed above a single wheel, a *choheon* was used by civil servants of the ministerial level or above (collection of the National Palace Museum).

ornamentations. Women of high social status were the most frequent passengers in this type of palanquin, but commoners could ride these gracefully decorated carriages on their wedding days. While ornately decorated, this female sedan chair was never a comfortable means of transportation. The narrow interior could quickly become suffocating on hot summer days, so a servant would follow along fanning the woman inside through a small window. A chamber pot was kept inside for emergencies, and a basket would be ready in case of motion sickness. In the early Joseon era, women rode freely like men in an open palanquin called a *pyeonggyoja*, or “flat palanquin,” or on horses and donkeys. As Confucian ideals tightened their grip on Joseon society, however, an



Saingyo

Literally meaning a “four-man palanquin,” the name derives from it being carried by four carriers. *Saingyo* were mostly used by women of high status on their weddings and decorated with a design of the 10 traditional symbols of longevity (*sipjangsaeng*) (collection of the National Palace Museum).



Yuok gyoja These were used by women of noble descent on outings. *Yuok gyoja* were heavily decorated with symbolic motifs representing fertility and longevity (collection of the Onyang Folk Museum).

open palanquin began to be considered problematic as a vehicle for women since it was feared that male carriers might flirt with a female passenger or they might come in contact with her clothes or even a part of her body. Therefore, it was recommended that noblewomen should change their carriage of choice to a closed palanquin, and females of low social status should simply walk or ride horseback.

However, the simple and inexpensive *pyeonggyoja* did continue into the later Joseon period as a popular means of transport for nobles. A depiction of the royal wedding of King Cheoljong in 1851 portrays a court woman riding on a *pyeonggyoja* with her face covered, carried on the shoulders of eight porters. A painting of an excursion for enjoying maple leaves by the later-Joseon genre painter Sin Yun-bok features a woman, presumably a *gisaeng* (female entertaining artist), on an open palanquin.

Gama, coming in diverse shapes and purposes, were a practical countermeasure for the limitations on movement created by mountainous terrain. They eventually became a symbol of the status of the passengers inside. 🌈

Dancheong: A Signifier of Architectural Function and Status

Text by Kwon Jy-eun, Professor, Department of Traditional Arts and Crafts,
Korea National University of Cultural Heritage

Photos by the Traditional Painting Research Institute, Korea National University of Cultural Heritage



The main hall at Unmunsa Temple

Certain traditional Korean buildings are elaborately adorned with diverse colors. This practice is known as *dancheong*, literally meaning “balance and contrast between red and green,” a time-honored method of ornately painting wooden buildings that was reserved for royal palaces, Buddhist temples, and Confucian institutions during the Joseon Dynasty. Providing an immediate indication of the identity of a building, the decorative system and purposes of *dancheong* are explored here.



Painted rafters arranged in ascending styles:

A _ *gachil dancheong* (base-coat coloring)

B _ *geutgi dancheong* (line-stroking decoration)

C _ *moro dancheong* (side-edge decoration)

D _ *geum dancheong* (elegant decoration)

Historical Trajectory

Although *dancheong* can be defined as the act of embellishing the interior and exterior of a wooden building with a range of motifs and painting in diverse colors, its historical significance is far-reaching. It also encompasses the painting of sculpture and craftworks and reflects the conventions of poetry, calligraphy, and painting.

The oldest surviving material evidence of *dancheong* in Korea is found in tomb murals from the ancient Korean kingdom of Goguryeo (37 B.C.–A.D. 668). Reflecting the life of the tomb's occupant and conveying wishes for his or her continued prosperity in the netherworld, these murals provide critical information on the lifestyles and belief systems of the people of the time. *Dancheong* was also practiced in the two other ancient Korean kingdoms of Baekje (18 B.C.–A.D. 660) and Silla (57 B.C.–A.D. 935). During the Goryeo Dynasty (918–1392), green, red, black, and white became the colors of choice for *dancheong*, and simple motifs were preferred.

It was during the Joseon Dynasty that a definitively Korean form of *dancheong* became established. Two successive foreign invasions, first by Japan in the late 16th century and then

The wood-painting tradition of Korea embodies diversity both in color and style.



The main hall at Seonunsa Temple

by Qing China in the early 17th century, left the preceding architectural structures mostly in ashes. Today's surviving historic buildings are predominantly from the later Joseon era, and so is their ornamental coloring. The decorative aesthetic of later Joseon adopted bright yellow and intermediate colors into the color spectrum, adding diversity and flamboyance to the *dancheong* practice.

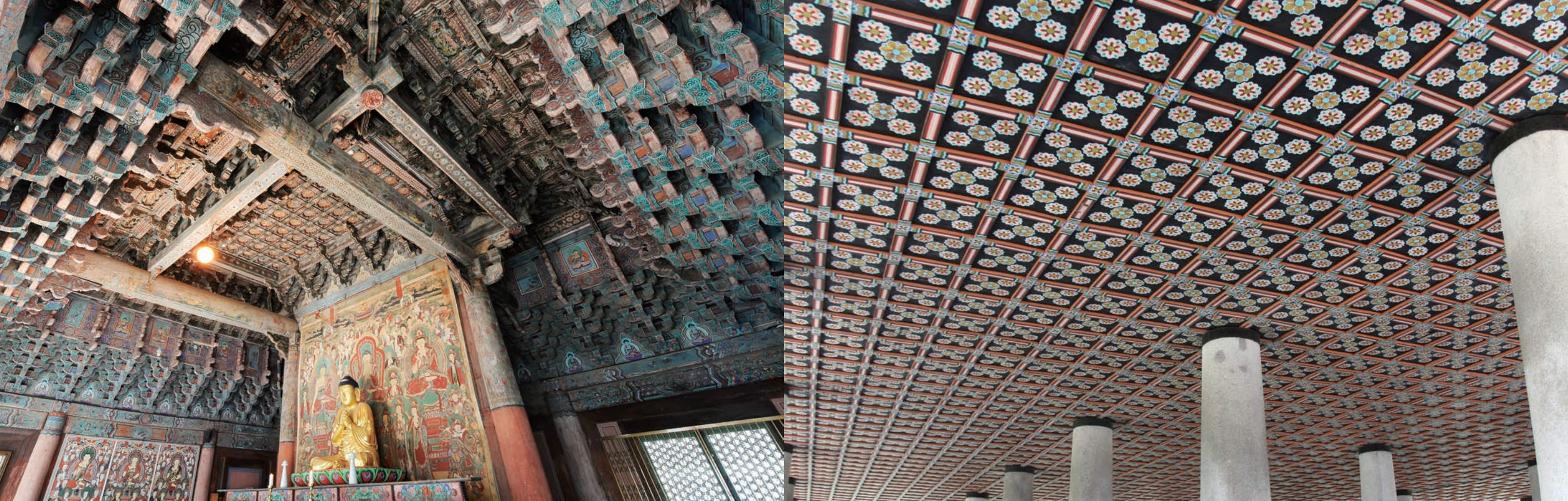
Diverse Motifs and Patterns

Various motifs could be depicted on a wooden building depending on the contemporaneous historical and political environment and the personal tastes of the *dancheong* artisan. However, they generally come in three types: First of all, geometric patterns of circles, triangles, rectangles, and lines were used singly, mostly in the form of a circle encompassing the *yin*-and-*yang* symbol known in Korean as a *taegeuk*. Additionally, they could be combined into diverse forms and to varying degrees. Geometric motifs were applied in *dancheong* one after another in a continuous pattern. Considered analogous to the weaving of silk threads, this type of serial pattern is called *geummun*, or “silk pattern.”

Next are motifs inspired by elements of nature. The sun, moon, stars, and clouds were stylized or developed into symbolic forms. Items like rocks, mountains, waves, and fire were used as motifs in rather simplified shapes. The ten longevity symbols (*sipjangseng*) and animals closely associated with the Buddhist belief system—for example, the elephant—were painted either realistically or in stylized versions. Flowers and plants were also a key source of inspiration for motifs: There are *dancheong* patterns modeled after lotus flowers, chrysanthemums, vines, and elixir plants.

Lastly, there are lucky motifs. Not only natural objects but also literary characters and everyday necessities could be turned into a motif symbolizing good fortune. Luck-invoking motifs were sometimes presented in a simplified or rather painterly form.

In addition to these mainly simplified and stylized motifs, sometimes a separate painting is placed on the surface of a wooden building, called a *byeolhwa* in Korean. This is a space where the individual skills of a *dancheong* artisan can be showcased. The subjects for this painting can include dragons, giraffes, landscapes, flowers and birds, the Buddha, or bodhisattvas.



The main hall at Unmunsa Temple

Gyeonghoeru Pavilion at Gyeongbokgung Palace

A Visual Marker of Hierarchy

Dancheong was conducted for functional, decorative, and symbolic purposes. These were not considered separate, but were interconnected and interdependent.

Dancheong was a means to protect the wooden materials preferred in traditional architecture, which excels at humidity control and ventilation but is intrinsically vulnerable to outside factors such as rain, wind, sun, and insects. Knots in wood can cause splitting as well. *Dancheong* was applied to buildings as an architectural treatment compensating for these limitations of wood by adding a protective coating. Painting also contributed to covering up the coarse surfaces of cut wood.

As the name of the practice suggests, decorative coloration played a role in glamorizing an otherwise modest wooden frame through the application of beautiful colors and diverse motifs. *Dancheong* practices were conducted according to the rule of placing reddish colors toward the lower end of a building and greenish tones toward the top, emulating the general color scheme of a tree so that the building as a human creation could be harmonized with the surrounding nature.

Dancheong also served as a signifier of architectural hierarchy. Historical records from the Three Kingdoms period (57 B.C.–A.D. 668) to the Joseon era confirm that decorative coloring was

applied only to buildings with public purposes and of high status, such as royal palaces, Buddhist temples, government buildings, and Confucian schools, and that the styles of coloring them were organized according to the specific purpose of a building. The ornamental painting of a building symbolized both its practical function and hierarchical position, distinguishing it from other structures and imparting a sense of sacredness and dignity.

The styles of decorative coloring can be generally divided among four types, gradually progressing from lower to higher status: *gachil dancheong* (base-coat coloring), *geutgi dancheong* (line-stroking decoration), *moro*



The ceiling of the throne hall (Myeongjeongjeon) at Changgyeonggung Palace



The lecture hall (Jeongyodang) at Dosan Seowon Confucian Academy

dancheong (side-edge decoration), and *geum dancheong* (continuous-pattern decoration or elegant decoration).

Ranking the lowest among the painting styles, *gachil dancheong* consists of simply a single color applied to the surface of the wood, either alone or as a base for other more delicate styles of coloring. In *geukgi dancheong*, lines are drawn in black or white along the borders of a painted surface (*gachil dancheong*). When *moro dancheong* is used, a splendid floral design is painted at either side-end of a wooden architectural member and the space in between is mostly finished with lines along the border (*geukgi dancheong*). The area in between the lavish floral patterns may be filled with geometric patterns appearing in a continuous, repetitive form (*geummun*) or with a separate painting (*byeolmun*) in the case of *geum dancheong*. This style of the highest rank features more diverse colors and flamboyant motifs compared to *moro dancheong*. Sometimes, it may be further sub-divided, from lower to higher status, into *eolgeum dancheong*, *geum dancheong*, and *gajeun geum dancheong*, differences among which can be difficult to note.

Particular Buildings

The Annals of the Joseon Dynasty include records of prohibitions on painting wood, for example, on royal palaces in times of financial difficulty or for other structures to prevent extravagant spending. *Dancheong* was a demanding process that required the investment of considerable labor and costs. This explains why it was reserved for buildings serving public purposes.

There were mainly three groups of architectural structures that were allowed the luxury of *dancheong*: buildings within a royal palace, Buddhist temples, and Confucian institutions. Buddhist temples came first in terms of the permitted level of elegance and flamboyance. They were allowed to decorate their main halls with *geum dancheong*, in contrast to the other two categories which could be ornamented only as far as *moro dancheong*. In each type of compound, auxiliary structures were painted in accordance with their practical purposes and their hierarchical position in relation to the main building.

Surviving examples of painted Buddhist temples mainly date from the late Joseon period. A Buddhist temple is an architectural complex featuring a diverse range of buildings serving various purposes and granted different ranks along an architectural hierarchy, such as Buddha halls, bodhisattva halls, shrines for venerable monks, repositories for printing woodblocks, and monks' dormitories. This makes them ideal sites to appreciate the full range of Korean decorative coloring styles rising as high as to *geum dancheong*.

As the central structure in a royal palace, the throne hall was embellished with the compound's highest allowed level of decoration, *moro dancheong*.

Subordinate buildings were assigned different ranks of coloring styles reflecting their function and architectural grade. Walls and corridors, for example, were mostly finished with *geutgi dancheong*. Green shades rather than reds were accentuated in the painting of palace buildings, creating a solemn and authoritarian atmosphere.

Since the Joseon Dynasty applied Confucianism as its governing ideology, Confucian educational institutions were widely decorated with paint. Painting wood was practiced at both public Confucian schools, or *hyanggyo*, and at private academies (*seowon*). The latter most likely adopted symbolic painting practices from their public counterparts and applied them internally. A Confucian school, whether public or private, was largely divided into a ritual area and a study area, respectively for enshrining the spirit tablets of Confucius and/or other Confucian personages and for lectures and study. Reflecting the hierarchical difference between the two areas, the ritual space was embellished with *moro dancheong* in its simplest form, and the other with *geutgi dancheong*.

The wood-painting tradition of Korea embodies diversity both in color and style. It served as a means to demonstrate the social dignity and architectural status of a building while, at the same time, maintaining harmony and balance with the surrounding nature. It added to the aesthetic of a building, but without crossing into pretension. The *dancheong* legacy of the past has been sustained to the present by contemporary masters. *Dancheong* is an important component of Korean traditions and includes both tangible and intangible heritage. 🌈

INTERVIEW

Hand-crafted Flowers Bloom Once More

Interview with
Master Hwang Su-ro and
the artist Koo Seong-youn

Text by Kim Ji-hye, editor

Photos by the Institute of Korean Royal Silk Flowers
and Koo Seong-youn

Flowers often embody prayers, one of their traditional roles in Korea. They feature in Joseon Dynasty documents ranging from royal records to folk paintings as a conveyer of heartfelt congratulations and sincere wishes for prosperity. This section will present the words of two flower artists: Master Hwang Su-ro, who is reviving the tradition of royal flower crafting; and the photographer Koo Seong-youn, who is turning the inspiration she finds in flowers from folk paintings, or *minhwa*, into modern artworks.



From left to right: *Silgukwa* (*Chrysanthemum*), noted for the delicate expression of petals; *Daesuparyeon*, a harmonious combination of lotus flowers, Chinese roses, peach flowers, birds, butterflies, and the eight immortals; *Sijahwa* (*Persimmon Tree*); *Hongdo samjihwa* (*Peach Tree with Three Branches*), made of three flowers and three branches; *Dangjukwa* (*Chrysanthemum*)

Strenuous Process of Crafting Silk Blossoms

“Silk flowers,” or *chaehwa*, were more than simply decoration during the Joseon Dynasty. They symbolized the authority of the king and heightened the dignity of regal events. Hwang Su-ro, the recognized master of royal silk flower making, explains:



Master Hwang Su-ro, dedicated to reviving royal silk flower crafting and to transmitting the traditional art to future generations

“Artificial flowers were made out of silk, paper, or wax for royal banquets and ceremonies. There were various names for these flowers depending on their uses—*jamhwa* for decorating hair, *sanghwa* for a festive table, and *sahwa* when personally presented by the king. Handmade flowers were an instrumental component of all sorts of royal rituals and celebrations.”

Flowers bloomed across the country every spring and autumn, including in the royal

palaces. However, those in the palaces were never picked out of a deep respect for nature and a sincere wish for longevity for the king. Natural flowers were replaced with handcrafted versions as ornamentation at royal events. As there were few surviving examples of actual royal flowers from Joseon, knowledge on the traditional techniques and skills used for crafting them remained minimal. This would have been the end of the story if it had not been for the arduous efforts that Hwang Su-ro poured into restoring the craft of creating silk flowers based upon on a wide range of textual and pictorial records on royal rites and ceremonies.

The year-long process of bringing a silk flower to full bloom takes no less time than is required in nature. First, natural dyes are created from seasonal flowers and applied to silk cloth, which is then immersed in glue and dried under the sun. The crisp silk coated with glue undergoes a fulling process involving pounding, out of which comes a brilliant undulating length of silk ready for its floral transformation. The smooth silk cloth is cut into petal shapes that are ironed to produce round edges and fine wrinkles. The ironing is an extremely delicate task that determines the unique appearance of each petal. Filaments are made individually by gluing pine pollen to the tips of roe deer hairs or strands of ramie or hemp. The finished silk flowers are coated in beeswax for durability,



Royal silk flowers are produced through an arduous process of hand-crafting.

creating a hint of the scent of honey that sometimes attracts bees.

“What troubled me most during my journey restoring traditional silk flower making was the crafting tools. Since there were no tools transmitted from the past, I had to recreate each piece of equipment needed. These included different types of irons for making folds on the petals and leaves, for creating leaf veins, and for marking delicate wrinkles along the edges of petals, a knife for splitting bamboo, and scissors for giving a round shape to the outline of petals.”

Master Hwang’s efforts were displayed at the special exhibition *Aesthetic of Royal Silk Flowers*, held at the National Palace Museum of Korea, which recreated the ceremonial table set to commemorate the 40th birthday of King Sunjo (1790–1834). The celebratory table was presented lavishly decorated with a colorful array of artificial blooms, including peach, peony, Chinese rose, chrysanthemum, and citron.

Master Hwang and Her Passion for Flowers

In 2013 Hwang Su-ro was recognized as the official transmitter of royal silk flower making, a traditional craft designated as National Intangible Cultural Heritage No. 124. The roots of her interest in flowers date back about 50 years before to the year 1960 when she studied in Japan.

“I studied the tea ceremony and flower arrangement in Tokyo. My teacher at the time said that flower arrangement was a traditional Japanese practice, and I retorted that it was also practiced in Korea. I knew this because I grew up appreciating the arranged flowers depicted in folk paintings and my mother also did flower arrangement.”

Her family possessed a few royal flowers that had been presented by King Gojong (r. 1863–1907) to Hwang’s maternal grandfather when he worked for the Gungnaebu, or “Bureau of the Royal Household.” Long interested in these beautiful royal flowers, Hwang made a critical decision to choose



A recreation of the ceremonial table prepared to celebrate the 40th anniversary of enthronement and the 51st birthday of King Gojong in 1902, based on records in *Gogong imim jinyeon uigwe* (Royal Protocol of a Royal Banquet in the Imin Year)

artificial royal flowers over natural ones. She completed her master's and doctoral-level education while combing through *Joseon wangjo sillok* (Annals of the Joseon Dynasty), *Joseon wangjo uigwe* (Royal Protocols of the Joseon Dynasty), and other relevant historical records. She learned general skills and knowledge on silk flower making from Abbot Choi Beom-sul at Dasolsa Temple in Sacheon, Gyeongsangnam-do Province, and the crafting of shamanic paper flowers from the masters Kim Yeong-dal and Kim Seok-chul. She spared no effort in learning anything that might be needed to accomplish her lofty dream of reviving the tradition of royal silk flower making.

After years of ceaseless efforts at resuscitating this lost tradition, she is now embarking on a new project: transmitting the restored tradition to future generations.

"A building for housing a royal silk flower museum is under construction near where I live in Yangsan, Gyeongsangnam-do Province. It will be a traditional Korean style house (*hanok*) with a display hall for traditional tools, a library for documents and books, and a special exhibition hall. As important as restoring the craft may be, publicly displaying artifacts made using traditional skills and

The year-long process of bringing a silk flower to full bloom takes no less time than is required in nature.

promoting their transmission far into the future is equally critical."

Onerous extended efforts are required to bring a lost piece of history or tradition back to life. Master Hwang proceeds through the extensive process of crafting a silk flower in the awareness of the beautiful reward that will bloom at the end of the journey. The artist Koo Seong-young also knows well the sweetness of the achievement that can come after all the struggle required to create artificial flowers.

Sincere Prayers Embodied in Candy Flowers

Koo Seong-young is a photographer who laboriously crafts the objects she photographs. One of her recent projects is the *Candy Series*, born out of inspiration she gained from a folk painting of peonies.



The artist Koo Seong-young found her artistic inspiration in flowers depicted in folk paintings.

"Peony is considered a traditional symbol of prosperity and wealth. It is known that folding screens with peony paintings were featured at weddings or other festive events, and a peony painting was hung in the newlyweds' room. I was thinking, why did people rely on perishable flowers? Mundane greed may be in vain, like candy that soon melts away. However, I created this *Candy Series*, photographs of flowers made of candy, in the hope that people's everyday wishes would not melt away like candy but endure like the photographs of candy flowers as a source of positive energy."



Candy Series, inspired by peony flowers in folk painting

Koo's peony flowers bloom in winter. Cold, dry winter weather is conducive to her work turning candies into flowers. Sweets are cut, polished, and glued together into the form of a peony flower. A full day of effort produces seven peonies at most. It takes around three months to craft enough peony flowers for a single vase. When winter gives way to spring, Koo's workshop blossoms with the sweetness of the candy peonies.

Folk paintings, or *minhwa*, provided the artistic inspiration for the *Candy Series*.

"*Minhwa* depict people's everyday lives at the time. Their ordinary desires, like wanting to find a spouse or wishing for good health, as expressed in folk paintings seem honest and just to me. Cravings for worldly things feel useless in the end, but the wholehearted prayer itself remains, like a flower that is still there after it has withered."

While working on her candy flowers, Koo sincerely prays that the final products will turn out well and she can deliver their beauty through photography.

Ephemeral Beauty Made Timeless

The artist Koo Seong-young has experienced an unlikely life trajectory. At the undergraduate level, she studied Indian philosophy and then photography. It was not a carefully mapped academic career. Koo was first attracted to philosophy for its abstract qualities, but after that, she wished to learn something practical, so she turned to photography. She is currently dedicated to the making of candy flowers.



Popcorn Series, born out of Koo's unfulfilled childhood wish to paint a plum tree

"As a part-time job, I once did some photographing of candies, a lot of them. Without their wrappers, they melted in a few days. Glossy and smooth, they look like jewels to me."

Mesmerized by the luster of the melted candies, Koo decided to create candy flowers. Her work does not permit haste. It is about keeping pace with the candy as it softens, takes shape, and hardens.

In another photo project, the *Popcorn Series*, she presents flowers made of popcorn. This project was inspired by paintings of plum trees.

"To be honest, I lack endurance. As a child, I studied Chinese calligraphy. My teacher said that painting plum trees with a brush is only possible after a long process of practice. Scared off by the idea of years of practice, I just stopped doing calligraphy before I even really got started. Time passed, and when I again developed a notion to create a painting of plum trees I was already a photographer. So I decided to make plum trees in the way that was possible for me: trees with kernels of popcorn blooming like plum flowers."

Koo's long hours of work survive as photos. She tries to capture the peak moment of her artificial flowers, but always regrets that their full beauty cannot be captured. However, Koo does not mourn when her perishable flowers wane since she understands that all things have to wither before they can flower again. 🌈



Historical Lessons from Goryeo:

INTEGRATION
COEXISTENCE
RECONCILIATION

Text by Park Jong-ki, Professor of Korean History

Photos by the National Museum of Korea, Haeinsa Museum,

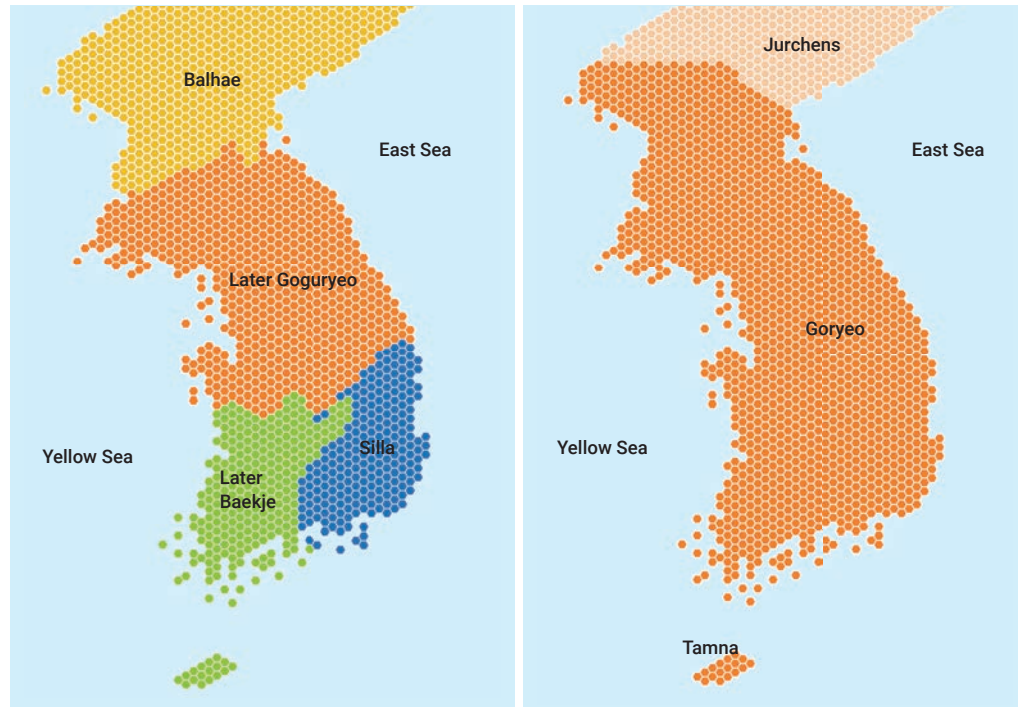
Mireuksa National Museum, Gongju National Museum, and Daegu National Museum

This year marks the 1,100th anniversary of the foundation of the Goryeo Dynasty. Given that its millennial commemoration in 1918 fell during the Japanese colonial era, the year 2018 takes on even greater importance as a special occasion to celebrate the anniversary of Goryeo's foundation and reflect on its historical significance. As the second unified dynasty in Korean history, Goryeo achieved national cohesion by pursuing such virtues as diversity, openness, and dynamism in the social and cultural fields. Casting a reflective light on the history of Goryeo can be a meaningful exercise for people living in South Korea in the present who are experiencing a strong need for social integration, both internal and intra-Korean. The numerous commemorative art exhibitions that have already been held or are scheduled for this year across the country offer an invaluable opportunity to more fully appreciate the history and culture of Goryeo.

History of United Rule in Korea

The first dynasty to bring the Korean Peninsula under a single government was Unified Silla. After absorbing the two other ancient kingdoms of Goguryeo and Baekje in 668, Unified Silla continued on for roughly 270 years until 935. However, it failed to establish a unified nation in the true sense of the word, not least because the "true-bone," or *jingol*, social class system that had ruled the kingdom before unification maintained a monopoly over politics and the economy after the integration. This prevented people of talent from the two absorbed kingdoms from taking part in important government affairs. Around the year 900, the political order on the Korean Peninsula showed signs of disintegration, finally splintering once again into three divided rules with the establishment of Later Goguryeo and Later Baekje in roughly their original regions. As a result, the Korean Peninsula suffered from decades of civil war at the end of the Unified Silla period.

Founded during this tragic period in 918, the Goryeo Dynasty established the second united nation on the Korean Peninsula in 936. This process required years of strenuous efforts at resolving the inter-regional and inter-class conflicts that arose during the unification process. From Goryeo's foundation to the division of Korea into north and south in 1948, the Korean Peninsula was under uninterrupted unified rule for over 1,000 years.



After laying the foundation of Goryeo in 918, Wanggeon, the founder of Goryeo, successively defeated Silla and Later Baekje in 935 and 936 to reestablish united rule on the Korean Peninsula.

Dynastic Foundation Based on Inclusiveness

Goryeo accomplished national integration and social cohesion by embracing the diverse cultural and ideological legacies transmitted from the respective polities that had dominated the different parts of the Korean Peninsula, namely the Later Three Kingdoms. This spirit of inclusion and integration underlay the continuity of the dynasty for nearly 500 years.

Wanggeon, the Goryeo founder also known as King Taejo, recognized the authority and autonomy of local warlords in exchange for their support for the central government. His inclusive policy toward different groups based on the principles of compromise and coexistence united the peninsula in a remarkably short period of time with little blowback. This is a sharp turn away from—and must have reflected a serious consideration of—the unsuccessful unification policy of Silla that upheld the dominance of the established elite and denied any inflow of human resources from the newly integrated polities into its political and economic system. As we experience ever-deepening internal conflicts among different regions and classes and face the reality of a Korea split between north and south, contemporary Koreans could learn from this policy of social cohesion and national integration established by the Goryeo Dynasty a whopping 1,100 years ago.

Dry-lacquered seated statue of Buddhist Monk Huirang at Haeinsa Temple, Hapcheon; c. 930; Treasure No. 999 (photo courtesy of the Haeinsa Museum)



An Open and Diverse Society

During the Goryeo era, diverse ideologies did not clash, but coexisted peacefully instead: Buddhism, Confucianism, Daoism, and *pungsu* (geomantic principles) all received their due regard. The refined cultural tradition of the center, represented by the creation of celadon and metal type, flowered side by side with the cultural dynamism of the periphery. The latter gave birth to the production of Buddha images in iron or stone. Values, ideas, and cultures of all stripes were equally appreciated with no preference given to particulars. This must certainly have contributed to the remarkable endurance of the dynasty.

A proactive policy of openness was also practiced in social and political matters. Robust foreign trade contributed to eventually making the country known in the international community by the name of Korea. A complete meritocracy was pursued as talented individuals were recruited as civil servants regardless of nationality or ethnicity. A foreign citizen was employed and promoted as high as a ministerial position during this era. Goryeo was a dynamic society in which people from the lower social classes rose in status and entered politics with great frequency. All this was made possible by the Goryeo belief in the power of social openness.



Silver-gilt bottle in the shape of a gourd; 12th–13th century
(photo courtesy of the National Museum of Korea)



A

A _ Celadon ewer in the shape of a fish dragon; 12th century; National Treasure No. 61 (photo courtesy of the National Museum of Korea)



B

B _ Gilt-bronze portable shrine; 14th century (photo courtesy of the National Museum of Korea)

The Past for the Present

History that is not meaningful to the present and future has already died. We reflect on history in order to help find a better path for today and the days to come. History comes alive when it sheds light on the present and future. In this sense, the history of Goryeo is a living textbook and a source of inspiration for contemporary Koreans.

The global community is watching carefully as a new turning point in human civilization unfolds in the 21st century with the advent of the Fourth Industrial Revolution. In Korea, we are seeing signs of social plurality sprouting up in every corner of the country as we place such issues as human rights, environmental protection, and gender equality high on the agenda. At the same time, we are grappling with social conflicts and confrontations that result from income disparity and the growing number of international residents and multicultural families.

Now is an opportune time for the arts exhibitions on Goryeo being hosted by the National Museum of Korea and its branch museums as they commemorate the 1,100-year anniversary of the dynastic foundation. *Goryeo: The Glory of Korea* at the National Museum is an occasion to explore the astounding artistic achievements of Goryeo and the inherent spirit of challenge and experimentation that they embody. It is hoped that we can discover some clues to resolving the social issues facing us today by engaging with the history of Goryeo at these exhibitions.

We must move beyond the days of a single dominant ideology and values system and the accordant social conflicts and confrontations. We must progress toward a new era of ethnic, national, religious, and cultural diversity and of different ideals and ideologies peacefully coexisting through comprehensive integration. The historical virtues we can find in Goryeo—respect for others, pursuing coexistence, and promoting reconciliation—have significant bearing on today's Korea and on the wider world. There are a series of exhibitions on the history and culture of Goryeo currently open. 🇰🇷

Special Exhibitions commemorating the 1,100-year anniversary of the foundation of Goryeo



Goryeo: The Glory of Korea December 4, 2018–March 3, 2019

This exhibition presents a comprehensive overview of the creativity and brilliance of Goryeo. Goryeo achieved the apogee of artistic accomplishment in Korean history by adopting new ideas and techniques from active exchanges with other states and, through this process, carved out a unique Korean cultural identity.

Special exhibition hall, Nation Museum of Korea
www.museum.go.kr

Crafted and Printed in Goryeo: Secrets of Inlaid Celadon and Metal Type July 20–December 31, 2018

Part of a series focusing on Korean creativity, this exhibition offers an experience space for children where they can discover and appreciate the artistic inventiveness, wisdom, and mastery embodied in Goryeo celadon and metal type.

Children's Museum of the National Museum of Korea
www.museum.go.kr/site/child/home



Mireuksa Temple during the Goryeo Dynasty

September 11–December 30, 2018

This exhibition showcases the role played by Mireuksa Temple (literally, "Temple of Maitreya") during Goryeo and the lives of the Buddhist monks who inhabited it. Mireuksa is presented as an embodiment of Maitreya belief through exhibits such as Goryeo celadon, Chinese ceramics, and Buddhist ritual objects excavated from the site.

Permanent exhibition hall, Mireuksaji National Museum
iksan.museum.go.kr

Goryeo in Chungcheongnam-do November 6, 2018–January 13, 2019

At this exhibition, major cities in Chungcheongnam-do Province during Goryeo are explored in terms of their respective roles as a military stronghold, administrative center, and hub for ocean transport. Characteristics of the religious and material culture of the region during this era are examined through a comparison with other localities, shedding light on the significance of Chungcheongnam-do in the past and present.

Special exhibition hall, Gongju National Museum
gongju.museum.go.kr



Treasures from the Geumgangsae Temple Site in Yeongju

October 23, 2018–February 24, 2019

This exhibition displays Goryeo artifacts excavated from the site of Geumgangsae Temple. A candle stand (Gwangmyeongdae) and incense burner from a pond site, a bronze mirror and other Buddhist ritual objects from near the main Buddha hall site, and many other items illustrate the flourishing of Geumgangsae during the Goryeo era.

Special exhibition hall, Daegu National Museum
daegu.museum.go.kr



Heritage in North Korea

Historic Monuments and Sites in Kaesong Bridge the Two Koreas

Text by Hong Young-eui, Professor in Korean History, Kookmin University

Photos by the National Research Institute of Cultural Heritage



Two Koreas, one in the north and one in the south, have been in confrontation ever since the division of the Korean Peninsula 70 years ago. After the 2018 Pyeongchang Winter Olympics in South Korea, the leaders of the two Koreas met twice at the border. At the third summit, held in Pyongyang, the Pyongyang Joint Declaration was released. North and South Korea seem to be embarking on a new journey toward the future.

* In this section, heritage names are indicated as they appear in the World Heritage nomination dossier of the "Historic Monuments and Sites in Kaesong."



Common Heritage for a United Korea

At this historic juncture, the joint archaeological excavation project at Manwoldae, the royal palace of the Goryeo Dynasty (918–1392), takes on even greater importance as the first effort at inter-Korean cultural cooperation. The joint excavation project continued uninterrupted from the signing of a joint agreement in 2006 until January 2016, when it ground to a halt with North Korean missile tests clogging all the existing cooperation channels. The North and South Korean excavation teams performed excavations at the Manwoldae site seven times from 2007–15. These cooperative excavation sessions produced a great number of archaeological achievements, discovering 39 building sites, two grand-scale staircases, and about 16,500 artifacts, including five pieces of metal type, various examples of celadon, and roof tiles.

This joint project has an important bearing on the present inter-Korean relationship, partly because Manwoldae is an element in the UNESCO World Heritage Site "Historic Monuments and Sites in Kaesong," and more importantly because the palace site belongs to a time when the two Koreas were one. The Manwoldae project may serve as a harbinger for a future with a single Korea.

Kaesong as Serial World Heritage

What eventually became inscribed as World Heritage under the title "Historic Monuments and Sites in Kaesong" was first listed on the Tentative List of North

Kaesong Chomsongdae

This structure for astronomical and meteorological observation was presumably constructed in the early Goryeo period. Only its granite platform has been transmitted to the present. Experts estimate that a two-story building would likely have been erected on the platform (photo courtesy of Tanaka Toshiaki, 田中俊明).

Korea as the Historic Relics in Kaesong on May 20, 2000. World Heritage status was granted at the 37th session of the World Heritage Committee in Phnom Penh in June 2013. It took a long and arduous journey of 13 years for Kaesong, the capital of Goryeo throughout the dynasty and the initial capital of Joseon, to be transferred from the Tentative List to World Heritage.

The inscribed property in Kaesong is comprised of 12 components, including the Manwoldae site and remains of an astronomical observatory (Kaesong Chomsongdae), five separate sections of the city wall (Kaesong City Walls), the south gate in the city wall (Kaesong Namdae Gate), the highest Goryeo state education institution (Koryo Songgyungwan), a private Confucian academy (Sungyang Sowon), Sonjuk Bridge, Phyochung Monuments, and the tomb of the founder of Goryeo (Mausoleum of King Wang Kon) and other royal tombs. The spatial layout of Kaesong was meticulously arranged in accordance with geomantic principles, and the palace, educational institution, royal tombs, and wall sections all testify to the cultural, political, philosophical, and spiritual values of the time.

There are a number of places and sites in and around Kaesong that require careful conservation attention, such as crumbling pagodas, dilapidated temple sites, unidentified tombs, and deformed architectural structures. Repair and restoration efforts are needed in order to present the cultural and historical significance of Kaesong as a whole. It is hoped that the World Heritage Site in Kaesong and the Manwoldae project will serve as a cultural bridge between North and South Korea, and further between Korea and the wider world. 🌍



The site of the throne hall at Manwoldae

The Goryeo royal palace was constructed in 919, but destroyed in 1361 during the invasion of the "red turban bandits." It has remained only as an archaeological site. The photo is of the site of its throne hall.



A statue of King Wang Kon

A statue of Wang Kon, the founder of Goryeo, was excavated to the north of his tomb (photo courtesy of Park Jong-jin).



Mausoleum of King Wang Kon

The royal tomb of Wang Kon is located on the slope of Mansusan Mountain. The founder of Goryeo and his first wife, Queen Sinhye, are buried under a single mound.



Kaesong Namdae Gate
This is the south gate of the Kaesong City Walls, which was damaged by fire in 1950 but restored in 1954. It houses one of the greatest bronze bells in Korea, the bell of Yeonboksja Temple.

Kaesong Namdae Gate
This is from *Joseon gojeok dobo* (Illustrated Compendium of Korean Historic Monuments and Relics), published in 1931



Sonjuk Bridge

Jong Mong Ju, a loyal official of Goryeo, was murdered on Sonjuk Bridge by individuals intent on establishing a new dynasty. Legend has it that the stone bridge still bears Jong's blood (photo courtesy of Park Jong-jin).

A portrait of Jong Mong Ju

A portrait of Jong Mong Ju is housed at Sungyang Sowon, a private Confucian academy founded to commemorate him. Sungyang Sowon is one of the 12 component sites of the World Heritage Site in Kaesong (photo courtesy of Park Jong-jin).

Phyochung Monuments

Two steles stand to the west of Sonjuk Bridge. They were respectively erected by King Yeongjo and King Gojong of Joseon in commemoration and eulogy of the loyalty of Jong Mong Ju to the Goryeo Dynasty (photo courtesy of Park Jong-jin).

An Ancient STONE PAGODA Reclaims Its Past

Text by Kim Hyun-yong, National Research Institute of Cultural Heritage

Photos by the National Research Institute of Cultural Heritage and others

The pagoda, a longstanding architectural symbol of Buddhism, was derived from the stupa, a hemispherical structure used to enshrine the relics of Shakyamuni Buddha. Pagodas started to be erected across East Asia with the dissemination of Buddhism. They developed into unique styles grounded in the natural and cultural environments of respective local areas. In Korea, stone was the dominant material for the construction of pagodas. The local abundance of quality stone such as granite fueled the development of masonry early on. It was considered a suitable replacement for wood, the material of first choice but vulnerable to fire and decay. The stone pagoda at the site of Mireuksa Temple in Iksan, recently opened to the public after a long and arduous process of repair, is the oldest and largest surviving stone pagoda in Korea. Including the preparatory research, the restoration of the stone pagoda at the Mireuksa site took a full 20 years, the longest period ever for the repair of a single structure in Korea. Its renovation is considered a milestone in the country's history of heritage conservation.



Restoration of a Stone Pagoda from 1,300 Years Ago

The survey and repair of ancient stone pagodas at the substantive level began in the early 20th century under Japanese colonial rule (1910–45). The focus at the time was concentrated on artifacts found within the pagodas, and academic studies of stone pagodas were biased toward the archaeological and art history perspectives, leaving their architectural and technical aspects mostly understudied. Toward the later 1980s, the significance of the documentation and conservation treatment of their architectural elements was brought to attention, and from the 2000s the science and technology related to the conservation and repair of stone pagodas saw phenomenal development. The greatest impulse for this advancement was provided by the repair project for the Mireuksa stone pagoda.

Mireuksa Temple was constructed in the seventh century in what is now Iksan, in the southwestern portion of the Korean Peninsula ruled by the ancient Korean kingdom of Baekje. The temple was originally rendered as a large tripartite compound with each section housing a Buddhist hall and a pagoda. A stone pagoda was erected in both the eastern and western sections, and the middle housed a wooden version. Except for the recently repaired stone pagoda standing in its western section, the ancient Buddhist temple of Mireuksa exists today only as an archeological site. However, the cultural and historical significance of the Mireuksa site was recognized at the global level in 2015 by its inscription on the World Heritage list as part of the “Baekje Historic Areas.” The stone pagoda, which features a cross-shaped passage through the

first tier of the body, is a remarkable embodiment of the transitional characteristics of pagodas as the primary material shifted from wood to stone. It is also a rare surviving example of ancient architecture with immense historical and academic significance. Worn out by the effects of 1,300 years of history, the western pagoda at the Mireuksa site came down to us with half of the body collapsed and several component stones severely damaged, calling for an urgent repair action.

After collapsing presumably around the 17th century, the western pagoda underwent a round of repairs in 1915 under the Japanese colonial authorities. The damaged half of the pagoda was covered and reinforced with concrete. The conservation at the time was not considered an effort at resolving fundamental problems, but more of an emergency response to ward off further deterioration. A structural safety check in 1998 revealed that the aging of the concrete reinforcement threatened the pagoda's structural safety, so a full-scale repair involving the disassembling and reassembling of the pagoda was authorized in 1999.

Prioritizing Authenticity

Information on the structure of the pagoda and its state of conservation was scarce, a systematic survey and study of the pagoda was required before determining how to proceed. First of all, it was decided that any use of new stone was to be kept to a minimum. Given the unique style of the pagoda, the severity of the damage, and the difficulty of the effort, the period of repair was projected from the beginning to be extensive.



A _ The eastern side of the stone pagoda at the site of Mireuksa Temple in 1910 (Photo courtesy of the National Archives of Korea)

B _ The western side of the stone pagoda in 1910 (Photo courtesy of the National Archives of Korea)

C _ The southeastern side of the stone pagoda after being reinforced with concrete under Japanese colonial rule
(Photo courtesy of Jeollabuk-do Provincial Government)

After long and in-depth discussions, a decision was made that the repairs should be limited to up to the sixth tier of the pagoda, the extent to which it had survived. There was an argument that the pagoda originally reached a ninth tier, but no concrete evidence could be found in the survey that would confirm this proposition. It was agreed that any reconstruction based on conjecture would undermine the authenticity of the pagoda and its value as historical material. Furthermore, it had to be taken into account that the original stone members, estimated to have only half of the load-bearing capacity of new stone, would not be able to withstand the weight of additional tiers, which would counter the intention to use original materials as much as possible. Keeping all this in mind, primary principles for repair were devised as follows:

First, since few surviving stone elements suggested having composed tiers above the sixth, the pagoda was to be restored only to the sixth tier as a means to reject conjecture and ensure authenticity.

Second, original architectural materials and traditional techniques were to be used to the greatest possible extent, while damaged stone elements were reinforced through scientific treatment before reuse.

Third, when it was deemed that traditional techniques alone would be insufficient to guarantee structural safety, proven modern techniques were to be allowed as a supplement but only to the minimum allowable extent.

Fourth, the entire repair process involving preliminary survey, research, and construction was to be thoroughly recorded, and the resulting documents were published to promote future research.

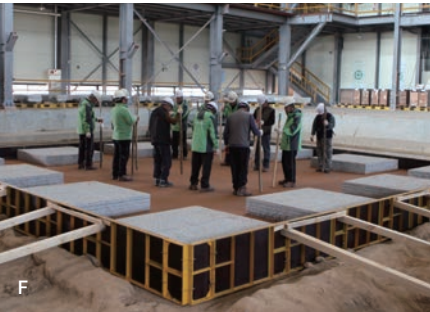
Based on these principles, the National Research Institute of Cultural Heritage embarked on the repair of the pagoda in 2001. The process of disassembling and studying the stone pagoda was completed in 2010, and from 2013–17 its reassembly up until the sixth tier was carried out.

The Long Process of Repairing the Stone Pagoda

Since little information existed regarding details of the pagoda, such as on its original appearance and current state, the National Research Institute of Cultural Heritage conducted multi-pronged research into its architecture, conservation science, archaeology, and art history. Based on the results, directions for the overall process and particular technical methods were established. It was unprecedented for the repair of a single structure to be preceded by such an extended, systematic research effort, and its outcomes were used as guidelines for determining the details of repair.

The academic and technical research into the repair of the western stone pagoda at the Mireuksa site is generally categorized into four areas: preliminary research, conservation science, study of structure and materials, and repair techniques.

First of all, research was launched to collect baseline information on the pagoda. The efforts in this category of research included the disassembly of the pagoda and three-dimensional scanning and documentation, excavation of the foundation platform, collection of excavated artifacts, and study of the construction methods for the pagoda. In particular, the disassembly of the pagoda, the entire process of which was fully documented, offered critical information for the entire repair process, including ascertaining the pagoda's original appearance, carrying out conservation treatment, reinforcing its structural stability, developing new techniques, and reassembling the pagoda. In terms of conservation science, the surrounding environment, contaminants on the surface of the pagoda, and the level of weathering of the stone elements were all scrutinized. Methods of conservation treatment were designed to reinforce the existing stone members and utilize them to the greatest degree possible. To ensure the structural stability of the pagoda, endeavors were made to ascertain

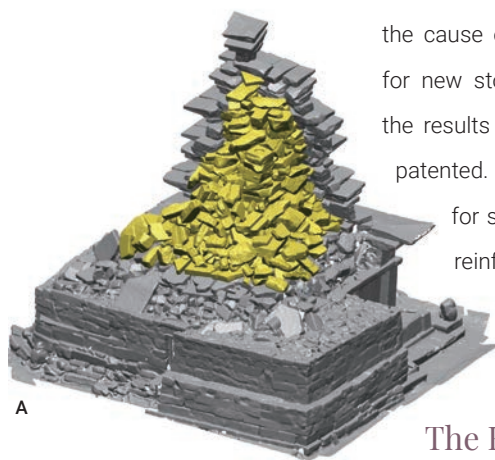


D _ The disassembly of the first tier of the stone pagoda in 2008

E _ An incomplete stone member is reinforced with new stone.

F _ Earth rammed for the reinforcement of the foundation

G _ The reassembly of the sixth tier in 2017



A

the cause of its collapse, evaluate its structural security, select a source for new stone, and study reinforcement minerals. For repair techniques, the results of the above-mentioned lines of research were organized and patented. The patented techniques are concerned with earth ramming for strengthening the foundation, filling voids in stone members and reinforcing them with minerals, differentiated structural reinforcement of stone members according to their level of weathering, and equipment for joining stone members.

The Rebirth of the Stone Pagoda

The repair of the stone pagoda at the Mireuksa site has in many regards been a meaningful project in the country's history of heritage repair. It was the longest extended repair endeavor in Korea for a single heritage structure. The extent of minimizing conjecture and maximizing the use of existing members for carrying out the repairs was rewarded with the preservation of the historical value and authenticity of the pagoda. The project also provided an occasion for advancing the repair methods for stone structures and promoting their successful application, generating a positive reaction among masonry experts at home and abroad.

Furthermore, from the void discovered in the center of the first layer of the pagoda were found receptacles for relics recognized as the greatest archaeological achievement made in the section of the country once ruled by Baekje. Alongside the reliquaries, about 9,900 further artifacts were found from the central empty space in the first tier. One object among them that merits particular attention is a golden plate inscribed with valuable information on the sociocultural background and main figures behind the construction of Mireuksa Temple and the year in which it was built. The discovery of the artifacts and precious information attracted academic interest to Mireuksa Temple and its western pagoda at the national and international levels, which in turn contributed to heightening their cultural and historical value.

Regardless of the type of heritage and its geographical or temporal position, conservation activity of any kind should always place accuracy before speed and historical fact before conjecture. Heritage is living history, and the repair and restoration of heritage of any kind should be based fully

on in-depth understanding while vigilantly guarding against any supposition or haste. It must be kept in mind that the heritage we repair and restore today also belongs to future generations. 🌈

- A _ An image of the collapsed stone members under a thick cover of concrete produced using three-dimensional scanning
- B _ The stone pagoda at the Mireuksa site after the completion of repairs in 2017
- C _ Artifacts from the bronze reliquaries
- D _ Reliquaries consisting of a gilt-bronze outer jar and gold inner jar found within the stone pagoda
- E _ A golden plate found in the pagoda inscribed with valuable information on Mireuksa Temple and its western pagoda



CULTURAL HERITAGE ADMINISTRATION HEADLINES

Another Type of *Hanji* Recognized as Material for Heritage Restoration

An additional variety of Korean paper, or *hanji*, recently entered the list of heritage restoration materials recognized by the Central Institute for the Restoration and Conservation of Archive and Book Heritage (Istituto centrale per il restauro e la conservazione del patrimonio archivistico e librario, or ICRCPAL) in Italy. This follows two other types of Korean paper being recognized by ICRCPAL in 2016. A commemorative event was held on October 16 at the ICRCPAL building in Rome with a certificate of recognition being granted and artifacts restored using Korean paper on display. This celebratory event was organized on the sidelines of a South Korean presidential visit to Italy, carrying even greater implications for cultural exchange between the two countries.

ICRCPAL has already successfully restored important Italian documentary heritage elements using Korean paper (Quattro diplomi di laurea risalenti ai sec. XVII e XVIII; Manoscritto membranaceo fondo Etiopii sec. XVII; and Stemmario sec. XVI–XVII). Three additional documents are currently under restoration using *hanji* (La guida dei perplessi di Mosè Maimonide; Incunaboli 1481 e 1483; Libro sacro della chiesa siriana-cattolica).

A Natural Remover of Biofilms Developed

The Korea National University of Cultural Heritage recently developed “Stone Keeper,” a liquid remover of the biofilms that form on the surface of stone heritage. This biofilm remover was made using volatile extract of clove as a main ingredient with emulsifying agents used for food or cosmetics added. Environmentally friendly and posing no harm to human health, Stone Keeper can simply be sprayed over a target surface to eradicate biofilms, making it suitable for a large stone buildings or areas.

A trial application of Stone Keeper on outdoor stone structures was carried out in Korea from 2014–5, confirming its effectiveness at removing lichen. From 2016 to the present, it has been applied in the tropical monsoon climate of Laos and Cambodia as well. Stone Keeper proved effective here as well: Organisms on the stone surface died within one month after application and the biofilms were naturally dissolved within eight months. The results of these trials have been reported in both domestic and international academic venues.

Stone Keeper will be produced for the wider cultural heritage field in applications across Asia and Europe by Con-Tech, a university-industry partnership of the Korea National University of Cultural Heritage. 🇰🇷



The certification ceremony in Rome. Lee Dong-sik from the National Research Institute of Cultural Heritage of Korea and Maria Letizia Sebastiani, Director of ICRCPAL, stand respectively at the second and third from right.



Before (right) and after (left) the application of Stone Keeper



This pattern is derived from the motif on the celadon vase with inlaid cloud and crane design designated National Treasure No. 68