

Silla Metalwork: Discoveries from Gyeongju

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Introduction

Metalworking conventionally refers to the process of manipulating various kinds of metal to create finished products. It spans a wide range of materials including gold, silver, copper, tin, and iron, either alone or in blends, such as alloys. Metalworking in Korea traces back to the Bronze Age, but only a small number of metals were used at that time and the items produced were limited to bronze ritual objects. It was during the Three Kingdoms Period (57 BCE–668 CE) that metalworking culture entered its prime in Korea, but it was particularly evident in the kingdom of Silla (57 BCE–935CE) (Lee Nan Young 1992).

Silla was founded in and around what is today the city of Gyeongju and maintained this capital for its entire history. A wide range of materials and goods must have been concentrated in Gyeongju, not only while Silla's territorial boundaries were limited to its capital region, but even after it expanded its influence across what is now Gyeongsang-do Province and parts of Gangwon-do Province. It seems that Silla's production of a diverse variety of metalwork in a unique style was made possible by this collection of abundant resources. Characteristic features become notable in relics from the fifth century onwards. In other words, metalwork with a distinctive "Silla-style" began to

be produced in this period (Lee Hansang 2004).

A turning point in Silla metalworking culture arrived with its unification of the Korean Peninsula and the establishment of Unified Silla (668–935 CE) in 668. Among the metal objects produced after unification, accessories and everyday goods came to strongly reflect styles stemming from the Tang Dynasty (618–907 CE) in China, as was common across East Asia. Nevertheless, there are sarira reliquaries and Buddhist bells from the era that still reflect a clear Silla provenance (Ju Gyeongmi 2005; Choi Eung Chon 2010).

This paper aims to examine the metalwork of Silla, in particular the items discovered in Gyeongju, by exploring the history of excavation and research, the development of metalworking technology, and the emergence of a distinctive Silla style. It will further describe the background, acceptance, and significance of the foreign influences observed in Silla metalwork.

Excavation and Research

Excavation of Metalwork

The rich and sumptuous metalworking culture of the kingdom of



Fig. 1. Bronze Lidded Bowl with Inscription of “Ho-u” (left) and Bronze Bottle (right) from Houchong Tomb. Bronze. H. 19.4 cm (left), 16.3 cm (right). National Museum of Korea

Silla was first revealed with the excavation of Geumgwanchong Tomb (金冠塚) in 1921. A gold crown and other golden ornaments were accidentally uncovered in the area of Noseo-ri in Gyeongju. Gold crowns were subsequently discovered at excavations carried out on the tombs Geumnyeongchong (金鈴塚) and Seobongchong (瑞鳳塚) in 1924 and 1926, respectively. This confirmed the remarkable goldsmithing tradition that had existed in Silla. Excavations of royal tombs from the Silla period continued after Korea recovered its national sovereignty in 1945. In 1946, the National Museum of Korea conducted an excavation of an abandoned tomb in the Noseo-ri tomb cluster and uncovered a bronze lidded bowl with an inscription of the name of the nineteenth king of Goguryeo, King Gwanggaeto the Great (廣開土大王, 373–413, r. 391–413), along with the Chinese characters ‘壺杆’ (K. *ho-u*), meaning bowls (Fig. 1, left). This was a remarkable find indicating that metalworking culture from Goguryeo was being transferred to Silla at the time.

In 1959, the National Museum discovered reliquaries while dismantling the West Pagoda at the Gameunsa Temple Site (感恩寺址) for restoration (Fig. 2, left). Although they were in poor condition when found, these sarira reliquaries featured elegant embellishments and exquisite representations of musicians and the Four Heavenly Kings protecting the Dharma, demonstrating Silla’s exceptional advancement in metalworking by the late seventh century.

Extensive excavations began to be carried out in Gyeongju in the 1970s and they revealed great quantities of Silla metalwork. The excavation of the tumulus of King Muryeong (武寧王, 462–523, r. 501–523) of Baekje in 1971 provided momentum to the pursuit of investigations of major historic sites in Gyeongju as well. A gold crown was unearthed in the excavation of Cheonmachong Tomb (天馬塚) in 1973 and another from the North Mound of Hwangnamdaechong Tomb (皇南大塚) in 1974.

In 1975, a further remarkable excavation was conducted that revealed exquisite metal objects. A large amount of high-quality metalwork in good condition dating back to the Unified Silla period was uncovered from Wolji Pond (月池) within the Wolseong Palace (月城) site. In 1966, sarira reliquaries were discovered within the Three-story Stone Pagoda of Bulguksa Temple (佛國寺), and more sarira reliquaries were found from the East Pagoda at the Gameunsa Temple site (Fig. 2, right) and the Five-story Stone Pagoda in Nawon-ri in 1996.

With the turn of the new millennium, fewer dramatic discoveries of metalwork took place in the Gyeongju area, largely due to the decreased number of excavations. Nevertheless, bronze relics including bowls, *donggot* (topknot pins), ladles, and small ornamental objects continued to be uncovered from wells within the premises of palaces and temples. Most of these wells had been deliberately abandoned, and these relics had mainly been buried during the decline of Silla.

Research Issues

The most notable metalwork among the items excavated at historic sites in Gyeongju are the gold accessories unearthed from ancient tombs. In the early phases, these gold items were studied and used to date ancient Silla tombs. More recently, they have been subjects for examination of metalwork production methods. Through the findings of this research, characteristics of metalwork unique to Silla have been identified, as well as the exchanges between the three kingdoms (Lee Song-Ran 2004; Lee Hansang 2004; Ham Soon Seop 2014).

Weapons and horse tack have been found that were decorated using the same metalworking techniques applied to jewelry. Scholars have been focusing on investigating the appearance and ownership of ornamental Silla swords rather than their production techniques. The production of equestrian



Fig. 2. Sarira Reliquaries from the West Pagoda (left) and East Pagoda (right) at the Gameunsa Temple Site. 682. Gilt-bronze. H. 28.0 cm (left), 31.0 cm (right). National Museum of Korea and Gyeongju National Museum



Fig. 3. Adornments of Silla (1, 2) and Gaya (3, 4): (1) From North Mound of Hwangnamdaechong Tomb. Gold and jade. H. 27.3 cm. National Museum of Korea (2) From Hwangori Tomb No. 52. Gold. L. 8.8 cm. National Museum of Korea (3) From Jisan-dong Tomb No. 32. Gilt-bronze. H. 19.6 cm. Gyeongju National Museum (4) From Jisan-dong Tomb No. 45. Gold and gilt-bronze. L. 6.54 cm. Gyeongju National Museum

gear involves not only metalworking, but leather crafting and woodworking skills as well. The horse gear found in Gyeongju include pommels, cantles, stirrups, and harness fittings. The studies conducted to date have been primarily focused on their form and the patterns in their designs.

Investigations have been carried out on the metal vessels discovered from wooden chamber tombs with a stone mound, including Hwangnamdaechong and Cheonmachong. In particular, bronze vessels have been found that parallel the forms of those excavated from tombs in Goguryeo, such as tripod cauldrons, and scholars have subsequently scrutinized



Fig. 4. Harness Fittings from South Mound of Hwangnamdaechong Tomb. 5th century. Gilt-bronze. H. 13.0 cm (top on right). Gyeongju National Museum

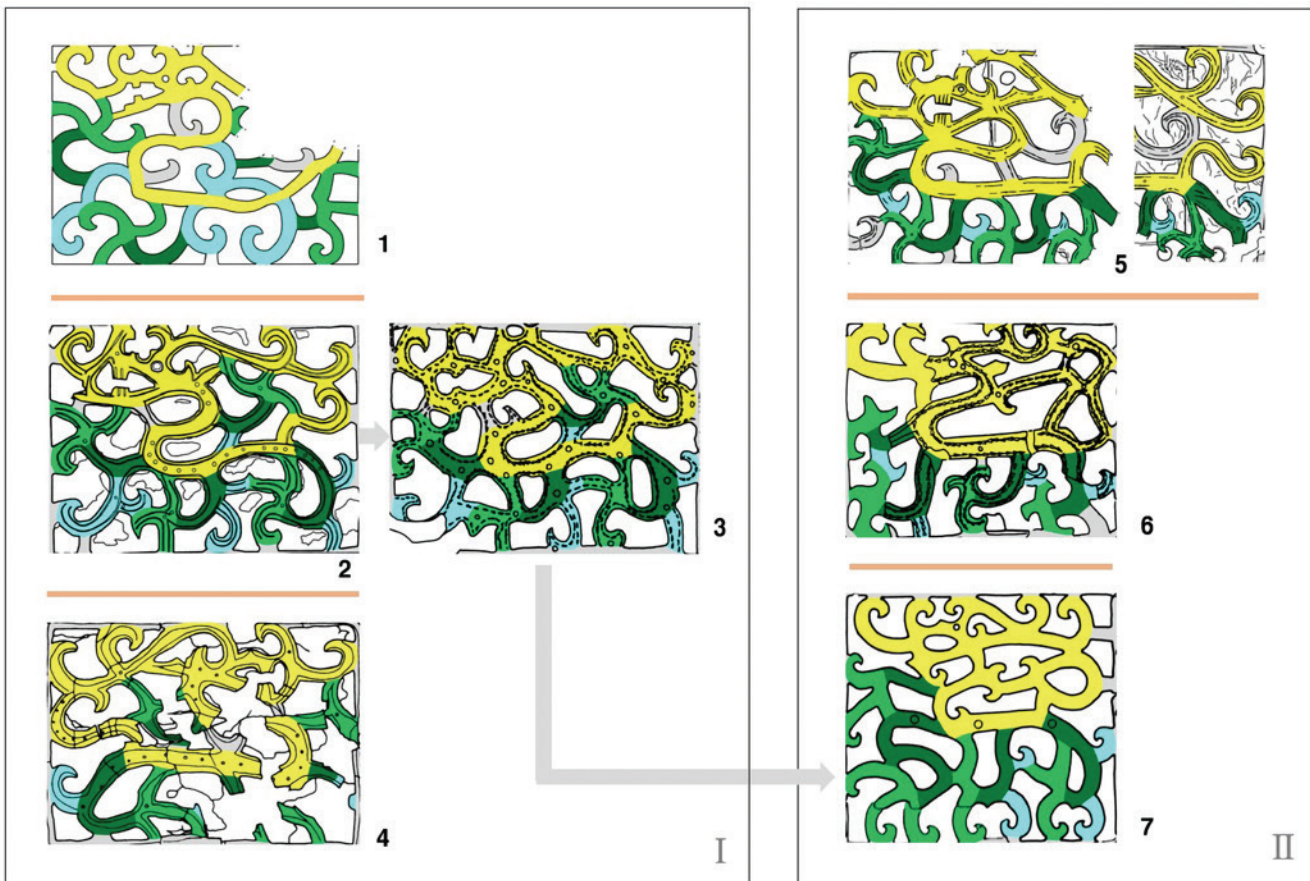


Fig. 5. Comparison of Dragon Designs of Baekje (1), Silla (3, 4, 7), and Wa (2, 5, 6): (1) Naseong-ri Tomb No. 4. (2) Shichikan Tomb (七觀古墳). (3) Imdang Tomb No. 7B. (4) Chodang-dong Tomb No. A-1. (5) Gojō Nekozuka Tomb (五條猫塚古墳). (6) Tsukino-oka Tomb (月岡古墳). (7) South Mound of Hwangnamdaechong Tomb

the transference of Goguryeo culture into Silla. In regards to metalwork in the Unified Silla period, thorough studies have been carried out on the findings from Wolji Pond (Lee Nan Young 2000).

The finest examples of Unified Silla metalwork are considered to be sarira reliquaries and the *Sacred Bell of Great King Seongdeok*. Sarira reliquaries feature an assemblage of metal, glass, and stone containers and objects. Studies on sarira reliquaries have hitherto been conducted mainly on their composition, location of enshrinement, and varieties of votive goods (Joo Kyeong-mi 2014), as well as their production method. For the *Sacred Bell of Great King Seongdeok*, there have been studies on its motifs and stylistic characteristics as well as a comparative analysis with bells from neighboring countries (Choi Eung Chon 1997).

Some of the metalwork excavated in Gyeongju can be identified as imported. These relics were brought into Silla via long-distance trade or diplomatic missions, and most of them are concentrated in the royal tombs within the capital. Foreign metal artifacts include items from Goguryeo and the Southern Dynasties (420–589 CE) of China, and Central Asia as well. Studies aimed at scrutinizing Silla's exchanges with other countries by

examining these foreign goods have produced significant results.

Development of Metalworking Techniques

Master Artisans and Workshops

The metalwork of Silla was created by professional artisans (Lee Younghee 2004). The production of metalwork in ancient societies necessitated the sourcing of required materials, such as gold and silver. In the case of gold, it was the most esteemed resource among the ruling classes around the region, including China. Objects created with such a precious material premise the existence of highly skilled artisans and workshops. Since maximum effect should be achieved with the least amount of metal possible, trial-and-error was unacceptable in production. Therefore, manufacturing could only be practiced directly by artisans demonstrating the finest skills.

It is likely that the metalworking artisans of the time resided within a designated area as they completed the works assigned to them. The number of metalcraft workshops was presumably not as high as those producing ceramics or ironware, and



Fig. 6. Example of Casting Technique: Tripod Cauldron with Handle from Geumgwanchong Tomb. L. 46.5 cm. Gyeongju National Museum (Right: Details of dragon design and lotus design)



Fig. 7. Example of Casting Technique: Detail of Sacred Bell of Great King Seongdeok from Bongdeoksa Temple Site. 771



Fig. 8. Examples of Openwork Technique: Conical cap (above) from Cheonmachong Tomb. Gold. H. 19.0 cm. Gyeongju National Museum; Cantele (below) from South Mound of Hwangnamdaechong Tomb. Gilt-bronze. W. 52.4cm

it is believed a wide variety of design books were housed in these workshops. Given that metalcrafts from different areas respectively bear distinct designs and develop unique styles, it is possible that metalcraft decorated with dragons (Fig. 5) and mythical birds known as *fenghung* (鳳凰, K. *bonghwang*) were created by referring to books obtained through trade with Wei, Jin, and the Southern and Northern Dynasties (420–589 CE) in China, as well as within the three kingdoms of Baekje, Silla, and

Goguryeo.

Nevertheless, acquiring the technical know-how for metal crafting is different from imitating design patterns, and this could only be developed through direct contact with and transmission among artisans. The various foreign elements and influences reflected in the metalcrafts of Silla are likely to have been introduced through human interchanges. In fact, frequent exchanges took place between artisans in ancient East Asia,



Fig. 9. Examples of Color Contrasts Using Gold with Jade: (1) Jade ornamentation of crown excavated from the North Mound of Hwangnamdaechong Tomb. Gold and jade. Gyeongju National Museum (2) Chain and pendant ornamentation of crown excavated from Geumnyeongchong Tomb. Gold and glass (3) Nirmanabuddha discovered from Wolji Pond. Silver and garnet. L. 9.0 cm



Fig. 10. Example of Filigree Technique: Earrings discovered in the stone burial chamber of Bubuchong Tomb in Bomun-ri. 6th century. Gold. L. 8.7 cm. National Museum of Korea

including Silla. The dissemination of metal crafting techniques, some of the most advanced technical skills of the era, were likely made possible via these interactions.

There are no means today through which to determine what these workshops would have been like. Further, only a few traces related to the production of metal are found around the city of Gyeongju (Cha Soon-Chul 2005). In the Historic Site in Dongcheon-dong, the site of a bronze ware workshop was uncovered together with roads and large-scale building sites. The site was discovered within the central two units of a three-unit building compound. Inside the workshop was found a three-

meter rectangular kiln, and the large number of red-brown molds found inside the kiln suggest that it was used to produce frameworks for molds. In addition, four bronze melting furnaces and one smelting furnace were discovered at the site.

Metalworking Techniques

The emergence of a Silla-style metalcraft culture coincided with the establishment and development of Silla as an ancient state. This is precisely the period during which gold adornments were being deposited inside large wooden chamber tombs with a stone mound located in Gyeongju. However, these large-scale tombs began to disappear from the mid-sixth century onwards and the number of metal items discovered at historical sites witnessed a drastic decrease as well. In any case, it seems that metalworking culture developed steadily during the Silla period. This is evidenced by the finest examples of Buddhist craftwork and everyday items used in the royal court unearthed from historic sites dating back to the Unified Silla period. Presented below are some of the detailing techniques employed in Silla metalwork (Lee Nan Young 2010).

Casting refers to the technique of melting metal at high temperatures and pouring the liquid metal into a mold to produce a desired form. Most of the bronze vessels uncovered from the wooden chamber tombs with a stone mound were created using this method. In particular, the *Tripod Cauldron with Handle* uncovered from Geumgwanchong Tomb (Fig. 6) is considered a masterpiece of this technique for both its elegant shape and refined decoration. Buddhist sculptures created around the time of Silla's unification of the Three Kingdoms demonstrate that the level of precision in casting at the time was highly advanced. Among the cast metal objects from the Unified

Silla period, the *Sacred Bell of Great King Seongdeok* is the largest extant example (Fig. 7, 17). The Chinese characters “鑄鍾大博士” (K. *jujong daebaksa*) are inscribed on it, literally meaning “chief master of casting Buddhist bells,” indicating the status of the artisan involved.

Forging involves shaping a metal object by beating or hammering it. Prior to the development of more ornamental metal crafting culture, production techniques for ironware were already flourishing in Silla. This suggests that the kingdom was prepared for decorative metalwork production in the sense that the required technical framework had already been established. Forging was the dominant production process for the gold accessories or gold and silver vessels unearthed from Silla’s wooden chamber tombs with stone mounds. However, the technique was generally used only partially in the metalwork of the Unified Silla period.

When decorating a metal plaque, the background of the design or the design itself can be cut out to enhance its visibility. This technique is known as openwork. Conventionally, an underdrawing is sketched on the surface of a metal sheet and then a hammer and chisel are used to excise the desired decoration. This particular technique is visible on the gold conical cap (Fig. 8, above), belt, and the pair of pommel and cantle (Fig. 8, below) uncovered from the Cheonmachong Tomb from the Silla Kingdom period. From the later Unified Silla period, the *nirmānabuddha*, or metamorphosed Buddha, and mandorla of a Buddhist sculpture uncovered from Wolji Pond provide classic examples of this technique. One of the most exquisite applications of openwork is found on the cantle discovered from the South Mound of the Hwangnamdaechong Tomb. Its entire surface features an openwork design of dragons laid above the wings of jewel beetles, yielding an ornate iridescent decoration. This technique can also be observed in the gilt-bronze openwork ornament in a sun shape unearthed from Jinpa-ri Tomb No. 7 of Goguryeo.

Precious metals such as gold and silver are beautiful unto themselves, but they can be even more stunning when juxtaposed with materials with contrasting tones, such as jade beads. Among the craftwork unearthed from wooden chamber tombs with stone mounds, the bracelets excavated from the North Mound of the Hwangnamdaechong Tomb nicely demonstrate jade inlaying, known as *gamok* (嵌玉) in Korean. However, there is a high possibility that these bracelets are foreign products. There is no other surviving example from the Silla Kingdom of the use of the jade incrustation technique, although a similar decorative method using liquid glass was prevalent at the time (Fig. 9-2). In addition, although it is not the



Fig. 11. Example of Ring-punched Design: Sarira Reliquary (Outer Casket) from Five-story Stone Pagoda in Namwon-ri. 8th century. Gilt-bronze. H. 15.2 cm. National Museum of Korea

classic form of this incrustation technique, there was another means to produce a similar effect by mounting a gold crown over a jade bead, as observed in the chains and pendants hanging from the gold crowns found under the North Mound of Hwangnamdaechong Tomb (Fig. 9-1) and Geumgwanchong Tomb. Jade beads in diverse colors were used to decorate craftwork in the post-unification period. A representative example is the *nirmānabuddha* discovered from Wolji Pond in Gyeongju (Fig. 9-3). The sarira reliquaries found in the three-story pagoda of Bulguksa Temple also feature jade beads in varied hues incrusting in the metalwork (Shin Suk 2016).

Filigree is a decorative technique that involves soldering gold beads or threads onto the surface of a metal object as a means of embellishment. The rings and small rattles excavated from the South Mound of Hwangnamdaechong Tomb feature elaborate filigree designs. The most notable relics demonstrating this technique is the pair of gold earrings discovered in the stone burial chamber of Bubuchong Tomb (夫婦塚) in Bomun-ri (Fig. 10). Filigree continued to be used both during and after the post-unification period, as can be observed in the sarira reliquaries discovered inside the East Pagoda at the Gameunsa Temple Site.

Inlay is used to render characters or patterns in the outer surface of metalwork by inserting pieces of different metals into a depression. Among the three kingdoms, an early form of inlay technique can be found in Baekje metalwork, and it is presumed that this method was introduced to Silla via Baekje. The sword unearthed from the Houchong Tomb (壺杆塚), and the pommel and cantle discovered in Gyerim-ro Tomb No. 14 feature inlay. In the post-unification period, the technique expanded beyond the creation of linear ornamentation to include broad and planar designs as well, as observed in the conical stirrups excavated from Pyeongsan.

Gilding is a decorative technique in which gold or silver is applied to surfaces of iron or bronze. Amalgam cannot be affixed to iron surfaces, so gold or silver leaf is used instead. However, bronze objects can be coated with a mercury-based amalgam. Gilding can also be partially applied on gold and silver vessels, a technique which prevailed in China during and after the Tang dynasty, but this method was uncommon during the Unified Silla period.

Among metalworking techniques, some are used for shaping metal vessels, such as casting and forging, while others are applied for rendering or emphasizing design motifs, such as openwork or chasing. A ring-punched design is a pattern achieved through the chasing technique that involves hammering the area surrounding a design with a tubular chisel to create a dense background of rings. This method was normally only applied to high-quality metalwork, such as the candle wick trimmer discovered from Wolji Pond and the sarira reliquaries discovered inside the East Pagoda at the Gameunsa Temple Site and the five-story stone pagoda in Nawon-ri (Fig. 11).

Emergence of a Silla Style

Gold Adornments

The ancient kingdom of Silla developed a tradition of metal adornments that resulted in some of the greatest splendor found in East Asia. Due to the practice of burying large quantities of objects in tombs and the unique structure of wooden chamber tombs with stone mounds, a large number of these artifacts have survived. In *Nihon shoki* (日本書紀, *The Chronicles of Japan*), which was written early in the eighth century, Silla is described as a “country of dazzling gold, silver, and various colors” or the “country of gold and silver.” In his book *Nuzhat al-mushtāq fi iktirāq al-āfāq* (نزهة المشتاق في إقتراح الأفق, *The Excursion of the One Who Yearns to Penetrate the Horizons*), the Arab geographer Muhammad ibn Muhammad Al-Idrisi noted that “Silla abounds in gold.” In the eyes of foreigners, Silla was a golden kingdom, and this image is clearly reflected in the extant metalwork relics of the time.

Numerous burial goods were interred inside Silla royal tombs such as Hwangnamdaechong and Cheonmachong. In particular, gold adornments have been discovered surrounding the remains of the tombs’ occupants. The period in which large-scale tombs were constructed within the city of Gyeongju and great numbers of gold objects were interred inside them coincided with a time of rapid development for the kingdom of



Fig. 12. Crown from North Mound of Hwangnamdaechong Tomb. 5th century. Gold. H. 27.3 cm. Gyeongju National Museum

Silla. This is also when the Kim clan held the throne and adopted the title of Maripgan (麻立干, meaning “great chieftain”) for the ruler. It is presumed that the kingdom carried out exchanges at this time with the peoples to its north and was introduced to the gold culture of nomadic tribes such as the Xianbei (鮮卑). However, Silla developed a distinct and independent style.

The peak of Silla’s creation of accessories in precious metals had already been reached by the time of the construction of the South Mound of Hwangnamdaechong Tomb. In this era, only a limited number of people were able to possess golden adornments. Around the time of the building of the North Mound of the tomb, a wider range of people could acquire gold accessories and a unique Silla style emerged in terms of design.

Gold crowns replaced gilt-bronze versions and were placed on the heads of deceased kings or other royalty. Moreover, accessories increased in both number and variety and came to include bracelets, earrings, necklaces (Fig. 13) and gilt-bronze shoes. Their decoration grew more lavish as well.

The most outstanding type of Silla ornament is the gold



Fig. 13. (1) Necklace from South Mound of Hwangnamdaechong Tomb. Early 5th century. Gold. L. 66.7 cm. Gyeongju National Museum (2) Necklace from Noseo-dong No. 215 Tomb. 6th century. Gold and jade. L. 30.0 cm. National Museum of Korea

crown (Fig. 12). Gold crowns have been discovered only from royal tombs built during the Maripgan period (the latter half of the fourth to the beginning of the sixth century). Such restricted possession of gold crowns indicates that they served to represent the status and authority of the royalty of the time. The gold crown in Fig. 12 features five uprights shaped like branches and antlers. The form of the branch-like uprights and the number of comma-shaped jade pendants and golden spangles evolved over time, and the designs on the band and uprights became more complex and decorative.

One century after the introduction of goldsmithing to the kingdom of Silla, works of the finest quality were being produced as the understanding and mastery of the techniques involved reached their zenith. The earrings discovered in the stone chamber tomb Bubuchong Tomb in Bomun-ri exemplify the level of sophistication achieved at the time. However, having reached its peak, Silla's golden adornment culture ceased to advance. This seems to be related to the dramatic changes that Silla experienced during the sixth century, including the state's official recognition of Buddhism.

Metal Vessels and Everyday Goods

Gold and silver bowls, together with gold earrings and Roman glass bowls, were excavated from the late-fourth century Wolseong-ro No. 8-13 Tomb. These footless bowls were crafted by hammering sheets of gold and silver. Royal tombs dated to later than the Wolseong Tombs, including the North and South Mounds of Hwangnamdaechong, Geumgwanchong,

Seobongchong, Geumnyeongchong, and Cheonmachong, have yielded large quantities of metal vessels. The assemblages of metal vessels unearthed from large-scale tombs, including the tripod cauldron (鼎, K. *jeong*), water bowl (洗, K. *se*), water basin (盤, K. *ban*), tripod cauldron with handle (鑊斗, K. *chodu*), flat iron (熨斗, K. *uldu*), lidded bowl (盒, K. *hap*), and bowl (盥, K. *wan*), are all presumed to be ritual vessels showing a Goguryeo influence.

Among the metal vessels that were discovered in the South Mound of Hwangnamdaechong Tomb, those regarded to be in a "Silla style" are the gold bowls, silver bowls, small and large silver lidded bowls, silver vessels with handles, silver ladles, and bronze lidded jars. Silla is the only state among the three kingdoms where extravagant vessels made of gold and silver have been found. More opulent gold and silver vessels were excavated from the North Mound than the South Mound of Hwangnamdaechong Tomb (Fig. 14). Among them, bowls were found inside a box of burial goods. The gold and silver vessels were produced in the same manner: a sheet of gold or silver was rolled outwards at one edge to create the mouth of the bowl, and its bottom was hammered flat from the inside so that it would appear like a low mound from the outside. Large numbers of metal vessels were also uncovered from Cheonmachong Tomb, a sixth-century royal tomb. Although the metal relics unearthed there were restricted in type and quantity compared to those found in Hwangnamdaechong Tomb, Cheonmachong is clearly among the ancient tombs of Silla that yielded the highest-quality discoveries. The metal vessels within are considered to be ritual vessels for service on ceremonial occasions, and a larger portion



Fig. 14. Mounted Cup from North Mound of Hwangnamdaechong Tomb. 5th century. Gold. H. 9.2 cm. Gyeongju National Museum



Fig. 15. Lidded Bowl from Wolji Pond. H. 11.2 cm. Gyeongju National Museum

of them were imbued with Silla aesthetics.

After the mid-sixth century, wooden chamber tombs were replaced by a new type, stone chamber tombs, and metal vessels disappeared from them. From this point on, metalwork is found only from the sites of palaces or in the capital city, and the most exquisite examples among them are the sarira reliquaries and votive goods in Buddhist temples. Excavations of the wooden chamber tombs with a stone mound from after this point no longer produce ritual vessels, but it is difficult to say whether these types of vessels were no longer being created or if simply none have yet been uncovered. Nevertheless, it is clear that Silla metalwork underwent a significant transformation, and the kingdom witnessed considerable changes after unification as it more fully absorbed the metalwork culture of Tang China.

Discoveries from Wolji Pond, located within the Silla royal palace, include diverse goods designed for everyday use, including tableware (Fig. 15). Also recovered from the pond is a wide range of architectural elements, such as door knobs, handles, locks, and butt ends, as well as tools such as candlewick trimmers. In addition, objects that were produced in workshops in Gyeongju and found in Wolji pond, including *jwapari gaban* (佐波理加盤, nested brass bowls), scissors, and spoons, are held in the Shōsō-in Repository (正倉院) in Japan.

Buddhist Crafts

Scholars are still debating precisely when Buddhism was first introduced to the Silla kingdom, but it is clear that it was in 527, the fourteenth year of the reign of King Beopheung (法興王, r. 514–540), that it was officially adopted as the state religion. From that point until the kingdom faded from history, Buddhism exerted a strong influence over Silla society. Large temples were constructed in various locations around the capital city of Gyeongju, and metalcrafts displaying diverse metalworking techniques were produced as part of this process.

Sarira reliquaries are considered the most important among Buddhist crafts. As containers enshrining the sacred remains of the Buddha, these reliquaries were created with the highest-quality materials available and using the most sophisticated skills and techniques. Many of the pagodas surviving at temple sites around Gyeongju have been either excavated or dismantled, but few of them have yielded intact metal sarira reliquaries dating to the period when they were erected. In some cases, the originals had been replaced with reliquaries and votive goods with a later production date, or additional offerings or reliquaries were added over time, as evidenced from the discoveries from the wooden pagoda of Hwangnyongsa Temple and the stone pagodas of both Bunhwangsa and Bulguksa Temples. Therefore,



Fig. 16. Sarira Reliquary from East Pagoda at Gameunsa Temple Site. 682. Gilt-bronze. H. 18.8 cm. Gyeongju National Museum



Fig. 17. Sacred Bell of Great King Seongdeok from Bongdeoksa Temple Site. 771. Bronze. H. 365.8 cm. Gyeongju National Museum

it is often difficult to conclude that all of the findings from a Silla-period pagoda are contemporaneous with the pagoda. The sarira reliquaries with known dates of enshrinement excavated from the Gameunsa and Hwangboksa temple sites are discussed briefly below.

Gameunsa Temple was established around the year 682 by the order of King Sinmun (神文王, r. 681–692) to honor his father and predecessor King Munmu (文武王, r. 661–681). The sarira reliquaries discovered in the West Pagoda take a nested form with a gilt-bronze outer casket around a gilt-bronze reliquary, inside of which was placed a crystal bottle. The reliquary is in the shape of a wooden pavilion, and heavenly figures are set at the four corners of its railings. The outer casket is embellished with attached images of the Four Guardian Kings in dynamic postures. The sarira reliquaries discovered in the East Pagoda are similar to the one in the West Pagoda, but remain in better condition. This sarira reliquary reflects a distinct pavilion shape (Fig. 16). The sarira bottle, only 3.65 centimeters in height, is characterized by a top and base adorned with elaborate filigree decorations. The sarira reliquaries excavated from both pagodas show diverse metalworking techniques, including casting, forging, and openwork. The reliquaries were completed by assembling separately-produced individual parts using nails or

soldering.

In the case of the sarira reliquaries found inside the stone pagoda at the Hwangboksa Temple Site, they consist of a glass sarira bottle placed inside a lidded gold case that was again set inside a lidded silver case and finally a gilt-bronze outer casket. The lid of the outer casket bears an inscription that relates that the pagoda was established in 692, and deposits, including the sarira, Buddha statues, and Dharani sutra, were additionally enshrined in 706. The outer casket also features on its exterior surface engravings of ninety-nine small pagodas. Although the difference between the reliquaries from the temple sites of Hwangboksa and Gameunsa is not great in terms of date, they differ significantly in terms of form and composition.

Temple bells are the largest Buddhist ritual objects, and possibly the most difficult to produce. The *Bronze Bell of Sangwonsa Temple* and the *Sacred Bell of Great King Seongdeok* (Fig. 17) are two surviving examples from the Unified Silla period that remain in Korea. These bells are considered to be archetypical of Korean Buddhist temple bells, embodying unique characteristics that differentiate them from their Chinese and Japanese counterparts.

The body of the bell resembles an upside-down jar with a swollen mid-body that tapers toward the upper and lower

bodies. The top of the bell includes a dragon-shaped ornament that serves as a hook from which the bell could be hung. Behind the dragon is a tubular reverberating pipe, the most distinctive element of Korean Buddhist bells. The details of these bells varied over time, particularly their design elements such as heavenly maidens playing musical instruments (Choi Eung Chon 1997).

International Exchange of Metalworking Culture

China

To understand the metalworking culture of Silla, it is essential to examine the exchanges between this kingdom and a string of Chinese dynasties. Even while still a statelet within a greater confederacy, Silla was importing Chinese metalwork such as mirrors from the Han Dynasty. Such imports continued through the period of constructing wooden chamber tombs with a stone mound. Bronze mirrors and flat irons that are deemed to have originated from the Southern Dynasties of China were excavated from the North and South Mounds of Hwangnamdaechong Tomb. It is unknown how and for what reasons these relics ended up in Silla. Nevertheless, considering that large quantities of Chinese items from the Wei, Jin, and Southern and Northern Dynasties were uncovered from contemporaneous sites in Baekje and that Silla and Baekje had forged an alliance in 433, the relics can be suggested to have reached Silla via Baekje. Silla and the Southern Dynasties formally established diplomatic relations in the early sixth century. Greater numbers of items imported from China have been discovered intact from Silla ruins dated to after the late sixth century. These include the Chang Ping Wu Zhu (常平五銖錢) coins from the Northern Qi Dynasty discovered at the Bunhwangsa Temple and Hwangnyongsa Temple Sites; Kai Yuan Tong Bao (開元通寶) coins from the Tang Dynasty excavated from Wolji Pond; and the Mirror with a TLV Pattern and Four Divine Creatures Design (四神鏡, Ch. *sishenjing*) uncovered from the lower part of the foundation stone of the wooden pagoda site at the Hwangnyongsa Temple Site. During the Unified Silla period, Tang cultural influences were widely diffused within Silla and their metalworking culture was being actively and broadly absorbed. However, Silla reshaped these Tang elements into its own unique products.

Goguryeo, Baekje, and the Gaya Confederacy

A number of items produced either directly in Goguryeo or in the style of Goguryeo has been unearthed from the ancient tombs



Fig. 18. Earrings from North Mound of Hwangnamdaechong Tomb. 5th century. Gold. L. 2.9 cm. Gyeongju National Museum

of Silla. These include a bronze lidded bowl from Houchong Tomb, a silver lidded bowl from Seobongchong Tomb, and a copper jar with four handles from Geumgwanchong Tomb. These three items are likely to be imported Goguryeo products. Though it is difficult to pinpoint precisely where they originated, the metal vessels unearthed from the royal tombs of Silla are likely to be ritual vessels created under the influence of Goguryeo. The gold earrings discovered under the North Mound of Hwangnamdaechong Tomb (Fig. 18) are similar to a pair discovered in Maseongu Tomb No. 1 (麻線溝) in the present-day Jian region of China. This clearly demonstrates the import of Goguryeo products to Silla.

Abundant elements stemming from Goguryeo were found in Silla during the period of wooden chamber tombs with stone mounds. This is largely due to the friendly relations enjoyed by the two neighboring kingdoms after the late fourth century and well into the mid-fifth century. It is presumed that many craftworks from Goguryeo were brought into Gyeongju during this time. Their relations experienced a brief period of tension when Silla killed the Goguryeo commander of border garrison (邊將) in 450, but they quickly recovered. Up until King Jinheung (眞興王, r. 540–576) attacked the Hangang River valley in 551, Silla and Goguryeo remained allies, and considerable goods and culture from Goguryeo were introduced to Gyeongju during this time (Choe Jonggyu 1983).

Silla and Baekje struggled for supremacy over the south-central area of the Korean Peninsula. However, the two stood shoulder to shoulder against any Goguryeo drive southwards. Historical records relate that Silla and Baekje exchanged specialists and established strategic marriages. These events and processes also entailed cultural and material exchanges. Opinions are divided on the origins of the gilt-bronze shoes discovered in Singnichong Tomb (飾履塚, Fig. 19). Some



Fig. 19. A Pair of Shoe Soles from Singnichong Tomb. 5th century. Gilt-bronze. L. 32.0 cm. National Museum of Korea

believe that they are Chinese products manufactured under the influence of the Southern Qi (479–502) in China, whereas others view the production site to be Baekje or Silla. Each shoe is comprised of three gilt-bronze plates decorated with hexagonal patterns surrounding a variety of auspicious motifs, including birds and mythical creatures such as *girin* (麒麟, Ch. *qilin*). This design is similar to one observed in the Baekje-period metal shoes excavated from Stone Chamber No. 4 of Bongdeok-ri Tomb No. 1 in Gochang and the stone chamber of Jeongchon Tomb No. 1 in Naju.

Seeking to break free from Goguryeo interference, by the 430s Silla had established friendly relations with the Gaya Confederacy and Baekje and a period of peace followed. Such amicable diplomatic ties are manifested in items originating from the allied states, as seen in examples of findings from ruling-class tombs.

A Gaya-style sword unearthed from Signichong Tomb in Silla is highly similar in its design and details to the sword with dragon and *bonghwang* (a pair of mythical birds) design excavated from Okjeon Tomb No. M3 in Hapcheon. Among the swords with ring pommels unearthed from Silla royal tombs, this one is highly unique and is presumed to have been imported from Gaya.

Central Asia

Metalwork originating from Central Asia has also been

discovered in Silla tombs. Examples include the gold bracelet from the North Mound of Hwangnamdaechong Tomb and the ornamented sword from Gyerim-ro Tomb No. 14 (Fig. 20). While scholars dispute over the origins of the former item, there is a consensus that the latter must to have been produced in Central Asia. The sheath and hilt of this sword are made of gold. Thin strips of gold are applied along the edges of the sheath, creating cells that were then decorated with dark red garnets. A sword with similar decorative features dated to the fifth century was found in Borovoye, Kazakhstan and is currently housed in the State Hermitage Museum in Russia. Studies on the sword discovered in Gyerim-ro have suggested that it was produced in either Iran or Central Asia (穴澤味光・馬目順一, 1980).

As seen above, metal items with diverse origins, not only from neighboring nations such as Goguryeo, Baekje, the Gaya Confederacy, and China, but also from Central Asia, have been unearthed at Silla sites. The origins of the foreign cultural elements exhibited in the metalwork of Silla vary by period. The craftworks in the most distinctive “Silla style” are those deposited in the wooden chamber tombs with stone mounds, and gold crowns and metalwork are the most notable among the ample numbers of objects uncovered from these tombs. The origins of the metalwork discovered in Silla royal tombs can be traced through the kingdom of Goguryeo, which at the time maintained close diplomatic ties with Silla. Given the fluctuations in international conditions, when Silla’s relations with other nations



Fig. 20. Dagger and Sheath from Gyerim-ro Tomb No. 14. 5th century. Gold inlaid with garnet and glass. L. 36.0cm. Gyeongju National Museum

improved, superior examples of their metalwork were brought into Silla. This added to the foundation for the development of the metalworking culture of Silla.

Conclusion

The nobility of the Silla kingdom began to apply metalwork as means to display their power and authority. They packed tombs with metal items to prepare for the afterlife, and kept them in their living quarters as well, including the royal court and residences. Around the time when the influence of Buddhism stretched across society, large-scale temples were constructed with a variety of metal items symbolizing the authority of the

Buddha enshrined inside. Some of these objects constitute a portion of the Silla metalwork that has been discovered across various sites in the city of Gyeongju.

The production of ornamental metalcrafts in Silla began in the late fourth century, around the time of the construction of the Wolseong-ro No. *ga*-13 tomb. Although few objects from this period have been discovered, it is highly likely that the metalworking culture of Silla traces back to Goguryeo. After the mid-fifth century, there was a surge in demand for metalwork, which eventually fueled the development of the skills possessed by Silla artisans. Accordingly, a unique Silla style was established by which their metalwork can be clearly differentiated from the products of surrounding nations. After the mid-sixth century, gold adornments, including gold crowns, seem to have suddenly ceased to be produced. This can be attributed to social shifts

taking place at the time.

Almost no decorative metalwork has been discovered dating from the late sixth century to the period of the war for unification of the three kingdoms. The metalworking culture of Silla underwent renewed development only after the unification of the peninsula. Most of the surviving metalwork from the Unified Silla period was excavated from Wolji Pond. Many distinct items from different periods were uncovered in relatively good condition from the pond, and these findings provide a crucial reference for examining the era's metalwork, production techniques and international trade. Moreover, the sarira reliquaries discovered from the three-story stone pagoda at the Hwangboksa Temple Site, east and west pagodas of Gameunsa Temple, and five-story stone pagoda of Nawonri Temple are particularly notable since they feature both elegant form and sophisticated decorative techniques.

As was mentioned, the metalwork discovered in Gyeongju embodied the aesthetics of the Silla people and reflects the history of the kingdom. The artisans commissioned for the work were not simply technicians, but artists in their own right. They were required to embrace cultural elements from China, the lodestone of East Asia, in a timely manner. In this light, works created by these artisans are not simply crafts made of metal. Rather, they can be viewed as time capsules preserving the history and culture of the kingdom of Silla.

Translated by Ahn Soyeon and Park Shinhee

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