

## Ceramics Exchange between Northern China and Early Goryeo

Jang Namwon

Assistant Professor, Ewha Womans University

### Introduction

When the Goryeo Dynasty (高麗, 918-1392) kilns were first established, they were heavily influenced by the Yuezhou (越州) kilns of southern China, as demonstrated by similarities in kiln structure, construction methods, and ceramic production methods. Later, however, Goryeo assimilated some new elements from northern China, including firing techniques, vessel types and forms, and decorative patterns and techniques. In other words, the following three factors represent such new elements from northern China. First, concurrent production of celadon and white porcelain: even in the early days of celadon production in Goryeo, there were occasions when celadon and white porcelain were made together in the same kiln, although they require different production conditions and processes. Given that, from the late 10th to the 11th century, celadon was mainly produced in southern China and white porcelain in northern China, the coexistence of white porcelain with celadon in Goryeo kilns suggests the influence of northern China. Second, some Goryeo wares showed different shapes and different formal characteristics from southern Chinese wares. One of the main examples of the Goryeo's deviation from southern Chinese wares is that the bowls with a *bi*-shaped foot (*haemurigup*, 玉璧底) produced in Goryeo did not reflect the development of their south Chinese counterparts (as early Goryeo ceramics production closely did regarding kiln

structure and various other details), such deviation exemplified by Goryeo's unique *bi*-shaped foot wares is important to note: they showed a mixture of anachronistic and eclectic influences of older northern and southern Chinese and even Tang styles. Third, inlay and iron-painting decorative techniques, which developed in northern Chinese kilns such as Cizhou (磁州) kilns, appeared in the early days of Goryeo ceramics production. Thus, this article aims to identify the new techniques and formal elements that appeared in the development of Goryeo ceramics by investigating the relationship between Goryeo and the Liao (Khitan) and Jin (Jurchen) dynasties, and by comparing the manufacturing conditions at Goryeo kilns from the 10th-12th centuries with those of northern Chinese kilns of the same period. Despite the historical importance of Liao and Jin dynasty wares, which had a notable influence on the forms and techniques of Goryeo wares, they have only been broadly addressed in the context of the relationships between Song, Goryeo, Liao and Jin, due to the marked tendency to concentrate on the relationship between Goryeo and Song. As such, this article reinvestigates the relationship between Goryeo and Liao and Jin, already explored in an earlier article (Jang Namwon 2008a). However, due to the difficulty of distinguishing between the kilns of Liao and Jin, and between Northern Song and Jin, and identifying the changes over time at each kiln site, further materials from China will be necessary to provide more concrete evidence in the future.

## Relations between Goryeo and Liao and Jin

### Goryeo and Liao

During the 10th century in Northeast Asia, the Liao dynasty was founded in 916, the Goryeo dynasty in 918, and the Song dynasty in 980. The foundation of the Liao dynasty (916-1125) marked the start of active official and unofficial exchanges between the Khitans and Goryeo, and Liao culture and technology was introduced to Korea when artisans from Liao settled in Goryeo. In 916, the Khitans had named their new state Liao (遼) and given their founding monarch the title of Emperor. In 928 they established their eastern capital, Liaoyang (遼陽), in the area of the former Balhae capital, Shangjing (上京). By 936, the Sixteen Prefectures of Yanyun (燕雲十六州, an area stretching from Beijing to Datong, modern Hebei and Shanxi) became part of Liao territory. This was an area to which Tang artisans and craftsmen from various fields had fled following the An Lushan rebellion (755). These Han artisans were treated well and in this way the arts and crafts techniques that had been inherited from Tang were assimilated by the Liao. As late as the fall of the Northern Song to the Jin in 1127, some Song craftsmen moved to Shangjing, the “supreme capital” of Liao. Moreover, under Liao rule, major Khitan bases such as Hebei, Shanxi, and Inner Mongolia saw further development in ceramics production. In the early years, ceramics were sometimes imported from the central plains region, but production by artisans at Liao kilns gradually increased (Fig. 1).

Goryeo maintained amiable exchanges with the

Five Dynasties (907-959), but became hostile towards the Khitans (Liao) in the process of trying to recover former northern territories. In 993, the Khitans invaded Goryeo, but by 994, relations between the two states had improved, as records show that they established tributary relations. Moreover, following Goryeo's victory in the Battle of Gwiju (龜州大捷, 1018) during the third Goryeo-Khitan war (1018-19), the two states negotiated for peace in 1022, ushering in a period of more active official exchange. At least until the first half of the 12th century, Goryeo-Khitan (Liao) exchange was as active as Goryeo-Song exchange. However, while Goryeo's relations with Song centered on trade between private merchants, relations with Liao were mainly based on official government exchange.

In the Amnokgang River (鴨綠江) area, the Khitans established a local government base to serve as the gateway to Liao, as well as a market for the exchange of local specialty products, where private trade did take place. The Khitans, who had defeated Balhae in 926, remained the most powerful force in the Liaodong (遼東) region for the next two hundred years, until the early 12th century. Throughout this period, even during the wars with Goryeo, Liaoyang served as the Khitans' point of contact with Goryeo. The route connecting Liaoyang and the Goryeo capital Gaegyeong remained in use, pointing to the likelihood of Khitan civilization entering Goryeo through Liaoyang.

King Taejo (r. 918-943), the founding monarch of Goryeo, created the *Hunyo sipjo* (訓要十條, *The Ten Injunctions*), which were then passed down to his descendants. The fourth article of this text says, “The Khitans are a barbarian nation with different customs and language to our own, so we should not make haste to follow their customs and institutions.” This clearly indicates Goryeo's uneasy relationship with the powerful Khitans. From a cultural perspective, however, it is possible that, by the mid-10th century, the customs and institutions of the Khitans were already being introduced to Goryeo. Interestingly, in the year 1129, (seventh year of the reign of King Injong 仁宗, r. 1122-1146), an official report lamented the fact that the spirit and style of the Khitans had spread “from the court to the common people.” By this time, the Liao dynasty had already fallen to the Jin, and Goryeo was working toward better relations with Jin. So it seems that Khitan culture and institu-

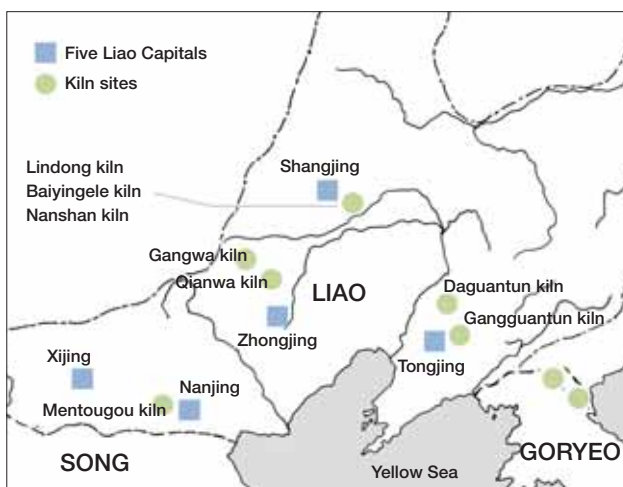


Fig. 1. Map showing location of Liao kiln sites.

tions were introduced during the early stages of the Goryeo dynasty, and had become widespread by the first half of the 12th century.

When the Jin dynasty (1115-1234) was established, it is generally believed that Goryeo considered the Southern Song dynasty to represent China proper, but Goryeo was still very mindful of Jin, and in fact maintained rather distant relations with Southern Song, which was now much weaker. Accordingly, Goryeo did not consider it necessary to continue the tribute-investiture system (朝貢-冊封) with Southern Song, and most state exchanges between Goryeo and Song came to an end.

According to *Xuanhe fengshi Gaoli tujing* (宣和奉使高麗圖經, *Illustrated Record of the Chinese Embassy to the Goryeo Court in the Xuanhe Era*), written by the Song envoy Xu Jing (徐兢) in the first half of the 12th century, among the tens of thousands of Khitan prisoners of war in Goryeo, those possessing a particular skill were kept in the capital, Gaegyeong.<sup>1</sup> From this, it can be deduced that Khitan artisans played a part in developing the art and crafts of Goryeo. In addition, a record from Goryeosa (高麗史, *History of Goryeo*) from 1116, the 12th year of the reign of King Yejong (睿宗, r. 1105-1122), says that when the king travelled to Nanjing, the southern capital of Liao, he watched various song-and-dance performances and other entertainments at a Khitan village. Khitan artisans were influenced by southern wares, as evidenced by discoveries of Yuezhou celadon in major Khitan archaeological sites, including a covered bowl found in the pagoda at Jingzhisi (靜志寺) in Dingxian (定縣), Hebei province, dating to 997 (second year of the Taping Xingguo, 太平興國), and a celadon dish found in the tomb of the Princess of the Chen (陳) state in Naimanqi (奈曼旗), Zheli Mumeng (哲里木盟), Inner Mongolia, dating to the seventh year of the Kaitai (開泰) reign of Liao, 1018 (Fig. 2).

### Goryeo and Jin

The Jin Dynasty (金, 1115-1234) was founded by the Jurchens. From the early 10th century, the Jurchens had been vassals of the Khitans (Liao), but in the early 12th century, as their forces grew in Northern

Manchuria, they founded Jin as an independent state. The Jin Dynasty eventually grew to take over the northern half of Song territory, including the once flourishing Northern Song kilns and their advanced production technology. Therefore, the various kilns that had been established in Inner Mongolia during the Liao Dynasty entered their most active period in the Jin Dynasty (Fig. 3). The Northern Song



Fig. 2. Celadon jar in the shape of a leather flask, from the Yuezhou (越州) kiln. 10-11th century. Height 23.0 cm. National Museum of Korea.

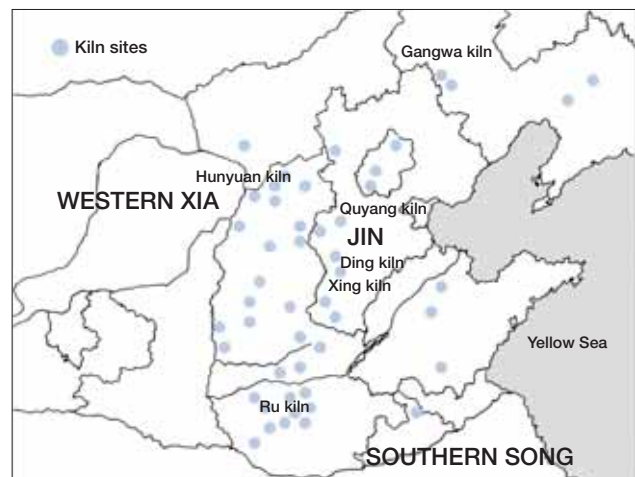


Fig. 3. Map showing location of Jin kiln sites.

<sup>1</sup> Vol. 19, section on Crafts, "I have heard that there are several tens of thousands of Khitan prisoners, among whom one in ten of the most skilled are kept in the capital." "...亦聞契丹降虜數萬人, 其工技十有一擇其精巧者, 於王府."



Fig. 4. Celadon incense burner with embossed relief. 12th century. Yaozhou (耀州) Kiln Museum. (Author's photograph).

kilns suffered a setback from the Jinkang Incident, when Jurchen soldiers sacked the Northern Song capital, Bianjing, effectively ending the Northern Song Dynasty, but the kilns continued to produce under Jin control. The possibility has also been raised that some of the Ding kilns (定窯) and the Yaozhou kilns (耀州窯) served as official state kilns of the Jin Dynasty (Fig. 4). Production particularly increased at the Jun kilns (鈞窯) in Henan province, and new types of wares were developed to meet the rising demands of the market. The recent excavation of the Zhanggongxiang kilns (張公巷窯) in Henan unearthed some 330 coins alongside celadon vessels, including some coins of the Zhenglong reign (1156-1160) (Zhenglong yuanbao, 正隆元寶) coins cast in 1158 (third year of the reign of the Jin Emperor Hailing 海陵, r. 1149-1161) (Tang Junjie 2010, 64-69). Therefore, it is believed that the Zhanggongxiang wares were made in the Jin period, based on Northern celadon.

In addition, the Ding kilns, the major white porcelain kilns of the northern regions, continued to thrive and, in fact, reached their peak during the Jin Dynasty. Though Jin ruled the central plains of China, it is generally agreed that Jin ceramic ware does not show any significant differences in form from that of the Northern Song Dynasty. On the Goryeo side, after the fall of the Khitans, exchange with the northern kilns would have continued unimpeded from 1125, when Jin conquered Liao and forced a

sovereign relationship on Goryeo, until at least 1153, when Jin remained based in the northern regions.

### Changes in Goryeo Ceramic Production

#### Secondary Firing Method

In the 11th century, a new aspect appeared in Goryeo ceramics production: a primary or bisque firing followed by a secondary firing to apply the glaze. After the Five Dynasties period, all of the kilns that utilized the techniques of the Yuezhou kilns employed only a single firing. But around the 11th century, when Korean style bowls with a *bi*-shaped foot were made in Gangjin, it became common to bisque fire the vessels first, and then fire once more after applying the glaze, with each vessel placed in a separate saggar.

It is not known exactly when or how the secondary firing method began in Korea, but it may have been connected with the Yaozhou (耀州) kilns, based on shards of bisque-fired wares that have been found at Yaozhou celadon kilns in Shaanxi province. The use of multiple firings allows for a thick application of glaze, which produces a deep jade-green or green color, thanks to the scattering and reflection of light in the glaze layer. Evidence of similar glazing and firing methods was also found during the excavation of the Jiaotan official kiln site (郊壇官窯址) in the city of Hangzhou (Fig. 5). Reflecting the influence of these official kilns, similar vessels, with thin walls and thick glaze fired multiple times, were produced in Longquan (龍泉), Zhejiang province, where ceramics production is known to have been active at that time (around the 12th century). But though the Yaozhou influence on Goryeo wares is considered to be the result of close exchange, the case remains in doubt since twice-fired vessels did not appear in Korea until sometime after the 11th century.



Fig. 5. Cross-section of multi-glazed celadon, excavated from Hangzhou (杭州). 12th century. (Photograph taken by Shu Peiqi 舒佩琦 at the Hongxi Museum (鴻禧美術館), Taipei).



There is another reason why it is problematic to assert that secondary firing in Korea was directly related to the tradition of the Yuezhou kilns. In Korea, the practice of secondary firing was not confined to the kilns of the central region, where early celadon was produced, but also developed in the kilns of the Gangjin area after the 11th century (Fig. 6). Thus, the source or channel for the introduction of secondary firing techniques to Goryeo between the mid-10th and early 11th century remains in question.

As for the origin of secondary firing, this method was already common in the production of the three-color (三彩, *sancai*) ware of the Tang Dynasty. In areas such as Shaanxi and Henan province, white-clay vessels were bisque-fired at high temperatures over 1,000°C, then covered in a low-fire glaze and fired again (Fig. 7). The bisque firing tradition of the kilns of northern China during the Tang Dynasty would have been maintained by the Song Dynasty. In the Yaozhou kilns in Shaanxi province, at least some of the wares produced during the period from the Five Dynasties to the early Northern Song Dynasty were fired twice. The techniques for making three-color wares spread through Shaanxi, Henan, and Hebei provinces and even into Inner Mongolia, and were also used in Balhae and Liao. Moreover, in addition to three-color wares, there is evidence that, in Liao and Jin territory, bisque firing was also used to make wares covered in colored or white glazes after the 11th century (Fig. 8). Therefore, based on international conditions at the time and the types of vessels that have been excavated together, the spread and development of secondary firing in Goryeo seems to date sometime between the late 10th and early 11th century, influenced by the active exchange of goods with Liao and the arrival of Liao artisans in Goryeo.

### Changes in Firing Supports

High quality celadon wares from the southern part of China from the mid- to late Five Dynasties period usually show traces of ring-shaped supports attached to the inside of the foot (Fig. 9). But evidence from Goryeo kiln sites indicates that refractory clay supports were attached to the foot rim for firing (Fig. 10). Ring-shaped supports appeared at kiln sites from the early Goryeo period, but their use seems to have sharply diminished thereafter in favor of refractory supports made from clay mixed with round lumps of black and white sand, similar to supports



Fig. 6. Bisque-fired shard (left) and twice-fired shards (right), from Yongun-ri no. 10 kiln site in Gangjin. 11th century. *Excavation Report of Yongun-ri Celadon Kiln Sites in Gangjin: Illustrations* (康津龍雲里靑磁窯址發掘調查報告書-圖版編). 1996. (Seoul: National Museum of Korea), p.18, fig. 22.



Fig. 7. Bisque-fired vessels before three-color glazing, from the Huangye (黃冶) kilns in Henan (河南) province. 8th century. Height 7.4 - 8.5 cm, footring diameter 7.5 - 8.2 cm. *New Archaeological Discoveries from the Huangye Kilns* (黃冶窯考古新發現). 2005. (Henan: Daxiang Publishing House), fig. 125.



Fig. 8. Three-color shards from the Gangwa (缸瓦) kilns in Chifeng (赤峰), Inner Mongolia. 11th century. *Liao Dynasty Ceramics* (遼代陶瓷), by Lu Jing (路菁). 2003. (Liaoning: Liaoning Huabao Publishing House), fig. 2-41.



Fig. 9. Footring and ring supports, from the Bangsan-dong kiln site in Siheung, Gyeonggi-do province. 10th century. (Haegang Ceramics Museum).



Fig. 10. Traces of supports on the footring of the bowl from the Seo-ri kiln site in Yongin, Gyeonggi-do province. 10th century. (Leeum, Samsung Museum of Art).



Fig. 11. Traces of supports inside the bowl from the Gangwa (缸瓦) kilns in Chifeng (赤峰), Inner Mongolia. 10th-11th century. *Liao Dynasty Ceramics* (遼代陶瓷), by Lu Jing (路菁). 2003. (Liaoning: Liaoning Huabao Publishing House), fig. 2-11.

found in most Liao kilns (Lu Jing 2003) (Fig. 11). Consequently, the use of only clay supports, with no ring support, is likely connected to the introduction of white porcelain production techniques from northern China. Interestingly, the clay supports used in Goryeo are quite similar in number, quality, and color to those used widely in Inner Mongolia throughout the Liao and Jin dynasties.

### Concurrent Production of Celadon and White Porcelain

Another indication of the close relations between ceramics production in Goryeo and northern China is the simultaneous firing of white porcelain and celadon wares in the same kiln. The early Goryeo kilns that first began making white porcelain were near the Goryeo capital, Gaegyeong, and they produced a high proportion of white porcelain (Haegang Ceramics Museum 2000; Ho-Am Art Museum 2003). However, some other early Goryeo kilns, such as those at Bangsan-dong and Seo-ri, produced mostly celadon at first and white porcelain later. White porcelain and celadon are made with different clay paste and have different glaze melting points, and hence usually require different firing conditions. In other words, it is not appropriate to fire them together. But these kilns used different clay and glaze to make the white porcelain, which serves as evidence of the concurrent production of celadon and white porcelain. (Figs. 12 and 13). In this context, which factors led to the production of white porcelain in Korea? In China, white porcelain was widely made in Hebei, Henan and Shanxi provinces, as well as in the autonomous region of Inner Mongolia. Production in Korea would naturally have begun when the techniques and forms entered Goryeo, along with actual vessels. Indeed, production of white porcelain was likely made possible by the arrival of artisans from northern China.

In the tenth century, the major white porcelain kilns in northern China were the Xing (邢) and Ding (定) kilns in Hebei province. White porcelain forms and techniques are generally thought to have been passed from these northern kilns such as Xing and Ding to neighboring kilns during the Liao and Jin dynasties (Fig. 14). The use of white porcelain compared to other wares started to increase after the 10th century in particular, when the northern part of China came largely under Liao control. Therefore, as



Fig. 12. Celadon and white porcelain dishes from the Bangsan-dong kiln site in Siheung, Gyeonggi-do province. 10th century. (Haegang Ceramics Museum).



Fig. 13. Celadon and white porcelain bowls from the Sangban kiln site in Seori, Yongin, Gyeonggi-do province. 10th-11th century. (Author's photograph).

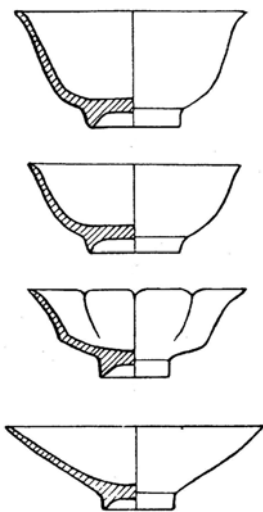


Fig. 14. Drawings of cross-sections of white porcelain from the Xing kilns. Jin Dynasty. *Xing Kiln Research* (邢窯遺址研究), by Yang Wenshan. 2007. (Lincheng: Kexue publishing), 330-340.

ceramics production focused more on white porcelain with the spread of techniques from the Ding and Xing kilns, greater diversity appeared in the northern style wares made in Liao territory kilns, and it is likely that similar developments occurred in Goryeo at the same time.

### Introduction of Northern Chinese Forms and Decorative Techniques

The diverse types of ceramic vessels produced in Goryeo—including bowls, dishes, bottles, ewers, jars, incense burners, cups and stands, covered bowls, and stationery items—show similar characteristics in both type and form with wares produced at the Ding, Cizhou (磁州), and Yaozhou kilns through the Northern Song, Liao, and Jin dynasties. This section investigates some of the characteristics of the wares that probably entered Goryeo through Liao and Jin and thereby influenced Goryeo wares.

### Restoration of Bowls with Bi-shaped Foot (*haemurigup*, 玉璧底)

In the mid-10th century, the following Korean kilns began production in the central-western part of the country, particularly in the vicinity of the Goryeo capital, Gaegyeong: seven kiln sites in Gyeonggi-do province (the Bangsan-dong kilns in Siheung, the Seo-ri Jungdeok kilns and Seo-ri Sangban kilns in Yongin, the Jungam-ri kilns in Yeosu, the Wonheung-dong kilns in Goyang, the Bugok-ri kilns in Yangju, and the Munae-ri kilns in Anyang); one the Gyeongseo-dong kilns in Incheon city adjacent to Gyeonggi-do province; two in Hwanghaenam-do province (the Wonsan-ri kilns in Baechon and the Bongam-ri kilns in Bongcheon-gun); the Taeseong no. 1 kilns in Nampo in Pyeongannam-do province; four kiln sites in Jeollanam-do province (the Yongun-ri kilns [Fig. 15] and the Samheung-ri kilns in Gangjin, the Undae-ri kilns in Goheung and the Seondeok-ri kilns in Haenam [Fig. 16]); and the Yonggye-ri kilns in Gochang, Jeollabuk-do province (Fig. 17).

By examining the stratigraphy at these sites, we can determine when certain styles and types of pottery became prevalent in Goryeo. In the case of bowls, those with a narrow footring were succeeded by those with a wide footring like a jade *bi* (a jade disk with a small hole in the middle). However, in





Fig. 15. Bowls with *bi*-shaped footings from the site of Yongun-ri kiln, Gangjin No. 10. 11th century. *Yongun-ri, Gangjin Celadon Kiln Site Excavation Report: Illustrations* (康津龍雲里青磁窯址 發掘調查報告書-圖版編). 1996. (Seoul: National Museum of Korea), p.9, fig. 4-1.



Fig. 17. Celadon bowls with *bi*-shaped footings from Yonggye-ri kiln site, Gochang. 11th century. (Wonkwang University Museum).



Fig. 16. Top and underside views of the same six celadon bowls with *bi*-shaped footings from Sindaek-ri kiln site, Haenam (the top views showing the characteristic circular depression in the center inside the vessel). 11th century. (Gwangju National Museum).

the Tang Dynasty, changes in the foot occurred in reverse order. Chinese bowls with a *bi*-shaped foot, characterized by a large diameter and wide footing, are generally found at kilns where celadon and white porcelain were made together, or at kilns that concentrated on white porcelain from the start. Also, only a small proportion of bowls with a *bi*-shaped foot have been discovered at Goryeo kilns that did not produce white porcelain, such as the kilns at Wonsan-ri in Baechon, Bugok-ri in Yangju, and Wonheung-dong in Goyang. The question is, why did the Goryeo kilns that produced white porcelain and celadon together, or that produced only white porcelain, such as the kilns at Bangsan-dong, Seo-ri and Jungam-ri, begin to produce bowls with a *bi*-shaped foot in the first place?

The onset of production of this style of bowl could possibly be explained in terms of usage, by the spread of the custom of tea-drinking, or perhaps in terms of production tradition, if we suppose that Goryeo artisans sought to restore a bowl type that had been popular during the Tang Dynasty. However, it is not plausible that Goryeo potters suddenly adopted a model of bowl that had been popular a century earlier. Most of the Chinese celadon wares discovered in Goryeo sites from after the 10th century have been bowls with a jade ring-shaped foot, and China was already moving toward new forms at the time. Moreover, the Goryeo bowls with *bi*-shaped foot have a circular depression engraved on the inside, a feature clearly distinguishing them from their Tang



counterparts.

This being the case, the next step is to ascertain which kilns were making vessels with a *bi*-shaped foot around the same time. Those that were making vessels unmistakably identified as bowls with a *bi*-shaped foot (disregarding differences in size and proportion) were in Liao and Jin areas. More specifically, such bowls were produced at the Gangwa kilns (缸瓦窯) in Chifeng (赤峰), Inner Mongolia (Figs. 18, 19) and the Lindong kilns (林東窯) in Shangjing, the Supreme Capital of Liao (Fig. 20).

Further evidence comes from examining archaeological sites that might shed light on the consumption of such wares. One group of sites that can be dated to that time is the royal tombs of the Liao Dynasty, located in the present-day autonomous region of Inner Mongolia. The Qingling (慶陵) or Qing mausolea in Bairin Zuoqi (巴林左旗), Chifeng, are presumed to be the tombs of three Liao emperors: Shengzong (成宗, r. 982-1031), Xingzong (興宗, r. 1031-1055) and Daozong (道宗, r. 1055-1101), whose tombs are named Yongqing (永慶), Yongxing (永興), and Yongfuling (永福陵), respectively. At the site of the Eastern Mausoleum (東陵, presumed to be the tomb of Shengzong, r. 983-1031), porcelain vessels with a wide, flat foot-rim have been discovered, and are thought to have been made at the Lindong kilns (Fig. 21). In addition, at the site of the Central Mausoleum (中陵, presumed to be the tomb of Xingzong, r. 1031-1055), shards presumably from northern celadon wares and white porcelain vessels with a *bi*-shaped foot have been found, which is helpful in dating the years in which the kilns mentioned above were active (Fig. 22).

In Korea, it seems that artisans or actual ceramic vessels from northern China entered Goryeo from the first half of the 10th century, when Goryeo and Liao formed a peace treaty and began diplomatic relations. Consequently, from the time that ceramics production began in Goryeo, northern artisans who had come to the Goryeo kilns could conceivably have made bowls with a *bi*-shaped foot alongside white porcelain. Related artifacts with a known production date include the white porcelain ewer (Fig. 23) found at the tomb of Prince of Weiguo (衛國王), the Imperial Son-in-Law, in Chifeng, Liaoning province (959), and the celadon lidded-ewers found with bowls with *bi*-shaped foot at the kilns of Bangsan-dong (Fig. 24).

In the late 11th century, diplomatic relations



Fig. 18. Bowls with *bi*-shaped footings from the Gangwa (缸瓦) kilns in Chifeng (赤峰), Inner Mongolia. 10th-11th century. *Liao Dynasty Ceramics* (遼代陶瓷), by Lu Jing (路菁). 2003. (Liaoning: Liaoning Huabao Publishing House), fig. 2-7.



Fig. 19. Bowl with *bi*-shaped footing from the Gangwa (缸瓦) kilns in Chifeng (赤峰), Inner Mongolia. 11th century. (Author's photograph).



Fig. 20. White porcelain bowl from the Lindong (林東) kilns in Shangjing (上京). 10th-12th century. *Qing Mausolea* (慶陵), by Tamura Jitsuzo (田村實造) and Kobayashi Yukio (小林行雄). 1953. (Kyoto: Kyoto University Press), fig. 10.



Fig. 21. Ceramics from the site of the Eastern Qing Mausoleum (慶陵 東陵). 10th-12th century. *Qing Mausolea* (慶陵), by Tamura Jitsuzo (田村實造) and Kobayashi Yukio (小林行雄). 1953. (Kyoto: Kyoto University Press), fig. 149.



Fig. 22. Ceramics from the building sites of the Central Qing Mausoleum (慶陵 中陵). 10th-12th century. *Qing Mausolea* (慶陵), by Tamura Jitsuzo (田村實造) and Kobayashi Yukio (小林行雄). 1953. (Kyoto: Kyoto University Press), fig. 150.



Fig. 23. White porcelain ewer from the tomb of Prince of Weiguo, the Imperial Son-in-Law, in Chifeng, Liaoning province. 959. (Liaoning Provincial Museum).



Fig. 24. Shards of celadon lidded ewers from the Bangsan-dong kiln site in Siheung, Gyeonggi-do province. 9th century. (Haegang Ceramics Museum).

between Goryeo and Song had been restored, and around the first half of the 12th century, when Goryeo began to actively accept Chinese culture, production of new types of celadon vessels from Northern Song began at the kilns in Gangjin and changes appeared in form and techniques. It is presumed that production of bowls with a *bi*-shaped foot, adopted from the northern part of China from the 10th century, continued until the early 12th century, undergoing gradual changes along the way.

### Inlay Technique

The representative decorative method of Goryeo ceramics from the 12th and 13th centuries is often purported to be the inlay technique (Jang Namwon 2008b), but excavations have revealed that the inlaid white porcelain was already being produced at early Goryeo kilns from the late 10th and early 11th century (Haegang Ceramics Museum 2000; Ho-Am Art Museum 2003). These inlaid white porcelains show two types of inlay methods prevalent at Goryeo kiln sites. The first involves etching into the surface of a *janggo* (杖鼓, a double-ended waisted drum), and then filling in the carved areas with white kaolin clay (Fig. 25). The second method involves covering the surface of the vessel in black slip, and then etching the design into the surface and filling the carved areas with white clay. For the latter method, the kaolin was applied very thickly to create the impression of a clay body with two layers. The Seo-ri kilns in Yongin show a subtle difference from the second method, in that the surface of the *janggo* was dressed smooth after the design was filled with white clay (Fig. 26).

Notably, the inlay technique has not been found in the kilns of southern China from this early period. Thus, although the basic production techniques of Goryeo ceramics came from the kilns of southern China, the discovery of these inlaid shards attests to the use of the inlay method of northern China. In other words, the influence of southern China was essential when Goryeo ceramics was initially established and developed, but soon there was an inflow of northern influence (Jeong Sinok 2007, 41-85).

Considering all the evidence, we can estimate that Goryeo inlaid wares were produced at the kilns in the central part of the country by at least the late 10th century. Such evidence predates the well-known inlaid celadon wares of the peak of Goryeo ceramics by a century. The technique of carving the design into



Fig. 25. Shard of an inlaid *janggo* with leaf decoration from the Bangsan-dong kiln site in Siheung, Gyeonggi-do province (note that a very small part of the inlay still remains in the carved indentation). 10th century. (Haegang Ceramics Museum).



Fig. 26. Shards of an inlaid *janggo* from the Jungdeok kiln site in Seo-ri, Yongin, Gyeonggi-do province. 10th century. *Report on Excavation of the White Porcelain Kiln in Seo-ri Yongin II* (龍仁西里白磁窯 發掘調査報告書). 2003. (Yongin: Ho-Am Art Museum), p. 256.



Fig. 27. Shards of inlaid celadon from the Jiezhuang kilns (界莊窯) in Hunyuan (渾源), Shanxi province. 11th century. (Shanxi Archaeological Research Institute, China). "Inlaid Pottery in Northern China during the Song and Jin Dynasties and the Relationship with Goryeo Inlaid Celadon (宋·金代瓷器象嵌工藝高麗象嵌青瓷關係)," by Jin Daesu ( ). 1998. In *Art History Forum* ( ) 7: 45-76, fig. 17.



the clay body and filling it with clay of another color has been found in Chinese kilns from around the same time. Notably, most Chinese kilns where this technique has been found are in northern China, indicating that the development of Goryeo celadon was not influenced solely by the southern Yuezhou kilns. The inlaid techniques found in northern China at the Cizhou kilns and others in Hebei province are diverse and similar to Goryeo inlay. In particular, the method of carving flowers on the surface and filling the space with white clay is reminiscent of the first Goryeo technique mentioned above. At the Jiezhuang kilns (界莊窯) in Hunyuan (渾源), Shanxi province, the design was first pressed into the surface with a stamp, and then the indented space was filled with white clay. Some examples of this method have been found in Liao tombs (Fig. 27) (Feng Xianming, 1987).

#### Underglaze Iron-painting Technique

From the late Five Dynasties to the early Song dynasty, black pigment was used to paint designs onto white surfaces at several kilns in Shaanxi, Henan and Hebei provinces, as well as at Jiangxi in the south, where migrating potters from the north were known to have settled. Throughout this time period, the influence of this decorative method spread through the Song, Liao, Jin and Yuan dynasties. Across China, from north to south, examples of black-painted porcelain with a white base have been found at many different kilns. At some kilns, such as the Xicun (西村) (Fig. 28), and Chaozhou (潮州) kilns in Guangdong province or the Cizao (磁竈) and Dehua (德化) kilns at the Qudougong (屈斗宮) archaeological site in Fujian province, black designs were sometimes painted straight onto the celadon clay body without first covering it in white slip. The same decorative technique was also used at several kilns in Liao territory which were under the influence of the Cizhou kilns (Fig. 29). Meanwhile, a shard from an iron-painted *janggo* was found in one of the later layers at the Silongkou (寺龍口) kiln, a major Yuezhou-type kiln in Zhejiang province, indicating the widespread influence of the iron-painting technique.

In the Goryeo Dynasty, wares made at the Jinsanri kilns in Haenam were entirely covered with iron-painted designs, while vessels made in provincial kilns were decorated with simpler designs (Jang Namwon 2004) (Figs. 30, 31). Goryeo iron-painted

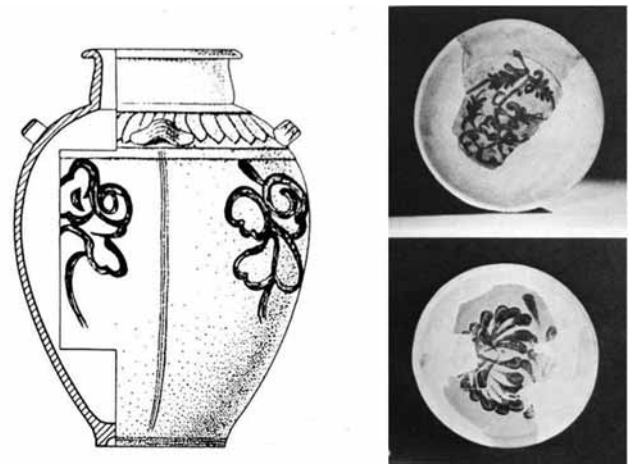


Fig. 28. Iron-painted ware from the Xicun (西村) kilns in Guangdong province. 10th-12th century. *Guangzhou Xicun Kilns* (廣州西村窯), edited by Chinese University of Hong Kong, Art Gallery (香港中文大學文物館合編). 1987. (Hong Kong: The Chinese University Press), figs. 33 (left) and 38-1 and 38-4 (right).



Fig. 29. Shards of iron-painted white porcelain from the Gangwa (缸瓦) and Jianguantun (江官屯) kilns in Inner Mongolia. 11th century. From *Liao Dynasty Ceramics* (遼代陶瓷), by Lu Jing (路菁). 2003. (Liaoning: Liaoning Huabao Publishing House), figs. 2-122 and 2-33.



Fig. 30. Shards of iron-painted *janggo* from the Jinsan-ri kiln site in Haenam, 12th century. (Mokpo National University Museum).



Fig. 31. Iron-painted *maebyeong* vase from the Jinsan-ri kiln site in Haenam, 12th century. (Mokpo National University Museum).

wares resemble northern Chinese wares, especially those from the Cizhou kilns, in both the composition of the design and the motifs of black-incised peonies and chrysanthemums. At the same time, they are also similar to wares that were popular at the southern kilns in the Guangdong and Fujian areas in terms of vessel type and decorative technique. As such, it is difficult to pinpoint the exact kiln or even the region where the iron-painting technique originated. It can be estimated, however, that the iron-painted *janggo*, excavated from the Bangsan-dong kilns in Siheung was produced around the late 10th to early 11th century. The iron-painting technique also appears in various other special types of vessels, as well as forms such as headrests. Of the Korean iron-painted wares, those with Chinese-style designs include the *janggo* shards found at the Jungdeok and Sangban kilns in Seo-ri, Yongin. Meanwhile, the Jinsan-ri kilns in Haenam contain evidence of a clearly northern Chinese technique, in which the surface is covered in iron pigment, then the background of the design is carved out (*sgraffiato*) and the design is filled with white slip. Ultimately, it appears that there was a slight time difference between the appearance of southern and northern techniques of iron-painting, but it is presumed that northern elements had a greater influence in this area.

### Conclusion

This article has examined the changes appearing in Goryeo ceramics during the 10th to 12th centuries to illustrate how those ceramics were influenced by the Liao and Jin dynasties of northern China. Though I have focused primarily on how ceramics production in Liao and Jin related to Goryeo, some other issues or areas that are perceived to be gaps in the history of the development of Goryeo ceramic production have also been raised. In particular, extending beyond the prevalent emphasis on Goryeo's relations with southern China makes it possible to investigate the lineage of Goryeo celadon and its production from various perspectives.

First, changes in production techniques were examined, particularly the introduction of secondary firing and the use of different supports for firing. The original technology for secondary firing had already become established through Tang three-

color ware, and from there it spread to the Shaanxi, Henan, and Hebei provinces in the north and then to Inner Mongolia. Thus, the prevalence of secondary firing in Goryeo seems to be more closely connected to northern China, specifically to the secondary firing method widely used in the three-color wares of Balhae and Liao, than with techniques used in southern China.

The introduction of new technologies led to the appearance of new techniques and forms in Goryeo ceramics, namely the concurrent production of white wares and celadon. These forms and techniques had been passed down through the 10th and 11th centuries at the Jin Dynasty kilns of northern China. When Liao took control of northern China, the kilns in the region began to concentrate on the production of white porcelain, in response to its increased usage. Over time, the Liao white wares became more diverse as the kilns adopted some of the techniques used at the Xing kilns, which had developed a strong tradition of producing bowls with a *bi*-shaped foot, as well as the techniques of the Ding kilns. Interestingly, the *bi*-shaped foot, which was so popular during the Tang Dynasty, reappeared in Goryeo. Contemporary Liao and Jin kiln sites have yielded vessels that were unmistakably bowls with a *bi*-shaped foot, although different in size and proportion. This combination of white porcelain and a *bi*-shaped foot was commonly found in both Goryeo and northern Chinese wares from the latter half of the 10th century.

Meanwhile, the production of inlaid wares began around the late 10th century at the brick kilns in the central part of the Korean peninsula. In Goryeo, the inlay technique was first used on white porcelain, which had probably been introduced from northern China, where white porcelain production was well developed. Goryeo wares were also directly and indirectly influenced by the iron-painting technique of the Cizhou kilns. These techniques first appeared in the 11th century in the kilns of the central region, and then spread to the southern region with similar designs and decorative motifs, which would indicate that the iron-painted wares in Goryeo developed in parallel with the general flow of early Goryeo ceramics.

In the early stages of Goryeo ceramics production, the influence of southern Chinese kilns was very strong, but later, as diplomatic relations and individual contacts with the northern dynasties became

more active, the production techniques and forms of the north spread throughout Goryeo. In particular, the Liao and Jin dynasties maintained relations with Goryeo for a long period of time, and they not only influenced Goryeo, but would also have assimilated some of Goryeo's strongest features in return. While this paper has focused on the new techniques and formal elements that entered Goryeo from northern China, future research is needed to examine the issue from a more comprehensive perspective, including how Goryeo ceramics influenced northern China and other parts of Northeast Asia. ㄸ

TRANSLATED BY CHO YOONJUNG

This paper was supported by the Korea Research Foundation Fund in 2007. This is a revised version of the paper previously published in *Art History* (美術史學) 23: 7-38.

#### Selected Bibliography

- Feng, Xianming (馮先銘). 1987. "Shanxi Hunyuan gu yaozhi diaocha, (山西渾源古窯址調查, A Study of the Hunyuan Kiln Site in Shanxi province)." In *Zhongguo gu taoci lunwenji* (中國古陶瓷論文集, *Collection of Essays on Ancient Chinese Ceramics*). Beijing: Forbidden City Publishing House of the Palace Museum; Hong Kong: Liangmu Publishing House.
- Goryeosa (高麗史, *History of Goryeo*), edited by Guksa pyeonchan wiwonhoe. <http://db.history.go.kr/KOREA/>
- Guo, Zhizhong (郭治中). 2005. "Chifeng Gangwayao yizhi chutu Liao Jin ciqu ju yao (赤峰缸瓦窯遺址出土遼金瓷器學要, Liao and Jin Ceramics Excavated from the Gangwa Kiln Site in Chifeng)." In *Zhongguo gutaoci yanjiu* (中國古陶瓷研究, *Studies on Ancient Chinese Ceramics*) vol. 11. Beijing: Forbidden City Publishing House of the Palace Museum
- Haegang Ceramics Museum. 2000. *Bangsang daeyo* (方山大窯, *The Bangsang-dong Kilns*)
- Hasebe, Gakuji (長谷部樂爾). 1981. "Kindai no Toji (金代の陶磁, The Ceramics of the Jin Dynasty)." *Sekai toji zenshu* (世界陶磁全集, *Ceramic Art of the World*) vol. 13. Tokyo: Shogakukan.
- Hebei Provincial Institute of Cultural Relics and Handan Office for the Preservation of Ancient Monuments and Relics, Department of Archaeology of Beijing University. 1997. *Guantai cizhou yaozhi* (觀台磁州窯址, *Cizhou Kiln Sites in Guantai*). Beijing: Wenwu Publishing House.
- Hebei Provincial Institute of Cultural Relics and Lincheng County Office for the Preservation of Ancient Monuments and Relics, Department of Archaeology of Beijing University. 2007. *Xingyao yanjiu* (邢窯研究, *Study of the Xing Kilns*). Beijing: Wenwu Publishing House.
- Ho-Am Art Museum. 2003. *Yongin seoribaekja yo balgul josa bogoseo* (龍仁西里白磁窯發掘調查報告書, *Report on Excavation of the White Porcelain Kiln in Seo-ri Yongin II*). Yongin: Ho-Am Art Museum.



- Jang, Namwon ( ). 2004. "Goryeo sidae cheolhwa jagi ui seongnip gwa jeongae ( , Establishment and Development of Iron-painted Ceramics in the Goryeo Dynasty)." *Misulsa nondan* ( , *Art History Forum*) 18: 41-71.
- . 2006. *Goryeo junggi cheongja yeongu* ( , *Celadon during the Mid-Goryeo Period*). Seoul: Hyeon.
- . 2008a. "Goryeo jeongi haemurigup wan ui jisok hyeon-sang e daehan churon ( , Study on the Continued Production of Bowls with Bishaped Foot in Early Goryeo)." *Hoseo sahak* ( , *Journal of Hosuh History*) 50: 321-353.
- . 2008b. "Goryeo cho junggi jagi sanggam gibeop ui yeonwon gwa baljeon ( 初·中期 瓷器 象嵌技法 , The Origin and Development of the Inlay Technique on Early and Mid-Goryeo Ceramics)." *Misulsa hakbo* ( *美術史學報, Journal of Art History*) 30: 159-192.
- Jeong, Sinok. 2007. "11segimal- 12segijeonban goryeocheongja ae boineun junggukdoja ui yeonghyang (11 -12 , The Influence of Chinese Ceramics Found in Goryeo Ceramics during the Late 11th – Early 12th Century)." *Misulsa hak* ( *美術史學, Art History*) 21: 41-85.
- Jin, Daesu ( ). 1998. "Song geumdae bukbang jiyek jagi ui sanggam gongyewa Goryeo sanggam cheongja ui gwangye (宋·金代 瓷器 象嵌工藝 高麗 象嵌青瓷 關係, Inlaid Pottery in Northern China during the Song and Jin Dynasties and the Relationship with Goryeo Inlaid Celadon)." *Misulsa nondan* ( , *Art History Forum*) 7: 45-76.
- Lu, Jing (路菁). 2003. *Liaodai taoci* (遼代陶瓷, *Liao Dynasty Ceramics*). Liaoning: Liaoning Huabao Publishing House.
- Meng, Yaohu (孟耀虎). 2006. "Hunyuan Yao xiangqian qingci (渾源窯鑲嵌青瓷, Celadon with Inlay Technique Developed at the Hunyuan Kiln)." *Zhongguo gutaoci yanjiu* (中國古陶瓷研究, *Study of Ancient Chinese Ceramics*) vol. 11. Beijing: Forbidden City Publishing House of the Palace Museum.
- Mikami, Tsugio (三上次男). 1981. "Botsugai Ryo Kin Gen toziki seisan no rekishiteki haikai (渤海遼金元陶磁器生産の歴史的背景, The Historical Background to the Production of Pottery in Balhae, Liao, Jin, and Yuan)." *Sekai toji zenshu* (世界陶磁全集, *Ceramic Art of the World*) vol. 13. Tokyo: Shogakukan.
- Shaanxi province Institute of Archaeology and Yaozhou Ceramics Museum. 1998. *Songdai Yaozhou yaozhi* (宋代耀州窯址, *The Yaozhou Kilnsites of the Song Dynasty*). Beijing: Wenwu Publishing House.
- Tamura, Jitsuzo (田村實造) and Kobayashi Yukio (小林行雄). 1953. *Keiryō* (慶陵, *Qing Mausolea*). Kyoto: Kyoto University Press.
- Tang, Junjie (唐俊傑). 2010. "Ruyao, Zhanggongxiangyao yu Nan Song guanyao (汝窯, 張公巷窯與南宋官窯, Ru Kilns, Zhanggongxiang and Southern Song guan Kilns)." *Kokusai shinpoji-yamu HokuSo Joyoseiji no nazo ni semaru* (國際シンポジウム北宋汝窯青磁の謎にせまる, *International Symposium: Approaching the Mystery of Northern Song Celadon Wares of the Ru Kilns*), held at The Museum of Oriental Ceramics, Osaka (大阪市立東洋陶磁美術館).
- Xu, Jing (徐兢). 1124. *Xuanhe Fengshi Gaoli Tujing* (宣和奉使高麗圖經, *Illustrated Record of the Chinese Embassy to the Goryeo Court in the Xuanhe Era*).
- Yi, Jongmin ( ). 2001. "Siheung bangsandong chogi cheongja yoji chultopumeul tonghae bon jungbu jiyek jeonchugyo ui unyeong sigi ( , The Brick Kilns Period in the Central Region of Korea as Viewed from the Early Goryeo Ceramics Excavated from the Bangsan-dong Kiln sites in Siheung)." *Misulsa hak yeongu* ( *美術史學 研究, Study of Art History*) 228/229.
- Yuba, Tadanori (弓場紀知). 2000. "Ryo jokyohu linto yoshi saikento (遼上京府林東窯址再検討, Further analysis of Kiln Sites in Chifeng and Lindong)." *Idemitsu bizyutsukan kenkyu kiyo* (出光美術館研究紀要, *Journal of Art Studies of the Idemitsu Museum of Art*) 6.