



Fig. 1. Type I kiln site at Bangsan-dong, Siheung. *Bangsan daeyo* (芳山大窯). (Icheon: Haegang Ceramics Museum, 2001, p. 230).

Relocations of the Main Celadon Production Sites during the Early Goryeo Dynasty

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Introduction

For more than 90 years, scholars have researched and debated when and how celadon production began in the Korean peninsula. Questions about the origins of Korean celadon production are important for various reasons, primarily for dating and describing the appearance and spread of high-fired ceramics in the peninsula. These issues are also related to other topics, such as charting the eventual decline of Korean celadon.

There are two primary theories regarding the origins of celadon in Korea. According to the first theory, celadon production began in the southwest region, including Gangjin, around the 9th century, during the Unified Silla Period (Choe Sunu 1978; Yoshioka Kansuke 1979; Kim Jaeyeol 1988; Jeong Yangmo 1989; Choe Geon 2006). The other theory argues that celadon production began in the early Goryeo Dynasty, around the 10th century, corresponding to the Five Dynasties and Northern Song era in China (Yun Yongi 1986, 2006; Yi Huigwan, 2003). In my previous publications, I argued that celadon emerged in Korea around the second quarter of the 10th century; that the first celadon kilns were located in the midwest part of the Korean peninsula, around Gaeseong; and that the main production sites were moved to the southwest part of the peninsula once celadon production began to proliferate (Lee Jongmin 2000, 2002, and 2003). My arguments were based on new archaeological evidence found in Ko-

rea and China since the late 1990s.

However, it is important to note that the relocation of the kilns to the southwest coastal area of South Jeolla Province meant leaving the Goryeo capital of Gaeseong, which was the largest market for ceramic products. The question of why the main kilns would have moved so far from the main market has not yet been adequately addressed. Hence, this paper considers this question from a historical perspective by focusing on political and diplomatic events of the late 10th and early 11th century, particularly the process of organizing and establishing the governing system of Goryeo in outlying areas.

Early Celadon Kiln Types and Production Sites

Kiln Types

Celadon was produced in various locations during the early Goryeo Dynasty. The early celadon production sites can be classified into four types, depending mainly on the size of the kilns and the material that they were made from.

Celadon was first produced in large brick¹ “dragon

¹ In this article “brick” refers to unfired mud-bricks that were formed out of earth/clay and then naturally dried. After the kilns were put into use, the heat from firing the ceramics also caused the interior bricks to be fired, while the exterior layer(s) of bricks remained unfired.



Fig. 2. Type II kiln site at Yonggye-ri, Gochang. *Excavation Report of Districts That Will Be Submerged by Asan Dam in Gochang* (고창 아산댐 수몰지구 발굴조사 보고서). (Iksan: Mahan Baekje Center at Wonkwang University, 1985, p. 231).

kilns,” based on those in southern China, which I will denote as Type I kilns (Fig. 1). Type I kilns were typically about 40 meters in length, with an average of seven openings on each side, and an interior that was about two meters wide; they are characterized by their huge size and by the use of bricks as the primary building material. They have been found in Baecheon and Bongcheon in Hwanghae Province; Goyang, Yangju, Siheung, and Yongin in Gyeonggi Province; and Seosan in South Chungcheong Province.

Type II kilns were also quite large (around 40 meters in length), but they were made with a combination of bricks and earth (Fig. 2). Large brick kilns demanded an advanced degree of technical skill to build and operate, as well as considerable effort to maintain, so it seems that in many cases, kilns that started out as Type I kilns (made with only brick) were eventually modified into Type II kilns (made with both earth and brick). Such kilns have been found in Yonggye-ri, Gochang, North Jeolla Province, and in Jungdeok and Sangban, Seo-ri, Yongin, Gyeonggi Province. In particular, the Seo-ri Kilns in Yongin exemplify the case of a Type I brick kiln that was modified into a Type II brick-and-earth kiln.

Type III kilns are brick kilns, like Type I kilns, but at around 20 meters in length, they are only about half the size of Type I kilns (Fig. 3). As mentioned, the massive Type I kilns were costly and difficult to maintain, which explains why their size was eventually reduced. Type III kilns have been found in Yeosu, Gyeonggi Province; Gongju, South Chungcheong Province; Jinan, North Jeolla Province; and Daegu



Fig. 3. Type III kiln site at Jungam-ri, Yeosu. *Goryeo White Porcelain Kiln Sites in Jungam-ri, Yeosu* (여주 중암리 고려백자요지). (Yeosu: Gyeonggi Provincial Museum, 2004, color plate 1).

and Chilgok, North Gyeongsang Province. The only actual excavation of a type III kiln took place in Jungam-ri, Yeosu, and the excavation confirmed that the Jungam-ri kilns were also changed from an initial brick kiln into a final earth kiln, like the type II kilns. I have categorized them as type III because of their considerably reduced size. Type III kilns are considered to be evidence of “downsizing,” as the celadon technique used in Type I kilns spread to other regions.

Type IV kilns are small earth kilns, found mainly in South Jeolla Province (Fig. 4). These kilns were made from a combination of earth, sand, and gravel,



Fig. 4. Type IV kiln site at Yongun-ri, Gangjin. (Gwangju National Museum).

so they were completely different from brick kilns in terms of both material and construction method.² Many Type IV kilns were constructed along the coastal area of South Jeolla Province, including at excavated sites in Yongun-ri and Samheung-ri, Gangjin. According to the excavations, these kilns are about 10 meters long and 1-1.4 meters wide, and they have two or three side openings. Shards from the different sites shared many commonalities in terms of the production methods and the kinds of ceramic wares produced, so the Type IV kilns in different areas are thought to have been similarly constructed and operated.

According to the most recent excavations and ground surveys, the earth kilns of Type II and Type

IV were in operation later than the typical brick kilns found scattered throughout the mid-west of the Korean peninsula.

Relocation of the Sites for Celadon Production

The four types of kilns show differences in size, material, and construction method. In addition, there are slight differences in the styles of celadon that these various types of kilns produced. Such differences have not been widely noted because the kiln types were contemporaneous, to a certain extent, and because the differences are quite slight and gradual. However, I argue that the four types of kilns reflect the process of moving the sites of the ceramic industry during the early Goryeo Dynasty. My argument is premised on two facts: first, each kiln type had a different geographical distribution, and second, the consumption of celadon spread and increased over

² Earth kilns were made from earth/clay combined with bundles of shrubby vegetation such as bush clovers (*Lespedeza*) used to support the walls and the ceiling. After these kilns were put into use, the interior walls would be burnt from the firing, causing the earth/clay on the inside to become fired.



Fig. 5a. Mounted cup inscribed: "Third year of Sunhwa" (淳化三年, 992). Excavated from a kiln site at Wonsan-ri, Baecheon. *Joseon Yujeokyumul Dogam 12* (조선유적유물도감 12). (Pyeongyang: Joseon Yujeokyumul Dogam Compilation Committee, 1992, p. 312).

time. I will now examine the process by which these celadon production sites were relocated.

Type I kilns show typical features of the Chinese ceramic industry. The size, material (i.e., brick), and construction method of the kiln, as well as the method of glazing the ceramics, the equipment for firing, and the types and forms of celadon wares produced were all borrowed from the Yuezhou (越州) kilns of China. At the time, the technology for producing porcelain (including celadon) was quite new to the Korean ceramic industry. Thus, the type I kilns and celadon products reflect the early phase of the transfer of Chinese celadon technology. It has been confirmed that the type I kilns began operating in the second quarter of the 10th century, in areas including Hwanghae, Gyeonggi and South Chungcheong Provinces. Notably, however, it seems that the type I kilns did not even remain in operation for 100 years. The crucial evidence for this assertion came from the excavation of the second kiln in Wonsan-ri, Baecheon, Hwanghae Province. Ritual wares with a *Sunhwa* (淳化) inscription (Figs. 5a and 5b) were excavated from the top layer of the kiln floor, representing the conditions at the time of the kiln's closing. They refer to the Chunhua reign period (990–993) of the Song



Fig. 5b. Detail of the inscription on the underside of the footring. *Joseon Yujeokyumul Dogam 12* (조선유적유물도감 12). (Pyeongyang: Joseon Yujeokyumul Dogam Compilation Committee, 1992, p. 312).

dynasty, thus indicating that the kiln stopped operating in the late 10th century. Along with these shards, excavations yielded numerous tea bowls with the pre-*haemuri* or fairly narrow footring (Fig. 6). Such bowls predate bowls with the *haemuri* or moon-halo footring (Fig. 7), which means that they must be from the early phases of celadon production.³

³ Bowls with the *haemurigup* or moon-halo footring (해무리굽) are the representative ceramic ware of the 11th century, featuring a wide footring. Therefore, a bowl with the pre-*haemuri* footring (선



Fig. 6. Examples of the pre-*haemuri* footring. Excavated from a kiln site at Wonsan-ri, Baecheon. (Author's photograph).



Fig. 7. Bowl with the *haemuri* (moon-halo) footring. *Masterpieces of Goryeo Celadon* (고려청자 명품특별전). (Seoul: National Museum of Korea, 1989, p. 14).

The celadon produced in Type I kilns was mainly produced for use in Gaeseong, the capital of Goryeo. But the majority of type I kilns stopped operating in the late 10th or early 11th century, at the same time that type II and III kilns were emerging in other areas around the nation, away from the capital. Type IV kilns are limited to the coastal areas of Gangjin, Haenam, Jangheung, and Goheung in South Jeolla Province, with scores of kilns gathered in each area. Thus, at the same time that the type I kilns were being abandoned, new types of brick kilns began appearing in other regions. These new kilns were either reduced in size, or else made with the new construction method, wherein an initial brick kiln was completed as a earth kiln.

To summarize, the large brick kilns that were prevalent during the early phase of celadon production were replaced by either mid-sized brick or earth kilns, which were then replaced by small earth kilns. Celadon production was initially centered in the area of Gyeonggi Province, but it eventually spread nationwide. The later kilns were concentrated in the coastal areas of South Jeolla Province, indicating that the central sites for producing celadon had shifted southward. Notably, all of these geographical changes happened between the late 10th and early 11th century.

Social and Political Changes in the Late 10th and Early 11th Century

Establishing Rule over Regional Provinces: King Seongjong through King Hyeonjong

In the late 10th and early 11th century, the kingdom of Goryeo was ruled by King Seongjong (成宗 r. 981-997), King Mokjong (穆宗, r. 997-1009), and King Hyeonjong (顯宗, r. 1009-1031). In order to understand the process by which the center of Goryeo ceramic production was relocated, it is essential to examine the great political and social changes that swept through the kingdom during this time.

First, in order to securely stabilize the monarchy and the centralized system of government, King Seongjong established and re-organized the kingdom's institutional systems in accordance with a

firm Confucian political ideology. Feeling that the kingdom's political policies were too closely intertwined with Buddhist principles, the king approved a lengthy proposal by Confucian scholar Choe Seungro (崔承老, 927-989), consisting of 28 articles aimed at correcting various problems and corruptions through the creation of new systems. The king also appointed Confucians, including Choe Seungro, to important governmental positions. As part of the new emphasis on Confucianism and the suppression of Buddhism, the *jongmyo* (宗廟, Royal Ancestral Shrine) and *sajik* (社稷, guardian deities of the state) were established, in order to bolster the power, influence, and legitimacy of the monarchy through strong Confucian political ideology. Reflecting such political changes, kilns around the capital were ordered to begin producing wares for Confucian rites. This is the political situation that led to the production of ritual wares with the *Sunhwa* (淳化) inscription that were found in the kilns in Wonsan-ri, Baechon in Hwanghae Province.

Moreover, King Seongjong exerted tremendous efforts to establish a system for governing the outlying regions of his kingdom. In the third year of his reign (983), he officially divided the kingdom into 12 *mok* (牧, administrative divisions), and for the first time, officials directly appointed by the central government were dispatched to the regions. Then, in the fifteen year (995), in order to further strengthen the central government's control of the regions, he reformed the *gunhyeon* (郡縣, commanderies and districts) system, which had been in effect since 940 (the 23rd year of King Taejo). In the process, the system of 12 *mok* was also reformed, creating a system of 12 *jeoldosa* (節度使, military commissioners). In the new *juhyeon* (州縣, region and districts) system, the two separate divisions of *gun* (郡) and *hyeon* (縣) were merged into *hyeon* (縣, districts), under the supervision of a *ju* (州, region). In effect, this reform represented a demotion for local clans, whose leaders were subsumed into the central aristocracy, thereby strengthening royal authority. However, the system did not last long before it was again revised.

The first phase of establishing Goryeo's new political and social system is considered to have been completed during the reign of King Hyeonjong, who continued King Seongjong's reformation and centralization of the government by dispersing the power and authority of high ranked officials. In 1012

해무리굽) are estimated to have been produced in the 10th century. Also, the pre-*haemuri* bowls greatly resemble the shape of 10th-century bowls from the Five Dynasties in China.

(the fourth year of Hyeonjong's reign), he extensively restructured the system for governing regional affairs, creating a hierarchy with four *doho* (都護, protectorates) and eight *mok* (牧) at the top, controlling 56 *ju* (州) and *gun* (郡), as well as 28 *jin* (鎭, garrisons). The central government directly appointed and dispatched officials to *doho*, *mok*, *ju*, *gun*, and *jin*. By 1018 (the tenth year of Hyeonjong's reign), even the lowest ranking administrative divisions were being actively controlled by the central government of Goryeo, and the administrative system by which the royal court governed the outlying regions was almost complete.

Khitan Invasions and the Construction of Fortresses

In the 10th century, there was little diplomatic conflict between the Goryeo and Song Dynasties, and the Khitans, because all three were primarily concerned with internal issues related to the founding of their nations. However, the peace was shattered in 986 when Song waged war against the Khitans, in order to reclaim the Sixteen Prefectures (燕雲十六州, the area around present-day Beijing).

Today, most Koreans know about the three major Khitan (Liao) invasions of Goryeo that occurred in the late 10th and early 11th century, but there were actually a total of six such invasions: one during the reign of King Seongjong and five during the reign of King Hyeonjong. The first Khitan attack came in the 12th month of 992 (the 12th year of King Seongjong), and it was motivated by three major claims. The Khitans demanded that Goryeo cut diplomatic relations with Song China, open diplomatic relations with the Khitans, and return to the Khitans the former Goguryeo territory which Goryeo now occupied. The conflict ended without much warfare, as negotiations soon produced a truce wherein Goryeo and the state of Liao established formal diplomatic relations. According to the terms of the truce, the Khitans allowed Goryeo to incorporate the Six Prefectures (江東六州, the area east of the Amnok River [鴨綠江]) into its territory. In return, the Goryeo court agreed to become a vassal under the Liao, including, as an amiable gesture, temporarily adopting the Khitan era name.

The Khitans attacked Goryeo for the second time in 1009, during an internal power struggle that had arisen around King Hyeonjong's accession to the throne. Another Khitan invasion in 1010 was focused on the area surrounding the Goryeo capital, which

sustained massive damages and eventually fell, forcing King Hyeonjong to flee far south to Naju. With the exception of these two invasions, the other four Khitan invasions were all related to the Six Prefectures. By the fourth invasion, around 1015 and 1016, King Hyeonjong's rule had become stabilized, enabling Goryeo to improve the strength of its military forces. For the sixth war, between 1020 and 1021, both Goryeo and the Khitans mobilized huge military forces. Finally, the Khitan army suffered terrible losses, forcing them to withdraw, and they did not attempt any more invasions after that.

During the 28-year war with the Khitans, Goryeo was constantly preparing for the next invasion, causing them to reform their military system and to build an extensive network of fortresses. These war preparations must have considerably affected the ceramic industry that was then centered in the midwest of the peninsula. For example, just after the second war in 1011, King Hyeonjong changed the Goryeo military system by creating a standing army, in order to make it easier to mobilize troops. As a result, a significant proportion of the male workforce was incorporated into the military, with a severe impact on many industries, including ceramics. With this measure, it would have been very difficult to operate the kilns at full strength.

Because the area around the capital was under constant threat in the early 11th century, war preparations took precedence over daily economic activities. This situation must have been a great obstacle to the brick kilns around the capital. It is thought that a single large (40-meter) brick kiln would have required (at least) dozens of workers, and some areas had multiple kilns operating at the same time, meaning hundreds of people from a given area might have been working for the ceramics industry. Thus, the ceramics industry employed a considerable percentage of the nation's workforce, especially in the area around the capital. However, it is highly likely that many of those ceramic workers would have been frequently mobilized as part of the war efforts, and I believe that such situation is what led to the disappearance of the large brick kilns (Type I) in the early 11th century.

Another aspect of war preparations that would have further hindered ceramic production in the capital area of the midwest was the extensive efforts to build fortresses. For example, Naseong (羅城) for-

treasury was built in the capital in 1029 (the 21st year of King Hyeonjong). The fortress had an enormous circumference of 10,666 *bo* (步). One *bo* [step or pace] is 1-1.25 meters, so the total area was approximately 11-13 square kilometers, making it large enough to accommodate many buildings and houses. Approximately 250,000 people participated in this massive construction project. During the reigns of King Mokjong and King Hyeonjong, there were dozens of projects to build new fortresses and repair existing ones. In particular, about 20 military building projects took place in the vicinity of the capital, in Bukgye, Gaeseong, and Seogyong, all of which were directly related to defense against the Khitans. Given that a total of about 170 fortresses are thought to have been built in the course of the near 500-year history of the Goryeo Dynasty, having to build 20 new fortresses in a few decades, all clustered in the region of the capital, represents a truly massive undertaking. Multiple ongoing construction projects of such magnitude would have occupied a very high percentage of the manpower in the region. From this perspective, the ceramic workers who formerly staffed the large brick kilns around the capital were almost certainly mobilized, either as part of the military or of the labor force building the fortresses.

In addition, King Hyeonjong also initiated several large-scale construction projects related to Buddhism. Unlike King Sejong, who suppressed Buddhism in favor of Confucianism, King Hyeonjong was a strong supporter of Buddhism, and he helped to establish many Buddhist temples. He also restored Buddhist rites such as *palgwanhoe* (八關會), a rite for the peace and prosperity of the royal family and the country, which had been abolished by King Sejong. Hyeonjong revived this ritual in order to encourage the national fighting spirit during wartime, and after the war, it was elevated into a national rite.

The mass construction of fortresses and Buddhist temples not only depleted the region's manpower, but also the supply of timber. Historical records show that, in the third month of 1013 (the fifth year of King Hyeonjong), it was illegal to cut down pine trees except for official government use. Thus, the government's demands for huge quantities of timber caused them to restrict and control the private use of timber, which would have been fatal to the ceramics industry, which required great quantities of firewood to operate its large brick kilns.

All together, under King Hyeonjong, the reformation of the military system for easier mobilization, the large-scale construction of fortresses and temples, and the prohibition against the private use of pine trees would have made it virtually impossible to produce ceramics in the capital region with any consistency or stability. As a result, with few exceptions, the Type I brick kilns in the area around Gaeseong stopped operating in the early 11th century, and the kilns in the southwest regions began to emerge as an alternative.

Rise of Naju as Center for Celadon Production

Naju-mok and Ceramic Production

Naju did not have a significant status in history until the Goryeo Dynasty. During the Three Kingdoms Period, the area around Naju was the last region to join the Baekje Kingdom, indicating that the local clans there were more powerful than in other regions. The Naju area has a history of accumulating wealth, thanks to its fertile soils and its advantageous geographical location, which provides easy access to international trade. Wang Geon (王建, 877-943), who founded the Goryeo Dynasty as King Taejo (太祖, r. 918-943), was stationed in the Naju region for long time, so the area was one of his strongest political sponsors.

When King Sejong reformed the system for governing the outlying areas, Naju was officially declared one of the 12 *mok*, thereby elevating the status of the region. According to the Geographical Monograph of *Goryeosa* (高麗史, *History of Goryeo*), Naju-mok had control over 58 *gun* and *hyeon*, and its territory covered the majority of present-day South Jeolla Province, as well as Gochang in North Jeolla Province. Hence, Naju-mok enjoyed very high status during the Goryeo Dynasty.

Two of the local powers with which Wang Geon joined forces were the O family from Naju and the Choe family from Yeongam. In fact, Wang Geon's second wife, Queen Janghwa (莊和王后, c. 894-c. 934), was from the O family from Naju, and she became the mother of King Hyejong (惠宗, r. 943-945), the second king of the Goryeo Dynasty. As such, the Naju region played an important role from the early period of Goryeo, and shared a very close

relationship with the royal family. Adjacent to Naju, Yeongam was also a key location along an important transportation route. Greatly trusted by King Taejo since 924 (seventh year of King Taejo), Choe Jimong (崔知夢, 907-987) of the Choe family from Yeongam played an important role in King Taejo's policy decisions. As such, the local clans from Naju and its neighboring area were major players during the establishment and early administration of the Goryeo Dynasty, and their status was consistently elevated and reinforced throughout the period.

As evidence of Naju's elevated status with the Goryeo court, King Hyeonjong chose to take refuge there in 1010 when he fled the capital during the third Khitan invasion. It is believed that Naju was not the first choice to shelter the king, but he eventually went there because he felt it was the safest place during a national emergency. Furthermore, in 1031 (23rd year of King Hyeonjong), Wang Rim (王琳, dates unknown) of the royal family was appointed as both the chief minister of Goryeo and governor of Naju-mok. This royal appointment clearly demonstrates that Naju-mok carried greater significance with the early Goryeo court than the other mok.

Naju-mok deserves special consideration in this paper because it became the location for many major sites of celadon production, including Gangjin, Haenam, Jangheung, and Goheung. Excavations have confirmed that the kilns in the Naju region are small earth kilns (Type IV). It is estimated that the first kiln sites in the Naju area to produce ceramics were those in Punggil-ri, Jangheung; Undae-ri, Goheung; and the kiln 63 in Yongun-ri, Gangjin. This estimation is based on the presence of bowls with the pre-*haemuri* footring among artifacts from those kilns. As mentioned earlier, bowls with the *haemuri* or moon-halo footring are the benchmark products of the 11th century, so bowls with a pre-*haemuri* footring are considered to have been produced in the 10th century. Only a small quantity of shards from bowls of this type were discovered in these kiln sites, but that is enough to imply that these kilns started producing around the late 10th century, the same time that the large brick kilns were dying out. The production of bowls with the pre-*haemuri* footring was especially rare in kilns in the southwest of South Jeolla Province, indicating that the kilns where the shards were found were part of the formative years of the celadon industry in that area. However, it seems that all three

of these kiln sites were established prior to the extensive reformation of the system for governing the regional provinces.

In contrast, it is known that a great number of kilns operated in the area after the reformation of the regional governance. In-depth studies of the surfaces at multiple sites have verified the presence of some 54 kilns in Gangjin and 56 more in Haenam, but there were surely many more kilns in the area that shared similar characteristics with the official kilns. Excavations in the southwest area have uncovered abundant quantities of celadon wares with the *haemuri* footring, indicating that celadon production began to flourish in that area in the 11th century. We can estimate that this increase in ceramic production was the direct result of the official policy to establish and promote many new kilns in the southwest area in the 11th century. Such evidence also implies that there was some system in place to control ceramic production in the Naju area. The Khitan invasions, the restructuring of the system for regional governance, and the operational hardships of the brick kilns coincided with one another, and the significant increase of the number of kilns in the southwest area of South Jeolla Province was a direct result of these circumstances. Thus, I believe that this background explains the appearance of kilns in the southwest area in the late 10th and early 11th century, and that these kilns were officially developed in order to address the obstacles facing ceramic production in the capital area.

It is not clear how long Naju and its neighboring regions continued to enjoy its special status and close relationship with the royal family that had begun during the early years of the Goryeo Dynasty, but it is believed that the Naju area still maintained its close emotional and political ties with the Goryeo court after the central government's reformation of the system of regional governance was finalized in 1018 (the tenth year of King Hyeonjong).

I will now discuss the status of Naju-mok in terms of ceramic production. From the first years of the Goryeo Dynasty, celadon production was essential as one of the higher value-added businesses. Thus, from the beginning, it was planned and controlled by the Goryeo court. Considering the amount of production, the kiln operation, the mobilization of manpower, as well as the immense profit from the production, it is doubtful that any local clan had the

capacity to handle such a huge undertaking. For example, excavations of a type I kiln in Bangsan-dong, Siheung showed that these large brick kilns could hold as many as 6,670 bowls or dishes per firing. Efficient operation of such a massive kiln would have required meticulous planning and execution of every aspect of the production, from the selection of materials, shaping, firing, packaging, to the distribution of the final products. In other words, it would have been impossible to operate a type I kiln without some form of systematic structure, and such structure could only have come from the Goryeo court. Furthermore, it is known that Chinese ceramicists played an important role in early celadon production, and only the royal court would have had the authority and the ability to integrate them into the system of ceramic production.

Thus, when ceramic production became impractical, or perhaps even impossible, in the mid-west of the Korean peninsula, the main celadon production sites were relocated to the southwest. It is my contention that this shift was not caused by market factors, but rather was the result of measures directly passed by the Goryeo court. The main kilns for producing celadon moved to Naju-mok and its jurisdiction, an area known as a strong ally of the central government. Based on this close and favorable relationship, Naju-mok assumed the major responsibility of successfully operating the ceramic industry and producing celadon for the court.

Establishment of Maritime Routes for Transporting Ceramics

During the Goryeo Dynasty, taxes were collected from the regions via the *gunhyeon* system, whereby crops and other local specialties were sent to the capital by ship. In 992 (12th year of King Seongjong), the maritime transportation system was institutionalized, which was devised as a secure delivery system for the taxes.

By the early years of King Seongjong's reign, it was known that the local clans routinely exploited and manipulated any transportation activities at local ports. As such, the central government considered it inefficient to try to manage and supervise some 60 local ports, so they adopted the system of 12 *jochang* (漕倉, warehouses for collected tax goods). The 12 *jochang* were Deokheungchang, Heungwonchang, Hayangchang, Yeongpungchang, Anheungchang, Jinseongchang, Buyongchang, Haeryongchang, Tongyangchang, Haeneungchang, Jangheungchang, and Seokduchang.

Jinseongchang, Haeneungchang, Buyongchang, Jangheungchang, Haeryongchang, Tongyangchang, and Seokduchang (Fig. 8). According to a record from *Goryeosa*, a thirteenth, Allanchang was added during the reign of King Munjong (文宗 r. 1046-1083).

First, the collected tax goods from each region were sent to the nearest *jochang* warehouse, located near the coast or on a river. The goods were stored there until the second month of the following year, when they were shipped to the capital. Although the tax goods were sent from all of the *jochang* at around the same time, they arrived in the capital separately, because of the difference in shipping distances. The goods from *jochang* that were relatively close to the capital typically arrived by the fourth month, while those from the more distant *jochang* arrived by the fifth month. Operating as part of the reformation of the *gunhyeon* (郡縣) system, the *jochang* system was well organized and highly integrated. The firm establishment and stable operation of the *gunhyeon* and *jochang* systems and of the maritime transport network allowed the tax goods to be securely and efficiently delivered to the capital, thereby completing the essential frame of administrative authority of the central government and national economy.

The flat-bottomed ships used to transport the tax

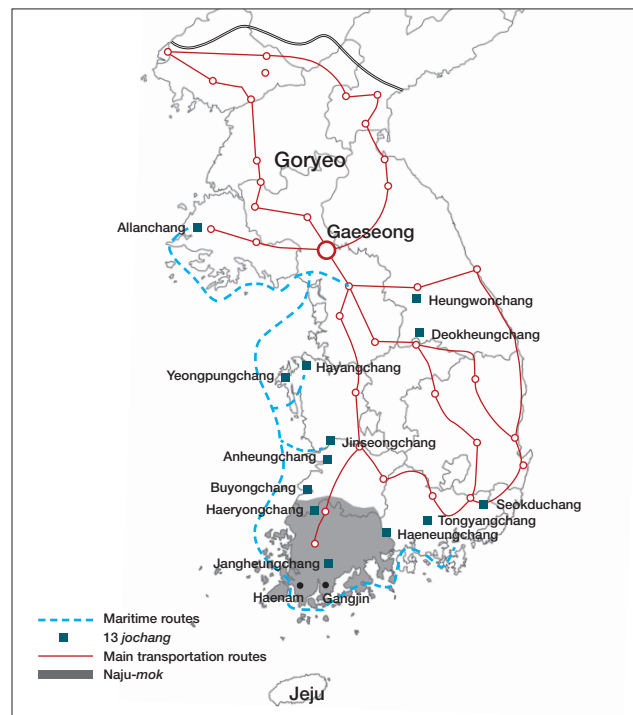


Fig. 8. Locations of and routes between the 13 *jochang*. *Korean Earth Born Into Ceramics* (한반도의 흙, 도자기로 태어나다) by Bang Byeongseon (방병선) et al. (Gwacheon: National Institute of Korean History, 2010, p. 237).

goods were called *chomaseon* (硝馬船), and they had a capacity of 1,000 *seok* (a measurement of volume, equal to approximately 180 liters). Tax goods included not only rice and other grains, but also local specialties, such as mineral resources, fabrics, and handicrafts. Ceramic products must have been one of the more important tax goods, because ceramics have frequently been found among relics excavated from sunken ships off Korea's western coast. On leaving the *jochang*, the laden ships sailed along the West Sea (Yellow Sea), where they sometimes fell victim to storms or rapid currents. In these shipwreck sites, the grains and other organic products have of course been destroyed or washed away, but inorganic substances like ceramics have often remained largely intact. Ceramics have been found in many shipwreck sites along the west coast between Taean and Wando Island, and I believe that more shipwrecks will be found by further research and underwater excavation. Excavations of such ceramic relics demonstrate the importance of ceramics as tax items during the Goryeo Dynasty.

It is important to examine how the relocation of the main sites for ceramic production was related to the maritime transport system that was completed during the reign of King Seongjong. A huge quantity of ceramics were being produced, and this precious, fragile cargo was more safely and easily transportable by sea, rather than overland. The biggest demand for ceramics came from the capital of Gaeseong, and they were delivered there through Byeongnando (碧瀾渡) Port, at the mouth of the Yeseong River, the same port which received the immense shipments of tax goods. Given this transportation route, it makes sense that the kilns were distributed along the southwest coast. Around the 11th century, the coastal area in the southwest of South Jeolla Province became the main site for celadon production, and the celadon wares were delivered to the capital via the maritime transport system that had been completed in 992 (the 12th year of King Seongjong). This water route remained in use at least until the late Goryeo Dynasty.

The maritime transport system was crucial for efficient tax collection, which was in turn essential for the central government's active efforts to control the outlying regions. Evidence suggests that it became virtually impossible to produce ceramics in the area of the capital following the Khitan invasions between the late 10th and early 11th century. The existence of

the maritime transport system must have been a pivotal factor in the decision to shift ceramic production to the southwest area. In actuality, the southern relocation would probably not have been possible without the maritime transport system, which enabled the ceramic goods to be produced at a distance and then shipped safely and easily to the capital.

Conclusion

There has been a lot of discussion and debate about the relocation and geographical expansion of celadon production sites during the Goryeo Dynasty. In response to this discussion, I have argued that earliest celadons in the Korean peninsula emerged from large brick kilns around the mid-west region, near the capital of Gaeseong, around the second quarter of the 10th century. Celadon production eventually spread to other sites throughout the country, reaching the southwest of the peninsula in the early 11th century. This paper supports my argument by examining historical documents and analyzing the contemporaneous political and social circumstances that led to such shifts.

The kilns that produced early celadon between the late 10th century and early 11th century can be categorized into four groups, depending on their size and structure. Celadon was initially produced in large brick-built kilns around the capital, which reflected the direct transference of production techniques from the Yuezhou (越州) kilns in China. Based on excavated relics, these kilns started operating around the second quarter of the 10th century, and ceased operating between the late 10th and early 11th century. Around the time that these large brick-built kilns disappeared, the ceramic industry spread to areas throughout the Korean Peninsula. New types of kilns emerged that were either smaller in size (mid-sized brick kilns) or made from earth rather than brick. However, with a few exceptions, these kilns did not operate for long. Beginning in the late 10th century, a fourth type of kiln—small earth-built kilns—appeared, which were concentrated in the coastal areas of South Jeolla Province. These kilns produced great quantities of celadon, eventually becoming Goryeo's main sites for producing celadon in the 11th century.

These significant changes in the ceramic industry, particularly the relocation of the main production

sites to the southwest, coincided with the Khitan invasions of Goryeo in the late 10th and early 11th century. Since the beginning of the Goryeo Dynasty, the central government had been taking measures to strengthen its control of outlying regions, and these efforts were strongly reinforced and organized during the rule of King Seongjong (r. 981-997) through King Hyeonjong (r. 1009-1031). Primary factors contributing to the relocation of the main kilns included the loss of manpower due to the creation of a standing army and the widespread construction of military fortresses and Buddhist temples, as well as the prohibition against the private use of pine trees. Given these developments, I argue that the government opted to shift the production of ceramics to a more stable location, namely the area of South Jeolla Province.

The royal family shared a very close relationship with local clans in the Naju area from the foundation of Goryeo until at least the reign of King Hyeonjong. Naju took on a more prominent national role and acquired an elevated status as a result of the reform of the system for governing the regional provinces. Through this system, officials were appointed by the government and dispatched to each region, and an efficient maritime transport system was established for collecting tax goods. These two changes provided the administrative support needed to ensure the stable, ongoing production of celadon. Hence, from the early 11th century, celadon was produced in the southwest of the peninsula and safely transported by sea to the main market around the capital of Gaeseong. If it had not been for the Khitan invasions, there would have been no real reason to make the great effort of shifting the main sites for celadon production so far from the capital. Such historical circumstances explain the process by which the southwest area, including Gangjin, became known as the main site of Goryeo celadon production. ㄸ

TRANSLATED BY PARK MYOUNGSOOK

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