

## Social Background to the Kilns and Pottery Production Systems of the Ancient Korean Peninsula

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**Abstract:** Following the Proto-Three Kingdoms period, when pottery production based on kiln firing took root, pottery differing with each regional polity or state came to be used at the stage when ancient states were established throughout the Korean peninsula. In light of that situation, this essay shows that regional differences between pottery styles and the borders of the kingdoms overlapped in the Korean Three Kingdoms period, based on the political situation. The system of pottery production between these entities might have differed as well. Baekje adopted a dispersed production/urban accumulation system, while Silla adopted a centralized production/regional distribution system. It can be concluded that this distinction between the two states originated from such differences as the social characteristics, political systems, and differences in ritual customs, including burial practice. This regionality of the pottery production continued for a while during the Unified Silla period as well, but the “cultural rivalry” synthesized by the division into separate states vanished, and state involvement in the production of articles of daily use such as pottery faded.

**Keywords:** Korean Three Kingdoms period, Baekje, Silla, pottery production system, government management

### 14.1. Introduction

For pottery of the ancient Korean peninsula, in addition to conspicuous regional idiosyncrasies in vessel types, forms and so forth, variety can be seen in the shaping and trimming, and in the firing technology as well. Looking at the degree of standardization, and at the distribution and scale of the clusters of kilns, it can be supposed that even the systems for producing and distributing ceramics differed from region to region. Taking such a situation as its premise, the current contribution outlines relations between the polities of the Korean peninsula and pottery production for the Proto-Three Kingdoms, Korean Three Kingdoms and Unified Silla periods, and in addition to perspectives on the numbers of kiln groups and their compositions, based on the quality, distribution and consumption of pottery as a product, I endeavor to look at how social background influenced the manufacture of pottery, or conversely how the society of those times can be reconstructed based on ceramic production. In particular, each region was producing stoneware independently during the Korean Three Kingdoms period, and by comparing the various pottery styles and ceramic industries it is possible to elucidate the characteristics of handicraft production for each polity.

Regarding pottery kilns of the ancient Korean peninsula, for which striking increases in data have been seen, as compilations, investigations and reviews of the history of research have been published in Japanese as well (Ueno 2009, 2013, 2015), with advances made in assessing their

lines of derivation and examining relationships with kilns in Japan, those results have been heavily consulted in the current undertaking (Ueno 2017; Nagatomo 2018, 2019).

### 14.2. Archeological characteristics of the Three Kingdoms period of the Korean peninsula

Simultaneously with the Kofun period of Japan, in Korea it was a time when various states and forces were arrayed across the peninsula. In particular the states of Goguryeo, Baekje and Silla were in a powerful three-way contest, and because their rivalry is detailed in historical texts this time is called the Three Kingdoms period. In actuality it is known that in addition to these three states there were various other forces in coexistence, such as Fuyu (Buyeo), Woju (Okjeo), Hui (Ye), Gaya and polities in the Yeongsan River basin. According to the *Samguksagi* (History of the Three Kingdoms), the founding of the Three Kingdoms was in the first century BC, and in texts such as the *Weishu* (Book of Wei) of the *Sanguozhi* (Records of the Three Kingdoms), in the Han (Korea) section of the chapter “Dong Yi” (Eastern Barbarians), the “Han” groups of Mahan, Jinhan and Byeonhan are depicted as divided into small polities holding their separate territories in the southern part of the Korean peninsula until about the third century AD. This era, from around the start of the Common Era until the Three Kingdoms were firmly established, is called the Proto-Three Kingdoms or Samhan period.

In terms of archeology, over the span from the Proto-Three Kingdoms to the Three Kingdoms periods multiple

changes occurred, such as the construction of fortresses, the appearance of kingly tombs with large-scale mounds, the emergence of new pottery styles and the spread of metal prestige goods. There is a tendency to regard this time as the period of ancient state formation on the Korean peninsula, which dates to around the third to fourth centuries chronologically. The Three Kingdoms period continued until the latter half of the seventh century, when Silla unified the three states.

In the same manner as for the Kofun period of Japan, the Three Kingdoms period was when the largest mounded tombs were built in the history of the Korean peninsula, a period of great vigor in rendering authority visible. Also, walled capitals serving as bases from which to rule were built in various regions, and many upland fortresses were constructed in the border zones and at geographically strategic locations. During this time much handicraft production was organized under systems of specialization, and the manufacture of metal ornaments, armor and weapons, equestrian gear, pottery and so forth took on political overtones. As one basis for this observation, materials having differences from one polity to the next in their form and structure are recovered from Three Kingdoms period sites, and these are thought to have served as part of those states' political and cultural identities.

Among such artifacts, ceramics are particularly amenable to sensitive expression and possess forms fully reflecting the intent of those who made them, but behind such acts were the social demands about form as noted above. Variations seen in Three Kingdoms period pottery cannot be dismissed as insignificant regional flavors, but are comprehensive differences in style extending from individual vessel shapes to the composition of vessel types in the assemblage, and from their biased distributions are referred to as the pottery of Goguryeo, Baekje, Silla, Gaya, the Yeongsan River basin and so forth. It was characteristic for each region to have unique vessel types and shapes, as seen in the *ammun* pottery (having patterns of lines made by pressing the surface with a hard tool) of Goguryeo, three-legged vessels of Baekje, representational pottery of Silla and Gaya, and so forth. In Gaya, there were further minute differences in pottery styles from one subregion to another.

Now, why should differences for each region have emerged so clearly even in handicraft items such as pottery? While of course it must be taken as a major premise that the Korean peninsula of the Three Kingdoms period was divided into at least three states plus several regional powers, each with its unique culture, and that those distinctions would be reflected in material culture as well, there are in addition three main factors that can be cited here.

First, the production and consumption of pottery in this era were not self-sufficient, occurring completely within a single household or settlement, as manufacture had already become specialized, and there were extensive

networks of distribution. What is vital is that these spheres of distribution were likely contained within the separate territories, making them clearly distinct from the spread of pottery over mere cultural regions. As background, it is thought that politically motivated regulation of distribution was at work.

Second, these differences between pottery styles were not simply superficial distinctions or variations in outward form, but differences in the very organization of technology and systems of production used in their manufacture. In other words, the existence of differences from one region to the next in the systems for manufacture and the technology of handicraft production were the conditions behind the emergence of differences in material culture. As will be touched upon in this contribution, with regard to the technology and system of production for pottery, in the Silla and Gaya regions the technology of manufacturing tile-clay ceramics was the foundation, and due among other things to a need for mass-producing pottery for use as grave goods, the intensive production of highly standardized, refined pottery is thought to have become established from early on. In contrast, in the Baekje region large-scale kiln groups that would indicate intensive production have not been found, but rather a condition can be discerned in which pottery fired in dispersed fashion in various regions was collected at consumption sites such as the capital. As a result, Baekje pottery is thick-walled and low in standardization, giving an impression of lower skill at pottery-making itself in comparison with Silla and elsewhere. The degree of control and management over pottery production was probably weaker than in places like Silla. The same can be said for the pottery of Goguryeo. Thus, the fact that intensive production was not carried out in Baekje is regarded as one factor rendering the typological chronology of its pottery difficult.

Third, as the most significant premise for explaining the above, it is possible that in each state or region these mutual differences in culture were regarded as part of their identities. As seen in modern society as well, the distinctive cultures of separate countries serve as an element that increases their political and social autonomy. Even for polities within the same general region, the Korean peninsula, the maintenance of different cultures for such a long time can only be due to a notion at work that one's own culture differed from those of others.

Especially in the Three Kingdoms period of the Korean peninsula, utensils were used to assert one's own country's uniqueness, but this was closely related to the practice of importing differing foreign utensils as trade items from an early stage and using these as prestige goods. For example, Baekje expressed a Chinese-style aristocratic culture through the importation of high-fired ceramics from the Chinese mainland, while Silla asserted north Asian connections that it considered linked to its own origins by importing glassware and utensils of gold and silver via the Steppe Route. Powerful groups in Japan imported mirrors to emphasize their connections

with China, using them within their own territories as ritual prestige goods and as a means of control, but in addition to the internal and ideational conditions of the Japanese archipelago, this can also be interpreted as including an intent to make distinctions with other regions. This type of situation likely led to attributing to pottery, along with other handicraft products made within one's own region, the role of medium for making distinctions from others.

Let me introduce a representative example regarding differences in pottery styles among the three Korean kingdoms and powerful groups in their environs, and the political conditions existing within them. It involves a trend in archeological materials attending the expansion of Silla's might and the unification of the three kingdoms from the middle part of the sixth century. From the first half to the middle part of the century, the pottery style of Silla changed gradually, and a style called late Silla became established in which short-legged pedestaled dishes and pedestaled long-necked jars with wide, flared mouths comprised a set. These bear characteristics that clearly differentiate them from the straight-mouthed long-necked jars and pedestaled dishes with long legs seen until the first half of the sixth century. From the middle part of the sixth century on, the distributional sphere of this style broadened greatly to extend as far as the Wonsan Bay area in the northeast part of the peninsula, and from Chungju in North Chungcheong Province down the Namhan River to the modern city of Seoul in the Gyeonggi Province region. This was not only a trend in ceramics, but conforms with the acceptance and spread of horizontal stone burial chambers in Silla, telling of the expansion to the north and west of Silla's cultural sphere, which had been limited to the east of the Sobaek Mountains, and the policy of territorial expansion under King Jineung of Silla seen in historic documents has been pointed out as background.

As Silla's 24th monarch, King Jineung (r. 540–76 AD) changed the title of the country's ruler from the native term *maripkan* to the Chinese word for king (*wang*), and, building upon the base of his predecessors in the first half of the sixth century, Kings Jijeung and Bopheung, who promoted various reforms such as the adoption of Buddhism and the introduction of Chinese-style formal legal codes, he is regarded as a monarch who furthered the policies of centralization of authority and territorial expansion, pushing his territory beyond the Sobaek Mountains, establishing the capital of Chungwon-sogyong, and taking control of the Hanseong region, thereby extending Silla's presence to the western coast of the Korean peninsula and making direct connections with China possible. Through such bold encroachments into the regions of Goguryeo and Baekje, this period set the stage for the subsequent unification of the three kingdoms. Stone monuments commemorating tours of inspection by King Jineung give the most prominent witness to this situation, with four such stelae remaining at Maeunryeong, Hwangchoryeong, Bukhansan and Changnyeong. The locations where these were erected and their ages correlate

with the distributions of Silla tombs and pottery, and make visible Silla's aim for regions incorporated into its territory to be assimilated culturally as well.

From this it is also seen that during the Three Kingdoms period there were examples in which political trends and cultural tendencies were definitely in agreement, with culture likely serving as a means to distinguish clearly self from other, and the existence of some form of cultural policy can be surmised. This stands in contrast to the situation of the Japanese archipelago of the Kofun period, when clear regional differences are not seen in Sue ware, which was fired with newly introduced technology.

#### **14.3. Pottery transitions and ceramic industries of the Korean peninsula**

In this section, the author briefly traces out the history of pottery manufacture in the ancient Korean peninsula, ascertaining at what stage a technological change occurred to firing with the use of kilns. Soft, reddish-brown types of pottery were long made in Japan until the Early Kofun period, but with the transmission of technology from the Korean peninsula there was a transition to a stage where the production of a hard, bluish-grey pottery (Sue ware) was added. But on the Korean peninsula the change from the former to the latter type was rather complicated, with "transitional period pottery" made in forms that were idiosyncratic to each region.

In the Korean peninsula the manufacture and use of pottery began in the Neolithic period, represented by Yunggimun (raised design) pottery and Jeulmun (comb-pattern) pottery. These were all soft reddish-brown wares made by oxidation firing, and while they had a small degree of local color they shared common shapes and patterns over wide regions. These lines of pottery continued to the Mumun and Jeomtoda (clay-band rim) pottery of the Bronze and Early Iron Ages, and the Yeonjil (soft-fired) earthenware of the Proto-Three Kingdoms and Three Kingdoms periods, although theories positing the influx of culture from the outside for the changes in form in each period are persistent. Further, Mumun pottery of the Korean peninsula also influenced the Yayoi pottery of Japan, but this was related to cultural transmissions that included wet-rice agriculture as well.

Pottery of differing materials was produced in various regions in the Proto-Three Kingdoms period, with undecorated earthenware that, even while presenting a reddish-brown color, was relatively hard and high-fired (Gyeongjil earthenware, also called Jungdosik), or pottery decorated with paddle marks (Tanalmun) made in the central region of the peninsula, while in the southeast there was soft grayish earthenware known as Wajil ware, and so forth. Both open-air and kiln firing are posited for undecorated Gyeongjil, but Tanalmun pottery and Wajil wares are regarded as kiln-fired. At the Samryongri/Sansuri kiln site group in Jincheon in the central region, approximately 20 kilns where pottery was

fired from the latter half of the Proto-Three Kingdoms into the Three Kingdoms period (Baekje period) have been investigated, and represent valuable data for considering the specialization of pottery production in one region of the Korean peninsula. At the same time, the operation of groups of kilns with standardized forms has been empirically demonstrated for this period, although their derivation and the occasion of their introduction are uncertain.

On the other hand, as yet no kiln sites have been definitely confirmed relating to the Wajil ware of the same period in the southeastern region, for which standardization was advanced. But as the provision of large amounts of pottery as grave goods in mounded tombs progressed in this region from the Three Kingdoms period on, it is thought that the creation of a system of organized pottery production advanced at this time.

Although shapes and patterns of pottery were shared over broad regions of the southern part of the Korean peninsula until the Early Iron period, the beginning of diversification of pottery was in the Proto-Three Kingdoms period. As background for that, it is considered that small states and regional groups having the nature of confederations began to emerge in the central and southern parts of the peninsula, where moderate cultural integration had previously been maintained. In particular, the situation of the various states of the Mahan, Jinhan and Byeonhan confederacies recorded in Chinese historic texts starting to manufacture their separate potteries is evaluated as a turning point leading to the subsequent production of pottery along strict lines of regional polities. Further, the Chinese commandery of Lelang was established in the northern part of the Korean peninsula in 108 BC, and the influx of Han culture also had a great influence on changes in pottery and pottery manufacturing technology.

Passing through the Proto-Three Kingdoms period, when transitional pottery was made of various materials region by region, in the Three Kingdoms period the technology for making hard, reduction-fired pottery became established in the southern part of the peninsula. As noted above, material culture differed in the Three Kingdoms period for each state or wide region, but pottery provides data that most strikingly reflect this situation. That the distributions of pottery styles for each country are seen to expand or contract, in keeping with historical phenomena such as Goguryeo's southward advance or Silla's territorial expansion, shows prominently how the "regional political attribute of pottery" was clearly evident. This manner of regional difference in pottery styles was particularly great in stoneware. This is a manifestation of pottery production being managed on the basis of each state or polity, and that the pottery styles of Gaya, in comparison with Baekje or Silla, varied with each subregion indicates that no system had been devised for Gaya to unify pottery production on the scale of the region as a whole. That archeological materials have nomenclatures starting with the names of

states or regions, such as "Baekje pottery," "Silla pottery," or "Gaya pottery," is an indication that researchers tacitly share the above premise. However, as will be touched upon below, even while speaking of the management of pottery production on the part of states or monarchies, this does not always indicate large-scale operation of centralized kilns. The management is inferred to have assumed a variety of forms on a regional basis.

Historically, of the three kingdoms, Silla unified the Korean peninsula in the latter half of the seventh century by absorbing Gaya and annihilating Baekje and Goguryeo. While the representative ceramic of the Unified Silla period, stamped-design pottery, is thought to have appeared at the start of the seventh century, it permeated the former Baekje territory and elsewhere from mid-century at the latest. At this time all of the Korean peninsula was unified as a single ceramic cultural sphere, but whether there were changes in the production and distribution of pottery due to the regional expansion of political control has not been clarified. It is thought that the productive system for Silla pottery up to that time would not have been sufficient to supply pottery to the widened area of control. Judging from the standard of production of stamped-design pottery recovered from the former Baekje territory, the possibility that Baekje's ceramic production system was maintained while being utilized to fire stamped-design pottery should also be considered.

In Baekje and Silla around the time of the seventh century, green-glazed stoneware was being made in some locations. Many of these green-glazed items share vessel shapes in common with conventional pottery, and as the absolute numbers are not many, rather than there having been separate specialized kilns, it is surmised they came from kilns that doubled as ones for ordinary pottery or roof tiles.

After the stage of stamped-design pottery, a style of pottery known from the end of the Unified Silla to the start of the Goryeo period, and comprised of a variety of stoneware vessel types with various vases and bottles as the main component, permeated the Korean peninsula in its entirety, and at this time kilns operating on a large scale were seen in the regional areas as well.

#### 14.4. Traits of pottery kilns on the ancient Korean peninsula

Following the stage of open firing of pottery, it is not clear under what conditions kilns as built structures were introduced in the Korean peninsula of the Proto-Three Kingdoms period. The earliest pottery thought to have been made by reduction firing is regarded as deriving from China or Lelang, and the kilns and technology for firing itself could very likely have been introduced through any region. There is the view that kilns of different types, such as those with level floors as well as climbing kilns, and of different lines of derivation diffused outward from multiple regions of China or Lelang, and considering the variability in materials and styles of the time this is a

reasonable opinion (Nagatomo 2019), and the discovery and investigation of verifiable examples of level-floor kilns are awaited.

Traces of pottery production through the operation of fully constructed kilns are seen at the Jincheon Samryongri/Sansuri kiln site group of the latter half of the Proto-Three Kingdoms to the start of the Three Kingdoms periods, where over 20 kilns have been investigated. The operation of this kiln group divides into five phases, for which a chronological spread of over 100 years is assessed, from the first half of the third to the middle of the fourth century, and all were built on the slopes of low hills. The structures were for the most part climbing kilns partly dug into the slope, with those from the oldest phase being small in scale, with a maximum width of 1.5 m for the kiln body and a length of 4 m (Samryongri No. 88-2), then growing larger in scale with the passing of time, with some reaching 2.5 m in width and 8 m in length (Samryongri No. 90-4). The slope inside the kilns at 13–16 degrees did not show regularity, but the horizontal plan had a common structure with the firebox greatest in width, then narrowing gradually from the combustion chamber to the smoke hole. Also, the firebox was in the form of a vertical pit one level below the stoke hole, so that fuel was fed into it in a downward manner. The trend toward kilns becoming larger at this time is thought to have been due to a need for mass production and distribution, rather than any advancement in firing technology. According to the site report, the circulation of products from these kilns is assessed as dividing into three stages, with their distribution expanding over time, and it is suggested that in the final stage they reached as far as Pungnap-toseong in Seoul, the base fortress where Baekje located its early-period capital, and were provided to the Seokchondong tomb group, which is thought to include the graves of kings (Choi et al. 2006).

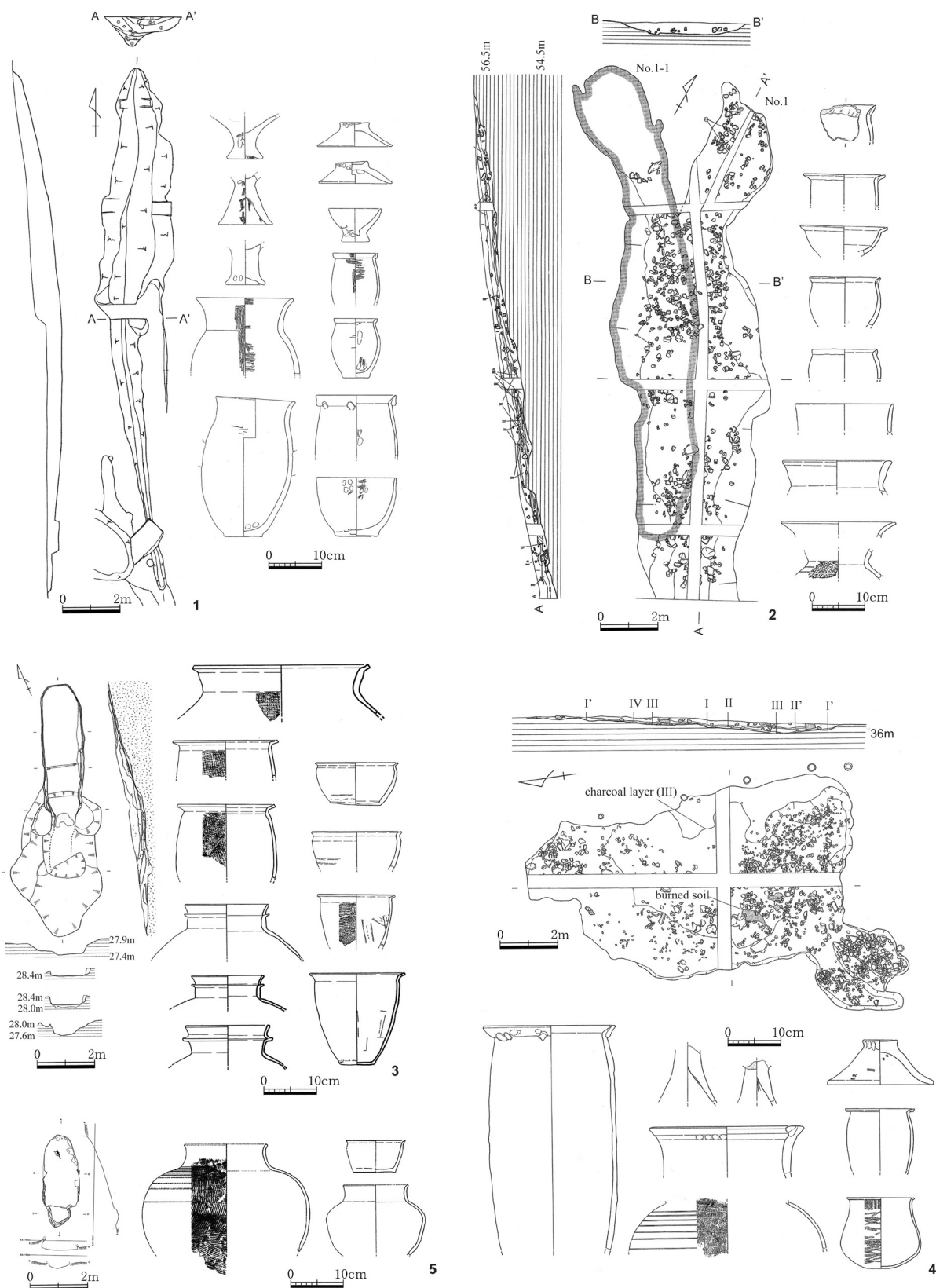
In addition, kiln features of an initial stage have been investigated for the Proto-Three Kingdoms period at the sites of Gajaeri in Hwaseong, Yongwonri in Cheonan, Yonggyedong in Daejeon and Gwisari in Gongju, and elsewhere in the region that would later become Baekje, and at Gundong in Yeonggwang and Gungokri in Haenam in the environs of the Yeongsan River basin (Fig. 14.1). Kilns for firing large thick-walled jars have been discovered at Gajaeri and elsewhere, so it is evident that kilns of this period could maintain temperatures sufficient for firing pottery. If all of these kilns that have been identified over a wide area were of the Proto-Three Kingdoms period, then kilns were introduced sporadically across broad areas of the western coastal region, but relations among the lines of derivation of these kilns are unclear.

Kilns for Baekje ceramics of the Three Kingdoms period are probably successors of Proto-Three Kingdoms kilns of the same region, and are scattered everywhere in Baekje territory, but no kiln group has been found where large-scale operation can be recognized. Examples where only a few kilns have been identified are common, and their productive capacities are insufficient for distribution over

wide areas. They are climbing kilns with subterranean or semi-subterranean kiln bodies that are elliptical to elongated oval in horizontal plan, and built following the slopes of hills. Many of the kilns on the northern periphery of Baekje in particular follow the form of the Samryongri kilns, and as a characteristic they have fireboxes that are clearly in the shape of vertical pits, as for example at the Maeseongri No. 1 kiln in Cheonan. This feature is called a “vertical firebox” or “vertically fed firebox,” and is regarded as a common form of kilns in the western coastal region (Fig. 14.2). By digging the firebox as a vertical pit, the difference in height with the smoke hole is increased, and this was probably intended to raise the temperature within the kiln. At the same time, kilns having only a gentle incline from the stoke hole to the firebox were seen from an early stage in Baekje, so having a vertical pit was not necessarily an essential characteristic of kilns of the Mahan and Baekje regions.

Baekje kilns changed greatly around the end of the sixth to the start of the seventh century. In addition to the climbing kilns with long elliptical forms in horizontal plan seen up to that time, there are kilns having rather wide, level fireboxes and sloping firing chambers raised one level above. There are also examples in which the firing chamber is stepped in form. These are dual-operation kilns that fired roof tiles and pottery simultaneously, and the Jeongamri kiln group site in Buyeo operated on a large scale in order to supply roof tiles for the temples that were starting to be built in great numbers from this period.

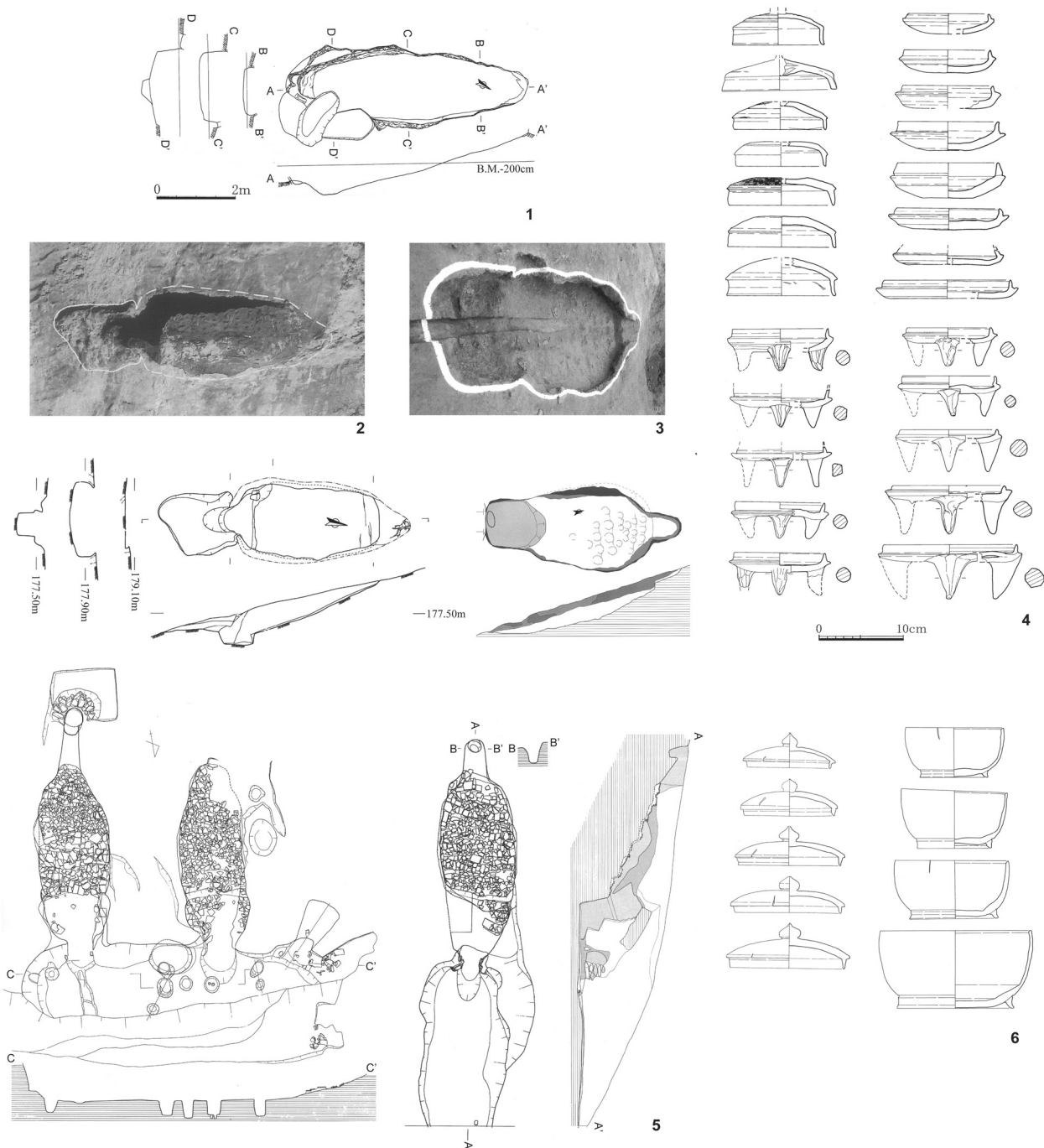
Many pottery kilns have been also been identified in the Three Kingdoms period region of Jeolla Province, which included the Yeongsan River basin, and their characteristics are inherited from those of the Proto-Three Kingdoms period. Many have kiln structures not differing greatly from those of the Baekje region, but in the products and conditions of production there are two major distinctions. First, in connection with the mortuary customs of the area, as it became necessary from around the fifth century to produce in quantity very large jars for use exclusively as coffins, groups of kilns were operated in order to fire these jar coffins (Fig. 14.3). The Oryangdong kiln site in Naju, where the remains of more than 60 kilns and workshops have been identified, is the representative example, and in comparison with kilns that fired general wares for daily use of the same period, many were at least twice as large in terms of firing chamber area, and they were characteristically built with a large forecourt at the kiln’s front. Second, in the Yeongsan River basin of this time a number of huge settlements formed which had between several hundred and more than 1,000 dwelling sites, and kilns were needed to supply pottery for these as well. A pottery kiln belonging to the settlement was built at the Sanjeongdong site in Gwanju, and at the Haengamdong kiln site in Gwanju, where more than 20 kilns have been investigated, from the degree of concentration and placement of the kilns, it can be seen that mass production was carried out in planned fashion and the products were supplied to large



**Figure 14.1. Kilns and potteries of the Proto-Three Kingdoms period (after Kim Jaechol 2007). 1. Shinchangri site, Gwangju; 2. Bonggyeri site, Sacheon; 3. Gundong site, Yeonggwang; 4. Daeseongdong, Gimhae; 5. Samryongri site, Jincheon.**

settlements in the environs. At the same, from the mid-sixth century on, Baekje pottery came to be made in the Yeongsan River basin as well, and at the Dangga kiln site in Naju, which is representative for this period, the firing chamber floors characteristically have a stepped form. As

this characteristic was also found at the Haengamdong kiln of the previous stage, this change in kiln structure is seen to have occurred within this region, and these local kilns were used to make the newly introduced Baekje pottery.

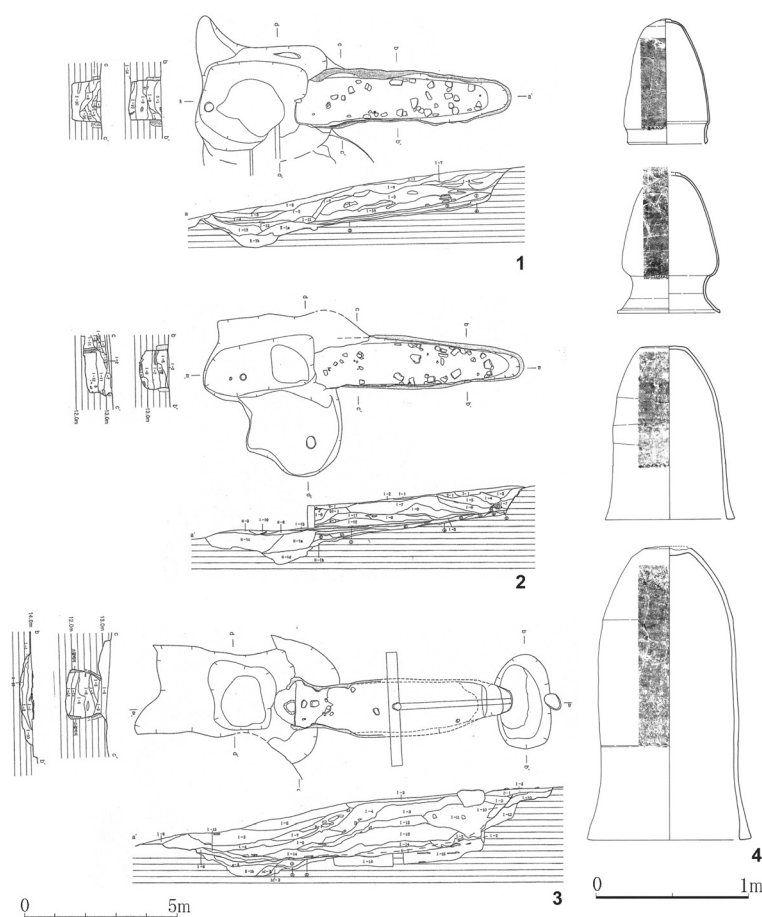


**Figure 14.2. Kilns and potteries of Baekje (Choi Byeonghyeon et al. 2006, CICH 2005, CIHC 2006, BNM1992). 1. Samryongri site, Jincheon; 2. Maeseongri site, Cheonan; 3. Hagamri site, Cheongyang; 4. Various forms of the early type of Baekje pottery; 5. Jeongamri site, Buyeo; 6. Standardized late type of Baekje pottery.**

The initial appearance of kilns in the Gyeongsang Province region is not clear, and while features related to firing from the Proto-Three Kingdoms period at Daeseongdong in Gimhae, Bonggyeri in Sacheon and Hwangseongdong in Gyeongju and others are named as candidates (Kim 2007; Nagatomo 2019), their structures cannot be said to have been standardized, and the lines of derivation are uncertain. At the same time, tile-clay vessels of this period have fixed shapes and styles, and as they are clearly reduction fired there is no doubt that kilns were in existence (Nagatomo 2019). The reason why standardized kiln groups are not

recognized when compared with the western coastal region of the same period is not clear, but it is necessary to consider differences in kiln structure and the relative cultural and geographical distances from China.

Subsequently, at the Hwasanri kiln site in Gyeongju and elsewhere kilns made pottery in the transitional period of the differentiation between Silla and Gaya pottery, while at the Yeochori kiln site in Changnyeong and elsewhere climbing kilns were operated that also manufactured early stoneware, and these had relatively long kiln bodies in



**Figure 14.3.** Kilns and jar coffins of the Yeongsan River basin (Yeon Ong et al 2011, Yamamoto 2016). 1–3. Oryangdong site, Naju; 4. Various forms of jar coffin.

horizontal plan, with the boundary between the firebox and firing chamber being characteristically indistinct.

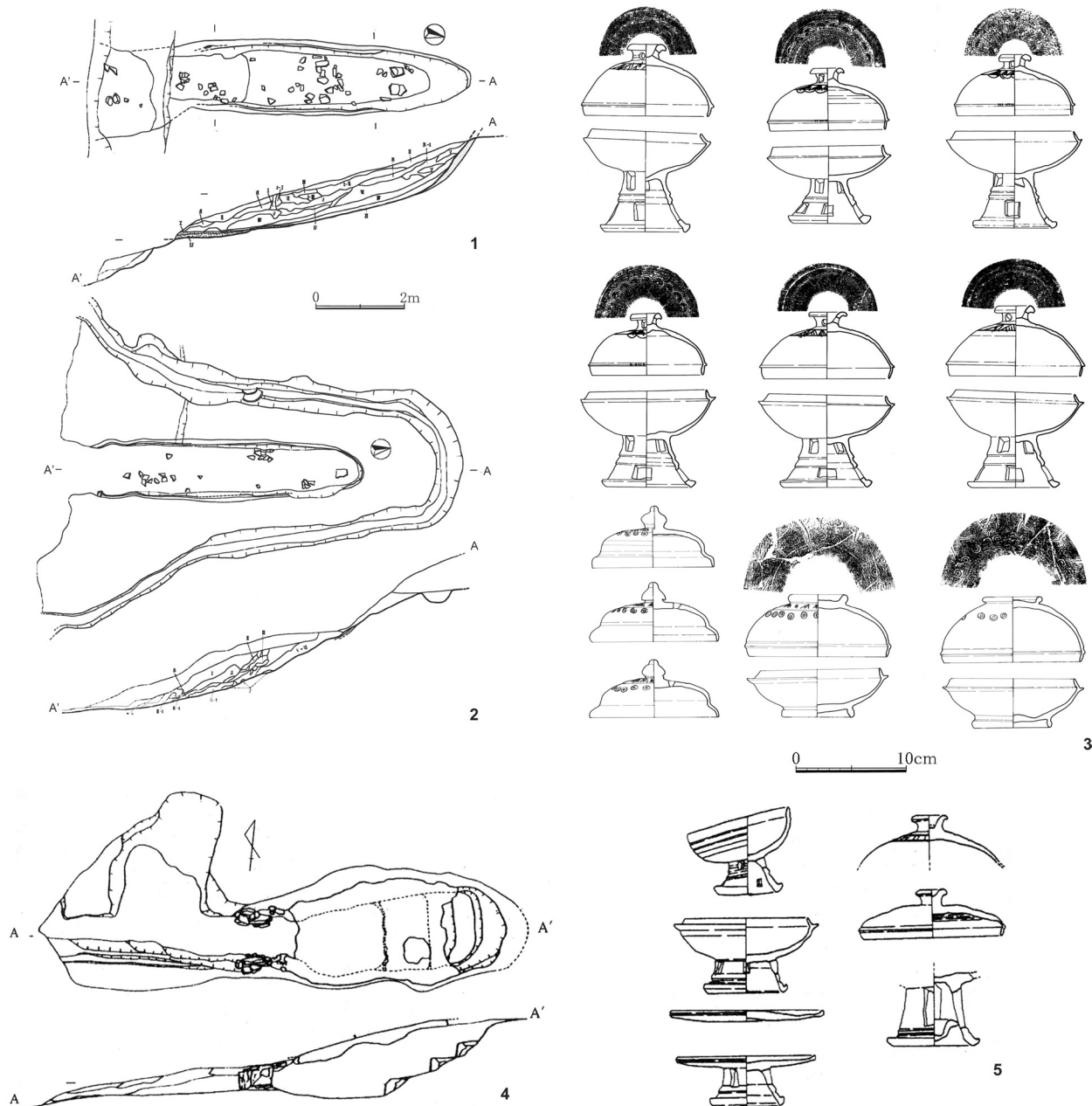
From the fifth century on, when huge tombs with high mounds came to be made in Silla, large-scale production sites encompassing several tens or more kilns and workshops, as represented by the Songokdong/Mulcheonri kiln site in Gyeongju, came to be operated in Silla (Fig. 14.4). This was a system of production propelled by demands for supply to a permanent capital (one not subject to frequent relocations) and the custom of providing large amounts of pottery as grave goods for the mounded tombs, differing greatly from Baekje, where the capital was repeatedly moved, and the provision of pottery as grave goods to mounded tombs was not very lavish. This type of situation was seen in other regions of Silla as well, and has been confirmed for example at Uksudong in Daegu and Oksandong in Gyeongsan. The kilns of Silla were not greatly different from those of the western coastal region in terms of the size of individual kilns, so they probably managed mass production by the numbers of kilns in simultaneous operation.

In the Gaya region, kilns producing early stoneware have been investigated at Myosari and Ugeori in Haman and elsewhere, and in the same manner as for the western coastal region it can be seen that small-scale kilns became

established at an early stage of the Three Kingdoms period. In structure these were climbing kilns that were oval in horizontal plan, and with consolidated kiln bodies having no difference in height at the boundary between the firebox and firing chamber. Subsequently, separate styles developed in the various subregions of Gaya in the Three Kingdoms period, with each locality using distinctive pottery, but the kilns that made these various Gaya potteries have not yet been investigated. Considering the amounts provided as grave goods for tombs and the standardization of pottery, it is thought highly likely that kiln groups will be found in various locations which made products in bulk numbers.

Historically speaking, from the mid-sixth century on, Silla absorbed the Gaya confederacies, and further advanced into the western coastal region in a manner that split the border between Goguryeo and Baekje. At this time, the style of Silla pottery changed slightly, and the ceramic set comprised of short-legged pedestaled dishes and pedestaled long-necked jars diffused to the regions into which Silla advanced. Kilns that produced pottery of this period have been confirmed in various regions, such as Gimhae and Daegu, so in response to changes in pottery styles of the center and the expansion of state territory, small-scale kilns are seen to have been operated in like manner in each region.





**Figure 14.4. Kilns and potteries of Silla (GNRICH 2004). 1–2. Songokdong site, Gyeongju; 3. Highly standardized Silla pottery; 4. Mulcheonri site, Gyeongju.**

Subsequently, around the start of the seventh century, Silla pottery which had undergone a large-scale transformation (stamped-design pottery) spread across all of the peninsula about the time of unification under Silla. Stamped-design pottery was made in large-scale kiln groups at sites such as Hwagokri and Mangseongri in the environs of Gyeongju, from where it continued to be supplied to the capital and palace, but it is known to have been produced at regional kilns such as Samgyedong in Gimhae as well. As noted previously, looking at the stamped-design pottery recovered from the former Baekje region, there are examples which are notably crude in their firing or decoration, and it is possible that pottery production was being carried out for a time using the previously existing kilns and artisans of local regions. By contrast, regional

differences for kilns are not seen from around the eighth century on.

This situation changes further with the stage of pottery from the end of the Unified Silla to the start of the Goryeo period, as kilns firing massive amounts of products such as the Jinjukri kiln site group in Boryeong are operated in the regions, and take on new roles of supplying and producing pottery. The structure of the kilns does not differ greatly from those of the Three Kingdoms period.

As seen above, from the Three Kingdoms period on, state or monarchy control took effect over the manufacture and distribution of the products of civilization throughout the Korean peninsula. Pottery and roof tiles were no exception,

and as their production has a tendency to change and develop in response to trends in political strength or social currents, investigations into the workshops and kilns which produced them need to keep in mind their connections to political conditions of the time, such as relations between states, when making interpretations of these materials.

Based on this perspective, I wish next to proceed with an examination of the relations between state and social orders and the system of pottery production.

#### 14.5. Systems of production and distribution seen through products and kiln operations

As different styles of pottery were used by each state or region in the Three Kingdoms period, it is difficult to discern whether the lines of craft technology including kiln operations in each region were mutually connected, or whether each developed independently. At the same time, even though the shaping of vessels and the level of manufacture differ, as stoneware began to be manufactured at closely matched periods in the various regions, and as marked differences in the structure of the kilns themselves are lacking, it is observable that on the whole there were no great discrepancies in the technology of firing pottery. What then may have caused the great differences in pottery styles of each region? In checking the numbers and distributions of kilns, and the distributions of the products, it is necessary to take cognizance anew of the underlying differences in the social systems and systems for the supply of materials in each state and region. In order to compare the pottery production systems of each state in the Three Kingdoms period, I would like to take the pottery recovered from the consumption sites (capitals) of Baekje and Silla as objects for examination as manufactured products.

The pottery style typical for Baekje was established during the Hanseong era (to 475) at its capital, which was then located in the vicinity of modern Seoul, and subsequently spread to Gyeonggi Province, Chungcheong Province, Jeolla Province and elsewhere over the western coastal region of the Korean peninsula. Three-legged vessels were the most characteristic type, and kiln-fired items consisted mainly of dishes such as lidded or pedestaled examples, or jars such as those with short or wide mouths. Baekje pottery was also provided among the grave goods of mounds, although the amounts are small, and amounted to the burial of sets of small and medium-sized vessel types that were used in daily life.

As one of the greatest characteristics of Baekje pottery, there are large differences between individual examples even among items of the same vessel type. These are not differences in size, but indicate that various techniques were being employed even while making vessels with a common perception of their type. For example, among three-legged vessels of the same period, the lip rising from the seat for the lid may be made as a single piece with the body or may be a separate attachment, while the legs of those vessels may be shaped and adjusted by manual

kneading or they may be fashioned by cutting away. These differences do not always permit clear distinctions as to the period or region, but may be seen mixed together within items recovered from a single site, and from their commonalities in terms of size and conditions of recovery, they cannot be considered as having been made for different uses either.

Another characteristic of Baekje pottery is that in comparison with other regions the vessel walls are thick, and many of the items are crudely made. This is clear when it is compared with the earthenware or Sue ware of Silla and Gaya of the same period, and even mid- and small-sized vessel types have a heavy feel. Taken together with the aspects of variability in shape noted above, Baekje pottery is relatively poor in standardization, giving the impression that regular styles had not become established.

As background to these unique characteristics of Baekje pottery, although there would naturally have been the individual circumstances of the producers, as there are no great differences with other regions in the structure of individual kilns or in the firing itself, these distinctions may be regarded as differences in the systems of production. To date pottery kilns have been investigated at about 30 locations in the Baekje region, and excluding from these the items of the Proto-Three Kingdoms period the total number of kilns for the Baekje period is not very great. Until about the mid-sixth century, there are no traces of production concentrated at a single location which supplied multiple regions, and from the existence of small-scale groups of kilns in each locale, it can be surmised that there were self-contained production and distribution networks for each local area. In Baekje, which lacked a custom of consuming massive amounts of pottery as grave goods in mounded tombs, there was probably no need for large-scale production. This situation continued from the Hanseong to the Eungjin era (475–538), a period of small-scale capitals at which large populations are not seen to have resided.

This tendency changed starting in the subsequent Sabi era (538–660), when planned moves of the capital were made, and in the first half of the sixth century during this period residential districts were set up at the capital based on a regular checkerboard-like grid of streets, with the surrounding population made to live there in concentrated fashion. At the capital where this populace gathered the volume of pottery consumption greatly increased, but the local system of production and distribution for Baekje pottery prior to that time, which could be termed a “regionally dispersed” or “small-area self-contained” model, could not meet the new demand, so pottery from kilns of the various regions gathered at the capital. In other words, as one reason why examples of the same types of products were mixed together in a variety of shapes, a situation can be supposed in which pottery made in different production sites was assembled at the center. Whether this phenomenon was limited to the capital, or whether similar

situations can be seen for other settlements or tombs etc., will require further examination in the future.

This situation changed in the latter half of the Sabi period (seventh century), when Baekje pottery transformed into a different style, with pedestaled bowls and plates as the main forms. This is called the late Baekje style. The regularization of form proceeded from this period, becoming highly standardized, and production was undertaken at the Jeongamri kiln group in Buyeo adjacent to the capital, where it can be seen that standardized kilns were operated in dense formations. Upon reaching this period, which was the final stage of Baekje, pottery production is seen to have finally come under centralized management of the state or the monarchy.

In contrast to the pottery of Baekje, with its heavy feel and heterogeneity, the thin-walled pottery of Silla and Gaya had the characteristics of being standardized and regular in form, from which the existence of a refined technology of mass production can be surmised. While there is a small amount of stylistic variation from region to region, on the whole a technological homogeneity encompassing multiple regions is visible.

Pedestaled dishes and jar-shaped vessels are the types representative of Silla pottery, and for pedestaled dishes in particular there are several forms, with changes in each vessel form clearly reflecting the age of production. For each vessel type of Silla pottery, products with almost no individual variation were made in great volumes. That the chronology for Silla pottery is detailed and clear-cut in comparison with the pottery of Baekje is due to its regularity of form and universality that were supported by a uniform productive technology. As background for this, the early establishment of a system of mass production in order to satisfy the custom of providing large amounts of grave goods to mounded tombs, and the possibility for continuous management of production and circulation in the outskirts of the political center, since the capital never left Gyeongju, are thought to have been conditions. This form of an organized system for the production of pottery is regarded as lasting from the stage of the fourth and fifth centuries until the seventh century and beyond.

Looking at pottery kilns that have been investigated, it may be seen that large-scale kiln groups were operated in Silla at an early stage in the vicinity of the capital Gyeongju. Kiln site groups at Songokdong/Mulcheonri, Hwagokri, Hwasanri and elsewhere are representative of these, and as more than 80 kilns and related features such as workshops have been confirmed at Songokdong, this is seen to have served as a production site over a long period. Pottery made at these large production sites is thought to have been distributed not only at the capital and large-scale tombs at the center of Silla but throughout the territory, and it is supposed there was also a system by which pottery was produced through imitation in the regions as well. More than 40 kilns have also been identified at the Uksudong/Oksandong kiln site in adjacent parts of Daegu

and Gyeongsan, substantiating the regional existence of such core production sites.

Looking at kiln structure, in comparison with those of Baekje the Silla kilns are standardized in terms of their shapes and scales. There is not much difference with regard to kiln body length between the two regions, and while the slightly narrower kilns of Silla appear inferior in productive capacity per kiln, Silla's mass production is evidenced by the exceedingly greater numbers of kilns in operation.

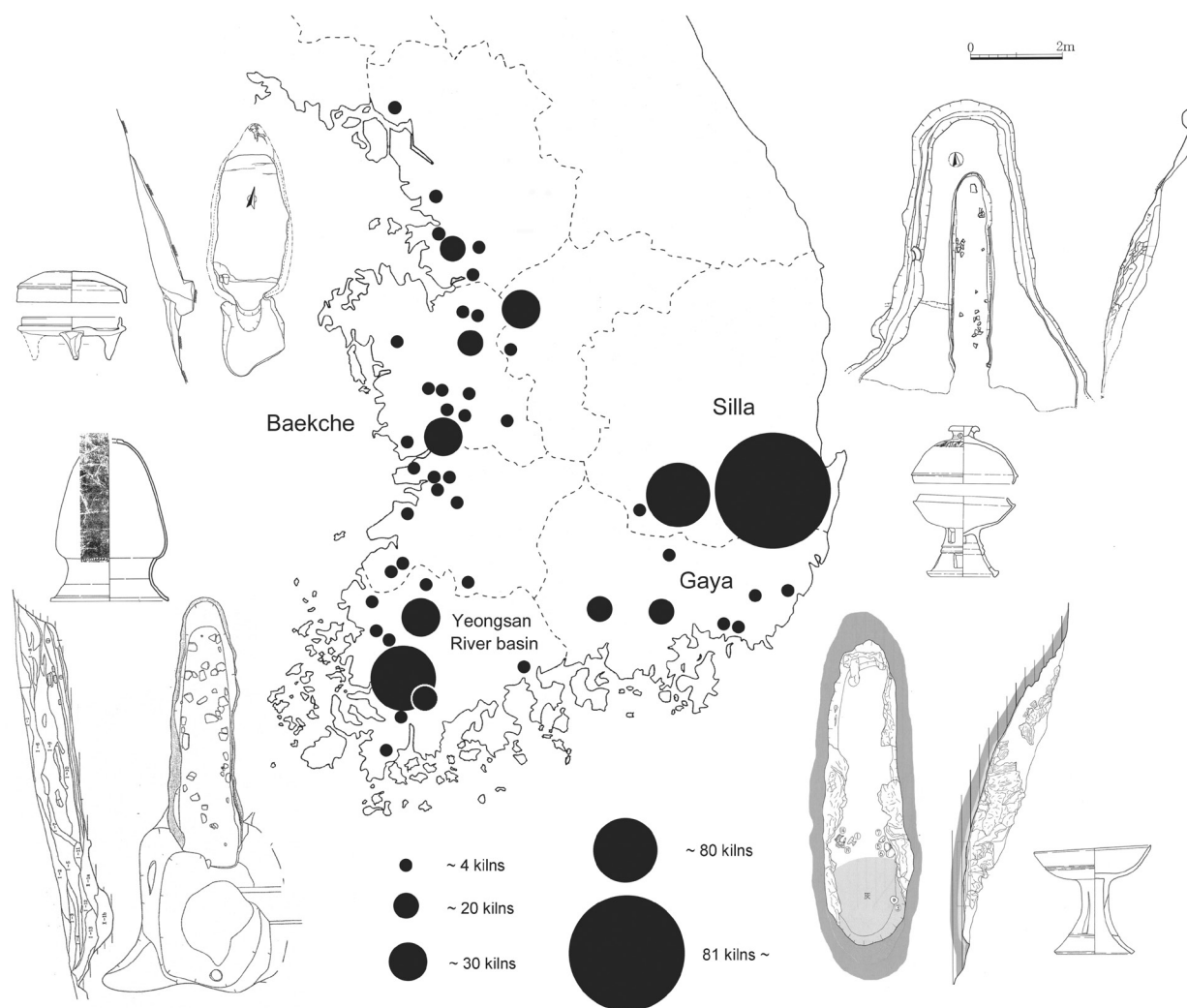
In this manner the pottery production of Silla and Baekje differed not only in the structure of their kilns but in matters such as the system of production as well. The productive system for Gaya pottery supplied spheres that were narrowly focused in individual subregions, but from the element of centralized production seen in the regularity of vessel form it is regarded as approaching that of Silla.

Let me summarize here the content above concerning the technology of pottery manufacture and the system of production of the Three Kingdoms period. In the Silla and Gaya regions, due to demands for large amounts of pottery as grave goods, systems of pottery manufacture intensively producing refined wares at a high degree of standardization with little individual variation became established from early on. Kilns clustered together in the outskirts of capitals or at core regions, and they mass-produced wares that were distributed everywhere. This type of production and distribution can be labeled the "centralized production/regional distribution system."

In contrast, Baekje pottery has great variation among items of the same vessel type, even though the numbers recovered from single sites are small. No kiln sites have been discovered giving evidence that intensive production was undertaken, and a situation can be surmised in which pottery that was fired everywhere in dispersed fashion to supply separate locations of consumption was brought together at sites such as the capital. As a result, the pottery is low in its degree of regularity, and gives the impression of not having been produced with very experienced skill in comparison with the pottery of Silla and elsewhere. The level of management for pottery production appears to have been weak when compared for example to Silla. This can be called a "dispersed production/urban accumulation system" (Fig. 14.5). This situation changed in the mid-sixth century to a centralized production system, with the pottery style completely changing at the same time, which indicates that the making of pottery in Baekje transformed to a system of production under government management. It should be noted that it was carried out simultaneously with the production of roof tiles in kilns that doubled as ones for firing pottery and tiles.

#### **14.6. Pottery kilns and tile kilns**

The use of roof tiles took hold in the Korean peninsula starting from the Three Kingdoms period. While buildings



**Figure 14.5. Distribution and number of kilns in the Three Kingdoms period.**

associated with fortresses and piled-stone mounded tombs are known to have been roofed with tiles from an early period in Goguryeo, there is no information regarding the kilns which produced them. In Baekje as well, tiles are recovered at sites such as Pungnap-toseong, which was a fortress, but the kilns which fired them have not been discovered. These early-period tiles are not associated with temples, and are thought to have probably been used at royal palaces inhabited by the ruling class and similar sites.

The increase in tile production in Baekje came with the full-blown spread of Buddhism, attended by the active construction of temples. Following the introduction of temple construction in the Eungjin era, projects for building temples flourished within and around Sabi Fortress after the move of the capital to Buyeo. Further, with the introduction of a Chinese-style capital, buildings using large numbers of tiles were adopted in palace construction. Starting with state-sponsored temples and those of comparable status (such as the temple sites of Jeongrimsa, Gunsurisa, Wangheungsa, Neungsanrisa, Miruksa and Jaeseoksa), with the adoption of the use of tiles for a variety of buildings, large-scale tile kilns such

as the Jeongamri kiln group were operated in the vicinity of the capital and came to supply various locations, and at those sites not only tiles but pottery was fired as well, and was supplied to core facilities of Baekje centering on the capital from the latter half of the seventh century. At this time a major changeover in pottery style was occurring in Baekje, from the traditional dishes to bowls as the main forms, with the material for firing pottery being close to the clay used for tiles, and regularization in form was progressing. In other words, in Baekje the centralized production of tiles was linked with the stylistic transformation and formal regularization of pottery, and further the system for production of tiles and pottery was changing over from the previous dispersed pattern to a centralized one.

As the kiln structure of this time differed from that of kilns used until then exclusively for pottery, it is necessary to include in examining its line of derivation the influences coming from the outside in tandem with the development of tile production, but there is no doubt that this change was intimately linked with political trends of this period aimed at advancing the centralization of authority. Inkstones that have also been recovered from

the Jeongamri kiln site are impressive artifacts telling of the penetration of document-based administration, and are a vessel type not previously seen (Yamamoto 2017). However, tiles were used not only at the capital and other core establishments but also at regional upland fortresses, and there were probably kilns supplying such individual facilities. Regarding the derivation of Baekje tile kilns, comprehensive investigations including those based on the situation of kilns for bricks are needed in the future.

In Silla as well, kilns where tiles are recovered appear around the time temple construction becomes active, but this does not indicate the creation of a new system of production as in Baekje, as initially tile kilns were built adjacent to the large-scale pottery kiln groups noted above. In other words, tile production in Silla began by building upon the already existing large-scale production of pottery, and no change can be seen therein regarding the systems of production or distribution. At the same time, around the time when regional temples of Unified Silla were being built, the operation of regional kilns for tiles became common, and it is thought that networks for the production and distribution of both pottery and tiles were established to encompass the vast territory that had been acquired.

As the nature and targets for supply of the products differ for pottery and tiles, when considering the lines of derivation for each regarding kiln operation technology and kiln structure, it is necessary to make examinations after assessing relations between the aims of production and state policy, the manner of social role carried out by the products, and so forth.

#### 14.7. Conclusion

Following the Proto-Three Kingdoms period, when pottery production based on kiln firing took root, pottery differing with each regional polity or state came to be used at the stage when ancient states were established throughout the Korean peninsula. It must be considered that if aspects of state policies are reflected in this situation, political conditions are reflected in the operations of kilns that fired the pottery as well, and that the mode of management varied from state to state. Baekje and Silla, which have been predominantly investigated in this contribution, make a good contrast, and their systems have herein been labeled as a “dispersed production/urban accumulation system” and a “centralized production/regional distribution system.” Differences between the two states in their social characteristics and political systems, and in their ritual customs including burial practices and so forth, serve as the background to this contrast, and differences are thought to have appeared as well in the bases of their handicraft production. While preserving the kiln industry that had developed regionally, Baekje sought to maintain uniformity in vessel form by making specifications as to product shape. As background, there was no stable capital or grave goods custom that consumed large amounts of pottery. In Silla on the other hand, it may be said that mass

production of pottery at a high standard was achieved by having state management of pottery production from the start. As background for this there was a high volume of consumption at the capital, which did not relocate, and the custom of providing large amounts of pottery as grave goods in mounded tombs. This situation continued for a while during the Unified Silla period as well, but as the “cultural rivalry” synthesized by the division into separate states vanished, state involvement in the production of articles of daily use such as pottery faded. The need for distinctions in material culture on a country-by-country basis disappeared, and a unified culture came to spread across the entire Korean peninsula. This situation should also be discernible in the kilns that produced pottery and tiles.

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## Part IV

### **Developments on the islands of the eastern periphery**