Research Article

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Leadership in the Emergent Baekje State: State Formation in Central-Western Korea (ca. 200–400 CE)

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Abstract: The process of state formation is a social phenomenon closely connected with a polity’s external relationships. During peer–polity interactions, polities undergo social reorganization as they mutually influence each other. This study examines this process and argues that in central-western Korea, around 200–400 CE, hostile interactions among multiple polities weakened the power of ingroup members to level social differences and increased social complexity. When confronted with unfriendly outgroups, potential rulers could assume different social roles (e.g., diplomat, war leader, or trader) and utilize new social threats to demand and legitimize higher social status. Archaeological data from central-western Korea illustrate the community’s efforts to build a defense system and prepare for war. Autonomous agricultural communities rapidly realigned into a state system in response to external threats, presumably from historically documented hostile groups such as the Lelang commandery and Goguryeo. The decision to oppose neighboring polities likely enhanced the leaders’ ability to consolidate power, while the rulers of the Baekje (also spelled “Paekche”) state could employ various other means for self-aggrandizement throughout its history.

Keywords: state formation, leadership, Baekje, Pungnap earthen fortress

1 Introduction

State building has been a dominant social practice globally over the last few millennia, and scholarly efforts are needed to explain why a society embraces a new social order. Historically, the emergence of the state was likely welcomed by a small minority who could attain the upper echelons of the hierarchical social ladder. They became the kings, queens, and nobles, and for them, the new sociopolitical arrangements implied better food, shelter, spouses, more wealth and prestige, and less labor. It is hard to find reasons why they would refuse such privileges. However, for the majority of the population who were relegated to lower positions in the social hierarchy, the benefits were much less clear. For them, life in the state almost certainly meant less autonomy and more labor and taxation than in previous, less complex, and more egalitarian societies. The question is, therefore: why did commoners, who outnumbered the few elites, accept new social arrangements and their low social position? This study posits the occurrence of external threats and warfare as an explanation for the expansion of leaders’ political ability and the contraction of the public’s leveling power.

When the rulers-to-be strove to strengthen their socioeconomic power and transform a society into a state, there were usually more powerful established rulers at various distances in the surrounding area and the emerging rulers had to decide how to relate to foreign powers as well as to the people of their own groups. Only a few early states were primary (or pristine); the vast majority were secondary states, which emerged...
during interaction with neighboring states that developed via historical succession from preexisting states (Parkinson & Galaty, 2007; Price, 1978; Stein, 2001). The early half of the first millennium CE witnessed the emergence of states across far eastern Asia, and these polities directly and indirectly interacted with the states and empires across mainland China and their successive dynasties (Barnes, 2015; Pai, 1992). The interaction of multiple polities with different levels of sociopolitical complexity and technological achievement was commonplace in pre- and proto-historic state formation. The archaic states on the Korean Peninsula were no exception.

In the Korean context, this study argues that encountering foreign influences made available new power-building strategies that were previously unavailable to local chiefs. These strategies can be summarized as “negotiation,” “opposition,” and “trade”: all are options to reduce the leveling power of their ingroup members, who had previously suppressed overt political centralization and social stratification. To articulate a theory of how nascent state rulers built their power, this study draws on social science research regarding the social contexts of intergroup negotiation (Demoulin & de Dreu, 2010; Kramer, Pommerenke, & Newton, 1993; Pruitt & Carnevale, 1993; Steinel et al., 2010); intersocietal exchanges and craft specialization (Schortman & Urban, 1994; Stein, 2002); the economic foundations of governance and individual dominance (Blanton & Fargher, 2009; Blanton, Feinman, Kowalewski, & Peregrine, 1996; Fargher, Heredia Espinoza, & Blanton, 2011; Feinman, 2018; Levi, 1989); and the relationship between collective action problems, external threats, and leadership (Barclay & Benard, 2013; Benard, 2012; Boone, 1992; Carballo, Roscoe, & Feinman, 2014; Emanuelson & Willer, 2019).

Archaeological data from the central-western region of the Korean Peninsula (Figure 1), the center of the Baekje state during the Hanseong phase (ca. 200–475 CE), demonstrate that elites invested more in public construction and defense systems than in private residences and individual properties. The grave goods found in elite burials were generally humble, while the community collectively built fortresses and defense systems. The construction of Pungnap Toseong, an earthen fortress in the Pungnap area, Seoul, represents the earliest archaeological evidence of large-scale cooperation among the Baekje people. It involved the mobilization of labor and resources from multiple agricultural communities that had likely enjoyed a significant level of political autonomy in the preceding era. This evidence suggests that warfare was a significant social issue and that perceived external threats fostered cooperation within the community and supported centralized leadership. The power-building strategies employed by Baekje elites initially focused on corporate groups, collaboration, and public benefits, although rulers had access to other means of consolidating power throughout history.

2 External Threats and Leadership

People relinquish their freedom for various reasons. Archaeological research suggests small-scale prehistoric villages that spread over a region through fissioning had high levels of autonomy and self-sufficiency (Bandy & Fox, 2010; Birch, 2013; Carneiro, 1991; Frangipane, 2007; Smith, 2014). These villages occupied different ecological niches and were spatially demarcated by open spaces, rivers, and mountains. They were likely simultaneous decision-making units that operated independently of each other, although they were socially connected through marriage, rituals, and occasional exchanges of goods and ideas. They did not necessarily have to yield their autonomy to submit to particular individuals or groups for a prolonged period. Therefore, it is pertinent to ask under what circumstances people would comply with an overarching new leadership regime over multiple previously autonomous villages.

Put simply, people are expected to unite and collaborate when they perceive advantages to doing so, for example, protection from external threats or improved economic productivity (Bandy, 2004; Carballo & Feinman, 2016; Drennan, 1988; Smith, 2014). External threats such as environmental degradation, emerging economic rivals, and hostile outgroups are important spurs that shape the cooperative relationships of loosely
related subgroups and promote community solidarity (Carballo et al., 2014; Hayden & Villeneuve, 2010). When threatened, people weigh the costs and benefits of individually and collectively addressing the threat and decide to collaborate if they can lower individual burdens through a group response. Some threats can be mitigated by localized group efforts (e.g., increasing the number of guards), while others require the cooperation of multiple subgroups (e.g., building a nationwide defense system against foreign invasion). Warfare is an important social circumstance under which autonomous villages relinquished their sovereignty and united under centralized leadership and overarching institutions (Carballo et al., 2014; Carneiro, 1970, 1991; Wiessner, 2019).

However, the decision to coalesce makes people vulnerable to exploitation by a small minority (Lopez, 2020). Those in privileged positions can build socioeconomic power by encouraging group members to mobilize resources to cope with risk while simultaneously reducing their ingroup rivals’ ability to accumulate resources for status competition (Barclay & Benard, 2013; Benard, 2012; Emanuelson & Willer, 2019). Rulers-to-be can demand larger individual shares by emphasizing their personal contribution to dealing with group risk (Boone, 1992; Gavrilets & Fortunato, 2014). Some individuals can decrease the cost of serving the community by leveraging individual traits such as physical characteristics, language ability, personal experience, and a large supporting family (Bastardoz & Van Vugt, 2019; Glowacki & von Rueden, 2015). Leadership positions are commonly filled by individuals whose personal qualities distinguish them from the rest of the community, a phenomenon known as stranger-kings (Dobat, 2015; Henley, 2004; Sahlins, 1985, 2008). They can arbitrate disputes and make decisions unbiased by existing social ties and obligations. Subsequently, they can build negotiating power over their followers and demand a higher social position.

In dealing with unfriendly outgroups, leaders may pursue diplomatic, nonviolent solutions such as marriage alliances, hostage exchanges, and tribute offerings. The tributary system is an effective means of negotiating peace among polities whose size and power differ (Bisson, 1982; Levavi, 2020; Selhitschka, 2019). Such a system is beneficial to leaders on both sides, as leaders in large polities can reduce the costs of controlling...
frontiers and extracting resources, while those in small polities can legitimize their power and collect revenue beyond immediate needs (Sinopoli, 1994; Tyson, 2014). Alternatively, leaders may opt for military solutions and take the role of commanders in charge of war and resistance. Leadership based on threat-dependent cooperation, regardless of whether top elites are portrayed as peace negotiators or war captains, is a form of collective governance (Feinman, 2018). Leaders and followers are connected in mutual bonds of obligation: leaders provide security for the community, while followers pay taxes and provide labor. In such systems of governance, leaders tend to invest more in public goods than in personal wealth (Feinman, 2018).

Conversely, some individuals may attain a rulership position by pursuing their own self-interest rather than projecting ideas of community service. Interaction with other polities may open new business opportunities for a small minority who have exclusive means of production. Elites in complex societies are often involved in interregional trade and exchange; they have access to key resources and technology (e.g., bronze and iron metallurgy) or the ability to outcompete ingroup rivals and monopolize exchange networks (Algaze, 1993; Edens, 1992; Parkinson & Galaty, 2007; Stein, 2002). Furthermore, the introduction of new technology from outgroups may lower production costs and enhance product quality, which enlarges local elites’ economic capacity and enables them to easily attract ingroup followers.

These alternative pathways to state rulership leave distinct archaeological footprints. Leaders with exclusionary control over their own economic foundations tend to invest more in private goods (e.g., elite residences, private storage, portable art, and attached specialists), whereas collective leaders invest more in public goods (e.g., public buildings, roads, markets, canals, and defensive systems) (Blanton & Fargher, 2009; DeMarrais & Earle, 2017; Fargher et al., 2011; Feinman, 2018). The more leaders rely on their followers’ taxes and labor, the more bargaining power the population has in negotiating public benefits such as peace and social security. Leaders must build a trusting relationship with their followers to legitimize their position and should exercise restraint in expressing their higher social position, ensure the provision of public goods, and present themselves as less autocratic.

3 Study Region and the Baekje State

The Korean Peninsula has plains and rivers in the southern and western regions and becomes mountainous toward the north and east. The earliest evidence of agriculture in the region has been found in carbonized millets (Panicum miliaceum and Setaria italica) dated to ca. 3500 BCE (Crawford & Lee, 2003). Then, during the Mumun period (ca. 1500–1 BCE), people cultivated a range of crops that included rice (Oryza sativa), wheat (Triticum aestivum), barley (Hordeum vulgare), and legumes (Glycine max and Phaseolus vulgaris) (Lee, 2011a). The number of Mumun settlements increased in ca. 800–400 BCE, reflecting a population increase. Settlements were established on low hills and slopes that had easy access to agricultural fields. The settlements differ in size, suggesting the formation of hierarchical settlement systems consisting of central villages and smaller subsidiary settlements (Yi, 2022).

The Mumun period is considered a chieftdom-level society, and dolmens and bronze artifacts (daggers, mirrors, and bells) are commonly presented as evidence for social hierarchy (Korean Archaeological Society, 2010; Rhee & Choi, 1992; Yi, 2022). Dolmens refer to burials that typically have a megalithic capstone with multiple supporting stone pillars. Large capstones weigh dozens of tons, and people from multiple villages would have collaborated to transport them. The construction of dolmens suggests the presence of central figures and a large-scale labor mobilization (Rhee & Choi, 1992). However, dolmens do not necessarily suggest more than temporary inter-village cooperation during funerals and rituals. Bronze artifacts demonstrate the existence of craftspersons who had access to raw materials, production means, and metallurgical knowledge. Bronze mirrors and bells are closely related to shamanistic rituals, suggesting that some individuals claimed privileged access to supernatural powers and ancestors (Lee, 2011b). Despite some evidence for status differentiation, the Mumun communities did not advance to statehood.

Polished stone daggers, stone arrowheads, ditched villages, wooden palisades, and burnt pit dwellings from this period are often presented as evidence for organized violence during the Mumun period (Park, 2011;
Son, 2011). Son (2011) argued that the evidence for intergroup conflict increased after 800 BCE and that there were more incidents of warfare, presumably between villages or tribes. However, these conflicts were primarily localized rather than oriented against external threats. There is little evidence to suggest that the Mumun people were united against a common threat that required a consolidation of power over a vast territory, although it is likely that they occasionally engaged in inter-village conflicts over land and water resources.

Encounters with Chinese states and empires, including Yan of the Seven Warring States (475–221 BCE) and Han’s Lelang commandery (108 BCE–313 CE) (Holcombe, 2001; Lee, 2009a; Pai, 1992), caused the societies on the southern Korean Peninsula to become more complex. These polities are historically documented as statelets of three Han peoples: Mahan, Byeonhan, and Jinhan (Barnes, 2001; Yi, 2009).

The Baekje kingdom originated from one of the fifty or more Mahan statelets and eventually ruled the entire Mahan region. Byeonhan had 12 statelets and later formed the Gaya confederacy. Jinhan also had 12 statelets and eventually became the Silla kingdom. While the Samguk Sagigi (History of the Three Kingdoms; compiled in 1145 CE) records the founding of Silla and Baekje as 57 BCE and 18 BCE, respectively, these dates are likely fictional. Archaeological evidence of fortresses, elite precincts, and tumuli with luxurious burial goods mostly dates after 300 CE (Barnes, 2004; Byington, 2008; Nelson, 1993, 2017; Pearson, Lee, Koh, & Underhill, 1989).

Lee (2011b) argued that the rulers of Silla and Gaya in the southeastern region wielded sociopolitical power primarily through two sources: the economy and the military. Most notably, they held a monopoly over iron production, enabling them to amass wealth through interregional trade. With an expanded economic capability, they were able to bolster their military strength, which they utilized to outperform neighboring rivals and maintain control over their own population. This model aligns well with the early developments of Silla and Gaya, as evidenced by archaeological records showcasing princely tombs containing luxurious burial goods as well as activities related to iron smelting, smithing, and the use of iron weapons, armor, and horse trappings (Barnes, 2000; Kim, 2005; Park, 2008, 2012; Pearson et al., 1989; Ryan & Barnes, 2014). Some sites even contained a wealth of iron ingots specifically designed for long-distance trade (Park, 2008). These emerging state rulers are considered to be both traders and warriors, possessing an exclusive and monopolizable power base (Kim, 2005; Park, 2009; Ryu, 2012; Woo, 2017).

I examined burial goods and prestige items from the central-western Korean Peninsula that originated from the Hanseong phase and found that the proposed model for power consolidation in Silla and Gaya insufficiently explains Baekje’s advancement into statehood. Stone-mound tombs, presumed to belong to elite individuals, began appearing around 300 CE, but the burial goods they contained were generally modest. Elite funeral practices were apparently frugal, and the scarcity of luxury items cannot be fully attributed to looting (Kwon, 2008a). Evidence of monopolies on trade and production is lacking as well. Glazed pottery of Chinese origin was discovered, but as its distribution was relatively even across the Mahan territory, it cannot be assumed that the Baekje capital served as the primary hub for its importation and distribution (Yim, 2012). Ceramic vessels were produced in various places throughout the region, and this production occurred beyond the immediate control of central rulers (Blackmore, 2020; Walsh, 2021). Mahan elites engaged in mutually cooperative exchanges of luxury goods without the need for overarching administrative and political systems (Heo, 2020). Overall, the evidence does not strongly support the notion of state rulers exerting exclusive control over craft production and exchange.

Archaeological evidence does suggest, however, the presence of external threats and defensive warfare. Hostile interactions with outgroups can be inferred from watchtowers, occupations of inaccessible locations, and abrupt settlement abandonments, as well as remains of traumatic deaths, fortifications, and weapons (Haas, 2001; Kim, 2013). In the case of Baekje, archaeological remains demonstrate the use of iron weapons, the construction of fortifications, and the growing significance of high-elevation areas suitable for surveillance and defense during the Hanseong phase. The earliest collective project, which relied on regional labor mobilization, aimed to strengthen the defensive capabilities of a large group. Apparently, Baekje’s initial governance was organized corporately, and its progression toward statehood was influenced by escalating external threats that united people under central figures.
4 Iron Weapons

The increase of inter-polity tension in central-western Korea from approximately 1–300 CE is primarily evidenced by the prevalence of iron weapons. The Daeseong-ri site yielded the earliest iron implements (ca. first century BCE) in the study region (Gyeonggi Cultural Foundation, 2009). The artifacts discovered here include axes, knives, and sickles. Remains of slag and furnaces were found, suggesting in situ iron smithing activities (Kim, 2009). Iron tools became widespread and started to replace stone and bronze tools around 1–300 CE. The most commonly found iron tools from this era are knives, axes, sickles, adzes, hoes, and shovels (Choi, 2010). These items are regarded as agricultural tools, although they could have also served other purposes. The ubiquity of agricultural tools across the sites dated to ca. 1–300 CE indicates efforts to increase farming efficiency. Although greatly outnumbered by agricultural implements, iron weapons (e.g., daggers, swords, spearheads, and arrowheads) started to proliferate in the region no later than the second century CE.

The Unyang-dong site is known for its iron weapons. The site contains 35 pit graves, in which 141 iron grave goods were discovered. Arrowheads were the most abundant (n = 34), followed by spearheads (33), axes (16), and sickles (15). Radiocarbon dating indicates that the graves were made between approximately 100 BCE and 200 CE (Hangang Institute of Cultural Heritage, 2013). Iron weapons from 1 to 300 CE were also found in over 30 settlements along the Han River basin (Choi, 2010, 2017). The graves containing iron weapons also typically contained iron agricultural implements. Kim (2014) argues that it is challenging to determine whether the buried individuals were primarily “farmers” or “warriors” solely on the basis of their burial goods; they likely held multiple social roles that they assumed in different sociopolitical circumstances.

Some settlements show traces of smithing, or forging iron products; however, it remains uncertain whether smelting, which involves reducing iron ore to produce a bloom, was performed locally. Smelting typically took place in furnaces equipped with large blast pipes (diameters greater than 20 cm) and resulted in the production of a significant amount of slag as a byproduct. Smithing, on the other hand, involved small blast pipes (diameters less than 10 cm) and various tools such as hammers, tongs, anvils, and chisels. This process produced hammer scales and slag prills as byproducts (Kim, 2012; Son, 1998).

Of these processes, only evidence of smithing has been discovered in the study region (Figure 1). Gian-ri is the only site with some remains that could be interpreted as smelting residues, while established smelting sites are located further south (Korea Cultural Heritage Association, 2012). In the study region, refined iron ingots were presumably imported and forged into the final products in local smithies. There is no evidence supporting the claim that elites in or near the political center, Pungnap Toseong, controlled iron production; rather, the people at the center were consumers of refined blooms and finished iron objects.

5 Earthen Fortress Construction

As the political center of Baekje in ca. 200–475 CE, Pungnap Toseong provides a useful case study to illustrate the impact of external threats and intergroup conflicts. Pungnap Toseong is a pentagonal fortress with a 3.5 km long earthen rampart, covering an area of 62.3 ha (Figure 2). The site was first discovered in 1925 when a historic flood destroyed the southern wall, leading to the discovery of bronze cauldrons and ornaments. The findings raised the possibility that Pungnap Toseong was Wiryesong, the historically documented first capital of the Baekje kingdom (Lee, 2009b); this hypothesis is now widely accepted by archaeologists and historians (Kim, 2001; Kwon, 2008a; Park, 2013). Excavation began in 1964, resumed in 1997, and continues to this day (Hangang Institute of Cultural Heritage, 2020; Jung, 2017). As of 2023, approximately 13% (89,666 m²) of the enclosed area has been excavated.

Radiocarbon dating indicates that people were living in the area by the first century BCE (Supplementary Material 1). Four pithouses discovered in the southeastern area were radiocarbon-dated to around 200–1 BCE or earlier, representing the earliest evidence of human occupation in that area (NRICH, 2001). These pithouses are surrounded by three concentric ditches, reflecting the Mumun-period settlement tradition of ditched enclosures (Bae, 2007); during this period, Pungnap Toseong was not yet encircled by embankments or
palisades. Subsequently, earthen ramparts were constructed around a much larger area than that enclosed by the previous ditches. The average cross-section of the wall is 201 m², and the total volume of the remaining wall is approximately 704,200 m³ (Heo, 2018).

Pungnap Toseong's ramparts were constructed using the rammed-earth technique, which involved compacting a damp mixture of sand, clay, and additives into wooden formworks using rammers (Figure 3). Through iterative ramming, compact and thin layers of soil were created. This technique, known as “banzhu” in Chinese (“panchuk” in Korean), originated from the Neolithic Yellow River Valley in China (Xie, Wang, Zhao, Gao, & Gallo, 2021). In the southern Korean Peninsula, the rammed-earth technique has been observed in 18 fortresses from the first millennium CE, seven of which were partially or fully constructed during the Baekje period (Ko, 2001).

The first scholarly attempt to date the Pungnap Toseong ramparts was made in 2001 and was based on three radiocarbon dates obtained from the eastern wall (Kang & Nah, 2001; NRICH, 2002; Shin, 2002). The results range from approximately 200 BCE to 400 CE; however, they do not align well with the stratigraphic information. Surprisingly, the charcoal from the lowest layer produced the latest date, while that from the upper layers yielded significantly older dates (Figure 4, upper figure).

This discrepancy can be attributed to the rammed-earth technique, which involves the use of sediment that may have been subject to natural and human disturbances. Consequently, organic materials from
different time periods can be mixed together in a sequence, regardless of their original dates. Additionally, earthen ramparts often require repairs and reinforcements, leading to the integration of organic materials from older deposits. Therefore, radiocarbon dating of the earthen layers is not immune to the “old-wood problem.” While the radiocarbon dating conducted in 2001 produced an exceptionally early date of 2050 ± 50 uncal. bp (195 BCE–109 CE [2σ range]; Lab No. KCP 401) (Kang & Nah, 2001; NRICH, 2002), this date does not align with the stratigraphic information, and the claim regarding the beginning of the earthworks based on this date is not verifiable (Figure 4, upper figure; Supplementary Material 1).

Fortunately, newly obtained radiocarbon dates in 2014 provide more reliable information regarding the ramparts’ construction dates (NRICH, 2014). Out of the twelve radiocarbon dates, four are considered outliers, as they significantly precede the expected dates according to their positions in the stratigraphic sequence; the remaining eight samples align well with the stratigraphy (Figure 4, lower figure). These dates suggest that the construction of the earthworks was not completed rapidly but lasted over a prolonged period, from approximately 250–400 CE.

This new chronology contradicts the arguments for Pungnap Toseong having a short construction period. Park (2001) estimated that the construction was completed in less than 3 years, assuming a minimum of a thousand workers per day. The construction of defensive walls can be a time-sensitive issue, especially when there is an imminent enemy threat. However, obtaining a large workforce from agricultural communities, even for a few years or seasons, can cause severe subsistence stresses. The rammed-earth technique cannot be performed during cold winters and rainy summers, and construction during spring and fall would encroach on busy farming seasons. When external threats are chronic but not necessarily imminent, extending the construction period and evenly distributing the burdens can help alleviate the stresses. The radiocarbon dates suggest a relatively long construction period, confirming the arguments of Lee, Kim, and Na (2013) who suggested that the construction of Pungnap Toseong’s earthworks continued for a few generations.

The following observations are worth noting. First, Pungnap Toseong is the earliest archaeological evidence of public works that required labor and resource mobilization across a wide region in central-western Korea. Archaeological evidence for the cooperation of multiple communities such as transportation networks, water reservoirs, monuments, and tumuli is scarce prior to Pungnap Toseong. The study region’s 300 dolmens only demonstrate temporary gatherings and cooperation (Oh, 2008). Pungnap Toseong represents the
collaboration of a far larger number of people over a prolonged span. Stone-mound tumuli, such as Seokchon-dong Tomb No. 3, were presumably constructed for the royal family, but they postdate Pungnap Toseong’s initial construction by approximately a century (Korean Archaeological Society, 2010).

Second, Pungnap Toseong was not exclusively occupied by the royal family and a select few. Pungnap Toseong’s inhabitants presumably held privileged socioeconomic positions within Baekje society. The use

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**Figure 4**: Radiocarbon dates from Pungnap Toseong’s eastern rampart. The upper figure presents three radiocarbon dates obtained in the 2001 excavation (Kang & Nah, 2001; NRICH, 2002; Shin, 2002). The lower figure presents 12 radiocarbon dates obtained in 2014 (NRICH, 2014). The figures show the dates according to the layer sequence (the lower, the earlier), and the four dates with red question marks in the lower figure indicate dates that do not conform to their positions in the layer sequence. These dates possibly suffer from the old-wood problem. Two dates obtained from the same layer were combined using the R_Combine function of Oxcal, depending on their chi-square test results. These dates are shown with two lab numbers. The dates were calibrated using Oxcal 4.4 with the IntCal20 calibration curve (Bronk Ramsey, 2017; Reimer et al., 2020). See Supplementary Material 1 for the comprehensive list of Pungnap Toseong’s radiocarbon dates.
The presence of abundant storage vessels implies that Pungnap Toseong had more stored food than the neighboring settlements (Kim et al., 2016). Nevertheless, the excavated areas revealed up to 86 houses within an area of 89,666 m². As a rough estimation, Pungnap Toseong’s entire walled precinct, measuring 623,040 m², contained approximately 600 houses. The excavated houses with restorable shapes (n = 58) range from 6 to 152 m² in floor size, with an average of 38.1 m² (SD = 32.1). The differences observed are more a matter of degree than kind, indicating varying household sizes, economic capacity, and/or social status.

Third, Pungnap Toseong’s central district, known as the Gyeongdang area, is believed to be associated with the highest-ranking individuals and exhibits various archaeological evidence of rituals, feasts, and social gatherings. Within this area, 24 pits contained pottery and the cranial bones of large land mammals such as cows, horses, boars, and deer. The largest pit, Pit #9, measures 13.5 m (length) × 5.2 m (width) × 2.4 m (depth) and contained 683 clay vessels and cranial bones of ten or more horses. These remains are interpreted as residues of sacrificial rituals and communal food consumption (Kim et al., 2016; Kwon, Kwon, & Han, 2004). Another notable archaeological feature, #206, is a well filled with 215 ceramic jars originating from diverse geographical locations. These remains possibly reflect water-related rituals involving multiple participants from neighboring regions (Kwon et al., 2015; Kwon, 2008b). The central district has not yielded remains of ornaments or luxuries that could indicate individual wealth differences, although some Chinese glazed pottery suggests the operation of external exchange networks (Kwon & Han, 2008).

6 Remains of Fortifications

An examination of archaeological remains of fortifications across central-western Korea demonstrates persistent inter-societal tensions during and after Pungnap Toseong’s construction. The Samguk Sagi contains 40 historical accounts of the construction of wooden palisades and fortresses throughout the Baekje period (Yoo, 1984). Accounts of fortifications are more prevalent during 11 BCE – 56 CE and 475–498 CE, with 23 out of 40 predating the southern relocation of the capital in 475 CE (Figure 5; Supplementary Material 2). In contrast, the

Figure 5: The number of historical accounts of fortification construction in the three states of Baekje, Silla, and Goguryeo according to the Samguk Sagi (Supplementary Material 2). The graph displays the number of accounts per 100-year intervals. There are more accounts for Baekje than for Silla or Goguryeo between 100 BCE and 100 CE, suggesting that warfare was an important social issue in Baekje. However, the counts do not directly reflect the relative significance of warfare in different states, and the historicity of these dates is debated. Please refer to the text for further details.
accounts of fortifications in Silla intensify from 463 to 694 CE within the same source, revealing a different pattern. The *Samguk Sagi* and *Nihon Shoki* (*The Chronicles of Japan*; 720 CE) document Baekje’s conflicts with neighboring polities, including the Chinese regimes on the Korean Peninsula (Lelang and Daifang commanderies), Goguryeo, Malgal, Silla, Gaya, and other Mahan polities (Best, 2006; Shin, 1984). Strengthening the defense system was presumably a major concern for Baekje even from the early stages of state formation, although Baekje’s relationship with these polities would have oscillated between peaceful trade and exchanges and hostile confrontations (Best, 2006; Lee, 2013; Park, 2016).

Not all statements in the *Samguk Sagi* are accurate, however (Best, 2006; Shultz, 2004), and some uncertainty remains regarding the fortification accounts. Although the historical text describes fortress construction led by Baekje’s royal court beginning in 11 BCE and continuing afterward, archaeological evidence of fortifications predating 200 CE is very scant. The most significant architectural remains possibly related to inter-community tensions before 200 CE are ditches and wooden palisades constructed on hilltop settlements such as Banje-ri and Donghak-san (ca. 300–100 BCE) (Chae, 2012; Figure 1). These settlements are modest in size, measuring less than 2.5 ha. The construction of these palisades would have been possible with village-level cooperation not necessarily involving centralized state leadership. As demonstrated earlier, radiocarbon dates from Pungnap Toseong indicate that people started building the fortress after ca. 200 CE, although the *Samguk Sagi* documents that Wiryeseong, now believed to be Pungnap Toseong, already existed in 23 CE.

Archaeological records suggest that the Baekje people endeavored to strengthen their defense system after 200 CE. In central-western Korea, more than 50 sites with earthen or stone fortresses are estimated to be part of the Hanseong phase (Baek, 2003; Kang, 2007; Oh, 2006). Unfortunately, only a few of the discovered sites have been fully excavated and radiocarbon-dated. Strategically important locations were subject to appropriation by enemies and later generations, and these sites typically contained artifacts and features from

![Figure 6: Radiocarbon dates from the Baekje fortresses: Jeongbuk-dong Toseong (Cho & Lee, 2013), Chuseong Sanseong (Jungwon Cultural Property Research Center, 2017), and Banwol Sanseong (Park et al., 2004). The dates suggest that Jeongbuk-dong Toseong and Chuseong Sanseong are roughly contemporaneous with Pungnap Toseong, dating between 250 and 400 CE. The dates were calibrated using Oxcal 4.4 with the IntCal20 calibration curve (Bronk Ramsey, 2017; Reimer et al., 2020). Please refer to Supplementary Material 1 for the details of the dates.](image-url)
multiple periods (Hanseong Baekje Museum, 2016, 2017, 2018). The study region was seized by Goguryeo forces in 475 CE and by the Silla forces in 553 CE. Accordingly, the discovered artifacts exhibit a wide range of styles and temporal contexts, providing only limited information on site chronology.

Nevertheless, some fortifications have been radiocarbon-dated and confirmed to have Baekje origins (Figure 6; Supplementary Material 1). These sites include Jeongbuk-dong Toseong (Cho & Lee, 2013), Chuseong Sanseong (Jungwon Cultural Property Research Center, 2017), and Banwol Sanseong (Park, Seo, Kim, Bang, & Jeon, 2004). Jeongbuk-dong Toseong is a rectangular earthwork that measures approximately 185 m × 165 m (2.9 ha) with a remaining wall height of 3.5 m (Figure 7). The site has not been fully excavated, but small-scale excavations conducted intermittently from 1996 to 2013 revealed that the earthen walls were built over preceding pithouses and a wooden palisade, with the fortress surrounded by a moat. Radiocarbon dates obtained directly from the walls indicate that the fortress was constructed in the fourth century CE (Cho & Lee, 2013).

Chuseong Sanseong refers to two earthen fortresses: the northern (1.2 ha) and southern (5.2 ha) walls, located approximately 259 m above sea level (Figure 7). Excavations within the walled areas have uncovered Baekje-period pithouses and pottery. The earthen ramparts have been radiocarbon-dated to the fourth century CE (Jungwon Cultural Property Research Center, 2017).

Banwol Sanseong is a half-moon-shaped stone fortress (4.0 ha) situated on a mountaintop at 283 m above sea level (Figure 7). The fortress contains artifacts and archaeological features from multiple periods, suggesting repeated site occupation and reconstruction (Park et al., 2004). Park, Seo, Bang, and Kim (2002) proposed that the site was initially occupied in the fourth century CE, as evidenced by abundant Baekje-style pottery such as long egg-shaped vessels (jangran-hyeong togi) and deep bowls (simbal-hyeong togi). The fortress was likely constructed prior to the southern relocation of the Baekje capital in 475 and continued to be used afterward.

Furthermore, researchers argue that several fortresses, including Yukgye Toseong, Daemo Sanseong, Gomori Sanseong, Mongchon Toseong, Seolbong Sanseong, Jukju Sanseong, and Jami Sanseong (see Figure 1 for locations), were initially built and occupied by the Baekje people according to historical accounts and stylistic observations of the discovered artifacts (Baek, 2003; Kang, 2007).
Many of these sites are sanseong, mountain fortresses located on mountaintops, and they offer panoramic views of the surrounding areas. Throughout the Holocene, mountains have served as locations for diverse human activities, such as hunting, gathering, timbering, quarrying, and religious rituals. Archaeobotanical and zooarchaeological research have shown that plant and animal resources from mountains and forested areas remained important in prehistory (NRICH, 2015; Shin, 2001). However, evidence of human activities in the mountains prior to around 200 CE is scarce. The elevated localities, which overlook valleys and transportation routes, provide ideal locations for watchtowers, beacons, and fortresses. The presence of fortresses in highlands suggests that, by the fourth century CE, the Baekje people became more concerned about monitoring activities in distant areas, transmitting long-distance signals, and/or defending themselves by leveraging the advantage of high elevation.

7 Discussion

Following the emergence of farming societies in the central-western Korean Peninsula around 1500 BCE, social structure became increasingly complex. Multiple lines of archaeological evidence, including dolmens, bronze artifacts, and large settlements, demonstrate the existence of specialized craftsmanship, exchange networks, labor mobilization, and social differentiation. Despite these developments, there is no evidence to suggest that a small minority held political control over multiple communities and a large population for an extended period. The prehistoric agriculturalists in the study region lived in dispersed settlements and enjoyed a relatively high level of self-sufficiency and political autonomy (Blackmore, 2020). Both self-aggrandizement and leveling mechanisms were at work, and the power balance between these two forces needed to shift in favor of self-aggrandizement for a state-level society to emerge. According to archaeological evidence, this transition occurred around 200 CE.

Warfare, diplomacy, and trade are recurring themes in historical discussions regarding the evolution of Baekje’s kingship (Park, 2016). Warfare is crucial for state formation, and during conflicts with outgroups, political power was centralized in response to the need for organized violence to protect territories, resources, and populations. Throughout this process, ruling elites established institutions, bureaucracy, and legal frameworks to consolidate their power and control over a given territory (Bassett, 2007; Tilly, 1990). Prior to the emergence of statelets on the Korean Peninsula, one of the most significant political changes in northeastern Asia was the Chinese Han dynasty’s eastward expansion and establishment of Han commanderies on the peninsula (Yi, 2022). During this period, local chiefs had the opportunity to employ various strategies for status competition. The introduction of foreign powers into the political landscape likely weakened the leveling power of autonomous agricultural communities and facilitated a shift toward a more intensified form of political centralization.

The presence of iron weapons and earthen fortresses signifies the emergence of warfare as a prominent public concern and large-scale collaboration as a chosen solution. In societies consisting of multiple autonomous subgroups, monument construction would require the consent of a large portion of the community. Mass labor was employed for these projects, and if the rulers-to-be had relied solely on intimidation and coercion, they would have likely encountered resistance. As people are unlikely to unquestioningly accept the ideological claims of the ruling classes (Trigger, 2003), achieving public consensus was a crucial aspect of constructing monumental fortresses. External threats, whether real or perceived, likely facilitated the process of eliciting public consent.

Political consolidation driven by the decision to construct defense systems leaves the public vulnerable to exploitation by a small minority. Those in privileged positions can centralize decision-making, curb autonomy, justify requisitions, and demand a greater share of the benefits in exchange for their role in maintaining social stability. The construction of monumental fortresses requires the integration of diverse social and kin groups, contributing to the endorsement of hierarchy and a new social order, which is a precursor to state formation.

Prior to the construction of the fortresses, the concept of “there should be a state” (Yoffee, 2005) was likely vague among the people residing in the territory that would become Baekje. Indeed, they had not yet
experienced state organization. They lacked a blueprint for the hierarchical reality of the state and thus had difficulty comprehending its meaning. The collaborative construction of monumental fortresses like Pungnap Toseong created an unprecedented social context that delineated the roles and responsibilities of rulers and the governed. Through this experience, people adjusted to their positions in the new social organization.

Koreanist researchers who have sought to identify the “markers” of state-level societies have considered Pungnap Toseong to be evidence of the establishment of a fully developed kingdom (Lee, 2000; Park, 2001; Shin, 2002). They argue that the construction of such a monument could only have been achieved through the successful operation of state bureaucracy and coercive rulership. In other words, the existence of Baekje as a state was a prerequisite for the construction of its monumental ramparts. However, this study presents an alternative perspective, positing that people became Baekje through involvement in building the monuments. The construction of Pungnap Toseong represented a significant leap toward statehood – there is no archaeological evidence supporting the operation of a state-level organization prior to its construction. Pungnap Toseong was the earliest result of a region-wide collaboration within the core territory of Baekje. As people worked together toward shared goals and benefits, they were becoming constituents of the state.

Warfare has been a key task of states globally and throughout history, and the archaeological remains of pre-state societies are replete with markers of organized violence and cooperative defense (Arkush & Allen, 2006; Demattè, 1999; Fernández-Gótz, 2018; Gilbert, 2004; Grau-Mira, 2019; Keeley, 1996; Spencer, 2003; Underhill, 1994). The higher frequency of warfare during state formation is not necessarily an outcome of fully developed organizational complexity. Instead, the collective practices of the people in preparing for war contribute to the development of centralized rulership. To effectively defend against external threats and wage war, a society must mobilize its resources and labor, which requires leadership that can coordinate these efforts and facilitate cooperation on a larger scale (Crespo & Appel, 2020).

8 Conclusion

This study’s key objective is to explore why the public in pre-state central-western Korea accepted the new social order of a state and their corresponding assignment of lower social status. For the majority of the population, life within the state likely entailed reduced autonomy, increased labor, and higher taxation in comparison to the more egalitarian societies of the past. Small-scale agricultural communities emerged in the central-western Korean Peninsula around 1500 BCE, and social changes such as hierarchical settlement systems and social differentiation progressed over the following centuries. The consolidation of state-level power, however, did not occur until around 200 CE. The establishment of the Baekje state signifies the dominance of centralized power over the leveling power of the public. This study emphasizes that external threats and warfare, possibly with established states and those progressing toward statehood, including the Chinese Han commanderies, Goguryeo, and Silla, were crucial factors in building acceptance of the new state order.

The construction of monumental structures such as Pungnap Toseong marked a significant turning point in the evolution of Baekje’s kingship and statehood. The project united diverse social and kin groups, integrating them into a cohesive entity that would eventually become Baekje. While previous researchers considered Pungnap Toseong as evidence of an already established kingdom, this study proposes that the process of building the monument was vital in shaping the identity of the people, transforming them into Baekje constituents. Pungnap Toseong’s construction reflects the emergence of a new social organization, and the fortress stands as a testament to the earliest region-wide collaboration of this kind.

Productive lines of inquiry for future research could involve investigating the archaeological evidence associated with alternative pathways to power consolidation in Baekje. This may include examining artifacts or structures that reveal power-building strategies beyond warfare, such as diplomatic alliances or economic control. It is important to consider the oscillation between warfare and diplomacy in Baekje’s foreign relationships, rather than assuming a constant state of war. Furthermore, understanding how Baekje rulers gained exclusive control over the production of specialized items like iron tools and luxurious ornaments can provide valuable insight into their economic capabilities. Hopefully, scholarly efforts will continue to explore
alternative means of power consolidation as well as investigate how these approaches may have changed over Baekje's history.

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