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Warfare, Art, and Monuments in the Process of Social Complexity Within the Prehistoric Japanese Archipelago

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This paper reconstructs the process of increasing social complexity in the prehistoric Japanese Archipelago through cognitive analysis of the archaeological evidence for warfare, art, and monuments. Evocative and biotic designs on pottery and communal monuments, such as circles and enclosures, gradually gave way to regular patterns on metal objects and individual monuments, such as burial mounds. This change is interpreted as revealing a significant shift in the material expression of the prevailing worldview and in the manner in which artificial environments were constructed: From communal approaches by egalitarian foragers with little conflict to individual approaches by agricultural communities characterized by social stratification and political integration accompanied by verbal and material representations of warfare. This change is considered to have encouraged the development of complex societies that were mediated by the body and internal cognition, rather than by external relationships between groups.

Este artículo reconstruye el proceso de crecimiento de la complejidad social en el prehistórico archipiélago japonés, mediante el análisis cognitivo de la evidencia arqueológica de la guerra, arte y monumentos. Diseños bióticos y evocativos en la cerámica y monumentos comunales, como círculos y recintos, fueron dando paso gradualmente a patrones regulares en objetos metálicos y monumentos individuales, como túmulos funerarios. Este cambio se interpreta como la revelación de un cambio significativo en la expresión material de la cosmovisión predominante y en la forma en que se construyeron los entornos artificiales: Desde la perspectiva comunal de recolectores igualitarios con poco conflicto hasta la perspectiva individual de comunidades agrícolas caracterizadas por la estratificación social y la integración política, acompañadas de representaciones verbales y materiales de la guerra. Se considera que este cambio impulsó el desarrollo de sociedades complejas, que fueron mediadas por el cuerpo y la cognición interna, más que por relaciones externas entre grupos.

Warfare, art, and monuments are the most remarkable elements of material expression of prehistoric societies increasing in scale and complexity toward archaic states and empires, which are characterized by an institutional structure. This paper aims to reveal the emergence and transformation process of these three elements and the relationship between them. By doing so, the author reconstructs the process of social complexity in the prehistoric Japanese Archipelago.

First, the author presents the chronological framework of prehistoric and protohistoric Japan from the Paleolithic to the Nara period, during which the first institutional state based on legal codes came into existence. Second, the temporal variation in the cognitive quality of artistic expression is shown by comparing Jōmon pottery from hunting and gathering groups and Yayoi pottery from farming societies with social stratification. Third, the morphological classification of prehistoric monuments, including earthworks, fortifications, and burial mounds, is presented in order to reveal the process by which the material expression of the worldview held by each society changed. Fourth, the evolution of warfare is traced by showing the temporal variability of archaeological evidence, such as weapons, skeletal injury, fortified settlements, and buried arms and armor, in order to elucidate the physical and cognitive function of warfare within the process of increasing social complexity. Finally, the author integrates these analyses to elucidate the process of social complexity in Japan from the standpoint of materialization as a creation of the environment, within and against which the social organization increases its scale and complexity.

Chronological Framework

The beginning of the Jōmon period, marked by the appearance of pottery in the Japanese Archipelago, can be dated to around 16,500 BP, during the transition from the Last Glacial Era to the Holocene. Under warming temperatures, productive ecosystems grew and enabled the sedentary foraging groups to increase their scale and complexity, allowing us to categorize them as tribal societies. These tribes economically depended on gathering, fishing, and hunting over the nearly 12,000 years of the Jōmon period.

After 4500 BP, the Jōmon tribes and their rich culture, including magnificent pottery, declined, especially in the northeastern part of the archipelago, which experienced environmental degradation owing to global cooling. In contrast, the southwestern tribes accepted horticulture with dry-field farming from the continent and maintained their population. Around 2950 BP, according to C14 dating, immigrants from the Korean Peninsula introduced more intensive agriculture with wet rice cultivation to the Jōmon tribes of northern Kyūshū. This marks the beginning of the Yayoi period, which witnessed the emergence of the first society based on agriculture in Japan (Fujio, 2015).

Immigrants from the Korean Peninsula are also considered to have introduced warfare practices, including the use of weapons and fortified settlements, which is believed to mark the beginning of warfare in Japan, as discussed later in detail (Fujio, 2015). By 2350 BP (4th century BC), according to C14 dating, the simultaneous importation of bronze and iron tools from the Korean Peninsula triggered the processes of social stratification and the emergence of local chiefdoms. Groups are considered to have been in competition for land and territory in the earlier stage and later for the supply of metal goods and resources (Hashiguchi, 1987; Tsude, 2011). In the middle of the 2nd century AD, select regions, in particular the San'in and Setouchi regions (mainly the modern Shimane, Tottori, and Okayama Prefectures), began to construct large burial mounds for their chiefs. These burial mounds are regarded as the precursors of the *kofun* (standardized mounded

tombs), albeit displaying much stronger regionality.

According to C14 dating and inscriptions of Chinese era names on bronze mirrors, standardized mounded tombs (*kofun*), represented by keyhole-shaped examples (*zenpō-kōen-fun*), emerged in the central Kinki region (mainly the modern Nara, Osaka, and Kyoto Prefectures) in the middle of the 3rd century AD. It can be inferred that this region established its hegemony over areas where local elites participated in the formation of the standardized mounded tombs and built their own examples on a smaller scale (Tsude, 2011).

This hierarchical formulation of mounded-tomb construction is regarded as the manifestation of a status system under the early state, reigned over by the paramount ruler (*daiō*) from the central Kinki region, who succeeded in extending his power over local elites. This network under the *daiō* reached its peak in the 5th century AD and declined over the course of the 6th century, as reflected in the reduction in scale of the mounded tombs.

This early state system, dependent on the material display of its power and prestige, is considered to have gradually transformed into a mature state based on legal codes and a world religion (Buddhism) imported from China and to have reached fruition in the 7th century, according to written documents such as the *Nihon shoki* (Chronicles of Japan).

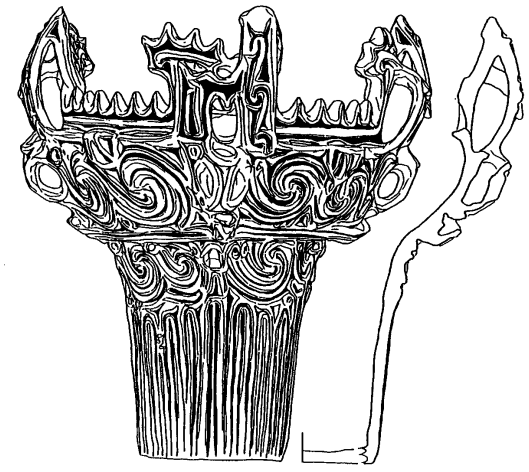
Artistic Expression

Structural features of the artistic expression of a society can be extracted by analyzing the morphological patterns expressed on pottery. Designs on Jōmon pottery grew complex after 6000 BP, when large sedentary settlements emerged and became densely distributed in the northeastern areas of the mainland, such as the Chūbu, Kantō, and Tōhoku regions, indicating population increase in these areas.

Asymmetry, broken patterns, curving lines, and up-and-down motion are dominant in the design of the Jōmon pottery from this period (Figure 7.1) In terms of cognitive psychology, these kinds of expressions are believed to activate semantic processing in human brains, much more than symmetry, unbroken patterns, straight lines, and horizontal motion (Matsumoto, 2008). This suggests that the pottery elaborated with these evocative designs functioned not only as food vessels but also as a medium of social communication among the people sharing them, acting to intensify their communal identity (Matsugi, 2016). Furthermore, biotic imagery and representations, such as *dogū* figurines and clay animals, as well as intertwining floral patterns on pottery, are dominant in the artistic expression of objects from this period. They are interpreted as fertility symbols representing the worldview within which their reproductive foraging society organized and maintained itself.

Figure 7.1.

Illustration of pottery from Sasayama site, Niigata prefecture. Tokamachi City Museum (1996). New Perspective of the Research on "Flame Style" Pottery.



After 4500 BP, the large settlements reduced in number, signaling a decrease and dispersal of the population under the global degradation of the environment, as previously mentioned. In parallel, the evocative designs also went into decline, giving way to plain patterns arrayed horizontally, and functionally differentiated pottery, such as vessels, pots, bowls, and saucers, with less elaboration emerged. This indicates that the pottery from the last stage of the Jōmon period began to lose its traditional function as the medium of social communication intensifying communal identity and came to act mainly as objects of daily use.

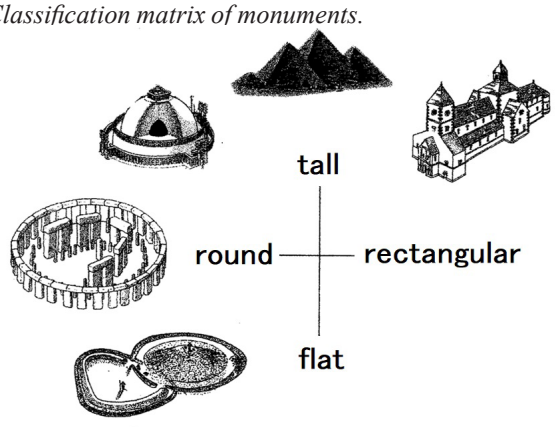
The same features seen in Final Jōmon pottery persisted into the following Yayoi period in the central parts of the archipelago. Biotic figures such as *dogū* figurines and clay animals were almost absent during the Yayoi period, suggesting that the traditional worldview held by foraging groups changed into one compatible with an intensive agricultural society (Matsugi, 2004).

After the emergence of bronze implements and weapons in the 4th century BC, they came to be heavily invested with artistic expression. Symmetry, unbroken plain patterns, horizontal and vertical lines, and saw-tooth patterns, which had not been seen in the previous Jōmon period, were dominant on the surfaces of *dōtaku* bells and other bronze objects (Matsugi, 2016). In terms of cognitive psychology, these shapes arouse feelings of rule, distinction, and aggression, as saw-tooth patterns or triangles are conspicuous in the visual field (Mitani, 1998) and can recall a sense of pain according to the results of Gestalt psychology experiments. These artistic expressions seen in Yayoi bronze objects are considered to have been material representations of the worldview within which the Yayoi agricultural society increased its scale and complexity through social stratification and integration involving rule, distinction, and aggression among groups.

After the 3rd century AD, with the transition from the Yayoi to the Kofun period, artistic expression in artefacts became restricted to elite goods, such as mirrors, weapons, armor, and funeral equipment. The uneven distribution of artistic expression on materials is considered not only to indicate an economic disparity between elites and the general population, but also to represent the hierarchically structuralized worldview of an emerging class society.

Figure 7.2.

Classification matrix of monuments.



Note. Adapted from (Matsugi, 2009).

Monuments

Prehistoric and protohistoric monuments can be classified into four types using a classification matrix, in which planar shape is represented on the horizontal axis from round to rectangular and elevation is represented on the vertical axis from flat to tall. From a global standpoint, the oldest monuments from egalitarian societies during the Neolithic were mostly flat and round, such as enclosures, henges, and stone circles. Stratified societies, such as chiefdoms, often built slightly elevated monuments, including burial mounds, whose planar shapes were mainly still round. Archaic states and empires preferred tall monuments with rectangular shapes and straight lines, such as the Egyptian pyramids and the imperial mausolea of the Qin and the Han dynasties of ancient China. Finally,

tall rectangular buildings with magnificent facades were often constructed as the monuments of world religions, such as Christian cathedrals and Buddhist temples from the end of the ancient period to medieval times (Figure 7.2; Matsugi, 2009).

The morphological transition of monuments, from round to rectangular in planar shape and from flat to tall in three-dimensional form, is closely related to the defining nature of a particular society in the three following ways (Matsugi, 2009).

First, the human brain has developed to utilize metaphors of physical schema (Lakoff, 1987; Matsumoto, 2000), the cognitive base of bodily sensation, in order to realize social relationships. For example, the "top-and-bottom schema" is often used to express the distinction between rich dominant persons and poor subordinate people, such as "top" or "high" class and "bottom" or "low" class. Likewise, the "inner and outer schema" is used to stress the relationship between "us" and "them". The fundamental form of each monument type is considered to be determined by the physical scheme most representative of the essential nature of a particular society. For instance, flat and round monuments in the Neolithic were the materialization of the "inner and outer schema" compatible with egalitarian communal society. In contrast, tall monuments from archaic states and empires derived from the "top-and-bottom schema" of class society.

Second, the structure of monuments is thought to reflect the social relationships behind their construction. Flat and round monuments of Neolithic societies were not related to any specific individuals, but rather involved numerous people participating in a communal activity. On the other hand, tall monuments of archaic states and empires were linked to a particular god(s) or individual(s), such as a king or emperor, by way of ritual activities conducted in and on the monument specifically for him/her.

Third, the shape and scale of the monument largely depended on the intensity of labor and the technological level of the society. Most of the Neolithic monuments, such as stone circles and earthen henges, do not seem to have required any intensive labor or specialized techniques. In contrast, tall architecture beginning in archaic states is assumed to have required advanced design techniques and construction skill, such as stone masonry, which could be actualized only under a class society with the power and mechanisms to integrate and provide these.

The oldest monuments in the Japanese archipelago were flat stone circles and earthen henges mainly found in the Kantō, Tōhoku, and Hokkaidō regions of northeastern Japan and dating to the late Jōmon period after 4500 BP. They are classified into the flat and round type, specific to egalitarian communal societies, into which the Jōmon is categorized. Considering that some of them, such as the Ōyu site in the Tōhoku region, were arranged in the direction of the sun on the solstice, they are presumed to have been communal centers for ritual, where people might have met together periodically (Matsumoto, 2005). They disappeared by the transition from the Jōmon to the Yayoi period, which is marked by the establishment of an agricultural society utilizing wet rice cultivation.

While monumental construction is rarely found in the Early and Middle Yayoi period, large enclosed settlements with multiple moats and banks might have functioned not only as substantial defense facilities, but also as demonstrations of communal identity. These settlements fall into the same category as the Jōmon monuments in that they are roughly round and flat and not related to any particular individuals.

Individual monuments appeared as large chiefly burial mounds in the San'in and Setouchi regions during the Late Yayoi period, as mentioned above. Their planar shapes are round or square with rounded corners, and sometimes they

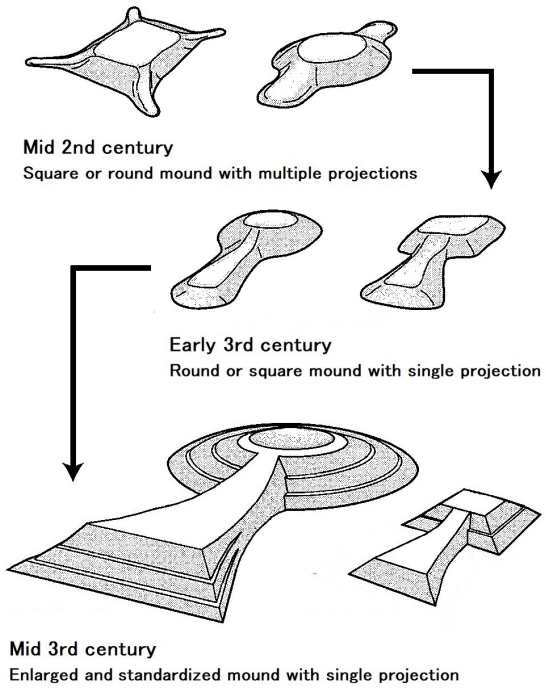
have one small projection at each corner or two large ones in opposite directions (Figure 7.3). One to several wooden coffins were buried on their flat tops elevated just several meters from the ground.

In the middle of the 3rd century AD, Yayoi burial mounds were enlarged and standardized into fixed styles, such as the keyhole-shaped examples with a round mound and singular projection that emerged in the central Kinki region (Figure 7.3). They were copied in other regions, marking the beginning of the Kofun period and foundation of the early-state status system. Although the mounds grew to extraordinary size, some over 500m in length, they were still relatively flat and hardly related to the "top-and-bottom" schema. Despite their elaborated chambers and coffins, rich grave goods, and magnificent exterior with enormous haniwa clay figures, they hardly fall into the same category as the pyramids from Egypt and Teotihuacan and other tall monuments dominant in more mature states and empires.

These mounded tombs declined in size and number during the 6th to 7th centuries and came to be replaced by Buddhist temples under the rule of the newly established institutional state. From the standpoint of monument morphology, prehistoric Japan underwent the transition to a class society without going through the stage of tall-monument construction, which was prevalent in the class societies of archaic states and empires. This anomalistic process is thought to reflect the inherent nature of the formation process of complex society in the Japanese Archipelago.

Figure 7.3.

Transformation of burial mounds from the Late Yayoi to Early Kofun period.



Note. Adapted from (Matsugi, 2007). Illustrated by Yūji Hōshō.

Warfare

Makoto Sahara, one of the leading Japanese archaeologists of the late 20th century, suggested six archaeological correlates of warfare: Antipersonnel weapons, skeletal evidence of trauma, fortified settlements, burial offerings of weapons or armor, worship of armaments, and artistic representations of warfare (Sahara, 2005). Sahara discovered that most of these appeared in farming societies, such as the Yayoi of Japan, and demonstrated that warfare was triggered by the accumulation of wealth innate to agriculture (Sahara, 2005).

According to Sahara, hardly any evidence is found from Jōmon settlements, indicating that substantial fighting was not frequent in the period. Antipersonnel weapons, fortified settlements, and burial offerings of weapons were all introduced together with wet rice cultivation by immigrants from the Korean Peninsula at the beginning of the Yayoi period, after 2950 BC.

Skeletal remains showing trauma also appear at this time. Examples increase from the Early to Middle

Yayoi period, mainly in northern Kyūshū, where social stratification progressed faster than other regions, suggesting the influential role of substantial conflict among local groups. Skeletal trauma and weapons penetrating the body found in coffins show a broadening distribution after the Middle Yayoi period in the San'in, Setouchi, and Kinki regions, suggesting that substantial fighting came to be conducted in a more extensive area outside northern Kyūshū. The most striking example comes from the Aoya-kamijichi site in the San'in region, where 109 people, including more than ten injured by weapons, were abandoned in a bog, suggesting a massacre in the 2nd century AD.

In parallel, bronze weapons, such as swords, spears, and halberds, became enlarged not to improve actual function, but rather to their increase visual effect as symbolic objects for communal rituals, especially in northern Kyūshū, San'in and Setouchi. Fortified settlements also became equipped with multiple moats and banks, with a central shrine for ceremony mainly in the central Kinki region. This suggests that the idea of communal defense and military prestige of each group had become materialized in the form of symbolic weaponry and monumentally elaborated fortified settlements against a backdrop of competitive relationships that developed into substantial conflicts.

It was during the transition from the Yayoi to the Kofun period in the 3rd century AD when materialization related to warfare was drastically reconstructed. Ritual bronze weapons and fortified settlements with multiple circular moats disappeared. Subsequently, the only moated structures were the rectangular residences of elites, which displayed the military prestige of the rulers residing within. Simultaneously, a considerable amount of weapons came to be offered at the elite burials conducted in the large standardized mounds (Figure 7.4; Matsugi, 2020).

This shift in the distribution of archaeological evidence of warfare from the Yayoi to the Kofun period can be explained in the following manner. Defensive constructions of the Yayoi period, such as moated settlements, are considered to have served as a material manifestation and visual representation of communal identity. This identity was represented in the form of collective self-defense and the sharing of a common goal within their worldview. In the Kofun period, by contrast, identity was manifested in the central display of elite military authority and heroic prestige through burial ceremonies centering on the offering of weapons and armor. In other words, the warfare landscape as material manifestation converged upon individual elites through mounded tomb construction.

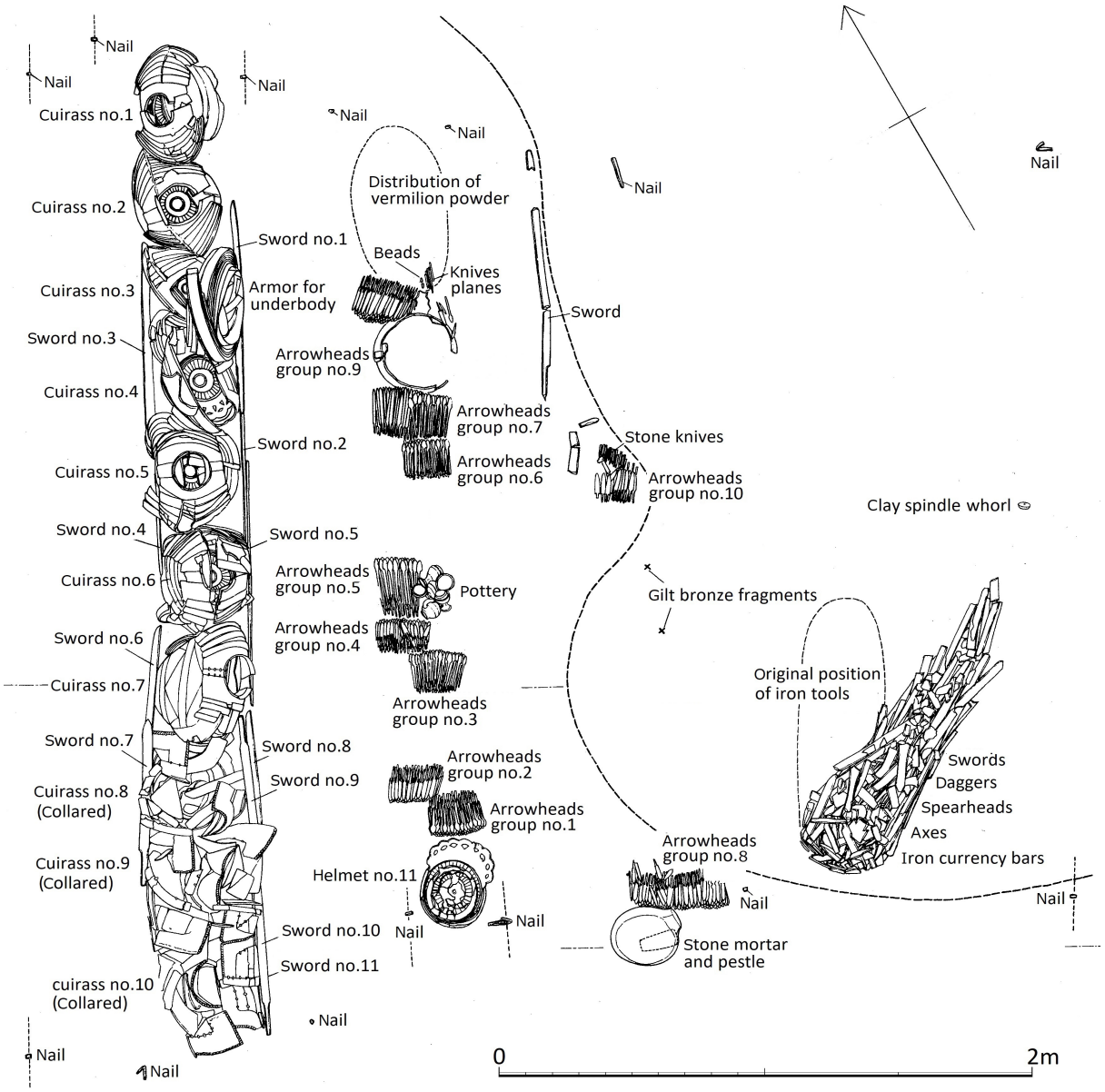
Interestingly, skeletal evidence of trauma decreases significantly in the following Kofun period, indicating that elites had become able to control intergroup violence through their political confederacy and emerging socio-political order under the paramount elite, which was reflected in the system of mounded-tomb construction.

After the 6th century AD, the practice of depositing large numbers of weapons and armor subsided and was replaced by the offering of one or two decorated swords in the funerals of the elite. These decorated swords were regarded as status symbols within the new political structure. The formation of a mature state based on legal codes and Buddhism brought from the continent during the 7th century was decisive in bringing about the decline of the mounded-tomb tradition.

The landscape associated with the emerging state of ancient Japan was novel in that cities were not fortified or walled. The only exception was the construction of a dozen or so hillforts by the late 7th century in northern Kyūshū and the Setouchi region in the western part of the archipelago. They may have been built in response to the threat of invasion from Silla on the Korean Peninsula and Tang China.

Figure 7.4.

Large numbers of armours and weapons.



Note. Large number of armor and weapons offered in an elite burial. Nonaka mounded tomb, Osaka Prefecture. Adapted from (Kitano, 1976).

Discussion

Based on changing patterns found in the archaeological evidence of art, monuments, and warfare, the process of increasing complexity in the prehistoric and protohistoric society of the Japanese Archipelago can be reconstructed as follows.

The first phase corresponds to the middle of the Jōmon period (6000–4500 BC), when pottery decorated with evocative designs developed to represent the worldview within which the foraging society sustained itself. The second phase after 4500 BC is characterized by the appearance of communal monuments as periodic ritual centers, in parallel with the transformation seen in pottery from evocative designs to plain patterns.

The shift from the first to second stage can be interpreted as the shrinking of a reproductive society with large settlements and a dense population into dispersed small groups against a backdrop of global cooling, which is supported by various methods of climate reconstruction. The focus of material representation as a vehicle of social communication shifted from pottery shared by groups residing together in large villages to monuments, where people who lived daily life separately would periodically assemble.

The third phase represents the introduction of a new worldview from the continent, which included discriminative and confrontational relationships between humans and nature, as well as between human groups. Monumental development of fortified settlements and symbolic weapons, which evoked distinction and aggression, were prevalent during the Yayoi period, until the 2nd century AD. Social stratification and integration progressed within this worldview, which was closely compatible with the expansion of an intensive agricultural society centered on wet rice cultivation and communal power.

In consequence, the focus of the worldview shifted from the community to individuals, mainly to the elite, with the transition to the Kofun period. The fourth phase beginning in the 3rd century witnessed the construction of elite mounded tombs containing a significant amount of weapons and armor. The material manifestation of the worldview of protohistoric Japan is unique in the dominance of mounded tombs and the absence of fortifications and walls. This uneven distribution of power in the construction of monuments stemmed from the nature of ancient Japan’s sociopolitical system of being an early state without cities.

Finally, during the 7th century AD, the new Buddhist worldview introduced from China replaced the former paradigm represented by mounded tombs, marking the beginning of the fifth phase. Supported by a writing system, it broadly came to dominate Koguryŏ, Paekche, and Silla on the Korean eninsula and reached all the way to Japan, where both artistic expression and the focus of monumental construction became centered on Buddhist temples and imperial palaces. These states shared a global worldview and an accompanying material landscape, under which they developed political systems based on legal codes, territorial governance, and military organization.

Conclusion

Japanese archaeology has traditionally stemmed from the historical materialism of Marxism and the social evolutionism of American anthropology, both of which adopted conventional categorizations such as "tribal society", "chiefdom", and "state", and focused on such functions as "labor division", "redistribution", and "urbanization". Archaeological shreds of evidence from surveys or excavations have thus been classified and interpreted into the compositional elements of such categories. As a result, invaluable information concerning human thought and worldview, which is indispensable

to comprehensively reconstruct past societies and their change, may have slipped out of our archaeological body of knowledge.

In this paper the author highlighted the unique nature of the transformation process of complex society in the Japanese archipelago, the drastic reorganization of material expression from group-oriented to individualizing at the beginning of the Kofun period, the absence of defensive and urban-centered landscape during the Kofun period, and the lack of the tall monuments characteristic of early class societies. All are important areas that traditional approaches based on conventional categorization have overlooked. It is time for Japanese archaeology to employ a new approach to the reconstruction of the rich past.

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