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#### THE YAMATO STATE: STEPS TOWARD A DEVELOPMENTAL UNDERSTANDING<sup>1</sup>

It is a basic axiom in archaeology that the distribution of cultural traits does not unequivocally imply political unification or integration: i.e. the cultural and political spheres are not necessarily concomitant. In addition, the concept of conquest itself is extremely vague and slippery: does it mean a raid, a military occupation, an administrative occupation, an assimilation of communities, or simply a change of dynasties (see Vansina 1966)? The impact of each of these would be very different, not to mention difficult to recognise archaeologically. In the case of Japan, saying that there was a foreign "conquest" in the fifth century does not explain adequately how the Yamato state developed.

I will temporarily put aside questions of identity of the first administrators in Japan and look instead at the development of the Yamato state as a form of social organisation. For even if someday the identity of the administrative nucleus of this new state organisation in Japan is known, we would still face the question of how did it come into being? A state is more than a group of people or an ideology. From recent African history, we know how extremely difficult it is to walk in and just

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set up a state: in order to function at all or survive more than one or two generations beyond its founders, a state must have a strong and well-integrated infrastructure. My contention is that Japan was in the process of moving towards state-level organisation and rapidly developing some of the crucial prerequisites of the necessary infrastructure in the Terminal Yayoi and early Kofun periods. This paper is the first step in a re-examination of data from the Kansai area for clues to the developmental processes operative in the formation of the Yamato state.

### Theoretical Foundations

In the field of American anthropology, the concept of state formation derives from the theory of social evolution: the qualitative transformation of a simple society into one with the social complexity of a fully-fledged state occurs within a systemic context and involves basic socio-economic variables (White 1949; Fried 1960, 1967; Service 1962, 1975). Recent research on state formation has indicated that at least three variables are important to the development of state-level social, economic and political institutions: demographic changes, documented for critical periods during state formation in Mesopotamia and the Near East (Parsons 1969; Sanders 1972; Wright and Johnson 1975); increasing specialisation in both crafts and agricultural production resulting in economic integration on a regional scale, discussed for the central Mexican basin and southwestern Iran (Sanders 1956, 1968; Wright 1972; Johnson 1973); and the development of site hierarchies has been demonstrated for early Near Eastern state systems (Wright 1972; Johnson 1973).

These studies are based on the analysis of such cultural remains as settlements, production sites, public works, and specialised activity areas, rather than the burial sites which have produced most of the data on Yamato state formation. They are classes of data rarely used in a systematic fashion to assess the development of the state in Japan. They have not been used because of the reported scarcity of Kofun period settlements and sites in the Yamato area (Daté 1975). However, I believe this "lack of sites" may actually be the result of a number of other factors:

1. the tendency of Japanese archaeologists to refer to a site only by its period of peak occupation and thus artificially restrict consideration of it to that period only;

2. the natural tendency to place more emphasis on decorated pottery sherds which biases the dating process towards the highly decorated pottery of middle Yayoi and away from the undecorated, plain wares of terminal Yayoi and early Kofun;
3. the quest for data from Kofun period farming settlements complete with pit houses and agricultural tools for comparison with large Yayoi agricultural settlements (Daté 1975), to the exclusion of other types of settlement data;
4. the lack of a settlement system concept in Japanese archaeology by which fragmentary data on production, extraction, trade, burial, environmental exploitation, etc., can be fitted together to produce a systematic view of culture and cultural change;
5. and the bias towards locating sites on the agricultural plains with little attention to the hill flanks and valleys (Morimoto 1924).

If the development of the Yamato state is to be explicated in concrete, processual terms, these deficiencies must be corrected. This can be accomplished through four complementary approaches: a complete re-examination of the site literature; a re-evaluation of surface and excavation collections; new surface surveys to obtain systematic and probabilistic data to compensate for the biases in the available data; and the analysis and integration of all the newly-generated data within the framework of the settlement system concept (Parsons 1972) and the theories of complex social integration and growth. For the past several months, I have been working at re-examining the site literature to the extent that Japanese source materials are available to me. This paper relates the findings of this research, which is yet incomplete because I have not yet had the opportunity to examine the collections first-hand or review site reports not available from the Asia Library, University of Michigan. The following presentation can thus be considered as work in progress and represents a first step in investigating the development of the Yamato state.

#### Periodization

One of the obstacles to working out a developmental scheme for the Yamato state is the number of contradictory

and overlapping period designations for early Japan. The most blatant of these is the separation of late Kofun and Asuka whereby all remains of the late tumulus culture are assigned to the late Kofun period, and Buddhist and administrative remains are assigned to the Asuka period. This creates in our minds and our writing an artificial separation between contemporaneous aspects of a single social system. To adjust for this and other distortions, I am proposing slight modifications to the existing schemes which will be based on developmental considerations.

In brief, I have adopted Suwa's designation of the Yamato period from 300-710 A.D. (Suwa 1957). The fourth century will be referred to as the Formative phase of the Yamato period. During that century the phenomenon of social stratification took place, tomb-building became widespread, political ideology was characterised by militarism and ritual symbolism, and most goods were locally produced and traded within Japan.

The Incipient phase during the fifth century witnessed the development of highly centralised authority, military power and agricultural productivity based on unrestricted access to iron, and the building of monumental tombs. Perhaps the state first manifested itself then, although its presence has not yet been firmly documented. During this phase also, extensive contacts with Korea brought new trade items, people and crafts production to Japan.

The Florescent phase, spanning the sixth and seventh centuries, was characterised by a fully developed administrative organisation, urban centres, and monumental architecture. Buddhism replaced militarism as the anchor for state ideology, and the elite channelled their wealth into temple building rather than tomb building to memorialise their status.

The chart on the following page illustrates the existing period divisions and the relationships to them of the phases I am proposing.

Japanese archaeologists are finding the current period divisions increasingly unsatisfactory and have voiced concern about the dependence on tomb oriented chronology. Possibly the scheme proposed here will help in revising our conception of historical processes and divisions during the period of state formation in Japan.

Source:

Date	Historical Tradition	Archaeological Variation #1	Archaeological Variation #2	Otsuka (1966)	Proposed
250	Yayoi	Yayoi	Yayoi	Yayoi	Yayoi
300					
400	Kofun	Kofun	Kofun early	Kofun I	Yamato Formative (early)
		early		II	
500			middle	III	
				IV	
600	Asuka	late		V	Incipient (middle)
				VI	Florescent (late)
700	Nara	Nara	late	VII	
	Hakuho				
	Tempyo			Nara	Nara

## The Nara Basin

In order to understand the patterns of interaction and growth in the Yamato area,<sup>1</sup> it is necessary to reconstruct the geophysical setting that served as the stage for social development. In the late Yayoi period, the configuration of the Osaka coastal plains was much different than today (see Map 1). A large inlet existed west of the Ikoma range where much of Osaka city currently lies, only a narrow spit of land separating the inlet from the bay. In the middle Yamato period this inlet still existed as a slightly smaller lake, but it was later filled in by river deposits and became a low swampy area. The two most important sites of the late Yamato period in Osaka, Tennoji and Naniwa, were both located on high ground provided by the narrow sand spit. Much of the central Osaka plains as well as the Kyoto basin were uninhabitable because of the extensive swamps.

The Nara basin is a topographically discrete but relatively small unit - approximately 750 km<sup>2</sup> measured to the crest of the surrounding mountains - lying directly east of Osaka Bay at the eastern end of the Inland Sea. There are several reasons why prehistoric settlement was located in this humid, subtropical region of Japan with a mean annual precipitation of about 200 cm. The surrounding mountains provide protection from the annual August typhoons that plague the southeastern coast of Japan, and the basin receives the major portion of rainfall during the early summer rainy season which closely determines the transplanting cycle of wet rice, the dominant crop from formative to modern times. The basin is drained by a radial pattern of small streams which could easily be diverted into irrigation canals. The streams converge in the centre of the basin to form the Yamato river which forms a natural communication link with the Inland Sea.

Up until the Tokugawa period (1603-1868), the course of the Yamato river took an abrupt turn north just as it flowed out of the narrow mountain corridor from the Nara basin. This river originally drained into the Kawachi inlet, but once that was filled in, it joined the Yodo river before flowing into the Inland Sea. The present course of the river, cutting directly west across the

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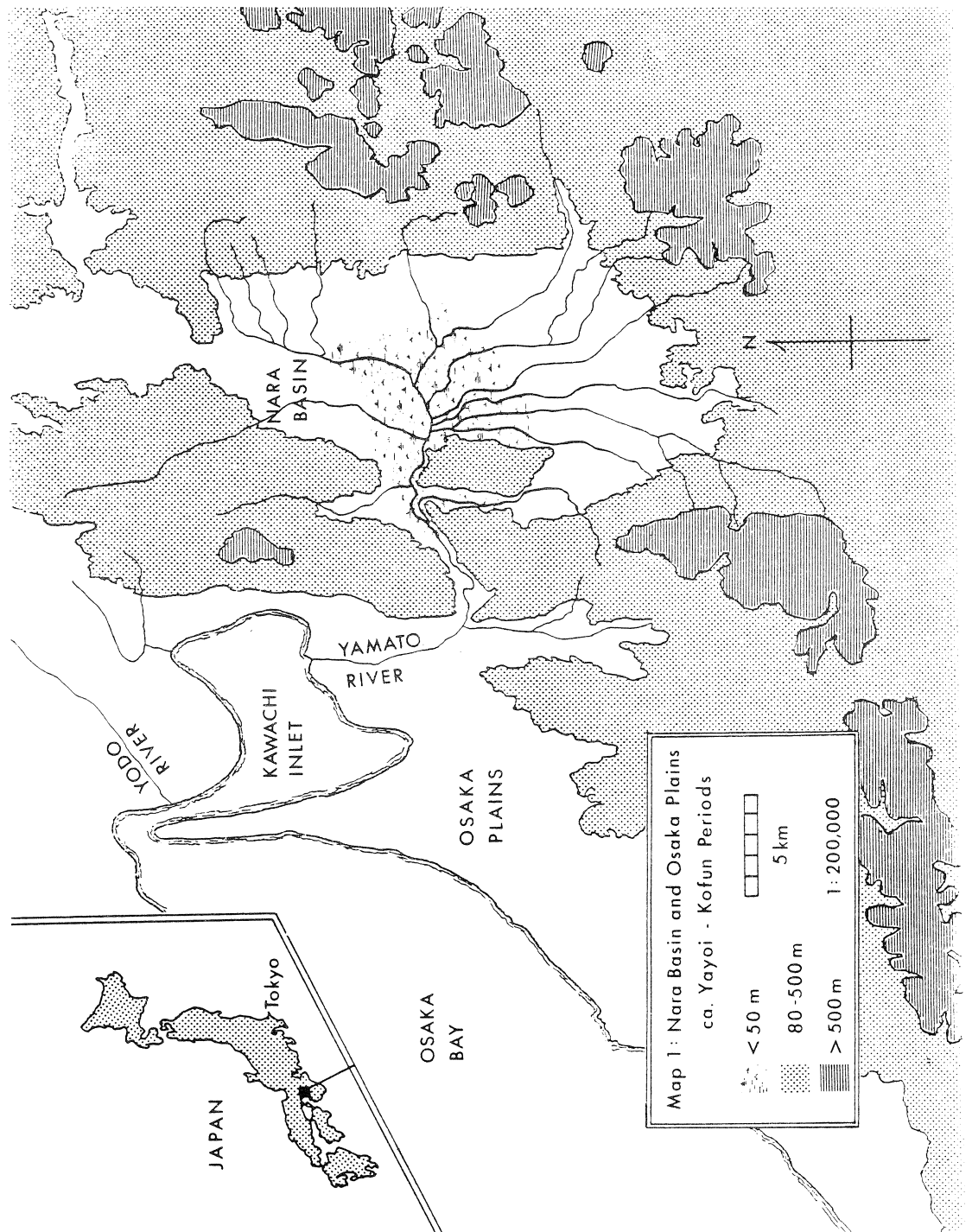
<sup>1</sup> See Map 0 for regional names

(Original map from Miki 1974)

## Prefectures of Modern Japan

- |                   |                            |
|-------------------|----------------------------|
| 1. Aomori         | 24. Wakayama               |
| 2. Akita          | 25. Shiga                  |
| 3. Iwate          | 26. Kyoto                  |
| 4. Yamagata       | 27. Hyōgo                  |
| 5. Miyagi         | 28. Osaka (Kawachi, Izumi) |
| 6. Fukushima      | 29. Nara                   |
| 7. Gumma          | 30. Tottori                |
| 8. Tochigi        | 31. Shimane                |
| 9. Ibaraki        | 32. Yamaguchi              |
| 10. Saitama       | 33. Hiroshima              |
| 11. Chiba         | 34. Okayama                |
| 12. Tokyo         | 35. Kagawa                 |
| 13. Kanagawa      | 36. Ehime                  |
| 14. Yamanashi     | 37. Tokushima              |
| 15. Nagano        | 38. Kōchi                  |
| 16. Gifu          | 39. Fukuoka                |
| 17. Niigata       | 40. Saga                   |
| 18. Toyama        | 41. Nagasaki               |
| 19. Ishikawa      | 42. Oita                   |
| 20. Fukui         | 43. Kumamoto               |
| 21. Shizuoka      | 44. Miyazaki               |
| 22. Aichi (Owari) | 45. Kagoshima              |
| 23. Mie           | Okinawa (not shown)        |







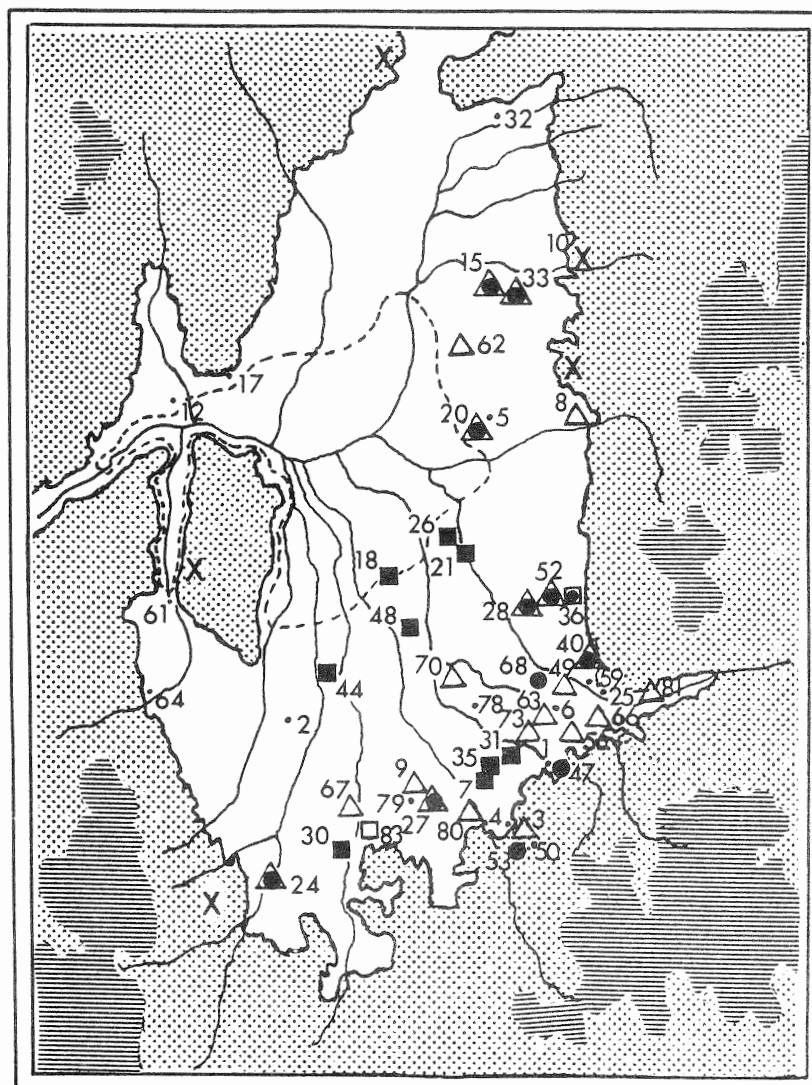
southern Osaka plains, was constructed during the late Tokugawa period and thus does not represent the major route of communication to the Nara basin for the majority of early Japanese history.

### Socio-economic Development

Sedentary occupation of the Nara basin began with the initiation of wet rice agriculture in the early Yayoi period. Early agricultural sites are located mainly in the southeastern portion of the basin on the coarse-grained, porous soils of volcanic origin (see Map 2 and Chart 1). From early to late Yayoi, site locations reflect a continuing expansion into all altitude zones in the basin (Daté 1963); however, the intense agricultural exploitation of the northern alluvial plains was inhibited until well into the Yamato period by the heavy, clayey soils derived from the sedimentary rock formations of the northern mountains. Hachiga estimates that 17% of the 300 km<sup>2</sup> of alluvial flatlands were cultivated in early Yayoi; by middle Yayoi this increased to 50%; and by the middle Yamato period, 95% of the basin had been brought under cultivation (Hachiga 1975).

Site distribution evidence and cultural materials point to a vast swampy area having existed in the central basin during the Yayoi period. Pottery sherds with incised drawings of boats have been recovered from the site of Karako (#26 on Map 2) indicating that the Yayoi peoples of the Nara basin were far from being land-bound and depended to some extent on water for transportation and possibly some subsistence needs. The lowlands may have provided freshwater fish and reedy grasses, the swamps added greatly to the ecological diversity of the basin. Pollen profiles would be very helpful in reconstructing the precise floral and faunal composition of this area. Most of the Yayoi sites in the basin were located along river courses or near the borders of the lowlands. Many of the smaller tributaries may have been navigable by boat, and it appears that the old course of the Yamato river served as the major communication route to the coast.

*Political Differentiation:* The Yayoi period subsumes all of egalitarian and early ranked society based on wet rice agriculture. Burials during this period show



Map 2 : Yayoi Period Sites

- in Nara Basin
- 50 meter line
- early thru late occupation
- early only
- middle
- △ late
- phase unknown
- × bronze bell caches
- 12 site number

CHART 1: Dated Sites in the Nara Basin<sup>1</sup>

Site	Yayoi	1	2	3	4	5	Kofun	E	L	Sué	Asuka
1 Abedera	+						+				+
2 Ariiike	+						+			+	
3 Asukakyo					+			+	+		+
4 Asukadera	+										+
5 Byodobo	+										
6 Daifuku					+		+				+
7 Fujiwaraskyo		+	+	+	+	+		+		+	+
8 Furu					+	+		+	+		
9 Gemyojiike						+		+	+		
10 Hayata	+										
11 Heijokyo							+				
12 Heiryuji	+										+
13 Jigashi Shindo				+							
14 Hirano									+		
15 Hirodaijiike				+	+						
16 Hokiji											+
17 Horyuji	+										+
18 Hotsu			+	+	+						
19 Iwami							+				
20 Iwamuro				+	+						
21 Kagi			+	+	+						
22 Kaginishi											+
23 Kaminoide											+
24 Kamotsuba				+	+	+					
25 Kaneya	+										
26 Karako		+	+	+	+	+		+	+		
27 Kashiwara				+		+	+			+	
28 Katsuyamaike				+	+						
29 Kawai							+				
30 Kazu			+	+	+			+			
31 Kibiike			+	+	+						
32 Kokutetsu Nara Eki	+										
33 Kubominosho				+	+	+		+			
34 Kuridono					+						
35 Kurodaike	+		+	+	+		+			+	
36 Makimuku			+	+				+	+	+	+
37 Makinouchi	+										
38 Makkanmura			+								
39 Miminashi	+										
40 Miwa				+	+		+				
41 Miyake							+				

<sup>1</sup>

Sites are dated as given in the literature

Chart 1 (cont.,)

Site	Yayoi	1	2	3	4	5	Kofun	E	L	Sué	Asuka
42 Nagatsuka	+										
43 Nakao									+		
44 Nakasoshi		+	+	+	+	+	+				
45 Naraike											+
46 Narayama							+				
47 Noto				+			+				
48 Oo			+	+	+		+			+	
49 Odonon					+						
50 Oka				+							
51 Omoriike	+										
52 Ota				+	+						
53 Owari Tanomiya					+				+		+
54 Sakatadera											+
55 Sakuragawa	+										
56 Sakurai Koennai					+						
57 Sakurai Jinja							+			+	
58 Shakudo											+
59 Shiba	+										
60 Shimanosho	+							+	+		+
61 Shimoda	+										
62 Shimoika					+						
63 Tachibana								+	+		+
64 Takenouchi	+										
65 Torimiyama										+	
67 Toriya					+			+			
68 Toshindo					+						
69 Toyama				+							
70 Tsuboi							+				
71 Yamanokami					+			+			
72 Yokota	+										
73 Yokouchi					+						
<u>Additions:</u>											
74 Hanesbida							+				
75 Ichi-no-moto							+				
76 Yamaguchi-ike							+				
77 Yamata-michi											+
78 Tokiwa	+										
79 Unebiyama	+										
80 Wada					+			+		+	+
81 Wakimoto					+						
82 Sakurai Baba							+				
83 Shibu			+								

Key: If phase of Yayoi or Kofun period occupations are known, they are designated as Yayoi 1-5 (initial through terminal) and Kofun E-L (early or late). If Sué ware is present on a site but not assigned a period, then Sué is noted.

Note: Kofun period sites only are represented by number on Map 4. Most of the Yayoi period sites appear on Map 2.

little status differentiation except for the demarcated burials known as *hokei shukobo*. These are low rectangular mounds of earth usually surrounded by a wide, shallow ditch. The top of the mound is flat and contains several jar, coffin, and pit burials. *Hokei shukobo* are the Kansai area equivalents of the dolmen burials in North Kyushu; they began to be built in the latter early Yayoi period and were the common burial form in the Kansai-Seto area during the rest of Yayoi.

The largest collection of *hokei shukobo* known from the Kansai is at the Uriyudo site in Higashi Osaka-shi. In the Yayoi period, Uriyudo was located at the mouth of the Yamato river where it drained into the Kawachi inlet. A cluster of 12 *hokei shukobo* were found surrounded by a large moat. On the other side of the moat was a separate cluster of 20 simple pit burials. Hokei #2 was the largest and fullest, containing six adult coffin burials, six pit burials, and six child jar burials. Since the age and sex of each individual were determined, it is clear that the burials represented an elder male household head and his family. The spatial separation and special architectural structure of these burials, together with a general lack of sumptuary burial goods, suggest a form of social ranking whereby certain families were given preferential burial treatment but had no differential access to material resources within the society. Indeed, the difference between the isolated pit burials and the *hokei* burials may have been in simply belonging to a full and active family. Widows, unmarried older people, and extraneous relatives, a few of whom live in any community, may have been buried separately from the patent members of a recognised family.

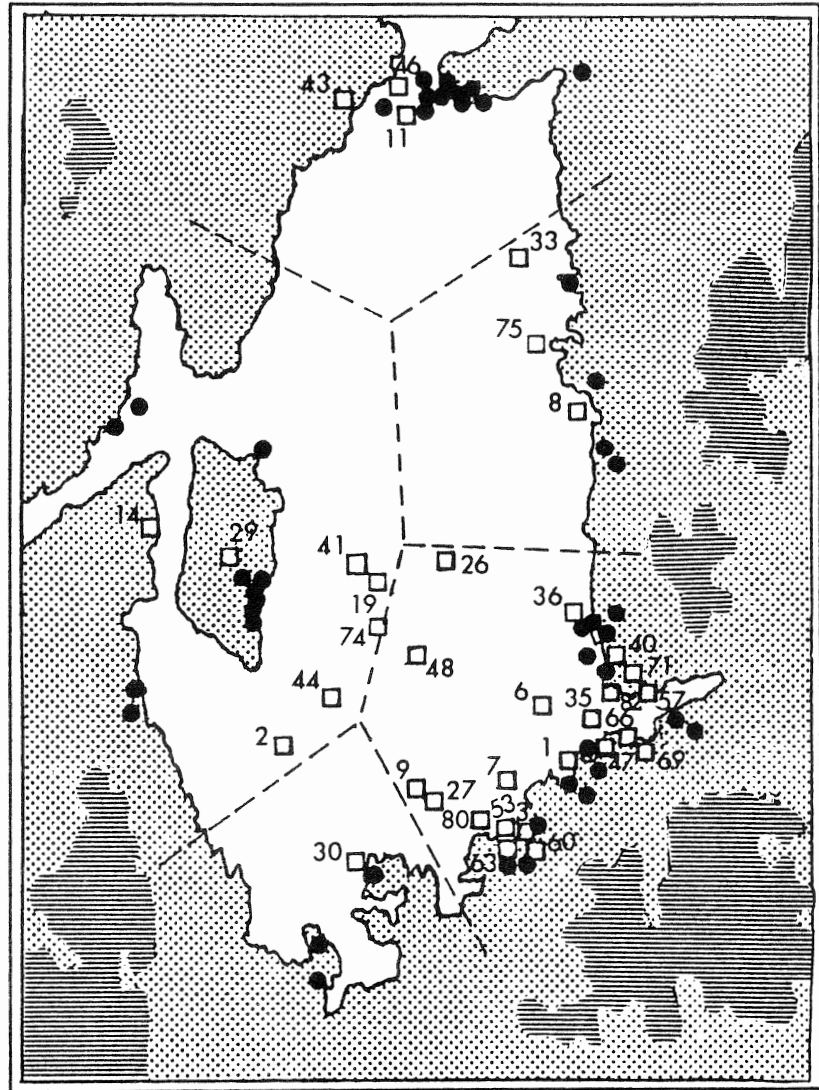
To date, there have been no *hokei* burials found in the Nara basin proper; however, it was in the southeast portion of the basin that stratified society came into being around 300 A.D. The funerary goods of the formative period Sakurai Chausuyama tomb are notably different from the pottery and personal ornaments deposited in Yayoi burials. The inclusion of a Han dynasty bronze mirror, jade magatama, and jasper staff imply that the deceased was of a socially exalted status and authority, which was symbolised through these exotic goods. Bronze mirrors, bells and weapons of the Yayoi period were not buried with individuals and thus did not serve as symbols of individual rank. The spatial isolation of the Chausuyama tomb, the

monumental architecture requiring the command of a large labour force, and the inclusion of precious funerary goods provide a clear indication of differential access to labour and material resources within the society - which is the basic criterion for social stratification (Fried 1960, 1967).

The largest and richest tombs of the formative Yamato period are distributed in three major clusters in the Nara basin. Assuming that the physical accretements of death reflect the status of an individual in life and particularly their place in the political hierarchy (Peebles 1970), we can suggest that the tomb clusters which contain the highest status individuals are close to the centres of socio-political units. The regular distribution of tomb clusters within the basin (Map 3) and also along the coast of the Inland Sea implies the existence of several politically equivalent units that may have been in conflict with each other during the formative phase. That formative Yamato society was distinctly militaristic is amply illustrated by the weapons and armour found in the tombs and represented in Haniwa sculptures. Conflict between the separate units is one form of social interaction and could have facilitated trends towards the cultural homogeneity that is so distinctive of this phase. Exchange relationships between these units are also reflected in the distribution of bronze mirrors (Kobayashi 1956). The simultaneous occurrence of weapons and symbolic articles in the tombs could indicate that both ritual authority and military power were important mechanisms of social control.

*Production and Specialisation:* Japanese archaeologists tend to regard the appearance of stratified society as an indication of state formation. In American anthropological theory, however, the occurrence of stratification serves only as the foremost boundary of state formation. It has been suggested that once stratification occurs, the state is imminent; but ethnographic examples such as Hawaii illustrate that state formation is not an automatic consequence of stratification.

As mentioned earlier, one of the operative processes in the formation of the state is the gradual spatial and functional specialisation of activities within society. In the Nara basin, it appears that there is a definite shift towards specialisation in crafts and agricultural production between late Yayoi and formative Yamato that may be related to changes in the political organisation.



Map 3: Dimensions of Kofun Period  
Occupation in Nara Basin

- mounded tombs
- excavated sites
- territorial boundaries?
- 12 site number

Excavations at the Karako site have demonstrated that craft and agricultural production was organised on the household level during most of the Yayoi period. In addition to the normal household utensils, the pit houses of Yayoi phases I-IV contained unfinished objects of every kind, some tools of production (hammerstones, polishing stones, spindle whorls), and by-products (waste flakes). Not only were stone tools chipped and polished at home, but they were also used there to manufacture wooden utensils and tools, some of which were in turn employed by the makers in agricultural production. Household sufficiency in daily craft and agricultural production was the rule, only raw materials and localised foods being traded between ecological zones.

The character of Karako site changed drastically in the Yayoi V phase and formative Yamato. All Yayoi V pits are storage pits; they show no signs of hearths inside, nor do they contain any household implements. The pits are filled with numerous large storage jars and food remains: rice, peach pits, chestnuts, walnuts, domestic melon, wild grape, miscanthus and gourd seeds, and animal bones. Some of the jars also have woven rope collars still intact. The nature of the site had thus changed from a general habitation-farming village site during most of Yayoi, where storage pits occurred in conjunction with the dwellings, to a specialised storage area in the terminal phase.

In the formative Yamato period, the major activity at the site is manifested through extremely small pits filled with organic material and a couple of Haji jars each. Often the pit floors were lined with sherds. This and the fact that the pots were sooty from the burned straw packed around them has led some archaeologists to think the pits were ovens. But, as no food remains have been found in the jars, the structure of the pits and the way they were packed lend to their interpretation as kilns.

The gradual spatial and functional differentiation of activities in society, as demonstrated by the specialised storage area and pottery manufacturing site at Karako, developed into production organised at the village level in the formative and incipient Yamato periods. Craft and agricultural production, unlike that in the Yayoi household, appear to be carried out at spatially separated locations. In addition to the Haji kiln site at Karako, at least three Haniwa ware manufacturing sites and one bead working (Tamazukuri) sites are known



within the basin. Teramura (1966) reports that a grinding stone and raw material fragments of agate, crystal and garnet were recovered from the south-eastern corner of the basin in Sakurai at Miwa (#40 on Map 3). This is one of two Tamazukuri sites in the Yamato area, the other one being located at Yao on the Osaka side of the Yamato river corridor.

Two Haniwa manufacturing sites are also located in Sakurai at Sakurai Shrine (#74) and at Noto (#47 on the map). On a slight plateau of Mt Torimi at Noto were excavated two kilns, bonfire remains, and many examples of Haniwa, Sué and Haji wares. The site does not appear to be associated with any particular tomb (Matsumoto 1937), and thus it existed as a specialised manufacturing area throughout the early and middle Yamato periods. Another group of Haniwa manufacturing sites is located in the centre of the basin. Various forms of Haniwa were discovered in Miyake at Iwami (#19) in association with round and rectangular wood boards and poles but no kilns (Suenaga 1935). Further research in 1966 defined a six metre moat, 30 m in diameter around the above deposits. As a result, the nature of Iwami as a manufacturing site is now being questioned (Mori 1966). However, the location of the site on the edge of the central basin lowlands may indicate that it was a clay-processing, formation and drying site rather than a firing site. Kilns for the firing of Haniwa have been discovered nearby in Miyake (#41) at Akamaru, Tomondo and Toin, and in Tawaramoto at Haneshida (#74). Along the eastern rim of the basin, there is one more Haniwa manufacturing site in Tenri at Ichi-no-moto (#75).

The spatial distribution of these production activities becomes very significant when viewed in conjunction with the spacing of tomb clusters within the basin. The division of the basin into roughly equivalent political units was mentioned earlier on the basis of the distribution of the largest and richest tombs (see Map 3). It will be noted that these postulated political units crosscut a number of ecological zones. Each unit includes a portion of moist, possibly swampy lowlands, alluvial plains, low hills and highlands. This configuration is similar to the division of political units in the Hawaiian chiefdoms where "... pie-shaped pieces of territory ... went from the seashore to the mountains. (Each unit) contained within its boundaries sufficient environmental diversity and productivity so that it was relatively self-sufficient with regard to subsistence items" (Peebles and Kus 1977:8).

If the political units in the Nara basin were similarly self-sufficient in basic production needs, we would expect to see the duplication of productive activities within each political unit. A number of discrete sets of productive activities in the basin would reinforce the cellular nature of political and economic organisation during the early and middle Yamato periods. The Haniwa manufacturing sites discussed above seem to fit the distributional requirements of cellular organisation. The sites occur either singly or in groups within at least three of the postulated political divisions in the basin. It is conceivable that the Haniwa craftsmen associated with these sites provided services to the dominant social group which controlled each territory.

The distribution of Tamazukuri sites, however, is different from Haniwa. It is unclear whether sources of raw materials influenced the exact locations of the sites, but their general locations may have been determined by political considerations. The site of Miwa lies in the centre of the Sakurai tomb cluster, which reflects the highest level of political development achieved in the formative phase. The Yao site is near the Furuichi tomb group in Osaka which eclipsed Sakurai in importance during incipient Yamato (Otsuka phase III). Because the products of Tamazukuri sites had high symbolic and status value, a case might be made for the "control" or at least patronage of this craft by the highest ranking political figure.

This reasoning might be extended to include the introduction of Sué ware manufacturing to Japan during the fourth century. In this case, the location of the manufacturing site in the foothills of the southern Osaka plain was clearly determined by ecological requirements of the craft. However, this time the centre of political activities shifted with the establishment of the Sué kilns to the Izumi coast. Izumi was not only an ideal location for pottery production but also for the inception of other continental goods, people and ideas.

It is not unusual for the political centre to be relocated several times during the developmental process, nor is it unusual for the focus of political activities to shift with the available economic opportunities. This is essentially a different process, though, than what was demonstrated in the case of Haniwa and Tamazukuri. Haniwa manufacturing involved skills and resources that were generally available in early Yamato society so that this craft could be attached easily to each political unit without major ecological restrictions. The products of

Tamazukuri craftsmen were in such high demand that the technology was transplanted from its original location in Hokuriku to places nearer the elite consumer. Instead of importing the finished product from distant Hokuriku, the consumer was then able to control the production by importing only the raw materials. Exactly the opposite seems to have happened with Sué ware and continental imports. Despite the immovable nature of the Izumi clay resources and the coastal port, the activities there were important enough to have caused the political centre to be shifted to that spot in order to gain control over the production and importation processes.

*Administrative Hierarchies:* The formation of territorial groupings is not an exclusive attribute of state-level organisation (Fried 1968). Proximity plays a role in kin group organisation so that even segmental societies are structured on and bound by territorial principles. In discussing the emergence of the state, we must combine our concern with territorial political groupings with a consideration of administrative hierarchies. Wright has suggested as a working proposition that a state administrative structure has at least three hierarchical levels for implementing administrative control. In a single territorial grouping where a political leader is in direct contact with the people through one layer of local intermediaries, a state-level administrative structure is not said to exist. But if several of these territorial groupings are integrated under a single specialised administrative structure then state organisation is said to have been achieved (Wright and Johnson 1975).

During the formative Yamato phase, the political groupings in the Nara basin are roughly equivalent. On the basis of rank and status data derived from the tombs, no political unit may be said to control the others although one of them may have been slightly more powerful (or achieved hegemon status as is commonly said). In the incipient phase, the political divisions within the basin remain constant, although the contents and construction of the tombs decline in relative status. They are well outclassed in size and structural features by the tombs on the Osaka plains. It is the addition of this superior status level onto an intact territorial organisation that suggests the integration of the smaller units into a single administrative hierarchy centred on the Osaka plains.

The incipient period of Osakan coastal supremacy corresponds almost exactly with the reign of what Kiley has termed the "Ojin line of kings" (396-506 A.D.), which had close ties with Korea (Kiley 1974). The archaeology

of this period speaks for extensive relations with the Korean peninsula. Whatever their nature, these relations were undoubtedly intimately connected with the production of iron in the Korean Kim Hae region. The large civil engineering projects of this phase, tombs, moats, irrigation canals, etc., were dependent on the efficiency and ample supply of iron implements. Although iron tools such as socketed axes, adzes, chisels, hoes, awls and fishing equipment, were commonly interred as grave goods in the formative Yamato tombs, iron became an increasingly expendable material in the incipient phase. The conspicuous disposal of iron weapons which occurred in middle Yamato tombs indicates an even greater level of consumption and a clearly open access to iron resources. The Ariyama tomb, one of the early fifth century auxiliary tombs of the Ojin Imperian Mausoleum, alone yielded over 3000 iron weapons and tools. Such extravagance implies an increasing demand for iron, in order first to replace the tools as functional items, and second to provide for more tools to be "consumed" in burial.

The development of relations with Korea required an open route of communication from Yamato to Korea through the Inland Sea. It is not necessary at this point to postulate the inclusion of the polities along the coast of the Inland Sea in the territorial boundaries of the Yamato state. In fact, the boundaries of emerging states as notoriously ambiguous and unstable. A major feature of early state organisation is the shading off of sovereignty, administrative control, authority and legal force from a powerful central focus to the peripheral areas (Southall 1953; Vansina 1962). Thus, the Inland Sea polities were most likely pacified by the powerful Yamato state but not directly unified with it politically and administratively.

In the middle sixth century, corresponding interestingly enough to what Ledyard calls the reversion of ruling power to "mainly Wa ethnic identit(ies)" (Ledyard 1975), the centre of political activity shifts back into the Nara basin to Asuka. It is from the Asuka region that we have the first evidences of urban concentration and the first documentation of the existing state structure. The most recent refinement in the art of documenting the presence of the state archaeologically has been contributed by Wright. The state, in addition to having a centralised authority, is characterised by having a special administrative organisation. Far from being a simple attribute to state organisation, this specialised administration is the state. Therefore, the documentation of the presence of an administrative structure (eg. the archaeological recovery of

administrative artifacts) documents the presence of the state (Wright and Johnson 1975).

In the late Yamato period, wooden plaques were used in the bureaucracy to record tax payments to the central government by outlying regions. The first discovery of remains of these plaques at Heijo palace a few years ago caused quite a commotion since they provided written documentation of early Japanese society in addition to the Chronicles. Plaques have now been recovered from the Fujiwara palace and from the Asuka Kawahara region and Sakata temple, thus providing administrative remains for the documentation of state-level organisation as defined above.

*Settlement and Population:* One of the great enigmas of Japanese archaeology was the total absence of Yamato period dwellings in the Nara area. Various explanations offered for this phenomenon include the exclusive use of surface dwellings similar to Haniwa houses that had neither pit depressions nor posts in their construction. But in the past few years, more and more Yamato period houses of all styles - pit, surface, and post - have been excavated. At Kubomi-no-sho (#33), an oval pit house approximately eight metres in diameter stood directly next to a surface house of about the same size. The latter was easily recognised from the numerous postholes in a shallow circular ditch eight metres in diameter.

Excavations in the Asuka region at Asuka (#3) and Shima-no-sho (#60) have revealed more than 15 early and middle Yamato dwellings plus numerous pillared structures that are usually assigned to the late Yamato period because they are not pit houses. Data from the late Yayoi site at Kamotsuba (#24) may show that the latter is a dangerous action. One pillared structure at Kamotsuba was built using foundation stones underneath two of the pillars, a construction technique generally thought to have been employed only in the late Yamato/Nara periods in the Yamato area (Amiboshi 1963). This technique may have continued to be used in the early and middle Yamato periods; if so, extreme caution must be used in assigning dates to the pillared structures excavated in the basin.

Most of the early and middle Yamato settlements (dwellings) are located on the alluvial plains, some in association with extensive agricultural facilities like at Makimuku (#36). Isolated irrigation canals filled with Haji pottery and agricultural implements are also

known apart from any settlements (Heijokyo #11, Nakasoshi #44, Wada #80, and Daifuku #6). But at Tachibana (#63), an incipient Yamato site was discovered in a completely different type of environment - on the hill flanks overlooking rolling foothills. The location of this site may reflect specialisation in either craft or crop, but this must be substantiated through the analysis of tools and pottery collected at the site. In any case, this site will contribute greatly to our understanding of environmental exploitation and settlement patterning during the Yamato period in the Nara basin.

In addition to the sites with recognisable features discussed above, a large number of pits and other deposits yielding Yamato period pottery and tools are important sources of information on associated artifact assemblages and their possible functional differentiation according to the location and circumstances of deposit. Other than to mention their existence, this paper will not deal with any of the above materials due to time and space limitations.

Changes in population through time in any geographic area have been very difficult to estimate for Japan. A formula has been devised to calculate the number of people living in individual pit houses of certain sizes (Mori 1957), and this has also been helpful in separating by size pits that were houses from pits that were used for other purposes. But the nature of survey and salvage archaeology in Japan has often prevented ascertaining the total site extent which is necessary for total population estimates. Therefore, there is no empirical data for increases or decreases in population through the Yamato period.

Some indirect evidence does exist for the exchange of population between regions during the Yamato period. Kanaseki (1975) states that a high proportion of non-local pottery was mixed in with locally-made wares at the formative Yamato site of Makimuku (#36). Pottery exhibiting the regional characteristics of Owari was most abundant, with others from Kawachi, Setouchi, San'in and Hokuriku. One explanation advanced by Okida (in Kanaseki 1975) is that people from these regions were imported as labour to help build the large keyhole-shaped tombs in the southeastern corner of Nara basin. Since many of these regions also had large tombs built in them at approximately the same time, it is difficult to imagine that the Sakurai polity was powerful enough to forcefully deprive these regions of valued labour resources.

However, it is known from other developing state systems that a politically and culturally advanced area (as Sakurai seemed to be at this time) could draw off population from outside districts. The rise of the city of Teotihuacan in the Valley of Mexico apparently led to the en masse abandonment of the Texcoco countryside in favour of life in the city (Parsons 1968). A similar phenomenon could have taken place in formative Yamato at Sakurai and may have been repeated when the centre of power was removed to the Osaka coast during the incipient phase. At this time population levels may have decreased in the Nara basin but increased drastically on the coast due to both emigration from the continent and out of the basin.

In future research, population distribution can be monitored through the evaluation of site size by its extent of surface remains, and increase and decrease in both site size and number through the different phases. A state may require a certain population level or density before bureaucracy becomes the most efficient structure for processing information and making decisions. A current "guestimate" places that level at around 50,000 people (Parsons 1972). Whether absolute population figures will ever be available for Japan to test this estimate is not known; but the monitoring of population levels in relative terms is still very important to understanding the prerequisites for state formation.

## Conclusions

The interpretations presented in this paper are exceedingly tentative, based only on a superficial survey of the data limited to those publications available in the Asia Library at the University of Michigan. As such, they are subject to revision once the primary data and site literature can be examined in Japan.

However, I hope it has been shown that the Nara area is not a total blank in terms of environmental surroundings, occupation remains, crafts development, and political organisation. Future research providing more data on the settlement patterns of the Nara basin and Osaka plains should enable us to elucidate the mechanisms of growth and elaboration of this early state system even further.

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