Polynesian Ancestry and the Nusantao Maritime Network

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In my research, I have been focusing on my Nusantao hypothesis since about 1975 when my first publication appeared (Solheim 1975a,b;1976). My concept of the Nusantao has evolved over time (ibid.: 1979, 1981, 1985, 1990, n.d.a,b), and my present definition of the Nusantao was presented in 1985 (ibid.: 1984-85; 1985-86). The definition of Nusantao applies to a people with a maritime orientation, who originated in Island Southeast Asia. I have expanded this a bit further to the Nusantao Maritime Trading Network. My most recent research on this trading network has been in its development from Southeast Asia to the north. The papers in which I present the results of this research have not yet appeared in print so I must repeat some of the material in order to present some context.

Asian Relationships of the Nusantao

An important publication for Pacific prehistory appeared recently as the result of a conference held in 1990 (Hanihara 1992). The papers on Pacific archaeology presented at that conference are important to Pacific prehistory because the peopling of the Japanese islands was influenced by movements of early southwestern Asiatic people, as is the case of the Pacific populations. The population history of the Japanese cannot be analyzed therefore, by ignoring that of the Pacific.

The papers presented closely match my arguments, indicating that both physically and culturally, Japanese origins are closely connected with Southeast Asia. What these papers do not do is to explain the process by which the people and culture of Southeast Asia came to Japan. I have hypothesized that it was not by major migrations of Southeast Asian peoples from Southeast Asia, but through the agency of the Nusantao Maritime Trading Network.

I have proposed that the Nusantao Maritime Trading Network brought rice agriculture and associated cultural elements to Korea and then to Japan from coastal South China. The supporting data are a number of stone artifacts found in South China, Taiwan, and neighboring areas of Southeast Asia, and in southern Korea and western Kyushu and Honshu. The knowledge and use of some of these artifacts was earlier in the south and of others in the north, demonstrating that elements of material culture were carried in both directions. These artifacts appeared in their new southern or northern locations between about 3000 and 500 B.C.; at this time they did not move as a total culture, but element by element, indicating their movement was not the result of a migration but through such an agency as a trading/communication network. The fields of linguistics, physical anthropology, and comparative ethnography support this hypothesis.

Some detail on the artifacts I mentioned was presented in the paper I gave at the Circum-Pacific Prehistory Conference (n.d., b):

> The complex of artifacts associated with rice cultivation in Korea has been noted before, in part (Kim Won-yong 1964; Keneko 1966:18-21; Kim Jeong-hak 1978:78-81; Solheim 1985:370, and 1990) . . . . Kim Won-yong (1964) brings together rice, the semilunar stone knife, and the stepped adze . . . . The artifacts that appear to me to be part of the rice associated complex include: the table and capstone dolman, cist grave, double burial jar, semilunar or crescent stone knife, stepped adze, pediform adze, perforated disk (probably a spindle whorl), stone dagger, concave based and long-stemmed polished stone arrow- or spearhead, and the so-called plain pottery of Korea (also carved-paddle impressed pottery, which is not common).

Rice was the central element in Japan for the major changes that came with the Yayoi Culture when it replaced the Jomon Culture. The artifacts mentioned above, and several others that were new to Japan at this time, were all associated with the coming of rice agriculture.

Sasaki Komei (1992) has reported on the movement of shells and rice north through the Ryukyu Islands to Kyushu (I would like to thank Erika Kaneko for sending me a copy of this paper and Douglas Fuqua for translating it for me). I quote from Fuqua's translation (Sasaki 1992:40-41):

> "The Houma Shrine, located in Kikinaga (southern Tanega Island), is well-known for a type of red rice known as *akanokome* which has been planted in its fields and used ceremonially since ancient times. Watanabe Tadayo extensively researched this rice and claims it is a variety from the south . . . . It can be grown in wet-paddies or in fields. Among Asian varieties, the *akanokome* is closest to a *Javanica* type rice found in Indonesia and known there as *bulu*.

Research shows that even in Okinawa there were many pre-1900 rice varieties which were similar to *bulu*. Until recently, one variety was found even on Yaeyama Island. Furthermore, rice related to *bulu* occurs in a wide expanse stretching from Taiwan's mountainous region and Mindanao Island in the Philippines to the eastern part of the Indonesian islands.

Moreover, research in the new field of genetics has also revealed traces of the spread of rice northward from the south. According to studies of genetic characteristics in rice by men like Satoh Youichi of the National Genetics Research Institute, there are two differing families of rice in Japan. One type is the Temperate Zone Japanese Variety which has the Hwc-2 gene. It accounts for 93% of all rice in Japan. The other is the Tropical Japanese Variety which has the hwc-2 gene. It accounts for the remaining 7% of Japanese rice.

> Geographically, Map D shows that in contrast to the Temperate Zone Japanese Variety which came to the Korean peninsula and northern Kyushu from the Yangtze River region of China, the Tropical Japanese Variety passed through the tropical islands of the south including the Philippines and the Ryukyus and entered southern Kyushu. In other words, genetic research also finally shows that Japanese rice cultivation was influenced by Southern Island rice growing even though this was not the main source of

Japanese rice.

Chang Te-tzu (1984-85:71-72), the primary authority on the genetics and origins of cultivated rice, has suggested that rice cultivation in Indonesia may be earlier than that in Malaysia and the Philippines. He further stated that *javanica* rice was the primary rice on Bali until the early 1970s, and was the variety of rice grown in northern Luzon especially in the mountains, and was the rice grown by the mountain tribes of Taiwan. This, combined with the early calibrated, mean date of 2334 B.C. for rice from Gua Sireh in Sarawak (Bellwood et al., 1992:167), strongly suggests, contrary to Bellwood (1984-85:108, 116), that the earliest rice in the Philippines and Taiwan came up from the south, and from Taiwan continued north to Japan.

Tropical taro (*Colocasia esculenta*) and yam (*Dioscorea alata* and *Dioscorea escultenta*) have similar distribution showing that they moved northward from Island Southeast Asia, through the Ryukyus into Kyushu. The techniques of farming these root crops and rice are also Southeast Asian. In the southern Ryukyus the manufacture of *Tridacna* adzes made either from the hinge or a rib of the shell appears to have been brought north from the Philippines, through not present in Taiwan (Shijan 1991:289-290).

Mark Hudson (1990:68-69) states that most Japanese archaeologists see rice agriculture coming from South China, and in particular from around the mouth of the Yangtze River, either directly to Japan or by way of Korea. "There can be no doubt however, that most of the concrete parallels are with Korea rather than coastal China (cf. Harunari 1990; Wang Wei 1989)." Hudson (1990:69) also feels that the spread of rice agriculture east along the Japanese coast or the Japan Sea during early Yayoi times was through the agency of a maritime culture.

An unusual type of shell bracelet makes its appearance in Japan in Early Yayoi times and possibly earlier. There are several types where this is found in its total distribution and it is made from several different shells. I have called it a bias shell bracelet (Solheim 1964a:186190) because in cross section it is generally rectangular but on a bias rather than vertical or horizontal to the arm. It is one of the earlier types of bracelet in the Philippines but continues in use into early Spanish times. There are no dates for the early bracelets in the Philippines but they were no doubt being made over 2000 years ago.

The bias shell bracelet found in Japan is made from a marine shell which is found in Okinawa and south, but not in Japan. The bias shell bracelet, a rare form, is found throughout the Ryukyu Islands (Takamiya and Miyagi 1983:57) and at sites on the southern tip of Taiwan (Sung et al. 1967:Pl. 20 1-2; 8-9). I do not know of any finds from Korea or China.

One way to test an hypothesis is to make a prediction that is correct. In the paper I presented in Hong Kong in 1991, I suggested that boat people—remnants of the Nusantao Maritime Trading Network—would be found living today in ports in coastal China, southern Korea and Japan. Douglas Fuqua located an article by Kunio Yanagita (1976) about boat people, living on the water on the Inland Sea in Nagasaki Prefecture, Japan. I quote portions of his translation:

> Despite the fact that there had always been sufficient space on the land, the Ebune have always made their homes on boats. Entire family units including parents, children, domestic animals and domestic fowl live on these boats . . . . Their culture and customs differ from those of people living on the land and their way of life doesn't appear to have changed much with the passing of time. After Nagasaki Prefecture, the northern and southern regions of Amabe-gun (Amabe County) in Oita Prefecture [Japan] has the largest number of people living on the water. These people also make their living primarily by fishing. However, in recent years, some have become engaged in trade between Oita Prefecture and Ehime Prefecture [in Shikoku, Japan].
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> Now I'd like to turn to Okinawa to a fishing community known as "Itomancho" . . . . Despite the fact that Okinawans live surrounded on all sides by sea, there is a strong dislike for the occupation of fishing. Accordingly, they have a fear of traveling on the sea. This is not the case with the people of the Itoman community who not only fish but also take small boats called "*henshu*" south to Taiwan, west to China, and north to Oshima of Kagoshima Prefecture.
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> China also has a vast number of people who live on the water. This is particularly true in the coastal areas of South China from the Yangtze River to the areas around Amoi in Fukien, Swatow, and Canton Province. These people number several hundred thousand. They are engaged not only in fishing but also in shipping and operation of on-the-water inns, prostitution, and restaurants.
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> As far as our country is concerned, it appears that we have had people living their lives on boats since the time of Emperor Onin or for about 2000 years. The history of boat people in some other parts of Asia seems to be even earlier. With the Malay peninsula as center, an area including the Dutch Indian Islands, the Burmese Islands and the Andaman Islands show traces of similar people.
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> There is a lot in common among the people who live their lives on the water. However, almost no written documents concerning them exist.

Nusantao Expansion

I have mentioned that I divide the Nusantao Maritime Trading Network into four lobes (n.d. c-d). The first two lobes, with which I have dealt the most, are the central and northern lobes. The central is the founding area of eastern Island Southeast Asia. This lobe includes southern Taiwan and coastal South China from Fujian south, and coastal Viet Nam. The northern lobe extends from Taiwan and Fujian in the south to include coastal China and an unknown distance up the rivers in China draining into the China Sea, and coastal Korea and eastern Japan, possibly including the western coast of Honshu up to the northern end of Honshu. These two lobes overlap in the area of South China and Taiwan. The third and fourth lobes are the eastern and the western. The eastern lobe, which is of primary concern to Polynesia, extends from the Moluccas in eastern Indonesia, and southern Mindanao in the Philippines, throughout the Pacific, to Easter Island, its furthest extension to the east. The western lobe extends from Malysia and western Indonesia, along coastal India and Sri Lanka to the west coast of Africa and Madagascar. Both of these lobes overlap with the central, originating lobe. The likely order of expansion probably is: first, from central to the

north; secondly, and the most problematical, from the central to the west; and finally from the central to the east.

I have presented a paper concerning the origins of the population in Micronesia (1990). Since then, I have realized that there are complications with the sources of early settlement in the Micronesian Islands. I still believe that the Nusantao sailors were the first to arrive, but now suspect that the routes into Micronesia were distinct from the route of the Nusantao explorers into western Melanesia. They probably reached the southern Marianas directly from the Philippines, or possibly even from southern Taiwan via the northern Marianas. To complicate things further there is a possibility that early Nusantao traders, that I have hypothesized had reached Kyushu first around 3000 B.C. and started exploring south into the Ryukyus and the Bonin Islands soon after, may have come into the northern Marianas through the Bonin Islands. I suggested (Solheim 1964b, 1968) the possibility long ago on the basis of a statistical analysis of methods of pottery manufacture. More excavation is needed in the northern Marinas to clarify this.

From Southeast Asia into the Pacific

Tsang Cheng-hwa (1992) has reported on archaeological fieldwork on the Pescadores Islands, off the southwest coast of Taiwan. In his conclusions he states:

> Based on the current archaeological evidence . . . I do not agree with Bellwood (1979:207) that "Taiwan is a potentially vital area for the transmission of cultural innovations from the Asian mainland into the islands" if he chooses to "emphasize the importance of the Corded Ware-Yuan-shan cultural tradition". Since the homeland of this tradition was most likely on the coast of the mainland between Fukien and Vietnam . . . I would postulate that the Austronesian languages and cultures were probably transmitted into insular southeast Asia and the Pacific Islands along the western coast of the Southeast Asian mainland rather than through the island of Taiwan.

On the basis of the above, I hypothesize that:

• the Early Nusantao Maritime Trading Network, after advancing their network from south to north through the Philippines, reached southern Taiwan and coastal southeastern China sometime shortly before 5000 B.C. They made contact—cultural and genetic—with the Middle Neolithic people of Southeast China. This included the peoples up the lower Yangtze River for, anytime the maritime people in their explorations came across the mouth of a large river, they would have moved up the river in making contacts with the local inhabitants and not have stayed totally along the coast;

• these people were very adaptable to new conditions. With their knowledge of the ocean and use of the land for hunting, gathering, and horticultural activities, they quickly incorporated the new elements of culture they came into contact with, forming a somewhat new and different culture in their sand dune and shell mound sites;

• the Middle Neolithic sites along the China coast, found on sand dunes and shell mounds were the land portion settlements of the Nusantao. Due to their rapid amalgamation with the local cultures with which they came into contact, their material culture in their land settlements would have varied from site to site as they moved north and south from southeastern coastal China.

• the Nusantao combination of land settlement and expanding maritime trading network is, to my knowledge, unique in the world. Therefore, there is no existing model that can be looked to, except for the much evolved maritime cultures still in existence today in Asia and the Pacific.

On the basis of linguistics, physical anthropology and archaeology, it is now generally agreed that the ancestors of the Polynesian peoples were the bearers of the Lapita Culture of Melanesia and that the ancestry of the Lapita peoples came from eastern Island Southeast Asia somewhat before the middle of the second millennium B.C. It is argued that an important element of the Lapita culture that led to the colonization of the Pacific Islands was the extensive long distance trade carried on by the Lapita peoples (Kirch 1988; Wickler 1990). It has generally been felt that this long distance trade developed in the islands of the Bismarck Archipelago. While I have not expressed it previously, I would say that this long distance trade element of Lapita Culture came with the ancestors of the Lapita people from Island Southeast Asia, carried by their Nusantao ancestors (Solheim 1976, 1984-85: 84-85).

For many years in the study of the Lapita Culture, the primary identifying archaeologically-recovered artifact was Lapita pottery. Since this pottery became the identifying element, I have noted its relationship to the Sa-huynh-Kalanay Pottery Tradition of Island Southeast Asia (Solheim 1976:35-36). Before Lapita pottery had taken on its name, I pointed out the relationship of this pottery to that of the Sa-huynh-Kalanay Pottery tradition (1964a:206-209; 1967:167). In fact, I proposed it belonged to the same tradition. As soon as Carbon ^{14} dating became somewhat common in the archaeology of the Pacific and Southeast Asia, it became apparent that this could not be so, for Lapita pottery had somewhat earlier dates than the Sa-huynh-Kalanay pottery. They were so similar, however, that I suggested the two pottery traditions must have a common ancestor (Solheim et al.:1979:126-129). Although no one else has remarked on this, I still say that while the two traditions are distinct, they share a great majority of their forms and elements of decoration. Both forms and patterns of decoration were present in both north and south Viet Nam well before 2000 B.C. This suggests that the ancestry of the Lapita pottery came from Viet Nam (Solheim 1976:145-146), brought by Nusantao traders who probably were the ancestors of the Lapita people (ibid.:1979:197). This means that the Nusantao Maritime Trading Network developed toward the south from southeastern China along the coast of the China Sea, across to Borneo and either around the north coast and or the south coast of Borneo into eastern Indonesia and then out to the Bismarck archipelago.

There appears to be two camps in the interpretation of the Lapita Culture of the Bismarcks. One says that the Lapita Culture resulted simply through the addition of a pottery tradition to the culture(s) that were there already (Allen and While 1989). The other argues that Lapita is the migration of an ethnic group into the Bismarcks (Bellwood 1979; Kirch 1987, 1988b; Kirch and Hunt 1988). I would argue that it is neither—but, to some extent—a combination of both. I suggest that the Lapita Culture in the Bismarcks resulted from

the expansion of the eastern lobe of the Nusantao Maritime Trading Network, acting as it did along the South China Coast. They were neither a migration nor the simple addition of a pottery tradition, but provided a new genetic element and their cultural tradition of long distance voyaging, plus numerous other cultural elements. Thus it was a continuation and enrichment of the culture carried by the Nusantao, neither a totally new culture resulting from a migration nor the simpleaddition of the pottery tradition to the existing northern Melanesian culture(s).

I like what Chris Gosden (1991:334) said in incorporating previous movements of people within and into Melanesia:

> Over the last 30,000 years there have been a series of archipelagic cultures through the Southeast Asian islands out to the Solomons. For these people the sea was a bridge, not a barrier, and maritime movements have led to the continuous transfer of people, genes and language over large areas for a long period of time. Areas such as the Bismarck Archipelago and the Solomons Island chain were never sealed off from other areas of the western Pacific. Rather they were part of the social flux washing through this area for tens of millennia bringing constant social change.

I would consider the movement of the Lapita Culture out of the Bismarcks as a continuation of the expansion of the eastern lobe of the Nusantao Maritime Trading Network, not a full migration of people but a spreading of genes, combining with the people in place before their arrival. When they expanded beyond the Solomons, into Fiji, Samoa, and further east, they found no one; so, in a way, their expansion became a migration to fill the islands of Polynesia, all the way to Rapa Nui.

Conclusion

My hypothesis of the origin and development of the Nusantao Maritime Trading Network is as follows: the origin of the Nusantao as a sailing and navigating people was in eastern Indonesia and the nearby southern Philippines. Improvement of their sailing abilities was forced upon them by the rising sea levels at the end of the Pleistocene, changing the southern portion of the Sundaland continent into a larger number of islands and requiring movement across gradually longer and longer stretches of open sea to maintain contacts with relatives and homeland. Sometime before 5000 B.C., some of the new fully-maritime oriented people of the eastern Indonesian and southern Mindanao started their explorations to the north through the Philippines, reaching Taiwan and southeastern China a bit before 5000 B.C. After reaching the China coast of Fujian and Guangdong, they started extending their network to the north and south along the China coast while continuing contact with the northern Philippines, and for about 250 years with Taiwan. Their expansion to the north brought them into contact with western and southern Korea and then to Kyushu in Japan, possibly a bit before 3000 B.C. They probably extended through the Ryukyus into Micronesia and to the east, with the Japanese current, along the coast of North America. They probably made landfall on the coast of Ecuador and further south, this by 2000 B.C. or earlier. Here they settled and intermarried with the local population, then forming the maritime trading culture referred to by Heyerdahl in his paper presented at this conference. Thus the likely South American contact with Easter Island had a much earlier Southeast Asian component.

The expansion, of importance for most of Oceania, was to the south along the coast of Viet Nam. From southern-central Viet Nam the currents running south along the coast turn to the west to the coast of Borneo (Solheim 1984-85:81). Expansion along the Viet Nam coast would have split into two routes, one continuing along the coast to the south and then west, the other to Borneo; from there one to the north into Palawan and the Philippines and also east to Sulaswesi, the other around the southern coast of Borneo and into the lesser Sunda islands. The route from South China to Champa and to Borneo and the southern Philippines was recorded in use around 1000 years ago (Long 1992:44; Scott 1989:23). From eastern Indonesia and southern Mindanao the extending eastern lobe would have been along the north coast of New Guinea into the Bismarcks. From there out to Rapa Nui, the order of expansion I leave to others.

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