Earthenware Pottery, the T’ai and the Malay

Received 14 February 1990

WILHELM G. SOLHEIM II

For about twenty years, in generalizations I have made about Southeast Asian prehistory, I have considered South China, roughly from the Tsinling Mountains to the south, as a part of Southeast Asia (Solheim 1973, 1975, 1979a, b, 1980, 1984a, b). I consider that most of the people of South China were not ethnically Chinese and that South China became inhabited by Chinese in changing patterns and at a varying tempo after the Chin and Han expansion. The subject of this article¹ is a relationship that I see between one of the large Austronesian-speaking ethnic groups of Southeast Asia and an ethnic minority of Southwestern China: the Malay and the T’ai (and the Thai of Thailand). I hypothesize this relationship as a result of my studies of prehistoric earthenware pottery in Southeast Asia and a study of present-day and recent past pottery manufacture of these peoples. I will begin by explaining the relevance of pottery studies to prehistory.

Pottery has been the most important artifact recovered by archaeologists in sites where it has been found in any quantity. This is so for two reasons. First, because where found it is by far the most common artifact in a site. Very little of the material culture of the people who lived on a site lasts to be recovered by archaeologists. Virtually all organic materials disintegrate rapidly in the soil of most sites. Except for bronze and gold, most metals oxidize quickly. Pottery is practically indestructible under most conditions found in archaeological sites—not in its original form, but as potsherds. Second, pottery is fully susceptible in manufacture to cultural and individual choice, while stone and metal present inherent limitations because of their physical properties, making cultural and individual expression more limited in these materials. Before pottery is fired, the clay used is fully plastic and so can be worked into any desired form and decorated using a wide variety of techniques to make an infinite number of patterns.

There are many different ways in which pottery can be analyzed, the choice of method(s) depending on the purpose of the analysis. Chemical and petrographic analysis of the clay can be used to indicate the source of the clay and through this to work out patterns of internal and external trade. Through detailed analysis of methods of manufacture, of form and decoration, pottery associated with burials in a cemetery can indicate differences in status and suggest other social elements that

Wilhelm G. Solheim II is a professor of anthropology in the University of Hawaii–Manoa.

Asian Perspectives, Vol. 29, no. 1. © 1990 by University of Hawaii Press. All rights reserved.
were part of the culture of the people buried there. Comparisons of the methods of manufacture and elements of form and decoration between sites suggest interrelationships. This last method is the one I use to suggest the relationships I hypothesize here.

Every report on the excavation of an archaeological site from which pottery was recovered will include information on the pottery. There are more data of this kind on prehistoric pottery in South China, but as they are in Chinese I can make little direct use of them. My acquaintance with the prehistoric pottery of South China is through a summary paper by Ho Chui-Mei (1984), summary information from Chang Kwang-Chih (1977), and numerous articles that appeared in the Journal of the Hong Kong Archaeological Society and monographs published by that society. These latter are concerned primarily with the archaeology of Hong Kong and to a lesser degree neighboring areas of China. I am also acquainted with a few studies, in Chinese, of pottery manufacture by present-day ethnic groups in South China, and these have been important for this article.

I am much better acquainted with the pottery studies on Southeast Asia, as this has been a specialty of mine for the last thirty years. Unfortunately, I am the only person who has studied the earthenware pottery of Southeast Asia as a whole. Several others, however, have made extensive studies of the high-fired, vitrified pottery of this area.

THE BAU-MALAY POTTERY TRADITION

I have proposed two primary pottery traditions that are found widely scattered in Island Southeast Asia during prehistoric and more recent times. These are the Sa-huynh-Kalanay Pottery Tradition and the Bau-Malay Pottery Tradition. The former is the earlier of the two, there is little overlap in time between them, and there is no relationship in their origins. The Bau-Malay Pottery Tradition, as it develops and expands in Southeast Asia, does incorporate some elements of the Sa-huynh-Kalanay Pottery Tradition (Solheim 1960, 1967a, 1981a).

The Bau-Malay pottery is distinguished from the Sa-huynh-Kalanay pottery by considerably less variety in form and decoration (Solheim 1981a: 8–9). The common decoration of the Bau-Malay pottery is impressed on the body with a carved paddle (Solheim 1967a: Pl. 1a–b, IIIc and e), which is used in the paddle-and-anvil forming or finishing of the vessel. Often two different carved paddles were used, giving a simple impressed decoration on the bottom and body and a somewhat more complicated pattern on the shoulder (Solheim 1967a: Pl. IIIa–b, d–f). From the use of a carved paddle developed the use of simple or moderately complex stamps to impress repeated patterns around the vessels (Solheim 1967a: Pl. IVa) on the shoulder. In some areas the later decoration included vertical ridges or channels, usually accompanied by the impressed stamp patterns (Solheim 1967a: 20–21, Pl. IVb and V). Later still some specialized forms developed, such as water jars with a flat bottom, low rounded body, and high narrow neck (Solheim 1981a: Pl. I–II).

The earliest known example of this kind of pottery is from southeastern China, where it has been called geometric pottery, named after the geometric impressed patterns on the body of the vessels (Chang K.-C. 1977: 412–414). The earliest sites that I know of for this geometric pottery are in Gwangtung and have 14C dates between 3000 and 2500 B.C. (Meacham 1979: 127). This pottery was present along the
coast in the Hong Kong area by 2200 B.C. (Meacham 1979:127), and soon after it was widespread in southeastern China. During pre-Han times it did not extend into Chu territory or farther west (Ho 1984:299). Its manufacture and use came to an end in the Hong Kong area and eastern South China by around A.D. 200 (Ho 1984:300).

The forms and decoration of geometric pottery like that of Hong Kong appeared in northern Viet Nam soon after 800 B.C. As in much of South China, this pottery must have been associated with the Yueh peoples (Solheim 1979b:198). In Viet Nam
this pottery was associated with the Dongson Culture. The other areas outside of present-day China where similar carved-paddle impressed pottery appeared in archaeological sites of the first millennium B.C. are Taiwan, southern Korea, and western Japan in Yayoi sites (Solheim n.d.). In none of these areas was this pottery common.

This kind of pottery started to appear not long after A.D. 700 in the southern Philippines (Solheim 1964a:16–17, 127–154; 1981b:60–61), western Borneo (Solheim 1960, 1965, 1967a, 1981a; Bellwood and Omar 1980), the western Indone-
sian islands (Soejono 1962: Fig. 1a–c, e, h, i, k, Pl. Ib; Miksic 1979: 194–196), and the Malay Peninsula (Gibson-Hill 1955: 186–191, Pl. 7–H; Lamb 1961: 25–26, Pl. 50–54; Solheim and Green 1965: 42–51, Pl. 12–13; Solheim 1967a: Pl. 3a–b; Leong 1973: 230–232, Pl. 20–22). Some of the later forms of this pottery tradition appear to have developed in western Indonesia and/or the Malay Peninsula. Jars with two or more spouts could well have developed out of the rare double-spouted vessels of the Niah Pottery Complex of Sarawak (Solheim 1981a: 10–12). Possibly related to the evolution of the double-spouted vessels is the development of the kendi as a Bau-Malay form (Solheim 1981a: 4–6, 12–13). Probably both of these forms are related to the water jar with flat bottom and high, narrow neck, plain or with impressed and/or carved band(s) of decoration on its shoulder and/or neck. I have no idea when this form came into use, as I know of no archaeological sites where this form is found. Variations of this and the multiple-spout form (Harrisson 1974) are still being made today in Sumatra and West Malaysia.

My interpretation of the distribution and dating of the geometric or carved-paddle impressed pottery and the Bau-Malay Pottery Tradition is directly associated with my hypothesis of the Nusantao maritime traders (Solheim 1975: 151–158; 1984–1985). This was not the early Nusantao but a late resurgence, associated with
the spread of the Malay people. I am of the opinion that these Malay-Nusantao coastal maritime traders had high prestige among the people of South China and Java Seas where they traded and that they intermarried with their trading associates living on land. They took up the geometric pottery manufacture of northern Viet Nam as their own and spread it widely through their intermarriage with coastal peoples of Island and Mainland Southeast Asia. I have hypothesized that these Malay traders were involved with the development of Srivijava, Madjapahit, Malayu, and the other “Malay” states of western Indonesia and Malaysia (Solheim 1981a:13). Their trading may well have brought them up some or all of the major rivers of Southeast Asia, from the Yangtze of South China to the Bramaputra of India.

**QUESTIONABLE BAU-MALAY POTTERY IN THAILAND, LAOS, AND BURMA**

I have been puzzled for about twenty years by what appears to be Bau-Malay pottery being made today in Burma, northeastern Thailand, and Laos. I visited...
Burma for the first time in the summer of 1962. While I was spending three days in Pagan, U Bo Kay, the conservator of the Pagan remains, took me to the market in Pagan. There I saw typical Bau-Malay carved-paddle impressed pottery for sale in several of the shops (Pl. 1 a–b). On a more recent trip I noticed that many of the public drinking-water jars in Old Prome and Rangoon were carved-paddle impressed. I have no information on the potters who make this pottery or their methods of manufacture. They could be Shan potters. Shan potters in northwestern Thailand, very close to the Burma border, make typical carved-paddle impressed pottery (Pl. II a–b).

In northeastern Thailand, potters in Ban Nong Sua Kin Ma use a narrow carved paddle to impress a band design on the shoulders of large pots. They also make lids with a phallic sort of handle (Solheim 1964b: Pl. IV and VIII), like those of Tanjong Kubor and other Bau-Malay pottery sites in Malaysia and the Philippines (Solheim 1981a:9). The people of this hamlet came from the southern part of the Korat plateau at the end of World War II (Solheim 1964b:156).

Two brief reports of pottery manufacture in Laos do not immediately suggest a relationship between the Laos and Bau-Malay potteries, but their methods of manufacture are quite similar, even though their locations are far apart. An unusual tool, used in both locations, is a type of slow potter’s wheel. Just outside of Luang Prabang, the modern capital of Laos, I made this description of the wheel I saw being used by a potter: “The wheel is made of wood with a disk on top, fastened to a solid bowl-shaped piece below. In the bottom of this lower piece is a slightly tapered hole in which fits the pivot. . . . The pivot is set firmly in the ground and the lower wooden piece turns on this pivot.” This wheel is turned slowly using the toes of either foot (Solheim 1967b:82). A similar sort of wheel was reported for Nong-Ane in southeastern Laos (Colani 1931). While the primary informant near Luang Prabang used only plain-suraced wooden paddles in forming the body of the large pots she made, another potter in the same village used a paddle with numerous small holes drilled into its surface, thus producing a carved-paddle impressed decoration (Solheim 1967b:84).

Chiang Mai, in northwestern Thailand, is noted for a number of different handicrafts produced there. One of these is earthenware water bottles (Pl. IIIa–b) with flat bases, rounded bodies, and high narrow necks with impressed and carved decoration in bands on the shoulder and neck. These are similar to water bottles made by Malay potters in West Malaysia and Sumatra (Pl. IVa–c). I have no information on the potters or methods of manufacture of the Chiang Mai water bottles.

None of these potters in Thailand, Laos, or Burma, where they are known, could be considered as Malay, and I have not before been able to arrive at an explanation of how they could have learned to make the reasonably typical kinds of Malay pottery.

**T’AI POTTERY IN YUNNAN**

My information on T’ai earthenware pottery in Yunnan is from reports written in Chinese and is incomplete because of my inability to read Chinese. I had two accounts (Li 1959; Chang C. 1959) translated in early 1961 by Chinese students at Florida State University, one a physicist and the other a chemist. Both had much trouble in their translations because they were not acquainted with the technical vocabulary. A third article (Wang 1966) I have not had translated and depend on its illustrations for my information.
Li Yang-Sung (1959) reported on pottery manufacture by the Kava, a T'ai group in southern Yunnan. He used his knowledge of the Kava pottery manufacture to try to understand the manufacturing methods used by Yangshao and other prehistoric potters. In his text it is often difficult for me to understand whether he is describing the Kava manufacture or interpreting the prehistoric methods from the Kava process. As I understand it, small vessels are modeled by hand. For larger vessels the Kava potter makes a flat, circular base and then forms a thick wall around the outer circumference of the base by placing several thick rings of clay, one on top of the other. Apparently the first ring is joined to the base (with the fingers?) and let dry for a bit; the second ring is placed on top and joined to the first followed with some drying, then the next ring is added, and so on. To form the final rounded large jar, a carved paddle and stone anvil are used. No wheel of any sort is mentioned.

Chang Chi (1959), in the second article, describes pottery manufacture by the T'ai people of Hsi Shuang-Pan-Na, Yunnan. This is the southernmost self-governing state of Yunnan. Chang, after his introduction, describes the potter's tools. In describing the slow wheel used, he says that it is a circular piece of wood, 35 cm in diameter and 15 cm thick. The upper portion is larger than the lower. A hole drilled in the bottom fits over a small stick that has been inserted in the ground, thus allowing the rotation of the wheel; the wheel is turned by hand. The wooden paddle is similar to those used by the Kava people. The longest one was 36 cm in length and the shortest, 30 cm. Vertical grooves, oblique grooves, and small grids were carved into the surface. Plain paddles were also used. Rounded river pebbles are used for anvils.

Coiling is used to make the bottom and sides. On the top of the wheel a strip of clay is started at the center and wound around, outward, to form a circle. This is then smoothed by hand. The edge is then turned up about 1 cm high. A long coil of clay is placed around the inside of this standing edge and then wound on top of itself. Additional coils are attached and wound upward. Junctures of the coils are smoothed by hand. When the desired height has been achieved, the rim is formed by pressing the clay with the fingers, holding a wet cloth over the top edge while rotating the wheel with the other hand. When the rim has been completed, the body is thinned and rounded using a carved paddle and the stone anvil. When the body is of the desired shape, it is placed in the sun to dry for a time. Finally, the pot is placed upside-down between the potter's thighs, and the rounded bottom is formed using the paddle and anvil.

The third report on T'ai pottery manufacture is by Wang Ning-Sheng (1966). From the report's numerous illustrations, the manufacture described must be very similar to that reported by Chang. The wooden paddles Nos. 8 and 9 illustrated on page 649 have parallel grooves cut into their surface. The series of plates illustrating the making of a large jar looks very similar to what I just described. The wooden wheel is partially in a hole in the ground and is turned by the toes. The bottom and wall of a pot are made by coiling, and the pictures of the forming of the mouth and rim are very much like my pictures of the same stages of manufacture in Laos (Solheim 1967b: Pl. Ib and IIa).

Ling Shun-sheng (1963:51, Pl. III–IV) mentions and illustrates carved-paddle impressed pottery made by Wa (who speak a Mon-Khmer language) and T'ai groups in southwestern Yunnan. This information is from reports by Li and Chang C., which I have not seen. The illustration from Chang C. (1959) on T'ai pottery
SOLHEIM: T’AI AND MALAY EARTHENWARE POTTERY

manufacture shows a slow wheel in use and cord-wrapped and carved wooden paddles. Li (1989) has also reported on this carved-paddle impressed pottery manufacture by the Wa.

In the spring of 1984 Pei Sheng-Ji, director of the Yunnan Institute of Tropical Botany, gave a lecture at the University of Hawaii on ethnobotany of some Yunnan minority groups. Among the slides that he showed was one with a T’ai girl in the foreground holding a water bottle like the form of those that I have illustrated from Chiang Mai (Pl. III). When I inquired about this bottle Pei said that it was one of the common forms of water bottle made by the T’ai group to which this young woman belonged.

CONCLUSIONS

The potters involved in the pottery manufacture or pottery here mentioned from Burma, Thailand, and Laos, and the T’ai potters of Yunnan could all have had at least a shared ancestry in South China during the first millennium B.C. While we know nothing of the potters making the carved-paddle impressed pottery of Burma, we can hypothesize that they were Shan. It should be possible to check this by a study of this pottery and its potters and of Shan earthenware pottery and potters.

We are not as yet certain of the history of the Thai peoples during the first half of the first millennium A.D. and earlier, but there are numerous indications that at least some of these people were in close contact with the Vietnamese at this time and were also in South China. They may well have made up some of the Yueh "tribes."

While there is considerable variation in the way the original cylindrical form of the jars is made by the different Thai groups, where we have information on manufacture, it appears that the first part of the jar to be completed is the mouth and rim, then the body, and the bottom is completed last. The slow wheel, where present, is similar in form and use. The carved-paddle impressed pottery and the water bottle of the Thai groups compare closely with the present-day pottery of the Malay of Sumatra and West Malaysia. I am convinced that the pottery of the two apparently unrelated peoples is related. How could this relationship have come about?

I see four possible explanations and I suspect that the answer is a combination of two of these. The supposed relationships could be due to (1) a common origin, (2) independent invention, (3) the Thai groups picking it up from the Malay, or (4) the Malay picking it up from the Thai. As a matter of personal philosophy I believe that independent invention cannot be the explanation for this degree of similarity if one or more of the alternatives are reasonably likely.

I would hypothesize that the carved-paddle impressed pottery shared by the two has resulted from a common origin, and that this common origin is the geometric pottery of South China, and probably more specifically the geometric pottery of the Yueh. This hypothesis will be tested in time by the results of much more archaeological research conducted in South China and northern Viet Nam, Laos, and Burma.

This hypothesized common origin does not explain the sharing of the water bottle form and decoration. This form appears to be late. I do not know of this form in the geometric pottery or in the early Bau-Malay pottery. I have suggested that the Malay potters may have developed this form from a Sa-huyhn-Kalanay form, where a high, narrow-necked form is known, usually without decoration. If this is so the Thai groups might have picked it up from the Malay.
According to legend and ethnohistory, Thai people controlled much of northern and eastern West Malaysia as early as A.D. 1000 to 1200. This form could have been picked up by the Thai from the Malay at that time and spread among the Thai peoples through internal channels of communication (Gedney 1988). Malay-Nusantao traders could have carried this and other forms up the Menam Chao Phraya and the Irrawaddy or Salween rivers to Thai and/or Shan territory where it was adopted by the northern Thai peoples. In both cases considerable communication among the Thai peoples would have been needed to bring the forms to such widely separated areas. These suggestions can only be tested archaeologically.

Ling hypothesized (1963:51) that “the impressed pottery culture of East Asia started from North China, spreading southward to central China and south China and then reached Indonesia by way of Indo-China.” From recent archaeological research we know this is not so, as the earliest geometric pottery is from South China and the carved-paddle impressed pottery is so far not known prehistorically or at present from southern Viet Nam or central Thailand.

One thing I would suggest is that present-day political boundaries put blinders on us when we attempt to explain area relationships. I strongly suspect that there was much internal trade and communication among the Thai peoples (and others) over much of South China, Burma, Laos, and northern Thailand and Viet Nam from early in the first millennium B.C. until recent historic times, despite the present and recent historic boundaries we know today.

It could be that the carved-paddle impressed pottery of the Malay peoples, which I have called the Bau-Malay Pottery Tradition and which originated in South China, came to the Malay by way of Yunnan and was then brought south by Thai-speaking peoples (rather than from northern Viet Nam to the southern Philippines and Indonesia). If this is so, however, its early appearance in Island Southeast Asia (perhaps as early as A.D. 700) would require earlier movement or communication to the south for Thai speakers than has been considered up to now.

REFERENCES

BELLWOOD, PETER AND MATTUSSIN OMAR

CHANG CHI
1959 Pottery making among the T'ai people or Hsi Shuang-Pan-na, Yunnan. KK 9:488–490. (Trans. Kuo Fan-yan.)

CHANG KWANG-CHIH

COLANI, MADELEINE

GEDNEY, WILLIAM J.
1988 A possible early Thai route to the sea. JSS 76:12–16.

GIBSON-HILL, C. A.

HARRISON, TOM

HO CHUI-MEI
LAMB, ALASTAIR

LEONG, SAU HENG

LI YANG-SUNG
1959 Some problems of ancient pottery making as seen from a study of the method of modern pottery manufacture by the Kava people in Yunnan. KK No. 5: 250–254. (Trans. Chyau Her-sheng.)

1989 A discussion of several issues relating to ancient earthenware based on a study of pottery by the Wa of Yunnan. That-Yunnan Project Newsletter 7: 20–21.

LING SHUN-SHENG
1963 Designs and inscriptions on impressed pottery and the invention of printing. BIEAS 15: 1–63.

MEACHAM, WILLIAM
1979 New C-14 dates from Hong Kong. JHKAS 8: 126–128.

MIKSIC, JOHN N.

SOEJONO, R. P.

SOLHEIM, WILHELM G. II
1960 Two major problems in Bornean (and Asian) ethnology and archaeology. SMJ 9(13–14; N.S.): 1–5.


1964b Pottery manufacture in Sting Mor and Ban Nong Sua Kin Ma, Thailand. JSS 52(2): 151–161.


1967a Two pottery traditions of late prehistoric times in Southeast Asia, in Historical, Archaeological and Linguistic Studies on Southern China. S-E Asia and the Hong Kong Region: 15–22, ed. F. S. Drake. Hong Kong: Hong Kong University Press.


1979a New data on late Southeast Asian prehistory and their interpretation (excerpts). JHKAS 8: 73–87.


1981a Notes on "Malay" pottery in East Malaysia and neighboring areas. SMJ 29(50; N.S.): 3–16.


SOLHEIM, WILHELM G. II AND ERNESTINE GREEN

WANG, NING-SHENG
1966 Investigations of the organization of the pottery craft of the T’ai groups in Yunnan. KK No. 2: 645–653.
NOTES

1. This paper is revised from a paper presented at the "International Symposium on the Language, Cultures and History of the Minority Nationalities of China," University of California, Santa Barbara, January 26–29, 1986. I was the only archaeologist taking part in the symposium; most were linguists or historians and all were specialists on China or languages spoken in China.