ADZES, POTTERY AND LANGUAGE IN PREHISTORIC VIET NAM

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It is always difficult to relate a prehistoric population community to a linguistic group. More often than not only hypotheses can be advanced, and many of them cannot be proved convincingly. That is because of the lack of decisive evidence and the absence of an effective theoretical approach. Archaeologists, although familiar with E. Sapir's point of view on the independence of language and material culture (Sapir 1921:121-135), are nonetheless attracted by problems of the cultural and linguistic affiliations of prehistoric populations. Such affiliations undoubtedly were important determinants of many aspects of prehistoric life and ethnic identification.

The issue of linguistic/artifactual correlations in prehistoric Southeast Asia was raised as early as 1932 by the Austrian scholar Robert Heine-Geldern. He put forward a reconstruction of three prehistoric cultures related to three languages: the Walzenbeilkultur (Round Axe Culture) of Papuan-speaking peoples, the Schulterbeilkultur (Shouldered Adze Culture) of Austroasiatic-speaking peoples, and the Vierkantbeilkultur (Quadrangular Adze Culture) of Austronesian-speaking peoples (Heine-Geldern 1932). However, many aspects of Heine-Geldern's theory, despite its influence on many researchers (Colani 1938; Beyer 1948; Loewenstein 1957), have since been disproved. It is clear that Heine-Geldern followed a diffusionist point of view, although he never stated that in so many words (Kaneko 1970). His reconstruction contained many unfounded statements and cultural elements were often related to one another in a haphazard manner (such as coiled pottery to the Walzenbeilkultur, cord-and basket impressed pottery to the Vierkantbeilkultur, and so on). Such absolute correlations cannot be demonstrated by recent research on prehistory in Southeast Asia and Viet Nam (Ha Van Tan and Tran Quoc Vuong 1961:131-133; Bronson 1977; Bellwood 1978:173-175). Heine-Geldern's three cultures, too, were generalised artificially. It is believed by some that the Walzenbeilkultur never existed at all (Bellwood 1978:175) and the discrete existences of the Schulterbeilkultur and Vierkantbeilkultur have never been successfully demonstrated.

In the view of Erika Kaneko (1970:4), what Heine-Geldern termed "culture" must be understood simply as "tool tradition". Even so, that does not change the situation in any

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way if our objective is to establish the relationships between prehistoric tool traditions and languages.

In his typological analyses of stone adzes in Southeast Asia, Roger Duff (1970) proposed a theory of three major foci. Focus 1 included south China, Taiwan and the Philippines; Focus 2 included Viet Nam, Laos, Cambodia, northern Thailand and Burma; Focus 3 included southern Thailand, Malaya and Indonesia. He also tried to relate his Foci 1 and 2 to the migrations of the Austronesians. Duff's work, though based on undated museum collections, has caused a reconsideration of Heine-Geldern's theory.

Attention has also been attached to pottery traditions, with W.G. Solheim II being a trail-blazer in this field. Solheim (1964, 1967a, 1967b, 1976) has published many statements about his "Sa Huynh-Kalanay", "Bau-Malay" and other pottery traditions in Southeast Asia, and has generally related the Sa Huynh-Kalanay pottery tradition to the Austronesians.

Questions of the origins and expansions of the Austronesians have been discussed with some animation, most particularly since the 12th Congress of the Indo-Pacific Prehistory Association in 1985 (Blust 1984-1985; Solheim 1984-1985; Meacham 1984-1985; Bellwood 1984-1985). The origin of the different linguistic groups in Southeast Asia has received less attention, although views have certainly been expressed in this regard (Solheim 1975; Yakhontov 1977; Shorto 1979).

Systematic excavations now underway in Southeast Asia, and in Thailand (Charoenwongsa 1988; Prishanchit 1988) and Viet Nam in particular, have provided us with a better idea of the distribution of the different types of adzes and pottery. It is high time that researchers on prehistory in this region continued discussion on the relationships between culture and language. This author will make his contribution by presenting information obtained in Viet Nam.

ADZES

In prehistoric Viet Nam there occur several different types of stone axes and adzes. Edge-ground axes first appear in Hoabinhian assemblages. In Xom Trai Cave, edge-ground axes have been found in layers with radiocarbon dates of *c.*18,000 BP. They continued their presence in the Da But Culture, a post-Hoabinhian culture which evolved directly out of the Hoabinhian (Ha Van Tan 1988). In this culture, stone axes extensively polished on both faces occur also, and in its late Go Trung phase the most common type is the "round axe" completely polished with an ellipsoid cross-section. This is the Walzenbeil of Heine-Geldern or the Duff type 2G. In Heine-Geldern's reconstruction the Walzenbeilkultur did not cover Indochina (Heine-Geldern 1932). In the light of the new discoveries in Viet Nam it can be stated that the Walzenbeil is simply an early axe form evolved from the Hoabinhian (Bacsonian) edge-ground axe.

Madeleine Colani was the first to discover pebble waisted axes in Hoabinhian sites and she thought that they were prefigurations of shouldered axes (Colani 1929). It was this that gave Heine-Geldern (1936) grounds to claim that the Shouldered Adze Culture may be regarded as a direct continuation of the Bacsonian-Hoabinhian Culture. This type of

waisted tool has also been found recently by Vietnamese archaeologists but only in very small numbers. More interesting is the presence of pebble shouldered adzes with edge-grinding in the middle layer of the Cai Beo site on Cat Ba Island. This site represents a local line of post-Hoabinhian cultural development which has been delineated by our archaeologists in the coastal area (Ha Van Tan 1988). The edge-ground shouldered adzes of Cai Beo are similar to those of Kalumpang in Sulawesi (Stein Callenfels 1951:85). The middle layer of the Cai Beo site has a radiocarbon date of 5645±115 BP (ZK-328.0). The shouldered adzes found at Cai Beo may constitute a link between the Hoabinhian waisted tools and the entirely polished shouldered adzes of the Late Neolithic.

Thus, we can see that the different types of adzes and axes in prehistoric Viet Nam may have had their roots in the Hoabinhian but reached perfection only in the Late Neolithic period. The Late Neolithic cultures of Viet Nam are each characterised by a dominant or special type of adze. Shouldered adzes and axes are common in some Late Neolithic cultures but they differ in sizes and in shapes (Ha Van Tan and Nguyen Dinh Chien 1977). There are also some cultures which are characterised by an absence of the shouldered or stepped types.

The areas of distribution of particular types of adzes can be listed as follows.

1) Shouldered Forms

The Bau Tro Culture occurs in the coastal parts of Nghe Tinh, Quang Binh and Quang Tri provinces. It has two local facies - Thach Lac in Nghe Tinh province and Bau Tro in Quang Binh and Quang Tri provinces. The shouldered adzes and axes of the Bau Tro Culture have an ellipsoid cross-section and a long butt with curved shoulders.

The Hoa Loc Culture in the coastal area of Thanh Hoa province may belong to the Early Bronze Age. The shouldered adzes of this culture are in very small number but are completely polished with rectangular shoulders. There are also many shouldered hoes with flaked oblique shoulders. Some sites in the Red River Valley such as Go Ma Dong and Doan Thuong are very similar to the Hoa Loc Culture and have also yielded shouldered adzes.

The Dong Nai Culture (Phuoctanien of H. Fontaine) includes many Late Neolithic or Early Bronze Age sites distributed in the Dong Nai River Valley. Adzes generally have rectangular cross-sections and rectangular shoulders. Arrow-winged shoulders are also present but in small numbers.

Neolithic cultures in the mountain areas of central Viet Nam, from Thanh Hoa to Lam Dong provinces, also contain many shouldered adzes. In Tay Nguyen in the western highlands many long and narrow adzes with or without shoulders have been found (Lafont 1956). Some of these might have been used as hoes.

2) Stepped Forms

The Ha Long Culture covers the coastal and island areas of Quang Ninh province. Stepped adzes are the most common types of stone tools. The stepped adzes of the Ha Long Culture generally have a shouldered butt (or pseudo-shouldered butt of Duff type 1B) but they differ markedly from the southeast Chinese type by having no bevel at the back (Duff 1970:90,96).

The Ha Giang Culture has been discovered recently in Lang Son, Cao Bang and Ha Tuyen provinces (Ha Van Tan *et al.* 1990). Stepped adzes have been found together with shouldered and simple untanged quadrangular forms. The stepped adzes of this culture are divided into two types: the Ha Long type with a curved step common in the Ha Long culture, and the Cao Bang type with sharply rectangular shoulders and an angular step.

3) Untanged Rectangular Cross-Sectioned Forms

The Phung Nguyen Culture of the Red River Valley occurs in the provinces of Vinh Phu, Ha Bac, Ha Son Binh, the city of Hanoi and probably part of the province of Ha Tuyen and the city of Hai Phong. Simple rectangular adzes and axes predominate in this culture. Rectangular adzes are common also in the following pre-Dongsonian cultures, such as Dong Dau and Go Mun.

The Early Bronze Age cultures in the Ma River Valley (Thanh Hoa province) are also characterised by untanged rectangular adzes. These adzes were manufactured in the many workshops discovered in this area, of which the most important is that at Dong Khoi.

The distribution in space of adze types has been considered above. Concerning changes over time it can be observed that in the cultures containing shouldered adzes, such as Bau Tro and Dong Nai, the number of shouldered adzes diminishes and the number of retangular adzes increases in later phases.

POTTERY

I have described the prehistoric pottery of Viet Nam elsewhere (Ha Van Tan 1984-1985). Pottery made its first appearance in Hoabinhian sites and is very coarse, made by hand and shaped by a paddle wrapped with vine or bark, not twisted cord. It is, therefore, not true cord-marked pottery.

The pottery of early post-Hoabinhian Viet Nam includes two complexes, that of Quynh Van with its pointed-bottomed vessels and combed patterns, and that of Da But with its round bottoms and basketry-like patterns. The period from the Late Neolithic to the Metal Age then saw advances in pottery technology. Wheel-made pottery appeared, but the use of the paddle and anvil still remained important in manufacture. This later pottery is distinguished by its variety of forms. Many vessels have a ring foot. True cord-

marking occurs on a high percentage of sherdage. Incised decoration developed with rich ornamental designs, and it is on the basis of incised decoration that Vietnamese archaeologists distinguish different cultures and phases one from another. In some coastal cultures designs were made on pottery by impressing with the edges of *Arca* or *Cardium* shells.

The Metal Age in northern Viet Nam finally culminated in the Dong Son Culture, distributed over half of Viet Nam's current territory. Dongsonian pottery is varied in form but decorative patterns are much reduced in comparison with the preceding period. On the other hand, in the contemporary Sa Huynh Culture in southern Viet Nam rich incised designs continued to be produced. Here painting was also combined with incision and impression. Painted pottery was present in the pre-Sa Huynh cultures and even in the Neolithic Bau Tro Culture.

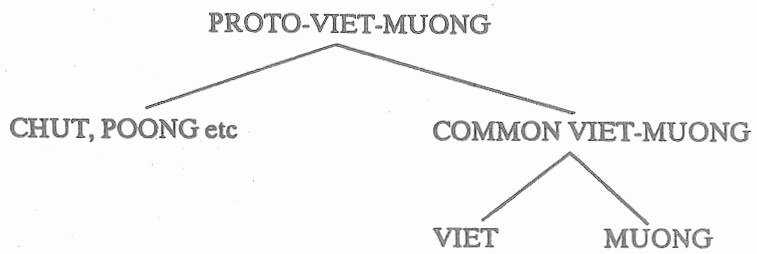
According to the characteristics of the Sa Huynh-Kalanay pottery tradition as defined by Solheim (1967a:16-17), we may consider all the late prehistoric pottery complexes in Viet Nam to belong to it. But obviously it is impossible to attribute all of it to the Austronesian-speaking peoples alone.

The Phung Nguyen Culture in northern Viet Nam and some Neolithic cultures along the coast of south China were considered to belong to what Meacham (1977:1983) described as the "Yüeh Coastal Neolithic". However, Geometric pottery is virtually absent in the Phung Nguyen Culture. This is a marked difference between Phung Nguyen and the cultures of coastal South China.

LANGUAGE

To identify prehistoric linguistic groups in Viet Nam, researchers in this country often resort to the comparative method which is designed to probe into the past on the basis of what is known for more recent times. For instance, it is generally believed that the Viet and Muong subgroups both sprang from a common ancestral language to which linguistics have given the name Proto-Viet-Muong (Barker 1963; Ferlus 1975).

Proto-Viet-Muong is regarded as a member of the Austroasiatic language family. The present Viet-Muong groups in Viet Nam and Indochina (four groups and seven languages according to Ferlus 1974 and two groups and nine languages according to Nguyen Van Tai 1986) record the stages of the development of the Viet-Muong languages as follows (Ha Van Tan 1976):



In this family tree, Proto-Viet-Muong is regarded the ancestral language of all present Viet-Muong groups, whereas Common Viet-Muong is considered to be the common ancestor of Vietnamese and Muong only.

In a more recent paper the linguist Pham Duc Duong and I have dwelt further on the development from Proto-Viet-Muong to Common Viet-Muong (Ha Van Tan and Pham Duc Duong 1978; Pham Duc Duong 1983). Generally speaking, Vietnamese linguists have accepted my family tree for the Viet-Muong languages (e.g. Nguyen Van Tai 1986, 1988). It is my view that Thai languages influenced the development from Proto-Viet-Muong to Common Viet-Muong, whereas the Chinese language had an impact on the subsequent separation of Viet from Muong. Some linguists believe that Viet had already become separate from Muong by the seventh or eighth century AD (Nguyen Van Tai 1978). Before this, Common Viet-Muong was probably spoken by a large part of the population of northern Viet Nam. The Dong Son Culture existed in northern Viet Nam from the mid-first millennium BC to the second century AD, so it can be assumed that a large part of the Dongsonian population also spoke Common Viet-Muong. Of course, it could also be the case that some of the population spoke Thai dialects.

As for the pre-Dongsonian populations of the Phung Nguyen Culture, I think they perhaps spoke an Austroasiatic language close to Proto-Viet-Muong, with perhaps some influence from Thai languages. In the opinion of W. Meacham (1977, 1983) the Phung Nguyen Culture belonged to a group of the Coastal Yüeh peoples. More recently, Meacham has suggested that the Bronze Age Yüeh spoke Mon-Khmer languages akin to Proto-Vietnamese (Meacham 1984-85:94). This agrees with my theory about the language of the Phung Nguyen population (Ha Van Tan 1972: 65). However, I think that the so-called Yüeh people south of the Yangtze River belonged to different linguistic groups, and that the evidence cited by Norman and Mei (1976) is insufficient to prove that Austroasiatic languages were the only ones spoken by the Yüeh. For instance, consider a Yüeh song quoted by Liu Xiang in his *Shuoyuan*. It is said by H. Izui (1953) to be close to Cham, an Austronesian language, whereas it is identified as Thai by Wei Qing'un (1982)!

Contrary to the Phung Nguyen Culture which existed in the Red River Valley, the Ha Giang Culture existed in the mountain area in the north and the Ha Long Culture along the northeastern coast of Viet Nam. As mentioned above, the Ha Long Culture is characterised by a large number of stepped adzes, and a small number of the same tools occur in the Ha Giang Culture. Since I persist in my belief that the stepped adze was an important element of the Austronesian-speaking groups, I hold that the Ha Long Culture belonged to a population that spoke an Austronesian language with a mixture of Austroasiatic elements. As for the Ha Giang Culture, it belonged to Thai-speakers who were in contact with speakers of Austronesian languages. There exists today in northern Viet Nam an ethnic group called the La Ha whose language is a mixture of Thai and Austronesian elements.

I do not believe that people who used shouldered adzes all spoke Austroasiatic languages, as believed by Heine-Geldern. Yet, according to the distribution of this adze type in Southeast Asia, I do think that most of the cultures using shouldered adzes were

related one way or another to Austroasiatic populations. Therefore, I hold that most of the prehistoric cultures in the mountain regions of Viet Nam belonged to Austroasiatic-speaking populations. As for the Bau Tro and Hoa Loc cultures which used shouldered adzes along Viet Nam's central coast, both probably belonged to people who spoke Austronesian languages with a mixture of Austroasiatic elements. Bau Tro and Hoa Loc both have relationships with the Sa Huynh Culture in the south.

Archaeologists are now beginning to realise the relationships between the Sa Huynh Culture and the Cham culture of historical and recent times. They have even discovered recently some very late Sa Huynh sites with Wuzhu coins of the Eastern Han period. One theory has it that the Kingdom of Champa was formed on the basis of the Sa Huynh Culture, under the influence of Indian civilisation. If this is correct then the Sa Huynh Culture surely belonged to a population using an Austronesian language which we propose to call Proto-Cham (Ha Van Tan 1983, 1984-5). As for the presence of Austroasiatic elements in the Cham language, I believe that the mixture could have taken place a very long time ago, possibly in Sa Huynh or even Pre-Sa Huynh times. This is the one case in Viet Nam in which we can clearly see a relationship between the Sa Huynh-Kalanay style of pottery and Austronesian speakers.

The Bau Tro Culture is now regarded as a possible source for the Sa Huynh Culture (Ha Van Tan 1982). In our view, the coast of Viet Nam was already inhabited by Austronesian speakers as early as the Neolithic (Ngo The Phong 1984-85). Later, the many migrations of Austronesians into Viet Nam from Island Southeast Asia helped increase Austronesian influence in the southern part of the country.

As for the cultures in the Dong Nai River Valley, first characterised by shouldered adzes and later by bronze artefacts, they appear to be related to sites in Cambodia such as Somrong Sen and Mlu Prei, and further to others in northeastern Thailand. For this reason, I think the people of these cultures were Austroasiatic speakers. Later, the influence of the Sa Huynh Culture became felt more and more in the Dong Nai River Valley, probably because groups of Austronesian speakers were making their appearance in the eastern part of southern Viet Nam and in the delta of the Mekong River.

In brief, one should not base oneself *solely* on stylistic features of adzes or pottery for identifying the presences of linguistic groups in prehistory. However, if adzes and pottery are considered in their proper contexts they can give useful hints for linguistic identification. So, while rejecting Heine-Geldern's theory in part, we must say that not all of his ideas were necessarily irrational or incorrect.

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