

Earthenware in Southeast Asia

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A Preliminary Cultural Geography of Contemporary Village-based Earthenware Production in Mainland Southeast Asia¹

Leedom Lefferts & Louise Allison Cort

Introduction

Since 1993 we have documented contemporary production of earthenware vessels by women in nearly one hundred villages in Mainland Southeast Asia, beginning in Northeast Thailand and extending to South, Central, and North Thailand, Laos along the Mekong River, Cambodia, Southern and Central Vietnam, and peninsular Malaysia.² These studies have led to a reconceptualization of the striking diversity in production processes for earthenware pottery within this region, as well as to the formation of some tentative hypotheses for explaining why this diversity occurs. This chapter summarizes our findings concerning the variety of contemporary earthenware production processes in Mainland Southeast Asia and proposes a method for their classification.³ After presenting synoptic definitions of six distinctive methods of producing earthenware, we provide a distribution map of these processes and discuss some possible explanations for their distribution.

We began our survey in Northeast Thailand without anticipating this diversity. We expected pottery in the Northeast to be essentially homogenous; instead we encountered unexpected variations as we moved from village to village.⁴ We learned that, although various ethnic groups were represented among the pottery-making communities in Northeast Thailand, the bulk of the pottery used in the region was made by women of one particular group. We also discovered that the method by which these Northeast Thai women made earthenware pots was seemingly unacknowledged in the ethnoarchaeological literature.⁵

Although we found clear differences in the repertoires and sequences of forming techniques used by women in different communities in Northeast Thailand, these differences were comparatively minimal in the processing of clay and temper, in firing, and in the finished pot shapes and their ranges of variation. We concluded that distinguishing among pots was best accomplished not on the basis of form or decoration (Solheim 1967a, 1967b, 1991)⁶ or of materials (as revealed in archaeological pots by petrographic analysis — Vincent 1988, 1990, and Chapter 16 in this volume), but on the basis of the way a pot is formed.

This recognition of the diagnostic importance of forming techniques motivated us to expand our study in order to determine the variety and distribution of different earthenware production technologies used throughout Mainland Southeast Asia. We have identified six major variations. All of the technological systems depend on the production of a pre-form from which the final form is derived. The way in which the pre-form is produced distinguishes each system from the others.

As we continued our research, we focused on documenting the motor patterns incorporated into the production of a vessel. Our hypothesis is that motor patterns, handed down from trainer to trainee, involve the potter's conceptualization of the pot in production as she moves through distinct stages of transforming the clay purposefully from a formless mass to the finished form. This corresponds to the concept of the operational chain (*chaîne opératoire*) as conceived by Leroi-Gourhan (1993) and Lemonnier (1986).⁷ Thus a pot can be seen as embodied behavior.⁸ That behavior rather than the finished appearance is the distinguishing feature.⁹ Two pots that look the same in finished form may be made using differing behaviors, while pots that look rather different from one another may be made using similar behavioral patterns.

As we pursued this approach to understanding earthenware pottery production, it became apparent

that, in order to make our insight convincing, we had to define boundaries and ranges of variation not of pot forms or clay bodies but of behavioral sequences by which pots could be produced. We wanted to clarify whether, in focusing on pot production, we were seeing simply the results of random variation across the landscape or, indeed, were looking at “traditions” — that is, the handing down, over some period of time, of particular ways by which pots could be made.

Since we are involved in ethnographic rather than archaeological research, our approach has been to survey every community of earthenware pottery producers we encounter and, in each community, to work with women potters to observe production processes as extensively and exhaustively as possible, spending from a few hours to several days watching, discussing, and recording how earthenware pots are made, using notes, sketches, 35 mm slides, and videotape. In some instances we have returned to the same site and even to the same potter over several years. Our goal is to prepare detailed descriptions using video and slides in an interactive format so that others will be able to engage in their own analysis of these data and reach their own conclusions. This also “preserves” these systems of production to archive some of the manifold ways humanity chooses to solve similar problems.

Methodology

Although we focus here on the techniques for forming pots, while excluding the patterns involved in getting and processing clay, including the preparation of temper, and firing the pots, we do not intend to deny the importance of those aspects of the total production process, and we do have data for them. (Indeed, as we have expanded our research beyond Northeast Thailand we have found, on a broader regional scale, correlations between forming techniques and materials processing, firing, and — to a lesser extent — the forms of the finished pots.) We feel, however, that focusing on the forming of pots provides the most significant data.

We focus, moreover, on what we call the pre-form of the pot. Too often descriptions of Southeast Asian earthenware production have assumed that all “paddle-and-anvil” production of pottery is essentially the same, perhaps because the finished products can look so much alike. As we have argued elsewhere (Cort, Lefferts, and Reith 1997), reference to “paddle-and-anvil” is insufficient for describing and defining differences in observed motor patterns. The use of paddle and anvil comes *after* the most critically distinctive phase of forming — the shaping of the pre-form — and, indeed, it often obscures evidence of that phase. We endeavor to show how attention should be paid to the total process of forming the pot, with emphasis on the initial steps by which production is defined.

Six Production Techniques

We summarize here the six patterns of motor behavior for making earthenware pottery that we have identified in Mainland Southeast Asia. The map that follows (Map 20.1) clarifies distribution of these six types. Having seen pots in production (and videotaped the production, a procedure we regard as essential for our research), we work from process.¹⁰ These brief descriptions necessarily simplify a multitude of body movements and eliminate references to intervals when the pot-in-progress is allowed to dry. In all cases we describe the production of a medium-sized jar (usually round-bottomed but sometimes flat-bottomed) for storage of drinking water.

Type A. This is a “transformative” approach to pot production, in which all the clay necessary for making the pot is present from the beginning in the initial form.¹¹ This approach has two variants:

- (1) a solid cylinder of clay is opened on both ends, then drilled through using a bamboo stick or hand to form a hollow cylinder without a base (Fig. 20.1: 5), or
- (2) a rectangular slab of clay is joined end-to-end to form a hollow cylinder without a base.

A

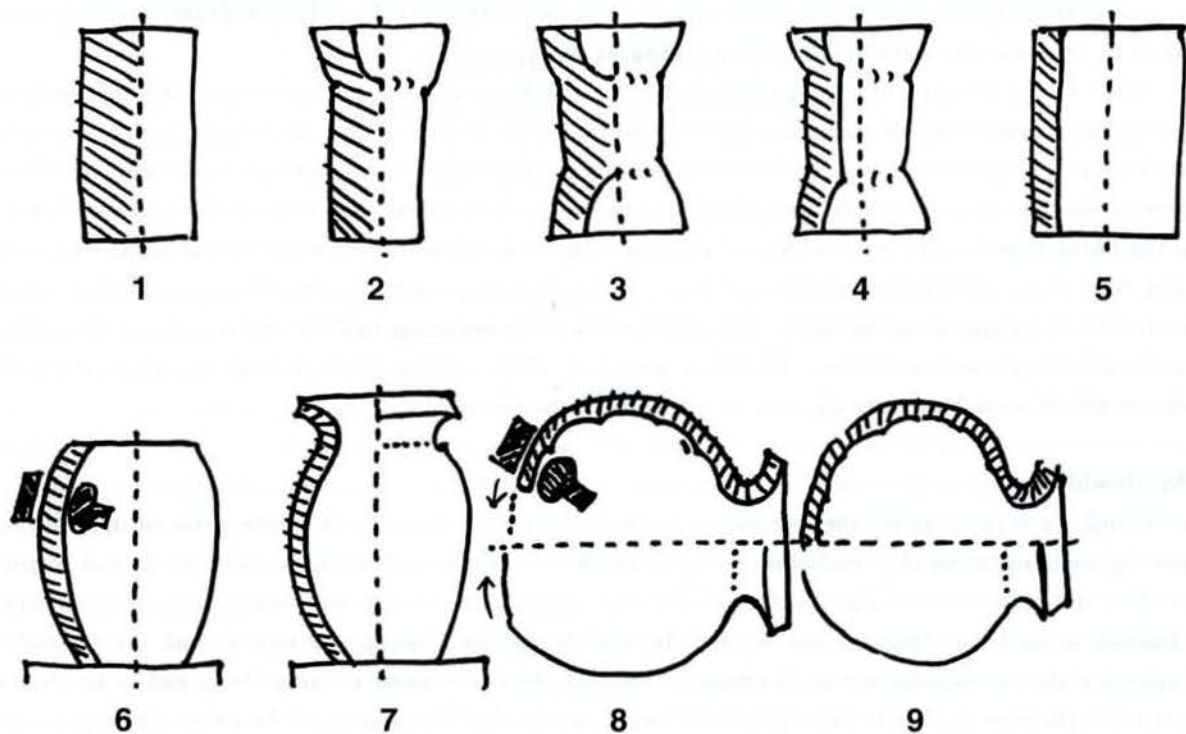


Fig. 20.1 Type A Process.

Next, regardless of which way was used to create the pre-form, the mouth rim is formed on the upper edge of the upright cylinder (Fig. 20.1: 7). (Either the potter walks around the cylinder or, in a recent variation, the cylinder is spun on a fast wheel while the potter stands in one place.) Then paddle and anvil are used to close the other end of the cylinder to form the base and to round out and shape the body (Fig. 20.1: 8-9).

Type B. In this variant of an “additive” approach to pot-making, in which the total quantity of clay is assembled gradually,

- (1) a flat base is formed from a lump of clay resting on a bat or a turntable (slow wheel), then coils, slabs (flattened coils), or rings (closed coils) of clay are added to form a hollow cylinder with a closed flat base (Fig. 20.2: 1-3), or
- (2) a hollow cylinder with a closed flat base is opened from a solid cylinder of clay.

The mouth rim is shaped on the upper edge of the upright cylinder (Fig. 20.2: 4-5). Then paddle and anvil are used to round out the flat base and to round out and shape the body (Fig. 20.2: 6-7).

Type C. In a different “additive” approach to pot making, to make a smaller pot, a pre-form is constructed from coils added to a flat base, on the upper edge of which the rim is shaped. The inside and outside of the pot are then scraped to thin and shape the vessel.

B

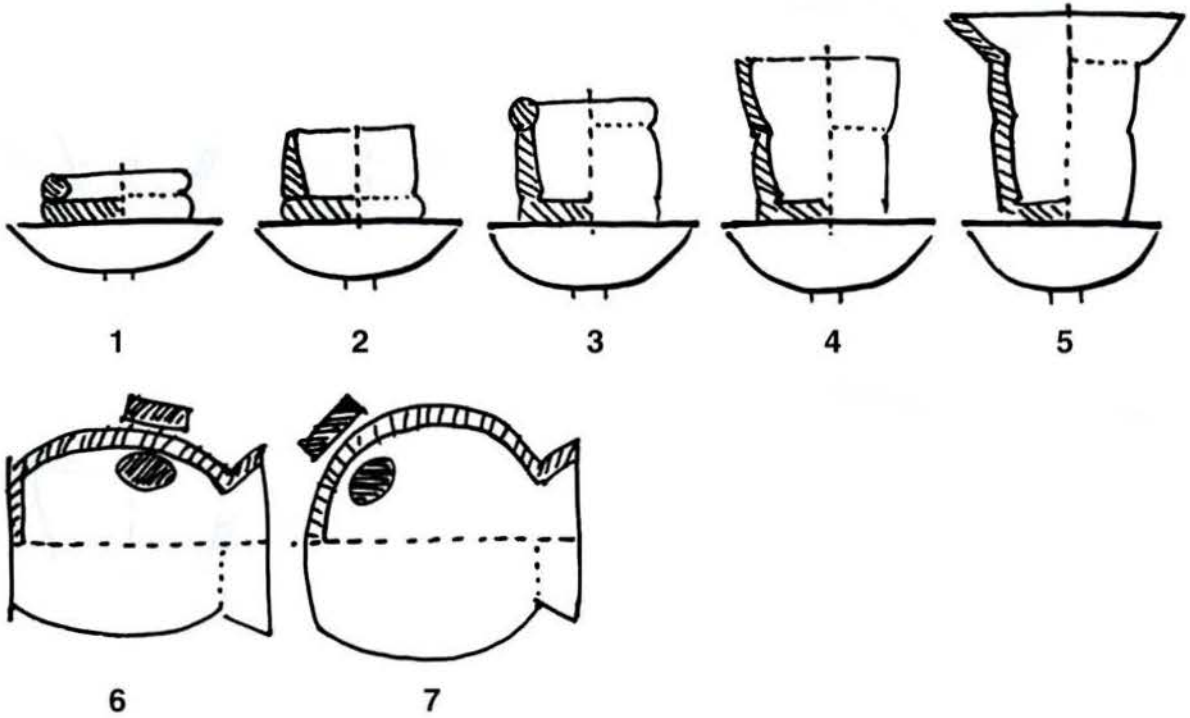


Fig. 20.2 Type B Process.

For larger pots, flattened coils are used to build up the upper half of the pot, beginning at the midpoint (Fig. 20.3: 1–2). The mouth rim is shaped along the upper edge of this form (Fig. 20.3: 3). The form is inverted onto the mouth rim and the interior is scraped with a metal or plastic loop to thin the walls (Fig. 20.3: 4). Coils are added to the upper edge of the inverted form to complete the hemispherical lower half of the pot (Fig. 20.3: 6–7). The vessel is smoothed and shaped using a spatula (but not, it must be noted, a paddle and anvil).

In a variation of this approach to large pot production, the upper half of the pot is built with coils added to a flat “base”. When the form is inverted onto its mouth rim for finishing, the flat “base” is opened, raised, and augmented by coils to complete the lower half of the pot (Fig. 20.3: 8–9).

Type D. In another approach to “transformative” pot production, on a rapidly turning wheel (spun either by hand by an assistant or, in a modern variant, by an electric motor), the potter uses centrifugal force to throw a hollow cylinder from a lump of clay and shape a mouth rim on the cylinder (Fig. 20.4: 1–3). The cylinder is cut off so as *not* to have a base (Fig. 20.4: 4). Paddle and anvil are used to close the base and expand the wall to form the finished pot (Fig. 20.4: 5–6).

Type E. In this “additive” method, the potter works on a row of small wheel heads barely wider than the diameter of the pot base, using one wheel for each pot in process and spinning the wheel by hand. (The potter is usually a man.) The potter builds the flat-bottomed pot in four stages, beginning with a flat disk of clay to which coils are added and thinned, then adding and shaping clay coils for the mid-body (Fig. 20.5: 3), for the shoulder (Fig. 20.5: 4), and finally for the mouth rim (Fig. 20.5: 5). The finished pot has a flat bottom.

C

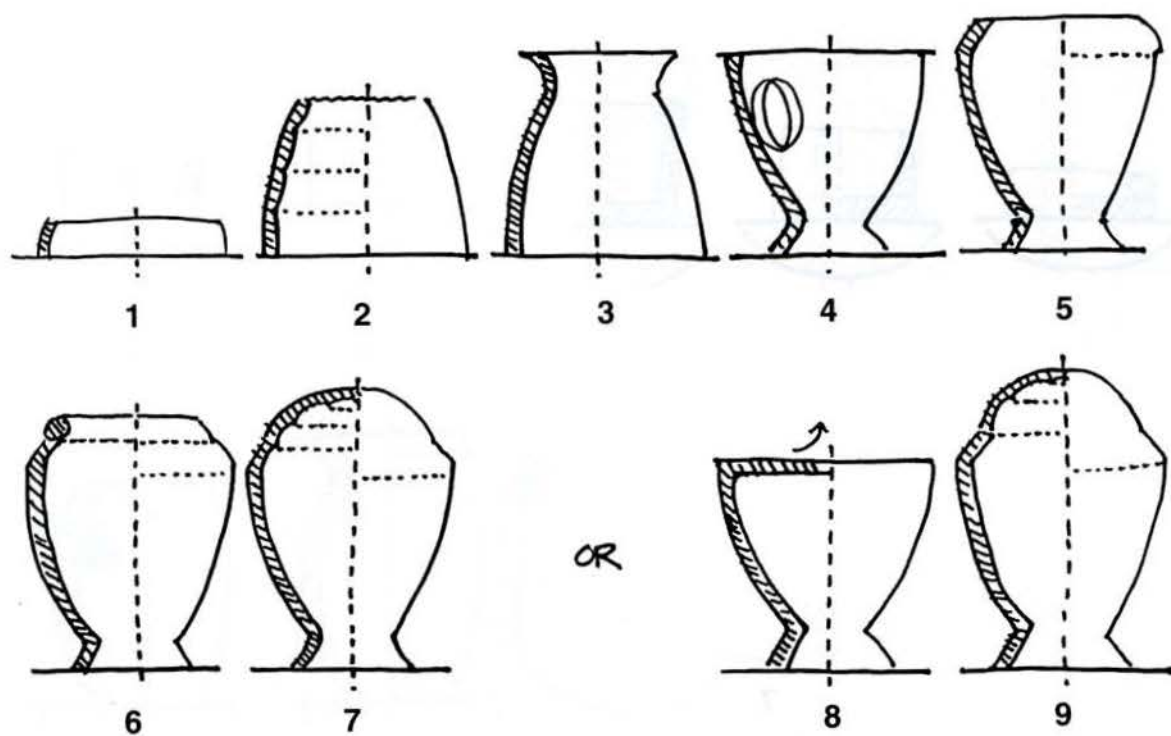


Fig. 20.3 Type C Process.

D

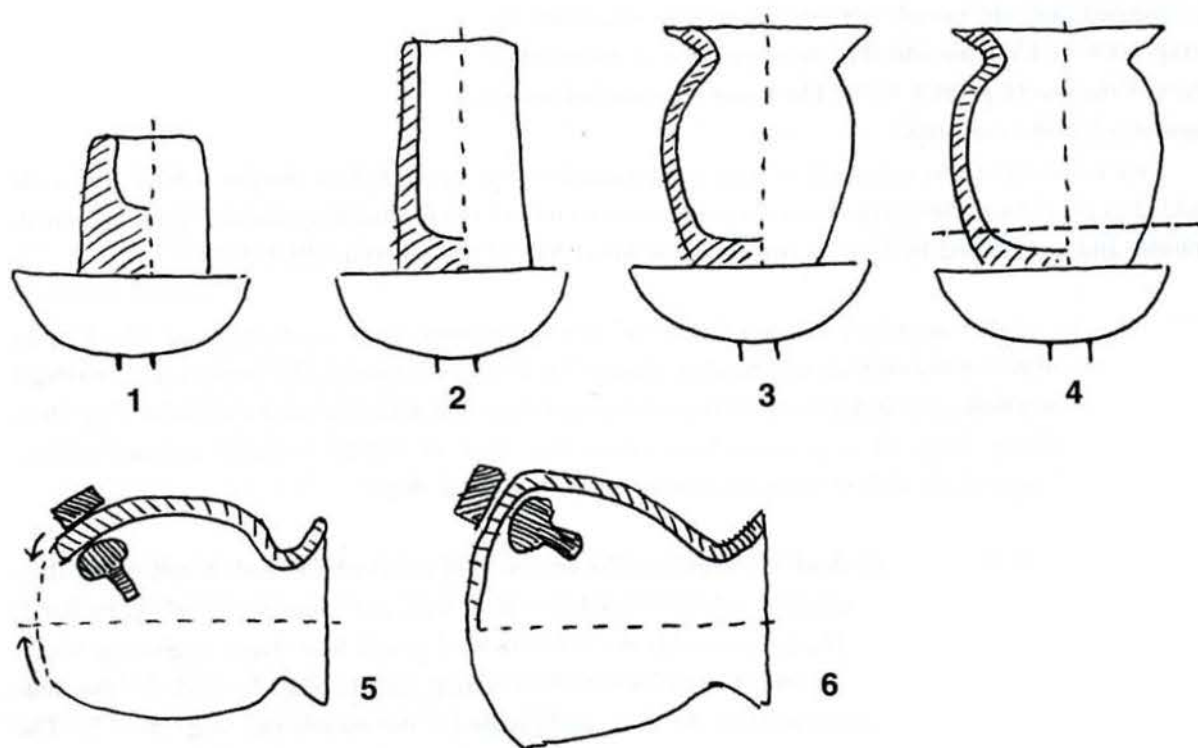


Fig. 20.4 Type D Process.

E

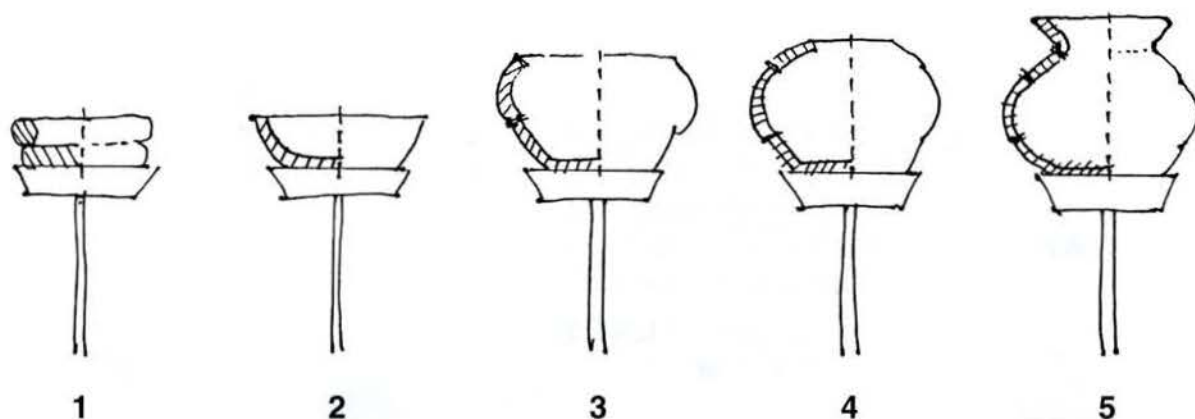


Fig. 20.5 Type E Process.

Type F In this “transformative” method, the woman potter works on a fast wheel spun by an assistant, who kicks the edge of the wheel. The assistant also prepares a short solid cylinder of clay for the potter (Fig. 20.6: 1), who throws the solid cylinder to produce the pre-form, shaped as a hollow vessel with finished rim, curved wall, and solid flat bottom (Fig. 20.6: 2–3). The pre-form is inverted and the lower wall and bottom are scraped using a knife to produce a round bottom (Fig. 20.6: 4–5). (Some pots intended to have flat bottoms are not worked in this manner.)

Pan-Southeast Asian Distribution: The Map

We now present a map of the sites in Mainland Southeast Asian sites we visited in our earthenware production survey through 2000. (This map documents only village-based earthenware production; it excludes both village-based stoneware production and Chinese immigrant production — mainly stoneware — surviving in pre-colonial kilns as well as in contemporary factories.) Several points may be made:

- (1) We are looking at remnant economies. Earthenware pottery production and use is, almost by definition, based in villages. Earthenware pottery is usually sold or traded to people who use clay pots for cooking (especially for steeping herbal medicine) and for cooling drinking water. Such people are rarely found in today’s provincial cities and district towns, where electric refrigerators cool water and metal pots are used for cooking. One important use of earthenware pots remains in Theravada Buddhist ritual, as a vessel to contain a portion of the ashes of the deceased following cremation. Even this use, however, can be served by an old aluminium pot recycled from steaming rice.

F

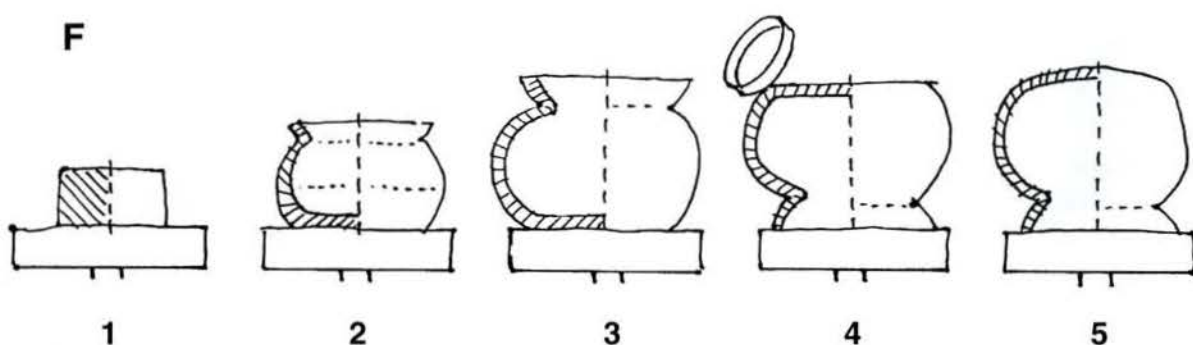
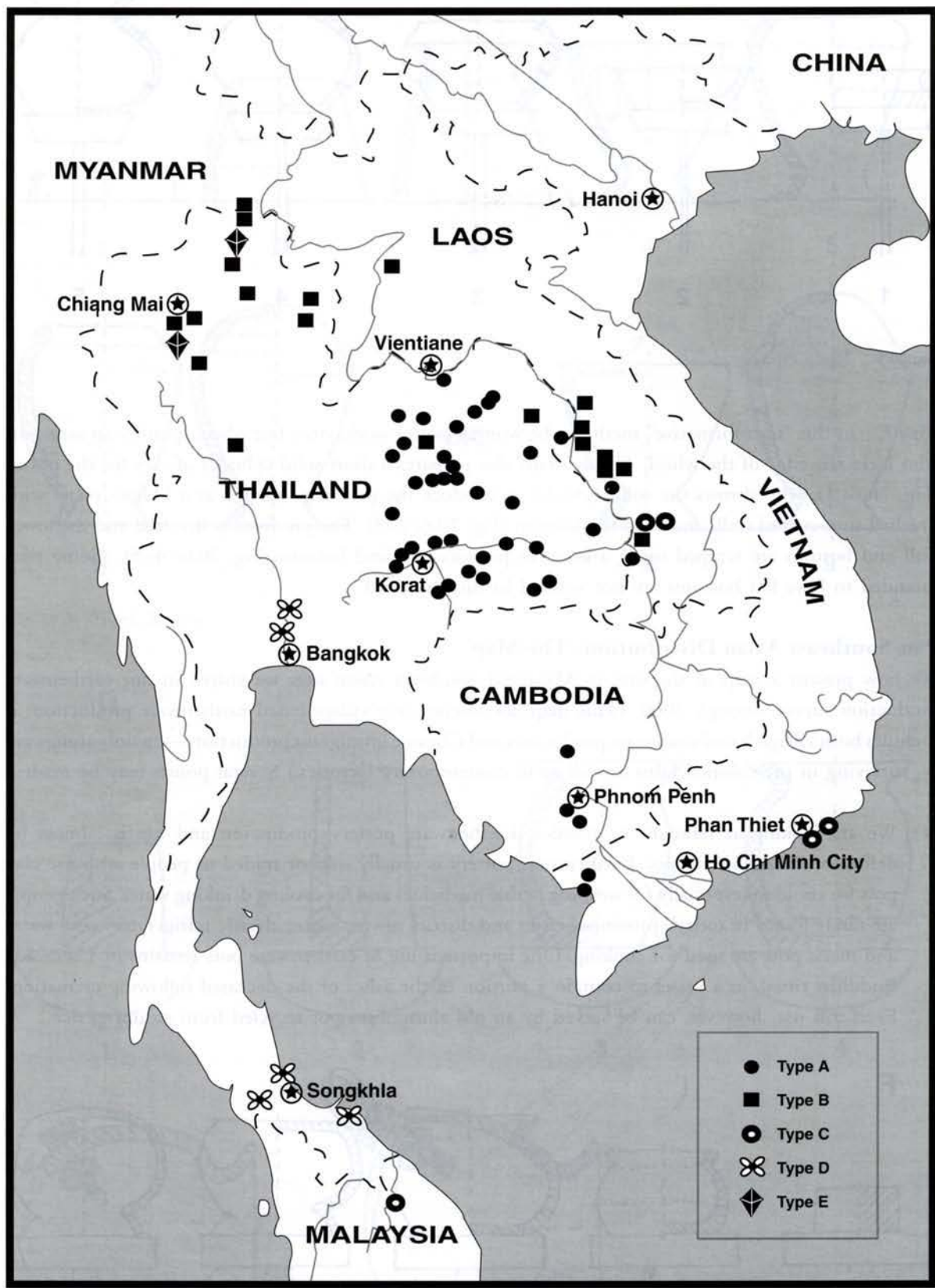


Fig. 20.6 Type F Process.



Map 20.1 Distribution of types of earthenware production in Mainland Southeast Asia (map predates observation of Type F). Map by Daniel Cole, National Museum of Natural History, Smithsonian Institution.

- (2) In large measure we examine economies that have been subject to colonialism imposed both externally and internally. Those sections of the economy that were least subject to the inroads of merchant capitalism tend to be those in which earthenware pot making is best preserved.¹² Rather than dismissing the incidence of production in areas in which few sites now operate, however, we need to highlight those sites that *have* survived, understanding that they may represent pre- as well as post-colonial contexts.
- (3) Despite the preceding points, many sites *do* tend to cluster near population centers such as cities and district towns. That may be because those centers and their surrounding villages provide a significant mass of consumers to support the continuation of earthenware production. In addition, government self-interest has often determined that road networks radiate out from those centers. Today, pot makers and middlemen use those road networks to sell or trade pots into outlying rural environments. Outlying production sites without easy access to roads have tended to cease operation.
- (4) Even though we present this map as contemporary cultural geography, history is implicit in it. Readers familiar with the ethno-linguistic map of Mainland Southeast Asia (e.g., Lebar, Hickey, and Musgrave 1964) will note on our map that the areas occupied by different pot production technologies sometimes disagree with the boundaries defined by what are commonly called ethnic or linguistic differences, or by contemporary nation-states (see Cort and Lefferts 2000). Our map provides a graphic illustration that the diffusion of technology may be independent of ethnicity and language. Technological aspects of human life may be separable from language, religion, politics, and economics — or they may coincide. The distribution of pottery-making procedures may represent earlier commonalities and diffusions of technology now masked by present-day attention to and definitions of ethnicity and language.

In our ongoing research and analysis, we explore the possibility that the “packages” of attributes we have discussed and mapped may actually be found, on further examination, to be separable. Attributes or elements of the production process may be combined in different ways. Our observations have led us to propose these six “bundles of production processes”. Variations certainly do exist in the way various potters at a given site produce pots. As our research continues and as colleagues contribute their thoughts, it remains to be seen whether the “bundles” mapped here remain coherent between sites.

Conclusion

Our map gives evidence that processes for producing earthenware pots may have little to do with the prevailing ethnic identification given to particular places. Nonetheless, we conclude with a discussion of a possible configuration of the relationship of the technologies of production to ethnicity. This configuration has implicit within it a “history” of mainland Southeast Asian earthenware production, a history related to the stories told by present-day ethnic groups. Ethnic histories are the way we currently think about Southeast Asia. This may not be the most accurate way, but it is what we have.

- (1) The transformative technology process noted as Type A, in which a hollow cylinder without a base is formed and then worked, appears based in Khmer culture. As the map shows, in Northeast Thailand this production method seemingly has forced out of production (as we interpret the historical process) almost all Thai-Lao potters (represented by Type B, located today on the “fringes” of Type A). Type A is practised by potters who identify themselves as Thai-Khorat; their stories describe — and the map shows — how an under-class of Thai-Khorat potters and their families expanded across the landscape of Northeast Thailand. In a few sites, however, Thai-Lao women have adopted Type A production and have even sent daughter households out to other Thai-Lao villages or — in some places, in an ironic twist — to Khmer villages. In these cases people who might be

presumed to have participated in Type B technology in the past have adopted Type A (Lefferts and Cort 1999).

- (2) Among Type B sites the use of a slow wheel (turntable) or bat to produce pots in an additive approach may be related to a stoneware tradition (pots coiled and thrown on a wheel by men) found in the same locales. In a very few locations earthenware is made by men who also produce stoneware pots, using cross-draft kilns. In one instance stoneware production by men and earthenware production by women coexist in the same community; there we have documented that women use paddle and anvil to finish the pre-forms that men prepare on a wheel.

Are we to see the production of earthenware exclusively by women, represented by most Type B sites, as remnant production that used to be (originated in) shared or combined production of earthenware and stoneware? We again contradict our hypothesis that ethnicity may not correlate with pot production by pointing out that many of these sites appear to be “Tai” (meaning the Tai linguistic group, not to be confused with citizens of the current Kingdom of Thailand). We note the evidence at historical ceramic production sites in North-Central Thailand — Si Satchanalai, Sukhothai, and Phitsanulok — for the production “side-by-side” of both stoneware and earthenware¹³ and at two contemporary sites (one in Laos, another in Northeast Thailand) where earthenware and stoneware are produced together.

- (3) Type C sites seem to represent a possible Austronesian presence in peninsular Malaysia and among the Cham on the Vietnam coast. This production process has expanded inland to people who are Mon-Khmer (Suay, Kui) and Lao speakers. As the result of these recent discoveries, our study has now begun to look toward Insular Southeast Asia (Gasser 1969).
- (4) The use of the fast wheel for Type D earthenware production remains puzzling, especially when it is used in a way that seems to relate to practices of potters in Eastern and Southern India. The technical commonality involves cutting off the thrown pot form without a base, then paddling the bottom closed.¹⁴ Connecting Southeast Asia and India is not new; other than Groslier (1981) and Solheim (pers. com.), however, no one has yet proposed direct connections between these regions in terms of earthenware production technologies. If such an explanation holds, why does the fast wheel not appear in Type A production, which also uses an open cylinder as its pre-form? How, moreover, do we explain that women use the fast wheel in this way in Southeast Asia while in India such potters are men?
- (5) Discussions with Charlotte Reith (pers. com.) and with researchers in North Thailand disclose that a number of sites related to Type E exist in Burma. The well-known history of the single Type E site in North Thailand is related to the expansion of a Burmese elite in that region in the past.
- (6) We have observed Type F production in only one site to date in Central Vietnam, south of Danang. This lacuna is due partially to the recent expansion of our research northward along the Vietnamese Coast. Type F is similar to both types D and E in that it involves the use of a fast wheel to make the pre-form. Other aspects, however, differ. The procedure suggests a relationship to Chinese stoneware production using the wheel, on the one hand, and, on the other hand, to “Cham-Malay” earthenware production (Type C) involving the use of a scraper to complete the shape. Should it be interpreted as a Type C technique altered by the introduction of the Chinese-type fast wheel? Because the folk history of this community holds that these potters migrated south from Thanh Hoa Province (in Northern Vietnam), further work needs to be done to chart the distribution of this type.

We have prepared this chapter not to answer questions so much as to provoke them. We propose another way by which to address issues in Indo-Pacific prehistory and archaeology and to understand the variation we see in contemporary earthenware production in Mainland Southeast Asia. The study of contemporary village-based earthenware pottery production leads to interesting ethnographic issues; we hope that it may also suggest fruitful leads for historians and pre-historians of Southeast Asia.¹⁵

NOTES

- 1 This chapter is a revised and updated version of a paper first presented at the 16th Congress of the Indo-Pacific Prehistory Association, Melaka, Malaysia, 1–7 July 1998, in the panel chaired by Richard Englehardt and Pamela Rogers, *Ethnoarchaeology in Theory and Practice in the Interpretation of Indo-Pacific Prehistory*. It was presented again at the Symposium on Premodern Southeast Asian Earthenware, Singapore, 11 July 1998, organized under the auspices of the Singapore Southeast Asian Ceramic Society, the Southeast Asia Studies Programme of the National University of Singapore, and the Asian Civilizations Museum of the Republic of Singapore, chaired by John Miksic. Finally, an abbreviated version was presented at the American Anthropological Association Annual Meeting panel, *Ceramic Ecology '98: Current Research on Ceramics*, chaired by Charles C. Kolb and Louana M. Lackey, 2 December 1998. We appreciate these opportunities and we thank Drs. Englehardt and Rogers for permission to publish this paper in the proceedings of the Singapore symposium. The research that forms the chapter's basis has been carried out under the auspices of many national organizations. We thank those nations for the opportunities they have provided.
- 2 Funding for the 1994–95 and 1996–97 research seasons was provided by the Nishida Memorial Foundation for Research in East Asian Ceramic History. We have benefited enormously from working collaboratively with archaeologist Narasaki Shoichi, then Director, Aichi Prefecture Ceramics Museum, Seto City, Japan, during 1993–97 and with Mori Tatsuya, curator at the same institution, in Laos in 1996–97. For Burma we defer to the extensive investigations of Charlotte Reith (Reith 1997, 1999, and present volume).
As of July 2002, we have surveyed 133 sites (95 earthenware, the remainder stoneware, production) as follows: Northeast Thailand 69, South Thailand 4, Central Thailand 3, North Thailand 16, Laos 25, Cambodia 5, Vietnam 10, and Malaysia 1. A detailed list is available in Narasaki *et al.*, 2000, or by addressing the authors.
- 3 A comprehensive statement of our work as of 2000 was published, in Japanese, in Narasaki *et al.*, 2000. Other published work pertaining to this project appears under Cort and Lefferts or Lefferts and Cort in the Bibliography section.
- 4 Initially we shared Solheim's (1984a: 95) impression that "present-day pottery manufacture on the Khorat Plateau appears very homogenous from area to area", but further investigation (assisted greatly by Samruad 1989) revealed a diversity of methods (Lefferts and Cort 1998, 1999).
- 5 The method described below as Type A is not acknowledged in Rye 1981. See Solheim 1984a for an overview of ethnoarchaeological research in Northeast Thailand, as well as Solheim 1964c, Bayard 1977b, and Ho 1982 for site-specific studies.
- 6 Solheim 1967a, 1967c, 1991, on the Sa Huynh-Kalanay and Bau-Malay pottery traditions. Solheim specifies that a pottery tradition ("a recognizable set of pottery forms and decorations, distinct from any other set of forms and/or decorations, that continues through time for many generations") does not necessarily imply a single ethnolinguistic group of makers and users and anticipates that "many different regional complexes" may eventually be distinguished within the Sa Huynh-Kalanay tradition (1991:49).
- 7 Our thanks go to Dr. Miriam Stark for bringing the work of these two scholars and that of Olivier P. Gosselain (e.g. 1998) to our attention.
- 8 See Arnold 1985: 7–8. Arnold's discussion of motor habits covers both producers and users. We are concerned specifically with producers.
- 9 This approach articulates with that developed by O'Connor in "Agricultural Change and Ethnic Succession in Southeast Asian States" (1995) and more recently by Dorothy Washburn for comprehending culturally dependent two-dimensional patterning systems (1999). The issue is one of a deeper analysis of cultural patterns than superficial fashion or style.
- 10 We presented a synopsis of our procedure for comparing production techniques in Lefferts and Cort 2000.
- 11 This term was suggested to us by Dr. Pamela Vandiver.
- 12 This is especially true today in Burma. See Reith 1997 and 1999 and Lefferts 1988.
- 13 For up-draft kilns (presumably used to fire earthenware) at Si Satchanalai and Sukhothai, see Richards *et al.* 1984; for Phitsanulok, see Hein and Prachote 1985 (there the earthenware probably was fired in bonfires, since no earthenware was found within the three cross-draft kilns and no separate updraft kilns were discovered). See also Lefferts 2000 for a discussion of contemporary up-draft kilns used to fire earthenware.

¹⁴ See Saraswati and Behura 1966: 39–75 for a geography of pottery production in modern India.

¹⁵ We must mention that a concern with regard to making the connection from ethnography to archaeology is how to identify production processes in archaeologically-recovered earthenware. Even when dealing with contemporary earthenware, one must witness the process in order to understand the steps by which the clay was shaped into a pot. In the processes we have described, the pre-forms disappear into the final shape of the pot as transformed with paddle and anvil or by scraping. To test the feasibility of finding traces of the pre-form and the transformational processes embedded in the pot walls, we asked Dr. Pamela Vandiver to use xeroradiography to examine pots we had collected at various sites, representing techniques A, B, and C. We did not give any information in advance about production processes. Her descriptions of what she “read” in the images, even as an experienced user of the method, alerted us to the problem that not all crucial aspects of the processes — the seam between base and coiled wall in Type B, the coiled base on the inverted rim and wall of Type C — were legible in the images. Thus one result of this research may be to make us aware of just how much information about process may be lost from the archaeological record.