COMMUNITIES OF PRACTICE IN THE EARLY POTTERY TRADITIONS OF THE AMERICAN SOUTHEAST

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The oldest pottery traditions of the southeastern United States include a series of punctated wares geographically clustered in three locales of the Savannah River region. Although potters in each locale decorated and used pots in virtually identical fashion, they tempered clays and formed vessels in appreciably different ways. Situated learning theory offers a framework for interpreting these divergent trends in early pottery by focusing attention on the multiple communities of practice in which potters participated. Independent data on the handedness of potters supports the inference that techniques for making pottery were transmitted cognately, whereas decorative expression and methods of cooking crosscut residential units as a result of affinal relations. Potential contradictions arising from different types and changing forms of community membership may have contributed to radical changes in pottery technology and decoration after some fifteen generations of relative stability.

HISTORICAL CONTINUITY IN MATERIAL culture is dependent on the processes by which knowledge and skill are transmitted from generation to generation of participants. Fundamental as they are, these processes are rarely investigated. Rather, we assume implicitly, through lack of investigation, that learning is cross-culturally invariant, embedded within an enculturation process that every individual experiences by virtue of existing. In this view, learning takes place within the individual, and we anticipate no perceptual differences among participants of shared experience. The consistency of behavior implied by this normative perspective underwrites the concepts of tradition, phase, and horizon that dominate Americanist archaeology.

Recent advances in learning theory in anthropology offer alternative perspectives of potential relevance to archaeology. In their 1991 book, *Situated Learning*, Lave and Wenger explore the idea that learning develops through social interaction and that communities, rather than individuals, are the units of

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learning. In fact, Lave and Wenger (1991:49) define learning as "increasing participation in communities of practice." Learning to them is an "evolving, continuously renewed set of relations" (Lave and Wenger 1991:50) in which all individuals have multiple, varied ways of being located in fields of participation defined by a community. These locations change as part of an individual's learning trajectories, developing social identities, and forms of membership.

In its emphasis on social identity and historical context, situated learning theory is consistent with the basic tenets of agency or practice theory, which itself has made significant inroads in archaeological inquiry (e.g., Dobres and Robb 2000). Although neither of these theoretical paradigms is ready-made for archaeological application, two aspects of situated learning theory have direct implications for the study of ancient material culture. One is that the ability of a community to reproduce itself lies not in the content of the learning (i.e., the tradition) but in the maintenance of certain modes of coparticipation. Inasmuch as the content of learning and modes of coparticipation are mutually underdetermined, historical continuity in material form may mask significant social change, and, conversely, social stability may transcend marked changes in material form. The second is that changes in the learning trajectories, social identities, and forms of membership over the course of one's lifetime mediate the relationships between material expression and cultural affiliation, rendering untenable the isomorphism that underlies archaeological time-space systematics.

In this article we explore the worth of these two assertions in explaining decorative, technological, and functional variability in the oldest pottery traditions of the American Southeast, those of the Savannah River region of Georgia and South Carolina. In situating the learning of pottery making and using in social fields of participation, we necessarily must refer to the structures of kinship and gender which were among the bases of social identity within these prehistoric communities. We review data on the decorative surface treatment of this early pottery to document the regional distribution and timing of communities of potters and juxtapose these with data on pottery technology and function that reveal subregional circumscription that belies decorative conformity. Finally, we review an unusual source of data—variation in the handedness of early potters—to resolve the apparent contradiction between technofunctional and decorative variation.

To anticipate the results, we conclude that social organization among these communities involved unilocal postmarital residence that ensured generational continuity in the coresidence of cognates, hence consistency in technology, but with decorative and functional conformity among nonresidential affines. Assuming they were exclusively women, potters participated in at least two communities of practice: their natal communities, as mothers, daughters, and sisters, and their marital communities, as daughters-in-law and wives. Recognition of these varied social identities not only helps to explain regional variation in early pottery but also provides a basis for explaining change in communities of practice arising from the potential conflicts of contradictory social obligations and responsibilities. Beyond its historical specificity, this case

study provides a comparative basis for examining how variation in the coparticipation of communities of potters contributes to decorative, technological, and functional variation in pottery worldwide.

One further point of theoretical justification is necessary before proceeding. We subscribe to the notion that crafting is among the actions people take to assert and reproduce social identity and social relations (Hodder 1982; Wiessner 1983, 1988) or, to put it more generally, to socially construct themselves (*sensu* Mauss 1935; see also Dobres 2000). This process is not deterministic because it depends on the lived experiences of persons whose social relations are situated in specific historical and cultural contexts. Thus, depending on context, learning may lead to either similarity or difference in material expression (e.g., DeBoer 1990:103). It follows that archaeologists cannot presume to understand or explain the meaning of material culture variation without detailed historical and cultural reconstructions of their study subjects. Such detailed reconstruction has been the goal of recent archaeological inquiry into Stallings Culture.

SURFACE DECORATION AND TECHNOLOGY OF EARLY SAVANNAH RIVER POTTERY

Stallings fiber-tempered pottery in the Savannah River region of Georgia and South Carolina appeared as early as 4,500 years ago to become the hallmark of Late Archaic hunter-gatherer populations for some fifteen centuries (Sassaman 1993, 1998). Along with a related sand-tempered ware known as Thom's Creek, Stallings pottery is best known from the freshwater shell middens of the middle Savannah River, its Brier Creek tributary, and the Ogeechee River of Coastal Plain Georgia, and from saltwater shell middens and shell rings of the Georgia-Carolina coast (Figure 1). Over the fifteen hundred years of their history, makers of these early wares became increasingly circumscribed in the middle Savannah River region, location of the famous type site, Stallings Island (Claflin 1931). Parallel and coeval conditions existed in the nearby Ogeechee and Brier Creek drainages (Figure 2). These three foci of settlement represent what we refer to as "Classic Stallings" times (ca. 3800-3500 B.P.; Figure 3) noted for freshwater shellfish subsistence, intensive riverine settlement, and elaborate punctated pottery.

The hallmarks of Classic Stallings pottery assemblages are the so-called drag-and-jab and separate linear punctate surface decorations (Figure 4), typically executed with subtriangular pointed styluses (Sassaman 1993:192, 204). An advanced level of diversity characterizes this surface treatment, as variations in styluses and in the depth, angle, arrangement, and spacing of punctations ensure that no two pots were decorated exactly the same. Notably, as much decorative variation exists within each of the three riverine settlement locales as between them, and no single motif or design element is exclusive to any locale. Parenthetically, several decorative elements—finger pinching, shell-point impressing, and grooving—distinguish coastal expressions of Stallings and Thom's Creek wares from their interior riverine counterparts. Some of these

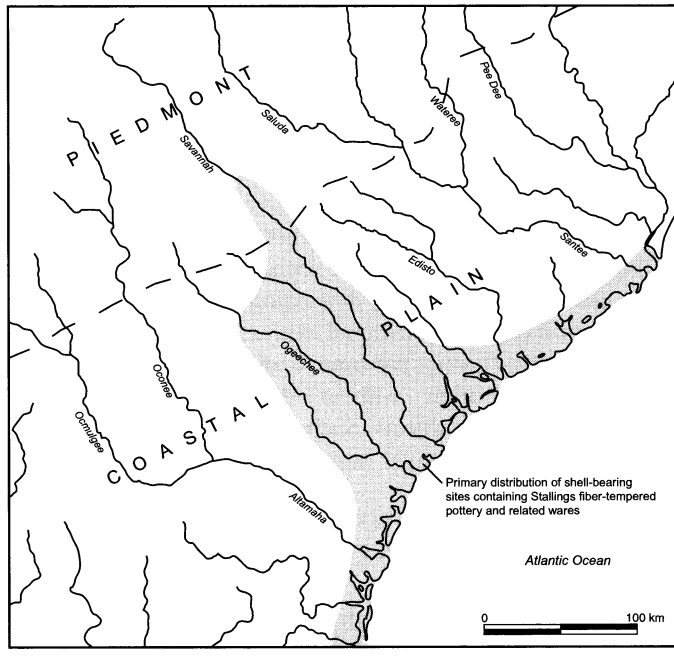

Figure 1. Map of the Savannah River Region, Showing Generalized Distribution of Shell-Midden Sites of Stallings and Related Cultural Affiliation

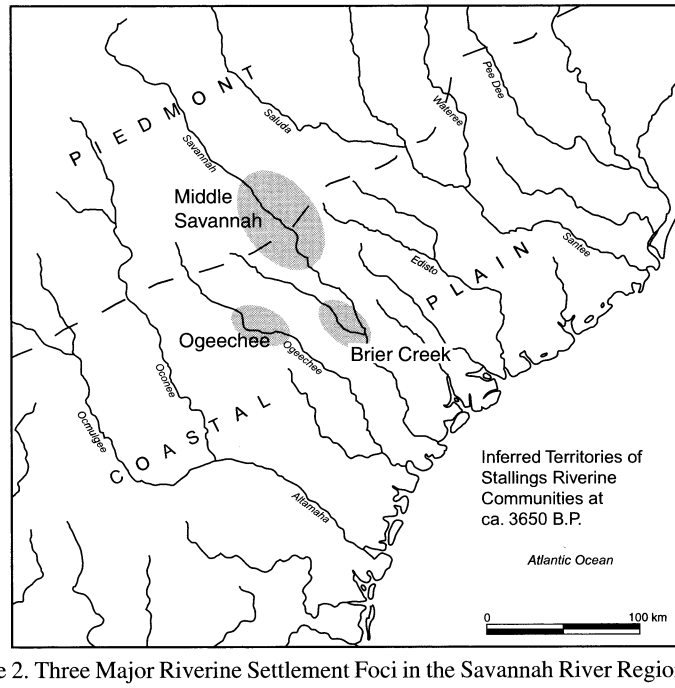

Figure 2. Three Major Riverine Settlement Foci in the Savannah River Region during Classic Stallings Times (ca. 3800-3500 B.P.)

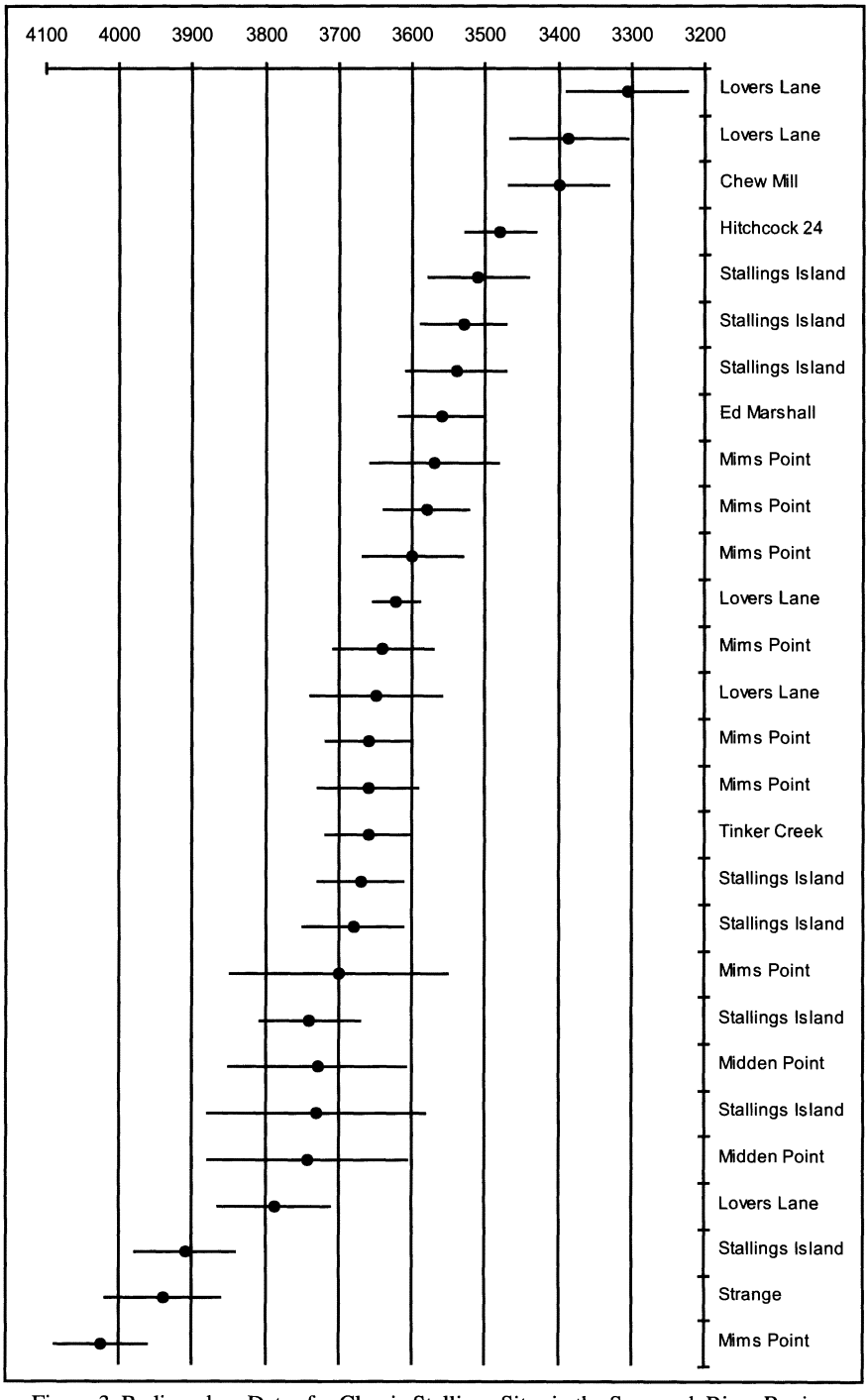

Figure 3. Radiocarbon Dates for Classic Stallings Sites in the Savannah River Region

coastal variations are demonstrably younger than Classic Stallings wares, appearing well after 3500 B.P., whereas those coeval with riverine assemblages may express cultural differences between coastal and interior riverine populations. Emphasis throughout this paper is on the pottery assemblages from interior riverine locales; further discussion of coastal assemblages can be found elsewhere (Sassaman 1993; Trinkley 1980).

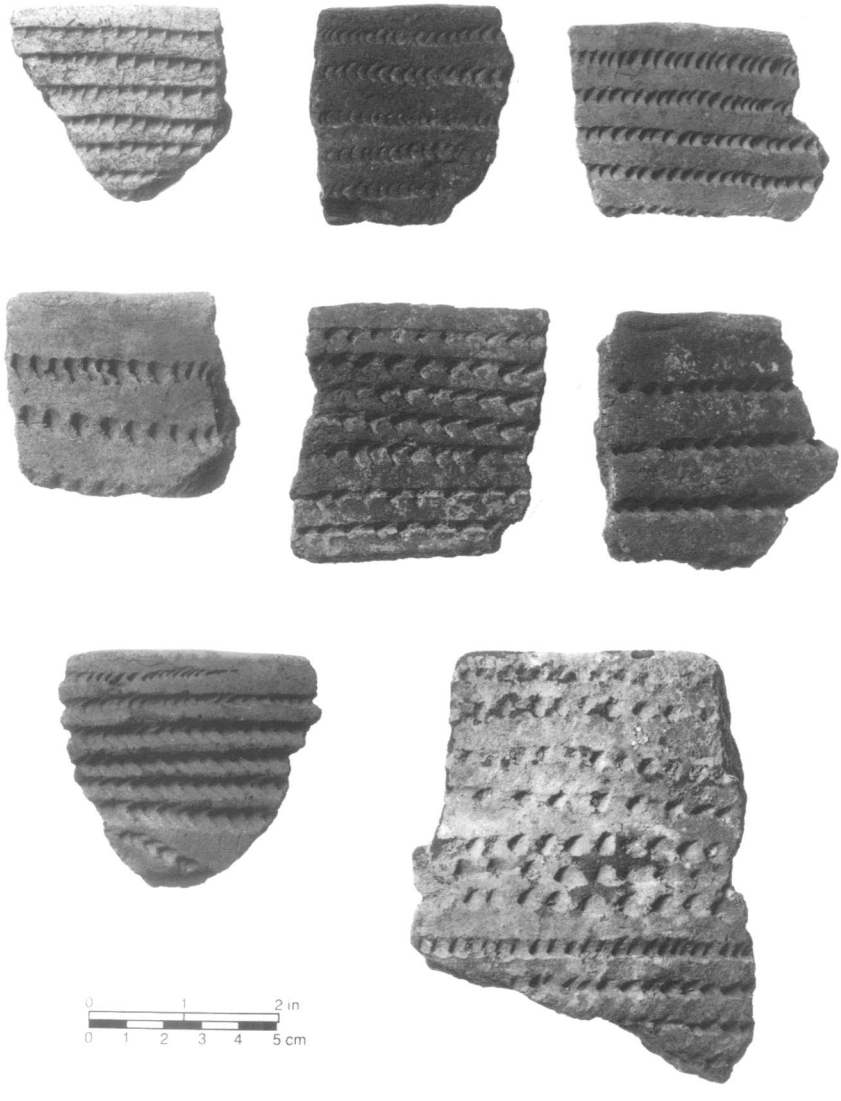

Figure 4. Sherds of Classic Stallings Pottery Illustrating Linear Punctate and Drag-and-Jab Punctate Designs

It is unlikely that the punctated exterior surfaces of Classic Stallings pottery had significance beyond cultural expression. Experiments on the thermal performance of various surface treatments suggest that punctations confer little advantage over plain surfaces with respect to heat transfer (Schiffer 1990), but they clearly improve the capacity for thermal shock resistance by retarding crack propagation (Schiffer et al. 1994). The porous paste of fiber-tempered pottery may have provided similar advantages (Skibo, Schiffer, and Reid 1989). As we review in greater detail below, however, the lack of independent evidence for direct-heat cooking with Classic Stallings vessels from riverine sites renders these points moot. In short, the punctated surfaces of these vessels appear to have been primarily an expression of cultural affiliation, nonthermal functions notwithstanding.

Contrasted with the general decorative similarity of pottery across the three interior riverine locales are appreciable differences in certain physical properties of these respective wares. Vessel-unit data from seven sites across these locales illustrate some of this variation (Table 1). Note that the data reported in Table 1 and throughout this article consist of sherds sorted into minimum numbers of vessels using criteria of surface treatment, rim morphology, and paste (Sassaman 1993:88-90). No whole vessels are known to exist from any Classic Stallings assemblages. Whereas the sample sizes for vessel lots may seem relatively small, the reader is reminded that these assemblages consist of generally small sherds from low-fired vessels. Minimum vessel counts clearly underrepresent the total number of vessels in each assemblage, yet they serve to standardize comparisons for sherd assemblages characterized by varying degrees of brokenness. Compared to assemblages of early pottery traditions elsewhere in the New World, these Stallings collections constitute remarkably large and well-dated samples.

TABLE 1
Technological Attributes of Stallings Punctated Vessels from Assemblages at Three Riverine Locals

	Middle Savannah	Brier Creek	Ogeechee
Number of punctated sherds	166	183	550
Temper			
Number (%) fiber tempered (no visible aplastics)	127 (76.5)	16 (8.7)	1 (0.2)
Number (%) fiber/sand tempered	34 (20.5)	28 (15.3)	272 (49.5)
Number (%) sand tempered (no visible fiber)	3 (1.8)	95 (51.9)	276 (50.2)
Number (%) nontempered (no visible aplastics or fiber)	2 (1.2)	44 (24.0)	1 (0.2)
Vessel wall thickness (mm)[a]			
N	94	101	162
Mean	8.5	9.9	11.8
Standard deviation	1.9	1.9	1.9
Minimum	4.8	5.8	7.6
Maximum	14.4	15.0	19.7

a. Measured 3 cm below lip.

Regarding interareal variation in ceramic paste, 97 percent of 166 punctated vessels from three sites in the middle Savannah locale were tempered with fiber (generally Spanish moss [*Tillandsia usneoides* L.]). Only about one-fifth of these have visible aplastics (generally fine sand) in the paste. In contrast, only 24 percent of 183 punctated vessels from two sites along Brier Creek contain fiber, and almost two-thirds of these include visible aplastics. Over two-thirds of the 139 vessels lacking fiber were tempered with sand; the remaining vessels lack any sort of visible aplastics. Finally, 550 vessels from two Ogeechee River sites are split evenly between fiber- and sand-tempered, with only one of the fiber-tempered specimens lacking visible aplastics. Chi-square tests of association indicate that none of these interareal differences in ceramic paste are likely due to chance alone ($\chi^2 = 196.61$, $df = 2$, $p < .001$ for presence/absence of fiber; $\chi^2 = 474.22$, $df = 2$, $p < .001$ for presence/absence of visible aplastics).

Similarly divergent patterns are evident in mean vessel wall thickness (as measured 3 cm below lip). Middle Savannah vessels are the thinnest on average, with a mean of 8.5 ± 1.9 mm. Brier Creek vessels are a bit thicker at 9.9 ± 1.9 mm on average, while Ogeechee River vessels are especially thick at 11.8 ± 1.9 mm on average. Difference of means tests using the students t distribution reveal strong nonrandom tendencies in all pairwise comparisons (unpooled $t = -5.12$, $df = 193$, $p < .001$ for Middle Savannah:Brier Creek; unpooled $t = -13.34$, $df = 254$, $p < .001$ for Middle Savannah:Ogeechee; unpooled $t = -7.85$, $df = 261$, $p < .001$ for Brier Creek:Ogeechee).

Certain implications of these divergent trends for pottery technology and function are beyond the scope of this article, although we want to offer a few observations relevant to our concern here with communities of practice. First, whereas interareal variation in the aplastic component of pastes (i.e., sand) might be due to local clay differences alone, the inclusion of fiber is not, nor is the thickness of vessel walls. Elsewhere, the senior author has reviewed the mechanical performance of fiber-tempered pottery relative to criteria of indirect-heat and direct-heat cooking, such as thermal conductivity and shock resistance (Sassaman 1993; see also Reid 1989; Skibo, Schiffer, and Reid 1989). Indirect-heat cooking, or "stone boiling," is a technique that existed long before the advent of pottery in North America, and it continued through the historic era as the chief means of heating liquids in the western Arctic, the Northwest Coast and Plateau, and California (Driver and Massey 1957:229, 232). The technique simply involves heating rocks to a high temperature in a fire and then transferring them with tongs to a liquid-filled container. Depending on the type of rocks and containers used, stone boiling can be an effective means of cooking liquid-based foods or for rendering fat or oil from bone, nuts, or fish. One disadvantage of stone boiling is that most types of rock suffer from the stress of thermal shock, that is, they fragment from repeated episodes of heating and rapid cooling. Food contaminated with the grit of disintegrated cooking stones is considered among the chief sources of high dental attrition among hunter-gatherer populations in the Southeast (Smith 1996:151).

Although data on the dental health of Stallings populations are inadequate to

assess relative rates of attrition (cf. Wilson 1997), an innovation indigenous to the Savannah River valley likely ensured better than average health. Since at least the sixth millennium B.P., residents of the middle and upper Savannah valley used locally available soapstone for indirect-heat cooking. Consisting largely of talc, soapstone absorbs and dissipates heat slowly, lending it superior thermal shock resistance over clastic rocks like sandstone or quartzite. It is also easy to shape with simple tools. From about 5000 B.P., middle Savannah populations carved soapstone into flat slabs 10 to 15 cm long, 8 to 12 cm wide, and 1.5 to 2.0 cm thick. Perforations in the slabs enabled transfer with a stick or antler tine from heat to container and back.

Stone boiling with soapstone slabs continued well into the early centuries of pottery making in the middle Savannah region. In fact, the oldest vessel forms were ideally suited to this method of cooking. The typical flat-bottomed basins of early Stallings times (ca. 4500-3800 B.P.) had wide orifices and shallow profiles to enable easy manipulation of vessel contents. Flat bottoms were effective at radiating the heat of cooking stones upward, and the typically thick, porous fabrics of fiber-tempering bodies acted to insulate internal heat. All assemblages of this early Stallings pottery include examples of soapstone cooking stones.

Classic Stallings pottery of the ensuing three centuries embodies innovations that would seem to suggest increasing use of direct-heat cooking techniques. Replacing basins as the dominant form are hemispherical bowls with smoother and taller profiles and lower orifice-to-volume ratios than basins. Fiber is accompanied and eventually replaced by sand as the dominant aplastic inclusion in two of three locales, and vessels walls decrease in thickness in all but the Ogeechee locale. Despite these changes, vessels from all interior riverine locales bear little independent evidence of direct-heat cooking, namely the carbon deposits, or soot, that may form on exteriors surfaces of vessels used over fire (Skibo 1992:152-57). The senior author observed soot on only 5 percent of Classic Stallings pots (n = 222) from interior riverine sites (Sassaman 1993:159). In contrast, some 42 percent of coastal vessels (n = 194) examined were sooted. Whereas taphonomic or other nonbehavioral factors alone might account for these differences (e.g., Skibo, Hally, and Schiffer 1988), recent excavations at interior riverine sites involved numerous contexts with impeccable organic preservation (Sassaman 1998). There are absolutely no data to suggest that interior riverine vessels were routinely used directly over fire, despite the fact many of these pots have morphological and technological properties conducive to direct-heat cooking. Recent excavations also confirm that soapstone cooking slabs continued to be made and used throughout the Classic Stallings period.

In sum, data on early pottery decoration, technology, and function evince multiple, overlapping fields of conformity and divergence. A repertoire of punctation designs unifies all three riverine locales, but with marked individual variation. Technological attributes vary widely, with potters in each locale differentially adopting innovations in paste and vessel wall construction. Irrespective of innovation, pots in all riverine locales continued to be used in the traditional fashion of indirect-heat cooking. These patterns suggest that actions

involving pottery were distributed across at least three communities of practice: one each for pottery manufacture, surface decoration, and use. This is not to suggest that these communities were mutually exclusive, or that each pot was made, decorated, and used by three different individuals. Rather, the pottery data pose the distinct possibility that potters were located in multiple fields of participation due to their varied and changing forms of membership in Classic Stallings communities. The challenge now is to reconstruct the rules of membership, and, from these, the contexts of learning.

COMMUNITY COMPOSITION AND CONTINUITY

Lacking historical continuity with the period of European contact, the social rules determining community composition during Classic Stallings times cannot be extrapolated faithfully from ethnohistoric sources. Similarly, regularity among ethnographic cases is insufficient to warrant generalizations for analogical purposes. The idea that exogamous patrilocal bands were an evolutionary ideal for hunter-gatherer populations (Radcliffe-Brown 1930-1931; Service 1962; Steward 1936) was long ago undermined by data on the prevalence of flexible rules of descent and postmarital residence among groups residing in unpredictable environments (Lee and DeVore 1968). Modern analyses suggest there is actually little correspondence between environmental variation and social organization. In a sample of 193 ethnographic cases, Robert Kelly (1995) has shown that patrilocal residence indeed dominates (n = 99), but among the remaining cases are 28 matrilocal, 18 bilocal, 6 avunculocal, and 42 ambiguous cases. He rightfully concludes that patterns result from complex decision making involving individuals aligning themselves more or less with their or their spouse's kin under different circumstances, both historical as well as environmental.

The significance of social organization to patterned variation in material culture cannot be overstated, particularly as it relates to gender-specific technology like pottery. Community composition is largely determined by patterns of postmarital residence, so if patterns are unilocal, communities of practice will involve residential continuity among members of one gender and discontinuity among members of the opposite gender. This was the very logic guiding efforts to reconstruct prehistoric social organization in the 1960s. In the cases examined by Longacre (1970) and Hill (1970) for prehistoric pueblos and by Deetz (1965) for the Arikara, matrilocal residence patterns ensured geographical continuity among females so that pottery design attributes (being gender-specific) tended to be consistent at a given site as a function of generational continuity.

But as postmarital residence ensures continuity in the material culture of at least one gender, marriages link individuals to nonresidents who contribute to and influence communities of practice. For instance, ethnographic data on the Hopi show that modes of learning the pottery craft crosscut village and tribal boundaries and that women changed designs during their lifetime due to

interactions (Stanislawski 1978:219-21). Whereas the effects of market economies and tourism in this example cannot be ignored, the point here is that potters will have multiple, varied affiliations that affect choices about pottery form, function, and decoration. Archaeologically, we ought to be able to detect these varied affiliations in the differential distributions of pottery attributes, although in many cases we lack an analogical basis for relating any given variable, say, decorative element or lip form, to a given social structure, such as descent or postmarital residence. Even when direct historical connections exist, as they did for the cases cited above, we cannot assume that specific attributes relate invariably to specific social relations over the span of many generations. At a minimum, independent sources of data are necessary for distinguishing the influences of cognatic and affinal relations on material culture patterning.

Help in this regard comes from an unusual source of data: the orientation of punctations on Classic Stallings pottery. Inserted at low angles to the surface of vessels and usually parallel to the rim, the drag-and-jab and linear punctate modes of decoration have a decidedly right or left orientation (Figure 5). As noted, these modes of decoration are dominant (60-70 percent) in the assemblages of all three riverine locales during Classic Stallings times; they indiscriminately crosscut differences in paste, vessel wall thickness, and other technological attributes to unite the region as an archaeologically recognizable culture, or what Welsch and Terrel (1998) call a "community of culture."

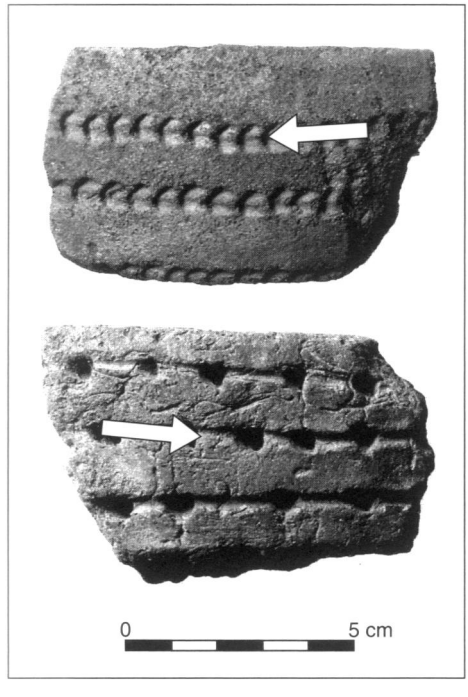

Figure 5. Right-Oriented (top) and Left-Oriented (bottom) Drag-and-Jab Punctate Sherds of Classic Stallings Affiliation

We began to quantify the incidence of right- and left-oriented punctations on Classic Stallings pots in a search of associations between design motifs and technological attributes. As the data accumulated, we began to speculate that punctation orientation was an accurate measure of the handedness of Stallings potters. In our regionwide sample of 598 punctated vessels from 27 sites, the orientation of punctation could be reliably coded for 504 vessels. Of these, 89.7 percent are right-oriented, and 10.3 percent are left-oriented. Interestingly, these figures closely match the proportions of right- and left-handed people worldwide and through time (Coren and Porac 1977).

Determining whether low-angle, drag-and-jab punctations are oriented to the right or to the left is a straightforward affair: we simply restricted our observations to rim sherds and recorded orientation relative to the upright position of the vessel orifice. How this orientation relates to preferences for right- or left-handedness is a bit trickier. From what limited experimental work we have conducted, we are convinced that only the dominant hand (if one exists) has the fine motor skill necessary to create the evenly spaced, linear punctations of Classic Stallings pottery. However, a pot could be held in a variety of positions to execute a desired design. Oriented upright, a pot decorated by a right-handed potter would display right-oriented punctations. Oriented upside down, another pot decorated by the same potter would have left-oriented punctations when viewed in an upright position. Given these alternatives, it would appear that the orientation of punctations would be an inconclusive source of data on hand preference. This ambiguity notwithstanding, the relative frequencies of right- and left-oriented punctations in our regionwide sample matches the expected proportions of right- and left-handed individuals population-wide. Moreover, given the wetness of the paste necessary to punctate vessel surfaces and the limitations this places on stress resistance, the only practical technique for punctating surfaces is to support the base of the vessel in one hand and rotate it as punctations are made with a stylus held by the dominant hand (if one exists). It follows that punctations oriented to the right usually were made by right-handed potters and that punctations oriented to the left usually were made by left-handed potters. Rare examples of vessels with alternating rows of right- and left-oriented punctations (2 of 598 vessels) might reflect ambidextrous potters.

The significance of these data for reconstructing community composition lies in the interareal distributions of vessels with right- and left-oriented punctations. Site assemblages of sufficient size (>30 vessels each) for nonparametric statistical testing include three (Stallings Island, Mims Point, Ed Marshall) from the middle Savannah River, two (Midden Point and Theriault) from Brier Creek, and two (Strange and Chew Mill) from the Ogeechee River (Table 2). The collective sample from these sites consists of 386 vessels, 87.6 percent of which are right-oriented, and 12.4 percent left-oriented. Notably, the proportion of left-oriented vessels is consistent within, but divergent between, each of the three locales. The Ogeechee sites have moderate fractions of 10.5 and 8.8 percent; the Brier Creek sites express low fractions of 2.3 and 3.3 percent; and the middle Savannah sites have high fractions of 20.3, 18.8, and 21.9 percent.

Tests of association with chi square show that none of the differences *within* each locale have nonrandom tendencies ($\chi^2 = 0.12$, $df = 2$, $p > .90$ for Middle Savannah sites; $\chi^2 = 0.07$, $df = 1$, $p > .70$ for Brier Creek sites; $\chi^2 = 0.12$, $df = 1$, $p > .65$ for Ogeechee sites). Comparisons *between* the locales cannot, however, be attributed to chance alone, as these reflect strong nonrandomness ($\chi^2 = 15.99$, $df = 2$, $p < .001$). Sample error is unlikely given the duplicated pattern within each locale.

TABLE 2
Absolute and Relative Frequencies of Right- and Left-Oriented Stallings Punctated Vessels by Site and Riverine Locale

	Vessel Count	Right-Oriented Count	Right-Oriented Percent	Left-Oriented Count	Left-Oriented Percent
Middle Savannah					
Stallings Island	74	59	79.7	15	20.3
Mims Point	48	39	81.2	9	18.8
Ed Marshall	32	25	78.1	7	21.9
Subtotal	154	123	79.9	31	20.1
Brier Creek					
Theriault	43	42	97.7	1	2.3
Midden Point	30	29	96.7	1	3.3
Subtotal	73	71	97.3	2	2.7
Ogeechee					
Chew Mill	57	51	89.5	6	10.5
Strange	102	93	91.2	9	8.8
Subtotal	159	144	90.6	15	9.4
Total	386	338	87.6	48	12.4

Note: Includes only those vessels for which orientation of punctations is unambiguous.

If we allow that these interareal differences in decoration reflect relative differences in the proportions of right- and left-handed potters, what are the implications for social organization?

There is a vast literature on handedness, hand dominance, or laterality, much of it attempting to sort out the relative contributions of genetics and environment. Because left-handedness is a consistent minority in all populations (Coren and Porac 1977), much research has been directed toward finding a biological basis for handedness (Annet 1978; Levy and Nagylahi 1972; Morgan 1977; Morgan and Corballis 1978). To date there has been no compelling evidence to support a simple genetic explanation for handedness (Tambs, Magnus, and Berg 1987), although other biological factors, including embryonic development and birth

stress (i.e., anoxia), have been implicated (Ashton 1982; Bakan, Dibb, and Reed 1973).

Much of the evidence for environmental or cultural influences on handedness is compelling. Some studies have demonstrated secular increases in left-handedness with changes in cultural pressure to conform to the dominant mode (Brachenridge 1981). Cross-cultural research documents appreciable intercultural variation in handedness (e.g., Dennis 1958; Porac and Coren 1981; Teng et al. 1976). In fact, high rates of left-handedness are found among hunting and fishing societies, where pressures to conform because of technological constraints or other cultural factors appear to be relaxed (Dawson 1974). The absolute highest incidence of left-handed individuals is among the Kwakiutl of British Columbia, where rates of 17 to 22 percent have been recorded (Marrion 1986). Our middle Savannah Stallings sample, if taken as a direct measure of handedness, would match this global high.

Whether determined genetically, culturally, or, most likely, by a combination of the two, handedness frequencies in any population are affected by family arrangements and residential patterns. Offspring with at least one left-handed parent are as much as nine times more likely to be left-handed than are offspring with right-handed parents (Chamberlain 1928; Porac, Coren, and Searleman 1986). Maternal influence appears to be a particularly strong factor (Ashton 1982; Carter-Saltzman 1980; McGee and Cozad 1980; Porac, Coren, and Searleman 1986). It follows that residential practices that keep related females together through multiple generations would have the long-term consequence of creating nonrandom distributions of left-handed individuals among residential units, all else being equal. If women were the makers and users of Stallings pottery, then the handedness data provide a tentative basis for inferring matrilocal postmarital residence patterns among Classic Stallings riverine communities.

The assumption that only women made pottery in Stallings communities demands justification. As we indicated earlier, homologues for Stallings communities do not exist; if we were to depend on ethnohistoric accounts of southeastern U.S. communities, despite the lack of demonstrable continuity, the ascription of women as exclusive potters would be fully justified (Hudson 1976:264). In lieu of such support, we turn to cross-cultural regularities. With some notable exceptions (Arnold 1985:103-4), when pottery production is household based, nonspecialized, and part-time, women exclusively are the potters (Arnold 1985:101-03; Skibo and Schiffer 1995). In the words of Skibo and Schiffer (1995:86), "it is difficult to find a stronger cross-cultural correlation." The exceptions noted by Arnold (1985) involve circumstances whereby men's responsibilities in subsistence do not conflict with optimal times to make pottery (i.e., warm dry season). Otherwise, men involved themselves in pottery making under circumstances of specialized production and market exchange, features clearly unexpected of the Stallings economy. Some interpersonal exchange of pottery may have occurred, but considering the geographic clustering of paste attributes noted above, intercommunity exchange was at best infrequent.

Given the minority frequency of left-handedness in any population, unilocal postmarital residence practices, over the long run, would produce an effect in material culture analogous to genetic drift in founder populations. Importantly, the effect would be apparent among only the material culture specific to the gender experiencing generational continuity in postmarital residence. Data showing that maternal influence may be the strongest factor in determining rates of handedness bolsters our inference that variation in Classic Stallings pottery can be traced to the residential continuity of women. At least fifteen generations of potters are represented in the span of Classic Stallings times. Observed variations in proportions of left-oriented vessels can be accounted for by differences of merely one or two left-handed potters in the founding populations of each settlement locale. Whereas these differences may appear insignificant, over the course of fifteen generations, these respective communities of potters not only became numerically distinct in their proportion of left-oriented vessels but technologically distinct in the preparation of ceramic paste and vessel walls. Again, decorative expression and vessel function were not so affected, as these traits have panregional qualities that crosscut the respective riverine locales.

In sum, data on the punctation orientation provide tantalizing, if not conclusive, evidence for postmarital residence patterns which ensured generational continuity among related women. Decorative and functional similarities across the board attest to interactions that likely included intermarriage among three exogamous groups. Alliances through marriage provided the basis for sustained contact between potters of different communities. Whereas contact alone is an insufficient cause for decorative and functional similarity, the social proscriptions of marriage may have entailed practices which united members of different lineages in common identity. Thus, participation in both cognatic and affinal communities of practice are evident in the material expressions of Classic Stallings pottery. Individualized decorative expression within a panregional tradition of punctation may have been among the means of mediating potential conflicts arising from dual membership. Even so, Classic Stallings communities could not be sustained after about 3500 B.P., when changes in settlement, subsistence, and perhaps social organization ushered in a new era of pottery technology.

If the geographical patterns we perceive in orientation of punctations indeed reflect matrilocal postmarital residence among Stallings riverine communities, then a reciprocal pattern ought to be evident in the geographic distribution of men's technology. That is, a pattern of mate recruitment that effectively reallocated young adult men, through marriage, to the communities of their spouses should serve to randomize the distributions of male-specific material attributes, whatever those may be. While we cannot assume that all flaked stone tools were made and used by men (Gero 1991), the apparent increased diversity in hafted biface form and raw material selection marking the onset of Classic Stallings times (see Bullen and Greene 1970) may very well point in this direction and is a promising avenue of future research.

CONCLUSION

Consistency in the technology of Stallings pottery within each of its three riverine locales of occurrences was due, in large measure, we submit, to postmarital residence patterns that ensured generational continuity among related women. Patterns of decorative expression and pottery function, however, crosscut residential clusters to unite riverine Stallings communities in a regional culture apart from its coastal counterparts. These differences of material expression reflect the multiple communities of practice potters participated in, communities which were constituted not simply through residential proximity and inheritance, but also through affiliations which evolved with changes in social identity, from daughter to daughter-in-law and from sister to wife, and which were structured within potentially contradictory relationships between cognates and affines.

The contexts of coparticipation that produced local and regional patterning in Classic Stallings pottery underwent transformation at about 3500 B.P. that resulted in entirely new expressions of decoration, technology, and function. The lack of conspicuous circumscription in either decorative form or technology after 3500 B.P. suggests that patterns of postmarital residence and marriage alliance had become more flexible. However, situated learning theory gives us reason to question assumptions about the relationship between a particular material attribute and any aspect of social organization. We are fortunate in the case of Classic Stallings pottery to have a measurable trait (i.e., handedness) whose regional variations are arguably affected mostly by cognatic relations. Similarly independent data for pottery technology and decoration must be developed for post-Stallings times before making inferences about changes in communities of practice. Despite the potential pitfalls of misinterpreting decoration or technique as handedness (e.g., Snow 1983), we encourage further exploration in the influences of hand dominance on pottery and other classes of material culture in the interest of reestablishing social organization as a primary concern to Americanist archaeology.

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