

Studies of Colonoware Variability in Virginia and South Carolina

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Introduction

Colonoware is low-fired, hand-built, locally made pottery found on sites throughout the mid Atlantic and Southeast in 18th and early 19th century contexts (Ferguson 1992; Noël Hume 1962).



We use data from ten slave-quarter sites in Virginia and two slave-related sites in South Carolina.

Although research has suggested possible regional differences in Colonoware vessel use, much of this work has been impressionistic. Here, we quantitatively investigate these patterns using three sherd attributes with data collected from ten sites in Virginia and two sites in South Carolina. We suggest that patterns of variation in wall thickness, decoration, and burning will reveal regional differences in vessel use.

We keep two propositions in mind:

1. Wall thickness is an essential property of cooking efficiency in that thin-walled vessels conduct heat more efficiently than thick-walled vessels (Tite, Kilikoglou, and Vekinis 2001).
2. Decoration represents an increase in time investment without additional performance payoffs.

We use these two assumptions to help us distinguish between vessels used by their manufacturers for things like cooking and vessels produced for other purposes, which may include trade or conspicuous consumption.



The Data

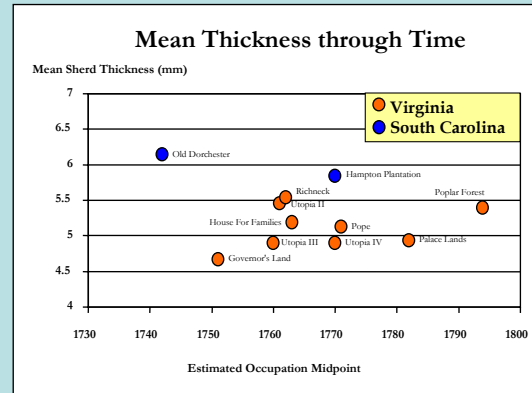
The Digital Archaeological Archive of Comparative Slavery (DAACS) is a collaborative project housed in Monticello's Department of Archaeology. DAACS analysts record information about many ceramic attributes at the sherd level, including wall thickness, burning, and decoration.



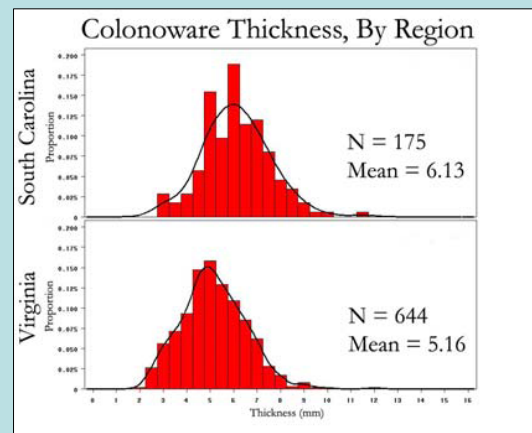
Come see us at the meeting!

Thickness

Our first proposition relates to wall thickness and cooking efficiency. How does thickness vary through time and between regions?



When we plot mean sherd thickness and the estimated midpoint occupation date for each site, we see no evidence of change in thickness through time among the Virginia sites. We do see, however, that South Carolina sherds are thicker than Virginia sherds.



Further, the histograms above also show that Virginia sherds are thinner than South Carolina sherds. The 1-millimeter difference is statistically significant ($p < .0001$).

Now let's investigate our second proposition.

Decoration and Burning

Our second proposition relates to time investment in pottery making, which can be measured a number of ways. Here, we consider burnishing and other decorations, listed below, to be indicative of greater effort invested than smoothed or otherwise unmodified vessel surfaces.

When a vessel is burnished, a tool such as a stone is rubbed against its surface while leather-hard, compressing the walls of the vessel slightly. Since we established that the overall mean thickness for Virginia sherds is thinner than for South Carolina, does this translate into more burnished vessels in Virginia than in South Carolina?

	Burnished	Cut	Impressed	Incised	Slipped	Stamped	Total
Virginia	264 (89%)	21 (7%)	4 (1%)	4 (1%)	2 (<1%)	1 (<1%)	296
South Carolina	19 (73%)	0	0	1 (4%)	6 (23%)	0	26

We do see proportionally more burnished and other decorated sherds in the Virginia samples (45% of 644 total sherds) than we see in the South Carolina samples (15% of 175 sherds).

The amount of time invested in making Colonoware seems to be greater in Virginia. We infer this from the relatively higher amount of burnishing and the thinness of Virginia sherds compared to those from South Carolina.

We have established that Virginia sherds are thinner and more of them are burnished than the South Carolina sherds. Based on the assumption that thinner sherds more efficiently conduct heat, was Virginia Colonoware used for cooking more often than South Carolina Colonoware? Vessels used for cooking, whether intentionally manufactured for cooking or not, are represented in our data as burned sherds.

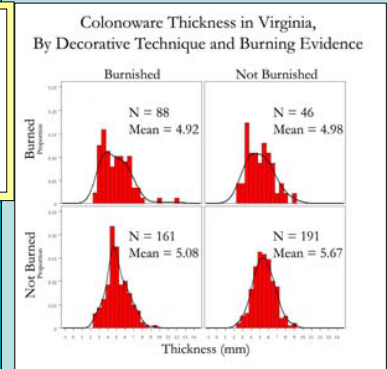
	Burned	Not Burned
Virginia	150 (23%)	494 (77%)
South Carolina	66 (37%)	109 (63%)

Unburned sherds outnumber burned sherds in both regions; however, the South Carolina sample contains proportionately more burned sherds than the Virginia sample ($p < .0001$).

These data suggest Virginia Colonoware was NOT used more for cooking. Are the thinness differences related to maximizing thermal efficiency or are the differences related to enhancing visual appearance?

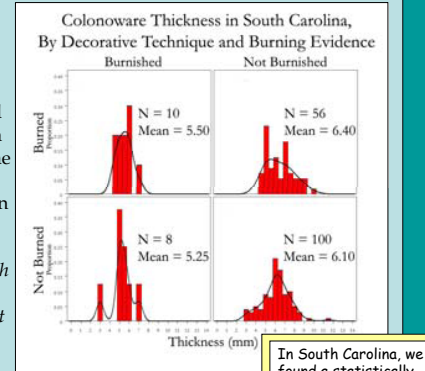
Putting It All Together

In Virginia, we found a statistically significant difference in thickness (mm) between:
 • burnished and not burnished ($p = .0003$)
 • burned and not burned ($p = .04$)



In Virginia, an association between decorative technique and burning is evident ($p < .0001$), and burned sherds are thinner than unburned sherds. These data suggest the thinnest vessels are being selected for cooking. The large number of unburned sherds indicates vessels were burnished for reasons other than cooking.

In the South Carolina sample, we see no association between decorative technique and burning ($p = .10$). Whereas the burnished sherds are thinner than those not burnished, the burned sherds are not necessarily thinner than the unburned ones. There appears to be a different strategy in South Carolina for choosing cooking vessels that is not related to maximizing thermal efficiency.



In South Carolina, we found a statistically significant difference only between burnished and unburnished sherds ($p = .019$).

The Cliff Notes

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|---|---|
| <p>Virginia</p> <ul style="list-style-type: none"> • less cooking • more time investment | <p>South Carolina</p> <ul style="list-style-type: none"> • more cooking • less time investment |
|---|---|

It appears that vessel-use strategies differed between the two regions. We think that time investment in Virginia Colonoware is related not to creating the perfect cooking vessel but to enhancing vessel appearance for other purposes.

References

Ferguson, L. (1992) *Uncommon Ground: Archaeology and Early African America, 1650-1800*. Smithsonian Institution Press, Washington.
 Noël Hume, I. (1962) An Indian ware of the Colonial Period. *Quarterly Review of the Archaeological Society of Virginia* 17(1):2-12.
 Tite, M., V. Kilikoglou, and C. Vekinis (2001) Strength, Toughness and Thermal Shock Resistance of Ancient Ceramics, and Their Influence on Technological Choice. *Archaeometry* 43:301-324.