An Elemental Approach to Ceramic Stylistic Analysis
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The Digital Archaeological Archive of Chesapeake Slavery, also known as

DAACS, is a four-year project to create an Internet accessible archive of standardized

artifactual and contextual data from 21 excavated slave quarter sites throughout the

greater Chesapeake region. DAACS includes sites excavated at Poplar Forest, Mount

Vernon, Colonial Williamsburg, Stratford Hall, and Monticello. The backbone of the

archive is a standardized relational database that contains fine-grained quantitative

information on artifacts, faunal remains, the contexts in which they were found,

archaeological site plans, and images of artifacts.

The DAACS database was designed and implemented last year. The reanalysis of

artifacts from archive sites began in June 2001. During the database development period,

the prospect of twenty-one sites cataloged to one standard led us to design several

detailed classification schemes for a variety of artifact classes that would allow

researchers to look at artifact attributes not captured by current database systems. These

cataloging protocols have ranged from a recording system for applied decoration on

beads to the development of the DAACS Munsell Color Range system. The DAACS

Ceramic Stylistic Element Study, perhaps the most ambitious of these cataloging

protocols, is the focus of our presentation today.

(SLIDE 1 Dogtooth Pattern Sherd)

The goal of the DAACS Ceramic Stylistic Element Study is to identify and catalog stylistic elements on seventeenth-, eighteenth-, and nineteenth-century ceramic sherds in a manner that is analytically useful for archaeologists. This project defines stylistic elements as any applied, molded, or incised decoration found on ceramic wares. The idea for this study sprung from the fact that archaeologists most often encounter stylistic elements on ceramic sherds, not complete vessels. When faced with time limitations archaeologists most often record decorative technique and color while the identification of larger decorative patterns is left until the cross-mending stage.

The desire to record each unique stylistic design on a sherd in a manner that would help archaeologists understand temporal and spatial stylistic trends through the analysis of unmended sherds shaped the methodology behind this project. A conceptual outline for the project was designed this summer with input from archaeologists at Poplar Forest and Mount Vernon. It was decided that the Ceramic Stylistic Element system should record five key decorative attributes.

(Slide 2: Database Window) This slide shows how this information is recorded for each ceramic in the database.

    1. Location of the stylistic element on the sherd

    2. The technique used to apply the stylistic element (painted, printed, etc.)

    3. The color of the stylistic element

    4.The name of the stylistic element

5. The motif

After deciding what decorative attributes to record, we developed a classification scheme for naming the stylistic elements. (SLIDE 3: Chinese House A) We quickly realized that we would not be able to capture the full range of stylistic variation for all design elements. For example, would we be able to reliably name and record all of the different varieties of houses depicted on painted wares (SLIDE 4: Chinese House B). (SLIDE 5: Fence A) And was it really necessary to capture the full range of fences found on both earthenwares and porcelains? (SLIDE 6: Fence B) We decided not to give each stylistic element a unique name for two reasons: First, the system would be unusable if we recorded every style of house, fence, tree, boat, dog--you get the picture. The stylistic element glossary would have contained thousands of entries. Second, we decided that a general classification scheme developed for most central design elements would not compromise the quality of the data. As a result, most stylistic elements are classified into general representative categories. All houses are recorded as house, all sprigs are recorded as sprig, and all trees are recorded as tree.

It was decided, however, that a more specific classification system should be developed for bands, swags, and garlands, elements that have temporal significance. While all of these elements are defined by their encircling characteristics, each category varies slightly. (SLIDE 7: Plate with Band) Band designs may range from a simple stripe of color to a shaded band filled with an intricately painted design. (SLIDE 8: Lid with Swag) Swags, seen here in the upper left, consist of suspended wreaths of botanical

material, drapery, and/or other decorative elements that appear to be fastened at the ends and points in between. (SLIDE 9: Plate with Garland GARLAND) Garlands are best understood as wreaths of flowers, leaves, ribbons, and so on. Garlands are often defined by either a circular or undulating line from which leaves and flowers grow. (SLIDE 10: Trellis Bands) For this project, every variation on a band, swag or garland receives its own name. Here you see some Trellis Bands examples. We currently have 18 different Trellis Band elements defined.

After collaboratively establishing the general and specific naming conventions for the element analysis, I started the project as the primary cataloger, which meant I named and defined each stylistic element, imaged the element and placed the image and written description in an electronic glossary used by catalogers at Monticello.

(SLIDE 11: Mulberry Row Plan) Stylistic element data from two excavated slave quarter sites at Monticello, Thomas Jefferson's plantation, were used for this analysis. These sites, Building *o* and Building *l*, are located along Mulberry Row, a concentrated area of domestic and industrial activity. Mulberry Row, often called the Main Street of Monticello, was a space in which enslaved African-Americans and white laborers negotiated their lives, where Jefferson and his visitors observed activities in the nailery and joinery, where many of Jefferson's domestic and skilled slaves lived, and where the occasional merchant sold goods to both Jefferson and those he claimed ownership of.

(SLIDE 12: TJ Drawing of Slave Dwelling) By 1796 at least 5 dwellings for enslaved African-Americans stood along Mulberry Row. During that year Jefferson described several of these dwellings and archaeological excavations during the early 1980s support Jefferson's descriptions of both buildings *o* and *l*. (SLIDE 13: BLDG O site plan) In 1796 Jefferson described O as a "servant's house 20 ½ by 12 feet of wood with a wooden chimney and earth floor." Three foundation walls of dry-laid greenstone roughly fit Jefferson's dimensions. The foundation most likely supported a one-room log building. The presence of two subfloor pits, one stone, and one dry laid brick, as well as two out-of-alignment wall segments hint at the existence of several building phases. An isolated cluster of cobbles and boulders to the west may belong to another building entirely. Although other architectural interpretations are currently being debated, the large ceramic assemblage from Building *o* supports Jefferson's domestic characterization and suggests that of the site's occupation was concentrated before 1800.

(SLIDE 14: BLDG L Site Plan) Building *l*, on the other hand, was most likely the site of simultaneous industrial and domestic activities. Excavations in the 1950s and 1980s uncovered floors that roughly outline a structure 10.5 by 16 feet. A mortared brick box feature measuring 3 by 4 feet appears to be a foundation for a small metalworking forge. The overwhelming presence of nail rod supports Jefferson's description of Building *l* as a storehouse. Despite a small artifact assemblage, ceramics, glass, and other domestic artifacts indicate that the building was also used as a residence, possibly for those who worked there during the day.

Before beginning our analysis of the stylistic elements on decorated sherds from these two sites, we assigned Mean Ceramic Dates to Building o and Building l contexts that contained five or more ceramic sherds. (SLIDE 15: LG GROUP Seriation) These contexts were then grouped into litho-stratigraphic units applicable to each site. We used Correspondence Analysis to seriate the litho-stratigraphic groups. The CA results not only indicated that the litho-stratigraphic groups for each site were correlated over both time and space but that they also formed significant clusters which allowed us to assign the contexts to six temporal phases. (SLIDE 16: LG Groups with Phases) These six phases were used to analyze each site. 1787 is the median date for Phase 1 and 1803 is the median date for Phase 6.

It is important to note that we used correspondence analysis and Bayesian smoothing techniques to reduce the noise introduced by the small sample size from Building *l*. Phased contexts from Building *l* contained 881 ceramics, while 6225 ceramics were associated with phased Building *o* contexts. From these two sites, 3040 sherds, around 49 percent of the Building *o* ceramic assemblage had some type of decoration, while 465 sherds, around 53 percent of the Building *l* ceramic assemblage were decorated.

A quick query of the DAACS database demonstrated that, as expected, Creamware, Pearlware, and Chinese Porcelain were the dominant ware types on these sites. The trends in the relative frequencies of these three ware types at Buildings *o* and *l* are quite similar. (SLIDE 17: O Ware Frequencies by Phase) At Building O, we see that

Chinese porcelain and creamware dominate the ceramic assemblage throughout all six phases. While they remain the predominant ware types, Chinese Porcelain and Creamware slowly decrease in popularity while the popularity of Pearlware steadily increases through time.

(SLIDE 18: L Ware Frequencies by Phase) The trend at Building l is much the same. Creamware is the most frequent of these three ware types in Phase 2. However, both Creamware and Chinese Porcelain decrease in popularity as Pearlware rises in popularity, accounting for 58% of these wares by Phase 6.

Despite differences in sample size, Building *o* and Building *l* have relatively the same proportions of Creamware, Pearlware, and Chinese porcelain over time. On a cursorary level, one could interpret this to mean that these two enslaved households were being provisioned with basically the same types of ceramics through all six phases. When we look very generally at the proportion of decorated sherds within these three ware types, we could be tempted to make a very similar conclusion: that not only were slaves at both sites receiving the same type of wares at the same frequency but that these wares were decorated at the same rates.

(SLIDE 19: O Dec Wares Frequencies) This graph shows the frequency of decoration on these three wares at Building *o*. Note that while Chinese porcelain has the highest frequency of decoration in all phases, its popularity slowly decreases from 47% in Phase 1 to 23% of decorated wares in Phase 6. Decorated Pearlware increases in popularity

over time. (SLIDE 20: L Dec Wares Frequencies) The same trends are seen for Building

l, with decorated Chinese Porcelain decreasing over time as decorated Pearlware

increases in frequency. Building o and Building l not only have similar proportions of

Creamware, Pearlware, and Chinese porcelain over time, the frequencies of decoration on

these wares are also comparable.

 (SLIDE 21: CP Band Sherd)   To test if the occupants of these sites were acquiring,

through either provisioning or purchase, similarly decorated ceramics, we will use the

data generated by the Ceramic Stylistic Element Study. While we could use many

different aspects of the stylistic element data to address this question, for the sake of time

we will focus specifically on band stylistic elements on Chinese porcelain from Buildings

o and *l*. Ceramic scholars have demonstrated that band elements are temporally sensitive.

However, earlier work has only looked at very general categories of bands on Chinese

porcelain. While we will briefly discuss general trends in Chinese porcelain bands, we

will then look at stylistic variation within band categories using data captured by the

DAACS stylistic element project.

(SLIDE 22: O General CP Band Frequencies) This slide demonstrates the trends in

broadly classified Chinese porcelain band elements found at Building *o*. On decorated

Chinese Porcelain from Building o, Trellis Bands, represented here by the blue line, were

the predominant band type in all six phases of occupation. Plain Bands, here the orange

dashed band, were also popular on porcelain sherds from Building o. Geometric Bands,

represented by the green dashed line, and Spearhead Bands, represented by the hot pink

line, each make up about 8 percent of the band assemblage. Note that there are many other bands that all make up less then 10 percent of Building o's band elements.

(SLIDE 23: L General CP Band Frequencies) Unlike Building *o*, no single band style dominates the decorated Chinese porcelain assemblage at Building *l*. (Please note that this Dot-Diaper band (red) is an outlier since the sample size for this phase is one sherd.) Trellis Bands and Plains Bands, seen here, enjoy a slightly higher frequency then other bands however they represent a much smaller percentage of the band assemblage then seen at Building *o*. (Slide 24: Wavy Bands) Wavy Bands, Half-Circle Bands, and Husk-Chain Bands all rise in frequency during Phase 5 and Phase 6 at Building *l*.

To test the significance of these differences we again used Correspondence Analysis to seriate the porcelain band elements by phase. (SLIDE 25: CA Bands by Phase) The results indicate that band elements on Chinese Porcelain at Building *l* are significantly different from Chinese porcelain bands at Building *o*, particularly during Phase 5 and Phase 6. (SLIDE 26: CA Bands by Dec) The divergence in the sites' decorated porcelain band assemblages results from the presence of three over-glazed band styles at Building l, Wavy Bands, Dogtooth Bands, and Half-Circle Bands. Dogtooth and Half-Circle bands were not present on any Building *o* sherds and Wavy Bands make up only 2% of the assemblage from Phase 4 at Building *o*.

Traditional levels of cataloging, which record decorative technique and color but not design elements on the sherd level, would not have captured the differences in the

decorated Chinese Porcelain assemblages. Although this analysis only looks at a subset of decorated wares from these sites, the decorative differences may well indicate that residents of Building *o* and *l* had the ability to purchase or select certain ceramic patterns. Those enslaved at Monticello occasionally earned money for tasks Jefferson considered unsavory, for the sale of produce they raised, and through gratuities bestowed on them by Jefferson's guests. Merchants selling household goods, ceramics included, often peddled their wares along Mulberry Row, thereby providing those who lived there with direct access to some of the most current ceramic styles. Certainly, those living at Building *l* had decorated wares similar to those living in Building *o*, but they also had access to over-glazed Chinese export porcelain not seen at *o*. They may have chosen to use what little they earned to purchase the most current ceramic wares. Or perhaps Jefferson did provide different lots of ceramics to each building. While the exact reason for the differences currently remains ambiguous, future work will compare stylistic elements on other wares from these sites to test if the stylistic variation occurs only on the Chinese porcelain level.

　　　　While I promise not to subject you to too many more graphs this afternoon, I do want to quickly show preliminary results that suggest that an even finer grained stylistic element approach has tremendous promise for refining our understanding of temporal decorative patterning. As noted earlier, DAACS names and records each stylistic variation within band types.

(SLIDE 27: Trellis Band Frequencies) As we just saw the Trellis band category accounted for the highest frequency of band designs at both sites. Within the Trellis Band category, it is evident that individual Trellis band styles change through time. This graph shows combined data on porcelain band elements from both sites. As you can see, Trellis Band 3 (green line) remains steadily popular while Trellis Band 12 (pink line), which makes up 66% of the Trellis Bands in Phase 1 is absent from the assemblage at both sites by Phase 5.

(SLIDE 28: Spearhead Band Frequencies) This slide shows that Spearhead Bands increase in popularity over time. Only two Chinese porcelain sherds with spearhead bands were present at Building l, hence the disappearance of Spearhead Bands in Phase 6. (SLIDE 29: Spearhead Band 1 Sherd) This sherd is decorated with Spearhead Band 1, which makes up 80% of the Spearhead Band assemblage in Phase 4. Many other specific bands we tested demonstrated temporal sensitivity. As more ceramics are cataloged into DAACS from sites throughout the Chesapeake, we'll have more opportunity to test the temporal significance of these variations.

What we have just presented demonstrates something that we, as archaeologists, all learned in our first archaeology class: STYLE CHANGES OVER TIME. While this is nothing new to us, recording style in the manner of a prehistorian, on an attribute-by-attribute level promises to give us a tremendous amount of decorative data that could be used in myriad ways. It is our hope that this project will become a viable way for archaeologists to record specific decorative elements on historic ceramics that will

facilitate new understandings of temporal variation in as well as provide insight into

inter- and intra-site consumption patterns.

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