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Hair-dressing residues on wig hair curlers from George Washington's boyhood home, a FTIR–ATR and SEM–EDAX analysis

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ABSTRACT

The Washington family struggled financially in the years following the untimely death of George's father, Augustine, in 1743. Accordingly, they invested in social strategies that allowed the family to compensate for their economic stress by demonstrating gentility, displays of refined etiquette, and fashionable apparel. A gentleman's hair was a crucial component of these efforts. George and his three brothers each found ways to express their status through their respective hair styles which is reflected by the recovery of 209 wig hair curlers from George's boyhood home (Ferry Farm, Fredericksburg, Virginia). The spatial distribution of these curlers reflects activity areas related to wig hair maintenance. Some of the curlers exhibited preserved residue from this maintenance. Infrared spectroscopy and X-ray fluorescence were used to examine residues on the ceramic curlers. Evidence for two types of hair powder was documented on three different curlers. One consisted of lime plaster and starch and the other of calcium carbonate and kaolin clay. Both of these recipes reflect an effort to economize costs associated with hair dressing and demonstrate the thriftiness of the mid-eighteenth century Washington family hair budget.

1. Introduction

Hair was serious business in the eighteenth century America (Rosenthal, 2004:1–2, 8). Archaeological investigations at the boyhood home of George Washington, located in Fredericksburg, Virginia, have recovered artifacts related to colonial-era hairdressing that includes a truly impressive assemblage of wig hair curlers. The recognition of residues on some of these curlers led to an analysis using infrared spectroscopy and X-ray fluorescence. The results demonstrate not only that residues from the mid-1700s are preserved on some specimens but also reveal that the Washingtons' used cheap hair powder. This study considers how the Washington family's social class, colonial subject status, and economic situation all contributed to making wigs such crucial emblems of gentility.

2. Wigs in the colonial British Empire

Wearing wigs was a highly visible emblem of male gentility. Their initial high cost and the expense of their unending maintenance restricted this essential component to British leisure-class males during the mid-eighteenth century (Festa, 2005:59–60; Kwass, 2006:650–651; Morgan and Ruston, 2005:45; Pointon, 1993:128–130). Wigs were also referred to as "perukes" and "periwigs" and some gentlemen found that wearing a wig was easier and more convenient than maintaining their own hair (Festa, 2005:53; Kwass, 2006:645; Pointon, 1993:121). A few scholars assert that wigs were first worn for medicinal reasons, to disguise the embarrassing effects of syphilis or to combat head lice (Stewart, 1782:193; Trasko, 1994:55), each common maladies.

Wigs were expensive (Festa, 2005:52; Hoffmann and Bailey, 1994:287; Ribeiro, 2002:129) and often the single most costly item in a gentlemen's wardrobe (Pointon, 1993:120). Cheaper wigs were available, produced by using lower quality hair, less popular colors of hair, and even animal hair (Corson, 1980:277; Earle, 1894:262; Festa, 2005:59; Hoffmann and Bailey, 1994:287; Horner, 2008:xix; Pointon, 1993:121; Ribeiro, 2002:129).

A significant second-hand market in used wigs provided stingy consumers with economical alternatives (Stewart, 1782:302–303). Some wig makers specialized in gathering used hair from a variety of men, women, and old wigs, to re-combine them into "new" hairpieces (Garsault, 1961 (1767:32); Stewart, 1782:303). By the mid-1700s, many men wore wigs, but the quality of that wig and its maintenance treatments distinguished true gentlemen from imposters.

The daily vicissitudes of life required regular wig maintenance, including the addition of fresh powder, which might be applied multiple times in a single day, as well as the occasional resetting of the wig's curls, which was ideally performed once a week, and — for the fastidious — daily (Le Cheminant, 1982:351; Ribeiro, 2002:129; Warwick, Pitz, and Wyckoff, 1965:165). These tasks were done for a gentleman by a barber or a personal valet to accommodate such upkeep

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men typically owned at least two different wigs simultaneously, and some owned upwards of five or more (Botham and Sharrad, 1964:101; DeCastro, 1946:47; Evans, 2009:162; Festa, 2005:70; Kwass, 2006:638; Ribeiro, 2002:129). This allowed gentleman to wear a wig while others were being maintained or repaired.

Powder was a popular finishing touch for most hair styles, both for wigs and for natural hair (Garsault (1961 (1767):3)). In order to make it easier for the powder to stick to hair, a grease- or lard-based pomatum was first applied to it (Corson, 1980:331–332; Trasko, 1994:54–55, 57; Stewart, 1782:266, 269, 292–297). The resulting hair styles and curls were rock hard, due to the accumulation of multiple layers of pomade and powder (Jedding-Gesterling, 1988:124–126). As part of routine maintenance, limp wig curls could be re-set either using heated curlers or curling irons. If cold curlers were employed, the entire wig was boiled, then dried for two-to-three hours, in an oven, by the fire, or in the sun (Botham and Sharrad, 1964:99; Horner, 2008:36; Fisher, 1965:26–28; Ribeiro, 2002:129; Sutton, 1903:110–111; Trasko, 1994:55), but this method of boiling subjected the delicate peruke to greater stress (Warwick et al., 1965:165).

Curlers were made from fired clay or wood, and different hairdressers had their own preferences about which material worked best (Clinch, 1910:118; Cox, 1965:8; Durbin, 1984:3; Redfern, 1909:5; Sutton, 1903:110–111). Historically, these instruments were called "roulettes," "bilboquets," or "curling pipes" (Clinch, 1910:118; Corson, 1980:272; Earl, 1894:264; Garsault, 1961 (1767):14; Redfern, 1909:5; Richardson, 1935:739; Warwick et al., 1965:165). Sometimes broken smoking pipe stems were used (Noel Hume, 1991:322). All of the curlers recovered from Ferry Farm were ceramic.

3. Financial stress in Washington household and the retention of social status

In 1738, the Washington family, headed by Augustine and (his second wife) Mary moved to Stafford County, Virginia located just east of Fredericksburg. The house into which they moved was originally built around 1727 by the Strother family. At the time, George was six years old and had four younger siblings: Betty, Samuel, John Augustine, and Charles. About four-and-a-half years later George's father, Augustine, passed away, leaving the bulk of the family's assets to his two oldest (non-resident) sons from his first marriage to Jane Butler Washington, seriously compromising the family financially.

The archaeology of the Washington home has revealed that the family was able to compensate for this financial stress due in part to a global consumer revolution that enabled them to purchase inexpensive versions of socially-powerful material culture (Hunter, 2001:4–5, 10; McNeil, 2007:381, 386–386) that included teawares, stemmed glassware, fancy needlework, fashionable clothing, and household accessories (Galke, 2009). This allowed the Washington family to pursue gentry-class activities and enact leisure class etiquette despite their financial anxiety. The Washington's apparel was an effective aspect of this strategy to communicate identity and class to the surrounding community.

Artifacts excavated from the Washington home site reveal that the house was filled with the tools associated with convivial, leisure-class social customs such as the tea ceremony and serving strong beverages (Smith, 2008:63). The teawares included vessels dominated by a variety of economical English earthenwares, rather than the more expensive Chinese porcelains, and archaeologically-recovered teaspoons were tin-alloy instead of silver. The leaded-glass stemware and creamware punchbowl fragments reflect vessels used to serve wine and other alcoholic drinks to guests in the Washington home. Gentlemen often preferred the option of consuming strong beverages in the privacy of their homes, as opposed to public taverns (Smith, 2008:84). English-made figurine fragments were also displayed in the Washington's hall or parlor: where discriminating visitors could readily appreciate the family's sophisticated taste (Galke, 2009).

Recovered clothing accessories, such as shoe and knee buckles, demonstrated their sensitivity to fashion trends over time. Decorative cuff links reflect a family that embraced their British heritage, evolving styles, and leisure-class pursuits such as fox hunting: a favorite hobby of George's (Galke, 2013). These data, and the use of economical versions of other status objects mentioned above, provide clear evidence for a family that was strongly concerned with impression management and the maintenance of social status. We hypothesized that the economizing manner may have extended to the expensive, and highly visible, marker of social position, the wig, through the use of alternate, less-costly treatments. We examined the residues on excavated curlers and compared them to published treatments from the period.

4. Historical documentation of the Washington's use of wigs

Evidence from historical documents demonstrated the importance of perukes to the Washington family. A 1752 entry in George Washington's account book records his purchase of a '…grey cut wig…' for his brother Samuel. In addition, there is a circa 1754 portrait of Samuel, sporting a different wig than the one recorded in the account book of his brother George. This portrait was done around 1754, the time of Samuel's marriage to his first wife, Jane Champe. Given its reddish-brown color it is possible that Samuel may be wearing a wig made from his own hair. Scholars of George Washington, based in part upon surviving hair samples, have asserted that his hair was auburn or reddish-brown (Flexner, 1965:8, 12). If his brother Samuel shared this trait, the portrait suggests Samuel's wig may have derived from his own hair.

Motivations for wearing a wig made from one's own hair included financial, medical, and social. Supplying one's own hair for the manufacture of a peruke was less expensive than commercially-available hair. Secondly, there was widespread concern regarding the nature of hair used in the manufacture of perukes (Pointon, 1993:120). Many were made from women's hair. While some wigmakers asserted that the hair of women produced superior wigs (Garsault, 1961 (1767):10), many moralists decried men wearing wigs made from women's hair.

In addition, due to the expense of wigs, there was a vast market for hair. Costs could be kept down by employing used hair, sometimes from a variety of sources, for the manufacture of hairpieces. Some customers were justifiably anxious that the hair of used wigs, plague victims, cadavers, harlots, or criminals were used in the manufacture of wigs (Garsault, 1961 (1767):32; Stewart, 1782:302–303). Thus, fashioning a wig from one's own hair was not only a sign of frugality; it also ensured the owner of its quality and history.

5. Spectroscopic analysis of the wig curler archaeological assemblage

Ferry Farm has one of the largest assemblages of ceramic wig hair curlers recovered from a domestic site in Virginia, with 209 specimens recovered to date. The spatial distribution of wig hair curlers, as well as their specific attributes (Durbin, 1984:3; Muraca et al., 2011), indicated that they were used during the mid-1700s. A significant concentration is evident in the yard to the east of the Washington home (Fig. 1) an area hypothesized to represent a work yard. This concentration likely represents a wig hair maintenance activity area, given its distinct spatial distribution in relation to the colonial-era trash midden located adjacent to the house (Fig. 1). With up to four young men wearing wigs in the Washington family, each potentially possessing at least two wigs at any one time, it seems that they invested in a routine of regular, home-based maintenance. Such a regimen of wig