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UNWRITTEN RULES AND GENDERED FRAMES AMONGST PROBATE APPRAISERS? EVIDENCE FROM 18th CENTURY YORK COUNTY, VIRGINIA

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This study analyzes inventory appraisals ordered by the county court for those estates undergoing probate in York County, Virginia, between 1700 and 1800 to determine whether local gender-modulated unwritten rules of appraisal or appraisers' gender-related frames in thought influenced the appraisal process. Regardless of how it occurred, we present evidence that the gender of the decedent, or of others involved in the probate process, statistically influenced appraisals. Although attractive as data sources, researchers have long known that probate materials can be difficult to use. Researchers have rarely written about gender as a source of difficulty, but our results suggest that localized, genderrelated behavior by appraisers could further complicate using probate materials to study phenomena ranging from the diffusion of consumer goods or of technology, to the integration of markets, and the growth and distribution of wealth. Most relevantly, our results do not specify a particular data correction precisely because we cannot be sure that we have discovered all, or even the most significant, local, gender-influenced behaviors, nor the variability in these behaviors across time or jurisdictions.

Early American Probate Inventories and Unwritten Rules

Probate inventories have received significant scholarly attention over the last fifty-odd years, albeit in periodic waves of interest. There is a stillactive field of scholarly inquiry into women's roles in household and society as producers, consumers, and decision-makers about acquiring possessions for both production and consumption (for example, Carole Shammas 1983; Joan Jensen 1986; David Freeman Hawke 1988; Jeanne Boydston 1990; Laurel Thatcher Ulrich 1990; Karin Wulf 2000; Ann Smart Martin 2010; Ellen Hartigan-O'Connor 2012; Sarah Meacham 2013). Some of what we know about women's roles, agency, and authority in these spheres comes from studies using probate materials (for example, Elizabeth Perkins 1991). A wide audience, particularly economists and economic historians, are probably familiar with probate inventories from the works of Gloria L. Main (for example, 1977) and Alice Hanson Jones (for example, 1980) on wealth and wealth distribution, undoubtedly reflecting our enduring interest in people's standards of living, but also of the intense current popular and academic interest in wealth distribution. These works continue to inspire researchers (even if they do not always use probate evidence), as in the recent outpouring of scholarship by Peter Lindert and Jeffrey Williamson (2013, 2016a, 2016b).

The inventories' primary purposes were to help the courts settle the estates' debts (owing and owed), and lawfully distribute the decedents' property. The appraisers entered their inventories before the court as testimony, swearing to the diligence, completeness and accuracy of their efforts. The appraisers were people from the community, and, in most cases, they would have been acquainted with the decedent and likely knew something of his business and possessions (Jones 1977 I, 15-17). As many researchers working with early American probate records discover, the same people appear repeatedly as appraisers within each generation. That many of these individuals repeatedly served as appraisers testifies to their general accuracy. Jones (1977 I, 17) concluded that, "the inventories were taken seriously, made conscientiously, and that the values are close approximations to the market values of the decedents' wealth. The inventories appear to be conservative estimates of portable wealth in all regions." Main (1975, 91, footnote four) concurred, writing that "receipts of ... sales occasionally appear ... and they generally attest to the soundness of the appraisers' judgements."

However, as in every scholarly endeavor, the quality of the research is limited by the quality of the data. Researchers (for example, Main 1974, 1982; Daniel Scott Smith 1975; Peter Benes 1987; Lois Green Carr and Lorena S. Walsh 1994; Amy Friedlander 1991; Paul Shackel 1993) have documented many problems inherent in using probate inventories for historical and economic research. Anne McCants (1999) offers a succinct

summary of these problems. Many of these issues are problems of representativeness. Surviving probate records disproportionately contain inventories of older, wealthier, non-enslaved/non-indentured, male decedents. Variations in law concerning probate compound problems of obtaining complete and correct statements of the decedents' assets and financial position. For example, unlike other colonies, Virginia's probate inventories typically omitted real estate and claims by and against the estate. To possess an accurate picture of a Virginia decedent's estate, a researcher would need three separate documents: the estate inventory, the will, and the account of settlement, a document detailing the settlement of financial claims. However, Carr (1989) notes that most decedents were intestate and ordering an inventory was at the court's discretion, so the probate process in Virginia did not necessarily lead to the creation of an estate inventory. Moreover, researchers would have much less material to analyze if they limited themselves to only those estates with all three documents extant and reasonably intact. The issue of completeness is worse in the South. The hot, wet climate, and the region's near total, fiery destruction during the Civil War were not kind to the South's paper records. The Colonial Williamsburg Foundation (2016), the source of our data, notes on its website that the York County inventories survived only because the county's government defied a Confederate order to centralize all records in Richmond, Virginia, which was subsequently burned.

Main (1988, 125) began to address another class of issues when she wrote, "The laws concerning inheritance and probate are remarkably silent about the process itself, and one can only infer from the surviving documents the unwritten rules that guided appraisers and judges." John Bedell demonstrated discrepancies between appraised possessions and archeological remains, strongly suggesting that not all possessions were inventoried, concluding that "unwritten rules" influenced how appraisers constructed inventories that were intended to be true, accurate, and complete recordings of the decedent's possessions (Bedell 2000, 230). Bedell discussed chickens, earthenware, razors, chamber pots, and sewing needles. Our York County sample seems to corroborate Bedell's observation for other items, containing no mention of domestic cats. Fewer than a handful of inventories mentioned dogs or dog equipment (such as collars). Equally absent were personal knives, *except* for large retail stocks

of folding pocket knives, such as Thomas Hancock's 240 maple-, ivory-, cocobolo-, and horn-scaled pocket knives appraised in 1738.

In this article, we explore a related class of issues surrounding the use of probate inventories as a data source. What were the effects of gender on which items of moveable property were appraised in eighteenth-century York County, after accounting for other factors? Could unwritten rules and cultural assumptions related to gender be another source of error or bias in probate inventory data? Researchers do not include gender bias in the probate process as one of the common pitfalls in probate inventory research. One might argue that this is immaterial because courts inventoried so few female estates. However, if gender bias or local practice caused appraisers to skew women's inventories, then appraisers likely skewed men's inventories as well, raising larger questions about probate inventory data. The literature has not ignored this possibility, but neither has it fully pursued it. Such findings would have implications beyond York County and the eighteenth century. Although this is a single study of a time series data set, gender differences—either due to cultural assumptions or informal practice-in the York County inventories, could be sufficient grounds to warrant similar studies using other sets of probate inventories to determine the prevalence of this gender bias.

The Gendered Rule of Reserving Items for a Widow

Researchers have identified at least one gender-specific unwritten rule. Carr and Walsh (1980) wrote that appraisers sometimes omitted certain types of items—clothing, a bed, and a pot—from a male decedent's inventory, reserving them for the use of his widow and/or children. Other times, they omitted specific legacies and items deemed worthless (Carr and Walsh 1980, 82). Alison Bell (2000, 2002) similarly noted appraisers omitting household items from a man's inventory for the use of his widow. She argued that if appraisers had a general tendency to appraise men's estates thusly, but were otherwise thorough and accurate, then the household items 'missing' in male inventories would re-appear in widows' inventories. With a large enough sample, there would be a detectable difference in the proportion of male and female inventories listing these possessions. Bell (2000, 186) analyzed possessions in hundreds of inventories from two Virginia counties, and found evidence that appraisers

reserved household linens, although she concluded that gender had relatively little impact, overall, in her sample. Our results, using probit and Poisson regression rather than Bell's simple hypothesis test, tend to support the conclusion that appraisers deliberately omitted certain types of items for the use of widows and children.

As implied by Main's and Carr and Walsh's statements, although the practice of reserving items seems to have been widespread, it received relatively little direct comment. Within our sample, we found few entries documenting the practice: "Besides the above there was some Corn and Meat which we thought not more than sufficient to support the Family" in William Powell's 1765 inventory, with no value recorded for the food. Similarly, John Cathcart's 1705 inventory listed "to two old sows[,] To five Small hoggs about one year old[,] To two about six moneths old: Six for the widdows prvisson and three appraised."¹ Several other inventories listed items but noted that they had been or were intended for distribution. In some instances, these distributions could be interpreted as reserving the items, such as inventorying a man's clothing, but noting that it was intended to be used by his children as they matured. For example, Thomas Irwin's 1743 inventory included "To his waring Apparel left for his Children."

Reserving items in this way exempted them from the probate process. Because appraisers did not (always or typically) record these reserved items, this introduces a systematic—but likely variable—downward bias into inventory-derived estimates of estate wealth, to name a single problem. The exempted items would have occupied a greater proportion of wealth in poorer estates. If similar items were exempted from both poor and rich estates, the misestimate of wealth would tend to be greater for poorer households. Were appraisers consistent across time and location in how they reserved possessions? Corn and meat were not on scholars' list of reserved items and food staples were frequently inventoried; however, as noted, York County appraisers sometimes reserved food for widows and families. Although appraisers were conscientious and generally

¹ Spellings appear throughout as in the original York County source documents, which can be found at Colonial Williamsburg Foundation (2016).

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accurate, what other common household possessions might they have reserved that researchers have not yet noticed?

Probate, Testation, Inheritance Practices, and Married Women's Property Rights

The status of married women's property rights, local inheritance law, and local inheritance practice is relevant to any discussion of probate appraisal. A woman's rights to property were transferred to her husband at marriage, a feature Britain's North American colonies inherited from British common law. The exception to this rule was dower property given a bride. Her husband had use of this property during their marriage but could not dispose of the property without her express consent. Upon marriage, women generally lost both control of property and the right to own property on their own, a legal doctrine known as couverture.²

As Carr (1989) detailed, English rules for the inheritance of property were (incompletely) standardized, particularly for intestate decedents, with the 1670 Statute of Distributions. Virginia adopted most features of the Statute in recognizable form as colonial law in 1705, and placed probate under the purview of the county courts. The rules flowing from the 1670 statute were primogeniture for freely-held real estate, with onethird of the property subject to life-use by the widow. The widow also received ownership of one-third of her husband's personal property. Virginia's version of the Statute allowed widows to claim only a one-third life-interest in slaves, and no greater a portion of her husband's "personalty" (his personal, movable property) than a child's share if there were more than two children. However, if her husband died testate-i.e he had a will before he died-his will could alter the distribution of "the widow's thirds," allotting her more or less real property and personalty. Virginia law allowed widows to renounce their husbands' wills and claim their customary inheritance. Testate males could name their estate administrators, who were otherwise court-appointed. Early in the century,

² See, for example, Carr (1989), who provides an excellent summary and analysis for the Chesapeake region, which includes York County. More generally, Shammas, Marylynn Salmon, and Michel Dahlin (1988) is an excellent resource.

widows were not uncommonly named or appointed as administrators, although this practice fell into increasing disfavor over time. Unlike the English, Virginians tended to practice partible inheritance rather than primogeniture.

For the decades for which she had reliable data (1730-1739, 1750-1759, 1770-1776), Carr (1989, 201) estimated that only 45 percent of male decedents' estates entered probate, and that only 20 to 25 percent of male decedents died testate. As a group, we generally know little about the York County decedents. Surviving records of births, marriages, deaths, occupations, estate inventories, wills, and accounts of settlement are notably separate and non-integrated. Consequently, deliberately or unintentionally systematic omission of categories of possessions from a category of inventories-male or female-could imply that these goods were permanently "lost" to analysis, contributing to gender-related bias in the inventories. It seems quite unlikely that there would be enough decedents, particularly female decedents, entering probate for researchers to recover the "missing" possessions, as Bell (2000, 2002) attempted to do. Moreover, particularly for several of the possessions for which we searched, the goods could have simply worn out over time. Items overlooked from a man's estate could be consumed during a widow's lifetime, and not replaced, perhaps in sufficient numbers for these items to become statistically "lost." Finally, no matter whether "missing" items were "recovered" in widows' inventories, the possessions and estate values of their pre-deceased husbands would still be skewed. Therefore, failing to record a skillet, chickens, or earthenware when inventorying a married male decedent's estate—whether because the widow did or did not receive them as portion of her personalty, the appraisers omitted them to reserve them for her use, or any other reason—would remove them from the strictures of couverture but also researchers' examination

Gendered Frames in Thought and Gender in the Probate Process

We believe gender could introduce a further complication beyond undiscovered, unwritten appraisal rules: the appraisers' frame in thought concerning gender roles. David Snow, Burke Rochford, Steven Worden and Robert Benford (1986) argued that frames were "schemata of interpretation" that help people organize and understand their observations and experiences, and guide future action. Dennis Chong and James Druckman (2007) wrote that framing is the process through which people orient and reorient their thinking and concepts about issues. Peoples' attitudes about issues—for example, the proper and appropriate role of women in home and social life—are composed of a vector of Lancastrian-hedonic attributes related to values, beliefs, or other considerations, each of which is subjectively weighted by salience. The weighted average of the attributes forms an individual's attitude about the issue. These attributes and weights comprise an individual's "frame in thought" about issues, and one's frame-in-thought will influence his or her decisions. A thought frame would influence how an appraiser would have interpreted visual information, including what visual information possessed sufficient activation potential to rise to the appraiser's conscious notice, cause him to lift his pen, and write.³

Individuals will notice what belongs and fail to notice what does not (or vice versa) according to their frame of thought. Humans do not "see" everything within their visual field. We subconsciously choose to focus on some stimuli at the expense of the other stimuli. Moreover, noticing visual stimuli is not identical to interpreting the stimuli, assigning to them meaning and significance. Thus, when inventorying a woman's estate, appraisers may have noticed women's possessions because they expected them, *or* they could have overlooked women's possessions because they are where they "belong" on the hook by the door. Similarly, one person's set of smoothing irons, if placed out of context—perhaps in a shed instead of a kitchen—becomes another person's parcel of iron.

Material culture objects are intrinsically non-gendered. Although chattel animals possess biological sexes, human ownership of them is not immutably gender-limited due to physical constraints. However,

³ Differing from the Kahneman and Tversky "framing effects" famous among economists, the theory of frames in thought and related frames in communication is solidly established in fields such as communications, management, marketing, social psychology, sociology, anthropology, and political science. Each field has an expansive and overlapping literature. Though largely limited to political science, Chong and Druckman (2007) is an excellent entrance into this literature. For an entrance into the social psychology literature, see Snow et al (1986).

historians have documented a "woman's world" with "woman's work," (for example, Ulrich 1980b; Allan Kulikoff 1986, 179-180 and 217-218; Shammas 2008) which we interpret as widely-shared, gender-oriented frames in thought. These thought frames about what men and women *should* do and be would be associated with attendant possessions, establishing the possibility of "gendered possessions." Some possessions could be "women's possessions" due to their association with "women's work" in the "women's world." For example, throughout the colonial era and across the British colonies, food preparation was woman's work, and therefore associated with skillets, pots, and pans with food preparation. These items, themselves, could become "gendered" to people with a particularly gendered thought frame.

Why might we suspect gendered thought frames in action in the York County inventories, and how might thought frames influence the data? Consider men's clothes. All men would have owned wearing clothes, no matter how old and mean. Although women's clothes seem to have been commonly exempted from the inventory in deceased husbands' estates, men's clothes would not have received the same treatment. Yet, of the 526 male decedents in our sample, appraisers inventoried clothing in only 190 estates.⁴ It seems highly improbable that almost two-thirds of all men would have disposed of their clothing prior to death in a way that exempted them from probate (particularly given the low testation rate), or wore clothing of such little value that appraisers ignored it, particularly since appraisers would occasionally inventory items they found valueless, or nearly so.⁵ Even clothing that had been bequeathed could be inventoried, such as the "clothes given to his brother" by Thomas Collier in 1705.

⁴ It could be that appraisers' attitudes about appraising clothing changed over the century, and that people held differing appraisable/non-appraisable/no value as the real price of clothing fell and real wealth grew. For the full sample, however, the simple correlation between men's clothing and the natural log of the inventory's filing year was (-)0.29 and (-)0.30 when restricted to male decedents, only. Similarly, the correlations between men's clothing and the natural log of real appraised wealth were (-)0.13 and (-)0.17, respectively. The correlations between men's clothes and the interaction of year and wealth were (-)0.13 and (-)0.18.

⁵ Although Carr and Walsh (1980) noted that valueless items could be omitted, Cornelius Wilson's 1707 inventory lists "one negro man of no Value;" Anna

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It would seem as likely that the appraisers were choosing to exempt the man's clothing, or overlooking it. The "missing" men's clothes would produce bias, not only in the enumeration of possessions important in material culture work (exemplified by Shammas 2008), but also in the decedent's wealth. Depending on the value of the clothing, which could run from negligible (John Casy's "1 pr. of Wosted Hose Old" in 1704 at eight real pence) to substantial (Bayley Green's "2 Embroiderld white Silk Waistcoats" in 1755 at 193 real pence), and the percentage of total estate wealth held as clothing, the bias would vary widely.

Now consider laundry. The combination of tedium, heat, and brute force expended made laundry a dreadful task. Due to the near omnipresence of women's complaints about laundry day in primary sources, the Hellishness of laundry is now a staple in American History survey classes when taught from a social-history perspective. The prevalence of complaints about laundry implies that nearly every household possessed some means of laundering clothing, particularly rural households (representing 70 percent of our sample) that would have lacked access to a commercial laundry. Even so, appraisers inventoried laundry items in only 49 percent of our observations. As we will see, female involvement in the appraisal process had a positive and significant impact on the probability that laundry items were appraised. It is easy to imagine a woman accompanying the (overwhelmingly) male appraisers through her household, precisely identifying items that might otherwise have been recorded in more general terms.

Failing to account for the possibility of gender-influence in the inventories could skew research studying the diffusion of technology and consumer goods through trade. An example is the rise of domestic spinning through the eighteenth century. As Virginia abandoned tobacco for cereal grains, the resulting increase in available female labor was diverted into spinning, as well as other customary housewifery (Carr and Walsh 1977; Shammas 2008). In our estimate of spinning equipment, we

Maria Thornton's 1760 inventory includes "one suit of curtains," Edmund Tabb's 1762 inventory lists "4 old trunks," and Sarah Mackendree's 1771 inventory lists "1 pair flatt Irons," all of no value. John Busse's 1704 inventory lists "2 Baggs, 1 Wallet & 1 boat sail all very old" for a total of less than nine real pence, while John Walker's 1799 inventory "1 Tin can" for 0.2 real pence.

found a positive and significant coefficient for female involvement in the appraisal process, which implies an under-reporting of spinning equipment in other classes of inventories.

Hypothesis and Strategy

Hypothesis

Logically, given the inventory's legal purpose as a true and accurate appraisal of a decedent's possessions, debts, and receivables, gender should not influence the process. It should not be significant in a wellspecified model. However, gender did influence the process, as the documented "reservations" of possessions demonstrate. Our hypothesis is that the gender of people involved in the appraisal process influenced it, other things being equal. It is metaphorically a two-tailed hypothesis. The null hypothesis would be no gender influence on what types of possessions were inventoried, while the alternate hypothesis would be that the gender of individuals involved with the estate exerted an influence. Our goal is to discover whether gender-related effects existed, besides those already identified. After empirically verifying the common proposition about reserving items for a widow's use, we seek to discover whether additional items fell through gender-driven cracks in the process. We incidentally attempt to separate deliberate omissions from gendered-thought-frame oversights when we believe we have a case for doing so.

Data Sufficiency for Gender Studies

The relationship between gender and appraisal has received less attention than have other topics using inventories. There is an excellent reason for this: the comparative absence of female decedents in the probate records. In British North America, only a small percentage of women's estates went through the probate process. Shammas (2008, 217) noted couverture tended to limit probated females. Most women entering probate were widows, and the contents of women's inventories would be influenced by their husbands' selection of items to bequeath them. Holly Izzard (1997, 148) concluded that only women's estates meeting one or more of a short list of criteria entered the probate process: "if they had written a will; if they owned real property (land and buildings) at the time of death; if they left minor heirs; if there were outstanding notes due them; or, if they died in debt." She wrote that the preponderance of female decedents was simply ineligible as they did not fall into these criteria. Scholars tend to analyze probate inventories quantitatively, requiring large amounts of data to make accurate and precise statements. "Such small numbers mean it is more difficult to establish sex differences" (Shammas 2008, 217). It is reasonable that many researchers would move on to other interesting, more tractable research questions.

By construction, this study increases female involvement in the probate process by looking beyond the gender of the decedent. Women were often inheritors. They occasionally provided inventories to appraisers or supplemented the appraisers' inventories. Women also (rarely) served as appraisers. Based on language used in the documents (i.e., language explicitly identifying the woman as the widow, inventory lines referring to "my husband," or the testatrix/administrix/executrix having the same last name as the deceased male), 90 percent-at a minimum-of the 'female mentioned' records appear to have concerned widows or adult females of the same last name. Given the low probability of unmarried adult females (Daniel Blake Smith 1980, 129), it seems likely that almost all these women were the decedents' widows. Marriage, or marriage dissolved by death, was the standard mode of adult existence for these people (Smith 1980). Though we cannot identify the family status of decedents, inventory-by-inventory, most of the decedent women would have been widows; most of the decedent men who died unmarried would have been widowers. Many decedent men left widows and children, both minors and adults. Non-decedent women's involvement could have influenced the probate inventories. We believe that expanding the lens to include female involvement other than as the decedent is a novel contribution of this article.

The Woman's World

Ulrich (1980a, 1980b, 1998) has drawn a distinction between the men's world and the women's world in early America. Different social, productive, and economic activities were pursued in these sometimes parallel, sometimes intersecting worlds. Women had greater authority, responsibility, and autonomy within their world than outside it. The boundaries of the women's world and the market/economic activities

permitted women were largely stable, but could be fluid at the edges of time and space. As Ulrich (1980b) points out, sometimes a woman's world was expansive enough to accommodate orchards; other times it was not. A woman might engage in spinning, weaving, laundering, sewing, some types of retailing, and tavern keeping to generate income, but usually not brickmaking, joinery, or shoe making, for instance. Typically, the woman's world was the house (particularly the kitchen and food preparation areas), the yard around the house, outbuildings, and areas associated with housekeeping and food preparation. These would include dairy sheds, laundry sheds, poultry coops, and vegetable gardens (ibid.). Usually, a woman's primary contribution was production of goods and services consumed by the household or traded informally with neighbors.

Similarly, Carr discussed how the Chesapeake's impediments to home industry faded as its sex ratio came into better balance. Both for home production and marketable surpluses, "women spun yarn and knitted it, made butter and cheese, salted down meat, and helped make cider and beer" (Carr 1988, 354). Kulikoff (1986) similarly argued demographic stability in the Chesapeake permitted a gendered division of roles and tasks by the mid-eighteenth century that was unavailable in the seventeenth century. White men served as the public representatives of the household. They labored on farms and managed plantations. White women raised children, prepared food, sewed clothes, spun fiber, and tended to household dairying and vegetable gardening. Finally, Shammas (2008, 72) wrote that in the seventeenth-century Chesapeake, a shortage of females and the use of enslaved African women for field work prevented women from engaging in traditional English "women's work," which she lists as poultry rearing, dairying, baking, brewing, and spinning. However, such domestic production rose in the eighteenth century as the white population stabilized and the enslaved population began to have families. Even so, "[In plantation households, only] slowly did grain cultivation and housewifery activities ... develop. Some tasks such as brewing and cheesemaking never did become widespread" (ibid.).

Strategy and Interpretation

We used the York County probate inventories available online from the Colonial Williamsburg Foundation (2016) to test our hypothesis. The

York County data were the best we found for analysis due to (a) digital transcription of many inventories (b) spanning an extensive period with (c) a great volume and variety of items in the inventories; and (d) all inventories were drawn from the same geographic area, within the same social and legal context. Therefore, we were not required to attempt to account for the differences in society, law, environment, and economy between the Virginia lowlands and, for example, Boston. By focusing on a single county, what we lose in generality we may gain due to depth. Critically, the York County inventories allow quantitative analysis due to sufficient female participation. The Colonial Williamsburg Foundation (2016) lists 852 inventories in the York County collection, a large data set by early American standards. Not all of these documents were estate inventories, and some were verbatim repeats of previous documents. Still others were simply not useful due to missing or mutilated information. Of the 108 documents filed prior to 1700 a relatively high proportion were damaged. We therefore restricted ourselves to the period 1700-1800, which yielded 648 usable inventories, filling nearly 31,000 lines in a spreadsheet and containing multiples of 31,000 of inventoried items. Within this sample there were 122 female decedents, 19 percent of the total. Non-decedent females were mentioned in 85 inventories, 13 percent of the total. Six inventories had both a female decedent and another female mentioned, thus 201 inventories (31 percent) were either for a female decedent or mentioned a female. Although we would wish for more female records, these percentages are not negligible. We coded three variables to measure female involvement in the probate process. "Female" took a value of one for decedents with typically feminine names. "Female Mentioned" took a value of one when a name related to an inventory (other than the decedent) was typically feminine. Overwhelmingly, this occurred when the inventory named a female as the executrix. Finally, "Any Female" took a value of one when either "Female" or "Female Mentioned" took a value of one.

To search for gender effects, our empirical strategy was to analyze the inventories for items that fulfilled various combinations of several criteria: (a) possessions that research has identified as having, or otherwise seem to have had, strong gender connotations; (b) likely prevalence due to being widely useful for many households and availability in a range of prices,

and (c) archeological ubiquity (Bedell 2000). Because the inventories can list a frying pan but not a skillet, "dunghill foules" rather than chickens, and "chists" or "seelskin trunks" rather than chests, we searched under a variety of names and spellings for categories of possessions, rather than single possessions.

We start from the assumption that most households, whether the decedent was male or female, would have owned many of these possessions, whether appraisers inventoried them or not. Few households would have owned imported, porcelain chocolate service sets, but most would have owned wooden trenchers, even if only for servants' or slaves' use. Therefore, we searched for earthen- and wooden-ware rather than specialized porcelain. We also searched for sewing equipment and razors. Although razors, sewing pins, and needles (typically inexpensive items) appear somewhat infrequently in probate inventories, most men of the day were clean-shaven, abundant primary sources describe daily sewing to maintain a household's clothing, and Bedell (2000) wrote of their archeological pervasiveness. Even if they were not inventoried, most households owned them, and the items had powerful gender associations. As most adult decedents would have spent time as part of a married couple (Julia Cherry Spruill 1972; Smith 1980; Rhys Isaac 1982; Darrett Rutman and Anita Rutman 1984; David Fischer 1989; John Nelson 2001; Emory Evans 2009), most estates would have had opportunity to acquire men's, women's, and gender-neutral possessions.

Following Carr and Walsh (1980), we organized the data around the presence (1) or absence (0) of these categories of possessions in an inventory. Through regression, we related possessions' presence or absence to the inventories' filing years, urban/rural location, estates' apparent real wealth, and the set of gender-related variables. Due to the dichotomous nature of these dependent variables, probit analysis was an appropriate tool for us to use. We obtained a more accurate picture of gender's influence by separately analyzing several such "present/absent" variables. If analysis of a single woman's world item indicated gender had no impact, gender could influence the probability of other items appearing in inventories. However, if we observe a consistent pattern after analyzing several such variables, we are more likely to be accurate concluding that gender was irrelevant.

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In addition to a series of probit estimates, we estimated gender's influence on the cumulative count of the selected possessions using Poisson regression. There could be several reasons why a particular estate was "missing" one category of possessions while another estate was "missing" another category, including human error by the appraisers or simply that those households did not own those specific items. However, we expect most households would have owned several of the categories of possessions, and we can count cumulative totals across our set of selected goods. With a sum-total variable, it would not matter which category of possession was "missing" from one inventory or another; only the total of all possession categories "present" matters. Poisson regression allows us to estimate models of a non-rank-ordered, count dependent variable. Although any household may not have owned one, two, or more of these categories of possessions, finding a significant gender impact on the progressive number of theoretically gender-associated possession categories would argue against accidental oversight or lack of ownership, while supporting the conclusion that gender was relevant to the appraisal process.

Regardless of the direction of the estimated effects, gender-specific effects introduce data bias. Any statistically significant outcome is potentially problematic for using inventories as the basis for social/economic comparisons. Nevertheless, statistically, given the dichotomous nature of the gender variables, "female and significant" will generally mean "male and significant of opposite sign." If a possession is more (less) likely to appear in female decedents' inventories, it is less (more) likely to appear in a male decedents' inventories. Table 1 offers interpretations of the estimates' potential results.

All things being equal, statistically significant absence of items in men's inventories and the presence of them in women's inventories would imply one or both of two conclusions: these items were *also* reserved for women's use by appraisers, *or* these items selectively attracted or repelled the appraisers' attention based on the decedent's gender. For a given possession, a positive and significant estimated coefficient for "Female," particularly when paired with negative and significant coefficient for "Female Mentioned" in a similar estimate, could be evidence of appraisers

Table 1

Interpretation of Estimated Coefficients

Female	Female Mentioned	Male	Interpretation
Insig	Insig	Insig	Support null hypothesis; not all items were considered "gendered" in the unwritten rules or the appraisers' thought frame.
(+)	Insig	(-)	Possibly "female" gendered items appraisers treated differently, either due to gender-based rules or thought frames.
(-)	Insig	(+)	Possibly "male" gendered items appraisers treated differently, either due to gender-based rules or thought frames.
(+ / -)	(+ / -)	(-/+)	Possibly "female" gendered items appraisers treated differently, either due to gender-based rules or thought frames, with "female involvement" dominating male's inventories.
(+ / -)	(-/+)	(- / +)	Possibly "male" gendered items appraisers treated differently, either due to gender-based rules or thought frames, with "male" dominating "female involvement" in male's estate inventories. However, a positive/ negative/ negative pattern could be evidence the item was for "reserved" for widows.
Insig	(+ /-)	Insig	If positive, the "mentioned females" sought to include certain items, specifically identified items, or engaged appraisers' gendered thought frames (toward inclusion) in males' estates. If negative, the presence of the females engaged appraisers' thought frames (towards exclusion) in males' estates, or appraisers reserved the item for widows.

reserving items for use by widows or children. As Bell (2000, 2002) argued, items regularly omitted from husbands' inventories should reappear in widows' inventories, given a sufficiently large sample; to which we add the caveats, "with sufficient female representation," and "with sufficient percentages of probated decedents."

Interpreting evidence for possessions statistically present in men's inventories but missing in women's inventories is more complicated. The men's world was broader than the women's world, encompassing more and a wider variety of activities-and, logically, more and more varied possessions-than the women's world. Law (Carr 1989) and culture (Kathleen Brown 1996) privileged men over women. Men had much greater opportunity to enter professions or crafts, and specialize in production when compared to the sameness of women's work. Most women were involved with the same tasks and all households used nearly identical technology, implying a degree of uniformity in the items associated with women's work. The continuous nature of women's work of feeding, clothing, and cleaning the household implies that the associated possessions would have somehow continued to be in use, even in the absence of their female owner. Meanwhile, the diversity of the men's world could have given rise to a wider diversity of men's possessions, and its greater degree of specialization could have led to more specialized possessions with narrower ownership. Searching for comparatively commonly-owned possessions with strong masculine cultural associations led us to items for which women would have had less use, or difficulty using, within their cultural context: men's clothing, shaving razors, military weapons, hunting firearms, and fish nets and fishing tackle.

Although most households consisted (or had consisted) of a married man and woman and would have acquired men's, women's, and genderneutral possessions, it seems more likely that a widow would have disposed of her husband's seine and fowling piece than a widower would have disposed of his wife's smoothing irons. Therefore, an item's statistical absence from women's estates and presence in men's estates could indicate (a) gender-lensed appraisers, (b) that widows had disposed of that possession of their husbands, or (c) that husbands or the courts had not given these possessions to the widow as part of her share of the personal estate. Firearms, weapons, and hunting/fishing gear, for example,

appear in many inventories and are notably present in men's inventories and notably absent in women's inventories. Appraisers overlooked these powerfully masculine items in women's estates, *or* women had disposed of these items as it would have been almost socially taboo for women to use them, *or* women did not receive/did not want these items as part of their husband's personalty. We believe that it is interesting to note that although these items may have been correctly accounted for (thus, not creating a data problem), each of these outcomes supports the overall proposition that gender influenced people's perception of what items an individual *should* own.

As discussed, an estimated negative and significant coefficient for "Female Mentioned" could imply that appraisers reserved that item for widows and children, particularly if the coefficient for "Female" were positive and significant. However, in the male inventories with female involvement, the women often added possessions to the inventory. This seems odd at first glance. One of the primary reasons for creating the inventories was to list the wealth available to settle the decedent's debts. It seems unusual for anyone to deliberately identify wealth to her creditors. However, in a legal and social environment where women had scant formal standing, the probate appraisal would have been one of the few times a woman could easily access protections of the legal system. Listing items in a man's inventory would have helped the widow prevent those items from being misappropriated or dissipated. Separately, but indistinguishably, a woman could have identified a specific purpose for an item when a man might have substituted a general purpose. When a man saw "a tub," a widow saw her laundry basin. When a man saw a "parcel of old iron," a woman saw her damaged, yet still functional, smoothing irons. Thus, one could anticipate an estimated significant and positive coefficient for "Female Mentioned" and insignificant coefficients for "Female" and "Male."

If we estimate both "Female" and "Female Mentioned" to have significant positive (negative) coefficients in the respective specifications it could indicate the effects of a gendered thought frame among appraisers. Male appraisers sent to inventory a woman's estate, or met by a woman at the door of the deceased man's home, could be consciously or unconsciously cued to be alert for the items they would expect to find in a woman's world—even if the woman's world existed alongside her husband's world.

Potential Pitfalls and Complications

To generate more precise estimates, we would prefer more covariates than the year, the estate's real appraised wealth, and rural/urban location. However, as is depressingly typical in historical research, the data is undiscovered or does not exist. We generally lack uniquely identifiable information about the inventoried decedents. We do not know their ages, occupations, or marital or head-of-household status at the time of their death. Record keeping in eighteenth-century York County was not a standardized process, with boxes to check and blanks to fill in, a difficulty exacerbated by Virginians' tendency to name children after relatives, resulting in a bewildering, overlapping mosaic of related people with the same name. Limiting the sample to decedents for whom we have deeper information would so restrict the data as to preclude meaningful statistical analysis. As have other researchers who faced this dilemma, we chose to continue with the data available to us, while acknowledging data limitations as a caveat.

This is not to say that we made no attempt to examine wills or match inventoried decedents with other information. For our purposes, what we found gave us a small degree of cautious optimism. Many of the wills, whether we could conclusively match them to an inventory or not, primarily concerned distributing cash, annuities, quit rents, land, and enslaved people. The wills often distributed a few moveable possessions other than slaves. Although some of these bequests were items such as a bed or a best brocade market coat (the sort of items relevant to this study), many distributed recognizably heirloom items—such as a silver-headed walking stick, gold finger rings, silver-chased and monogrammed writing accoutrements, or engraved silver plate (items not relevant to this study). Others made blanket bequests, such as Sheldon Goodwin, a man for whom we also have an inventory, whose 1751 will simply states, "To Constance Goodwin [his wife] All my estate."

Moreover, while acknowledging the Carr and Walsh (1980) statements that inventories omitted bequeathed items, in our sample we found several instances of bequeathed items included in the inventories.

Drawing on Lyon Tyler's "Notes on the York County, Virginia, Goodwins" (1897), we see that Elizabeth Goodwin, already a widow, left a will in 1718 and her estate was inventoried in 1719. Her inventory included bequests of slaves, cattle, horses, clothes, tobacco in Virginia and in London, beds, bolsters, pillows, rugs, curtains, silver service items, a dram cup, saddle and bridle, all of which were *also* included in her estate inventory. Similarly, Peter Goodwin in 1747 left bequests that were inventoried: a silver tankard, a silver-hilted sword, and slaves. Rebecca Goodwin made bequests of slaves and silver plate that were included in her estate inventory. James Goodwin's 1758 will bequeathed slaves, a silver-hilted sword, a silver tankard, beds and accessories, and a mare that were inventoried, plus land and cash bequeathed but not inventoried. Likewise, John Goodwin's 1759 will bequeathed inventoried slaves, cattle, and sheep. John Goodwin's 1767 will included his inventoried slaves.⁶

The obvious answer to the presence or absence of particular possessions is that the decedents simply did not own them. For that reason, we carefully selected possessions as our dependent variables. Similarly, to account for this possibility, we estimated the Poisson models of the cumulative number of our selected possession appearing in the inventories. Most households would have acquired a set of both men's and women's possessions. The possessions we selected for the women's world would have been useful in all households and could have been in continued use, typically even after one partner's death. Consider the ordinary iron tripod pot. These pots were very common. Households, whether headed by a widow or a widower, needed to eat. Because of this, it seems highly unlikely that a widower would dispose of his wife's iron pot after her death (although appraisers specifically excluded such pots from men's estates for the widow's use). In a modern economy, the remedy would be market exchange. A widower could simply purchase his meals. However, in the eighteenth century, markets were generally not nearly as well developed and home production was much more prevalent. Instead of disposing of his wife's pot and buying all of his meals from various vendors (a

⁶ Will the descendants of the Goodwins please contact us to let us know of the final disposition of the silver-hilted sword?

difficulty in the rural countryside), the widower would be more likely to do some cooking himself, or rely on female labor to do it for him, be it daughters (married or unmarried), neighbors, hired or indentured servants, or slaves. While women may have had little use for inexpensive, utilitarian swords after their husbands' deaths, all would have needed eggs cooked in a skillet and served on trenchers, and their clothes laundered, pressed, and repaired.

In this place and time, with a sufficiently large sample, there will simply not be much that a woman—particularly a widow—would have owned that a man—particularly a man who had been married—would also not have owned. The same cannot be said for men. If chickens, linens, and earthenware are statistically absent from men's estates and present in women's estates, especially if pigs and storage chests are no more or less likely to appear in men's or women's estates, that indicates that appraisers overlooked or reserved those items.

Furthermore, if households simply did not own the possession in question, then there would be no reason to assume that the lack of ownership would be significantly related to gender. The gender of those involved with the estate should *not* exert a detectable influence on the presence, absence, and cumulative number of possessions linked theoretically to women's and men's worlds; particularly when other possessions *not* theoretically linked to gendered worlds do not have a significant relationship to the decedents' gender.

Of course, men could have dispersed possessions prior to their deaths or through testation. These possessions, particularly if they passed to other males, could re-appear in the inheritors' inventories. As discussed, testation was uncommon, some bequests were inventoried (although others were not), wills frequently focused on real estate, slaves, and cash flows rather than personal estate, and they were often blanket bequests covering the entire estate. It seems unlikely that a man would deliberately bequeath his chickens, baking trays, and cheese hoops directly to his wife or anyone else. This leaves giving away personal items prior to death. Although it surely occurred, it would seem even more unlikely that a man would give away the laundry tub, wooden trenchers, and earthenware mug that his wife used daily or weekly prior to his death. We cannot demonstrate this to be the case, but we strongly suspect it. Finally, even if

appraisers omitted these items from a man's inventory because it had already been decided that they would be part of the widow's personalty, they were, nevertheless, omitted, reducing the inventories' accuracy and completeness.

Dowry possessions could be another source of complication. During his lifetime, a husband could use his wife's dowry possessions, slaves, and real estate, but they remained her property. Her dowry property should not appear in his inventory, but would appear in her inventory, creating a gendered effect. But it is hard to imagine that short-lived chickens or useful-but-cheap wooden trenchers and terra cotta bowls would be given as dowry possessions often enough to have a statistical impact over a time frame long enough to stretch from women's marriage, through the deaths of their husbands, and then through their own deaths. Furthermore, if items such as chickens and trenchers were long-lived assets given as dowry goods, then why not pigs and storage chests? Although we find significant gendered effects with chickens and earthen-/wooden-ware, we do not find significant effects for pigs and chests. Families gave daughters valuable, long-lived dowry assets; however, those tend not to be the assets we examine in this study. We doubt that women's dowry property substantially influences our results.

The Inventory Data Set

We categorized whether the decedent was female based on first name and on any internal word usage, such as "she," "her," or "widow." We categorized an inventory as "female mentioned" when the (male or female decedent's) inventory contains language obviously referring to a female who was not the decedent. We categorized an inventory as "rural" if it was returned from York County, rather than Yorktown or Williamsburg ("urban"). We calculated the real value of the inventoried possessions, the "apparent wealth" of the estate. Appraisers recorded most value in Virginia pounds, a small amount in pounds sterling, and an even smaller amount in dollars. Appraisers occasionally used tobacco to express value in our sample.⁷ Converting Virginia pounds (and the smattering of dollars) into pounds sterling for the entire sample period proved to be challenging and required us to use several sources.⁸ Having done so, we converted nominal sterling values into real sterling values using the Henry Phelps-Brown and Sheila Hopkins (1956) price index data, wherein the average price of a composite unit of consumables between 1451 and 1475 was set to 100. The resulting figure is not easily interpreted. It is the number of (hundreds of) Phelps-Brown and Hopkins (ibid.) composite consumption units an estate could purchase if prices of the items in the unit were at their average from the period between 1451 and 1475. It is more convenient as a basis for relative comparison rather than as an absolute figure. The figure clearly represents a stock of wealth rather than income, and is only the apparent wealth as revealed through the inventories, rather than an accurate measure an estate's net worth. However, apparent wealth is not inconsequential. A wealthy estate indicates that someone, at some time, through production or credit, amassed sufficient resources to purchase valuable possessions.

The third quarter of the century contains a disproportionate percentage of female decedent inventories. The first quarter contains a disproportionate percentage of female mentioned inventories, consistent with the declining social and legal status of women as the colony's gender

⁷ We converted tobacco values to monetary approximations using data from Russell Menard (1980, 109-177; Appendix, 157) as well as Thomas Purvis (1995, 56, Table 4.67).

⁸ For the initial years, we directly converted Virginia pounds into sterling using John McCusker's (1978) annual average exchange rate data. For missing years, we approximated the exchange rate using the simple annual growth formula anchored by the closest preceding and succeeding observations. After 1775, we first converted Virginia pounds into USD using data from McCusker (1992) and extended his rate of £1 to \$3 1/3 from 1796 to 1800. We directly converted USD to sterling for the period after 1790 using Lawrence Officer (2016). For 1775-1790, we drew on Officer and Samuel Williamson (2014) and Williamson (2016). McCusker's (1992) approximations that £1.2 Virginia was equivalent to £1 sterling and that £1 was equivalent to between \$3.33 and \$3.60, and one very large assumption on our part: we assumed that the British 'market basket' and the American 'market basket' were substantially similar for these 15 years. With these, we constructed an annual series of conversion factors to complete the process of transforming the York County inventories into pounds sterling.

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ratios came into balance. (Carr 1989) The bottom two tiers of real appraised wealth contain a disproportionate number of female decedent and female mentioned inventories, although the highest third of appraised wealth contains 26 percent (28 percent) of female (female mentioned) inventories. Relative to the entire sample, female decedent estates were slightly more likely to be rural, while female mentioned estates were more likely to be urban. Relative to a uniform distribution, female decedents are more likely to appear in the bottom two-thirds of wealth. Inventories mentioning females were slightly more likely to be in the middle-income tier, but were also more likely to be in the bottom tier than in the top tier. Concerning apparent wealth, neither female decedents, nor male decedents whose inventory mentioned a female, "gained ground" or "lost ground" over the century. Table 2 shows female representation by quarter century, tier of apparent real wealth, and rural location, respectively. Table 3 describes the variables we extracted from the sample of inventories.

Regressions Results

Categorical Terms in the Inventories

One way to make a generalized argument that appraisers treated men's and women's estates differently is to ask whether appraisers tend to use more generic, categorical, vague "lumping" words when inventorying a woman's estate. If so, this could indicate that male appraisers expended less effort to be precise and accurate for female decedents, or failed to recognize specific items or their utility in the woman's world. The decedent might have owned an item of interest, but the appraisers categorized it as part of the "lumber in the chamber closet." To account for this possibility, we coded "Generic." This variable takes a value of one if the appraisers used catch-all terms in an inventory, such as "sundry," "trifle," "goods," "things," or "lumber." Table 4 shows our results.

	Female Representation Female					Female Mentioned			Any Female		
	Total	n	Pct Sample	Pct Group	n	Pct Sample	Pct Group	n	Pct Sample	Pct Grou	
1700-1724	104	14	13%	11%	46	44%	54%	58	56%	29%	
1725-1749	132	20	15%	16%	31	23%	36%	49	37%	24%	
1750-1774	291	65	22%	53%	7	2%	8%	70	24%	35%	
1775-1800	121	23	19%	19%	1	1%	1%	24	20%	12%	
All periods	648	122	19%		85	13%		201	31%		
Low Wealth: 43-1839 "Units"	216	49	23%	40%	27	13%	32%	74	34%	37%	
Mid Wealth: 1854-8040 "Units"	216	41	19%	34%	34	16%	40%	74	34%	37%	
High Wealth: 8042-390736 "Units"	216	32	15%	26%	24	11%	28%	53	25%	26%	
Totals	648	122			85			201			
Rural Location	462	93	14%	76%	54	8%	64%	144	22%	72%	

Unwritten Rules and Gendered Frames

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sample.

			V	I able 3	
<u> </u>	*7 * 1 1			ariable Description	
Category	Variable	Mean	Freq	Туре	Description
Base Model	ln(Year)	7.47		Continuous	Year of inventory
	ln(Wealth)	8.25		Continuous	Appraised value of possessions
	Rural	0.71	462	Dichotomous	Rural estate
	Female	0.19	122	Dichotomous	Decedent's gender
	Fem Men	0.13	85	Dichotomous	Non-decedent females mentioned
	Any Female	0.31	201	Dichotomous	Decedent or non-decedent females
	Generic	0.29	185	Dichotomous	Use of imprecise categories
Reserved Items	W. Clothes	0.08	53	Dichotomous	Presence of women's clothes
	Beds	0.86	559	Dichotomous	Presence of Beds
	Cookery	0.81	528	Dichotomous	Presence of Cookery
	Linens	0.67	436	Dichotomous	Presence of Linens
	Resrv. Sum	2.43		Count	Sum of reserved items present
"Non-Gendered"	Cash	0.18	118	Dichotomous	Presence of Cash
	Pigs	0.54	349	Dichotomous	Presence of Pigs
	Toilet	0.21	133	Dichotomous	Presence of Toilet
	Chests	0.78	505	Dichotomous	Presence of Chests

Table 3	
Variable Descriptio	n

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Category	Variable	Mean	Freq	Туре	Description	
Men's World	M. Clothes	0.29	190	Dichotomous	Presence of men's clothes	
	Hunt	0.54	352	Dichotomous	Presence of hunting/fishing/war equipment	
	Razor	0.20	129	Dichotomous	Presence of razors	
	Men Sum	1.13		Count	Sum of men's world items present	
Women's World	Chickens	0.07	46	Dichotomous	Presence of chickens	
	Dairy	0.19	126	Dichotomous	Presence of dairy equipment	
	Earthen	0.50	327	Dichotomous	Presence of earthen utensils	
	Laundry	0.49	317	Dichotomous	Presence of laundry equipment	
	Sewing	0.23	152	Dichotomous	Presence of textiles and sewing equipment	
	Spinning	0.51	329	Dichotomous	Presence of spinning equipment	
	Women Sum	2.03		Count	Sum of women's world items present	
	Fem Sum	4.46		Count	Sum of women's world and reserved items present	

Unwritten Rules and Gendered Frames

Table 3 ContinuedVariable Descriptions

	Table 4	
Probit	Estimates of "Ger	neric"
	Coef.	S.E.
Female	0.22	0.14 *
	34.10	
Female Mentioned	-0.10	0.17
	31.83	
Any Female	0.10	0.12
	32.20	

Notes: Covariates: Year, real appraised wealth, rural location; *=90%; Log Likelihood Chi-squared statistic in italics

The estimated coefficient for "Female" was positive and weakly statistically significant. The marginal effect at the means of being a female decedent increased the probability that appraisers used imprecise, "grouping" language to from twenty percent to thirty percent. Other things equal, being female meant a higher probability that appraisers described the decedent's possessions using generic terms. This indicates genderrelated differences in the appraisers' approach to their task. The insignificance of "Female Mentioned" could reflect that the decedents were male, or the efforts of the female to increase the accuracy and thoroughness of the inventory.

Estimates for "Reserved" Items

Our second step was to test the proposition that appraisers reserved specific types of possessions for the widow's use by exempting them from her decedent husband's probate inventory, the gender-based "unwritten rule" of appraisal researchers have identified. The items were the woman's clothes; beds; pots, pans, or skillets; and household linens. Table 5 presents our regression results.

For each category, the estimated coefficients for "Female" and "Any Female" are positive and significant at the 95 percent level or greater. Therefore, at the most basic level, gender influenced the appraisal process concerning these possessions, as expected. For women's clothing, "Female Mentioned" is negative and significant. Together, these results suggest that clothing was exempted from the probate process. In the cookware estimates, "Female Mentioned" took a positive and significant coefficient, suggesting that women sought to include their pots and skillets in the inventory or that male appraisers were particularly cognizant of the women's needs to prepare food for themselves and their families. Turning to the Poisson estimate of the cumulative number of these possessions, the marginal effect of "Female" at the means was approximately an increase from 2.4 items to 2.5 items, and the marginal effect of "Female Mentioned" at the means was approximately an increase for 2.6 items. We concluded that either these possessions were reserved for a widow's use or appraisers saw them in women's houses and overlooked them in men's houses. Scholarship argues for the former. Overall, our empirical evidence suggests that scholars have been correct about this "rule," at least in eighteenth-century York County.

Due to a gender-based unwritten rule of appraisal, men's possessions and their value would be misrepresented. Moreover, it would be difficult to correct men's estates for these missing items because, for example, it is unclear how many beds appraisers would have exempted if there were children, whether the widow was given the best bed or the worst bed, and so on. Critically, it is unknown whether appraisers in other counties or colonies followed the same unwritten rule, and, if so, how many and which beds they would have exempted from appraisal.

Estimates for Gender Neutral Possessions

To argue that some possessions are gendered, male or female, could imply that some possessions are gender neutral. Our argument and approach would be substantially weakened if we discover gender effects in any particular category of possessions. Therefore, we looked for relatively common possessions that have not been related to gender in the literature, or do not seem to have an obvious, strong gender connotation. We selected cash, pigs, and chests/trunks.

Table :	5
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Probit and Poisson Regression Estimates of the "Reserved" Items											
Dependent variable	Female			Fem	ale Ment	ioned	Any Female				
	Coef.	S.E.		Coef.	S.E.		Coef.	S.E.			
W Clothes	1.08	0.17	***	-0.55	0.25	**	0.64	0.16	***		
	58.93			25.67			37.52				
Beds	0.47	0.18	***	0.254	0.24		0.49	0.16	***		
	64.25			58.24			67.22				
Cookery	0.34	0.16	**	0.46	0.22	**	0.45	0.14	***		
	53.84			53.94			60.23				
Linens	0.36	0.14	**	0.00	0.20		0.28	0.12	**		
	123.30			116.71			121.80				
Resrv. Sum (Poisson Regression)	0.20	0.06	***	0.02	0.08		0.16	0.06	***		
	49.29			39.53			47.64				

Notes: Covariates: Year, real appraised wealth, rural location; **=95%; ***=99%; Log Likelihood Chi-squared statistic in italics

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Currency (specie or fiat) was not commonly inventoried (18 percent of the sample). The amounts varied greatly, but tended toward what we consider "everyday amounts", the small amount of money to facilitate ordinary transactions. Consider the £1.2.2¼ (Virginia, not Sterling; an important distinction) that Elizabeth Ives had "in her pockett" in 1723. The features that make currency a medium of exchange, coupled with the often-small amounts recorded, would seem to argue against either appraisers exempting currency or profound gender effects.

Many households possessed pigs. They appear in 54 percent of the sample inventories. Pigs are particularly adaptable livestock. Owners can keep them in small pens in urban areas, or turn them out, as with William Garro's "Some hogs in the Marsh Quantity unknown" in 1708. Pigs are famously omnivorous. Fresh and preserved pork were dietary staples across the income spectrum. William Byrd's jarring observation that the poor people of the border region between Virginia and North Carolina ate so much pork it caused their noses to rot off their faces indicates that even the poor could afford a pig (1733, 55).⁹ In eighteenth-century York County, pigs were the primary source of the smoked meats that circulated as country pay (Wendy Lucas and Noel Campbell 2017). As such, it seems less likely for them to acquire as strong a gender connotation as cattle, horses, or chickens. As a species of standardized agricultural commodity, it seems unlikely that decedents would have left pigs as specific bequests. As a living, portable larder that turned household garbage into winter food, however, we can imagine appraisers reserving pigs for widows and children.

Chests or trunks were among the most commonly inventoried possessions. They appear in 78 percent of the inventories. They could be plain, wooden boxes with hinged lids, or elaborately carved furniture in mahogany or walnut. One found them in the "man's world," storing his carpentry tools for example, and in the "women's world," storing her household linens. Table 6 shows, as expected, that none of these possessions did we estimate any gender variable at a customary level of

⁹ The reference to noses rotting off was likely the result of a fungal infection similar to fungal sinusitis (aspergillosis or blastomycosis). On another occasion, one of his company picked "several Scabs as big as Nipples" off a woman "the Consequence of eating too much pork" (Byrd 1733, 59).

statistical significance. Thus, given the statistical insignificance of the gender variables, some possessions appear to have been gender neutral.

Estimates for the Men's World

We have focused on the woman's world and women's possessions, but more generally this article concerns *gendered worlds*, including the men's world. The men's world was much more expansive and would likely have included a much broader set of associated possessions. We looked for possessions with an obviously masculine connotation that were also likely to be widely owned. These items were razors and shaving equipment, men's clothing, and the equipment of hunting, fishing, or war.

Razors could be inexpensive or expensive, and are archeologically ubiquitous (Bedell 2000). Razors are neither notably rare nor common in the inventories (20 percent), but most female decedents' husbands likely owned a razor. Weapons were quite common in the inventories (54 percent). They could be expensive or inexpensive. Table 7 presents our empirical results.

We estimated negative and strongly significant coefficients for each of the "men's world" categories of possessions for both "Female" and "Any Female," as expected. Evaluated at the means, being a female decedent reduced the number of items appearing in an inventory from 1.13 to 0.78 (12 percent of the maximum possible value of "Men's Sum"). Similarly, a positive value for "Any Female" reduced the number of men's world items appearing in an inventory from 1.13 to 0.96.

Although female inventories were less likely to include hunting gear and weapons, curiously, the relationship was positive and significant in "female mentioned" inventories. The Goodwin's heirloom, silver-hilted sword notwithstanding, many of these items were inexpensive and apparently quite plain. Rather than firearms, many inventories listed old swords, bayonets, and ammunition pouches; possessions unlikely to be specific bequests. "Female Mentioned" estates are men's estates. Perhaps hunting and war equipment was so powerfully masculine and widely prevalent that it overpowered any effect the females may have had.

Unwritten Rules and Gendered Frames

Probit Estimates of the "Non-Gendered" Items										
Dependent variable		Female	Fem	ale Mentioned	Any Female					
	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.				
Cash	0.15	0.15	-0.11	0.19	0.03	0.13				
	33.44		32.85		32.59					
Pigs	-0.16	0.14	0.30	0.18	0.01	0.12				
-	175.67		177.25		174.41					
Chests	0.00	0.14	0.24	0.22	0.12	0.13				
	51.81		53.01		52.62					

Table 6

Notes: Covariates: Year, real appraised wealth, rural location; Log Likelihood Chi-squared statistic in italics

Probit and Poisson Regression Estimates of the "Men's World" Items											
Dependent variable	e Female			Fema	ale Menti	oned	Any Female				
	Coef.	S.E.		Coef.	S.E.		Coef.	S.E.			
M. Clothes	-1.28	0.21	***	-0.18	0.17		-0.77	0.14	***		
	64.25			58.24			67.22				
Hunt	-1.18	0.15	***	0.41	0.18	**	-0.61	0.12	***		
	53.84			53.94			60.23				
Razor	-1.24	0.25	***	0.02	0.19		-0.61	0.14	***		
	123.30			116.71			121.80				
Men Sum (Poisson Regression)	-1.14	0.15	***	0.04	0.11		-0.52	0.09	***		
	49.29			39.53			47.64				

Table 7

Notes: Covariates: Year, real appraised wealth, rural location; **=95%; ***=99%; Log Likelihood Chi-squared statistic in italics

Unwritten Rules and Gendered Frames

We have some evidence that male decedents owned some possessions that women, typically widows, did not. If we assume that most widows' pre-deceased husbands also owned these possessions (simple assumption for clothes and razors; more difficult with weapons), then (a) women disposed of these possessions during their lifetimes, (b) widows did not take them as part of their portion of personalty, or (c) appraisers overlooked men's world items in female decedent's households. Our evidence does not allow us to determine which was more likely, nor whether these goods were likely to be under-counted. However, it supports the broader conclusion that appraisers (and, we suspect, society at large) thought of possessions in gendered terms; there were men's things and women's things.

Estimates for the Women's World

To establish that other categories of possessions besides those discussed in the historiography might have been reserved for widows, or that women's world possessions were selectively noticed or ignored by male appraisers, we searched for items that fit several criteria: (a) they were clearly related to women's labor roles as per the historiography (b) they were widely owned, and (c) they would have continued to be useful, as the associated labor continued to be necessary in all households, male or female. These items were chickens, earthen and wooden ware, sewing items and textiles, spinning, brewing, laundering, and dairying equipment. "Women Sum" was the cumulative sum of these seven categories. "Female Sum" was the sum of these items plus "Reserve Sum," the cumulative sum of the categories of women's clothes, post and pans, beds, and household linens.

Chickens were ubiquitous in the archeological record, inexpensive, and part of woman's world per Ulrich and others (Ulrich 1980b; Jean Russo 1983). Earthen and wooden ware are not only archeologically common and inexpensive, but were likely to be simple, useful items from the woman's world of food service. If appraisers withheld cookery items for the widow's use, perhaps they also withheld plain items for her to serve her food. Household sewing was woman's work, its equipment was often inexpensive, and its remains are common; therefore, we searched for unstructured textiles and "sewing notions" that would have been used to

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construct clothing and household textiles. Spinning, another traditional housewifery task, came to the Chesapeake after the initial tobacco boom faded and women were more numerous (Carr 1988; Shammas 2008). Ulrich associates women with laundry. The inventories include many "washing tubs" and other laundry equipment such as flat irons and clothes presses. Ulrich (1980b), Carr (1988), Kulikoff (1986), and Shammas (2008) all identify dairying as women's work. We also searched for obvious items of women's clothing. Table 8 presents our estimates.

These results generally support the hypothesis that these categories of items were either withheld for a widow's use, or inventoried through a gendered frame by the appraisers. Female-related estimates were statistically insignificant for dairying. For sewing and textiles, "Female Mentioned" was statistically significant at a customary level, and the sign was negative. The negative sign could indicate that appraisers reserved sewing supplies and textiles for widows and children, but the "missing" sewing supplies did not re-appear in female decedent inventories. Perhaps the female decedents consumed the sewing supplies or dispersed them prior to death. Although that could be logical for some types of expensive textiles, it seems more likely that females would have used and replaced sewing supplies on an on-going basis. Instead, we suspect this result was caused by "male-with-no-female-mentioned" inventories listing large amounts of textiles and sewing equipment. Given the other items in these inventories, we are convinced that these represent wholesale/retail stocks or stock-in-trade for tailors.

Regarding chickens, the estimated coefficients for "Female" and "Any Female" were positive and strongly statistically significant. Evaluated at the means, the impact of "Female" or "Any Female" was to increase the probability that chickens were inventoried from seven percent to eight percent. Given the insignificance of "Female Mentioned," this seems to imply that appraisers were *not* reserving chickens for widows and children; rather, they were overlooking them in men's estates. Admittedly, counting chickens after they were released for the day from their coop would be difficult, but appraisers could have listed a "parcel," "lot," or "number" of chickens as they regularly did with horses, hogs, and cattle, or they could have noted the presence of a coop or nesting boxes. Instead, they seem to have done neither.

Probit and Poisson Regression Estimates of the "Women's World" Items Dependent variable Female Mentioned Any Female Female S.E. Coef. S.E. Coef. Coef. S.E. Chickens 0.50 0.17 *** -0.37 0.35 0.37 0.17 ** 28.38 21.45 24.99 Dairy -0.02 0.16 0.20 0.20 0.01 0.14 72.66 73.61 72.66 *** Earthen 0.25 0.13 ** 0.44 0.17 ** 0.41 0.11 38.32 41.08 47.90 Laundry -0.09 0.13 0.33 0.17 ** 0.10 0.11 48.07 51.52 48.50 Sewing -0.04 0.15 -0.38 0.18 -0.17 0.13 ** 111.60 56.88 54.34 Spinning -0.01 0.14 0.38 0.17 ** 0.17 0.12 52.62 116.50 113.81 Women Sum (Poisson regression) 0.06 0.07 0.14 0.08 * 0.12 0.06 * 98.92 113.29 101.92 Fem Sum (Poisson Regression) 0.14 0.07 0.06 0.14 0.05 *** 0.04 *** 116.20 123.28 126.48

Unwritten Rules and Gendered Frames

Table 8

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Notes: Covariates: Year, real appraised wealth, rural location; *=90%; **=95%; ***=99%; Log Likelihood Chi-squared statistic in italics

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Female-related regressors were positive and significant in all three specifications of earthen- and wooden-ware. Positive values for "Female," "Female Mentioned," and "Any Female" increased the probability that earthen- and wooden-ware were inventoried from 50 percent to 52 percent, nearly 53 percent, and over 55 percent, respectively. Again, the estimates lack the pattern of "Female" significant/"Female Mentioned" insignificant we interpret as evidence that appraisers reserved the items. Instead, as with chickens, it appears that appraisers looked for these items in female decedent estates. For "Female Mentioned" estates, we hypothesize that either appraisers noticed these items because of the widow's presence, or the women, themselves, drew attention to the earthen-ware. We cannot say why appraisers at "Female Mentioned" estates would notice earthen-ware but not chickens. It could simply be that the earthen-ware would have been stored in the kitchen or dining areas, the heart of the woman's world, while the chickens were loose outside.

For laundry and spinning possessions, the "Female Mentioned" coefficient is positive and statistically significant. Evaluated at the means, a positive value for "Female Mentioned" increased the probability that laundry items were inventoried from 49 percent to 51 percent. Turning to spinning items, evaluated at the means, a positive value for "Female Mentioned" increased the probability that they were inventoried from 51 percent to 53 percent. Neither "Female" nor "Any Female" was estimated at customary levels of significance. We can imagine women calling attention, using proper names, to specific pieces of equipment they used in their weekly work, or appraisers being conscious of "woman's work" within a man's household as the widow accompanied them. The key point to note is that these possessions appear in some types of men's estates but not other types of men's estates, based on gender.

In Poisson estimates of the count of "women's world items" using "Women Sum" as the dependent variable, "Female Mentioned" and "Any Female" took positive and weakly significant coefficients. The effects were small. Evaluated at the means, a positive value for "Female Mentioned" increased the average number of appraised women's world items from 2.03 to 2.05 possessions. Similarly, a positive value for "Any Female" increased the average number of these items from 2.03 to 2.06 possessions. Other things equal, appraisers inventoried more items from this suite of possessions when females were involved with the estate. In Poisson estimates of the count of "female items" using the variable "Female Sum," regressors "Female" and "Any Female" took positive and strongly significant coefficients. Their marginal impact at the means was to increase the number of female items from 4.46 to 4.54 and 4.65 items, respectively. The "Women Sum" results are driven by laundry and spinning equipment. Appraisers inventoried these categories in large numbers of estates, overall, and particularly in "Female Mentioned" estates, but not particularly in female-decedent estates. The "Female Sum" results are driven by the very commonly appraised beds, cookery, and linens (present in 86, 81, and 67 percent of inventories, respectively) that were likely deliberately omitted in "Female Mentioned" estates, but were abnormally noted in female-decedent estates.

Conclusions

Our objective was to determine whether gender had a significant impact on how appraisers conducted probate court inventories. The unwritten rules of appraisal concerning widows could have encompassed more types of possessions than those scholars typically consider. Furthermore, if society drew distinctions between a man's world and a woman's world, then it may have associated different goods with them. This could have created "men's possessions" and "women's possessions." Acting within this set of cultural assumptions, probate appraisers might have wittingly or unwittingly inventoried estates differently based on female involvement with the estate. Gendered material objects may have been more likely or less likely to appear in an inventory when either the decedent or the executor/administrator was a woman.

To investigate gender's impact on the appraisal process in colonial North America, we employ a sample of 648 inventories filed between 1700 and 1800 in York County, Virginia. Relying on probit and Poisson analysis and controlling for time, location, and apparent real wealth, we found evidence that gender mattered in York County's appraisal process. Possessions are inherently non-gendered. However, for several categories of possessions we could reasonably expect many households to have owned, the gender of those associated the estate influenced the likelihood a type of possession would be inventoried and the cumulative number of categories inventoried. Although this result is not unexpected, it is important as this is the first direct empirical evidence of such an effect.

To summarize, our evidence suggests that appraisers used more categorical, generic "grouping" terms to describe female decedent's possessions. This could indicate that they took a less focused approach to inventorying women's estates. York County appraisers in the eighteenth century appeared to reserve a widow's clothes, a bed, cookery utensils, and household linens for her use. To that list, we would add that appraisers either (1) reserved for the widow's use, (2) systematically if unwittingly overlooked, or (3) specifically noticed several additional sorts of possessions: chickens, laundry equipment, spinning equipment, earthenand/or wooden-ware food service items, and possibly sewing equipment and textiles. Given the comparatively low rate of probate, the much lower rate of female probate, and the general difficulty of matching deceased women to pre-deceased husbands, items omitted or overlooked are unlikely to reappear to be counted later. Moreover, even if later appraisers managed to recover all of these items in subsequent inventories, the original inventories would still systematically misrepresent the decedent's possessions and their value.

The magnitude of our estimated effects tend to be small, and we cannot estimate a monetary value of the effects because we lack information about the quality and condition of, essentially, "used goods." This does not mean that our results are trivial. Our goal was to investigate whether there were additional unwritten rules governing the appraisal process, or implicit, perhaps unconscious, framing effects at play. Our results answer that question affirmatively. Though our estimated effects were small, we uncovered effects in one location over a long period. However, the data may contain more, larger, effects for which we did not search. Moreover, since we discovered persistent effects in York County, it is reasonable to expect that unwritten rules or framing effects would also influence appraisals in other counties and other colonies/states. However, there is no reason to assume that the effects would be the same or of similar magnitude. For example, in New England where cheese-making was more prevalent than in the Chesapeake, perhaps appraisers overlooked cheese hoops in women's estates or consciously omitted them from men's inventories.

Researchers have long known of—and attempted to correct for problems of representativeness in inventory data. This article heightens our appreciation that the probate inventories are human-generated artifacts, potentially containing important but nuanced social influences. They were created in a time before standardization became the norm and expectation in most fields of human activity. Inconsistency was the rule of the day, down to such trivia as spelling. When researchers use probate inventory data, we should not only be cautious about the inventories' representativeness. We should think critically, carefully, and locally about what sorts of possessions might be included or excluded.

Based on our evidence, we conclude that it is even more difficult than is commonly believed to do probate inventory analysis-for any purpose-across colonies, and perhaps even across counties. We do not know the extent to which local variation in appraisal rules or the extent of gendered lenses among appraisers existed, nor the extent to which those rules changed over time, nor the monetary impact of the rules and their variations. How many beds were reserved? What was the value of the linens reserved? Did appraisers tend to exempt the most valuable exemplars from probate, or the meanest examples? Why did appraisers believe linens to be rightful and necessary for a widow, but not (or instead of) her other possessions of similar value, such as stoneware table items, her laundry tub, or her flax hackles? Unless, of course, in her particular time and place appraisers were withholding or overlooking flax hackles and patty pans. Appraisers were making culturally appropriate, but gender-influenced, decisions about what possessions to inventory, just as husbands may have been making gender-influenced decisions about what personalty to bequeath to their widows. Without extensive, local research, we really cannot answer these questions. The most conservative conclusion is that gender-related inventory omission occurred and was likely variable in quality, quantity, and financial impact. McCants (1999, 444) wrote, "The probate inventory alone cannot be used... to estimate wealth distributions, either within communities or across them." This article reinforces that conclusion.

Should estimates of wealth or its distribution be recalculated in the light of our results? Consider adding "missing" earthenware to inventories. Should we add our estimates of earthenware values to all male inventories,

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or only those male inventories which did not include it? Should we also add an estimated value for earthenware to the women's inventories which do not include it? Similarly, what value should we add to the inventories? The language appraisers used to inventory earthenware was so widely varied that the most we believed we could document was its overall presence or absence. The inventories would offer practically no guidance as to what earthenware items, and how much of it (much less its physical condition) the appraisers withheld or overlooked. Particularly because earthenware was widely inventoried (50 percent of all inventories, 55 percent of female inventories, 49 percent of all male inventories), we believe that exercises such as adding the mean value of all inventoried earthenware (plus/minus one standard deviation) to all male inventories lacking earthenware would be entertaining, but unconvincing. More importantly, at present, we do not know whether the same adjustment should be applied to inventories outside of York County.

Of course, we are not arguing that researchers not attempt such calculations, particularly given our own argument about doing historical research in knowledge of the data limitations. Historical research is and will remain one of the most rewarding and frustrating scholarly endeavors, in our opinion. Rather, we hope our results will motivate subsequent investigation. Perhaps most importantly, to what extent do these results generalize beyond eighteenth-century York County, which is the sole focus of the analysis here? If the York Country results are representative of early America more broadly, then to what extent does gender bias affect our interpretation of analyses of probate inventories? Resolving these questions could alter the narratives of early America.

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