



Adaptation and Innovation: Archaeological and Architectural Perspectives on the Seventeenth-Century Chesapeake

Author(s): Willie Graham, Carter L. Hudgins, Carl R. Lounsbury, Fraser D. Neiman and James P. Whittenburg

Source: *The William and Mary Quarterly*, Jul., 2007, Third Series, Vol. 64, No. 3 (Jul., 2007), pp. 451-522

Published by: Omohundro Institute of Early American History and Culture

Stable URL: <https://www.jstor.org/stable/25096728>

REFERENCES

Linked references are available on JSTOR for this article:

https://www.jstor.org/stable/25096728?seq=1&cid=pdf-reference#references_tab_contents

You may need to log in to JSTOR to access the linked references.

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



JSTOR

Omohundro Institute of Early American History and Culture is collaborating with JSTOR to digitize, preserve and extend access to *The William and Mary Quarterly*

Adaptation and Innovation: Archaeological and Architectural Perspectives on the Seventeenth-Century Chesapeake

Willie Graham, Carter L. Hudgins, Carl R. Lounsbury,
Fraser D. Neiman, and James P. Whittenburg

AT the close of the seventeenth century, the Chesapeake was a mosaic of landscapes, building forms, and subsistence activities, layers of cultural patterns imposed by adaptation and innovation. Whatever the original intentions of the colonists and their London backers who carved out the initial settlement at Jamestown, at the end of the century the Chesapeake was unlike anything they might have previously imagined. Certainly, it did not mirror old England, nor was much in Virginia and Maryland like English settlements in New England. A dependence on tobacco set the Chesapeake apart. So too did the dispersed character of its plantations, separated from each other along the region's rivers and broad creeks. Even the character of its housing was unusual: almost all houses were made of timber and raised by

Willie Graham is curator of architecture at the Colonial Williamsburg Foundation. Carter L. Hudgins is the Hofer Distinguished Professor of Early American Culture and Historic Preservation in the Department of History and American Studies at the University of Mary Washington. Carl R. Lounsbury is a senior architectural historian at the Colonial Williamsburg Foundation. Fraser D. Neiman is director of archaeology at the Thomas Jefferson Foundation (Monticello). James P. Whittenburg is a professor of history at the College of William and Mary. The authors would like to thank the readers for the *William and Mary Quarterly*—Warren M. Billings, Cary Carson, James Horn, Karen Ordahl Kupperman, and Lorena Seebach Walsh—for their many excellent suggestions. They owe a great debt to the many archaeologists and architectural historians who contributed their reports, data, and advice. The authors wish to thank Wayne Graham, Library Emerging Technologies coordinator, Swem Library, College of William and Mary, who designed the online database on which this work depends. The authors thank the several history graduate students from the College of William and Mary who worked as research assistants, chief among them Lindsay A. Watkins. Above all the authors wish to thank Sarah E. King, assistant to the director of the College of William and Mary's National Institute of American History and Democracy, which sponsored the project, for her dogged research and keen insights.

William and Mary Quarterly, 3d Series, Volume LXIV, Number 3, July 2007

earthfast construction, a method found elsewhere but embraced in the Chesapeake with a singular tenacity. Its growing dependence on slave labor and the patterns of segregated house plans, yards, and labor routines that emerged at the end of the century made the Chesapeake still more distinctive.

Historians have suggested two main factors to explain the seemingly transitory character of the built Chesapeake environment: the demographic chaos of the region's beginnings as well as the continued instability that troubled it until the second half of the century and the failure to create a diversified economy. Edmund S. Morgan argued three decades ago, as did Cary Carson and his collaborators in the early 1980s, that Jamestown's boomtown character and the later dominance in the region of what has been styled "impermanent architecture" bespoke shallow attachments to the place and modest investments in its future.¹ More substantial houses appeared only at the end of the century with economic diversification, in particular the rising importance of wheat production. These explanations for the seventeenth-century Chesapeake's architectural impermanence, compelling as they are, fail to consider other dynamic cultural forces.

Nearly a century of invention, learning, and adaptation resulted in a tobacco economy, dispersed settlement, impermanent architectural technology, growing dependence on slave labor, and increasing social and racial differentiation and segregation. The archaeological record can serve as a primary source of evidence about the emergence of these Chesapeake adaptations. It can also further understanding of the causal dynamics that were responsible for them. This article charts change in architectural technology, architectural ornament, and the spatial arrangement of farmhouses and farmsteads, taking advantage of evidence unearthed during the past thirty years. It builds on and revises earlier work on material life in the seventeenth-century Chesapeake, which emphasized demographic disaster, boomtown mentalities, and the persistence of tobacco monoculture as keys to architectural impermanence. It also considers wider categories of evidence. Inferences made from these architectural data can be evaluated with independent evidence from documents and archaeology. Faunal data from the analysis of the remains of wild and domestic animals that the colonists consumed reveal important trends in diet. Variation in the spatial distribution of different kinds of clay tobacco pipes within sites and among them offers clues to the social standing and aspirations of the individuals who smoked them.

¹ Edmund S. Morgan, *American Slavery, American Freedom: The Ordeal of Colonial Virginia* (New York, 1975); Cary Carson et al., "Impermanent Architecture in the Southern American Colonies," *Winterthur Portfolio* 16, nos. 2–3 (Summer–Autumn 1981): 135–96.

Architectural evidence, archaeological artifacts, and the documentary record combine to allow an analysis that focuses on three broad themes: shelter, subsistence, and status.

The years from the initial landing at Jamestown to about 1720 can be considered the Chesapeake's long seventeenth century. The year 1607 marks the beginning of what would become a permanent English settlement in the region, and the expansion of colonial settlements in Virginia's southside as well as the taking up of lands farther inland along the upper reaches of the Chesapeake Bay in the north signals the end of the period.² During this period English and African settlement encompassed the entire coastal plain, displacing the region's native peoples (Figure I). By the middle decades of the seventeenth century, a distinctive Chesapeake material culture emerged out of a complex interplay of forces. With the transition from a labor force dominated by indentured servants to one composed of enslaved Africans and their descendants, this regional distinctiveness increased during ensuing decades.

Recent archaeological and architectural research, as well as the 400th anniversary of the settlement at Jamestown, prompts a reconsideration of the path the Chesapeake colonies followed toward regional distinctiveness. This treatment of material evidence departs significantly from previous studies in two ways. First, it is quantitative rather than anecdotal. When Carson and his collaborators embarked on their study of Chesapeake architecture, modern archaeology of the region was still young and the data from a little more than two dozen sites supported their conclusions. The quarter century since their pathbreaking study has seen a tenfold increase in the number of sites that have been identified and excavated. A quantitative approach makes it possible for the first time to accurately date significant shifts in the cultural repertoires of Chesapeake colonists and link them in convincing and testable ways to the unique ecological, economic, and social conditions to which they were a response.

Second, this analysis is based on the concept that artifacts are historical evidence. Human activities, from building houses to setting tables at mealtime, express strategies integral to the processes individuals and groups use to adapt in ways that further their interests in the world and respond to the historical circumstances they encounter. This understanding implies that the link between artifacts and their historical meaning is not primarily symbolic but rather causal. Decision making in the seventeenth-century Chesapeake sometimes involved trial-and-error

² The shapes and forms of the classically inspired architectural ornaments that became increasingly visible after 1720 constitute another marker for the end of Virginia's long seventeenth century.

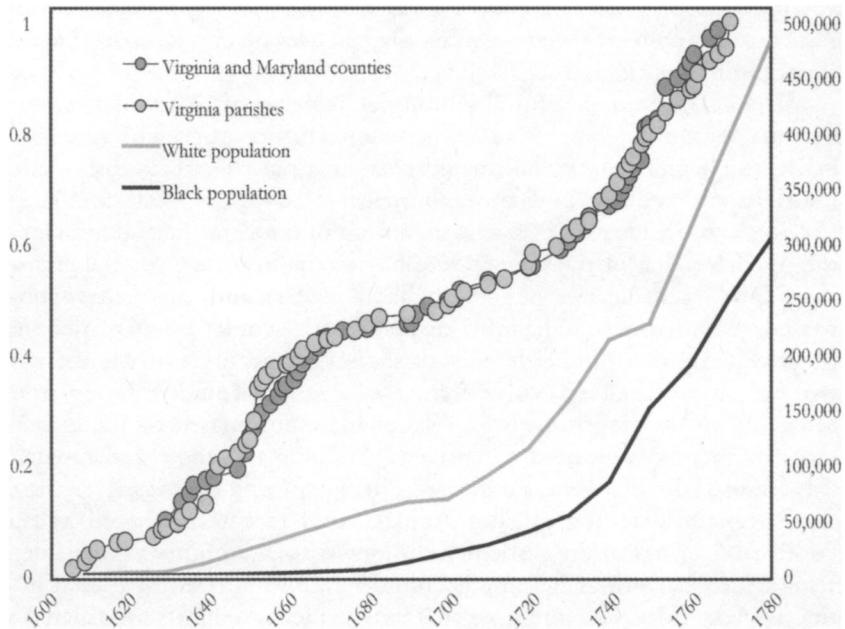


FIGURE I

Settlement spread and population growth in the early Chesapeake. Settlement spread is measured by counting the number of Virginia and Maryland counties and the number of Virginia parishes established by a given date, then dividing by the total number that existed in 1775.

learning, such as when people tried new solutions to new problems or attempted to improve on novel and not-so-novel solutions they learned from others. Evaluation and selective retention occurred continuously and repeatedly. From a range of strategies, colonists adopted the ones that delivered more favorable outcomes. Iterated during weeks, months, years, or even generations, such decision making resulted in increased frequency of variant strategies; the artifacts linked to these winning strategies benefited their users.³

³ Cary Carson et al., “New World, Real World: Improvising English Culture in Seventeenth-Century Virginia,” paper presented at “The Atlantic World and Virginia, 1550–1624,” sponsored by the Omohundro Institute of Early American History and Culture, the College of William and Mary, the Colonial Williamsburg Foundation, the Gilder Lehrman Institute of American History, the Reed Foundation Inc., and the Virginia Foundation for the Humanities, Mar. 4–7, 2004, Williamsburg, Va.

The role that artifacts played thus suggests that their historical meaning can be extracted from analysis of variations in their shapes, forms, and uses in daily interactions with natural and social environments. Consider an unusual iron breastplate excavated from James Fort (see Plate II). The breastplate had been reworked by a Jamestown colonist who welded a metal flange to the front at the right armhole. In late-sixteenth-century Europe, these breastplates were worn by pikemen who defended musketeers from cavalry charges. Pikemen wore armor and musketeers did not, since only pikemen encountered sword-bearing cavalry. In Virginia there was no attacking cavalry and thus no need for pikemen. But a breastplate-wearing musketeer would have an obvious advantage against natives armed with bows and arrows. Hence the breastplate was modified: the flange is at just the place required to steady the butt of a musket raised to firing position. Three such breastplates, all dating to the early seventeenth century, have been excavated at sites along the James River. Indian access to firearms later in the century made even modified breastplates obsolete. One by one colonists pitched them into wells or trash pits or, as was the case with another Jamestown example, pounded them inexpertly into buckets. These discarded breastplates reveal that colonists tinkered with the material limitations of an Old World strategy for a time but discarded any technology that proved ineffective.

Though a useful example, the altered breastplate is potentially misleading because it is a good trick, an obvious solution to an obvious problem. Not all solutions are so clear-cut, nor are all problems. Two analytic models—future discounting and signaling theory—can pull together the disparate categories of evidence that archaeological excavations have produced. Future discounting offers an insight into the process whereby people discount the value of future benefits in ways that can profoundly affect the strategic choices they make to acquire and expend resources in the present.⁴ Models of future discounting help to clarify the choices that colonists made about investments in earthfast architectural technologies. The early dominance of buildings in the Chesapeake that consisted of mud-encased light framing demonstrates uncertainty about the future and highlights immediate investments in land, labor, and tobacco production. The later dominance of earthfast structures raised on heavily framed principal posts covered with riven

⁴ See for example Michael S. Alvard and Lawrence Kuznar, "Deferred Harvests: The Transition from Hunting to Animal Husbandry," *American Anthropologist* 103, no. 2 (June 2001): 295–311; Bram Tucker, "A Future Discounting Explanation for the Persistence of a Mixed Foraging-Horticulture Strategy among the Mikea of Madagascar," in *Behavioral Ecology and the Transition to Agriculture*, ed. Douglas J. Kennett and Bruce Winterhalder (Berkeley, Calif., 2006), 22–40.

clapboards shows declining levels of future uncertainty and payoffs to reinvestment in production. Future discounting models illuminate a parallel set of choices colonists made about the use of wild or domestic mammals and patterns of investment in pigs versus cows.

Another analytic model is signaling theory, which is a way to understand conspicuous consumption and symbolic capital.⁵ This model suggests that signals must be undeniably costly to be effective. Building in brick was costly in the seventeenth-century Chesapeake; hence, it was a powerful and efficacious signal. The amount of wealth that people are willing to expend on signals is a function of the level of the quality they reflect and the payoffs these signals are calculated to achieve. Payoffs can vary widely according to levels of political competition, audience size, and prior familiarity of audience members with signalers. Signaling models are critical to understanding not only the historically documented pattern of increasing use of brick but also the concentration of brick buildings in and around Jamestown, where political competition among elites was most intense and interaction among strangers most frequent. In addition signaling theory offers a cross-culturally valid framework with which to analyze the complex historical dynamics that Atlantic historians refer to as the consumer revolution. Signaling helps explain two trends in seventeenth-century architecture. One is the increased importance of architectural decorative details, initially in the exuberant artisan-mannerist fashion and later in a more restrained classical form. The second is the emergence of novel house plans, including new and larger rooms designed specifically for entertaining and room arrangements that yielded symmetrical facades.

The threads of human activities—building houses, devising floor plans, furnishing rooms, dressing people, arranging landscapes, defining labor relations, and establishing foodways—follow their own evolutionary paths. Each activity can be studied independently to find when significant change occurs. And where such changes converge in more than one thread, patterns lead to discoveries of significant shifts in shared cultural assumptions.

The modern archaeology of the Chesapeake began in the 1970s, when archaeologists and historians fully recognized the signatures of ephemeral buildings that populated the landscape of the seventeenth-century Chesapeake. By 1982 sufficient archaeological data about the region's earliest structures had been gathered to support the essay by

⁵ For signaling theory, see Rebecca Bliege Bird and Eric Alden Smith, "Signaling Theory, Strategic Interaction, and Symbolic Capital," *Current Anthropology* 46, no. 2 (April 2005): 221–48. For a brief discussion of its relevance to the consumer revolution, see comments by Fraser D. Neiman, *Current Anthropology* 46, no. 2 (April 2005): 242–43.

Cary Carson and his collaborators. The archaeological study of the seventeenth-century Chesapeake continued at a brisk pace with research proceeding on two courses. Archaeological analyses significantly extended knowledge of the shape and substance of the material surroundings of everyday life in the seventeenth century and also pursued the idea that a distinctive regional architecture emerged in the Chesapeake during that time.⁶

Carson and his colleagues hypothesized that it was not until late in the seventeenth century that a regional building practice coalesced. They argued that earthfast construction must have been a familiar English practice well known to these early settlers. Subsequent research has recognized this technology at other British sites, reinforcing the idea that there was prior knowledge of it. Recent excavations of seventeenth-century sites in Maine dating to as early as the 1620s, for example, reveal post-in-the-ground structural footprints.⁷

As data from numerous excavations of seventeenth-century sites across the region have accumulated, it has become clear that Carson and his collaborators based their analysis on structures that varied widely in building methods and plan types. Furthermore the earliest of the sites they considered dated to 1619 and the 1620s, years when particular plantations chartered by the Virginia Company established nucleated settlements along the James River. In 1994 renewed archaeological excavations at Jamestown overturned the long-accepted notion that the site of the fort built there in the early summer of 1607 had eroded into the James River. Archaeologist William M. Kelso discovered that much of early Jamestown was intact, sealed beneath layers of soil first plowed in the eighteenth century, piled higher by the construction of a Confederate artillery battery during the Civil War, and protected by the Association for the Preservation of Virginia Antiquities since its acquisition of the site in 1893.⁸ Evidence of the fort and buildings the colonists pieced

⁶ Carson et al., *Winterthur Portfolio* 16: 135–96; Carter L. Hudgins, “Seventeenth-Century Virginia and Its 20th-Century Archaeologists,” in *The Archaeology of 17th-Century Virginia*, ed. Theodore R. Reinhart and Dennis J. Pogue (Richmond, Va., 1993), 167–82.

⁷ Emerson W. Baker et al., “Earthfast Architecture in Early Maine,” paper presented at the Vernacular Architecture Forum annual meeting, Portsmouth, N.H., 1992.

⁸ The most authoritative book on archaeology at Jamestown Island is William M. Kelso, *Jamestown: The Buried Truth* (Charlottesville, Va., 2006). Kelso and Beverly A. Straube summarize the results of the first decade of archaeology undertaken at Jamestown under the aegis of Jamestown Rediscovery (Kelso and Straube, *Jamestown Rediscovery: 1994–2004* [Richmond, Va., 2004], 34). Recent archaeological excavations at Jamestown are not the first on Jamestown Island. Archaeology preceded construction of a protective seawall there in 1903. Prior to the current work, the most ambitious excavations were those conducted under the auspices of the National Park Service from the late 1930s to the 1950s when two pioneers of American historical archaeology, John L. Cotter and J. C.

together during Jamestown's frail beginnings lay inches beneath the modern ground surface. After more than a dozen years of digging, the ongoing archaeological effort at the site of James Fort has traced the outline of the palisaded, triangular enclosure and explored much of its interior (see Plate IV).

Undertaken in anticipation of the 400th anniversary of Virginia's English founding, these excavations gained wide popular attention for the archaeological study of early Virginia. Archaeological data gathered during the last quarter century make it possible to compare evidence from the newly excavated fort and the structures built inside it for the colony's first months and years with data from many more sites, a broader date range, and a wider geographic scope than had been analyzed in the early 1980s. The work done at Jamestown and at scores of other sites throughout the region by a large coterie of archaeologists during the past twenty-five years suggests that an assessment of previous efforts to describe and explain the architecture of the seventeenth-century Chesapeake is overdue (Figure II). This new evidence clearly narrates the evolution of architecture and material culture in the early Chesapeake with its many threads of false beginnings and dead ends.

It is now possible to put the scope of the architectural forms and practices that appeared in the seventeenth-century Chesapeake into a broad cultural context. The sequences of adaptation and innovation that began in 1607 suggest that by the 1640s colonists understood they had created something that responded to their environment and the exigencies of settlement. They borrowed from a number of English building traditions to design something that, if not completely new in its many component parts, was indeed distinctive in its sum.⁹

ARCHITECTURAL TECHNOLOGY IN THE CHESAPEAKE

The Chesapeake's path to distinctive architecture began at Jamestown. James Fort, and nearly everything built, used, or consumed within it, reveals much about the cycle of application and trial of Old World strategies, of frequent disappointment, and of occasional success.

Harrington, directed work in the so-called New Towne, a suburb that spread away from James Fort in the 1620s and that eventually supplanted it. See Cotter, *Archeological Excavations at Jamestown Colonial National Historical Park and Jamestown National Historic Site Virginia* (Washington, D.C., 1958).

⁹ This article depends to a great extent on a database of mostly statistical information drawn from more than three hundred published and unpublished reports of archaeological projects during the last three decades. The database will eventually be available to researchers online through the College of William and Mary and will be expanded and updated over time.

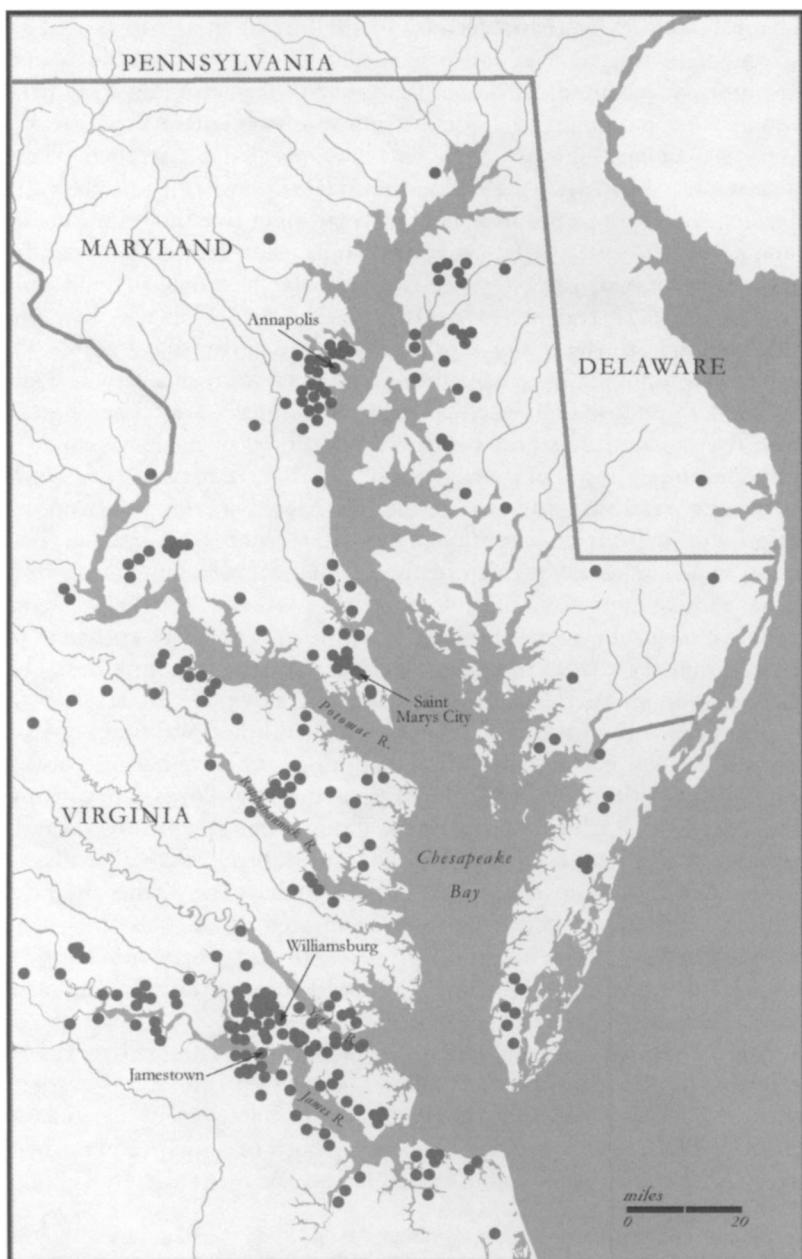


FIGURE II

Location of excavated archaeological sites in the Chesapeake, 1607–1720. Drawn by Rebecca Wrenn. A color version is available on <http://www.historycooperative.org/journals/wm/64.3/graham.html>.

William Strachey's firsthand account of the fort suggested to several generations of historians that the palisaded enclosure was poorly planned and clumsily executed. Some contemporary detractors and historians extended that judgment to a condemnation of the entire Virginia enterprise. The archaeology of James Fort has revealed a flattened triangle that enclosed more than one and one-half acres within a high wall of palisades made from upright trunks of small trees five inches to one foot in diameter and set in a flat-bottomed trench two feet deep. At each of the three corners of the palisades were circular bastions, or raised platforms for artillery and for enfilading musket fire along the fort's side-walls. James Fort was more sophisticated and militarily credible than previously supposed. Defensive ditches six feet wide and four feet deep paralleled the palisade at the southeast and southwest corner bastions where two squared bulwarks presented additional obstacles. As many as three demilunes (triangular enclosures) may have radiated from each of the corner bastions, additional formidable obstacles for attackers. Designed and built by experienced military men who had served in Ireland and fought the Spanish in the Low Countries, James Fort would not have looked out of place on an English military outpost elsewhere.¹⁰

Archaeological evidence indicates that the men at James Fort were well versed in military architecture and had a clear defense plan in mind, which was based on Old World tactics. The evidence, however, also suggests that these traditional outworks—ditches, berms, demilunes, and other obstacles designed for European foes—were abandoned when it became obvious they were of little defensive value against the new Powhatan adversary. Later fortified settlements followed Jamestown's example. Martin's Hundred, Flowerdew Hundred, and Jordan's Journey were all palisaded, but the fortifications at these places did not include the ditches, berms, or demilunes for defense against cavalry or massed infantry assaults.¹¹ The Powhatan had no horses and did not attack in mass formation; thus, the men who designed late Virginia Company-era settlements discarded demilunes in favor of curtain walls of upright palisades.

Archaeologists discovered that James Fort was enlarged to the east soon after Strachey described it. When completed the large rectangular enclosure tripled the fortified area and gave the settlement a pentagonal footprint. Perhaps constructed after John Smith became president of the colony in September 1608, this addition was not ditched, a tacit

¹⁰ Kelso and Straube, *Jamestown Rediscovery*, 33–49.

¹¹ Ivor Noël Hume discusses the enclosure built at Wolstenholme Towne during the Virginia Company period (Hume, *Martin's Hundred* [New York, 1982], 150–52). For a plan of another company-era enclosure at one of the colony's so-called particular plantations, see James Deetz, *Flowerdew Hundred: The Archaeology of a Virginia Plantation, 1619–1864* (Charlottesville, Va., 1993), 27.

acknowledgment that this feature had already dropped from the vocabulary of fortification on the Virginia frontier.

As with the adaptation and innovation found at James Fort, colonists approached the building process in a similar manner. The peculiar social, economic, and environmental conditions of the New World led them to modify traditional framing methods. Of the myriad ways Englishmen built, two structural systems stood out as useful models in the seventeenth-century Chesapeake: slight framing and box framing.¹²

Structures built with slight framing had lightweight utilitarian frames that were encased in clay. Cheap to produce and easy to repair, a slight-frame building required little time for the preparation of materials and served well as a covering to protect inhabitants from the elements. Archaeologists discovered that the first semipermanent buildings erected at James Fort used this type of construction, which continued to be a common choice in the Chesapeake through the first half of the century. A large rectangular building, Structure 165, anchored the southeast corner of the fort and may represent rebuilding after a fire ravaged Jamestown in January 1608 (Figure III). Like most of the earliest buildings, it was earthfast, meaning that the posts forming the sidewalls of the building were set into holes dug into the subsoil to hold the structure erect, which eliminated the need for masonry foundations. Walls were fashioned out of clay, packed around crudely aligned and irregularly spaced posts.¹³ Its roof was likely covered with a thatch of reeds.

Excavations also revealed two additional early buildings (Structures 160 and 166) of similar size and earthfast construction within the triangular fort (See Plate I). Strachey described their placement: "To every side, a proportioned distance from the palisade, is a settled street of

¹² Carson et al., "New World, Real World." Architectural historian Eric Mercer coined the term slight framing. See Mercer, *English Vernacular Houses: A Study of Traditional Farmhouses and Cottages* (London, 1975), 125.

¹³ New scholarship also suggests that clay-wall and earthfast construction was more prevalent among cottages in seventeenth-century England than historians had formerly recognized. On the prevalence of flimsy construction practices, see Robert Machin, "The Lost Cottages of England: An Essay on Impermanent Building in Post-Medieval England," paper presented at the Winter Conference, Vernacular Architecture Group, London, Dec. 13–14, 1997; Rodney Cousins, *Lincolnshire Buildings in the Mud and Stud Tradition* (Lincolnshire, Eng., 2000); J. Eric Deetz, "Architecte of Early Virginia: An Analysis of the Origins of the Earth Fast Tradition" (master's thesis, University of Leicester, 2002). On English framing systems, see Mercer, *English Vernacular Houses*, 125; J. R. Harrison, "The Mud Wall in England at the Close of the Vernacular Era," *Transactions of the Ancient Monuments Society* 28 (1984): 154–74; Harrison, "Some Clay Dabbins in Cumberland: Their Construction and Form, Part I," *Transactions of the Ancient Monuments Society*, new ser., 33 (1989): 97–151; Harrison, "Some Clay Dabbins in Cumberland: Their Construction and Form, Part II," *Transactions of the Ancient Monuments Society* 35 (1991): 29–88; Machin, "Lost Cottages of England."

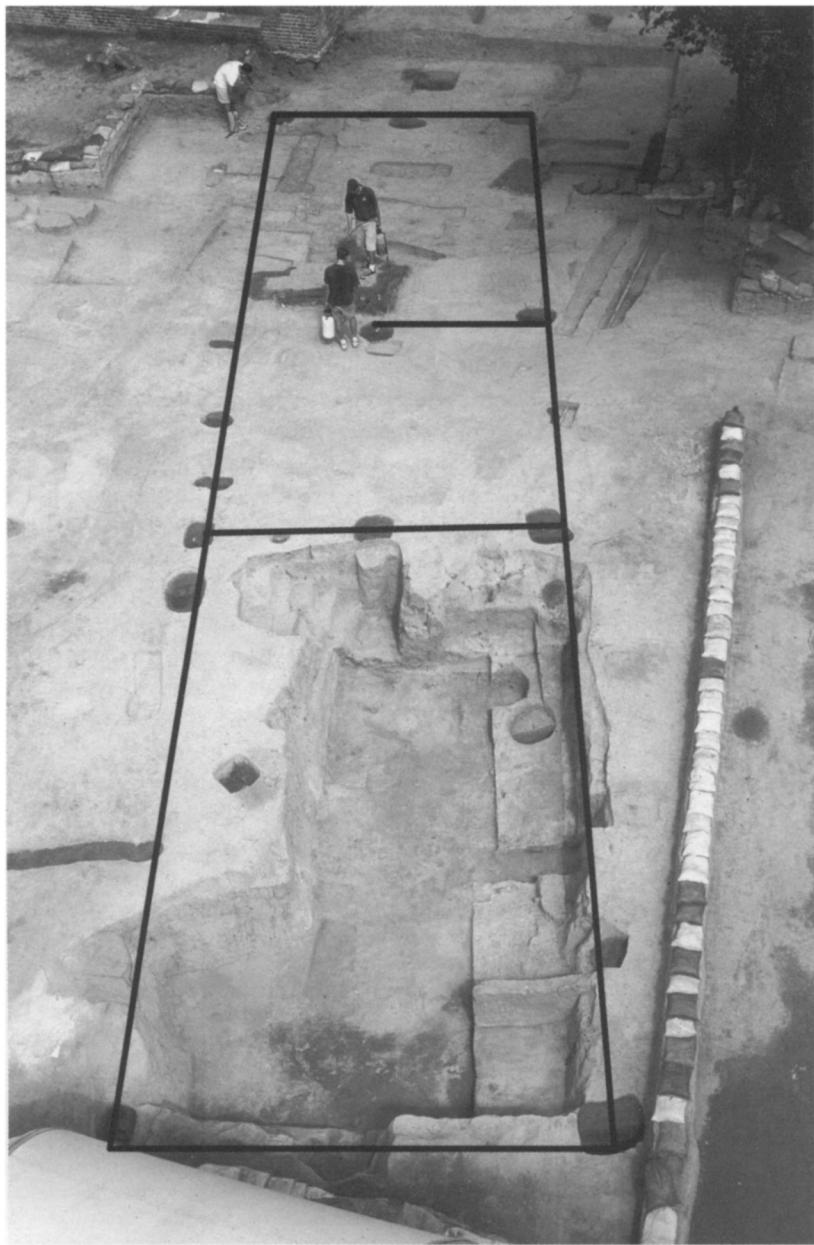


FIGURE III

Plan of Structure 165, Jamestown, ca. 1608. Photographed by Jamie May. Courtesy, APVA Preservation Virginia / Historic Jamestowne. A color version is available on <http://www.historycooperative.org/journals/wm/64.3/graham.html>.

houses that runs along, so as each line of the angle hath his street.”¹⁴ Both buildings were about seventeen feet wide and both had a cellar at one end. Each probably consisted of three to four rooms and, like the long linear buildings that continued to dominate the interior of James Fort and were used sporadically at other early company-era settlements, must have been akin to barracks, housing all domestic and industrial activities from sleeping and eating to alchemy and metallurgy.

Based on what has been recovered so far, buildings within the fort largely consisted of these long barracks and multifunctional structures. The clay-walled rectangular structures at Jamestown stood for less than a decade and, even as they sagged and fell apart, colonists employed an alternative technology when they built two long row houses, each a series of connected rooms, and aligned them along the fort’s western wall line. Unlike the fort’s first buildings, these houses were set on wide masonry foundations of ballast stone and river rocks lightly bonded with clay. They demonstrate that a variety of forms were tested from an early date. Allegiance to slight framing, as measured by the archaeological impression of abandoned buildings, dwindled as the colony’s purpose evolved from trading to agriculture and as forts yielded to farms in the postcompany period.

The functions and layout of the James Fort buildings may not have translated well to the postcompany era, but the post-in-the-ground technology remained popular with later planters who sought efficient ways to build houses. As seasoned colonists and waves of new immigrants experimented with various building strategies, the structural trait that remained most constant through the century was earthfast construction. From the evidence of more than 450 Chesapeake buildings dating from the first century of settlement, nearly 60 percent were earthfast (Table I).

As the century progressed, colonists tried a variety of framing and walling solutions: some traditional methods brought from home, some modifications that tweaked English forms to better fit the Chesapeake landscape, and some largely new inventions. At the 1630s Kirbye site, for instance, thick clay walls were used in conjunction with extremely superficial framing to enclose a building with a heavy internal frame

¹⁴ William Strachey, “A True Reportory of the Wreck and Redemption of Sir Thomas Gates, Knight,” in *A Voyage to Virginia in 1609*, ed. Louis B. Wright (Charlottesville, Va., 1964), 79 (quotation). Surviving firsthand accounts give a sense of the appearance of these first structures. John Smith reported that the buildings constructed after the 1608 fire were raised with mud walls packed around forked poles. Their roofs were covered with a thatch of reeds set in a bedding of earth. See Smith, *The Complete Works of Captain John Smith (1580–1631) in Three Volumes*, ed. Philip L. Barbour (Chapel Hill, N.C., 1986), 3: 295. Archaeology within the fort confirms Smith’s descriptions of just how ephemeral the construction material was and how little attention was paid to the buildings’ alignment. Clay fragments found slumped in their ruins testify to their fragility.

TABLE I
CONSTRUCTION METHODS ON CHESAPEAKE SITES
AS A PERCENTAGE OF THE TOTAL

	<i>1607–24</i>	<i>1625–49</i>	<i>1650–74</i>	<i>1675–99</i>	<i>1700–1720</i>	<i>Number of buildings</i>
<i>On all sites</i>						
Earthfast	79	76	62	49	38	269
Masonry						
foundations						
with walls of						
frame, mud,						
or other	21	16	7	12	24	67
Masonry						
foundations						
with masonry						
walls	0	8	31	39	37	119
subtotal						455
<i>On rural sites</i>						
Earthfast	84	88	82	58	47	228
Masonry						
foundations						
with walls of						
frame, mud,						
or other	16	8	5	13	21	38
Masonry						
foundations						
with masonry						
walls	0	4	13	28	32	54
subtotal						320

Note: Rural sites exclude buildings constructed at Jamestown, Saint Marys City, Annapolis, and Williamsburg (the latter two after their respective foundings).

braced by another set of earthfast posts that were angled and probably used to relieve most of the roof's load from the outer clay walls (Figure IV). Though not a cruck building, the association of angled framing members and superficial wall material is certainly reminiscent of this well-known English form.¹⁵

¹⁵ A cruck is a roof truss composed of a pair of curved timbers whose lower ends are set either on a low plinth or directly in the ground. The cruck blades carry the roof load

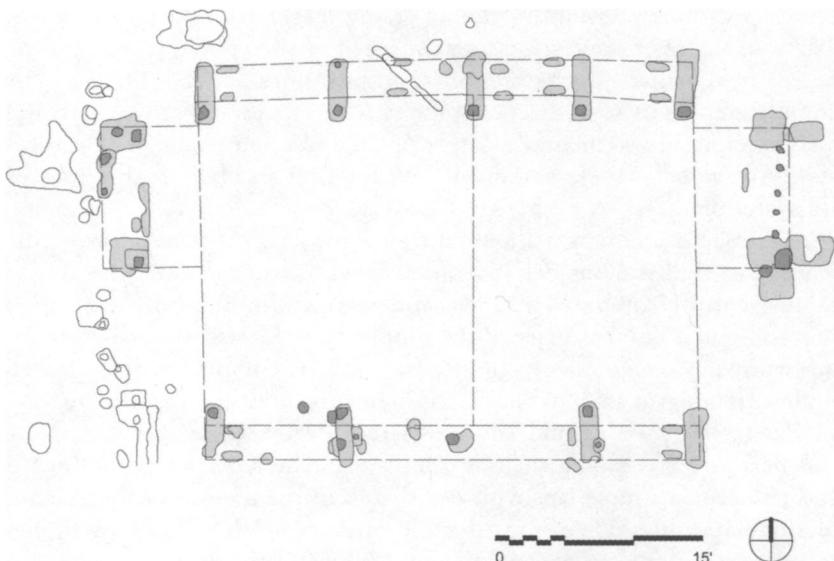


FIGURE IV

Plan of the Kirbye House, York County, Virginia, ca. 1645.

The range of variation and experimentation has been revealed by earthfast houses with sunken floors, tobacco barns and servants' quarters consisting simply of A-frame roofs sitting on the ground, puncheon buildings (a type of earthfast construction made up of closely set, upright posts either driven into the ground or set into shallow holes or trenches), and the occasional frame house with continuous sills resting on a foundation. By midcentury, however, colonists had developed an entirely new approach to construction.

The building technology that eventually emerged as the common solution to regional conditions looked unlike anything in contemporary England. Its lineage, however, was related to the mud-clad, lightly structured dwellings found in early Virginia and to more substantially framed buildings common in medieval and postmedieval England. In addition to the slight framing associated with mud-walled construction, colonists

directly to the ground rather than to a wall plate. Cruck construction was popular in parts of Britain from the early twelfth century through the late seventeenth century. Willie Graham, "A Report on the Nature of the Kirbye House Frame and Wall System," report for Blaney Services, 2004. Interpretation of the archaeological evidence is similar to what has been imagined for Cheddar Palace. See Philip Rahtz, *The Saxon and Medieval Palaces at Cheddar, Excavations, 1960–62* (Oxford, Eng., 1979).

drew on a more substantial timber-frame method called box framing. The wall frame of these structures consisted of sills, posts, plates, and tie beams over which was raised a structurally integrated roof. With its complicated mortise-and-tenon joinery, the intricacy of this structural system required a carpenter's skills to plan and assemble. The easy availability of wood made a variant of box framing an obvious solution for tidewater planters.¹⁶

If timber framing was a natural choice for a region rich in forests, the scarcity of skilled labor delayed the adoption of box framing because it required neatly prepared timbers and intricate joints, both expensive propositions. Colonists married the simplicity and low cost of slight framing with the robustness of the box frame. This combination condensed timber framing to its most basic requirements, creating a stout structure similar to box framing and laid out with a degree of regularity to easily and neatly receive siding such as clapboards. The joinery was minimized and reduced to simple laps with posts sunk in the ground in the manner of slight framing. This form of building became so ubiquitous by the 1640s that colonists coined "Virginia house" to reflect the extensive refashioning of English carpentry practices into something now recognizable as distinct and belonging to the New World.¹⁷ The adoption of this terminology coincides with the increased appearance of earthfast houses with neatly aligned posts (Figures V–VI). Though the regularity of posts on archaeological sites does not ensure that a building was covered with clapboards, unaligned posts preclude their use. Whereas only 30 percent of the surveyed buildings dating to the first half of the seventeenth century were framed in a regular fashion, 68 percent had regular framing by the second half of the century, evidence of the growing predisposition of colonists to use clapboard covering.

¹⁶ J. G. Hurst, "A Review of Archaeological Research (to 1968)," in *Deserted Medieval Villages: Studies*, ed. Maurice Beresford and Hurst (London, 1971), 76–144. For framing technology, see Mercer, *English Vernacular Houses*, 125–26; Richard Harris, *Discovering Timber-Framed Buildings* (Princes Risborough, Eng., 1978), 23–24; Dell Upton, "Early Vernacular Architecture in Southeastern Virginia" (Ph.D. diss., Brown University, 1979), 1: 58–59. Upton notes the evolution of common seventeenth-century framing from earlier close-studded models. While other ornamental framing styles often relied on middle rails to break the length of studs (in part because long timbers were increasingly difficult to obtain), conventional close studding did not. Common seventeenth-century framing of the type that inspired Chesapeake carpentry omitted horizontal rails as principal framing members.

¹⁷ In 1647 the Virginia General Assembly enacted a bill stipulating "that such houses provided for that purpose shall be accompted sufficient prisons as are built according to the forme of Virginia houses, from which noe escape can be made without breaking or forcing some part of the prison house" (William Waller Hening, ed., *The Statutes at Large: Being a Collection of All Laws of Virginia, from the First Session of the Legislature, in the Year 1619* [New York, 1819], 1: 340).

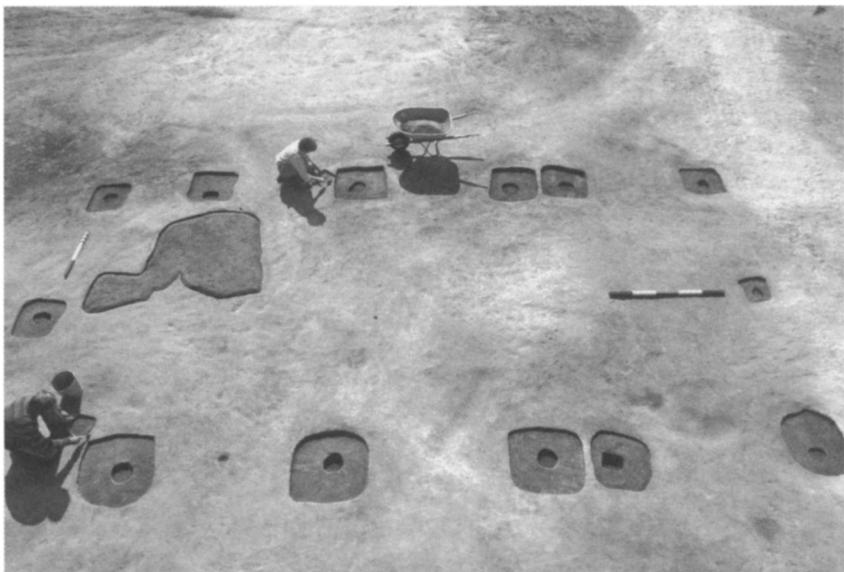


FIGURE V

The Virginia house depended on regularly aligned posts, such as those found for this structure at Jockey's Neck, James City County, Virginia, 1640s. Photographed by Nicholas Luccketti. Courtesy, James River Institute for Archaeology.

The Virginia house was a purely technological solution and not a plan type except that it limited house widths to twenty feet, the distance a frame could span without internal support. It was an ingenious integration of framing and skinning that could be used for virtually any type of building, whether a courthouse, dwelling, or barn. Its major components included an earthfast frame and riven clapboards.

Clay, which was susceptible to the wet, humid, subtropical climate of the Chesapeake, was abandoned as the principal wall covering and limited to chimneys and floors or occasionally packed in eaves or in wall cavities between the studs to weatherproof a structure. From midcentury onward colonists increasingly built with a more substantial and orderly framework, albeit still with earthfast posts. As carpentry in the Chesapeake became distinctive, its use also modestly increased in complexity, one of the signals that, with a rise in investments of time, labor, and expense in housing, architecture was discounted less.

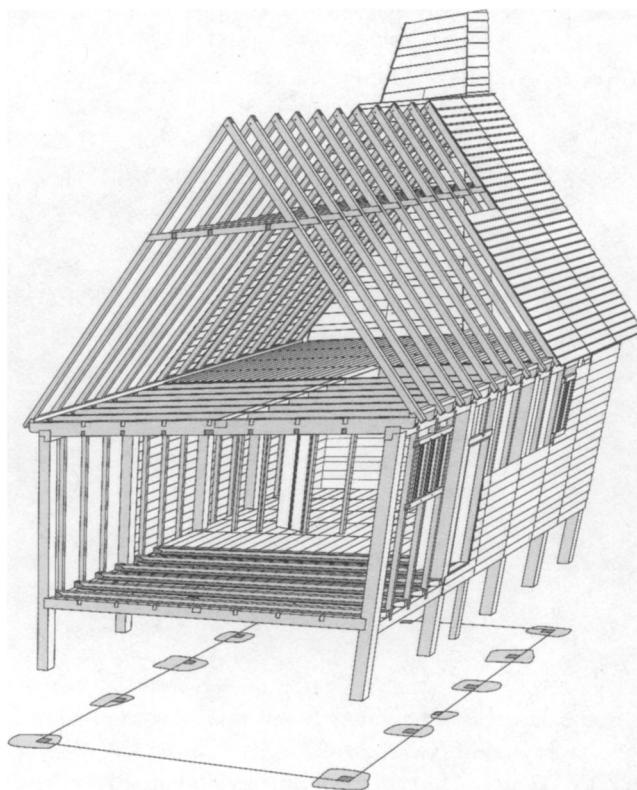


FIGURE VI

Reconstructed view of a Virginia house, Bennett Farm, York County, Virginia, ca. 1648. Drawn by William Graham Jr.

Riven clapboard carpentry of the Virginia house became the dominant way of building during the second half of the seventeenth century, reflecting a coalescing view shared by planters of all social ranks about how a house in the Chesapeake should be built. The frame of the new Virginia house was assembled using timber that was either hewn to shape or split from abundant straight oak and chestnut trees. This technique saved time and labor costs. The simplified lap joinery used to assemble the frame also required less precisely prepared surfaces than those inherent in the more complicated joinery of English box frames. Because the frame was earthfast and the seating of posts in the ground gave the structure rigidity, colonists did not need to use braces. Once end-chimney plans became the preferred arrangement for houses, side-

wall assembly emerged as the ideal way to raise such a frame. The benefits of earthfast, sidewall assembly were twofold: it streamlined joinery at the eaves and made precise alignment of vertical framing members easier to achieve. Such regularity was necessary for the application of wooden siding.¹⁸

Like clay for walls, thatch for roofs had run its course by midcentury. The lightness of clapboard roofs allowed the use of simplified trusses with fewer members of smaller-dimensioned stock than were typical of English carpentry. By lapping clapboards end to end and one row on top of another, builders added rigidity to the roof and eliminated the need for lateral bracing. The elaborate joinery necessary to connect the roof to the wall frame was eliminated altogether by the ingenious use of a square timber called a false plate. This board was pinned to the top of joist ends, and the rafter feet were simply notched over and nailed to it. The false plate dramatically minimized the amount of time required to connect the roof to the lower walls, and the abundance of wood made the cost of materials to cover it negligible.¹⁹

Early company-period sites were dominated by slight-framed, mud-walled buildings. The connection between poor longevity expectations and the ease with which these buildings could be erected reflects the uncertainty settlers felt about life in the new settlement. Uncertainty moved with the frontier, expanding north from Saint Marys City. Richard Chaney's house on the South River, constructed in the late 1650s, and the early houses of Providence on the Severn River, settled by dissidents from southeastern Virginia, continued the slight frame, irregularly aligned posts, and mud-covered conventions of the earlier era.

By the third quarter of the seventeenth century, a degree of stability had been achieved and the Virginia house, in relative terms, was more

¹⁸ Periodic use of older, outdated modes and the regular introduction of new ideas from abroad continued to give variety to the Chesapeake landscape. Bent construction, common in the first half of the century, was the ideal framing mode for center chimney plans because bay spacing could be easily adjusted to account for varying room sizes and chimney bays. With end-chimney plans, bays became less important. For an overview of the early framing system in Virginia and Maryland, see Willie Graham, "Preindustrial Framing in the Chesapeake," in *Constructing Image, Identity, and Place*, ed. Alison K. Hoagland and Kenneth A. Breisch (Knoxville, Tenn., 2003), 179–96. Earthfast bent-frame structures often show a poor alignment of posts along the length of the building, making it difficult to nail wood siding to it. Sidewall structures have the advantage of a continuous plate to help keep the posts in alignment.

¹⁹ Slate, stone, and tiles were rarely used in the Chesapeake countryside and never as part of the Virginia house system. Besides being labor intensive to produce locally and expensive to purchase from abroad, they also required stouter roof frames than those fashioned for a clapboard covering. For a discussion of the origins of the false plate, see Cary Carson, "The 'Virginia House' in Maryland," *Maryland Historical Magazine* 69, no. 2 (1974): 185–96.

stoutly built, was better covered, and had a longer life expectancy than its predecessors. Yet when colonists desired larger or more sophisticated structures, they had to modify the Virginia house form. To construct houses that were two rooms deep, builders required roof types of greater spans than the simplified common rafter roof the Virginia house afforded. Adaptation and innovation led to structures with continuous sills set on masonry foundations with the principal timbers sawn to shape and covered with a more regular treatment of sawn and beaded siding. Referred to as English framing, the structure of the new polite house was more durable and complex than its seventeenth-century Virginia house counterpart and represented a further decline in the inclination to discount investments in architecture.²⁰

DIET

If the future discounting model accurately explains changes in architectural technology during the seventeenth century, it should be useful in understanding change in other domains as well. Analysis of faunal remains from contemporary Chesapeake sites reveals that what seventeenth-century Virginians chose to eat echoed the thinking behind their architectural decisions. During the past several decades, zooarchaeologists studying excavated faunal samples have documented dramatic changes through the first century of settlement in planters' meat diet and, at the close of the seventeenth century, meat in the diet of their servants and slaves. The model of future discounting also elucidates the choice to rely more on the delayed returns offered by animal husbandry than on the immediate returns from hunting and fishing.²¹ Investing years of effort

²⁰ Graham, "Preindustrial Framing in the Chesapeake," 181–96.

²¹ Henry Michael Miller, "Colonization and Subsistence: Change on the 17th Century Chesapeake Frontier" (Ph.D. diss., Michigan State University, 1984); Miller, "Transforming a 'Splendid and Delightsome Land': Colonists and Ecological Change in the 17th and 18th-Century Chesapeake," *Journal of the Washington Academy of Sciences* 76, no. 3 (September 1986): 173–87; Miller, "An Archaeological Perspective on the Evolution of Diet in the Colonial Chesapeake, 1620–1745," in *Colonial Chesapeake Society*, ed. Lois Green Carr, Philip D. Morgan, and Jean B. Russo (Chapel Hill, N.C., 1988), 176–99; Joanne Bowen, "Foodways in the 18th-Century Chesapeake," in *The Archaeology of 18th-Century Virginia*, ed. Theodore R. Reinhart (Richmond, Va., 1996), 87–130; Lorena S. Walsh, Ann Smart Martin, and Joanne Bowen, "Provisioning Early American Towns. The Chesapeake: A Multidisciplinary Case Study, Final Performance Report," National Endowment for the Humanities, Grant RO-22643-93, Colonial Williamsburg Foundation, 1997; unpublished information supplied by Joanne Bowen, curator of zooarchaeology at the Colonial Williamsburg Foundation. For an introduction to evolutionary ecology, see Eric Alden Smith and Bruce Winterhalder, eds., *Evolutionary Ecology and Human Behavior* (New York, 1992). The prey-choice model is a quantitative analysis of foraging that mathematically describes food selection based on recognition of which

to care for and feed a cow until it reaches maturity means taking the risk that someone else might kill and consume the cow or that the cow's owner or his or her heirs might die or move before the cow matures. Some individuals would prefer not to invest in a cow at all and hunt for meat instead. Greater reliance on wild resources, then, implies higher discount rates and greater uncertainty about the future. Data from excavated faunal samples show that reliance on wild species decreased dramatically during the seventeenth century (Figure VII). A regression-based estimate of the overall trend, with its 95 percent confidence limits, demonstrates that wild mammal usage declined significantly up to the third quarter of the seventeenth century, which implies that colonists were increasingly willing to forgo the immediate returns from hunting in favor of delayed returns from husbandry during the first half of the century.

Future discounting is also relevant to understanding changes in the relative abundance of cows and pigs and the place given them in the seventeenth-century diet. When the future is uncertain and current investments are likely to have higher long-term payoffs, domesticated animals with higher reproductive rates will be favored over those with lower ones. Reproductive rates vary inversely with body size. Other factors being equal, higher discount rates should cause farmers to prefer pigs to cows. The Chesapeake pattern of change—the frequency of pig bones relative to pig and cow bones combined—matches the pattern for wild species relative to domestic mammals (Figure VIII).

A regression-based estimate of the overall trend, again with its 95 percent confidence limits, demonstrates that the number of pig remains declined significantly into the third quarter of the century. The agreement between the trends for wild mammal and pig usages offers strong support for the notion that future discounting declined until about 1660 (see Figures VII–VIII). After 1680 pig bone frequencies again increase and by 1720 they average about 50 percent of the total. Significantly, the timing of the increase coincides with the shift from indentured to slave labor. At the Drummond site near Jamestown, two assemblages—one dominated by the remains of pigs and wild mammals and the other by cow bones—have been interpreted as representing two distinct kinds of

sources are most likely to yield the best results. For examples of archaeological application of the prey-choice model, see Jack M. Broughton, "Declines in Mammalian Foraging Efficiency during the Late Holocene, San Francisco Bay, California," *Journal of Anthropological Archaeology* 13, no. 4 (December 1994): 371–401; M. C. Stiner et al., "Paleolithic Population Growth Pulses Evidenced by Small Animal Exploitation," *Science* 283, no. 5399 (Jan. 8, 1999): 190–94. The relevance of future discounting to animal domestication and husbandry is outlined in Alvard and Kuznar, *American Anthropologist* 103: 295–311.

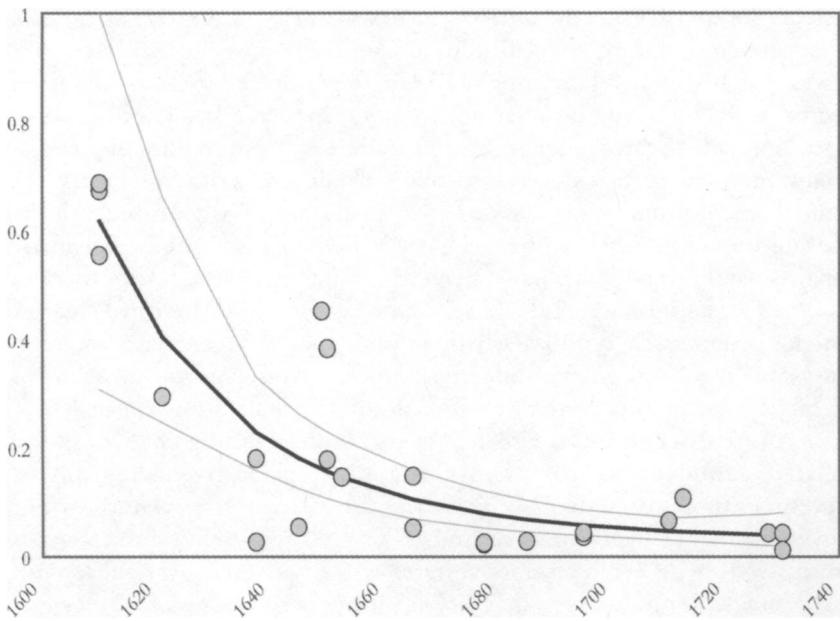


FIGURE VII

Wild mammal index values for a sample of faunal assemblages. The wild mammal index is the proportion of identified specimens from wild mammals relative to the number of specimens for all wild and domestic mammals. The circles represent individual faunal assemblages. The black line shows the temporal trend for these assemblages, estimated by regression. The grey lines are 95 percent confidence limits for the trend estimate: 95 percent of such intervals are expected to contain true trend for the entire Chesapeake.

meals, the former of laborers and the latter of their owners.²² This later increase in pig remains has important implications for changes in how servants and slaves were fed as the seventeenth century drew to a close.

Wild resources were a critical component of the meat diet in the early seventeenth century. Faunal assemblages also document the choices colonists made about which wild species to pursue. A prey-choice model helps explain the shifting factors that informed those choices. The model suggests that in identifying suitable wild prey, hunters should first rank species in terms of the amount of meat gained by consuming them relative to the time and effort required to pursue, capture, and process the animals. In general larger-bodied animals such as deer

²² Miller, "Colonization and Subsistence," 364–67.

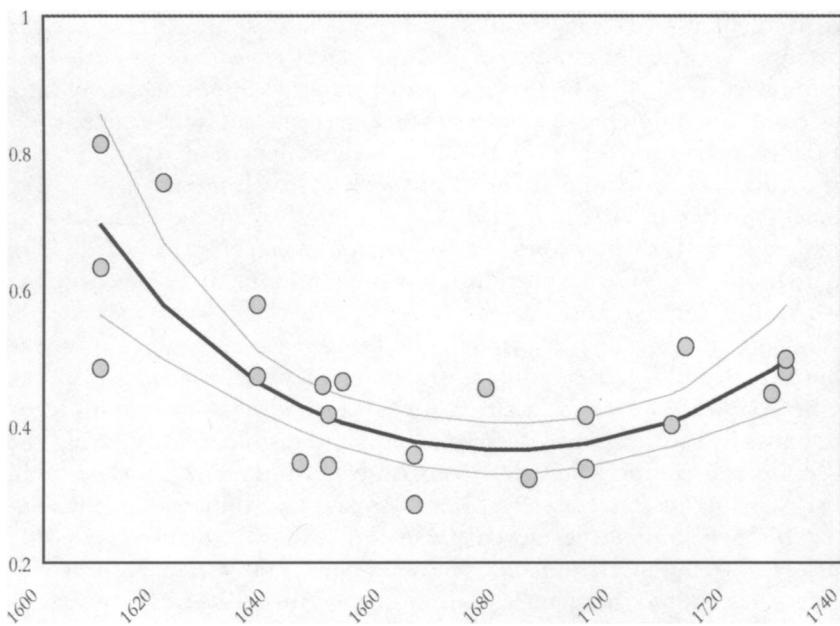


FIGURE VIII

Pig index values for a sample of faunal assemblages. The pig index is the proportion of identified specimens from pigs relative to the number of specimens for pigs and cows. The circles represent individual faunal assemblages. The black line shows the temporal trend for these assemblages, estimated by regression. The grey lines are 95 percent confidence limits for the trend estimate: 95 percent of such intervals are expected to contain true trend for the entire Chesapeake.

supply more meat than smaller-bodied ones such as squirrels. Hence the prey-choice model would expect hunters to target larger-bodied animals to the exclusion of smaller-bodied ones, assuming a bounty of large animals. It would be more efficient to hunt deer than squirrels if deer are reasonably abundant.

In theory overhunting larger animals such as deer decreases their abundance and should force hunters to target low-ranked animals such as squirrels. Inclusion of these smaller animals in the diet is not a function of their abundance but of the shrinking availability of larger ones. Faunal assemblages dominated by smaller-bodied species are thus signs of low foraging efficiency and subsistence stress. The model predicts that deer remains would dominate in early assemblages and then decline

in frequency relative to smaller species such as squirrels. In fact the opposite occurred at Jamestown.²³ Assemblages from the fort period are dominated by smaller-bodied species, whereas the reverse is true of later assemblages, implying that perhaps deer became more abundant after 1620, which seems unlikely. A more likely explanation is that fear of Indian attack constrained the ability of fort-era hunters to roam the local woodlands in search of deer, forcing greater reliance on lower-ranked animals such as squirrels. Early Jamestown colonists had to work harder for less. When constraints on their movement declined in the 1620s, they hunted more deer.

Consumption of fish through the century varied slightly from the pattern of wild game. Adult sturgeon, which were available in the Chesapeake Bay from March to June, weighed around one hundred pounds, five to ten times the size of other accessible species during the seventeenth century. Sturgeon constitute more than 70 percent of all fish remains in fort-era assemblages. Apparently, Indian-imposed constraints that limited the movement of fort-era foragers only applied on dry land.²⁴ Because sturgeon appear in significant numbers in assemblages after 1620, their concentration in the James River during spawning runs seems to have made the considerable effort required to harvest these large fish worthwhile even to colonists now raising domestic animals. By 1640, however, the frequency of sturgeon bones approaches zero, supplanted by smaller-bodied species.

The fort-era assemblages reveal remarkably high frequencies of pig relative to cow, sturgeon relative to other fish, and small wild mammals relative to deer. They also contain higher frequencies of turtles and wild birds relative to domestic mammals than any other assemblages from the Chesapeake region. High frequencies of wild species of all sorts and smaller wild mammals relative to larger ones are consistent with high levels of uncertainty and heavy future discounting. They are also compatible with the hypothesis that ideas the colonists brought with them about obtaining meat were radically at odds with Chesapeake reality.

²³ Joanne Bowen and Susan Trevarthen Andrews, "The Starving Time at Jamestown: Faunal Analysis of Pit 1, Pit 3, the Bulwark Ditch, Ditch 6, Ditch 7, and Midden 1," report submitted to APVA Jamestown Rediscovery, 2000.

²⁴ Some archaeologists have interpreted the Jamestown assemblages as the unique product of the starving time, a notion that construes the assemblages as the result of a Pompeii-like event. Cataclysms of that sort, however, are exceedingly rare. Almost all archaeological assemblages are the result of long periods of accumulation reckoned in terms of decades. Thus it is more likely that the assemblages are typical, suggesting that low foraging efficiency and subsistence stress were enduring characteristics of the colony during the first decades of settlement. This idea also fits well with the recent dendroclimatological discovery that the decade following 1607 witnessed one of the region's worst droughts of the previous millennium.

The astonishingly low frequencies of domestic mammals early on at Jamestown may point to the delusion of being able to trade with locals for meat. Such a strategy might have worked in other joint-stock company outposts but it did not at Jamestown.

If the interpretation of these trends is correct, there are significant implications for understanding change in architectural technology. The synchrony of substantially framed, post-in-the-ground technologies, which had almost entirely replaced slight-framed, clay-wall construction by the middle of the century, with declines in the remains of wild mammals and pigs lends independent support to the idea that the technological shift was also driven by decreases in uncertainty about the future. Discount rates, as reflected in fauna and framing, had stabilized by 1660, yet there is an increase in the frequency of brick building at roughly the same time. The emergence of brick construction was likely linked to a different set of causal dynamics. Increases in the frequency and scale of brick building in the second half of the seventeenth century can be traced to the efficacy of brick as a signal of wealth in the context of economic and political competition among local and English elites.

THE PRESTIGE OF BRICK

As the seventeenth century progressed, costly signaling expanded, especially in the last quarter of the century with increasing wealth, continuing immigration and population growth, and changing levels of Crown involvement in the region's political affairs. Brick-walled buildings were perhaps the ultimate example of costly signaling in the seventeenth-century Chesapeake. Unhappy with the material progress of Jamestown after more than a half century of settlement, royal authorities in London endorsed Governor William Berkeley's scheme to turn the capital into something more than a straggling collection of wooden alehouses and dwellings. Berkeley ushered through the General Assembly in 1662 "An act for building a towne" that specified the construction of thirty-two two-story brick houses in Jamestown financed through a combination of county taxes, fines, and incentives for investors. Laid out in formal arrangement, the town houses were to emulate the pattern of urban development then blossoming in the West End of London. The act stipulated that new wooden buildings were prohibited and standing wooden structures were to be pulled down when they fell into disrepair.²⁵

Building in brick modestly increased following the 1662 act. In 1665 Secretary of the Colony Thomas Ludwell reported that through the efforts of Berkeley and other officials, Virginians had "begun a town of brick and have alreddy built enough to accommodate both the publique

²⁵ Hening, *Statutes at Large*, 2: 172–76 (quotation, 172).

affairs of the country and to begin a factory for merchants and shall increase it as there shall bee occasion for it." In addition to the town houses, the colony erected its first purpose-built brick statehouse. Archaeology at Jamestown confirms the construction of at least two sets of four-unit brick row houses (Structures 115 and 144) that were undoubtedly part of this public works program (Figure IX). Documentary evidence indicates that several more row houses were built, including eight by the governor himself.²⁶

Created at the behest of provincial officials, the row houses found limited acceptance in a society that doggedly resisted urban habitation. Many units became taverns; another served briefly as a jail. All burned during Bacon's Rebellion in 1676 and some remained in ruins years later. All disappeared by the early eighteenth century. Jamestown's boosters never succeeded in turning the town into the idealized entrepôt envisaged in the 1662 act. By 1671 officials had even relaxed their ban on wooden buildings. But for a brief moment in the seventeenth century, thanks to royal pressure and Berkeley's keen eye for investment opportunities, brick building had flourished in the capital.

Masonry construction at Jamestown furnished a visual, structural, and symbolic counterpoint to the wooden buildings that dominated the Chesapeake landscape in the seventeenth and early eighteenth centuries. The absence of building stone in most of tidewater Virginia and southern Maryland made brick the only alternative to wood as a building material. Deposits of clay were plentiful throughout the region, but the skills and cost involved in making bricks and tiles limited their use during the first century of English settlement. As excavations at Providence, in Anne Arundel County, Maryland, and other early- and mid-seventeenth-century sites indicate, imported brick and tile offered a modest alternative to local production. Yellow clinker bricks lined hearths and a checkerboard of yellow- and green-glazed tiles paved floors at Providence, no doubt purchased from Dutch ships that plied the Chesapeake. As the framers of the 1662 act acknowledged, a shortage of brickmakers and bricklayers drove up the cost of their services, placing the use of brick even for foundations and chimneys out of the reach of planters who struggled to find the proper balance between investments in agricultural labor and house improvements.²⁷

²⁶ Martha W. McCartney, *Documentary History of Jamestown Island, Volume I: Narrative History* (Williamsburg, Va., 2000), 122 (quotation). Structure 19 a/b may be a two-unit row erected during this campaign. The brick foundations for each measure twenty by forty feet, the standard size for individual houses in the other rows. For a study of the politics involved in improving the capital, see Warren M. Billings, *Sir William Berkeley and the Forging of Colonial Virginia* (Baton Rouge, La., 2004), 174–84.

²⁷ As excavations at Jamestown and other locations indicate, river cobblestones were occasionally used for foundations. Outcroppings of soft and porous marlstone found

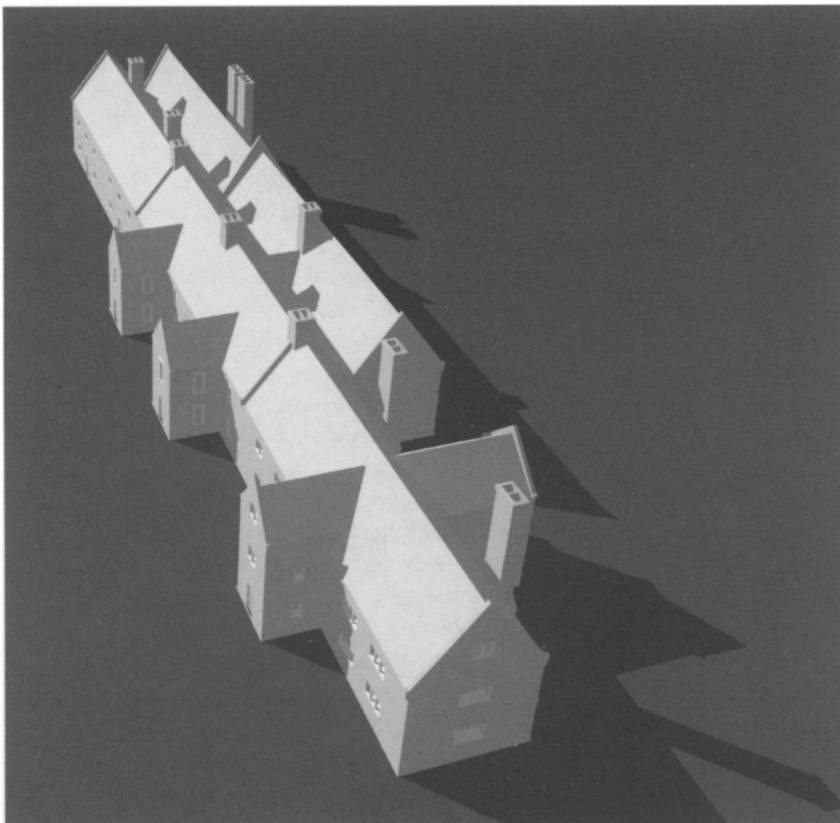


FIGURE IX

Reconstructed view of Structure 144 at Jamestown as it had developed by the late seventeenth century. Drawn by William Graham Jr.

along the York River enticed colonists to use it to build Grace Church in Yorktown in 1697. Beyond these modest and limited sources, easily collectible fieldstone did not exist east of the fall line in the Chesapeake. A few bands of fieldstone in Maryland enabled builders to find enough materials for the construction of a foundation, cellar, or chimney. Except for part of northern Maryland and certain areas between the Rappahannock and Potomac rivers in Virginia, the area also lacked stone for quarrying. The first quarries did not open until the 1730s when a vein of soft but easily workable buff-colored sandstone was extracted from Aquia Creek in Stafford Co., Va. On the use of Dutch brick in Anne Arundel Co., see Al Luckenbach, *Providence 1649: The History and Archaeology of Anne Arundel County, Maryland's First European Settlement* (Annapolis, Md., 1995); Jason D. Moser et al., "Impermanent Architecture in a Less Permanent Town: The Mid-Seventeenth-Century Architecture of Providence, Maryland," in Hoagland and Breish, *Constructing Image, Identity, and Place*, 197–214. On husbanding resources, see Carson et al., *Winterthur Portfolio* 16: 168–70.

Building with manufactured materials was fraught with logistical pitfalls that most planters simply chose to avoid. Others took extraordinary measures to secure those materials. William Byrd I (known as William Byrd of Westover) so desired roofing tiles that he went to the expense of importing them from England.²⁸ Used to line cellars or the backs of hearths, fragments of brick and mortar turn up on seventeenth-century sites throughout the Chesapeake in sparing amounts, as if they were precious resources.

The 1662 town act was the culmination of two decades of efforts by a few individuals to make brick building commonplace in the Chesapeake. They generally failed. Though a few early colonists used bricks for foundations, cellars, and chimneys, brick-walled buildings first appeared in the 1640s and 1650s at only a few sites. The first brick houses tended to be the homes of newcomers rather than native-born men or indentured servants who had served out their time. These well-connected immigrants, including Robert Beverley, Richard Kemp, and William Sherwood, had the financial wherewithal and the desire to build well and conspicuously soon after they arrived. They came from a generation of English gentry and merchants who had taken the initiative in replacing the traditional wooden buildings found in most English towns and on country estates with masonry structures and were determined to replicate their accustomed circumstances despite the difficulties of building in a frontier society. Significantly, members of this group did not confine their economic pursuits to tobacco production.²⁹ Governor Berkeley and this coterie of immigrant provincial officials embarked on substantial brick-building projects that asserted their political authority and social prestige.

The first cluster of these brick buildings appeared in the Jamestown area. Erected by men who aspired to play a role in the colony's political affairs, some of these structures served as semiofficial meeting places for

²⁸ Marion Tinling, ed., *The Correspondence of the Three William Byrds of Westover, Virginia, 1684–1776* (Charlottesville, Va., 1977), I: III. Arthur Allen of Surry County covered his roof with English stone slates.

²⁹ Robert Beverley, Richard Kemp, and William Sherwood are examples of the assertive men who historian Bernard Bailyn observes "assumed control of public office by virtue not of inherited status but of newly achieved and strenuously maintained economic eminence" (Bailyn, "Politics and Social Structure in Virginia," in *Seventeenth-Century America: Essays in Colonial History*, ed. James Morton Smith [Chapel Hill, N.C., 1959], 90–115 [quotation, 96]). Their rapid rise to dominate Virginia's politics in the mid-seventeenth century emanated from a shrewd combination of merchant and planter roles. Signaling theory suggests that they benefited from greater investments in brick because their social and economic standing owed much to commercial and political connections that were not easily discernible. On the rising prestige of brick and stone building in seventeenth-century England, see Nicholas Cooper, *Houses of the Gentry, 1480–1680* (New Haven, Conn., 1999).

the council and courts. Besides his Jamestown houses, Governor Berkeley erected a two-story, E-shaped brick house at Green Spring in the 1640s. He then more than doubled its size by adding a wing in the early 1660s. Berkeley may have been following the example of Kemp, then the secretary of the colony, who was credited by Governor John Harvey with erecting the first brick house in Jamestown on land he had patented in 1638 and who erected another brick house on a plantation at Rich Neck in nearby Middle Plantation early in the 1640s.³⁰

As in Virginia, provincial officials, chiefly members of the Calvert family and their deputies, constructed many of the earliest masonry buildings in Maryland. Following his appointment as deputy governor in 1638, Thomas Cornwaleys built a brick house in Saint Marys City. Charles Calvert, 3d Lord Baltimore, made the brick pile Mattapony in Calvert County his primary residence in the early 1670s. Eventually, other immigrants recognized that costly building projects offered cachet in a society where social rank had not yet solidified. A few merchants and even some planters who did not sink all their capital into tobacco chose to build in brick. John Page at Middle Plantation (1662), Arthur Allen across the James in Surry County (1665), Joseph Bridger in Isle of Wight County (1670s), and John Custis II at Arlington on the Eastern Shore (1675) were among a handful of powerful newcomers who ignored the tribulations of gathering a skilled labor force and expensive building materials and erected substantial brick dwellings to enhance their political and social positions (Figures X–XI; see Plate III).³¹ Costly signaling had its rewards for Page, Bridger, and Custis, who became members of the Governor's Council, and their political attainments were replicated at the end of the century by Lewis Burwell of Fairfield and Edmund Jennings of Ripon Hall. Though possession of a brick dwelling was not a requisite for membership, a fine house offered a boost for newcomers. After Allen's son inherited his father's brick house and large tracts of land in Surry County, he later became Speaker of the House of Burgesses in the 1680s. Obscure men never built brick houses. Yet brick houses constituted only a handful when compared with the hundreds of wooden buildings documented or excavated throughout the Chesapeake. Brick construction was exceptional. The number of brick-walled

³⁰ Billings, *Sir William Berkeley*, 58–64. For a discussion of Kemp's Jamestown house (Structure 44), see Cary Carson et al., *Jamestown Archaeological Assessment, 1992–1996: Evaluation of Previous Archaeology* (Williamsburg, Va., 2006), 63–67. For Kemp's Rich Neck, see David Muraca, Philip Levy, and Leslie McFadden, "The Archaeology of Rich Neck Plantation (44WB52): Description of the Features," Department of Archaeological Research, Colonial Williamsburg Foundation, 2003.

³¹ For the Page House, see John Metz et al., *"Upon the Palisado" and other Stories of Place from Bruton Heights* (Williamsburg, Va., 1998).



FIGURE X

Cartouche, John and Alice Page House, Middle Plantation, Virginia, 1662.
Photographed by Tom Green. Courtesy, Colonial Williamsburg Foundation.
A color version is available on <http://www.historycooperative.org/journals/wm/64.3/graham.html>.



FIGURE XI

Bacon's Castle, Surry County, Virginia, 1665. A color version is available on <http://www.historycooperative.org/journals/wm/64.3/graham.html>.

buildings was on the rise in the last quarter of the seventeenth century but still constituted about one-quarter of the buildings constructed from 1607 to 1720. When the buildings from Jamestown, Saint Marys City, and later Annapolis and Williamsburg—the areas most intensively studied archaeologically—are subtracted from the count, the inventory of masonry-walled buildings in the Chesapeake dating from the first century of settlement is less than 15 percent. If only rural brick dwellings are considered, then the percentage is negligible.

The rarity of brick construction is borne out by the evidence from public buildings in the second half of the seventeenth century. In Virginia only a few counties and parishes had built brick courthouses

and churches by the end of the century. Parishioners at Jamestown labored long to complete a brick church in the 1640s and were forced to rebuild it following its destruction during Bacon's Rebellion. Outside the capital brick churches existed in no more than five or six parishes that bordered the James or York rivers. When the vestry of Christ Church parish in Middlesex County undertook the construction of two new brick churches and a frame one from 1711 to 1717, the total cost of the undertaking was more than 312,000 pounds of tobacco, or approximately £1,800 sterling, which equaled half the total budget for both the county court and the parish for the previous decade. Other vestries eventually followed the lead of Christ Church and replaced their wooden buildings with brick churches, but few did so before the 1730s.³²

In Maryland the record of building in brick was even more meager. County magistrates met in alehouses and earthfast timber buildings until a few brick courthouses were built early in the first quarter of the eighteenth century. In the 1670s a cruciform brick statehouse was built at Saint Marys City, and in 1679 Chancellor Philip Calvert erected Saint Peter's, the most ambitious brick house in the colony, which also served as a public meeting place. Catholics in Saint Marys City erected a large cruciform brick chapel in the late 1660s but outside the capital the religious needs of scattered congregations of Catholics, Quakers, Puritans, and Anglicans were barely served. A 1698 survey of places of worship listed a few small chapels and meetinghouses on both sides of the Chesapeake Bay, described as "plain country buildings" or "clapboard houses" built "after the manner of a tobacco house." In other words these structures were of the Virginia house tradition that emerged for common building. Following the establishment of the Anglican Church in the 1690s, a handful of brick churches, including Saint Paul's in Kent County, built in 1713, appeared in newly formed parishes in the first quarter of the eighteenth century.³³

³² Carl R. Lounsbury, *The Courthouses of Early Virginia: An Architectural History* (Charlottesville, Va., 2005), 67–68. Just how substantial the repairs to the Jamestown church were following its burning by followers of Nathaniel Bacon in 1676 is uncertain. The surviving west tower was added in the 1690s. See Lounsbury et al., "The Early Church at Jamestown, Virginia: A History and Precedents for its Design and Reconstruction," report for Jamestown Settlement, December 2004, 6–8. On the number of brick churches in Virginia in the late seventeenth and early eighteenth centuries, see Dell Upton, *Holy Things and Profane: Anglican Parish Churches in Colonial Virginia* (Cambridge, Mass., 1986), 11–13, 38–39. For the cost of building the Middlesex Co. churches, see Darrett B. Rutman and Anita H. Rutman, *A Place in Time: Middlesex County, Virginia, 1650–1750* (New York, 1984), 202.

³³ Carl Lounsbury, "Anglican Church Design in the Chesapeake: English Inheritances and Regional Interpretations," in Hoagland and Breisch, *Constructing Image, Identity, and Place*, 22–38 (quotations, 26). Magistrates in Saint Marys Co. convened their monthly meetings in the brick statehouse built in the mid-1670s and took over the build-

A generation after Berkeley, another governor, Francis Nicholson, tried to reshape the architectural landscape of the Chesapeake by moving the capitals of both colonies. In the early 1690s, he abandoned Saint Marys City for a more central location farther up the Chesapeake Bay at Annapolis. A few years later, he shifted the Virginia capital from swampy Jamestown Island to a more salubrious location at Middle Plantation, where he laid out Williamsburg. Nicholson was an ardent Royalist and a firm supporter of the Anglican Church. He did all he could to acknowledge these loyalties by strengthening the authority of church and state in his town designs and public building programs. In Annapolis a brick statehouse, a brick Anglican church (Saint Anne's), and a brick grammar school rose at the highest point in the town.³⁴ Compared with the public buildings soon to go up in the new Virginia capital, all were modest affairs.

A rectangular brick church with curvilinear gables built by Page in 1683 stood advantageously in the center of Williamsburg. To proclaim the Crown's authority over the new Virginia capital, provincial officials constructed two prominent and architecturally pretentious buildings: a statehouse and a governor's house. Both the capitol and governor's house had several features that raised them above the general level of architectural competence practiced in early-eighteenth-century Virginia. With its central soaring cupola adorned by royal arms, compass-headed windows, and arcade that linked the two wings of the building, the capitol contained architectural details common in contemporary English public buildings yet almost unknown in the Chesapeake. County magistrates gradually incorporated these features into their courthouse designs.³⁵ Though Nicholson was recalled to England before he could begin an official residence, the Governor's Council undertook the design and oversaw the construction of a two-story, double-pile governor's house at the terminus of a cross-axial avenue just north of the parish church. With its modillion cornice, sash windows, hip roof, and advanced service wings that formed a front courtyard, the governor's house became the prototype for elite residences throughout the colony.

Previous research has linked the emergence of architectural permanence in the Chesapeake as indicated by brick foundations and walls to economic diversification. When viewed from a cost-signaling perspective,

ing when the provincial government moved in the 1690s. After the construction of the new brick statehouse in Annapolis, Anne Arundel Co. justices were allowed the use of a room in the building. See Morris L. Radoff, *The County Courthouses and Records of Maryland Part One: The Courthouses* (Annapolis, Md., 1960), 13, 131.

³⁴ Morris L. Radoff, *Buildings of the State of Maryland at Annapolis* (Annapolis, Md., 1954).

³⁵ Lounsbury, *Courthouses of Early Virginia*, 117, 125–27.

the evidence points to a different explanation for the increased frequency of brick construction during the second half of the seventeenth century and its spatial concentration in the region's political centers. Governors, councilors, and newly arrived immigrants with political and economic ties to Britain and the larger Atlantic world benefited from extravagant investments in brick. The prestige of brick convinced those who were not familiar with the newcomers that they were formidable competitors or valuable social allies.

METAL AND MATERIAL GOODS

Jamestown's appalling attrition rate during the company period due to disease, accident, war, and starvation has led historians to conclude that dire futures and spartan furnishings went hand in hand. Data emerging from recent excavations suggest that the everyday material world at Jamestown was more complicated than that. Excavated artifacts make it clear that Jamestown's first colonists were well equipped to pursue a number of industrial ventures, especially the search for metals then in short supply in England. At least 16 percent of the men identified as artisans who lived on Jamestown Island from May 1607 to October 1608 were involved in the working of metal. Archaeological evidence reveals that the necessary equipment and the waste from the assaying of ores were cast off everywhere in the fort but particularly on the east side of the enclosure. Crucibles exhibit the residue of tests for gold, silver, zinc, and other metals. A ceramic alembic (a specialized vessel used to produce chemicals necessary for the detection and refinement of precious metals) and other metallurgical equipment suggest that the gold refiners and other metalworking artisans who were in Jamestown during the earliest years worked from a well-equipped shop. Like all the bright hopes for quick profits in Virginia, the search for metals was dashed by high mortality rates rather than a paucity of equipment or expertise.³⁶

Along with these implements, archaeologists have recovered more than eight thousand pieces of sheet copper in the excavations at Jamestown. Fragments identical in form and chemical composition to the Jamestown scraps discovered at two Powhatan villages dating to the early seventeenth century confirm the role copper played as currency in exchanges between colonists and native peoples when the English first arrived. The value of copper collapsed soon thereafter, devalued by its abundance. The first colonists at Jamestown intended to use the sheet

³⁶ Kelso and Straube, *Jamestown Rediscovery*, 157–61, 187–91. On artisans engaged in the metal trade at Jamestown, see Carter C. Hudgins, “Articles of Exchange or Ingredients of New World Metallurgy? An Examination of the Industrial Origins and Metallurgical Functions of Scrap Copper at Early Jamestown (c. 1607–17),” *Early American Studies: An Interdisciplinary Journal* 3, no. 1 (Spring 2005): 32–64.

copper as currency, a plan that failed just as surely as their use of copper scraps as flux in assaying ore samples failed to find prized metals.

Archaeologists' discovery inside James Fort of fragments of a type of ceramic pot called Potomac Creek ware also reveals cultural exchange between English colonists and Indians. Produced by Native Americans in the Virginia coastal plain and characterized by inclusions of ground oyster shell, the pots point to the complicated relationship that emerged between English colonists and Powhatan's people. Though these pots may indicate the coercive relationships that often characterized interaction between the two groups, it is also possible that they reflect a brief period of cooperation when Indian corn saved the colony. Nowhere else in the Chesapeake have so many Indian artifacts been recovered at an English site. Contemporary Indian artifacts are almost altogether absent at all other seventeenth-century sites.

If the gold that rich men in England hoped would make them richer proved elusive in Virginia, the men who lived and worked there established and maintained the distinctions that defined social boundaries at home. A quality youth's latchet-style shoe, for instance, survived in the muddy bottom of Well 27, dug outside the fort's western wall, as did a fire shovel with brass fittings. Dozens upon dozens of glass bottles and tumblers along with ceramic plates, jugs, mugs, bowls, chargers, and costrels indicate that even when colonists had nothing to eat, Jamestown's tables were well set. Tailoring irons and goffering irons, the latter necessary to care for and repair the ruffs and collars of looped semicircles of linen that gentlemen preferred, played their roles in maintaining the stiff, starched boundary that separated the colony's leaders from its laborers. Lost in even greater numbers were more than sixteen hundred aglets, small metal cylinders folded on the ends of laces and used to secure items of clothing. Also discarded were seventy-six small, circular cloth seals, the metal disks affixed to bolts of cloth that proclaimed their origin and that taxes had been paid. Many of the more than 1 million artifacts excavated thus far at Jamestown reflect the role costly personal accoutrements and expensive possessions played as props to social and political position within the small social theater of James Fort. They also reveal much about the cruel notion of starving in style.³⁷ Simply put,

³⁷ Kelso and Straube, *Jamestown Rediscovery*, 152, 169–78. Initial analysis of the hundreds of thousands of artifacts excavated at Jamestown, from the simplest and most numerous such as shards of bottle glass to the most complete and complex such as a pewter tankard with its hinged lid still attached, has focused on identification and conservation. Most of the far more difficult task of completing a description of Jamestown from artifactual sources and an explanation of what they reveal about the colony remains unfinished.

though documents may make it clear that Jamestown's first years were arduous and there were inadequate provisions for daily survival, archaeology has discovered that material goods from England were not in short supply.

Clay tobacco pipes were among the first objects to be deployed as costly signals (Figure XII). These displays of conspicuous consumption expanded from person and parlor to plantation as the seventeenth century progressed. While studying Jamestown pipe assemblages in the 1950s, archaeologist J. C. Harrington, one of Jamestown's most careful excavators, noticed that the bore diameter of white clay pipes imported from England declined during the seventeenth century.³⁸ As a result of Harrington's discovery, many archaeologists have measured pipestem bore diameters to date sites. Because the mechanics of pipe production require pipes with longer and thinner stems to have smaller bores, the temporal trend in bore diameters Harrington recognized also highlights a preference over time for longer, thinner, and more fragile pipes. Given the greater encumbrance and higher breakage rates of such pipes, their increase in popularity during the century seems puzzling until one applies the plausible hypothesis that pipes with longer, thinner stems were strategically useful as portable, costly signals of wealth. No single class of portable artifacts supplies more systematic, quantifiable information on social dynamics of commodity production and consumption in the early modern Atlantic and within the Chesapeake.

Englishmen learned from the Algonquin how to smoke tobacco in clay pipes in the late sixteenth century. Initially the practice was exotic and expensive, qualities that gave smoking its appeal to elites. The Virginia Company tried to cash in on the craze in 1607 by sending London pipemaker Robert Cotton to Jamestown to ply his trade. That Cotton actually made pipes in Virginia, intended for shipment back to European markets, is attested by the recovery at James Fort of kiln furniture, wasters, and completed pipes. In a little more than a decade, it became clear that Virginia's economic future lay with the production of the drug itself, not the paraphernalia required to ingest it. As Virginia's tobacco output increased exponentially, tobacco prices fell, bringing smoking within reach of individuals further down the social scale. To stay ahead of the crowd, wealthy smokers demanded longer, thinner, and

³⁸ J. C. Harrington, "Dating Stem Fragments of Seventeenth Century Clay Tobacco Pipes," *Quarterly Bulletin: Archeological Society of Virginia* 9, no. 1 (September 1954): 10–14. See also Lewis R. Binford, "A New Method of Calculating Dates from Kaolin Pipe Stem Samples," *Newsletter of the Southeastern Archaeological Conference* 9, no. 1 (June 1962): 19–21. A subset of Harrington's data was published by Cotter, *Archeological Excavations at Jamestown*.

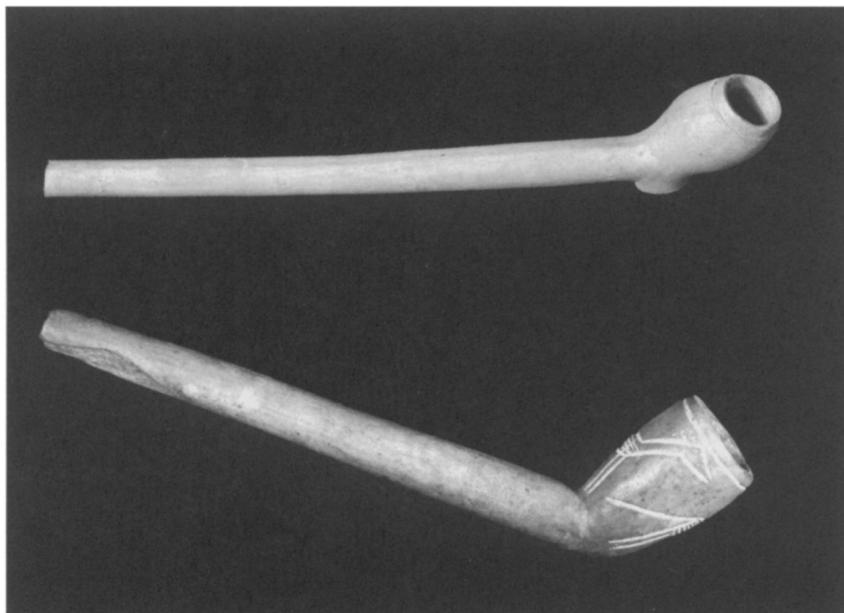


FIGURE XII

Tobacco pipes dating to the second quarter of the seventeenth century recovered from Kingsmill Tenement, James City County, Virginia. The top is an imported English white clay pipe; the bottom, a locally made clay pipe with deer motif. Photographed by Keith Egloff. Courtesy, Virginia Department of Historic Resources. A color version is available on <http://www.historycooperative.org/journals/wm/64.3/graham.html>.

more costly pipes with smaller bores and larger bowls to distinguish themselves from social inferiors. English pipemakers were happy to accommodate larger numbers of more socially diverse customers by turning out smaller-bore pipes for the wealthy and larger-bore pipes for the rest. This process, iterated over decades, produced the continuous decrease in bore diameters that Harrington observed. In addition increases in the variance of bore diameters within assemblages as smoking's popularity grew throughout Chesapeake society can be found in the pipestem assemblages that Harrington and colleagues excavated in New Towne, the streets and lots adjacent to James Fort into which the settlement spread in the late 1620s and 1630s. When arranged chronologically, the decrease in bore diameter accompanied by the increase in variance bears out the cost-signaling model (Figure XIII). Clay pipes

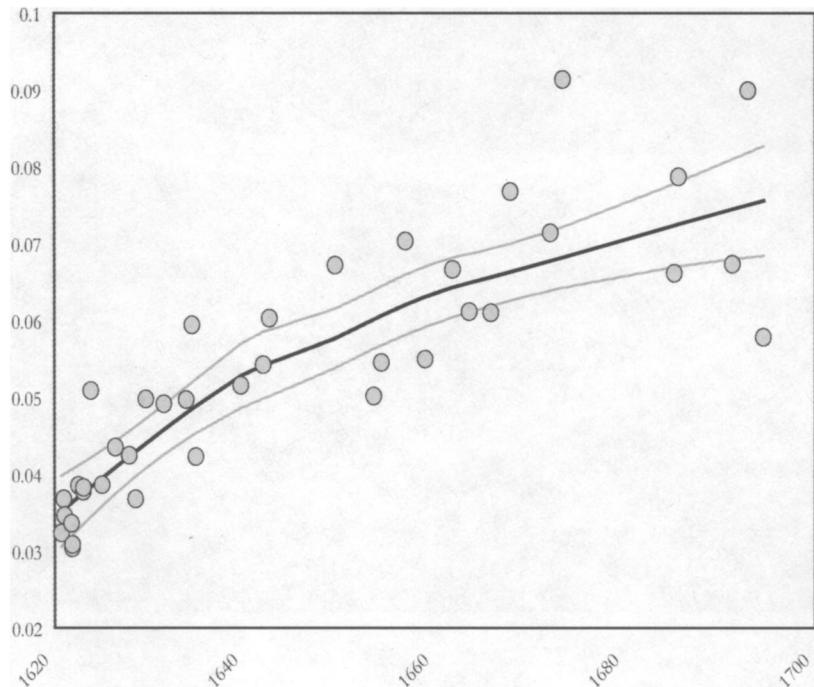


FIGURE XIII

Increase in the coefficient of variation in white clay pipestem bore diameters over time at Jamestown. The coefficient of variation, the standard deviation divided by the mean, measures the spread of the bore diameter frequency distribution. Dates are estimated from the mean bore diameter of each assemblage using Binford's equation (see Lewis R. Binford, "A New Method for Calculating Dates from Kaolin Pipe Stem Samples," *Newsletter of the Southeastern Archaeological Conference* 9, no. 1 [June 1962]: 19–21). The trend and its 95 percent confidence limits are estimated by local regression.

were among the earliest commodities whose manufacture in England and eventual mass consumption throughout the Atlantic world became a hallmark of the consumer revolution.³⁹

³⁹ Alexander von Gernet, "Nicotian Dreams: The Prehistory and Early History of Tobacco in Eastern North America," in *Consuming Habits: Drugs in History and Anthropology*, ed. Jordan Goodman, Paul E. Lovejoy, and Andrew Sherratt (London, 1995), 67–87. On Robert Cotton, see Kelso and Straube, *Jamestown Rediscovery*, 163–66. The data for this analysis of pipe diameters come from Cotter's 1958 report on the National Park Service excavation in New Towne, the area of Jamestown that was developed beginning in the 1620s. See Cotter, *Archeological Excavations at Jamestown*, 233–86. They are supplemented with the few assemblage measurements available from the recent

For much of the seventeenth century, smokers at Jamestown and across the Chesapeake could choose to use either white clay pipes imported in large numbers from England or red clay pipes manufactured in the Chesapeake. Red clay pipes were shorter and had thicker stems than their white clay counterparts. Smokers' choices and the resulting temporal and spatial patterns gleaned from archaeological excavations shed light on the dynamics of consumption and on Chesapeake society. At Jamestown locally made red clay pipes rapidly increased in popularity, relative to imported white clay ones, soon after tobacco became the colony's staple crop. After reaching a peak of about 30 percent from 1640 to 1660, red clay pipes began a gradual decline in popularity. They disappeared at the end of the century (Figure XIV).

During the first half of the century, when tobacco prices and economic opportunity were high, pipe making was probably an attractive option only for bound laborers, free Indians, and, intriguingly, enslaved and indentured Indians. The mix of English and Algonquin designs found on the pipes certainly suggests this conclusion, as does the occurrence of manufacturing debris on several plantation sites.⁴⁰ Manufacturing might have become a more attractive option for free, landless people later in the century, but declining demand for local pipes limited opportunities to profit from it.

excavations at Jamestown. See J. Cameron Monroe and Seth Mallios, "A Seventeenth-Century Colonial Cottage Industry: New Evidence and a Dating Formula for Colonial Tobacco Pipes in the Chesapeake," *Historical Archaeology* 38, no. 2 (2004): 68–82. Archaeologists have noticed the increased variance in assemblages from Flowerdew Hundred and Carter's Grove. See James Deetz, "American Historical Archaeology: Methods and Results," *Science* 239, no. 4838 (Jan. 22, 1988): 362–67; Andrew C. Edwards and Marley R. Brown III, "Seventeenth-Century Chesapeake Settlement Patterns: A Current Perspective from Tidewater Virginia," in Reinhart and Pogue, *Archaeology of 17th-Century Virginia*, 285–309. For an innovative review of this pattern of consumption, see Cary Carson, "Consumption," in *A Companion to Colonial America*, ed. Daniel Vickers (Malden, Mass., 2003), 334–65.

⁴⁰ The historical meaning of locally made red clay pipes found on seventeenth-century Chesapeake sites is a contentious subject. For the large variety of names archaeologists have invented to refer to them, including red-clay pipes, terra-cotta pipes, and Chesapeake pipes, see J. C. Harrington, "Tobacco Pipes from Jamestown," *Quarterly Bulletin: Archeological Society of Virginia* 5, no. 4 (June 1951): 2–8; Susan L. Henry, "Terra-Cotta Tobacco Pipes in 17th Century Maryland and Virginia: A Preliminary Study," *Historical Archaeology* 13 (1979): 14–37; Matthew C. Emerson, "Decorated Clay Tobacco Pipes from the Chesapeake: An African Connection," in *Historical Archaeology of the Chesapeake*, ed. Paul A. Shackel and Barbara J. Little (Washington, D.C., 1994), 35–49; Emerson, "African Inspirations in New World Art and Artifact: Decorated Clay Tobacco Pipes from the Chesapeake," in "I, Too, Am America": *Archaeological Studies of African-American Life*, ed. Theresa Singleton (Charlottesville, Va., 1999); Monroe and Mallios, *Historical Archaeology* 38: 68–82. Emerson's suggestion that the decorative designs are African is a quixotic interpretation that flies in the face of the bulk of the evidence. The definitive statement is L. Daniel Mouer et al., "Colonoware Pottery, Chesapeake Pipes, and 'Uncritical Assumptions,'" in Singleton, "I, Too, Am America," 83–115.

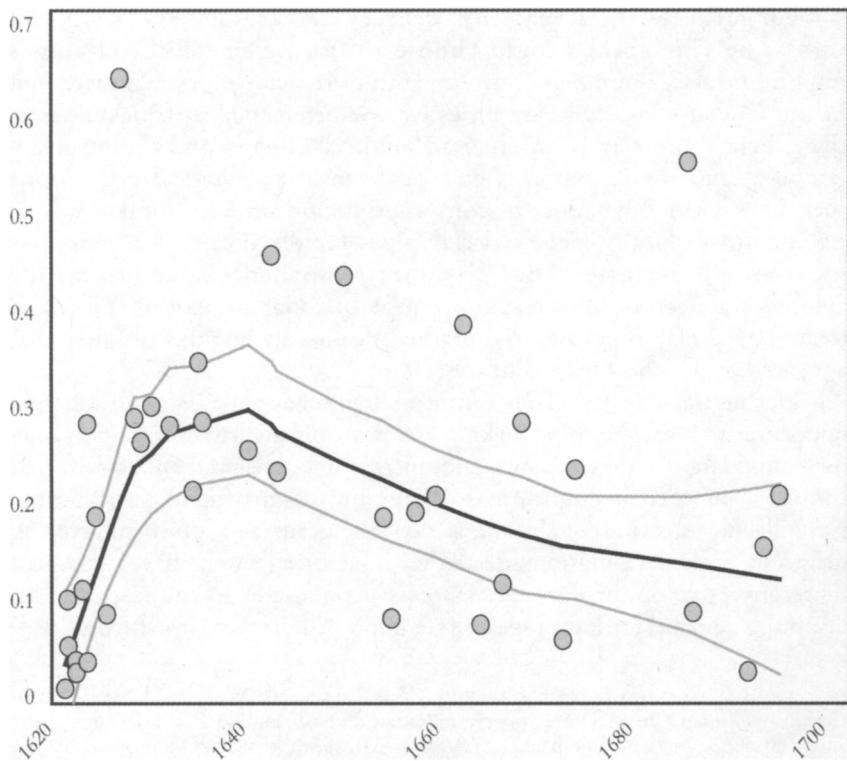


FIGURE XIV

Change in the proportion of red clay pipes, relative to red and white pipes, at Jamestown. Dates are estimated from the mean bore diameter of each assemblage using Binford's equation. The trend and its 95 percent confidence limits are estimated by local regression.

The exuberant designs lavished on early Chesapeake pipes attest to their function as costly signals. Some pipes from the first half of the century bear the carefully worked initials, a kind of terra-cotta ego tag, of labor owners such as Walter Aston. Many of the earliest Jamestown red clay pipes come from archaeological deposits associated with Structure 112, which was probably Governor John Harvey's dwelling. At Rich Neck Plantation, almost all the pipes from the period of Richard Kemp's ownership in the 1640s were locally made. This evidence supports the idea that some members of the colonial elite smoked locally made pipes. At Saint John's, Secretary John Lewger's plantation near Saint Marys City,

the spatial distribution of locally made pipes is radically different from that of imported ones. Apparently, only servants smoked locally made pipes at Saint John's in the 1640s, and they did so in a separate quarter located some distance from Lewger's dwelling. This pattern contrasts sharply with the one for Rich Neck, where the spatial distributions of imported and locally made pipes are nearly identical, implying that Kemp, his peers, and his servants smoked the same kinds of pipes.

In the second half of the century, the use of locally made red clay pipes was increasingly limited to servants, slaves, and the free poor. The spatial distribution of locally made pipes on plantation sites from this period typically falls into distinct clusters, suggesting that different social groups used only locally made red or imported white pipes. The distinctiveness of these distributions is a function of the social segregation of domestic spaces. At Clifts Plantation on the Potomac River in Westmoreland County, Virginia, for example, there was considerable overlap in the use of space by owners and laborers in the last quarter of the century (Figure XV). On the other hand, at Compton on the Patuxent River in Maryland, living areas of the two groups were distinct during the third quarter of the century (Figure XVI).⁴¹

In assemblages dating to the same period at Jamestown, higher proportions of locally made red clay pipes are usually accompanied by higher than expected proportions of larger bore diameter imported white clay pipes. This correlation confirms the usage of both by individuals of lower economic standing. By the end of the century, however, larger bore diameter pipes were sufficiently affordable and locally made pipes considered too parochial by the dwindling number of indentured servants and a rapidly growing number of enslaved Africans, many of whom were probably already familiar with the imported white clay pipes that circulated across the Atlantic world.

Chesapeake elites gave up locally made pipes for imported ones to make it easier for elite visitors from the larger Atlantic world to decode their intentions and power. The demise of locally made pipes coincides with quickened economic and political interactions with English elites, whether government officials or well-connected immigrants, who appeared on the scene in greater numbers at midcentury.⁴² It is probably no accident that use of locally made pipes began to decline at Jamestown at about the same time brick building increased.

⁴¹ Fraser D. Neiman and Julia A. King, "Who Smoked Chesapeake Pipes?" paper presented at the 32nd Annual Meeting of the Society for Historical Archaeology, Salt Lake City, Utah, Jan. 6–10, 1999.

⁴² Bailyn, "Politics and Social Structure in Virginia," 90–115.

Legend

-1 - -0.8	0 - 0.2
-0.8 - -0.6	0.2 - 0.4
-0.6 - -0.4	0.4 - 0.6
-0.4 - -0.2	0.6 - 0.8
-0.2 - 0	0.8 - 1

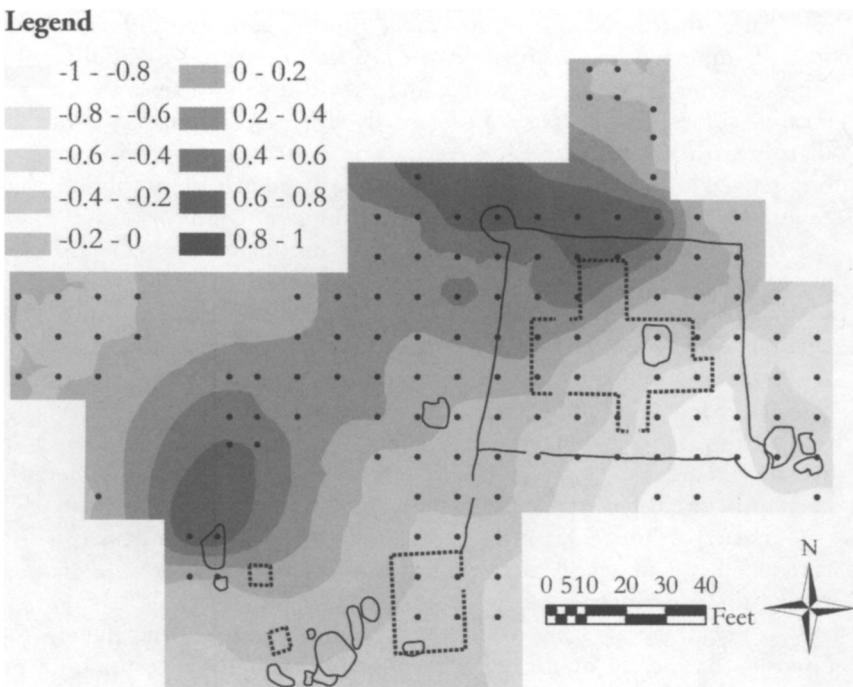


FIGURE XV

Relative frequency of locally made red clay pipes compared with imported white clay pipes at Clifts Plantation, Westmoreland County, Virginia. The contours represent the extent to which the proportion of red clay pipes (relative to red and white ones combined) found in excavation quadrants, whose centers are represented as points, departs from the site-wide average. The departures are estimated as (observed proportion – site-wide average proportion) / site-wide average proportion. Thus negative numbers mean the proportion found in that area was lower than average, whereas positive numbers represent greater-than-average proportions. Red clay pipes are concentrated in higher-than-expected frequencies to the north and west of the principal dwelling. Laborers and labor owners apparently used this structure, albeit different parts of it. The outbuilding to the south has only average proportions of red clay pipes, suggesting shared use by both social groups. A color version is available on <http://www.historycooperative.org/journals/wm/64.3/graham.html>.

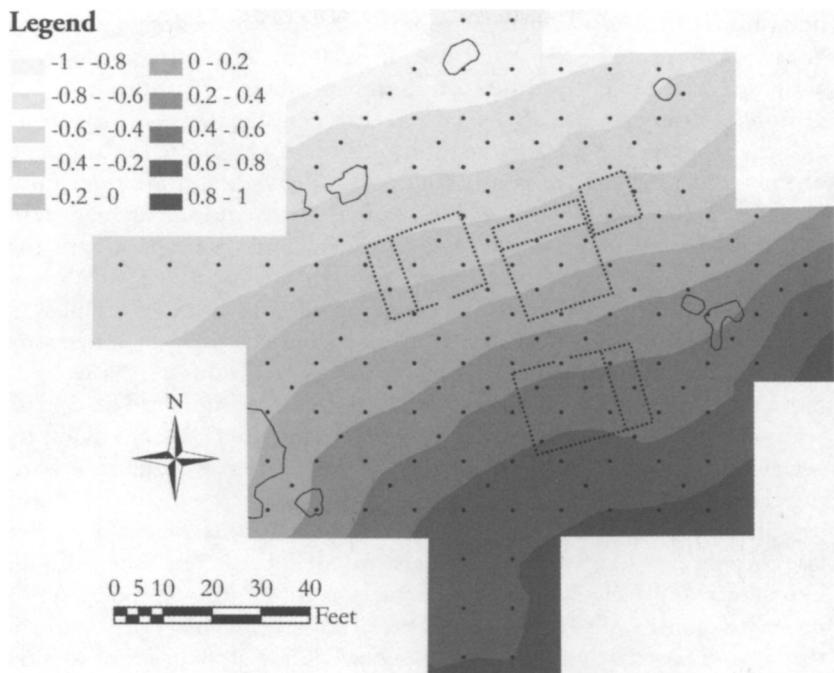


FIGURE XVI

Relative frequency of locally made red clay pipes compared with imported white clay pipes at Compton, Calvert County, Maryland. In contrast to Clifts Plantation, where there was some mixed use of the same building, the pattern points to the near-exclusive use of the southern structure on the site by bound laborers and the complementary use of the three structures to the north by labor owners. A color version is available on <http://www.historycooperative.org/journals/wm/64.3/graham.html>.

THE DYNAMICS OF HOUSE PLANNING IN THE CHESAPEAKE

Brick construction in the Chesapeake mirrored its growing use in England in the late sixteenth and seventeenth centuries, where it not only improved the quality and comfort of houses but also paralleled a reconfiguration of traditional room arrangements. It is possible to discern two different dynamics at work behind changes in house plans on both sides of the Atlantic, one related to changing social and economic relationships between house owners and their servants and slaves; the other, to the consumer revolution and costly signaling. Architectural historians, archaeologists, and social historians who examine house plans to

determine functions of spaces are mindful that room designations suggestive of restricted or singular uses in reality encompassed a variety of activities in the daily routines of family members, servants, slaves, and visitors. Through most of the seventeenth century, the hall in England and the Chesapeake was a large multipurpose room located in the center of most dwellings where families prepared, cooked, and ate their meals, performed odd jobs, played games, stored farm equipment, and entertained guests. In many households servants shared this space with their employers as they ate, worked, and slept in a room filled with chairs, chests, tables, bedding, hoes, and cooking utensils. Near the hall was a secondary room, known variously as the parlor, chamber, or inner room, which served as the principal bedchamber for the master as well as a more private space for domestic chores and entertainment. These spatial relationships are sensitive indicators of contemporary cultural habits and social attitudes, and in the Chesapeake they changed dramatically during the course of the seventeenth century.

Scores of excavations in tidewater Virginia and Maryland during the last thirty years have recovered fragments of a landscape where English inheritance and New World experimentation combined to produce a great variety of house types. By the late 1970s, however, scholars began to construct narratives that made sense of the bewildering array of forms found in the ground. They traced the consignment of many household functions such as the processing and storage of foodstuffs into separate service structures and observed the increasing privatization of domestic spaces as plantation laborers were moved out of the house into separate quarters. According to these historians of Chesapeake material culture, the transformation of domestic architecture had little to do with the warm climate of the region but was instead driven by the insatiable demand for laborers to work tobacco fields. Nearly three-quarters of the immigrants who came to Maryland and Virginia in the seventeenth century arrived as indentured servants. They appeared in increasing numbers from the 1630s until the 1660s. These young men had few kinship ties in the Chesapeake, differing significantly from the example of farmhands traditionally employed in many parts of rural England. English farms were often worked by members of the community, sometimes the sons and daughters of neighbors and friends. Servants were part of the household, working and living alongside their masters. The dynamics of laborers who served Chesapeake masters strained the social boundaries inherent in traditional English house plans, which had encouraged the mingling of family members and servants in common rooms. Increasingly, white indentured servants and black slaves in Virginia and Maryland were less welcome within the tobacco planter's dwelling.⁴³

⁴³ Carson, *Maryland Historical Magazine* 69: 185–96; Carson et al., *Winterthur Portfolio* 16: 135–96; Fraser D. Neiman, "Domestic Architecture at the Clifts Plantation:

Fieldwork conducted in the last quarter century has confirmed a number of arguments—from the elimination of English plan types to the delineation of domestic service functions into separate outbuildings to the relocation of servants and slaves out of the main dwelling—that Cary Carson and his collaborators made in their 1981 essay. This subsequent field research, however, suggests that progression toward a distinctive regional farmstead was neither smooth nor linear. And now that many more sites have been excavated, archaeologists can document the timing of these events and the range of regional variations more precisely. Many elements associated with later Chesapeake plantations are found at sites dating as early as the second quarter of the seventeenth century, though even at the end of the century some planters still experimented with house plans that earlier settlers had long discarded. The unevenness of the progression is due to demographics. An inhospitable climate and a host of diseases killed immigrants at an intolerable rate even by seventeenth-century standards. An imbalanced sex ratio made the establishment of stable households and the natural increase of population all but impossible. Only the continuous influx of new immigrants to the Chesapeake sustained the population.⁴⁴

The Social Context of Early Virginia Building," *Northern Neck of Virginia Historical Magazine* 28, no. 1 (December 1978): 3096–3128; Stone, "Society, Housing, and Architecture"; Upton, "Early Vernacular Architecture in Southeastern Virginia." For the pattern of indentured servitude, see Russell R. Menard, "British Migration to the Chesapeake Colonies in the Seventeenth Century," in Carr, Morgan, and Russo, *Colonial Chesapeake Society*, 104–5, 121. It was common for young English agricultural laborers to enter service first with families in their home communities and then move farther afield. On English agricultural servants, see Ann Kussmaul, *Servants in Husbandry in Early Modern England* (Cambridge, 1981); Ian D. Whyte, *Migration and Society in Britain, 1550–1830* (Basingstoke, Eng., 2000). Historians of the early Chesapeake have traced the transformation from indentured white servants working in the tobacco fields to enslaved Africans in the last decades of the seventeenth century. As the supply of indentured servants declined in the 1670s and 1680s, planters turned increasingly to the importation of slaves, first from the Caribbean and then from Africa. By the 1690s and early 1700s, black slaves constituted between two-thirds and three-quarters of the unfree labor force in the Chesapeake. See Menard, "From Servants to Slaves: The Transformation of the Chesapeake Labor System," *Southern Studies: An Interdisciplinary Journal of the South* 16, no. 4 (Winter 1977): 355–90; Rutman and Rutman, *Place in Time*, 75–76, 165–70; Allan Kulikoff, *Tobacco and Slaves: The Development of Southern Cultures in the Chesapeake, 1680–1800* (Chapel Hill, N.C., 1986), 39–43. In a study of the advent of slaveholding in the Chesapeake, John C. Coombs has argued that large planters along the James River began substantial investment in slaves as early as the 1640s and that by the 1670s almost all provincial and county-level officeholders had acquired slaves. See Coombs, "Building 'The Machine': The Development of Slavery and Slave Society in Early Colonial Virginia" (Ph.D. diss., College of William and Mary, 2003), 69–99.

⁴⁴ Lorena S. Walsh and Russell R. Menard, "Death in the Chesapeake: Two Life Tables for Men in Early Colonial Maryland," *Maryland Historical Magazine* 69, no. 2 (1974): 211–27; Carville V. Earle, "Environment, Disease, and Mortality in Early

It is useful to compare the Chesapeake's architectural progression with New England's. After the great migration of the 1630s and early 1640s, immigration to New England became a trickle. The willingness to experiment with new house types diminished and house plans in New England quickly coalesced around a few types within a generation. New Englanders found that many of the old patterns worked well in the New World and felt little need to experiment with new forms. In the Chesapeake, however, a continuing supply of immigrants ensured that Chesapeake architecture would be influenced by new ideas that arrived with each new group. Merchant-planters who had been part of the commercial bustle of the metropolis were especially aware of new trends in domestic planning that flourished in London and throughout southern England.⁴⁵ In the second half of the century, these forms began to appear in a few buildings erected by a small but socially prominent class of newcomers who saw no reason to jettison metropolitan fashion merely because they now resided on the empire's fringe.

In England as well as the American colonies, the seventeenth century marked a significant break in traditional house design. In many parts of England, the century witnessed a revolution in housing standards as thousands of farmers, husbandmen, merchants, artisans, and others improved their older, medieval dwellings by flooring over rooms originally left open to the rafters, inserting chimney stacks in rooms once heated by open hearths, installing window glass in apertures formerly protected by wooden grills or shutters, and raising one-story structures to two full stories. It was a long, uneven, back-and-forth process that, though nearly completed in some parts of southeastern England by the time Jamestown was founded, scarcely affected more isolated and poorer regions in the northern reaches of the mother country until much later in the century.⁴⁶

Virginia," in *The Chesapeake in the Seventeenth Century: Essays on Anglo-American Society and Politics*, ed. Thad W. Tate and David L. Ammerman (Chapel Hill, N.C., 1979), 96–125. On servant immigration, see Lois Green Carr and Menard, "Immigration and Opportunity: The Freedman in Early Colonial Maryland," *ibid.*, 206–42; Menard, "British Migration to the Chesapeake Colonies," 99–132.

⁴⁵ On the development of New England house plans, see Abbott Lowell Cummings, *The Framed Houses of Massachusetts Bay, 1625–1725* (Cambridge, Mass., 1979), 22–39; Cummings, "Three Hearths: A Socioarchitectural Study of Seventeenth-Century Massachusetts Bay Probate Inventories," *Old-Time New England* 75, no. 263 (1997): 5–49. On the retention of many English cultural values in New England, see T. H. Breen, *Puritans and Adventurers: Change and Persistence in Early America* (New York, 1980). Martin H. Quitt has explored the cultural implications of the commercial backgrounds of many midcentury Virginia merchant-planters. See Quitt, "Immigrant Origins of the Virginia Gentry: A Study of Cultural Transmission and Innovation," *William and Mary Quarterly*, 3d ser., 45, no. 4 (October 1988): 629–55.

⁴⁶ For an overview of the housing revolution in England in the sixteenth and seventeenth centuries, see Anthony Quiney, *The Traditional Buildings of England* (London, 1990), 93–126.

English farmhouses had traditionally consisted of a single range of rooms connected in a linear fashion. The principal entrance, often located along the long wall near one end of the house, led into a cross passage that bisected the house into two uneven sections (Figure XVII). At the smaller, or lower, end of the building, a door from the cross passage opened into a service room such as a kitchen, pantry, buttery, or even a byre for animals. An opposing doorway in the cross passage gave access to the all-purpose hall in the upper end that frequently joined another room, perhaps a parlor.

Farmhands and family members moved through the same cross passage to reach service spaces on one side or to take a meal, work, or sleep in the hall in the center of the house. As long as the household was composed of familiar local people of similar social status, this indiscriminate mingling of hired workers and family members caused few strains in domestic relations. To increase profit margins, however, some farmers chose to reduce costs by hiring day laborers from lower social ranks. Houses with cross passages proved less desirable when the status of laborers changed. They began to be replaced in many parts of England by what Eric Mercer and other architectural historians have called the undivided house, a form that did not separate the dwelling into upper and lower ends. In undivided houses the main entrance, which was usually located in or near the center of the front facade, led from the outside into either a small lobby or directly into one of the principal rooms (Figure XVIII).⁴⁷

If the role of servants within the hall and other more private parts of the house became more circumscribed, the family still needed service rooms in which to cook and store goods. This necessity had a dramatic effect on the way men and women lived. There was a steady growth in domestic conveniences among all but the poorest class of English dwellings. Dairies, pantries, sculleries, brewhouses, and butteries could be added to one side or the other of the main core of rooms in an undivided house. Occasionally, dairies were located in cellars below parlors to take advantage of the thermal qualities of subterranean storage. An alternative location for service functions was behind the main rooms in small outshots. Perhaps the greatest break with traditional domestic arrangements in the seventeenth century was the separation of food preparation from consumption. In homes of the minor gentry, prosperous yeomen, merchants, and professionals, food was cooked in a separate

⁴⁷ For a discussion of the emergence of the undivided house, see Mercer, *English Vernacular Houses*, 60–65. A detailed study of how these plans developed in one particular region can be found in Raymond B. Wood-Jones, *Traditional Domestic Architecture of the Banbury Region* (Manchester, Eng., 1963), 139–62.

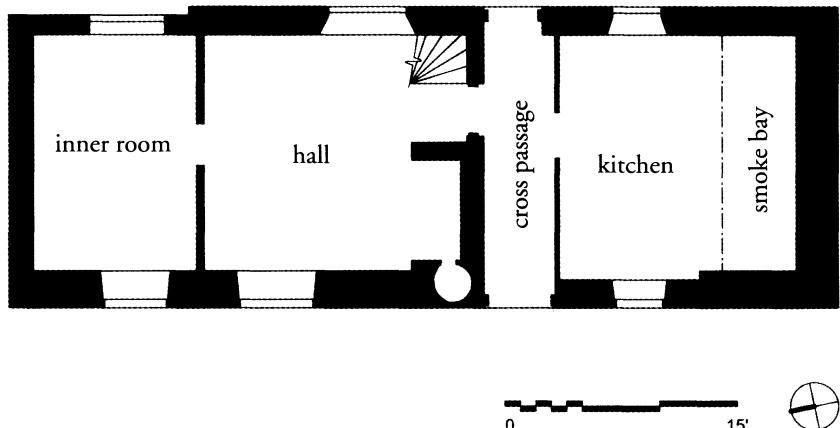


FIGURE XVII

An English three-unit cross-passage plan. Kerris, Compton Dundon, Somerset, England. A late-fifteenth-century house that was later upgraded with the insertion of a masonry chimney in the hall and the addition of a partition at the low end of the passage. Drawn by William Graham Jr.

kitchen and eaten in the hall. Historian M. W. Barley has observed that "the integration of the kitchen into the house did more to upset the householder's customary ideas of the functions of rooms than any other development of this age." The shift in cooking from the hall to a kitchen meant that female family members spent more of their time preparing meals and doing other customary domestic chores in these secondary service spaces located away from the central rooms of the house (Figures XIX–XX).⁴⁸

By the second half of the seventeenth century, the desire for more service rooms, for a kitchen separated from the hall, and for additional living spaces led to the construction of English houses with more specialized rooms. The old linear plan allowed little variation in circulation

⁴⁸ In New England these spaces were known as lean-tos and in Bermuda as "outlets." For the growth of service rooms, see M. W. Barley, *The English Farmhouse and Cottage* (London, 1961), 178–79; Anthony Quiney, "The Lobby-Entry House: Its Origins and Distribution," *Architectural History* 27 (1984): 456–65. On the social significance of the separation of cooking from the hall, see Matthew Johnson, *Housing Culture: Traditional Architecture in an English Landscape* (Washington, D.C., 1993), 137. Cary Carson has argued for a similar occurrence in New England houses in the late seventeenth and early eighteenth centuries with the advent of kitchen hearths in lean-tos and double-pile houses. See Carson, "Culture Transfer, Culture Shock: How the English Farmhouse Was Redesigned for British North America," unpublished paper, 2006.

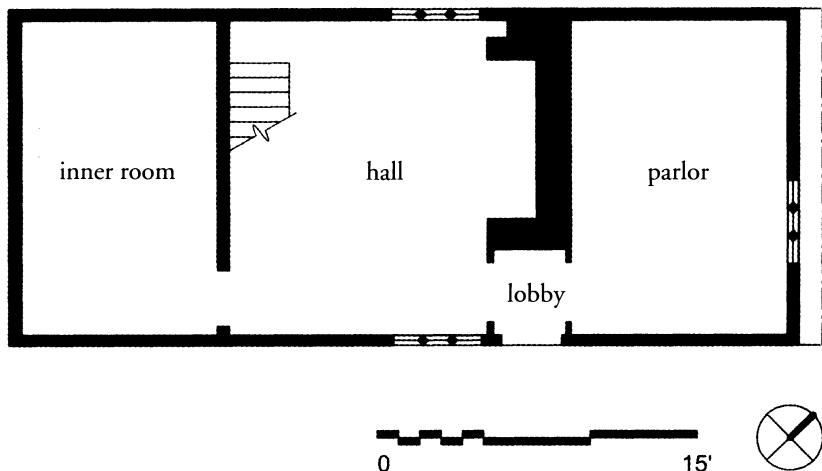


FIGURE XVIII

An undivided, lobby-entry plan. Garden Cottage, Brook, Kent, England. A three-unit, timber-framed, end-jettied house that was improved in the early seventeenth century when the chimney and upper floor were inserted, creating a lobby-entry plan. Drawn by William Graham Jr.

within the house or the relationship between rooms. Therefore builders began to construct double-pile, or two-room deep, dwellings contained within a compact, squarish block, which was a substantial conceptual break from traditional planning ideas. With domestic chores relegated to the back of the house, the front rooms were reserved for more specialized uses and frequently given over to more polite activities. The hall emerged as a more formal entertaining room. In wealthier rural households, the parlor evolved into a room in which family members dined. Elsewhere, especially in poorer households, the hall remained the principal bedchamber.⁴⁹

The switch from a lower- and upper-end orientation to a front-and-back arrangement accompanied a cultural shift in the perception of the house's shell. Renaissance ideas regarding scale, symmetry, and proportion profoundly influenced the appearance of facades. Whereas the function of earlier houses was obvious from the location of doors and

⁴⁹ On the early-seventeenth-century origins and development of the double-pile plan among London merchants and landed gentry, see Cooper, *Houses of the Gentry*, 160–94. On the use of the hall in smaller English houses, see Barley, *English Farmhouse and Cottage*, 239–40.

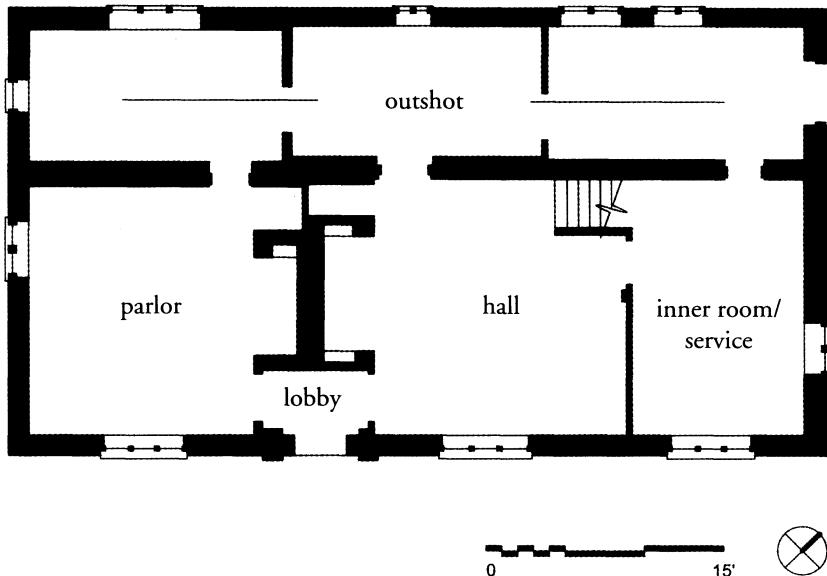


FIGURE XIX

A seventeenth-century brick dwelling with a three-unit lobby-entry plan with integral outshot, or rear range of rooms under a shed roof. Troy Town, Brook, Kent, England. The creation of service rooms and specialized entertaining rooms led to the development in seventeenth-century England of houses with rooms arranged front to back. Troy Town has large front rooms with smaller rear service rooms located beneath a sloping roof. Drawn by William Graham Jr.

windows, these new houses were largely indecipherable from the outside. Central entrances flanked by symmetrically arranged windows of similar size took precedence over older, functional considerations in the placement of openings. Houses with end-wall chimneys superseded lobby-entry ones because they afforded less constricted circulation. A lobby-entry house has two or three rooms and the main entrance opens into a small vestibule in front of the central chimney stack. With a central passage, more generous entrances could be made to all the principal rooms in single- and double-pile houses. A large, showy staircase in the central passage bespoke the wealth of the owner and the increasing importance of second-floor chambers, something nearly impossible to achieve with the cramped enclosed staircases, called winders, associated with lobby-entry plans.⁵⁰ This intersection of academic design and the

⁵⁰ Cooper, *Houses of the Gentry*, 74–107. For the significance of the stair passage, see J. T. Smith, *English Houses, 1200–1800: The Hertfordshire Evidence* (London, 1992), 78–80; Quiney, *Architectural History* 27: 464–65; Cooper, *Houses of the Gentry*, 242.

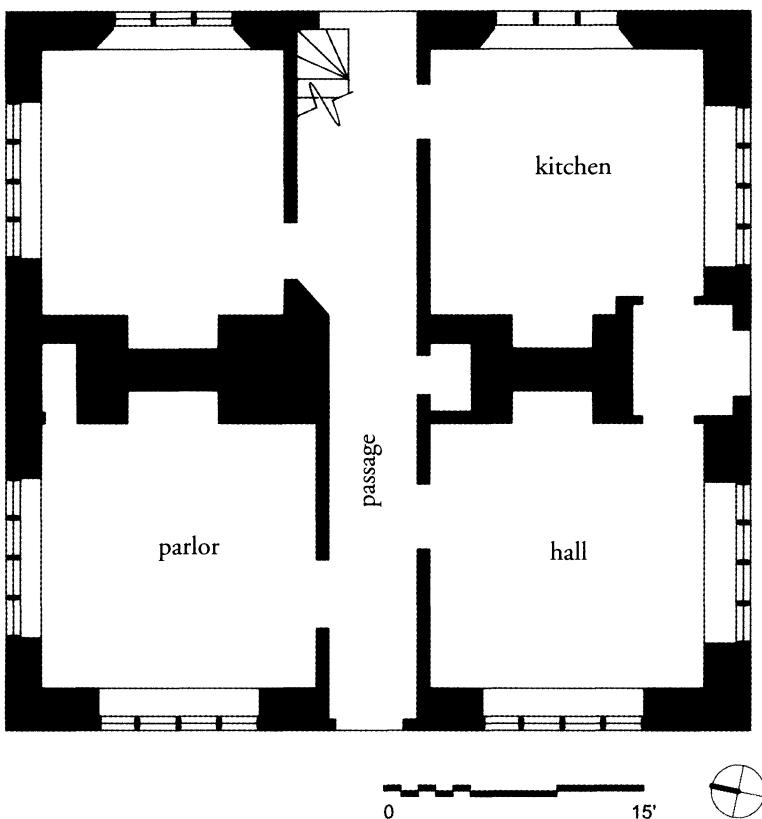


FIGURE XX

An early double-pile brick dwelling described as having four good rooms with stone mantelpieces on the first two floors. Woolmore Farm, Melksham, Wiltshire, England, 1631. The southeast room probably served as a kitchen and has always been divided from the other rear room by the stair passage. It is unclear whether the front two rooms, undoubtedly set up as entertaining spaces, were originally divided by a passage or were two rooms of unequal size. Drawn by William Graham Jr.

reconfiguration of room functions created the polite house, which was not a particular plan type but a self-consciously shaped dwelling whose exterior was governed by the grammar of classical architecture (sometimes loosely applied) and whose interior accommodated specialized rooms set aside for new forms of entertaining.

House plans that were in flux in England through most of the seventeenth century were jostled still further in the Chesapeake by the

growing population of tobacco planters and servants who came from different corners of the kingdom. That there was so much experimentation in the Chesapeake should come as no surprise given the stresses on traditional house planning. It is remarkable, then, that by the late seventeenth century Chesapeake architecture had developed its own distinctive forms with plans that reflected the needs of its creole culture. Yet no matter how much this landscape of small farmhouses, dispersed service buildings, and separate quarters for servants and slaves differed from that of England or New England, the spatial organization of household activities was similar in all those places.

The polite house was an emerging form in the Chesapeake that looked to England for inspiration. At first it was the prerogative of a few and expressed in limited ways: classical forms and finish, a limited range of public entertaining rooms, and more generous, if controlled, circulation. By the second quarter of the eighteenth century, more of the Chesapeake gentry had adopted elements of the polite house. Specialized and private spaces such as dining rooms, studies, and bedchambers became necessities. To accommodate these extra spaces, builders experimented with houses that had a double depth of rooms, sometimes arranged in back wings, and also built box-shaped dwellings with rectangular footprints, echoing the type that had become popular among the English gentry, merchants, and professionals as town residences and country villas. Like their English counterparts, the main rooms were increasingly given over to more restrictive uses, often including new spaces for genteel entertainment such as dining and tea drinking. The absence of standing early structures in Maryland and Virginia compared with dozens of large frame houses that survive in Connecticut and Massachusetts often led earlier architectural scholarship to stress obvious differences between the New England and Chesapeake landscapes, and in doing so scholars failed to recognize common forces that affected development in both areas. The polite house trumped regional building traditions that evolved from distinct economic and social conditions in seventeenth-century England and its American colonies. The Chesapeake's particular circumstances shaped the development of domestic architecture, but much of the emerging polite house was part of a broader trend in house planning in England and throughout the American colonies: the transformation of dwellings from workplaces to showplaces.⁵¹

⁵¹ For a discussion of house planning in eighteenth-century Virginia, see Dell Upton, "Vernacular Domestic Architecture in Eighteenth-Century Virginia," *Winterthur Portfolio* 17, nos. 2–3 (Summer–Autumn 1982): 95–119. The phrase "workplaces to showplaces" is used by Carson, "Culture Transfer, Culture Shock." For a study of how local conditions in the Chesapeake influenced the development of plans, see Fraser D. Neiman, "Temporal Patterning in House Plans from the 17th-Century Chesapeake," in Reinhart and Pogue, *Archaeology of 17th-Century Virginia*, 251–83.

Once tobacco began to drive Virginia's economy, colonists spilled out of Jamestown and their palisaded villages to settle in dispersed plantations. The rural farmhouse with its supporting agricultural buildings became a hallmark of Virginia and Maryland. Elements of that landscape began forming in the late company period (1620–24) with specialized tobacco houses and two-room dwellings. Colonists gave up the elongated barracks of the fort period at Jamestown in favor of smaller houses for family members and their few unrelated laborers. In the second and third quarters of the seventeenth century, Chesapeake colonists established many more aspects of the plantation landscape. The home lots of these farmsteads held the main dwelling house with a few detached service structures. Occasionally, planters built separate quarters for their indentured servants during this period, but servants continued to be an integral part of the household where they worked, ate, socialized, and slept. Houses more than fourteen or sixteen feet in width were large enough to offer headroom beneath the slope of the rafters. The loft, reached by a ladder stair from the hall, supplied additional sleeping space and storage for produce. A few planters experimented with detached kitchens, but for most the hall remained the principal room where meals were prepared.

If a dwelling had dairies and butteries, they often appeared in small shed rooms attached to the side or back of the hall or were partitioned off from the hall in the main block of the house. Though the archaeological evidence for partition walls within the main core can be so imperceptible that these spaces appear to be a single room, scholars know that many were subdivided into several small spaces. In 1645, for instance, a fifteen-by-twenty-foot dwelling on the Eastern Shore of Virginia had a partition that separated the main room from a buttery. A similar division of space appeared in the house erected for Nathaniel Batts along the Albemarle Sound in northeast North Carolina a decade later. Long and narrow service spaces, sometimes no more than six feet wide, were hived off parlors and halls by thin plank partitions in many seventeenth-century English farmhouses and must have been common in early Chesapeake houses.⁵² Though there were many ways to accommodate services within the house, the integration of work and living spaces characterized most houses of this era.

A few colonists built houses with cross passages (Figure XXI). These plans inevitably functioned in the traditional English manner whereby

⁵² Susie M. Ames, ed., *County Court Records of Accomack-Northampton, Virginia* (Charlottesville, Va., 1973), 212. On the position of service rooms in English homes, see examples in Wood-Jones, *Traditional Domestic Architecture of Banbury Region*, 139–82.

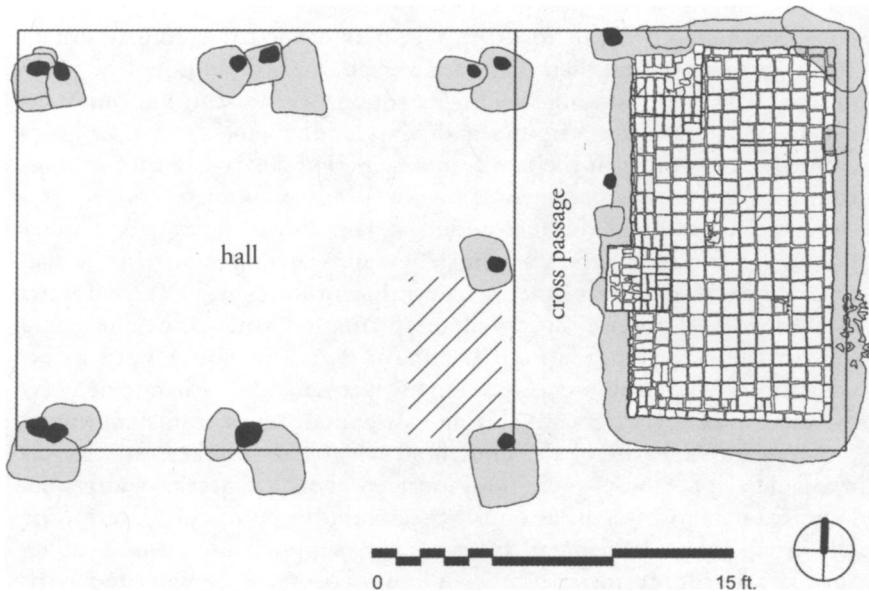


FIGURE XXI

A Chesapeake cross-passage plan. Structure A, Site 44HT55, Hampton, Virginia, ca. 1630–55.

servants and masters used the same entrance and worked alongside each other in the lower end of the house and in the hall. Generally associated with more prominent plantations, a cross-passage house dating from the mid-1620s appeared at Site A at Martin's Hundred in James City County, Virginia, and was perhaps the residence of William Harwood, the former administrator of that particular plantation. At the Boldrup site in Newport News, Structure 2 was built in the 1630s with a lower-end room on one side of a cross passage and a three-bay upper end, presumably incorporating the hall with a smaller parlor beyond it. Unfortunately, the site exhibits a typical problem encountered when excavating many seventeenth-century buildings: the hearth was so shallow that evidence of it did not survive. The scant evidence suggests the lower room was heated, but the exact division of the three-bay upper end remains uncertain.⁵³

Colonists built a number of other recognizable English plan types in the mid-seventeenth century, but the most common form consisted of two main ground-floor rooms with a habitable loft when the house was

⁵³ Hume, *Martin's Hundred*, 46, 170–71. For an archaeological assessment of the Boldrup house, see Nicholas Luccketti, "The Boldrup Site, Newport News, Va.," draft report, James River Institute for Archaeology, 2005.

wide enough to offer headroom. These undivided houses gave direct access into one of the main rooms or into a small lobby or entry porch (Figure XXII). Porches appear increasingly in the archaeological and documentary records in the second half of the century.⁵⁴ Measuring from five to fourteen feet in width and a similar range in length, they could be fully enclosed or partially open on the sides. A porch offered a sheltered buffer between the outside and the hall and included an additional chamber or storage room on its second floor. Lobby-entry houses figured prominently in the campaign to build brick row houses at Jamestown in the 1660s. Two of these row houses (Structures 115 and 144) consisted of a series of four contiguous two-story houses. Each house measured forty feet by twenty feet with two ground-floor rooms positioned around a central H-shaped chimney, creating an eight-foot-square lobby. The prevalence of the undivided house plan in towns and in the countryside demonstrates its adaptability on the Chesapeake frontier.

Another undivided house type became the dominant form during this period, supplying the model for domestic plans in the region during the next two centuries. At the lower end of the social scale, yeomen and cottagers in some regions of England erected two-room houses with one or two gable-end chimneys or, alternatively, with a chimney located on one of the long walls. The principal entrance led into the hall, the larger of the two rooms, and direct access was sometimes buffered by an entry porch (Figure XXIII).⁵⁵ Similarly arranged houses appeared in the Chesapeake in the second quarter of the seventeenth century. Based on archaeological sites in which chimney locations are known, dwellings with end chimneys rose to 74 percent of the total building stock in the third quarter of the seventeenth century, whereas center-chimney plans dropped to 26 percent, having reached a high of 41 percent the previous quarter. As colonists refined and adjusted the plan to match the bay

⁵⁴ Examples of early porches appear at the stone house at Flowerdew Hundred (ca. 1619–20) and Structure 2 (ca. 1650) at Nansemond Fort, Suffolk, Va. See Carson et al., *Winterthur Portfolio* 16: 152; Deetz, *Flowerdew Hundred*, 35. The brick house erected by John Page at Middle Plantation in 1662 had a thirteen and one-half foot-square entrance porch matched by a slightly larger stair tower in the rear, an arrangement similar to that found a few years later at Bacon's Castle in Surry Co., where the porch and stair towers measure eleven feet wide by ten feet deep. The late-seventeenth-century porch towers added to Houses 3 and 4 of Structure 144 at Jamestown are thirteen feet wide by twelve feet deep. By contrast the porch at Smith's Ordinary, a timber-framed building in Saint Marys City dating from the late 1660s, was five feet wide by seven feet long. On the prevalence of porches in estate inventories, see Upton, "Early Vernacular Architecture in Southeastern Virginia," 1: 172. For an early site with porches, see Nicholas Luccketti, "Nansemond Fort, Suffolk, Va.," draft report, James River Institute for Archaeology, 2006.

⁵⁵ Quiney, *Traditional Buildings of England*, 113–15; R. Machin, *The Houses of Yetminster* (Bristol, Eng., 1978), 92–108; Wood-Jones, *Traditional Domestic Architecture of Banbury Region*, 108.

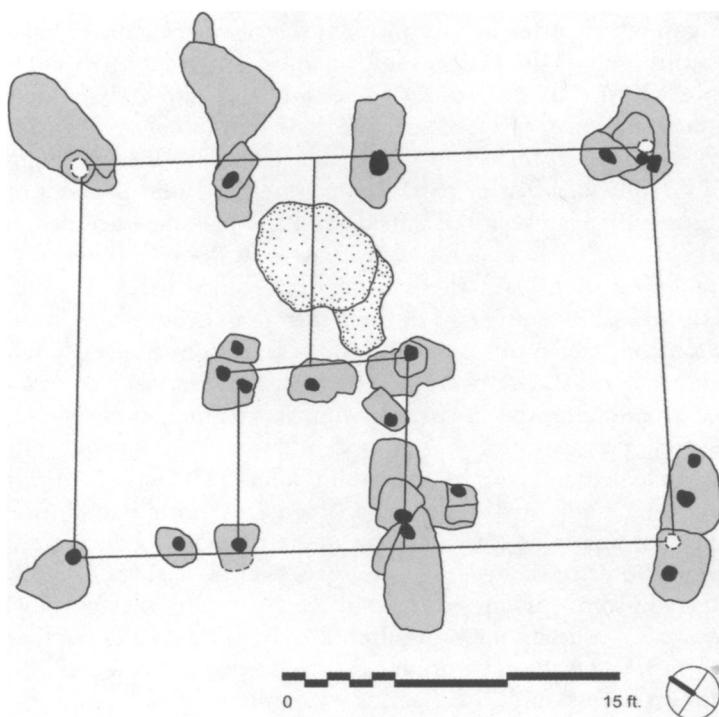


FIGURE XXII

A two-unit, lobby-entry plan. Chaney's Hills, Anne Arundel County, Maryland, 1650s.

system inherent in the structural logic of the Virginia house's riven clapboard carpentry, the essential core of a regional house type had emerged.

LANDSCAPES OF SEGREGATION AND SPECIALIZATION

The segregation of laborers and the movement of services into outbuildings became commonplace in the last decades of the seventeenth century. More plantations had subsidiary structures arrayed around the main house in the form of detached kitchens, quarters, and service buildings. New building types, such as smokehouses, that only appeared in documents at the beginning of the eighteenth century make explicit this transformation of service spaces. Conversely, the traditional English buttery, an internal storage room for liquids, foodstuffs, and implements for food preparation, virtually disappeared from probate inventories as cooking migrated from the house to separate kitchens.⁵⁶

⁵⁶ Carl R. Lounsbury, ed., *An Illustrated Glossary of Early Southern Architecture and Landscape* (New York, 1994), 54, 228–29, 337.



FIGURE XXIII

A two-unit plan with gable-end chimneys (not found in the excavation but surmised), porch, and rear stair tower. Page House, Middle Plantation, Virginia, 1662. Photographed by Tom Green. Courtesy, Colonial Williamsburg Foundation. A color version is available on <http://www.historycooperative.org/journals/wm/64.3/graham.html>.

Never completely banished from planters' houses because of the need for domestic service, Chesapeake servants and slaves nonetheless ate, slept, and socialized in separate quarters. A French traveler to Virginia in 1687 observed that planters "whatever their rank . . . build only two rooms with some closets on the ground floor, & two rooms in the attic above; but they build several like this according to their means. They build also a separate kitchen, a separate house for the Christian slaves [indentured servants], one for the negro slaves, & several to dry the tobacco, so that when you come to the home of a person of some means, you think you are entering a fairly large village."⁵⁷

⁵⁷ [Durand de Dauphiné], *A Huguenot Exile in Virginia; Or, Voyages of a Frenchman Exiled for His Religion with a Description of Virginia and Maryland*, trans. and ed. Gilbert Chinard (New York, 1934), 119–20.

The Chesapeake farmstead was dramatically reorganized to create separate realms for work functions, housing for free and enslaved laborers, and polite space. Substantial planters who controlled a large labor force of indentured servants or who, increasingly by midcentury, turned to African slaves to work their tobacco fields may well have been among the first to establish the type of plantation described by the French visitor. In the 1660s Thomas Ludwell, a powerful associate of Governor William Berkeley, came into possession of Richard Kemp's plantation at Rich Neck. During the next two decades, Ludwell remodeled Kemp's brick house and kitchen and erected a number of earthfast structures just beyond a fence behind the kitchen. Some of these buildings may have served as work buildings whereas others probably housed some of Ludwell's enslaved workforce.⁵⁸

Even on more modest plantations, the pattern of segregation was well articulated. In 1679 Thomas Atkinson purchased sixty-four acres in James City County, Virginia, on which he cultivated tobacco with the help of a few indentured white servants or slaves during the next thirty years (Figure XXIV). During the course of his ownership, Atkinson erected a two-room earthfast dwelling with one gable-end chimney and a small shed addition. A quarter-kitchen that stood approximately twenty feet off the back corner of the main dwelling was also of earthfast construction and contained an offset fireplace at one end with two subfloor pits, one in the common location directly in front of the hearth. Near the quarter was a small, four-post, unheated work building. A paled fence ran parallel to the back wall of the main dwelling and separated the site into two distinct sections with Atkinson and his family on one side of the line and his servants or slaves and services housed on the other. A gate a few feet south of the house allowed access between the divided home lot.⁵⁹

As the quarter at the Atkinson site demonstrates, the living spaces of laborers, now increasingly separate, were changing. The end of the seventeenth century saw the emergence of a novel architectural form in the region: houses, likely slave houses, whose floors were riddled with multiple subfloor pits. The pits were apparently subterranean closets in which enslaved men and women stored personal possessions. Evidence of this practice relates to a shift in how laborers were provisioned. In the eighteenth century, slaves were given weekly food rations on an individ-

⁵⁸ Muraca, Levy, and McFaden, "Archaeology of Rich Neck Plantation," 47–78.

⁵⁹ Steve Archer, "Atkinson Site (Site CG-10): Excavation of a Late 17th- Early 18th-Century Site at Carter's Grove," Department of Archaeological Research, Colonial Williamsburg Foundation, 2001. See also http://research.history.org/archaeological_research/mhpage/whowasatkinson.htm.

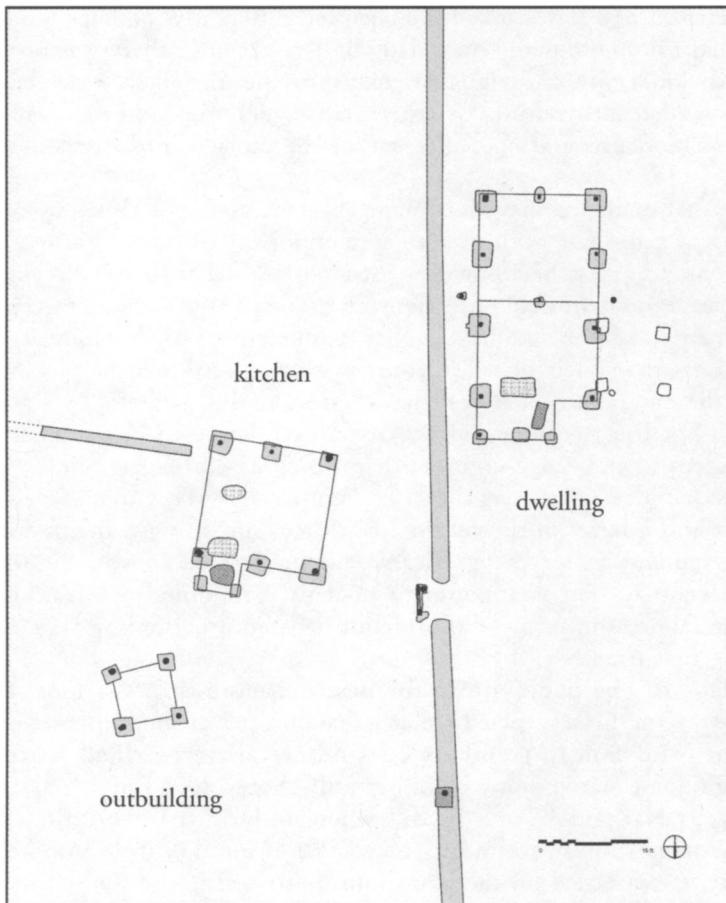


FIGURE XXIV

Atkinson site, James City County, Virginia, last quarter of the seventeenth century. The kitchen/quarter is separated from the main house by a paled fence. Drawn by William Graham Jr.

ual basis, which needed to be kept secure.⁶⁰ Subfloor pits offered a solution. The absence of multiple pits in the seventeenth century suggests

⁶⁰ Evidence of this practice raises an interesting and so far unasked question: why is the evidence so scant for multiple pits beneath the floors of houses used by indentured servants and slaves earlier in the seventeenth century? Saint John's in Saint Marys City offers a good example. Here the early servant quarter behind the main house initially had no subfloor pit and later acquired only one. A similar situation existed at Richard Kemp's Rich Neck in the 1640s and 1650s. Again, there was only a single large subfloor pit under

that servants and slaves may have been fed differently; perhaps food was provided for communally on a daily basis and hence there was no need for individual pits. Individual, weekly provisioning likely emerged late in the seventeenth century as part of an owner strategy to shift all the costs of food preparation and some of the costs of procurement onto laborers.

Faunal evidence may document the emergence of this new provisioning system. Salt pork was a key component of slave rations in the eighteenth century. Slave owners used pork instead of beef because its lower water content made it easier to preserve. Large eighteenth-century slave quarter assemblages have higher frequencies of pig bones relative to cow bones than their nonslave contemporaries. It should be possible to chart the emergence of a pork-based provisioning strategy by tracking changes in the frequency of pig remains relative to cow remains in seventeenth- and early-eighteenth-century assemblages. Such values decline for most of the century (see Figure VIII). This trend levels out in the third quarter of the century. But then, surprisingly, the frequency of pig remains increases significantly in the last decades of the seventeenth century. The abandonment of daily, communal provisioning of food to laborers in favor of an individual-based provisioning system is a likely explanation.⁶¹

Planters who could afford to construct more than the most rudimentary structures turned to plans that limited chance interaction of servants and family members outside certain prescribed patterns. Though some native-born colonists still chose older English arrangements, as Nathaniel Pope Jr. did when he built a three-unit, cross-passage manor house around 1670 at Clifts Plantation in Westmoreland County, most settled on the two-room undivided house. Over time the ubiquitous two-room house improved in quality. The trend was to enlarge the depth of the house, often to twenty feet, the most simple

a building that was likely a kitchen and quarter, and there are no pits under the floors of earthfast buildings that excavators infer were used to house slaves in the third quarter of the seventeenth century. The earliest archaeological descriptions of subfloor pits can be found in William M. Kelso, *Kingsmill Plantations, 1619–1800: Archaeology of Country Life in Colonial Virginia* (Orlando, Fla., 1984). For a brief discussion of their functional significance, see Fraser D. Neiman, “Changing Landscapes: Slave Housing at Monticello” (2003), <http://www.pbs.org/saf/1301/features/archeology.htm>. See also Lorena S. Walsh, “Work and Resistance in the New Republic: The Case of the Chesapeake, 1770–1820,” in *From Chattel Slaves to Wage Slaves: The Dynamics of Labour Bargaining in the Americas*, ed. Mary Turner (London, 1995), 97–122.

⁶¹ Maria Therese Fashing, “Recognizing Variability in Eighteenth-Century Plantation Diet through Pattern Analysis” (bachelor’s thesis, College of William and Mary, 2005). On the preservation properties of pork and beef, see Joanne Vickie Bowen, “A Study of Seasonality and Subsistence: Eighteenth Century Suffield, Connecticut” (Ph.D. diss., Brown University, 1990), 108–44.

framing could accommodate without overly taxing the complexity of the roof system. A wider house meant that the garret could be fitted up as habitable chambers. Ceiled, finished, and accessed by a staircase rather than a ladder stair, a few may have been heated by a fireplace. With the increased use of dormers, the upper floors of genteel houses contained space far superior to the dark, cold, and cramped garrets of their earlier counterparts. Increasingly, at the turn of the eighteenth century, the interiors of houses received more genteel finishes that masked evidence of the framing. A system called flush framing was devised to hide a building's structure. Interior wall planes were evened out by enlarging secondary members such as studs and reducing the depths of the principal timbers. The new framing convention changed the structural dynamics of the building, and the joinery of these members was altered accordingly. A handful of these improved houses from the late seventeenth and early eighteenth centuries has survived because later owners found them adaptable to warrant substantial repairs to the lower parts of their frames, whereas others had their wooden shell encased in brick walls.⁶²

The small, enclosed entrance porches that had furnished an intermediary space between the outside and the hall faded from fashion in the first quarter of the eighteenth century. Their disappearance corresponded with the rise in popularity of the center passage in the homes of wealthier planters and especially merchants and prosperous tradesmen in towns. The stair passage facilitated the reordering of household activities by offering a means for family members, servants, and visitors to move between rooms and floors without having to pass through one room to enter another. This development facilitated setting aside certain rooms for specific functions. Center passages not only kept uninvited visitors from entering directly into the principal rooms of the house but also supplied a waiting room for servants.⁶³

The center passage enhanced the development of the polite house, where rooms dedicated to specific, highly specialized, and socialized

⁶² For a discussion of the rise of genteel behavior and the emergence of the polite house, see Cary Carson, "The Consumer Revolution in Colonial British America: Why Demand?" in *Of Consuming Interests: The Style of Life in the Eighteenth Century*, ed. Cary Carson, Ronald Hoffman, and Peter J. Albert (Charlottesville, Va., 1994), 483–697. Note that English framed buildings were built earlier in the century but remained a rarity until the early eighteenth century. On Pope's House at Clifts Plantation, see Neiman, *Northern Neck of Virginia Historical Magazine* 28: 3099–3103. Frame houses later encased in brick are spread across the Chesapeake. Notable examples include Holly Hill and Cedar Park in Anne Arundel Co., Md., dated by dendrochronology to 1699 and 1702, respectively. The Matthew Jones House in Newport News, Va., was built about 1720. All three structures were bricked sometime in the second or third quarter of the eighteenth century.

⁶³ Mark R. Wenger, "The Central Passage in Virginia: Evolution of an Eighteenth-Century Living Space," in *Perspectives in Vernacular Architecture, II*, ed. Camille Wells (Columbia, Mo., 1986), 137–49.

functions began to reshape the arrangement of living spaces. Adoption of a new set of rules and behaviors followed English ideas of gentility and guided the reshuffling of space in Chesapeake housing. A growing tendency to entertain guests away from the daily chores of housework led to the setting aside of rooms for the reception of visitors. These rooms contained dedicated implements for entertainment, including new forms of seating furniture, tea sets, and fashionable tableware that allowed the host and invited company to demonstrate their refined tastes in social interactions and to display the material goods that signaled their understanding of the role of ritual objects in genteel society. To underscore the social importance of these entertaining rooms, they were most commonly located at the front of the house on the ground floor. The old hall now shed all functions save that of reception and the new fashion for tea ceremonies. Renamed the parlor, this room and the dining room became the entertainment suite. Along with the center passage, these spaces received the best architectural finishes, such as carved chimneypieces, paneled wainscoting, and built-in cabinets displaying costly ceramics and glass.⁶⁴ Across Maryland and Virginia, planters, merchants, and professionals upgraded and remodeled the public arena of their domestic lives in accord with metropolitan-inspired ideals and rituals of genteel living.

Scholars can trace rooms specifically set aside for social rituals to a few Chesapeake houses in the late seventeenth century. Cary Carson has interpreted the massive two-story wing that Governor Berkeley added to his original E-shaped dwelling at Green Spring in the early 1660s, for example, as a series of grand entertaining rooms set above an arcaded basement and used in much the same manner as a traditional English lodge on a large estate to which parties retired on special occasions for feasts and other amusements.⁶⁵ The desire to accommodate polite entertainments in appropriate settings led rich planters, merchants, and provincial officials to experiment with a variety of plans that offered at least three principal ground-floor rooms: a dining room, a parlor, and a bedchamber. To accommodate these three rooms, elite Chesapeake residents sometimes built single-pile houses with a rear range, forming an L or T shape. In 1694 Lewis Burwell built one of the most imposing of these houses at Fairfield, in Gloucester County, Virginia (Figures XXV–XXVI). This T-shaped brick house had a central entrance at the

⁶⁴ Mark R. Wenger, "The Dining Room in Early Virginia," in *Perspectives in Vernacular Architecture, III*, ed. Thomas Carter and Bernard L. Herman (Columbia, Mo., 1989), 149–59.

⁶⁵ Cary Carson, "Seventeenth-Century Plantation Housing in the Chesapeake," unpublished paper, August 2006, 35–36.

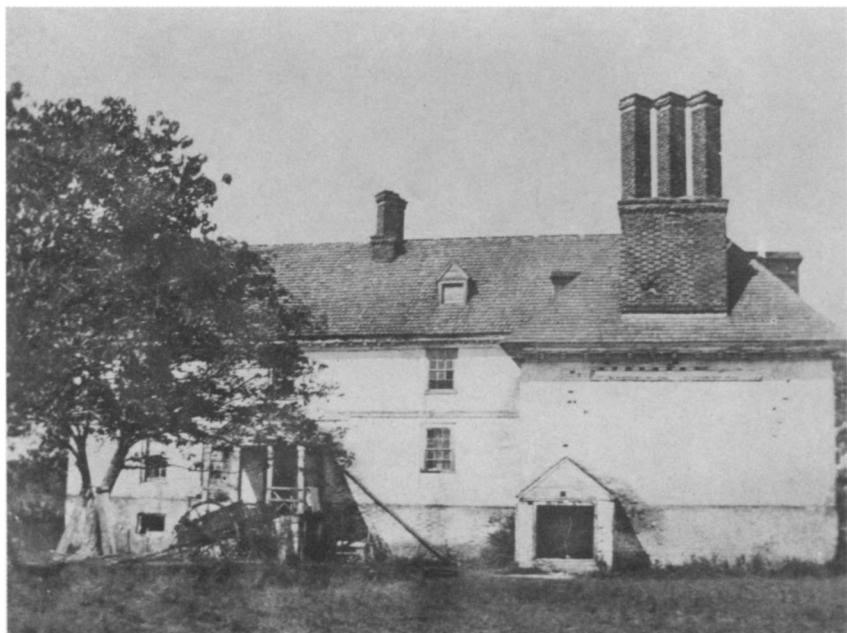


FIGURE XXV

View of Fairfield, Gloucester County, Virginia, before it was destroyed by fire in 1897. An addition (to the left of the rear stack and partially obscured by a tree) was made to the back of the house in the eighteenth century. Courtesy, Colonial Williamsburg Foundation.

top of the T, which probably opened into a generous center passage flanked by large rooms heated by internal gable-end chimneys.

Long before the cubical mass and symmetrical facade of the governor's palace in Williamsburg furnished a conspicuous model for elite housing, a few gentlemen had fully formed double-pile dwellings. Their rear rooms were nearly equal in size to the front ones, not merely smaller, unheated service rooms beneath a shed roof. Archaeologists have determined that Arlington, a three-story brick house erected in the mid-1670s by merchant and councilor John Custis II on the Eastern Shore of Virginia, anticipated many of the attributes of the grand eighteenth-century gentry house (Figure XXVII). A fully developed double-pile plan with either three or four sidewall chimneys, like Fairfield and Arlington, had a central entrance that led either directly into a large hall flanked by smaller entertaining rooms or into a center passage between the two front rooms. If the latter it was a precocious example of such a

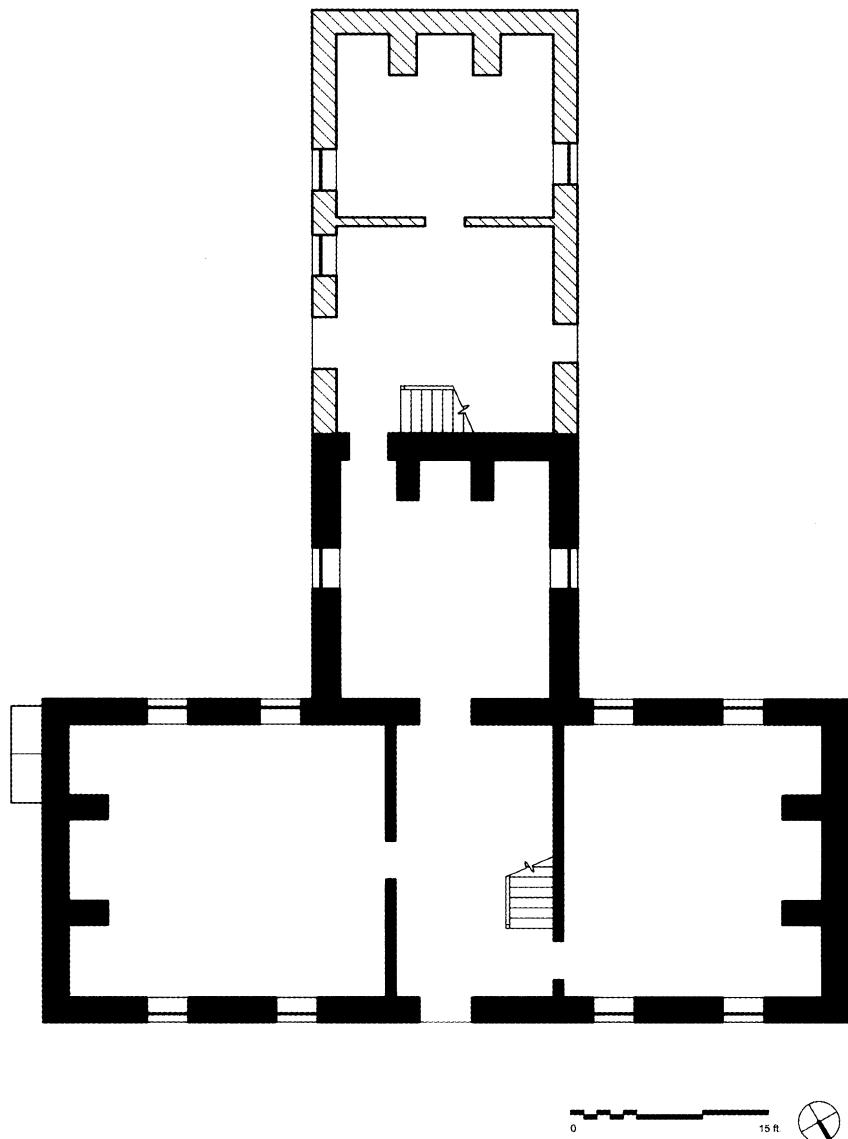


FIGURE XXVI

Restored plan of the main floor of the original section and eighteenth-century addition of Fairfield, Gloucester County, Virginia, 1694.

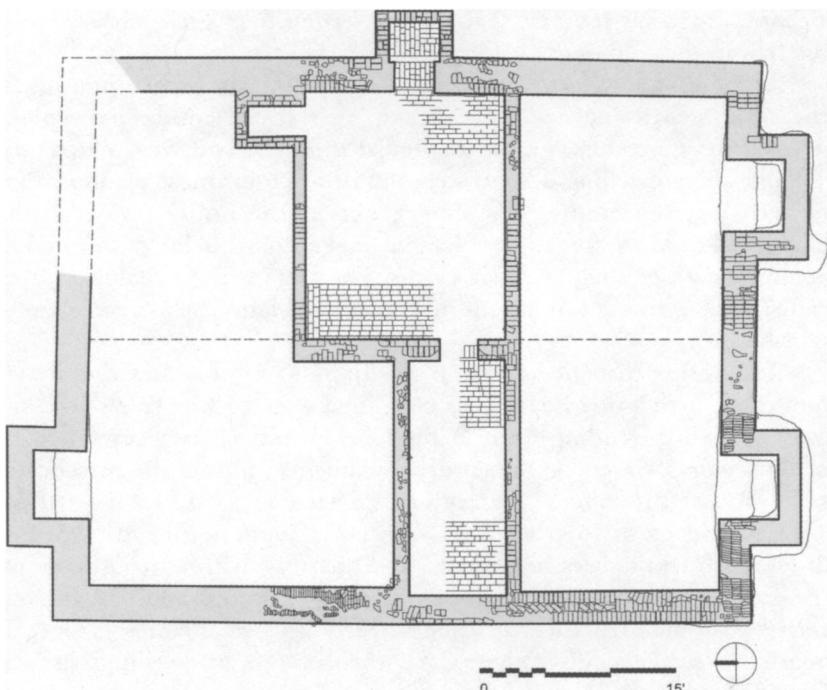


FIGURE XXVII

Cellar plan of Arlington, Northampton County, Virginia, 1675. The two internal parallel walls in the western front half of the building enclosed a vaulted room in the cellar and may have defined the location of a passage on the main floor.

feature but not unheard of in English double-pile houses of the period. The kitchen may have stood in one corner at the back of the house with a service room below it in the cellar. If originally located within the house, the kitchen had been moved outside by the early 1690s, matching the trend elsewhere across the region.⁶⁶ The back range of rooms housed

⁶⁶ Nicholas M. Lucketti, *Archaeology at Arlington: Excavations at the Ancestral Custis Plantation, Northampton County, Virginia* (Richmond, Va., 1999), 15–17, 25–27. For English double-pile plans, see Cooper, *Houses of the Gentry*, 141–43. A deposition noted that Gilbert Moore, a visitor who had come to see Custis on business, “came out of the Great house into the Kitchen to light his pipe” (Northampton Co., Va., Order and Will Book, 1689–1698, 235 [May 30, 1693], Virginia State Library, Richmond). Extensive archaeological sampling of the site has yet to reveal the location of the exterior kitchen. For the building history, see Edward A. Chappell, “Arlington as Architecture,” in Lucketti, *Archaeology at Arlington*, 25–30; Chappell, “Arlington, 1674–1676,” report for the Arlington Foundation, 2004.

a central, spacious staircase that led to a second-floor great parlor, one of the first in the colonies.

Arlington and Green Spring stood at the pinnacle of elite housing in the seventeenth-century Chesapeake. Few could emulate the plans devised for governors, grand provincial officials, and rich merchants. Though these dwelling designs were out of reach for most planters, they nonetheless represented the emergence of the polite house in the Chesapeake. Most freeholders had to make do with far more modest accommodations than those of Custis. For them private chambers, specialized entertaining rooms, and restricted circulation spaces were unobtainable.

The notion that the one-room dwelling—"a tumble-down, 12-by-12-foot cabin with a dirt floor and a clay-lined wooden fireplace"—was the most pervasive building form in the Chesapeake has been espoused by many scholars. Seventeenth-century documents indicate the presence of small houses throughout the region. Archaeological data collected for sites dating from 1650 to 1720, however, suggest that all types of dwellings (main houses, tenements, and quarters) with a single room on the ground floor represented about 24 percent of all buildings. In contrast two-room structures made up nearly 40 percent of the total. If quarters are taken out of these data, then one-room dwellings such as Chalkley's in Anne Arundel County, Maryland (a sixteen and one-half by twenty-foot dwelling with a gable-end chimney built around 1677), make up only 10 percent of the evidence, and almost all these examples date from the 1690s or later. Two-room buildings, on the other hand, account for the largest proportion of the total (Table II).⁶⁷ Without

⁶⁷ J. Richard Rivoire, *Homeplaces: Traditional Domestic Architecture of Charles County, Maryland* (La Plata, Md., 1990), 6 (quotation). On the assumption that one-room houses were predominant, see Upton, "Early Vernacular Architecture in Southeastern Virginia," 1: 153. Clear statistical evidence for this assumption appears in the 1798 federal tax in which enumerators surveyed the housing stock of the new nation. Surviving tax rolls for a number of Maryland counties suggest that most people living along the northern fringe of the Chesapeake Bay inhabited modest dwellings, perhaps with only one ground-floor room. In 1798 the median size of dwellings in Baltimore Co. was 432 square feet (a median length and width of eighteen by twenty-four). In Anne Arundel Co. the median size was 360 square feet (eighteen by twenty). The size of houses in Prince Georges Co. matched those in Baltimore Co. at 432 square feet (twenty-four by eighteen), and in Somerset Co. on the lower Eastern Shore the median was 400 square feet (twenty by twenty). Some of these small dwellings may have contained two rooms, but the data suggest a preponderance of one-room plans. See Elizabeth Gallow, "Observations from the 1798 Tax Record for Anne Arundel, Baltimore, Prince George's, and Somerset Counties, Maryland," report for the Architectural Research Department, Colonial Williamsburg Foundation, 2004. In estimating the size of houses in the database, room counts include all spaces exclusive of cellars, garrets, and circulation (such as porches, passages, and stair towers). Sheds have been included. A table delineating square footage of dwellings over time is available online at <http://oieahc.wm.edu/wmq/Jul07/graham.html>.

TABLE II
NUMBER OF ROOMS PER DWELLING OVER TIME
AS A PERCENTAGE OF THE TOTAL

	<i>1607–24</i>	<i>1625–49</i>	<i>1650–74</i>	<i>1675–99</i>	<i>1700–1720</i>	<i>1607–1720</i>	<i>Number of buildings</i>
1	17	0	7	10	12	8	12
2	17	48	16	25	39	28	41
3	33	36	7	0	30	19	27
4	25	0	43	25	6	23	34
5	8	4	4	0	3	3	5
6+	0	12	21	40	9	18	26

Notes: Buildings with two rooms are the most common form throughout the seventeenth and early eighteenth centuries. Considering the number of two-story, hall-and-parlor houses constructed in Jamestown in the second half of the seventeenth century, a two-room footprint can be seen as even more dominant. Quarters are not included in the count. Rooms are considered definable space within the principal stories of a building but exclude circulation spaces, porches, stair towers, closets, cellars, and garrets.

question, the two-room house was used from the earliest days of expansion beyond the Jamestown fort and the palisades of the particular plantations and remained one of the most common dwelling arrangements throughout the seventeenth century.

The fashion for one-room houses in the eighteenth century may have been due in part to technology as much as to a change in living arrangements. The trend toward better-framed structures parallels increased building width, which in turn allowed for more generous space in the garrets of houses. The better quality of the loft above a well-joined staircase allowed a planter to add a secondary bedchamber there. As the number of detached kitchens grew, the hall was used less for service and work activities and more for entertainment. The master and his wife may have placed their bed in the hall, but their bedchamber had always doubled for entertainment purposes when it was located in the inner room. In the eighteenth century, then, the hall became a more specialized space for entertainment and, with the principal bed in it, functioned much like the old parlor or inner room. It was natural that the expulsion of service and servants from the core of the house allowed the remaining functions of the ground floor to be condensed into a single room. Over time dwelling plans became simpler.

The one-room plan was also promoted by the use of log construction, which was favored over post-in-the-ground framing on the eighteenth-century frontier in the southside, Piedmont, and Shenandoah Valley. Though it was technically possible to build multiroom log houses, the technique was most resourceful when applied to single-room structures. Limiting log lengths to make them easier to handle and simplifying joinery made this building form a staple in the expanding Chesapeake world. The old evidence used by historians to defend a universal preference for one-room houses may also reflect the rise of log construction on the frontier and its proliferation in older parts of the tidewater in the second half of the eighteenth century.

ADAPTATION AND INNOVATION

Lost and discarded tools and possessions now coming to light in the Jamestown excavations suggest that in the weeks and months following the initial construction of the fort, its inhabitants stumbled into a process that persisted through the colony's early chaotic decades. At first colonists inserted themselves and the myriad activities that constitute daily life aggressively into the Virginia wilderness. When English tools, implements, and manners of arranging their households proved ineffective, the colonists attempted to refit their English ways to their new surroundings and new circumstances. When tinkering and adjusting failed to fix mismatches between what might be called Old World solutions and New World riddles, whatever did not work was discarded altogether. Jamestown was thus a graveyard not only for those unfortunates who died but also for tools and ideas that did not work. Trial and error was everywhere an informal process that identified a handful of ideas that found broad application. These ideas were so distinctive that they became inseparably identified with Virginia and in time with the Chesapeake. Only a few of those strategies, however, seem to have gained application beyond the palisaded boundaries of the Virginia Company-era settlements. Jamestown and other early settlements contrast significantly from what followed the collapse of company rule.⁶⁸

English ways, whether they involved protection, diet, or buildings, did not simply appear in the New World and, after undergoing a trial-and-error process, develop along a straight-line trajectory into American ways. In the Chesapeake the progression was considerably less elegant and far more complex. The successive waves of immigrants from across England brought cultural traditions and ideas that were archaic or progressive to the Chesapeake colonies. Thus old as well as new English ideas continually refreshed the storehouse of solutions to the problems

⁶⁸ Carson et al., "New World, Real World."

of getting along on the Chesapeake frontier. There was indeed a winnowing process and an adaptive one by which serviceable ideas were selected, modified, and creatively transformed. Yet the mix was ever subject to additions from abroad and always changed by local conditions, including the aspirations and prejudices of the colonists. Some immigrants may have been traditionalists by temperament but were forced to be improvisers out of necessity.

Archaeological and documentary evidence reveal that the distinctive methods of house construction, house plans, and domestic uses first explored by Cary Carson and his colleagues emerged after the demise of the company. Freed from the constraints and expectations of the company and its sponsors, post-1624 individual entrepreneurial farmsteads evolved into independent plantations more widely dispersed than their counterparts in England or New England. These settlements consisted of main dwellings that were increasingly surrounded by smaller, separate buildings for food storage, tobacco processing, and livestock stabling. Extensive archaeological data suggest that this plantation landscape pattern appeared much earlier than once thought. Building technology, for example, rapidly responded to local conditions. The minimally prepared timbers and efficiently joined earthfast frames with walls and roofs covered with riven clapboards became so identified with the region that by midcentury the structure they created was called a Virginia house. Though the framing technology of riven clapboard carpentry was used for a variety of house plans, the two-room arrangement so closely associated with nonelite housing in the region became the standard way to configure domestic space once the company fell and profits from tobacco became the driving force throughout the Chesapeake.

Evidence from archaeological excavations have revealed that the two-room version of the Virginia house was the hallmark of the dispersed farmsteads that dotted the countryside seemingly everywhere in the region and that it appeared much earlier than previously thought. Archaeologists have pinpointed other physical elements of the plantation landscape and helped to link them to the lives of frontier Virginians. At midcentury servants and slaves on small and modest-sized plantations still resided within the master's dwelling. A quarter of a century later, however, many plantation owners had relocated their labor force to a variety of outlying service buildings, kitchens, and separate quarters.⁶⁹

⁶⁹ Dell Upton has argued that the mean size of a planter's house in Virginia increased from 1640 to 1670, peaked in the 1670s and 1680s, and then steadily declined through the early decades of the eighteenth century. He attributed this pattern of expansion and contraction to the initial accommodation of laborers in their master's house, which was later followed by their expulsion in the late seventeenth century, esp. as the labor force changed from white indentured servants to black slaves. See Upton, "Early

At the same time, the spaces within the main house became increasingly private and devoted to the specialized activities that served as markers of the owner's social status. The migration of laborers to unattached buildings is mirrored in clusters of locally made red clay pipes found near outbuildings occupied by servants and slaves, whereas imported white clay pipes are distributed around the hearths and doors of the plantation's principal dwelling.

At some point masters desired to limit contact between their families and their laborers. The rise of slavery seems to hold obvious explanatory power, but even at the end of the seventeenth century there were few slaves in Virginia and Maryland. On the other hand, these slaves were concentrated on the plantations of a few wealthy landowners who had the economic means to build separate slave quarters and the social need to redefine boundaries between laborers and household residents. Yet this expulsion of alien laborers from the main house was not entirely driven by the increasing pervasiveness of slavery in the Chesapeake; it was part of a broader transatlantic trend occurring simultaneously across the English world. Houses on both sides of the Atlantic became more socially restrictive. In comparable rural houses occupied by members of similar social ranks, servants were all but banished from the main dwelling. Though domestic servants continued to work inside the house, few were live-in residents. Ancient relationships between farm families and their servants that had long promoted easy interaction within the household broke down. To increase profit margins, English farmers in many regions began to reduce costs by hiring day laborers, many of whom were from lower social classes. The arrangement of domestic space and its use changed to accommodate the new social order.⁷⁰ Added to these explanations was the contemporary development of the idea of a polite house as a reflection of the owner's social intent. In Maryland and Virginia, these dwellings were not especially large and most were of wood-frame construction. After midcentury, however, a small but increasing number of rich men whose wealth did not entirely depend on the price of tobacco consolidated their status and influence by building impressive brick homes and sponsoring construction of a

Vernacular Architecture in Southeastern Virginia," 1: 154–74. As Fraser D. Neiman has pointed out, the documentary evidence is ambiguous. The listing of room names does not necessarily imply that those spaces were a part of the dwelling house as opposed to a detached service building. See Neiman, "Temporal Patterning in House Plans," 270–72.

⁷⁰ Morgan, *American Slavery, American Freedom*, 295–315; Coombs, "Building 'The Machine,'" 73–96. On the exclusion of live-in servants from English homes, see Mercer, *English Vernacular Houses*, 60–65; Wood-Jones, *Traditional Domestic Architecture of Banbury Region*, 139–62.

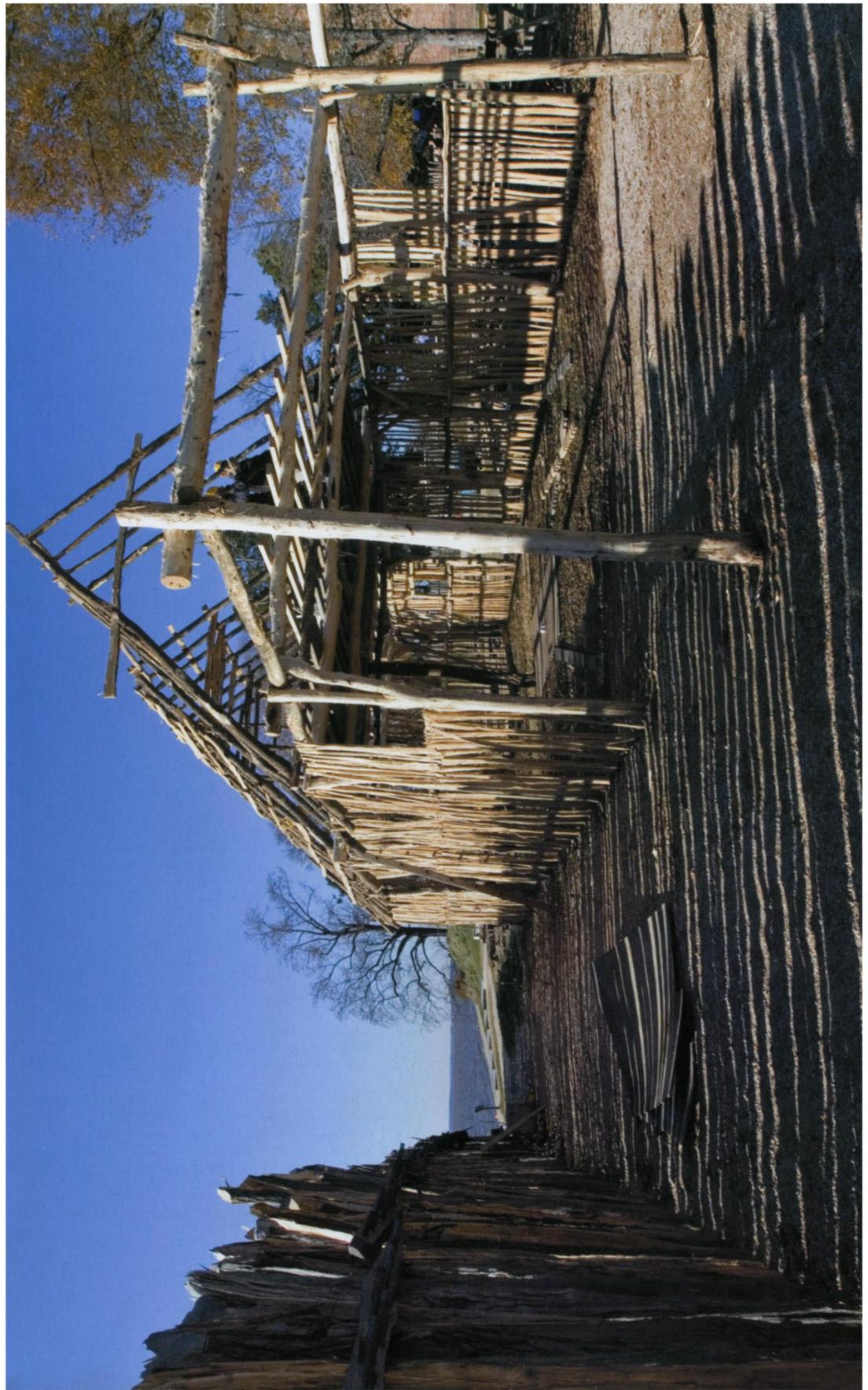
handful of brick public buildings. A more forceful wave of masonry construction only occurred in earnest in the 1720s and 1730s.

The phenomenon of the polite house was as common in England and New England as in the Chesapeake, and everywhere it demanded refinement of social behavior, displays of wealth, and the privacy required for entertaining. Uncontrolled servant access to the private recesses of the master's house and frequent unscripted interaction between laborers and family members or guests would not do. The polite house offered a means of checking the access and controlling interaction if servants lived in separate buildings. By the end of the seventeenth century, all these factors converged in the Chesapeake to create a plantation model in which laborers were segregated from masters and the planter lived in a great house that made a statement about his wealth, power, and status. Archaeology supplies a graphic manner in which to mark and measure the movement of servants and slaves out of the master's dwelling and can prompt scholars to reassess familiar documents and narratives.

Evidence excavated from hundreds of sites in the last quarter century offers fresh opportunities to analyze the social and cultural dynamics that shaped everyday life in the seventeenth-century Chesapeake. Archaeological evidence of the emergence of distinctive regional patterns in shelter, sustenance, and status can be profitably studied as independent phenomena, but the application of explanatory theories of future discounting and costly signaling suggests that these threads of human activity were entwined rather than independent and that they reflected shared rather than private attitudes. As the century progressed, Chesapeake elites more frequently evaluated their strategic options with a view to their long-term payoffs, resulting in decisions to build longer-lasting houses and to embrace a meat diet that emphasized domestic animals over wild ones and cows over pigs. Construction of stylish brick houses suggests that initial inclinations to eschew the future yielded to a new social calculus. Better houses were no doubt more comfortable, yet they were also costly signals. Investments in improved housing and furnishings played an increasingly indispensable role in competition for social and political leadership. Embedded in the patterns of house plans, tobacco pipe fragments, and other artifacts are evolving intentions that are at once both overt and implicit. Understanding what those intentions reveal about the lives of the Chesapeake's often anonymous inhabitants will require additional study of how they built houses, devised floor plans, finished rooms, dressed themselves, shaped landscapes, defined labor relations, and created foodways. Where these threads of

everyday life intersect, scholars should find shifts in cultural assumptions and attitudes that punctuated the Chesapeake's complicated path toward its distinctive culture.⁷¹

⁷¹ Thus far, the accumulation of archaeological data has outstripped the published analysis of it. With increased access to the information, especially through online repositories such as the infant one that undergirds this article, the analytic component should catch up. In Virginia the Colonial Williamsburg Foundation's Department of Archaeological Research, the College of William and Mary's Center for Archaeological Research, the James River Institute for Archaeology, and the APVA/Preservation Virginia have been especially active in sponsoring the study of seventeenth-century sites. In Maryland the Anne Arundel Co. Lost Towns Project has taken the lead in excavating and publishing, and the Saint Marys City Commission and the Jefferson Patterson Park and Museum, the location of Maryland's Archaeological Conservation Laboratory, have sponsored important excavations on Maryland's western shore. This wave of new research has resulted in an explosion of so-called gray literature, reports produced for project clients and funding organizations but circulated in limited numbers in print or, increasingly, electronically. The organization of data for dissemination via the Internet was pioneered by the Thomas Jefferson Foundation, sponsor of the Digital Archaeological Archive of Comparative Slavery, whose Web site supplies links to seventeenth-century sites once occupied by enslaved Africans (<http://www.daacs.org>). The Comparative Archaeological Study of Colonial Chesapeake Culture is a consortium of researchers from a number of regional institutions, hosted by Colonial Williamsburg. The project's Web site reports project goals, data, and results (<http://www.chesapeakearchaeology.org>).



This content downloaded from
108.18.142.78 on Tue, 22 Apr 2025 12:10:48 UTC
All use subject to <https://about.jstor.org/terms>



PLATE I (overleaf)

Reconstruction of Structure 160, Jamestown, Virginia, ca. 1608.

PLATE II

Altered breastplate, Jamestown. Courtesy, APVA Preservation Virginia / Historic Jamestowne.

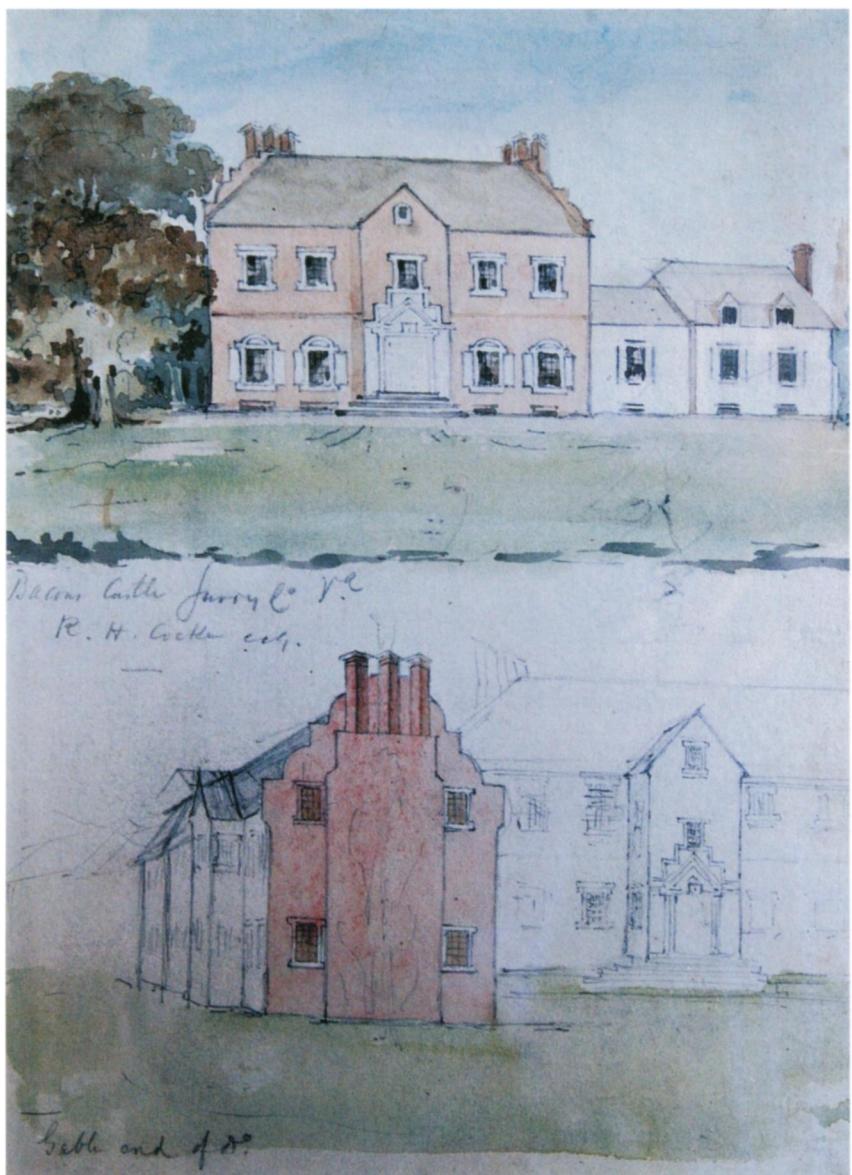


PLATE III

Nineteenth-century sketches of Bacon's Castle. Courtesy, APVA Preservation Virginia.



PLATE IV

Plan of Jamestown Fort showing the location of excavated buildings as of 2004. Photographed and digitally superimposed by Jamie May. Courtesy, APVA Preservation Virginia / Historic Jamestowne.