

Dendro-Dating the Domestic Architecture of Colonial Virginia: Exploring the Potential of Certainty

Camille Wells

It seemed only moments after the turn of the century that the sustained relevance of architectural history as a field of inquiry in North America received cruel and tragic confirmation. Although more systemically devastating targets abound, those motivated to direct their rage and frustration against the United States chose to assault *buildings*. Of course they were well populated buildings, and their urban locations insured significant collateral damage, but their greatest importance on that day was iconic. All were shaped, identified, and frequently referenced as symbols of America's capacity, through market forces, military action, and federal legislation, to influence almost anything almost anywhere (Retort 2005; Street 2004.)

This is architectural history of national significance in a global context, and in North America, it is drawing attention to previously peripheral or obscure topics, issues, and modes of inquiry. Even members of the profession who have been inclined to delimit rather strictly those aspects of the architectural past deserving of scholarly attention now acknowledge that the study of buildings both influences and is influenced by a remarkably diverse set of concerns (Blau 1999; Stieber 2005). The recognition of such broad horizons for architectural history in the new century is welcome and full of promise, but the discipline still draws necessary strength from its original concerns: the discovery and recounting of building histories and the incorporation of architectural evidence into the analysis and explanation of historical places, trends, and events. It is in the service of these concerns that "building archaeology" contributes indispensable information. Patient, discerning, lapidarian attention to a building's smallest details becomes the source of key insights and inferences. These in turn form the basis for the most accurate, subtle, and worthwhile conclusions.

Architectural historians who begin their inquiry in this way are at work in many different regions of North America and in many distinct periods of its history, but scholars of colonial architecture in New England and in the vicinity of the Chesapeake Bay have gained the most from the methods and ethics of building archaeology. The first important published results of this work were Paul Buchanan's "Eighteenth-Century Frame Houses of Tidewater Virginia," and Abbott Lowell Cummings' Framed Houses of Massachusetts Bay (1976; 1979). Both appeared about a quarter-century ago, and together they marked the emergence of a resourceful, discerning, and profuse literature devoted to the construction systems, building materials, plans, and decorative finishes of colonial architecture in New England, Virginia, and Maryland. The most influential of these studies are published, but closely observed and carefully explained conclusions fill the scores of historic structure reports that have been commissioned and quietly printed by museums and preservation agencies during this same span of years.

Of course, as a process devoted exclusively to the intense scrutiny of buildings themselves, building archaeology has never been enough. In 1981 Cary Carson and four colleagues merged what they had learned from the excavated remains of vanished houses and outbuildings in Maryland and Virginia to tell a tale of the earthfast structural system that once dominated the architectural dimension of life for seventeenth-century colonists of every rank (1981). While a methodological kinship with archaeological excavation is inherent in the term “building archaeology,” Dell Upton demonstrated in 1982 that the documentary record is equally susceptible to “excavation.” Through a systematic examination of colonial Chesapeake probate inventories he explained how seventeenth-century colonists configured their houses and how, as the character of their tobacco-growing labor force evolved, they altered their house plans to meet new challenges (1982a). Then in “Re-Editing the Past,” Orlando Ridout analyzed architectural descriptions in the 1798 Federal Direct Tax List to prove that the majority of structures standing in rural Maryland at the end of the eighteenth century shared little, in terms of materials, square footage, or quality of construction, with those few that survive today (1982). These studies by Carson, Upton, and Ridout now keep company with numerous essays and monographs that incorporate or even privilege evidence drawn from documents or archaeological excavations. Gathered among those studies founded largely or exclusively on the counsel of standing structures, they contribute to an imaginatively framed and diligently executed demonstration of what building archaeology may encompass and what it can achieve.

The result of all this work is that the colonial buildings of New England, Maryland, and Virginia are now the most closely and productively analyzed of any North American building assemblage. This status attracts funds and expertise for innovative and sometimes experimental strategies to enhance discovery and understanding. The use of modern temperature gauges permits historic interpreters to replicate and document the successful brick-making techniques of the colonial period (Weldon 1990). X-rays reveal construction strategies and instances of alteration that lie buried beneath historic surfaces (Howlett 2002). Microscopic scrutiny of plaster, paints, and glazes can confirm not only sequences of application and changes in finish but also, through attention to interstitial layers of dust or soot, how briefly or how long one particular finish dominated the appearance of a room or a facade (Buck 2004). Chemical analysis of surface coatings can identify their composition, thereby determining the probable stability or volatility of their tone and texture (Chappell 1995). The sorting of building characteristics by frequency of occurrence reveals how remarkable or typical a case study may be (Wells 1993). Statistical analysis can confirm or realign once vaguely perceived disparities and congruencies in the documentary record (Main 1982; Walsh 1989).

Perhaps it was inevitable that this growing range of strategies for understanding historic structures and for approaching one or another form of certainty would erode patience with the most fundamental yet elusive of all facts: the date of origin. In New England as well as in the Chesapeake Region, many architectural conclusions, despite all the study, have remained frustratingly provisional because scholars could not determine the year, the decade, or in some cases, even the quarter-century during which most colonial structures were built.

Isolated and inconclusive attempts to introduce the techniques of dendrochronology to the study of colonial American architecture date from as early as 1968, but only at the turn of the twenty-first century did reliable analysis of tree ring patterns emerge to figure among the other methods of building archaeology in New England, Virginia, and Maryland. The sources of obstructions and delays varied, but architectural historians in both regions struggled with the common belief that plentiful rainfall and undulating terrain prevented trees from growing annual rings in legible patterns. This was never entirely true, although development during the 1970s of more sophisticated systems of electronic computing made detection and alignment of tree-ring patterns much more reliable (Cook 1987). Thereafter, the challenge of introducing dendrochronological dating to historic buildings in eastern North America had to do with recognizing or generating opportunities for the interests of quite different disciplines to intersect.

In New England this opportunity came following the discovery of an old-growth stand of red oak on Mount Wachusett in Princeton, Massachusetts. Study of these trees resulted in a firm chronology that extended continuously from 1672 to 1996. The obvious potential inherent in this chronology motivated the Preservation of New England Antiquities, the Massachusetts Historical Society, and a constellation of other historical organizations to plan and fund a pair of studies. The first involved analysis of the tree-ring structure in six New England meeting houses or churches with documented dates of construction (Krusic and Cook 2001). The second study applied the Mount Wachusett chronology, newly lengthened by the meeting house study, to wood samples collected from some eleven houses in eastern Massachusetts. In each case, scholars previously had inferred dates of origin and augmentation from documentary sources. (Miles, Worthington, and Grady 2002). Appropriately, it was Abbott Lowell Cummings who introduced the revised construction dates and discussed their implications in the journal Vernacular Architecture (Cummings 2004).

But what of dendrochronology in the Chesapeake Region? Between 2000 and 2002 the University of Virginia School of Architecture and the Jessie Ball duPont Religious, Charitable, and Educational Fund supported dendrochronological analysis of some fifteen early Virginia houses. All had been built in the eighteenth century, and all were located in the coastal plain that surrounds the Chesapeake Bay. Virginians call it simply “Tidewater” (Pritchard and Schubel 2001). Associated with each house was a remarkably full range of documentary source material including, in several cases, archived collections of family papers. Despite these resources, dates of origin for every house had eluded determination. Traditional dates of construction were, in almost every case, posited and cultivated under nostalgic or romantic circumstances during the early twentieth century (Wells 1998).

As an exercise in building archaeology, this study involved three distinct and potentially useful components. The first was, of course, the extraction and scrutiny of core samples in order to determine the cutting date for the wood used to construct each of the houses. Analysis began with attempts to date every core sample drawn from a single structure. Thus the first result was a composite chronology for each house. These individual chronologies were then compared and the patterns aligned. All cross-dating occurred through computer analysis and with the program

COFECHA (Cook and Krusic 2001; Holmes, 1983). As was not the case in New England, earth scientists with various specialties had generated several master chronologies for the southeastern United States (Cook, Stahle and Cleaveland 1992; Stahle and Cleaveland 1992). These successfully underpinned the patterns generated both for each house and for the entire study group. In the end, the dated Virginia houses began to overlap in statistically significant ways. In the end, this project supported the creation of two new chronologies for Tidewater Virginia: one for white oak and one for yellow pine (Callahan, Cook, and Wells 2002).

Techniques familiar to building archaeologists inspired the second aspect of the project as well. Each study house was distinguished by at least one architectural characteristic which, for the purposes of inferring dates of origin, Chesapeake architectural historians have come to rely. These include masonry laid up in Flemish bond with regular patterns of glazed headers. Such a characteristic indicates that the house likely was built after 1700 and before 1750. After 1750, masons still laid up most fashionable brickwork in Flemish bond, but they changed their strategy, paying close attention to consistency of color. Jack arches with curved soffits date from before 1740. Closed-string staircases almost always situate a house in the first half, and likely the first quarter, of the eighteenth century. Most one-room houses had been constructed by 1735. Almost every surviving house with at least two rooms enclosed a central passage by 1735. Most surviving houses incorporated the three-room, hall-chamber-dining room plan by 1750. The pitch of hipped roofs had declined to no more than forty-five degrees by 1770. Houses designed with a dominant central section and subordinate wings did not appear in Virginia until after 1765. Because of growing political unrest and, after 1776, war with Britain, almost no expensive building campaigns date from roughly 1773 through 1790.

The incorporation and management of documentary sources for this project also drew on the methods and priorities of building archaeology. While dendrochronological field work and lab analysis were underway, graduate students in architectural history from the University of Virginia had set about assembling documents pertaining to the lives and fortunes of those who owned and occupied each of the houses. Previously undiscovered evidence of building activity on the site was welcome, and in one case, a remarkable document turned up. The goal, however, was to complete, insofar as possible, the eighteenth-century “story” of the site on which the house had been built. From this narrative the students highlighted spans of years during which conditions favored a major building campaign. They called these “windows of opportunity.” In addition, they identified “blackouts,” or periods in the site history when building activity was unlikely. Because neither the dendrochronologists nor the graduate students knew what sort of conclusions were emerging from the work of the others, this aspect of the study was, in a sense, double-blind.

By the end of this project, circumstances and augmenting sources of funding increased the number of study houses from fifteen to seventeen and among these, dendrochronological analysis had generated twenty-three dates of construction. A few of these houses had never received close study,

but among those that were well known, all were shown to have been built many years after the traditional--and sometimes published--dates of construction.

Although the study houses are too few in number to confirm generalizations or trends, they did, for the most part, support the efficacy of associating specific architectural features with approximate dates of construction. By 1750, glazed-header Flemish bond had disappeared as thoroughly as if banned by statute. Only Marmion, with a 1758 construction date, retained some lively variegation on its gable-end chimneys. Consistently red or reddish brickwork dominated the masonry of Virginia houses after 1750, although the masons who built Indian Banks obligingly laid up some handsome walls with brick carefully chosen for an unvarying red presentation in 1738. Indian Banks is one of only a handful of surviving Chesapeake houses to receive the flourish of curving soffits above each window, but it supports the comparatively early disappearance of this embellishment.

Closed-string staircases have been misleading Chesapeake architectural historians, and severely. The two study houses with staircases of this design dated from 1778 and 1781. Thus they correspond with a pattern in at least some parts of Britain where close-string staircases, while losing ground in terms of fashion, remained in use for smaller and more modest houses of modest form 1750 until 1800 (Hall 2005). Both Linden Farm and Kirnan are comparatively unprepossessing houses, although they, like virtually every other surviving house in Virginia, were built by families who enjoyed gentry status, at least in a county context (Wells 1987).

One-room houses have also sustained, or perhaps invited, misinterpretation. Starting their professional lives in the 1970s, many architectural historians were persuaded by the work of Henry Glassie to seek out the voiceless common Virginia colonist among the smallest houses they could find (Glassie, 1975). Documentary research put to rest the notion that surviving houses with one-room plans belonged to ordinary folk, but the notion lingers that single-room dwellings lost appeal for any member of the gentry, once spatial differentiation emerged as a social concern (Wenger 1986; Wenger 1989). The one-room Rochester House dates from 1745 and Linden Farm, which originally enclosed but a single room, was built in 1760. More accurate, if difficult to chart, is the observation about the ubiquity of central passages after about 1735. All but two of the multi-roomed study houses enclose passages by which the colonial inhabitants could gain independent access to every first-floor room. At Belle Isle, a spacious entry served the same purpose. Only at Rippon Lodge did the owner consider double front doors and a shed-roofed porch adequate for circulation. Also durable is the generalization regarding the popularity of the hall-chamber-dining room configuration by 1750. There may be good reason to push this date back to at least 1745. Eleven of the seventeen study houses enclosed this plan (Upton 1982b).

Steep roofs did lose their role as fields for display after about 1770, although they remained useful for those Virginians who chose to build houses like Belle Isle with three-part compositions. By

1793, the steep roof and the glittering pattern of glazed headers were too much for the owner of Wilton. He tolerated the masonry which had been fashionable in 1742 when the house was constructed, but at great expense, he dismantled the original hipped roof and had the rafter recut and reset to a significantly lower pitch. Belle Isle is the only one of the study houses to have been designed with a dominant central section and two flanking wings, and it was indeed built after 1765. That central pile stood detached from its flankers until 1802 when a later owner completed the composition.

The period of inactivity for the building trades was real during the Revolution, but it appears to have been more brief than is often supposed. Menokin and Monaskon were both under construction in 1773 and Verville received a new gambrel roof and more second-story headroom in 1775. Linden Farm sustained a comparatively modest addition in 1778, and Kirnan was erected start-to-finish in 1781. In 1784 and 1785 ambitious building projects resumed at the sites of Clifton and Ditchley. Grove Mount was underway by 1787.

Building archaeology, like archaeological excavation and documentary research, requires enormous effort, copious amounts of time. This is why it can end with a well supported and clearly explained sequence of facts. This is why the medium for architectural, archaeological, and documentary investigations so often is the unpublished report. Still, the painstaking attention demanded by these forms of inquiry into the past yield precisely the sort of complex and nuanced detail that can bridge gaps or challenge assumptions. Now that the construction dates of some significant Virginia houses are no longer approximate, the identity of their makers and the circumstances of their construction are no longer conjectural. When building campaigns are aligned with the fortunes of individuals and families, where will there be conciliation and when will dissonance erupt? Only two or three of the many possible narratives surrounding and embedded within these houses will have to suffice.

In 1663, Thomas Glascock, already a landowning planter in Virginia, made good use of Virginia's head right system to gain a patent for six hundred acres situated on the north side of the Rappahannock River and along the navigable Morattico Creek (Nugent 1929). Subsequent generations of the family increased their holdings here and elsewhere along the peninsula. In 1724 Thomas Glascock's great-grandson inherited the original six hundred acres and likely settled himself into the two-room dwelling where his father had died. Four years later he made an advantageous alliance when the sixteen-year-old Easter Ball of Lancaster County agreed to be his wife (Glassco 1974).

In 1730 the Virginia General Assembly established a tobacco inspection warehouse "at William Glascock's Landing" and thereafter Glascock could expect all of his neighbors, wealthy and otherwise to bring their hogsheads of tobacco, by way of a rolling road, across his plantations (Hening 1819-1823). Glascock immediately began to sell land he owned elsewhere along the Rappahannock River, buying up acreage in the Morattico Creek area instead. Within ten years, he

owned a productive 1,260 acres and a great deal of shoreline around the inspection warehouse. Although documents do not reveal precisely how Glascock used his property to turn a profit, he had generated sufficient wealth by 1738 to build his family a two-story house with such eye-catching details as bright red brickwork, a symmetrical arrangement of doors and windows, and curvilinear embellishments above each opening. Surviving remnants of interior woodwork indicate that the three main rooms of Glascock's house, eventually known as "Indian Banks," were handsomely finished off with deeply molded and beveled paneling. The siting of the house suggests, however, that the exterior presentation which mattered most. The house of William and Easter Glascock boldly faced the public rolling road and stood a scant 20 feet away.

Confirmation of wealth and social status appear to have been among William Glascock's motive for building an expensive and arresting house. Yet located in the midst of his productive acres, near his busy landing, and remarkably close to a public road, Indian Banks was intended to convey an accessibility of assets. Glascock intended to make his way financially not only through planting and shipping but also through diverse and numerous dealings with friends and neighbors. By contrast, a certain elegant detachment and visibility from afar was precisely what William and Maria Page Randolph had in mind when, as young newlyweds unrestrained by parental advice, they devoted a substantial part of Maria Randolph's £2000 dowry to the construction of a grand house on a lofty escarpment overlooking the James River. William Randolph's father had prepared himself for successful mastery of the yet poorly improved Tuckahoe tract through several years in service as manager to another wealthy planter. Once he took possession of his inheritance, Thomas Randolph and his wife lived in a comparatively modest house located, quite likely, on the river plain where his slaves cultivated the plantation's richest land. When he died in 1729 he left his only son well situated with many cleared acres and an enslaved labor force sufficiently large to produce successful crops. (Wells 2001).

William Randolph was neither unaware of nor inattentive to his day-to-day responsibilities, but he also was eager to take a position befitting the superior standing of the Randolph and Page families in Virginia. William Randolph saw in his father-in-law's grand building campaign at Rosewell the sort of architectural gesture necessary to challenge the royal governor's dominion over Virginia's council of state, the twelve members of which were always among the richest planters in the colony. Thus the house he and his wife began to build in 1733 seemed like an investment in a larger social and political game. The house at Tuckahoe was capacious and expensively finished, but its four rooms, all paneled in walnut and meant to be seen, apparently afforded the couple too little privacy. In 1740 they flaunted convention and spent lavishly, more than doubling the size of their house and creating an H-shaped plan with separate wings for entertaining and for family retirement. Sadly, the couple did not long enjoy their mansion. By 1745, both were dead. They left behind a son and two young daughters whom they committed to the care of Peter Jefferson and his wife, another member of the Randolph family. In this way the young Thomas Jefferson came to Tuckahoe at the age of two and spent most of his youth in the lavish world of the Tidewater elite (Wells 2001).

The juxtaposition of the dendrochronological date for Westover with surviving documentary evidence is difficult, for it does violence to the long standing and cherished tradition that William Byrd II, the English-educated diarist, essayist, explorer, lover of fine books and fine women should have overseen the design and construction of the grand mansion that survives at Westover today. Indeed, there is documentary confirmation that William Byrd II did supervise construction of a house for himself at Westover between 1729 and 1735 (Tinling 1977). It was this house, however that “burned to the ground, with the loss of all the furniture, clothes, plate, liquore” in January of 1749, five years after William Byrd II had died (Wenger 1980). Thus the stage was set for a new house built for the new generation.

The orderly design and excellent workmanship manifest at the new Westover hardly seems possible, given the manifestly chaotic circumstances in which it was erected. In 1748 William Byrd III married Elizabeth Hill Carter of Shirley. He assumed control of his inheritance in 1749, and despite the conflagration at Westover, chose to build a house for himself and his wife in Richmond. In 1750 he directed that timbers be cut for the construction of a new house at Westover, where his mother still resided. Correspondence suggests that he remained at Westover, apparently involved with the completion of his house, until 1756 when he began a restless seven years of travel. He left Westover to his mother’s management, sent three of his five children to England, abandoned his wife and the two younger children at the house in Richmond, and volunteered for military duty in the Seven Years’ War. In this service, he traveled to Charleston and to Philadelphia between campaigns in the Virginia back country. Notified by letter of Elizabeth Carter Byrd’s death in 1760, he married Mary Willing of Philadelphia just six months later. By the close of 1761 he had built a house in her native city, where they resided until 1763 (Tinling 1977).

Apparently it was the increasing urgency of indebtedness which drove William Byrd III back to Westover, where he spent the last years of his life in attempts to recover his losses and provide for the children of both his first and second wife. Overcome by the gravity of his circumstances, he committed suicide in 1777. Mary Willing Byrd gradually stabilized and in some measure reversed the damage caused by her husband’s careless spending, but at the cost of his library and most household furnishings. Nevertheless, a French nobleman who called on her in 1782 wrote that Westover was “still the most celebrated and the most agreeable in the neighborhood” (Chastellux 1787). More significant, perhaps, is a description of Westover penned by one of the thousands of troops that traversed or camped at Westover during the Revolution, John Davis, an officer from Pennsylvania wrote “We lay still this day looking around us admiring the greatness of this mans idea, in his improvements” (Wenger 1980). Already, it appears, Westover’s origins were receding farther back into the eighteenth century where its remarkable proportions, its elegant details, and the manifest quality of its workmanship settled into what already seemed the more orderly, contemplative, refined Virginia of William Byrd II. Of life at Westover in 1726 he wrote: “Like one of the patriarchs I have my flocks and herds, my bondmen and bondwomen and every sort of trade amongst my own servants, so that I live in a kind of independence of everyone but

Providence” (Tinling 1977). A dendrochronologically confirmed date of origin, however systematically derived, may never prevail in a case such as this.

ACKNOWLEDGEMENTS

The author is delighted for the opportunity thank Bill Callahan and Ed Cook, Nick Duke at the University of Virginia. Emily Gee, Shelly Pellish, and Hal Sharp

REFERENCES

Blau, A (ed.) 1999. “Architectural History 1999/2000”, *Journal of the Society of Architectural Historians* 58, pp. 278-499.

Buchanan, P E, 1976. “The Eighteenth-Century Frame Houses of Tidewater Virginia”, in Charles E. Peterson, (ed.), *Building Early America: Contributions Toward the History of a Great Industry*, Radnor, Pennsylvania, pp. 54-73.

Buck, S L, 2004. “The Aiken-Rhett House: A Comparative Architectural Paint Study”, unpublished PhD dissertation, University of Delaware.

Callahan, W J, Cook, E R, Wells, C, 2002. “Final Report: Dendrochronology for the Colonial Virginia House”, unpublished report prepared for the Jessie Ball duPont Religious, Charitable, and Educational Fund.

Carson, C, Barka, N F, Kelso, W M, Stone, G W, Upton, D, 1981. “Impermanent Architecture in the Southern American Colonies,” *Winterthur Portfolio*, 16, pp 135-196.

Chappell, E A, 1995. “The Changing Complexion of Thomas Everard’s House”, *Colonial Williamsburg*, 18, pp. 32-35.

Cook, E R, 1987. “The Decomposition of Tree-Ring Series for Environmental Studies”, *Tree-Ring Bulletin*, 47, pp. 37-59.

Cook, E R, Stahle, D W, Cleaveland, M K, 1992. “Dendroclimatic Evidence from Eastern North America”, Bradley, R S, Jones, P D, (eds.), *Climate Since 1500*, London: Routledge, pp. 331-348.

Cummings, A L, 1979. *The Framed Houses of Massachusetts Bay, 1625-1725*, Cambridge: Belknap Press.

Cummings, A L, 2004. “Recent Tree-Ring Studies of Early New England Buildings: An

Evaluation”, *Vernacular Architecture*, 35, pp. 66-71.

Glassco, L A, 1974. *The Glas(s)cock-Glassco Saga*, privately printed.

Glassie, H, 1975. *Folk Housing in Middle Virginia: A Structural Analysis of Historic Artifacts*, Knoxville: University of Tennessee Press.

Hall, L, 2005. Personal communication regarding closed-string staircases.

Hening, W W, (ed.) 1819-1823. *The Statutes at Large, Being a Collection of All the Laws in Virginia from the First Session of the Legislature 1619*, New York, privately printed, volume 4, p. 267.

Holmes, R L, 1983. “Computer Assisted Quality Control in Tree-Ring Dating and Measurement”, *Tree-Ring Bulletin*, 43, pp. 69-78.

Howlett, F C, 2002. “Thomas Jefferson’s Model for the Capitol of Virginia”, *Virginia Cavalcade*, 51, pp. 4-15.

Krusic, P J, and Cook, E R, 2001, “The Development of a Standard Tree-Ring Chronology for Dating Historic Structures in Eastern Massachusetts”, unpublished report prepared for the Massachusetts Historical Commission and the Society for the Preservation of New England Antiquities.

Main, G L, 1982. *Tobacco Colony: Life in Early Maryland*, Princeton: Princeton University Press.

Marquis de Chastellux, 1787. *Travels Through North America in the Years 1780, 1781, and 1782*, London.

Miles, D W H, Worthington, M J, Grady, A A, 2002. “Development of Standard Tree-Ring Chronologies for Dating Historic Structures in Eastern Massachusetts, Phase II”, unpublished report prepared for the Massachusetts Historical Commission and the Society for the Preservation of New England Antiquities.

Nugent, N, 1929. *Cavaliers and Pioneers: A Calendar of Virginia Land Grant Patents 1623-1800*, Richmond: Dietz Press.

Pritchard, D W, Schubel, J R, 2001. “Human Influences on the Physical Characteristics of the Chesapeake Bay,” in Curtin, P D, Brush, G S, Fisher, G W, (eds.), *The History of an Ecosystem: Discovering the Chesapeake*, Baltimore: Johns Hopkins University Press, pp. 60-82.

Retort, 2005. *Afflicted Power: Capital and Spectacle in a New Age of Art*, New York: Verso Press.

Ridout, O V, 1982. "Re-Editing the Past: A Comparison of Surviving Documentary and Physical Evidence", unpublished paper, annual conference of the Society of Architectural Historians.

Stahle, D W, Cleaveland, M K, 1992. "Reconstruction and Analysis of Spring Rainfall over the Southeastern United States for the Past 1000 Years", *Bulletin of the American Meteorological Society*, 73, pp. 1947-1961.

Street, P L, 2004. *Empire and Equality: America and the World Since 9/11*, Boulder, Colorado: Paradigm Publishers.

Stieber, N, (ed.) 2005. "Learning from Interdisciplinarity", *Journal of the Society of Architectural Historians* 64, pp. 417-440.

Tinling, M, (ed.), 1977. *Correspondence of the Three William Byrds of Westover, Virginia, 1684-1776*, Charlottesville: University Press of Virginia, 2 volumes.

Upton, D, 1982a. "The Origins of Chesapeake Architecture", in *Three Centuries of Maryland Architecture*, Annapolis: Maryland Historical Trust, pp. 44-57.

Upton, D, 1982b. "Vernacular Domestic Architecture in Eighteenth-Century Virginia", *Winterthur Portfolio*, 17, pp. 95-119.

Walsh, L S, 1989. "Plantation Management in the Chesapeake 1620-1820", *Journal of Economic History*, 49, pp. 393-406.

Weldon, B, 1990. "The Brickmaker's Year," *Colonial Williamsburg Historic Trades Annual*, 2, pp. 1-40.

Wells, C, 1987. "The Eighteenth-Century Landscape of Virginia's Northern Neck", *Northern Neck of Virginia Historical Magazine* 37, pp. 4217-4255.

Wells, C, 1993. "The Planter's Prospect: Houses, Outbuildings, and Rural Landscapes in Eighteenth-Century Virginia", *Winterthur Portfolio*, 28, pp. 1-31.

Wells, C, 1998. "The Multistoried House: Twentieth-Century Encounters with the Domestic Architecture of Colonial Virginia", *Virginia Magazine of History and Biography* 106, pp. 353-418.

Wells, C, 2001. "Virginia by Design: The Making of Tuckahoe and the Remaking of

Monticello,” *Arris: Journal of the Southeast Chapter of the Society of Architectural Historians* 12, pp. 44-73.

Wenger, M R, 1980. “Westover: William Byrd’s Mansion Reconsidered,” unpublished MA thesis, University of Virginia.

Wenger, M R, 1986. “The Central Passage in Virginia: Evolution of an Eighteenth-Century Living Space”, in Wells, C, (ed.), *Perspectives in Vernacular Architecture II*, pp. 137-149.

Wenger, M R, 1989. “The Dining Room in Early Virginia,” Carter, T and Herman, B L, (eds.), *Perspectives in Vernacular Architecture III*, Columbia: University of Missouri Press, pp. 149-159.

The architecture of the central Middle Ages was termed Gothic during the Renaissance because of its association with the barbarian north. Now this term is used to describe the important international style in most countries of Europe from the early 12th century to the advent of the Renaissance in the 15th century. At the technical level Gothic architecture is characterized by the ribbed vault, the pointed arch, and the flying buttress. One of the earliest buildings in which these techniques were introduced in a highly sophisticated architectural plan was the abbey of Saint-Denis, Paris.