

## Gentility and Self-discipline in the Mansion Home— A Tall Case Clock from Eighteenth-century New England: A Study in Material Culture

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### Material Culture Study in America

THE TALL CASE CLOCK IS A HUMAN PRODUCT used to measure time. However, as an example of luxurious furnishing, it was also used to display the owner's wealth and authority. It is a part of material culture. As material culture, such artifacts manifest the culture in which they were produced and used. Thomas J. Schlereth introduces anthropologist Melville Herskovits's definition of material culture: "the totality of artifacts in a culture, the vast universe of objects used by humankind to cope with the physical world, to facilitate social intercourse, to delight our fancy, and to create symbols of meaning."<sup>1</sup> In this paper, I examine the spread of gentility and the permeation of self-discipline in American culture toward the turn of the 18th century, by analyzing a tall case clock.<sup>2</sup>

The careful study of artifacts holds the potential to clarify not only technique and workmanship, but also fashion and way of life, which make up culture and society. Schlereth explains that

material culture study is the study through artifacts (and other pertinent historical evidence) of the belief systems—the values, ideas, attitudes, and assumptions—of a particular community or society, usually across time. As a study, it is based upon the obvious premise that the existence of a man-made object is concrete evidence of the presence of a human mind operating at the time of fabrication. The common assumption underlying material culture research is that objects made or modified by humans, consciously or unconsciously, directly or indirectly, reflect the belief patterns of individuals who made, commissioned, purchased, or used them, and, by extension, the belief patterns of the larger society of which they are a part.<sup>3</sup>

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The author, professor and vice director of the Institute for Area Studies at Tokyo University of Foreign Studies, has written *The Utilitarian Idea of Public Interest and the Creation of Republic in the American Revolution*. Research for this essay, at the University of Massachusetts and Amherst College was supported by the International Research Program of the Ministry of Education, Culture, Sports, Science and Technology.

The study of material culture opens access to the software of human behavior as well as the hardware of culture.

While earlier material culture scholars had a staunch humanist orientation, current researchers tend to be social scientists or social historians. The new trend of New Social History among professional historians has influenced material culture studies. Around the same time, British labor historians such as E. J. Hobsbawm and E. P. Thompson stimulated American historians into taking a new look at the realities and ideologies of the ordinary people. The French scholars known as the *Annales* school sought to write a history of societies as a whole, and to recreate the *mentalite* of past society.<sup>4</sup> Cary Carson sums up the questions of social historians well: "How were historic societies structured? How did their parts work together? What underlying forces eventually altered both structure and function?" The increasing interest of social history in commonplace activities and common people has led to a shift in the attention of material culturalists to social structure, social statuses, and social institutions.<sup>5</sup>

Some American material culturalists with a social historical orientation study a specific form of material culture with the purpose of uncovering a given age's climate of opinion. Schlereth takes Alan Trachtenburg's *Brooklyn Bridge: Fact and Symbol* (1965) as a work seeking "to establish artifacts as powerful 'cultural symbols' capable of yielding special insight into the worldview of a people at a particular time in a way unmatched by most other historical resources of the period."<sup>6</sup> E. McClung Fleming proposes the systematic study of a single artifact to clarify unconscious beliefs, ideas, taboos, fantasies, projections, rules, and hidden meanings.<sup>7</sup>

### Fleming's Study Model

Since my analysis of the Dunlop tall clock and case follows Fleming's model, it is convenient to sum up the points of his research model.

The model utilizes two conceptual tools—a fivefold classification of the basic properties of an artifact and a set of four operations to be performed on these properties.

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The five basic properties provide a formula for including and interrelating all the significant facts about an artifact. These properties of an artifact are its history, material, construction, design, and function.

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The four operations to be performed on the five properties yield answers to most of the important questions we want to ask about an artifact. These operations are identification, which results in a body of distinctive facts about the artifact; evaluation, which results in a set of judgments about the artifact, usually based on comparisons with other examples of its kind; cultural analysis, which examines the various interrelationships of an artifact and its contempo-

rary culture; and interpretation, which suggests the meaning and significance of the artifact in relation to aspects of our own culture.<sup>8</sup>

In this paper I will make use of his study model to understand changes in time consciousness and sociability in late eighteenth-century and early nineteenth-century New England.

### Identification

*The chief objective of identification is to provide accurate information about the five properties of the artifact.<sup>9</sup>*

The artifact here is a tall clock and case. It is approximately seven feet in height, two feet wide, and one foot deep. The clock is fixed on a large decorated wooden frame. On the top it has one whirl-patterned and four flower-shaped bells. The short hand and long hand show hours and minutes, respectively, and another hand on a small circle above them shows seconds. The date is displayed through a small window on the face. The clock obviously tells the time, but it has also been appreciated for the beauty of its decorations. The curators authenticated the tall clock as genuine, and original.

The history of the clock can be seen from inscriptions regarding the manufacturers and the place where it was made. The face of clock has markings of names and places, including "Jon a Mulliken" and "Newbury Port" (also Newburyport). The curators identified "Jon" as Major John Dunlop (1737–1812), and "Mulliken" as Nathaniel Mulliken (1746–1782). Dunlop was a woodworker, and Mulliken a clockmaker. Perhaps based on the time that this style of tall clock made its appearance, and the year of Mulliken's death, the curator infers that the clock was made around 1780. The history of its ownership cannot be determined precisely, but it was located in New Hampshire, with the latest owner being Ms. Isabel J. Turner. The condition of the artifact is very good; it has been repainted and recoated. The innermost wooden decorations on the clock face show some deterioration. The glass door covering the face must have been replaced at some point in time, because there are no scratches on the surface.

Proceeding to the material, the curators ascertained that the wood is cherry. The clock face is brass covered with a glass door. Most of the mechanical parts are probably iron and brass, though visitors are not allowed to see the inside of the clock. Wooden nails were used for some spots in the main parts of the frame, and minor decorations were glued on. Two metal hinges are used for the doors which cover the face and the mechanical parts.

Turning to the construction, the wooden case was scrupulously planed, painted, and given a coat of varnish. The main body of the wooden case was constructed by attaching four boards to the case using glue and wooden nails. The outside boards have grooved decorations. The moldings and spindles are

attached to the clock case. The bottom platform has four decorated legs, each in the shape of a bird's talons grasping a ball.

The ornamental effects result mainly from two types of decoration: carvings and various markings. The clock face is the focus of the ornaments. A decorative effect was created by carving the moldings, split spindles, bosses, and vertical supporting members in symmetrical patterns. At the top of the clock, four flower-shaped bells and a whirl-patterned bell are placed between two crests of waves. Originally, the two upper flower bells were colored purple and the lower ones were colored cream white. This color must have attracted attention through its contrast with the general brown color, especially when the bells were ringing. There are four grooved lines on both sides of the main body. The bottom of the clock case is adorned with a line of curved dots and a line of curved lotuses. A curved lotus was also placed on the bottom of the platform of the case. The four legs were modeled after a bird's talons clutching a ball. The support part of the case has several marking designs. The door covering the machine parts was hemmed with a rope-patterned line, a chain-patterned line, and a second rope-patterned line. Within these three lines, two tendrils are tangled around each other. The platform also has two rectangular lines, one with a chain pattern and the other a rope pattern.

### Evaluation

*There are two kinds of evaluation. One has to do with judgments of aesthetic quality and workmanship. The other kind consists of factual comparisons of one object with others of its kind in quantifiable terms.<sup>10</sup>*

Compared to other artifacts I have seen so far, this tall case clock stands out in terms of luxury and novelty. First, it is very tall and neat, well ornamented, sophisticated, and catches the eye. Second, the movement is controlled by a spring. At that time, ordinary people would never have seen self-moving parts. The case and the clock must have created contradictory feelings in people. Third, it was very expensive. Of the various items of furniture used during that period, the tall case clock was by far the most costly.<sup>11</sup> The clock was not of local manufacture, but was imported from a port town, Newbury Port, Massachusetts.<sup>12</sup> The makers were proud of their work and wanted to spread their names as widely as possible, for the purpose of advertisement, by placing their names on the work. Fourth, the existence of a mechanical clock indicates the appearance of a sense of time and schedule among rural people in the late eighteenth century. This artifact from northern New England reflects the movement of the Enlightenment in the eighteenth-century Western world.

In comparison with other examples of woodworking from the late eighteenth century, this tall case clock shows excellent workmanship. The work on the boards is comparable to that found in delicate card tables in later days. In terms

of woodworking technology, their craftsmanship was likely the forerunner of the work of the Federal period.<sup>13</sup>

### Cultural Analysis

*This seeks to examine in depth the relation of the artifact to aspects of its own culture.*<sup>14</sup>

I will consider three issues regarding this tall case clock: its production, its utility function, and the machine civilization.

The manufacture of this tall case clock required professional craftsmanship. It included metal and mechanical parts for the movement as well as fine woodworking.<sup>15</sup> There were few craftsmen even in prosperous urban centers. Newbury Port, the third largest port town in Massachusetts, was a large, busy and prosperous town. The craftsmen were well known to the people, and they needed to be so. Because of the high price, there was only a limited number of customers in neighboring towns, and the local market was not large enough to support their business. They depended on the rapidly developing market economy of the New England region, and achieved recognition in the large market. Jon Dunlop and Mulliken were likely a team who shared work, specializing in woodwork and mechanical work, because it is unusual for the casemaker's name to be found on the clock face. Being a port town was convenient considering the need to transport such a large object as a tall case clock. The tall case clock's presence in New Hampshire was symbolic of the progress of the market revolution in North America.

By the end of the seventeenth century, the colonial societies in British North America had completed the seasoning phase of their colonization, and had started down the road to consumerist development following the English consumer revolution. The colonial people were keen to learn of new fashions in consumer goods including housing and new ways of life in England. Historians call this movement Anglicization.<sup>16</sup> Americans acquired such information through magazines, books, and advertisements as well as letters from England. They had an appreciation of Georgian-style mansions, furniture, tea and tea party sets such as those made by Wedgwood, tall case clocks, and so forth. Not only the wealthiest people but those with more moderate wealth and even lower classes enjoyed manufactured household goods, albeit with variations in scope and timing. At the basic stage of consumption they possessed pans, pots, and spits for cooking; sheets, blankets, and beds for more comfortable sleeping; tables and chairs. As their standard of living improved they acquired candlesticks, linens for tables and beds, and even silver. The wealthiest built stylish mansions with a parlor and hall plan, with chimneys, wide windows, hearths in each room, and beautiful doors.<sup>17</sup>

During the late eighteenth century, various elegant products such as the tall

case clock became available through the market. According to Carole Shammas, local buyers had fairly easy access to commercial products. In Massachusetts just prior to the Revolution, the ratio of population to retail establishments was about 12 to 1.<sup>18</sup>

At the end of the seventeenth century, craftsmen from England began making clocks in Boston, and then New York and Philadelphia. In the eighteenth century, craftsman who had apprenticed with masters in the central cities began to open shops in local towns in New England. They employed their own apprentices, and became local clockmakers. Some of the local clockmakers were from other New England colonies or from New York. The number of clockmakers and the output of clocks in New England increased substantially in the last quarter of the eighteenth century. It is assumed that the New Hampshire customer of the Dunlop case clock sought one of the best quality, and purchased it from as far away as Newbury Port, Massachusetts, even though he could have bought one made by a local craftsman. Less wealthy townsmen surely contented themselves with wooden clocks.<sup>19</sup>

The Dunlop case clock was a very desirable item.<sup>20</sup> It functioned in two ways. The excellence of craftsmanship displayed the owner's wealth and cultural superiority, in a way that was easily visible to visitors. Additionally, the family surely lived a time conscious life and controlled their activities with the clock. This exquisite artifact gave a new order to the residents of the mansion.

To perform the first function, the clock was located in the parlor of the mansion.<sup>21</sup> Important visitors who were introduced into the parlor to see the clock would understand the elegant taste and refined character of the owner. It seems certain that the parlor also had elaborate furniture and sophisticated drinking and eating vessels. The family and visitors would have had tea, played cards, and danced there, and looked at the clock to check the time. It was one of the main products in the stage set for genteel association. These consumer goods verified the social values shared by the participants.

Regarding the time keeping function, it is clear that the personal clock was not necessary for people living naturally or communally. The farmer worked from sunrise to sunset following a given sequence of agricultural tasks. Although in urban communities the public clock set on the church or the city hall signaled man-made time, townsmen had only one time, that of the community. They arranged their schedules based on the public clock when carrying out public activities. Workers in the city worked as long as the natural light gave them enough visibility. As David Landes explains, "Time . . . was of the essence because it belonged to the community and to God."<sup>22</sup>

The ownership of clocks, however, privatized time. Owners of clocks could order and control their lives personally. The clock was an ever visible, ever audible companion and monitor. As Landes says, "A turning hand, specially a minute hand (the hour hand turns so slowly as to seem still), is a measure of time used, time spent, time wasted, time lost. As such it was prod and key to personal

achievement and productivity.”<sup>23</sup> Benjamin Franklin advised people not to waste time, and practiced this; his *Poor Richard's Almanac* included the famous phrase, “Time is money.” He made plans to control his daily life by the hour. To begin the day at five a.m., before sunrise, required a clock.<sup>24</sup> Landes introduces the words of a fifteenth-century Italian merchant: “he who knows how to make use of time, he will be lord of whatever he wants.”<sup>25</sup> When a household had a tall clock and case at home, time was their own. They were responsible for utilizing their own time.

The Dunlop tall case clock shows the second and date. People in the late eighteenth century had no need to measure time in seconds, and they knew the date through the almanac and calendar. This superfluous information surely tended to display the marvel of the fine mechanism of the clock. Above all, it was an automatic machine. Since the days of the elaborate public clock, equipped with angels, saints, roosters, and hammers, the mechanism was as much spectacle as time signal. As Landes points out, “The clock as pageant was an imitation of divine creation, miniaturization of heaven and earth.”<sup>26</sup> Jean Froissart, a French historian and poet, praised the automatic machine in his *L'horloge amoureuse* (1369):

The clock is, when you think about it,  
A very beautiful and remarkable instrument,  
And it's also pleasant and useful,  
Because night and day it tells us the hours  
By the subtlety of its mechanism  
Even when there is no sun.  
Hence all the more reason to prize one's machine,  
Because other instruments can't do this  
However artfully and precisely they may be made.  
Hence do we hold him for valiant and wise  
Who first invented this device  
And with his knowledge undertook and made  
A thing so noble and of such great price.<sup>27</sup>

Though the Dunlop case clock only has a second hand and the date window in addition to the useful hour and minute hands, it seems that the owner enjoyed the automatic movement. In fact, some tall case clocks had a glass window on the side through which one could see the inside and the working of the movement. The clock must have impressed people and, at first sight, shocked them. To see a clock was to experience a new world. Families that owned them introduced a new age and a new world to local people.

### Interpretation

*It is concerned with the relations of the artifact to our present culture.*<sup>28</sup>

Life in a mansion and with a clock signified a great transformation of society from communal to personal. Mansion residents shared the world with genteel people in Boston and Philadelphia, and wished to share it even with those in London; they did not, however, want to share it with the local populace. Their great homes were no longer public offices used as they carried out justice as local magistrates, but were private arenas used as they carried out a genteel way of life. Clock owners living in mansions could and did arrange their personal time schedules to ensure that they did not waste their time. Clock owners kept a private time of their own. They became independent from the communal cycle of life.

In communal life, togetherness and the natural sequence of agricultural tasks controlled the people and sustained the social order. The members of the hierarchical community, with their own social positions in it, labored in the fields and enjoyed fiddling and dancing at the times of harvest. For several nights during harvest, one local gentleman in colonial Delaware recorded that he “had fiddling and Dancing and was very Merry till Mid Night then I came home and three or four more with me.” Apparently the workers who helped each other got no payment but the entertainment and the drink. As Richard Bushman explains, “They joined in the harvest labor out of a sense of communal obligation, and the fellowship of the drink sustained the neighborly fraternity.”<sup>29</sup> Each member had to follow and contribute to the public activities through fraternal commitments. A personal clock and a genteel mansion stood against this fraternal world.

The development of market economy and consumerism, and the political turmoil surrounding the Revolution, changed fraternal communities into a republican nation consisting of independent citizens. They were individuals and took responsibility for their personal decisions. A mansion and a clock were well suited to an age of increasing emphasis on privacy and self-control. Kevin Sweeney points out the change in social organization in mansion plans.

A concern with increasing a family’s collective privacy and the privacy of individual family members influenced floor plans of the mansion houses. [A]lterations in New England house plans during the mid-eighteenth century resulted in more formalized and specialized delineations of space that created sharper boundaries between interior and exterior spaces and individualized interior spaces.<sup>30</sup>

The mansion house separated individuals into homes and chambers private from the fraternal community. In such a mansion, when people had time they could order their lives and set work tasks for themselves in a manner once reserved to the regulated community. It was not just the invention of the mechanical clock, but the privatization of time, which was a major catalyst to individualism.<sup>31</sup>

The clock was an essential artifact for building the age of gentility. Gentility is not simply a matter of refined manner and fashion, but rather is a culture in the Geertzian sense.<sup>32</sup> It is a new way of thinking, feeling, acting, associating, and

most of all of being self. Refinement requires the establishment of a common standard of behaviors to elevate human life. This development heightened self-consciousness in the sense that a member of the genteel class became aware of how one looked in the eyes of others. Self-consciousness made "life a continuous performance, perpetually subject to criticism. . . . Not only [was there] criticism directed outward to others, but people had to watch themselves through the eyes of others."<sup>33</sup> As shown in the case of Benjamin Franklin, having a schedule is a sort of "other's eyes within" monitoring the wasting of time. With accuracy increased to a range of five minutes or so, a clock could function as a standard to control and monitor life and work.<sup>34</sup>

Individualism is by no means anarchy or self-indulgence. Independence and self-discipline are indispensable to individualism. Individuals act by themselves on their own judgment and responsibility. They make judgments according to the standards of society. The individualistic social order works only when people fully internalize this principle, because such a society can no longer depend upon communal understanding, customs, or fraternal interdependence. It is inner discipline, rather than external regulation or pressure, that maintains individualist society. For that purpose Landes stresses the importance of the widespread private use of the mechanical clock. The possibility of private use

laid the basis for time discipline, as against time obedience. One can . . . use public clocks to summon people for one purpose or another; but that is not punctuality. Punctuality comes from within, not from without. It is the mechanical clock that made possible, for better or worse, a civilization attentive to the passage of time, hence to productivity and performance.<sup>35</sup>

Hence punctuality is the most basic qualification for being a citizen in modern society.

In democratic America, all people should have an equal opportunity to be genteel. Obviously, this does not necessarily mean the equalization of wealth or standards of living. Rather it is standards of manners and culture that matter. According to Bushman, when Catherine Sedgewick, a popular nineteenth-century novelist who wrote about heroines in a genteel world, wished to imbue every American with vernacular gentility, she implied that "All that was needed was for every family to occupy a parlor with chromos on the walls."<sup>36</sup> A parlor is a space to display the owner's civilized life in the eyes of genteel guests, and chromos on the wall should show the family's genteel taste. A parlor and chromos were roughly the genteel minimum. Making use of whatever artifacts were available, Americans must prove their gentility to be independent and free citizens.

A mansion and its clock had pioneered the age of gentility and the society of discipline.

*I am grateful to Professor Kevin M. Sweeney of Amherst College for his guidance in the study of material culture.*

## Notes

<sup>1</sup> Thomas J. Schlereth, "Material Culture Studies in America, 1876–1976," in Thomas J. Schlereth, ed., *Material Culture Studies in America* (Nashville: The American Association for State and Local History, 1982), p. 2.

<sup>2</sup> The artifact dealt with here is the Dunlop clock and case in the Mead Art Museum collection at Amherst College. Richard L. Bushman provides an excellent example of social history widely utilizing material culture study to show the totality of culture in eighteenth- and nineteenth-century America. Richard L. Bushman, *The Refinement of America: Persons, Homes, Cities* (New York: Alfred A. Knopf, 1992), "Introduction."

<sup>3</sup> Schlereth, "Material Culture Studies," p. 3.

<sup>4</sup> *Ibid.*, pp. 36–37.

<sup>5</sup> Cary Carson, "Doing History with Material Culture," in Ian M. G. Quimby, *Material Culture and the Study of American Life* (New York: W. W. Norton for the Winterthur Museum, 1978), p. 48.

<sup>6</sup> Schlereth, "Material Culture Studies," p. 44.

<sup>7</sup> E. McClung Fleming, "Artifact Study: A Proposed Model," *Winterthur Portfolio*, vol. 9, no. 2 (Summer 1974): 153–73.

<sup>8</sup> *Ibid.*, pp. 154–56.

<sup>9</sup> *Ibid.*, p. 156.

<sup>10</sup> *Ibid.*, p. 157.

<sup>11</sup> According to a sampling of 113 inventories taken between 1754 and 1777 in all areas of the Connecticut Valley, the most luxurious "house clock" cost £30. This amount of money could have maintained a lower income household for almost a whole year. A simple type of "clock and case," it seems, was valued at less than £10. Roughly six percent of the estates in the sample included a watch. Remember that the probate records are socio-economically biased because only propertied househeads registered inventories. Chris H. Bailey, "Clocks and Instruments," in Wadsworth Atheneum, ed., *The Great River: Art and Society of the Connecticut Valley, 1635–1820* (Hartford, Conn.: The Atheneum, 1985), pp. 341–42.

<sup>12</sup> I owe the interpretation of the names on the clock as an advertisement to Prof. Kevin Sweeney.

<sup>13</sup> Jules David Prown, "Style as Evidence," *Winterthur Portfolio*, vol. 15, no. 3 (Autumn 1980): 197–210.

<sup>14</sup> Fleming, "Artifact Study," p. 157.

<sup>15</sup> Through the eighteenth century, craftsmanship in New England developed and diffused into local communities at an increasing pace. Kevin Sweeney, "Regions and Study of Material Culture: Explorations Along the Connecticut River," in Luke Beckerdite and William N. Hossly, eds., *American Furniture 1995* (Hanover, N.H.: University Press of New England, 1995), pp. 145–66.

<sup>16</sup> On Anglicization in terms of material culture, see T. H. Breen, "An Empire of Goods: The Anglicization of Colonial America, 1690–1776," *Journal of British Studies* 25 (1986): 467–99.

<sup>17</sup> Ann Smart Martin explains the general process of the development of consumerism in eighteenth and nineteenth century America together with a comprehensive historiographical sketch. Ann Smart Martin, "Makers, Buyers, and Users: Consumerism as a Material Culture Framework," *Winterthur Portfolio*, vol. 28, nos. 2 & 3 (Summer/

Autumn 1993): 141–57.

<sup>18</sup> Carole Shammas, *Pre-industrial Consumerism in England and America* (Oxford: Clarendon Press, 1990), pp. 273–378.

<sup>19</sup> Penrose R. Hoopes, *Connecticut Clockmakers of the Eighteenth Century* (Hartford: Edwin Valentine Mitchell, 1930), pp. 4–12.

<sup>20</sup> By examining the desirability of goods that are both available and affordable, it is possible to understand the social value represented in consumerism. Martin, “Makers, Buyers, and Users,” p. 156.

<sup>21</sup> For the preeminence of the parlor in mansion plans of the period, see Bushman, *The Refinement of America*, pp. 120–22.

<sup>22</sup> David S. Landes, *Revolution in Time: Clocks and the Making of the Modern World* (Cambridge, Mass.: Harvard University Press, 1983), pp. 69, 82.

<sup>23</sup> *Ibid.*, p. 89.

<sup>24</sup> Benjamin Franklin, “The Autobiography,” in L. Jesse Lemisch, ed., *Benjamin Franklin: The Autobiography and Other Essays* (New York: New American Library, 1961 [based on Farand edition]), p. 100.

<sup>25</sup> “I Libri della famiglia,” in Giuseppe Brusa, ed., *Gli Orolonghi, Cataloghi del Museo Poldi Pezzoli*, no. 1 (Milan: Museo Poldi Pezzoli, 1974), Book 3 “On Management,” cited in Landes, *The Revolution in Time*, p. 92.

<sup>26</sup> *Ibid.*, p. 79.

<sup>27</sup> Cited in *ibid.*, p. 82. Also Carlo M. Cipolla, *Clocks and Culture, 1300–1700*, “Conclusion.”

<sup>28</sup> Fleming, “Artifact Study,” p. 161.

<sup>29</sup> Harold Hancock, “‘Fare Weather and Good Health’: The Journal of Caesar Rodney, 1727–1729,” *Delaware History*, 10 (April 1962): 40–45, cited in Bushman, *Refinement of America*, p. 22, and also pp. 22–23.

<sup>30</sup> Kevin M. Sweeney, “Mansion People: Kinship, Class, and Architecture in Western Massachusetts in the Mid-Eighteenth Century,” *Winterthur Portfolio*, vol. 19, no. 4 (Winter 1984): 245.

<sup>31</sup> Landes, *The Revolution in Time*, p. 89.

<sup>32</sup> Clifford Geertz, *The Interpretation of Cultures* (New York: Basic Book, 1974). His definition of culture, given on p. 44, is as follows:

I want to propose two ideas. The first of these is that culture is best seen not as complexes of concrete behavior patterns—customs, usages, traditions, habit clusters—as has, by and large, been the case up to now, but as a set of control mechanisms—plans, recipes, rules, instructions (what computer engineers call “programs”)—for the governing of behavior. The second idea is that man is precisely the animal most desperately dependent upon such extragenetic, outside-the-skin control mechanisms, such cultural programs, for ordering his behavior.

<sup>33</sup> Bushman, *Refinement of America*, p. xiv.

<sup>34</sup> Landes, *The Revolution in Time*, p. 128.

<sup>35</sup> *Ibid.*, p. 7.

<sup>36</sup> Bushman, *Refinement of America*, pp. 432–33.