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**Rethinking Reconstruction and Replicas:  
Advancing Preservation Through Experimental Archaeology**

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**Rethinking Reconstruction and Replicas:  
Advancing Preservation Through Experimental Archaeology**

by

**Samantha Anastasia Smith, B.A.**

**Thesis**

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Thanks to:

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The Baron's Men, who humored me

Michael and Richard, who never stopped pushing

and

My parents and my friends, who never stopped believing.

**Rethinking Reconstruction and Replicas:  
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by

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The University of Texas at Austin, 2013

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According to the Secretary of the Interior's standards, reconstruction of no longer extant buildings should be undertaken only based upon existing documentation and upon its original site. This is not always feasible, and in these cases, replica buildings may take their place. These replicas potentially have great . By creating experiments with the use of the scientific method—that is, by developing a hypothesis, testing it, and recording the results—interested groups can replicate conditions and experiences that cannot be achieved otherwise. Replicas may be expensive in time, materials, research, and labor to create, but because they are of no historical value, destructive experiments may be performed without losing objects of cultural significance. Preservation professionals are not the only people who can perform these experiments.

This thesis explores this possibility with three case studies: replica structures or complexes that perform experiments and explore experiences. At Shakespeare's Globe, actors, directors, costumers, and audiences seek to replicate a period experience and thereby expand scholarship on the plays that were originally performed in such theaters, the singular requirements of the space, and the experiences of the participants. Plimoth

Plantation and the Mayflower II, both staffed by volunteer re-enactors and historians, seek to recreate respectively the conditions of a colonial Massachusetts village and the ship that brought its colonists. By replicating the material culture, participants can potentially replicate the experience of those who originally created and used it. To this end, the re-enactor community—a community of interested parties who are currently underutilized in preservation—can be tasked with projects and experiments to maximize the replicas' usefulness.

The same strategies can translate to historic sites. Through understanding the strengths of experimental and experiential archaeology, we can grow the population of preservationists nationwide and mobilize their ideas and enthusiasm. We can expand the use of historic buildings and create a sense of ownership in their communities. By defining and bridging the gap between experimental and experiential archaeology, we can push the boundaries of current preservation science with innovative approaches to generating a physical and emotional connection to material culture.

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## **Rethinking Reconstruction and Replicas:**

### **Advancing Preservation Through Experimental Archaeology**

How can we use the principles of experimental and experiential archaeology in replica buildings to further the goals of modern preservation?

#### **CHAPTER 1: INTRODUCTION**

On a rural plot in the woods outside Treigny, in the Burgundy region of France, workers clothed in wool and linen have been toiling for fifteen years—and may be toiling for another fifteen—to construct a castle. They use simple tools and local materials. Lime is slaked on site, and the stone has been hewn from a once-abandoned quarry nearby. Indeed, the location was selected because of its strategic proximity to the materials needed: clay, lime, wood, and stone are all available locally. Budgets are tight, despite the wealth of the man for whom the castle is to be built, but in the end the workers will have constructed a fortress to stand the test of time. These workers, however, are not laboring in the expectation of repelling bandits or jealous neighboring lords. Instead, this is a labor of love and an opportunity for experience in construction techniques antiquated relative to these twenty-first century builders.

Construction began on the castle of Guédelon in 1997. It was conceived by Michel Guyot, an avid preservationist and owner of a historic property near the Guédelon site, who wanted to see how such a structure would have been built. He wanted to create the most historically accurate castle possible. The stones are hand-quarried and shaped, and even the workers themselves are dressed in period-appropriate clothing—the theory

being that the way we dress affects our range of motion and the way we move and stand. By replicating as exactly as possible the conditions under which such a castle would have been built, he has embarked on an architectural and archaeological experiment of massive scope<sup>1</sup>. Preservationists and apprentices in building trades work at the site for experience in historic masonry techniques, which in turn trains them for work in historic masonry preservation and rehabilitation<sup>2</sup>. The building site is itself an experiment, but what will it be when it is complete? Other such sites—ruined and restored palaces, for example—are used as venues for weddings and other special events. Guédelon is a modern replica of a historic site, but how do such places fit into the grander scheme of historic preservation?

The answer to this question lies in a method that bridges the already-slim gap between historic preservation and archaeology. As I will show, however, this method—experimental archaeology—can not only link preservation and archaeology but can pull in disciplines such as sociology, anthropology, and experimental theater. By keeping in mind the principles of experimental archaeology, we can examine and manipulate human interaction with historic places. In order to study this phenomenon, we will observe the



Figure 1: Guédelon under construction. Source: “An Introduction.” *Guedelon: A Castle in the Making*. Web. 01 Mar 2013.

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<sup>1</sup> “The Guedelon adventure: The scientific approach.” *Guedelon: A Castle in the Making*. Web. 01 Mar 2013 [http://www.guedelon.fr/en/the-guedelon-adventure/the-scientific-approach\\_01\\_04.html](http://www.guedelon.fr/en/the-guedelon-adventure/the-scientific-approach_01_04.html)

<sup>2</sup> “Participate in the building of Guedelon Castle.” *Guedelon: A Castle in the Making*. Web. 01 Mar 2013 [http://www.guedelon.fr/en/participate-in-the-building-of-guedelon-castle\\_07.html](http://www.guedelon.fr/en/participate-in-the-building-of-guedelon-castle_07.html)

use of these principles on replicas of three contemporaneous sites. Before we do so, however, we must define the terms of our argument.

Experimental archaeology is not a new discipline, but it was not strictly codified for much of its history. Archaeologists, just as other preservation professionals, have always sought to fill in our gaps of documented knowledge with something beyond educated guessing. It is separated from the simple creation of a replica or an imitation by the application of the scientific method to the problem. Archaeologists worldwide have made the attempt to recreate the conditions of an object's creation and have done so for at least as long as they have been recording their results. However, their methods were not always scientific. As archaeologists developed their discipline into a science, they attempted to legitimize their work by applying the scientific method. Though he was not the first to write on the subject, John Coles's 1971 reference *Archaeology by Experiment* seems to be the most ambitious attempt by that time to describe experimental archaeology, to detail its good points and downfalls, and to show examples of how it could help find answers to puzzling questions. Coles points to the scientific method as the manner by which archaeologists can perform their experiments—seemingly a simple statement; nevertheless, his work has provided a resource for “best practices” in this field. In his words: “Most of these rules are observed in most experiments, although they may be unacknowledged as such, because they are basically common sense<sup>3</sup>.” Coles's common sense recommendations are as follows:

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<sup>3</sup> Coles, John. *Archaeology by Experiment*. Charles Scribner's Sons, 1974.

1. Use materials that would have been available to the artifact's creators either by trade or locale.
2. Use methods and technology that are feasible/proven to be accessible by the artifact's creators.
3. Use modern technology only to observe the results or where it will not interfere.
4. Determine the scope of your work before starting.
5. Construct an experiment that can be repeated.
6. Have a result in mind, but do not fear to improvise or alter your methods of experimentation.
7. Do not assume that a positive result proves your hypothesis to be true: it has only been proven feasible.

Broadly speaking, these are the rules of any experimental procedure. Of particular interest to this analysis is the determination of scope. The boundaries of the experiment must be set before experimentation begins. This would appear to be countered by the suggestion for improvisation and flexibility, but the scientist must strike a happy medium between the two.

This is especially true when we consider experimental archaeology as a discipline that can go beyond the physical act of reconstruction. If we are to accept experimental archaeology as a legitimate method by which we can examine the creation of material culture, the step to the examination of human response to material culture is not such a leap. The scope of this approach is necessarily broader and there will be exponentially

greater need for improvisation compared to a relatively short experiment, but human response itself is variable and unpredictable.

Why, then, is this relevant to historic preservation? Would this examination not be more appropriate to examining issues of archaeology? Historic preservation is inextricably entwined with experimental archaeology—we preserve and continue to use ancient, even lost building methods to prevent them from dying out entirely—but both are focused primarily on the replication and examination of material culture. We examine as observers rather than experiencers, though: we see an eighteenth-century farmhouse and imagine the life that went on within, and we might even restore it to something very close to its original condition. Generally speaking, however, if the farmhouse is to have a working kitchen, it will not be in a backyard lean-to, nor will it include a wood-burning hearth as its main cooking area. We make allowances for the needs of the modern-day resident. The farmhouse is electrified, linked to modern sewage systems, and fitted with climate control. When the restoration is complete, the owner sits in his living room and imagines he is living in a piece of history, but he is not entirely immersed in it. His experience is necessarily unlike that of its original owner and builder.

In some ways, that original experience cannot be replicated. No eighteenth-century people still exist to put into eighteenth-century farmsteads, and few modern people would assent to live indefinitely without modern conveniences. Few people in the American South would volunteer to live or work in a building with nineteenth-century climate control. Such buildings exist, but where they are used for any purpose they are refitted for modern use. A house might become a house museum, for example, and while

it might be furnished much as it would have been during its period of significance, maintaining its original conditions may be not only impractical but detrimental to finishes and furnishings. The experience would be closer, but is it an experience people would want to have? What would be the purpose of such a painstaking degree of authenticity?

Where this approach is impractical, solutions are nevertheless possible. Replicas offer an environment for experimental archaeology, providing an environment for personal, memorable experiences for visitors. This is already done: Skara Brae, for example, a Neolithic settlement in the Orkneys, is a site with many regular visitors but is so delicate that these visitors cannot explore the site itself. A nearby replica structure, therefore, provides as much of the experience as possible without damaging the Neolithic buildings. Where the structures no longer exist, open-air museums with replica buildings take their place to create an immersive experience both for visitors and interpreters. As shown by Shakespeare's Globe, these replicas can provide laboratories for experimentation as a part of creating that immersive experience. Combining these replicas with an experiment of defined scope can further our understanding of the way these structures were built. This, in turn, can develop our understanding of the buildings themselves, the culture in which they were built, and ways we can adapt that understanding into practices of preservation as well as other disciplines.

That said, experimental archaeology does not always stay within its original scope. Archeon, an archaeological "theme park" in the Netherlands, suffered a fire in 1995 where two of its reconstructed buildings were destroyed. Their original mission had not been to study catastrophic deterioration of historic structures; nevertheless, they

turned what could have been a disaster into serendipity<sup>4</sup>. The fire gave them the chance to study how buildings like these would have reacted in similar circumstances. Findings such as these could be of use to more than living history museum curators or devotees of Dutch stone-age material culture: they could be of use to architects designing fire-safe structures and to archaeologists looking for detailed evidence of burned structures in the sites they excavate. The fire was obviously unintended, and examining the burned remains of an ancient house was outside the initial scope of Archeon. Nevertheless, because they built with the tenets of experimental archaeology in mind, they were able to improvise and exploit this opportunity for research.

Experimental archaeologists such as Dr. Peter J. Reynolds, first director of the Butser Ancient Farm, seek to draw a bright line between experimental and experiential archaeology. Where experimental archaeology refers to the use of deductive reasoning and experimentation under the scientific method to determine how historical artifacts were made, experiential archaeology is based more on what we can learn through the activities of participants taking part in and teaching through immersive experiences. Some experimental archaeologists such as Reynolds argue that experiential archaeology is not scientifically rigorous: that it is impossible for a twenty-first century person to experience the past accurately. Nevertheless, the experiences of participants in historic reenactments can be relevant, even vital to our understanding of the past.

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<sup>4</sup> Flamman, J.P. "Two burnt-down houses examined." *euroREA*. 1.1 (2004): 93-102.  
[http://journal.exarc.net/files/exarc-eurorea\\_1\\_2004-two\\_burnt-down\\_houses\\_examined.pdf](http://journal.exarc.net/files/exarc-eurorea_1_2004-two_burnt-down_houses_examined.pdf)

To accept this, we must consider that preservation is not based solely on the preservation of material culture but what that material culture tells us about the past and the present. We try to preserve culture, context, and experience through maintaining the artifacts of history. Even if we cannot gain a perfect understanding of the past through attempting to experience it, if we keep that fact in mind we can still learn from immersing ourselves in a material culture not our own. We cannot become Bronze Age farmsteaders—we cannot leave the past entirely behind—but we can come closer to an understanding of what their life might have been like. We can also use the principles of experiential archaeology to help visitors of both replicas and historic sites gain a closer connection to history.

To examine the ways replicas (and potentially other historic sites) can use experimental and experiential archaeology, we will observe three separate case studies. Treigny has been exempted mainly because it is still a work in progress. We cannot yet infer its effect on visitors after its completion, whereas in these case studies we can observe the success of these sites after at least a decade of use. The clearest example of a site using the tenets of experimental and experiential archaeology both in its design and its current use is Shakespeare's Globe. Purpose-built for observing the effects of Elizabethan plays performed on an Elizabethan stage, part of the Globe's mission was to see how these performances would differ from modern performances on other types of stages. Through the use of this space, they discovered lost and unusual methods of blocking, costuming, and audience engagement to create an experience analogous if not identical to the experience of a 17<sup>th</sup> century audience. The fact that this was the stated

purpose of developing Shakespeare's Globe and a part of the troupe's mission statement means that, of all three of these case studies, it most closely follows the best practices of experimental archaeology—and, perhaps for that reason, it may be the most successful.

Plimoth Plantation supplies our next case study. This site in Massachusetts some few short miles from the original Plymouth settlement is dedicated to the recreation of life in the Plymouth settlement in the early 1620s. We can observe the fitness of this collection of structures in two ways: first, we can chart the progression of the site owners' philosophy from inception to the present day; second, we can refer to their ongoing commitment to teach history through immersive, hands-on methods. We will also visit the concept of living history museums, their relevance to experiential archaeology, and how these principles can be translated into useful tips for building preservationist populations.

Our final case study is a replica from 1957 of the Pilgrims' *Mayflower*. Called the *Mayflower II*, this ship was designed by William A. Baker at the request of Plimoth Plantation. Interested parties in England requested these designs in order to create this replica and, as a sign of goodwill between nations, to sail it from England to the United States as it would have been sailed by a contemporary crew. At least one crewmember kept a journal, later published, which gives a day-by-day account of life aboard the ship. The trip was not set up as an experiment, but the ship was designed and built with exactitude and care to be a fit stage for such an experiment. The experiences of its 1957 crew as well as those of modern re-enactors show the value of experiential archaeology and the difficulties in attempting to recreate the past in the present.

## CHAPTER 2: SHAKESPEARE'S GLOBE

The walk from London Bridge Station to the Globe is not identical to the walk of a theatergoer in 1600. The modern replica stands perhaps two hundred yards from the site of the original, the remains of which lie beneath a paved courtyard and a housing block from the early 19<sup>th</sup> century. Between the subway station and the theater are streets choked with cars and modern buildings hung with neon signs. Nevertheless, the walk from London Bridge feels authentic in a manner that painstakingly maintained 17<sup>th</sup> century buildings never would have been able to manage. Crossing the Borough High Street, the traveler finds himself at Southwark Cathedral, a place of worship for over one thousand years and the origin point for Hollar's "Long View of London." He may walk through the cathedral grounds or alongside them past street food vendors hawking their wares. By hugging the wrought iron fence and following the sidewalk toward the Thames, the traveler leaves the din of cars behind and heads down traveled walks and through tunnels sharing space with other pedestrians and the occasional busker. The remains of Winchester Palace and its rose window stand along this walking path near to the Clink, burnt down in 1780 with the Clink Prison Museum lurking in the former warehouse that took its place. The Golden Hinde is here as well—another replica, this time of Drake's famous galleon, standing at dry-dock and available for children's parties. The Thames itself can be seen from here, and before long the traveler emerges and walks along the riverbank. The modern world hasn't been left behind, but the walk gives the theater-goer a sense of the life of this neighborhood—vibrant, alive, welcoming, and tinged but not mired in history. The neighborhood is old. The city is older.



Figure 2: Maiden Lane on the path to the Globe. Photo taken by author.



Figure 3: Rose Alley on the walk to the Globe. Photo taken by



Figure 4: The view of St. Paul's from the front of Shakespeare's Globe. Photo taken by author.

The surroundings of the Globe are not entirely a happy accident. They were planned: Southwark's original zoning plan for the surrounding area was designed with the avowed intent of replicating not a 17<sup>th</sup> century district but rather the neighborhood that might have grown around the theater had it remained.<sup>5</sup> At the time Sam Wanamaker of the Globe Trust was gamely trying to convince the Southwark council to allow the construction of the Globe, the borough was in need of urban renewal. The original plan for the Globe would have transformed the entire neighborhood; subsequent to the proposal of this zoning scheme, however, enough businesses settled in the area to make a concerted rezoning effort unnecessary.<sup>6</sup> Nevertheless, the Globe walk was by no means unplanned. The front door is bare yards from the banks of the Thames. The walk from the nearest underground station is invigorating rather than exhausting even for a sedentary

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<sup>5</sup> Day, Barry. *This Wooden O*. New York: Limelight Editions, 1998.

<sup>6</sup> *Ibid.*

American. One could almost believe that the Globe has remained on this spot waiting to be inhabited again.

For the Globe, it was impossible to build on the original site. Originally, no one was certain where it was. When the remains of the old Globe were found, construction had already started on the replica. These remains proved both promising and confusing for archaeologists and scholars. Just as when the remains of the Rose were excavated the year before, the Globe's remains challenged long-held scholarship and assumptions about its size and situation. Moreover, the old Globe could not be entirely excavated, nor could



*Figure 5: Courtyard over the foundations of the Globe. Photo taken by author.*

the site be used for new construction. There is little freely available space in central London, and the historic Globe sits beneath a stretch of street, a courtyard, and Anchor Terrace. Anchor Terrace is a Grade II listed building and is therefore protected from demolition by British law. Instead, a monument stands on the spot and tile work in the courtyard follows the original circumference.

There are inherent challenges in the design and construction of a replica building for which no plans and very few records exist. When design of Shakespeare's Globe began in 1986, the foundations of the original still lay hidden beneath Anchor Terrace. Travelers' accounts from the late sixteenth and early seventeenth centuries existed, and drawings of the theater appeared on several contemporary maps and sketches of London.

Other theaters had also been found, which gave the designers an idea of interior layout, proportion, construction methods, and so on. The fact remained, however, that this was all secondary information. Plans, invoices, and any other real concrete documentation were nonexistent. How, then, could a new plan be made with any accuracy? Indeed, why should it? Wanamaker himself originally conceived a theater of the same general dimensions and shape as the Globe but built of brick<sup>7</sup>; why should this replica be so exacting?

The purpose of the theater was not merely to stand as testament to Shakespeare. Wanamaker wanted to recreate as accurately as possible the experience of both actors and audiences in the seventeenth century. He believed that these participants could learn more about theater in general and about these historic plays in particular by performing them in an appropriate space: in short, that material culture is necessary to replicate past conditions. His idea was to create a laboratory for experimentation to discover the differences inherent in performing on such a stage. Even in 1979, well before work had begun on the blueprints, scholars such as John Russell Brown spoke of the possibilities of experimental theater in a reconstructed Globe<sup>8</sup>.

Initially, the people who took up the challenge were neither preservationists nor architects. Among the scholars who attempted to discern the original design of the Globe were theater historians and English professors who believed in the power of Shakespeare

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<sup>7</sup> *Ibid.*

<sup>8</sup> Brown, John Russell. "Modern Uses for a Globe Theatre". *The Third Globe: Symposium for the Reconstruction of the Globe Playhouse*. Detroit: Wayne State University Press, 1981, p. 17.

in performance. Like Wanamaker, they also believed they could learn much by performing the plays in their originally intended environment. Many, including John Orrell, Andrew Gurr, Theo Crosby, Richard Southern, and Richard Hosley weighed in on the design of the replica. Of these, only Theo Crosby was an architect and, as lead architect for the project, the facilitator of the scholars' consensus.

The consensus took a great deal of work and required significant compromise on the parts of many<sup>9</sup>. Everything from the angle of orientation for the structure to the material of the floor on which the groundlings stood was debated and discussed. Many drawings showed a perfectly round structure: was this accurate, or would the Globe have been multi-sided? There were proponents of an eight-sided, fourteen-sided, even twenty and twenty-four sided plan. The roof of the original Globe was known historically to be thatch; given that this is known because it was a spark in the thatch that led to the fire that destroyed the original,<sup>10</sup> many were skeptical that it was the best choice to use for the new Globe. Authentic, yes, but thatched roofs had been illegal in London for centuries. No one knew the precise diameter of the original structure, but some scholars were concerned that a difference of even ten feet would be disastrous and ruinous to the intimacy of the space. The presence and size of a superstructure atop the theater also

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<sup>9</sup> The following debates come from multiple sources including correspondence among the principal scholars and designers of Shakespeare's Globe. Among these are the aforementioned John Orrell, Andrew Gurr, Theo Crosby, Richard Southern, and Richard Hosley as well as Sam Wanamaker himself. All correspondence comes from the Shakespeare's Globe archive.

<sup>10</sup> Smith, Logan Pearsall. *The Life and Letters of Sir Henry Wotton*. Oxford, England: Clarendon Press. 32–33.

caused controversy and scrambling among the historians involved, all of whom were committed to getting it right.

The sources that the committee used were varied. Some, like the panorama sketches of London, look on the face like they cannot possibly be very accurate: they are hand-drawn and, compared to modern maps, appear crude and imprecise. Among the most prominent images of the London contemporary to the original two Globes are the map drawn by John Norden in 1593 and the followup, *Civitas Londini*, from 1600; Claes Janszoon Visscher's map from 1616; and Wenceslaus Hollar's *Long View of London* from 1647. These show, variously, a round or faceted ring-shaped building with a pitched roof and an open space in the middle. Travelers' accounts exist as well, including those of Johannes de Witt in 1596 (who also drew an image of the interior of the Swan Theatre) and the Spanish ambassador in 1624. They describe a space capable of holding as many as three thousand people including the "groundlings" who stood in the yard around the stage, filling up the space between the actors and the galleries for a penny a head.



Figure 6: Portion of Visscher's Panorama from 1616 showing the Globe at the bottom. Source: Harrington, Peter. "The Visscher Panorama of London, 1616." *Discovering London*, <http://www.peterberthoud.co.uk/2012/09/visscher-panorama-of-london/>.



Figure 7: Norden's *Civitas Londini*, 1600 showing the Globe as an eight-sided building. Source: "Globe Theatre Dimensions." *The Globe Theatre*. <http://www.globe-theatre.org.uk/images/globe-theatre-london-map.jpg>

After much research and examination of the maps of London and other extant drawings, Orrell concluded in *The Quest for Shakespeare's Globe* that Hollar's drawing showed, apart from some mislabeling and a curious perspective, impressive accuracy. Noting the angles of incidence from the point of Hollar's perspective—the top of Southwark Cathedral—and the width and height of the sketch, he concluded that the Globe was between 101.37 and 103.32 feet in diameter and about 31.97 feet in height. His work was rewarded when the foundations of the Globe were found to fall within those parameters.

One of the problems with using Hollar's drawing, however, was that it was certainly of the Globe that took the place of the original. The original theater burned in 1613, and the preliminary sketches for the Globe in Hollar's *Long View* came from 1638. Due to tax and zoning ordinances—which existed even in Jacobean London—the footprint, orientation, and foundation at least would have remained the same. What of the rest of the structure, though? Older drawings were less reliable in other aspects; how could they be relied upon for building a replica of the older Globe? The rebuilt Globe at

least had more reliable documentation. It was not, however, Shakespeare's Globe—and to Sam Wanamaker, that had become paramount.



Figure 8: Hollar's Long View of London—specifically the portion showing the transposed labels of the Globe and the 'Beere bayting'. Source: "London by Wenceslas (Wenzel) Hollar." *Viatico de Vagamundo*. [http://viticodevagamundo.blogspot.com/2012\\_04\\_01\\_archive.html](http://viticodevagamundo.blogspot.com/2012_04_01_archive.html)

While some of the creative and academic team behind the Globe's reconstruction thought the design of the second Globe must have been a refined, perfected version of the first, its construction in 1614 would have put it well after Shakespeare had retired to Stratford. If they were to build Shakespeare's Globe, the theater for which he wrote his plays, they had to rebuild the original. The best evidence they had of its shape, its orientation, and its design were from the Hollar drawing, but they could use every bit of evidence at hand to create the original. Theo Crosby and the rest of the designers of what is now called Shakespeare's Globe had to fix upon answers to these questions. Small details may have changed, altered, or improved, but by combining their understanding of the Globe's contemporaries with the Hollar drawing and hints from Norden, they started the groundwork for the design of a faithful replica.

What Crosby and his architectural firm Pentagram lacked in Globe-specific documentation they were able to derive from contemporary building practices and examples from similar structures. For the rough design and proportion, they turned to a theater for which they had better documentation that included references to the Globe itself. The Fortune was designed by Peter Street, a London carpenter, in 1600<sup>11</sup>. While no construction plans exist for the Globe or for the Theatre from whose bones it was built, the contract for the Fortune illustrates both its similarities to and relative differences from its predecessor. Judging from the likely education of Street, Orrell deduced that he was most likely to use the *ad quadrantum* method to design the space. *Ad quadrantum* is a method by which a designer may maintain classical proportions and was also called “squaring the circle”.<sup>12</sup> Not only was this method common among medieval craftsmen, but the relative size and proportions of the Globe make it, Orrell concludes, the most likely method by which it was designed. Using this method with the derived measurements of the Globe from Hollar’s sketch, Orrell suggested that the stage was 49 feet 6 inches wide. Theo Crosby, architect for the new Globe, used the same method to determine the size, shape, and proportion of his design. *Ad quadrantum* sketches appear on his architectural drawings of the Globe: just as his medieval forebears, Crosby began

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<sup>11</sup> Orrell, John. *The Quest for Shakespeare’s Globe*. Cambridge: Cambridge University Press, 1983.

<sup>12</sup> *Ibid.* The *ad quadratum* method consisted of drawing a square to encompass the space to be used, connecting the corners with diagonal lines, and drawing a circle within that touched each of the four sides at one point. A square was drawn within this circle, its corners touching the circumference of the circle—again, without overlapping at any point. Circles and squares alternated within, creating proportional shapes that made the maximum use of their space.

from the circle and worked his way inward. From the very foundations of the design, he worked to recover the old ways.

Armed, therefore, with the basic requirements of his client—authenticity in all things, or at least as many as humanly possible—Crosby set about outlining the details.

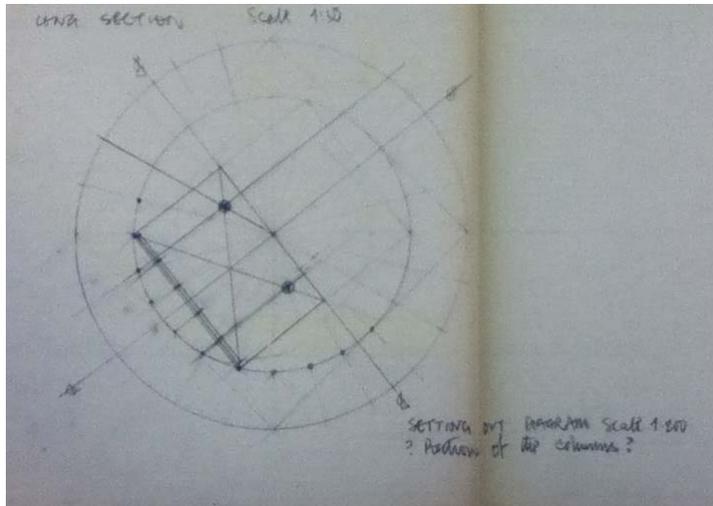


Figure 9: Ad quadrantum sketch from Crosby's plans for the new Globe. Source: Shakespeare's Globe archives. Photo taken by author.

With only a few accounts and ideas and nearly nothing extant, he and his firm had to improvise. They sought out “buildings of the same form or function as the Globe, built at a similar time, and in the same geographical area. As no

surviving buildings met all three

criteria, buildings were chosen that met two of the three<sup>13</sup>.” They studied construction techniques, materials, and design and ornament to determine what was most likely to be authentic. English oak and Tudor bricks “made to match examples of Tudor bricks from Whitechapel” were used in its construction. Neither nails nor screws were used, nor were metal brackets to hold the wood together: expert craftsmanship took their place. The wood was cut green and allowed to season in place. Thatchers still existed, though the thatch had to come from Norfolk as thatched buildings had been outlawed in London

<sup>13</sup> Pentagram. *Rebuilding Shakespeare's Globe*. London: Pentagram Design Limited, 1995.

since 1212<sup>14</sup>. Lime plaster was used in the walls using coarse sand and a binder of cow hair. The wooden pillars that held up the roofed hut above the stage—yet another point of contention among the designers who worried about balancing authenticity with the modern desire for clear sightlines—were decorated as the originals to look like marble. They did make a few small changes for modern requirements of safety. The roof was still thatched, but fire mitigation including an underlying fireboard and a sprinkler system was installed. The doorways and stairwells were widened and illuminated exit signs to lead the way out met the necessary safety requirements. In the main, however, the new Globe was built with painstaking accuracy.

Conservators and preservationists of all kinds encounter a common problem when attempting to conserve, preserve, or recreate: our attempts are almost always doomed to inaccuracy. We may have photographs of the original structure, but we cannot reproduce materials perfectly. In the same way, directors, actors, and producers cannot make a perfect recreation of a historic play. They can research contemporary staging practices, costumes, and even punctuation. They can delve into the deepest meaning of the play and, in the case of the Globe, they can perform it in a space almost identical to that stage on which that play was originally set. Just as in conservation, however, the approach to true authenticity is asymptotic. A bit of work takes us some distance. A bit more work takes us a little further, and before long we are working ten times as hard for a tenth of the result. If we have unlimited resources and the project is an important one, we might

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<sup>14</sup> Barry Day, *This Wooden O*, p. 99.

feel comfortable with this added expenditure of effort, but in the end we can only approach authenticity—we can never reach it. For the professionals who use the Globe as both stage and laboratory, “the fault... is not in our stars, but in ourselves<sup>15</sup>.”

Nevertheless, if we understand the limitations we can still make the attempt. One of the major limitations of performing a perfectly seventeenth-century play is that we no longer have seventeenth-century actors or audiences. To a contemporary of Shakespeare, the great playwright was not the acme of poetry and playwriting that he is today. Modern audiences view Shakespeare as the definitive form of high class and culture, but Shakespeare’s own audiences, even if they appreciated his skill, would have viewed him much differently. His work was not taught in schools; indeed, contemporary schoolteachers and masters of apprentices could legitimately detest the Bard for luring students away from their tuition. The average play at the Globe might start at two o’clock in the afternoon and last two or three hours. This was then as it is now a complete interruption of the workday. Moreover, while today’s theaters have the reputation of highbrow culture, neither the Globe nor the other public theaters contemporary with Shakespeare were considered particularly noble. Wealthy patrons could and did attend shows there, but the public playhouses—especially when considering the groundlings—were also known as dens of gambling, drinking, and prostitution. Even the very poor could scrape up a penny for a three-hour show; anything, therefore, might happen among the groundlings.

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<sup>15</sup> Shakespeare, William. *Julius Caesar* (I, ii, 140-141).

Acting as a profession had only recently become almost legitimized: prior to the institution of dedicated playhouses, actors traveled the countryside and performed in the medieval version of a bar parking lot. In centuries of plague, war, banditry, and uncertainty, wanderers and strangers of any kind were highly suspicious. Common opinion held that the only reason a person would depart his home for a wandering life was due to some disgrace or disreputability. The modern reputation for the disreputability of actors, therefore, is in fact a centuries-old tradition. With the advent of patronage and settled playhouses, theater gained some reputability; nevertheless, it was the good name of the patron as much as the skill of his troupe and the quality and exclusivity of his venue that made for a successful production.

In four centuries, Shakespeare and his plays have entirely changed their place in culture and society. Shakespeare's canon is required reading for schoolchildren worldwide and his plays are performed in many languages. With this popularity has, however, come a sense of inaccessibility: we no longer speak the English of our Elizabethan forebears, and much of Shakespeare's language and meaning are lost to modern audiences. Included in that lost meaning are topical jokes: where one character might at the time have been an obvious caricature of some famous social or political figure or one line might remind the audience of some current event, we have lost that meaning. Even where scholars have uncovered the joke or the pun, it will almost certainly still be lost on the average modern audience, and even an informed audience will lose the immediacy of the moment. The audience itself will also be different: at the modern Globe, groundling tickets can be purchased for five pounds, but these historic

plays no longer have a reputation of accessibility. To modern audiences Shakespeare can be complicated, overly-poetic, and difficult to understand. He is nevertheless staggeringly popular, but the average playgoer is likely to enjoy the shows on a different level than their Elizabethan peers.

Nevertheless, the players at Shakespeare's Globe have made a concerted effort to keep their performances fresh and relevant. Their initial plan was to perform no more than one historic production per season. Performances of historic plays would incorporate modern costumes and experimental staging to avoid mirroring them in the past. Above all, the directors and decision-makers at the Globe wanted to avoid what they called 'museum theater'. Sensible of the fact that theater is an entertainment medium and must therefore stay fresh and relevant, they loaded their earliest seasons with contemporary interpretations of historic plays and the occasional completely modern production. They discovered, however, that their audiences preferred the more historic performances. The changing role of Shakespeare has actually worked to the benefit of those who would use the Elizabethan stage as a laboratory for experiments in theater history: people expect a historic performance, and by giving them what they want the actors and directors can experiment with theoretical historic techniques.

The effect of all this work is not perfect, but it is nevertheless remarkable. Inasmuch as it is impossible to create a perfectly accurate replica of the Globe both in structure, audience, performance, and philosophy, nevertheless the result comes far down that asymptotic range. My visit to the Globe surprised me, both by showing me features I had not expected and expressing to me how very important it was to see the theater in

person. Shakespeare's Globe was not, as I had expected, a great huge Elizabethan building sitting on the bank of the Thames. The street-facing façade of the structure is brick and metal and glass: not by any means unattractive, and the curved southern wing of buttressed brick has an appropriately Tudor feel. A restaurant and pub called The Swan at Shakespeare's Globe sits in a lovely historic building at the corner. Nowhere is the half-timbered structure visible from the street, and a traveler seeking the Globe with that image in mind will wander confused and a trace disappointed. Logistically, the move makes sense: in order to preserve the appearance of the structure, protecting it from the elements—and from vandalism—is essential. The theater has even been built on a high,



*Figure 10: The exterior of Shakespeare's Globe. Photo taken by author.*

thick concrete foundation to prevent infiltration from the nearby Thames. Taking tickets, starting tours, providing restroom facilities, and sending visitors through the gift shop and snack bar would also have been difficult without some kind of outbuilding and chokepoint. Nevertheless, the momentary confusion and disorientation remained: had I really come to the right place? My confusion abated when I saw the icon for the Globe on the lobby doors: a many-sided circle with a tower in the middle. It had been shorthand for a public playhouse since Norden's drawing of 1593.

Once inside the lobby, I found the ticket counter, the front desk, the restrooms, the gift shop, and a small snack bar. Glass doors led to the theater's yard; beside the doors were tables laden with cushions for the hard wooden benches inside. The snack bar is not entirely inaccurate—there would have been food vendors at the original Globe and there certainly would have been a taproom—though the 'OM NOM NOM' sticker atop my plastic cup of watermelon might have been less than Elizabethan. In some places, the half-timbered building gently infiltrates: near the thankfully-present modern convenience of the restrooms, for example, a portion of the wall curves to give the hallway a reminder that this is no ordinary stage. It created a small break in the modern fabric of the exterior. The theater within, therefore, is not entirely of the modern day: through the gradual approach, the visitor is led slowly from the present into the past, melding the two to create an audience both of the seventeenth and the twenty-first centuries. Just as the venue belongs to both times, so too do the actors and the performances.

Entering the theater was another matter entirely. The space managed to convey both incredible size and a surprising intimacy and immediacy. The effect was



*Figure 11: Shakespeare's Globe from within, showing crowd of groundlings. Photo taken by author.*

compounded in the yard with a groundling's ticket—the galleries created more of a sense of separation from the stage—but the thrust stage and the configuration of the theater brought the audience much closer to the actors than they might have expected in a modern proscenium arch theater. The public playhouse is open-air and there is no roof above the yard, with the result that an afternoon drizzle—typical in London even in the summer—sent several audience members scrambling for hats and raincoats. We were

tightly packed, however, enough so that an umbrella would have been out of the question. Standing for three hours was less than comfortable for a sedentary American, but the experience was well worth the discomfort.

Lighting at the Globe is democratic: there are no spotlights, and many shows are performed in the afternoon. Because of the orientation of the stage—another hotly-contested matter put to rest after research and testing—the actors are perpetually in the shade, performing in a soft and even light. Even in the evening, the audience is lit as well as the performers. The fourth wall is almost entirely knocked down: the audience

members do not feel separated from the performance nearly so much as they might in a darkened theater with a brilliantly lit stage; at the same time, the actors must confront and even interact with their audience in a manner uncommon in large theaters. The sense of separation between the audience and the performers, is almost nonexistent. It creates a subtle sense of immediacy that does more to involve the audience than any clever staging technique in a less-intimate setting. The audience gets immediacy; in return, the actors get the immense energy from an enthusiastic performance. Because of their emotional and physical proximity to the performance, the audience can potentially be more affected; when their emotional reactions are heightened, their response can energize the actors and bring life into the play. This cycle of stimulus and response injects a remarkable life to performances on Shakespeare's stage. Lighting aids this, as does physical proximity to the stage; the lack of amplification, as well, contributes to the effect. The acoustics are remarkable, and after a few moments on an Elizabethan thrust stage the seasoned actor can find new ways to make himself heard. Though some views may be obstructed, sound never is.

Staging conventions are necessarily different as well. On a proscenium arch stage, the audience is arrayed in front of the action; on a thrust stage, they surround the stage on three out of four sides. In fact, the fewest audience members will be directly in front of the stage: almost everyone will face the stage at an angle whether slight or extreme. For this reason, actors can address many sides of the audience. Ribald jokes and other 'groundling humor' can be directed to the yard, while poetry and more sophisticated fare can be spoken to the wealthier patrons in the galleries. Actors can stand at any angle and

be heard and seen, and in the absence of directed lighting their stance and positioning can be of immense importance. The placement of an actor, the turn of his body, the tilt of his head, even the direction of his eyes can shift the focus of the audience from one place to another. In this intimate space, performances can be remarkably subtle.

Even in scrupulously historic productions, the Globe's players take a few modern liberties. The yard, for example, is used as performance space: in Shakespeare's time, this would have been unheard of. The original Globe did not have stairs connecting it to the groundlings, but the modern company does so in order to activate the intimacy of the space. They are safer in this practice than their Elizabethan contemporaries would have been: it would have been unwise to allow the frequently-drunken audience members to have close access to the actors. In the performance I attended of *The Taming of the Shrew*, the drunkard who opens the play staggers in from among the groundlings dressed as a modern-day football fan. He appears to be an intruder and is treated as such by the actors, and through his portrayal as a modern man he draws a parallel between himself and the audience. He is one of them, and they are drawn in to the story along with him.

In order to engage the audience and to make the best use of the space, new standards had to be created—or, rather, old standards had to be rediscovered. An early critical review suggested that the actors had not yet learned to address more than the front of the stage and were getting lost to sight between the pillars (as would be common and unsurprising for actors and directors trained on a proscenium arch stage)<sup>16</sup>. These altered

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<sup>16</sup> Potter, Lois. "A Stage where Every Man Must Play a Part?" *Shakespeare Quarterly* 50, Spring 1999, p. 80.

techniques included new blocking diagrams by the directors and new ways of addressing the audience. Merely by facing one direction and turning his head in another, an actor could address a greater proportion of the audience. As a result, in the words of Chantal Schutz of Globe Research:

At the Globe, a new dynamic is created: attitude oscillates between the uninhibited enthusiasm of football matches and the dilettante snobbery of classical concerts, but with the added dimension of self-consciousness born from its idea of what Elizabethan audiences may have been like; it results in something completely new<sup>17</sup>.

This is, perhaps, the Globe's greatest success. It has its detractors—the injection of the modern is jarring for some purists—but by making the performance more accessible to modern audiences in small ways while at the same time maintaining an expected level of historic accuracy, the players manage to create an authenticity that might well be inaccessible, even impossible, on a traditional stage. The builders of the Globe used medieval techniques both for designing and building the playhouse; through the use of this tool, the actors, directors, and audience rediscovered lost methods of blocking, speaking, and set design to engage their audiences. Both contributed to our understanding of theater, history, and culture. Beyond its success as a commercial venture, Shakespeare's Globe meets with success as a laboratory for experimental archaeology.

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<sup>17</sup> Schutz, Chantal. "Music at the New Globe." *Early Modern Literary Studies*, May 2001, p. 34.

### CHAPTER 3: PLIMOTH PLANTATION

The city of Plymouth sits past the curving lip of the Massachusetts Bay peninsula in relatively calm waters. Historical fact reminds us that the *Mayflower* first stopped at what is now Provincetown, a settlement not far from the peninsula's tip, but their first settlement stood where the current city still stands. Today, Plymouth is a large town with a bustling tourism trade and a keen and constant eye toward its history. The first houses of the *Mayflower* pilgrims, small and wooden and temporary, are long gone—structures from the seventeenth century remain, but they are grander than the tiny cottages of the settlement's first years.

Plymouth, therefore, shares traits with the *Globe* and the *Mayflower*: the original structures no longer exist, they cannot be rebuilt on their original footings, and there are no plans of the original structures. Indeed, it is likely that plans never existed: the original Plymouth settlements were examples of vernacular architecture, unpretentious by design as well as by nature. The foundations of the original buildings are now long gone, and the city around them would provide poor context to replicas. Plymouth Rock stands in a grandly colonnaded Roman temple and the *Mayflower II* bobs in the bay a short walk away, but the exacting reconstructions of Plymouth's original cottages are a few miles from their original home.

The site of Plimoth Plantation was chosen in part for its similarity to the original Plymouth settlement. The lay of the land is similar, as is its proximity to the coast.<sup>18</sup> Rebuilding on the original site would have been impractical at best: tearing down historic buildings in a living city in order to build replicas of Pilgrim homes was not a feasible option. It is near the city of Plymouth, however, and can be reached after a short drive.

What we know of the original Plymouth settlement comes partly from archaeological evidence and partly from written descriptions, letters, and journals from inhabitants and visitors. The resources are far clearer in their descriptions than those of the Globe, including dimensions and relative layout; nevertheless, arguments have abounded regarding many of the particulars of their settlement. *Mourt's Relation*, written by Edward Winslow and William Bradford, governor of the Plymouth settlement for thirty years, chronicles the early efforts of the Mayflower pilgrims to an exacting degree, including the account of December 28, 1620, when they first began to lay out their settlement:

So in the afternoon we went to measure out the grounds, and first we took notice of how many families there were, willing all single men that had no wives to join with some family, as they thought fit, that so we might build fewer houses, which was done, and we reduced them to nineteen families. To greater families we allotted larger plots, to every person half a pole in breadth, and three in length, and so lots were cast where every man should lie, which was done, and staked

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<sup>18</sup> Plimoth Plantation. "17<sup>th</sup> Century English Village." Web. <http://www.plimoth.org/what-see-do/17th-century-english-village>

out. We thought this proportion was large enough at the first for houses and gardens, to impale them round, considering the weakness of our people, many of them growing ill with cold, for our former discoveries in frost and storms, and the wading at Cape Cod had brought much weakness amongst us, which increased so every day more and more, and after was the cause of many of their deaths.<sup>19</sup>

One 'pole' or 'rod' was a little over 5.5 meters, making the plots a little less than twenty feet by sixty feet in size. The initial houses, therefore, would have to fit into such a footprint with room for the family garden. Daily entries follow this and include activities of gathering thatch and deciding how the labor of house-building should be distributed. By January 9,

The common house, in which for the first we made our rendezvous, being near finished wanted only covering, it being about twenty feet square. Some should make mortar, and some gather thatch, so that in four days half of it was thatched. Frost and foul weather hindered us much, this time of the year seldom could we work half the week.<sup>20</sup>

There is, however, very little description of the houses they built. Perhaps they would have made more of a description if they had not shortly afterward encountered the local natives; regardless, when the Plimoth Plantation builders decided to construct replicas, they had to seek other sources.

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<sup>19</sup> Mourt's Relation

<sup>20</sup> Bradford, William and Winslow, Edward. *Mourt's Relation: A Journey of the Pilgrims at Plymouth, 1622*. Trans. Caleb Johnson. <http://www.histarch.illinois.edu/plymouth/mourt1.html>

Luckily, other sources exist from which they have made conclusions. An indication that the houses were intended to be small may be taken from the writings of Separatist agent Robert Cushman. He did not travel on the Mayflower, but he helped organize the Pilgrims in Leiden before their departure for the New World. Along with John Carver, later to become first governor of Plymouth, he made certain his Separatists would have investments backing their settlement. Part of this included assuring the investors that the settlers were not concerned with personal gain:

No one will be poorer than another for 7 years... This will hinder the building of good and fair houses, contrary to the advice of politics. And so we will have it; our purpose is to build for the present such houses as, if need be, we may with little grief set fire, and run away by the light; our riches shall not be in pomp, but in strength; if God send us riches, we will employ them to provide more men, ships, munition, etc.

“You may see it amongst the best of politics, that a commonwealth is readier to ebb than to flow, when once fine houses and gay clothes come up.”<sup>21</sup>

This suggests both that their settlement is not intended to retain wealth and that they will grow more smoothly as a result. Whether this was a philosophical choice on the part of the Mayflower pilgrims or merely a sales pitch to their investors, logic tells us the first houses of the settlement could not have been elaborate. The New World was not

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<sup>21</sup> Strickland, Sidney. “The Plimoth Pilgrims: The Town and the Houses They Lived In.” Plimoth Plantation Archives, FRED 1202.

industrialized: there were no great quarries for stone or brickyards for bricks, so other building materials needed to be found. Wood, straw, and mud were easily at hand; wood in particular was far more common in the New World than in England. In some places, there is documentary and archaeological evidence of pit dwellings, but between documentary and archaeological evidence, historians deduce that the very first Plymouth houses were timber-framed wattle-and-daub constructions with thatched roofs.

Even within this, however, there lies room for question and debate. The footprints of the houses are easy to confirm from evidence of post holes, but were the fireplaces mud, stone, or mud-covered stone? We know from Bradford's own accounts that the first attempts at houses failed in the vicious New England rainstorms and subsequent constructions were outfitted with wooden weatherboards, but were they horizontal or vertical? Horizontal clapboards were common in England, but some later-period vertical siding houses—such as the settlers might have seen in Holland—still existed.<sup>22</sup> The earliest attempts at reconstructing Plymouth houses included log cabins, but further study suggested that these were introduced by Swedish settlers some years later. Without a single extant structure, common agreement was all but impossible to find.

Nevertheless, scholarship continued. Strickland's scholarship was accepted as gospel for the colonial houses of New England, citing evidence based upon John Howland's house in Rocky Nook and the 1640 Sparrow House. His work was challenged in 1966, however, with the Carson-Candee "Report on Plimoth Plantation

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<sup>22</sup> Baker, James W. "Notes in Evolution of P. P. Architecture." Plimoth Plantation Archives, 1973, FRED 3234.

Architecture”<sup>23</sup>. Cary Carson and Richard Candee’s research included evidence from archaeological studies both in England and the United States and was used to design the Hopkins House in Plimoth Plantation’s reconstruction. Strickland’s failure to provide his research evidence and his subsequent withdrawal from the Plimoth Plantation project meant that within a few years, Carson and Candee made several suggestions for the Plimoth houses. Rough-hewn beams had to be resurfaced, and half-round logs were to be removed. They further suggested that, for the buildings with vertical siding, horizontal rails ought to be removed and the siding itself should be fitted tighter with “better widths”. Entrances ought to be opposite chimneys, windows should be smaller, and the stone chimneys were to be replaced.<sup>24</sup> The Hopkins House was built with these specifications, but subsequent correspondence from Carson after trips to England and Holland indicated that, as far as the rest of the plantation was concerned, they should “go easy with those 1966 plans.”<sup>25</sup> The recommendations may have been hasty: it seems there was less room for certainty than for potential argument.

The dig at Allerton House caused a breakthrough in 1972. Due to its proximity and age (much closer to the original Plymouth colony than any other colonial houses or remains thereof, determined in large part by the diameter of the pipe-stems found there), it was used as the basis for the Billington House on the Plantation.<sup>26</sup> Combined with the

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<sup>23</sup> Baker, James W. “As Time Will Serve: The Evolution of Plimoth Plantation’s Recreated Architecture.” *Old Time New England*, Spring 1996, p. 60.

<sup>24</sup> Baker, James W. “Notes in Evolution of P. P. Architecture.”

<sup>25</sup> *Ibid.*

<sup>26</sup> Deetz, James. “Plymouth Colony Architecture: Architectural Evidence From the 17<sup>th</sup> Century.” *Architecture in Colonial Massachusetts*. Boston: The Colonial Society of Massachusetts, 1974

Carson-Candee report, the Allerton and Billington houses were as of 1973 the only documented early colonial houses in the area.

Since these controversies, the builders at Plimoth Plantation have been careful in accepting radical changes. The layout of the original town has been taken from Bradford's own sketch. The houses are built with horizontal clapboards, this being the most likely and most easily documented of the possible options. Roofs are thatched or, as Bradford suggested after fire swept several houses in 1622, shingled with wood. The houses are not identical to one another either in footprint or in detailing, but all are taken from the Plantation's historians' best guesses based on evidence. They build in the traditional manner. No power tools are



*Figure 12: Thatched cottage at Plimoth Plantation. Photo taken by author.*

used. Logs are sawn into boards in a pit, much as the early Plymouth settlers would have done. The wattle is hand-woven and the mud is hand-daubed, including straw and animal hair—again, as the early settlers would have. Fingermarks are visible in the mud as can be seen on other existing vernacular structures of this type.

The houses are not the only historical context here. As stated previously, Plimoth Plantation's siting along the coast is directly comparable to its original orientation and distance from the water. The trees have not been cut down to create a defensible plain as the settlers would have, but the palisade is equipped with cannons to defend against



*Figure 13: A spring lamb from the Plimoth Plantation livestock program.  
Photo taken by author.*

documented descriptions of the goats brought to the New World, are among the year-round animal residents of Plimoth. Plimoth boasts, in fact, the largest population of these goats outside their native land. Historic interpreters grow heritage crops, harvest them, and sell the seeds in the museum's gift shop. These interpreters do not, however, work solely behind the scenes.

Every year from March to November, Plimoth Plantation opens its gates to visitors. Most visitors are from school groups, including children of all ages coming to experience a few hours of 1623. Interpreters dress in clothing of authentic materials in authentic cuts and colors. No machine sewing is permitted. The interpreters take on the personas of Plymouth settlers, taking on the names and histories of these men and women to guide visitors through their town. The experience is immersive: fires burn in the hearths, smoke curls from the chimneys, and people mill about the town on their daily chores. So immersive is the experience that the houses have the feel of real residences rather than museum set-pieces. After receiving a warm welcome from the re-enactors,

marauding bands of natives. The fields include oxen, goats, sheep, and even fowl of species as identical as possible to those the settlers would have brought. Arapawa goats, brought to New Zealand by English settlers and closely resembling the

however, entering these houses feels like less of an intrusion: rather, the sense is of being invited into their homes.

Open-air museums such as Plimoth Plantation are partly sites for experimental archaeology. Much of their public face, however, deals with “experiential archaeology”, derided by Dr. Peter J. Reynolds in his 1999 article: “at best theatre, at worst the satisfaction of character deficiencies<sup>27</sup>.” The immersion, complete as it is, is not scientific: there is no experiment here; instead, the site is put on display for its visitors. They leave the twenty-first century behind to interact with the seventeenth, but the average visitor is not taking part in experimental archaeology. They may learn new things and gain a new perspective, but—just as the passengers on the *Mayflower II* discussed in the following chapter—their experiences are personal. The interpreters can observe their interactions with the village, but unlike the Globe, the site is not being used for its ‘original’ purpose. Rather than housing settlers, the cottages hold selections of material goods that would have been common. The population of Plimoth Plantation consists of interpreters and tourists, and most of the tourists are not taking part in any great experiment.

This is not true of all the visitors, however; neither is it true of the artisans or caretakers. Nor is it to say that the experiences of these participants are without value. We will discuss each in turn. The artisans of Plimoth Plantation craft every piece of the material culture in the village from the houses themselves to the mugs from which the re-enactors drink. Pottery is fired in period-appropriate kilns, and wood is hand-cut and

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<sup>27</sup> Reynolds, Peter J. “The Nature of Experiment in Archaeology.” *Experiment and Design in Archaeology*, Oxbow Books: 1999, p 156.

hand-carved. Food from crops grown by the museum is cooked over the hearths inside these houses. Their devotion to their work is great, though unsurprising given the time and effort that goes in to pre-industrial crafting. When the Cooke House burned in November 2011, the Plantation artisans were devastated. Robert Cushman may have advocated the idea of building houses that the colonists could “with little grief set fire, and run away by the light,” but the replica’s builders grieved nevertheless. They did, however, channel that grief into determination to build a replacement:

...we get a little excited at the prospect! We are very fortunate to be able to build in this manner—no 2x4s, no nail guns, no laser levels. Nothing against those things; some of our best friends are compound miter saws. But not in the 17th century. It’s hand-work and traditional methods once we’ve punched in. It’s what we do.<sup>28</sup>

It is indeed what they do—and they are known for their exacting detail in their work. They are in an unrivaled position to see the realities of life in Plymouth in the seventeenth century by using and observing the use of the museum.

At Shakespeare’s Globe, the participation of audiences is an integral part of the experience for all participants, including the actors. At Plimoth Plantation, the visitors can take part in the experience of living the colonial life. Adult visitors can attend lectures, but they can also enjoy several cooking workshops where they can cook and eat

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<sup>28</sup> McKee, Rick. "Cooke House, RE-Constructed: Part 1." *The Riven Word*. Plimoth Plantation’s Interpretive Artisans Department, 09 May 2012.

authentic seventeenth-century food—including bread baked in a period-appropriate bread oven. Children can learn games and chores alike, writing with quill pens, building clay pots, and caring for the livestock. They are taking part in experimentation to a lesser extent than students, artisans, and historians, but their purpose at the museum is far different. They are the patrons, and they are there to immerse themselves in the experience. This immersion begins at the trail to the colonial village itself.

The approach to Plimoth Plantation is gradual. The drive from Plymouth proper to the museum site is short; the site is a few miles from the city, but it is screened from sight and sound. The main museum building is modern, and the walk from there to the village and the Wampanoag settlement gradually separates the visitors from the modern world.



Figure 14: The approach to Plimoth Plantation. Photo taken by author.

They are surrounded by a natural environment: trees, a dirt path, and a gradual lessening of modern touches like signposts and informational plaques. The visitor walks around a tree-lined corner and down a hill and is rewarded by

the sight of the settlement spreading out in the middle distance, easily reached and seeming as organic a piece of the landscape as the hills and trees themselves. By the time they arrive in the village, all signs of modernity are gone: the visitor is rewarded with an

unobstructed view of the seventeenth century. The only signs of modernity are those brought by the visitors.

Once there, they are—as described before—surrounded by the material culture of the seventeenth century. Just as the audiences in Shakespeare’s Globe, they are twenty-first century people drawn gradually into the seventeenth century. They cannot leave themselves behind entirely, but the act of immersing themselves into that material culture creates a deep and personal connection. The opportunity to explore freely allows the visitors to encounter a representation of the past at their own speed and on their own terms. They can make a connection to the place, and through this they can gain a personal connection to the era more intimate than even the best-written accounts can provide. In the conclusion, we will explore what can be done with this intimate connection shared by both site participants and visitors.

## CHAPTER 4: THE MAYFLOWER II

The *Mayflower II* was conceived after World War II as a goodwill gesture between nations. Americans and Britons fought and died at one another's sides, and while a sailing ship was not considered to be a sole and sufficient thanks for such service, the symbolic joining of the two nations was warmly meant and warmly received. In the words of Warwick Charlton:

“We had agreed in war, but in the uneasy days that followed, the tangible reaffirmations of friendship and mutual respect and understanding became more and more official phrases, press conferences and newspaper platitudes. Something more permanent yet less official was needed; some measure or plan that would perhaps link the hearts and minds of the peoples and not merely the governmental parties; something that would give a sense of community feeling to both the English and the Americans, and would stand apart from politics and international crises.”<sup>29</sup>

Inspired by reading the words of William Bradford, second mayor of the Plymouth colony, Charlton devised the idea of creating a replica of the *Mayflower* and sailing her to America. Concept and execution, however, did not follow one another without effort.

In order to have the ship built, Charlton first needed to find someone with the understanding and know-how to build this replica. This task was not trivial: little is

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<sup>29</sup> Charlton, Warwick. “The Second Mayflower Adventure.” Boston: Little, Brown and Company, 1957, p. 4

known of the original ship except what is included in Bradford's journal, published now under the name *Of Plymouth Plantation, 1620-1647*, which includes the account of the journey and the first days of the colony. Speaking first to Dr. R.C. Anderson, president of the Society for Nautical Research and trustee of the Nautical Maritime Museum in Greenwich, confirmed this. Anderson, known as an authority on the *Mayflower*, explained that the ship had quite a common name and could have been any one of a dozen or so. The only thing known was that she was likely old, given that Bradford complained of her leaky hold and the breaking of her main beam, she had topsails, and she was about 180 tons.<sup>30</sup> This was shaky ground on which to design a ship, but Charlton began the process of raising money regardless.

Six months after the plans began, which included seeking funding and a final caretaker for the ship, the Mayflower Company discovered the plans William A. Baker had drawn for Plimoth Plantation and published in *The American Neptune* in 1954. Baker had, as a project for Plimoth Plantation, designed a likely *Mayflower* based on contemporary evidence.<sup>31</sup> Baker was a graduate of the Massachusetts Institute of Technology, and though he worked as an engineer for the Bethlehem Steel Corporation, his personal passions ran toward maritime history as much as nautical innovation. The problem of the *Mayflower* was a daunting one: just as the Globe and Plimoth Plantation, no remnants of the original ship existed; also, as stated above, there were few concrete

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<sup>30</sup> Ibid. 6-7

<sup>31</sup> Ibid. 14

facts at all known about the vessel. Nevertheless, he could make some very reasonable guesses.

Broad strokes began with an image we have already seen: Visscher's *Panorama of London in 1616*. As an image contemporaneous with the *Mayflower* and including several images of ships in the Thames, it was useful for a beginning. Rather than seeking out an inscription with a tiny *Mayflower* painted on the side, Baker observed the types of ships Visscher chose to include. Certainly the image he showed might not include every type of ship sailed by the English at the time, nor indeed might it display perfect accuracy. Nevertheless, the types of ships present on the Thames must have been at least somewhat representative of contemporary English vessels. If they had been distinctly strange, Baker remarked, someone would have taken notice. The images on the Visscher panorama included small shallops—boats used for fishing and coastal sailing—as well as larger ships closer to what the *Mayflower* must have been. These larger ships are square-sailed and rigged accordingly, providing a general size and shape for ships of the era.

This is not, of course, enough upon which to develop even a broad design. Baker's research continued, fixing on the writings of another Baker more contemporaneous with the *Mayflower*'s construction: Mathew Baker, shipbuilder for Henry VIII and Elizabeth I. Much as in many other crafts, arts, and disciplines, little of the art of shipbuilding was written: the knowledge was passed down from father to son and master to apprentice. Trade secrets were jealously kept, and such documents as existed were more often sketches on boards to be referred to when necessary. Baker, however, was the first to commit the art of shipbuilding to print. His treatise on the



Figure 15: Mathew Baker's mackerel sketch. Source: Mathew Baker Master Shipwright 1530-1613. 'Skinner's Room. 26 Feb 2010. <http://skinnerroomfiveyears.blogspot.com/2010/02/mathew-baker-master-shipwright-1530.html>

subject included  
equations for the  
proportions of a ship,  
designs for the curvature  
of the hull, and theories  
of shipbuilding

including meditations on

the anatomy of certain fish. One of his sketches shows a mackerel superimposed on the hull of a ship, illustrating the similarities that made the ship aquadynamic. At last, unlike Shakespeare's Globe or the building at Plimoth Plantation, we have a structure that could be derived from expressly-written plans.

Even with these documents, Baker still had his work cut out for him. He knew the likely tonnage, but that did not tell him with any certainty what shape and proportion the ship should have. He used Mathew Baker's own notebook and the equations found there to determine the ship's basic dimensions, but was the maximum appropriate width measured from the outer hull or the inner? How many thicknesses of planking were there? An inch here or there might not have changed things dramatically for the crew, but enough inaccuracies would alter the ship's handling and draft. Additionally, the plans for ships in Mathew Baker's notebook were for naval rather than merchant vessels, though William A. Baker reasoned that the proportions would not be notably different if he maintained the appropriate size. Even with this in mind, "...considering the known merchant vessels, *Mayflower* could have had a keel length anywhere between 52.4 feet

and 73.0 feet, a breadth from 24.3 feet to 27.0 feet and a depth of 10.1 feet to 13.1 feet. The reader may make his choice<sup>32</sup>.” The designer made his: by further perusal, including the comparison of these figures to the recorded dimensions of the *Crane*, a vessel of similar tonnage (and therefore almost certainly similar size) to the *Mayflower* built by another shipwright in 1590 (therefore within a decade of the *Mayflower*’s own construction), he determined the appropriate dimensions and proportions for the *Mayflower II*<sup>33</sup>. He used as his source Mathew Baker’s explicit equations and instructions for determining curve, length, and proportion.

William A. Baker designed, then, not precisely the *Mayflower* for the *Mayflower II*. What he designed instead was what he could: a ship very like what the *Mayflower* must have been. What he lost in perfect authenticity—which was, as stated previously, impossible—he made up for in authenticity of material and construction. J. W. & A. Upham Ltd., headed by Stuart Upham, crafted the ship as assiduously as possible and, though they did not completely eschew modern tools, they did make certain to remove the signs of their use. The ship was built, stained, painted, and outfitted just as the *Mayflower* might have been with the exception of a few details retained for safety and necessity. A diesel generator powered the cook’s stove and, if desperate need should arise, an emergency engine.

Raising the money for the *Mayflower* Company proved difficult, but Charlton came up with an idea that was not only profitable and ingenious but also in keeping with

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<sup>32</sup> Baker, William A. “The *Mayflower* Problem.” *The American Neptune*, Vol. XIV, No. 1, 1954.

<sup>33</sup> *Ibid.*

the historicism of the project. The original Mayflower voyage, as well as other similar voyages during that time period, was backed by corporate investors looking to make a profit in the New World. The *Mayflower* carried settlers who would colonize the land and make a profit from it; the *Mayflower II* carried ‘treasure chests’ of fine goods from British merchants. Each chest would cost £460 to send, which ended up raising over £30,000 for the project.<sup>34</sup> Donations carried the rest along with patronage from interested private individuals.

Though there was significant worry and uncertainty on the part of English and American officials and the general public as to whether twentieth-century Americans could successfully pilot a relatively tiny seventeenth-century ship across the Atlantic, it would not be quite right to call the *Mayflower II* project an experiment. Certainly Baker’s ship design came from centuries-old documents and equations and the construction was sound and appropriate, making the *Mayflower II* an ideal laboratory for testing theories about seventeenth-century sailing. Historic methods were certainly used in both sailing and navigation: the use of these was new to many of the sailors, but the captain and navigator were not ignorant of what needed to be done to reach Massachusetts. The trip was not organized with the aim of learning something new about sailing, at least as far as science and innovation were concerned. Instead, the trip focused on the experiences of the participants themselves.

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<sup>34</sup> Charlton, Warwick. *The Second Mayflower Adventure*, p. 39

We have one published journal from the sailors of the *Mayflower II*: Warwick Charlton's *The Second Mayflower Adventure*. This account includes the conception and challenge of the project itself, though a large portion of the book is dedicated to Charlton's experiences aboard the ship. Experience in sailing was a prerequisite for most of the *Mayflower II*'s crew, and the captain in particular desired men who had sailed on similar ships before. He handpicked his crew, a luxury a contemporary captain would not have had, but the choice was made for the safety of all aboard. They sailed with the utmost safety, taking as few chances as possible in order to be certain of reaching Massachusetts in one piece. Fresh water became a valuable commodity, one not to be wasted in something as frivolous as washing. Regardless of how tightly the ship was built, water would still 'weep' through the cracks, requiring the bilges to be pumped frequently. Many small changes in daily life added savor to the trip, and Charlton was by no means insensible to the beauty and romance of the journey he was on:

I listened to the sounds from below decks—the sound of voices coming up from the open hatches, the creaking and groaning of the timbers as the ship rolled with the swelling sea—looked up at the crescent of our sails, and savored again the romance and drama of the situation: sailing day after day, over two thousand miles from home, a community of thirty-three men in a seventeenth-century ship, journeying in time, if you like, to the moments in history of Drake and Columbus. I thought of this when I stood high on the poop and I was no longer galled by our

almost empty sails but watched proudly as her masts swayed majestically, and I looked westward to the horizon where we would make an old discovery anew.<sup>35</sup>

Claustrophobia did set in: “This wooden world becomes smaller as the number of days at sea increases. We live very much on top of one another; there is little privacy, so I have come to appreciate Alan’s point about not taking women, although I miss their company.”<sup>36</sup> Nevertheless, Charlton found in his journey an opportunity for reflection and communion with nature. He, as were the rest of the crew, were able to “relax for longer than any time before in our adult lives.”<sup>37</sup> They talked about their life on shore, considered the infinite, and grew close to each other in the way only people who are forced to share one another’s space can.

For Charlton and the rest, the point of the project was at least as much journey as it was destination. There were political and social reasons to travel between England and the United States on a tall ship, but each man aboard the *Mayflower II* joined the crew for the experience. For some, it was a connection with their ancestors. For others, it was a connection to a centuries-old tradition. Their experiences enriched, enlightened, and enlivened them. The act of sailing between the continents was not an experiment in the same sense as the Globe and Plimoth Plantation, but it does remind us that experiential archaeology is as relevant to preservation as experimental archaeology. Its methods may

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<sup>35</sup> Ibid. 161

<sup>36</sup> Ibid. 179

<sup>37</sup> Ibid. 190

be less scientific, but the project gave them the opportunity for an experience they could not have had any other way.

While the city of Plymouth can be seen from the deck of the *Mayflower II* at its modern mooring-place, the approach is nevertheless significant. This part of the coastline is not built up with boardwalks or storefronts but is instead kept clear of everything but memorials and monuments. Plymouth Rock itself, surrounded by a Roman portico, lies within an easy distance of the ship where it stands at anchor. A deck with exhibits and explanations of the *Mayflower II*'s purpose, design, crew, and journey gives visitors a basis for understanding their destination before they cross the gangplank from the shore onto the ship—from the present into the past. The modern world is some yards distant up a grassy hill, left behind in favor of timbers stained with salt and tar.

Once again, just as at Plimoth Plantation, the artifacts here are unlabeled. There are interpreters willing and eager to answer questions, but they do so as if they were crewmen explaining their vessel to curious passersby. This sense is probably helped by the fact that the re-enactors on the *Mayflower II* do sail her as part of their training. The



Figure 17: Interior of *Mayflower II*. Photo taken by author.



Figure 16: Sleeping quarters and a costumed re-enactor at the *Mayflower II*. Photo taken by author.

ship is furnished as fully as possible while still allowing people to move around inside. There are no crates of goods, nor are there rats; nevertheless, the visitor is surrounded by the trappings of the seventeenth century. Moreover, the ship bears the natural wear and tear of a vessel used and lived in for weeks or months at a time. This material richness, just as at Plimoth Plantation, allows visitors to imagine themselves not on a replica ship but an authentic historic vessel. It has not been preserved and repaired to seem new: it is weathered and slightly tarnished, and all the more real-seeming for it.

Just as the artisans at Plimoth Plantation, the re-enactors on the *Mayflower II* keep a regular blog of events on board: particularly those regarding preservation. In every article they post, their affection for the vessel is apparent and unfeigned. In their words:

It is a challenge for this or any museum to be responsible for a iconic wooden vessel. We take comfort that we are not alone. A ship like *Mayflower II* has many stake holders: Plimoth Plantation, the town of Plymouth, the state of Massachusetts, schools and school children from our own town and all over the country, tourist from here and abroad, maritime enthusiasts, square rigged sailors, immigrants, Mayflower passenger descendants, and anyone who is searching for a change, willing to take a chance, and dreaming of a new life. Mayflower is the ship that can transport you there.<sup>38</sup>

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<sup>38</sup> Arenstam, Peter. "A day in the life... of an old wooden ship." *Mayflower II Captain's Blog*. Plimoth Plantation, 11 March 2013.

## CHAPTER 5: CONCLUSION

In these three cases, we see three approaches to using the philosophy of experimental archaeology to achieve explicit goals and to create an immersive experience. Even though Plimoth Plantation manages the *Mayflower II*, their approaches to this immersion are not identical. Each approach has slightly different origins, goals, and effects on their chosen audiences, and each approach can be helpful for preservationists seeking to create a plan and program for their own sites.

The approach to the Globe, not unlike many walks in central London, walks the visitor from a history-tinged present into a present-tinged history gradually and with subtlety. It immerses the visitor not by pushing them into the deep end but instead leading them through the shallows until they find themselves in a place of comfort. Similarly, Plimoth Plantation's approach is gradual, taking the visitor from modern buildings down curving wilderness tracks to reach the colonial settlement proper. The *Mayflower II*, as noted in Chapter 4, stands at a respectful distance from the relatively modern buildings in Plymouth. Exhibits line the deck that leads to the gangplank, providing the same sort of buffer zone between present and past.

The greatest similarity among these sites is their ability to immerse the visitor in the past in an interactive, kinesthetic manner. At Shakespeare's Globe, audience members are included in the recreation of a historic performance. They may not be seventeenth-century people, but through their surroundings—both the theater and the performance—they share in an experience both connected to and distinct from their previous

experiences with theater in general and Shakespeare in particular. For the most part, the original crew of the *Mayflower II* had experience sailing. Few, however, had experience on sail-powered ships traveling across the Atlantic. Plimoth Plantation allows visitors a relatively unfettered experience with the site, but they also run scheduled workshops for all ages of visitors. Children and adults will sit through talks and seminars, but they can also cook, do chores, care for the livestock, and otherwise take part in an early American colonist's daily life.

Though Plimoth Plantation is a living history museum, it would be a stretch to say the same of Shakespeare's Globe. Their performances use period costumes and historic plays, but they are not museum set-pieces: this is explicit in their charter. The *Mayflower II*, as well, was not built to be a living history museum. For its original sailors, it was no museum: it was a working vessel for all that it was a replica. Nevertheless, the same philosophy holds true. By creating an exacting environment, they have made a potential setting for experimental archaeology. By interacting with that environment, participants can take part in these experiments; at the same time, they can immerse themselves in the experience of their centuries-past forebears. Through material culture, they can bring the living experience of history into the modern day.

Being immersed in a historic setting is not enough to create this richness of experience. Audiences at the Globe take part in a re-enactment of a historical production complete with sight, sound, smell, and touch. We can watch *Hamlet* on our televisions, but we lose the experience of looking into the actor's eyes from mere yards away, smelling the weathered wood, hearing the quality of unamplified voices in remarkable

acoustics, and feeling either the hard wood under our bottoms or the ache in our legs as we stand among the groundlings. We can watch movies about America's early colonists, but they show us little about pumping bilges, lying in the doldrums, herding goats, or cooking over an open fire the food we have grown over the last few months. Similarly, we can go to any number of house museums and battlefields and listen to lectures or look at artifacts under glass, but there is no comparison between hearing a recording of an actor reading the Gettysburg Address and dipping a beeswax candle or touching the walls of a pioneer's cabin.

This sense of ownership engendered by physical interaction with material culture is, in fact, an important facet of the experience for participants as well as the visitors. By participants, I refer to actors, directors, and related crew at the Globe and re-enactors and historians at Plimoth Plantation and the *Mayflower II*. Conservators regularly interact physically with historic artifacts, but open-air history museums like Plimoth Plantation allow the participants to actually create the built and crafted environment. As described in Chapter 3, their personal attachment to their built environment speaks of great personal devotion: unsurprising, given the amount required to maintain that environment.

This creation is less concrete but no less substantial at the Globe and the *Mayflower II*. The theater has been built, as has the ship—though both need preservation and repair from time to time—but the product is experience rather than physical artifacts. The audience gains the experience of a seventeenth-century audience (as much as can be effected in the twenty-first century), but the actors, producers, directors, and crew have the opportunity to recreate some of the experience their antecedents would have had.

They knew that the venue is an important part of the performance, but they did not know to what extent that would be true. Those who work and sail on the *Mayflower II* share this personal affection for their ship, as described in Chapter 4. This relationship with a space—one that creates a significant sense of place—is nothing new to preservation. We know historic buildings, neighborhoods, and districts help create a city’s identity. We are skeptical, too—and not without reason—that replica buildings can do the same. If built with sensitivity, however, they have the potential to create an interactive environment that can be used for experimentation and to create a connection with the past.

As a child, I was enraptured with the Chinese exhibit at the Children’s Museum of Houston. They had built a replica of a small, fully-furnished house and a nearby market. I delighted in pulling on peasant’s clothes, lying on the narrow bed, and serving plastic food to the other children. The memory is more than twenty years old, but it is nevertheless clearer than many of my memories of more traditional museums I visited in the past year. The ability to touch and see and freely experience these replicas made the experiences more real to me. The phenomenon did not end in childhood: I have attended lectures and seminars, but I have achieved satisfaction and the most lasting memories from hands-on work. These experiences helped me see science and history not as sterile facts but as tangible reality. These experiences are what made me a preservationist.

Kinesthetic learning is not a new concept. Many people learn best through hands-on experience. Senses beyond sight, hearing, and touch can also create intense memories: the olfactory sense is known by biologists and psychologists to be deeply linked to

memory.<sup>39</sup> Triggering all the senses is part of the goal of living history museums; as the Globe shows us, however, these tactics can be used elsewhere to great effect. Though these case studies are all centered on replicas, actual historic structures and sites can also benefit from this approach. Damage to a replica is perhaps not as disastrous as damage to a historic structure; nevertheless, historic sites can include interactivity in their programs. This can be as simple as allowing visitors to handle some historic artifacts; indeed, some objects such as leather-bound books require occasional handling to avoid cracking. We should not make the mistake of worshiping history by keeping it—literally and figuratively—under glass. This does not mean that the millions of visitors to the National Archive, for example, ought to be able to handle the Declaration of Independence. Nevertheless, teapots are made to steep tea and cauldrons are made to cook food. Chairs are meant to be sat in and hearths are meant to be lit. From the perspective of a conservator, this can be detrimental to some artifacts; from the perspective of the average person, even small touches like this can bring a historic site to life. This life creates deep, lasting memories and can create not only a love for but an ownership of history.

The leaders of the projects were not professional preservationists. Sam Wanamaker was an actor. Henry Hornblower II was a stockbroker. Warwick Charlton was a journalist. All had a personal interest in history and the preservation of culture and heritage, but none made his living from that love. Most of them were, strictly speaking, amateurs. Nevertheless, they were well-educated, motivated, and worked with experts to

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<sup>39</sup> Myriad sources, including: Herz, R.S. and Engen T. (1996) “Odor memory: review and analysis.” *Psychon. Bull. Rev.*, 3, 300–313.

make their goals reality. Each had a purpose for his project, and each pursued that purpose with authenticity in the forefront of his mind.

Love and a sense of ownership of one's home is not unique to active preservationists: indeed, it is common for people to feel that sense of ownership to their neighborhoods, towns, states, and entire countries. However, that love is often difficult to mobilize. We see it when a particularly beloved park is set to be paved over for new development, when a landmark building is slated for demolition, and when a particularly emblematic street's character is lost to renovation: people complain, organize, and protest. Love and enthusiasm are not enough to preserve heritage, however. Education and action are, we know, both necessary.

One of the problems we have in preservation is mobilizing the public, educating them, and motivating them to take action. One of the reasons we have this problem is a bias within the academic community against amateurs. We have trouble accepting that anyone outside our sphere can have a nuanced understanding of history or of preservation or that they have anything of value to add to the conversation. Even educated people from other disciplines can be slightly suspect. As preservationists, we learn about local resources and organizations. We learn about the National Trust and the historic commissions in our towns, cities, and states. We make contacts of curators and preservation officers and join mailing lists with volunteer opportunities, classes, and bulletins about endangered sites. We have created a community—and, like many communities, sometimes we distrust and are distrusted by people outside it. Ordinary citizens disagree with us about the value of a historic building or a cultural landmark, and

our assumption that their disagreement stems from ignorance may bleed into our relations with them. If we dismiss their input and ideas, we can hardly be surprised when they refuse to respect our authority.

Though there are a few enemies of preservation, however, there are also countless allies who may not even realize their alliance. They devour history books and visit museums. They discuss heritage and culture with their friends. Some of them even take their fascination a few steps further: across the United States alone, there are tens of thousands of historical re-enactors of all types. Some specialize in only one era of history, while others belong to numerous organizations. While some of these re-enactors are hobbyists interested in only escapism, many see living history as a way to experience history for themselves and thereby gain perspective and understanding of another era.

The volunteers at Plimoth Plantation and the Mayflower II are examples of living history re-enactors: they are each educated in their era and their persona, but they need not be accredited historians to have experiences of worth and merit—or, indeed, to create them for others. These volunteers may come from any walk of life, but regardless of their other areas of expertise, their attention to detail and authenticity in re-enactment is often exacting to the point of obsession. They research their characters and the world they lived in, immersing themselves in another era in a different manner from other historians. Some have taken wool from sheep to shawl, performing every step from raising livestock to shearing them, carding and cleaning the wool, spinning it, and knitting or weaving it into clothing after dyeing it with period-appropriate materials and techniques painstakingly researched through both primary and secondary sources. It is not out of the

question for a re-enactor to visit a museum with a camera, a magnifying glass, and a plea to see an artifact up close. To them, history is more than dates in a book or objects under glass. They seek a more personal connection to their history and that of their ancestors. There is intrinsic worth in experiencing what life was like for a Plymouth settler, but the purpose of these re-enactors need not end there.

For decades, re-enactors of this sort—whether connected to living history museums or hobbyists organizing under their own banners—have been disregarded by the academic community. In the words of Dr. Peter J. Reynolds, a British experimental archaeologist and the first director of the Butser Ancient Farm:

At the outset, it is a fundamental tenet that experiment has absolutely nothing to do with the exercises of 'living in the past', 'dressing in period costume', 're-enactment of past events' or, indeed, the teaching of well understood techniques—which may well have been originally established by the experimental process—like, for example, lithic technology, pottery manufacture or laying mosaics. The former are at best theatre, at worst the satisfaction of character deficiencies; the latter are simple skills which, should they wish to be acquired, require learning. It is extremely unfortunate that these activities have become generally subsumed under the overall title of experimental archaeology since their inclusion militates against the real value of experiment and its acceptance professionally. The labelling of an activity like shaving with a flint flake or even a Roman bronze razor as an experiment rather than exploration is clearly absurd. It advances our

knowledge not one iota and serves generally to increase our prejudices of history and pre-history<sup>40</sup>.

Reynolds was attempting to separate the scientific practice of archaeological experimentation from what we have called in the introduction and throughout this work “experiential archaeology.” At best, re-enactors are considered by academics to be well-meaning but not academically serious. This is not baseless: there are many re-enactors who are less interested in painstaking authenticity than they are in playing dress-up, and some early re-enactors have been slipshod about their research and scholarship.

Partly for this reason, modern re-enactors have become more exacting. They keep up with modern scholarship regarding their chosen era; moreover, they add to it using the techniques of experimental archaeology. One re-enactor of my acquaintance has reproduced, using only dyes and techniques available before 1620, all sixty-four colors in the modern Crayola crayon box. Others replicate historic costume based on extant examples and the examination of period portraits so exact that they include seams and the grain of the material. They bind books according to evidence from extant objects. They build clay bread ovens and bake bread in them from historic recipes. They build period-correct forges and smith with iron, brass, bronze, and steel to replicate ancient artifacts as exactly as possible. They document their work, too, and keep up with reputable scholarship in their chosen field of study. They present their documentation along with the objects they create, holding conferences not dissimilar to those held by professionals.

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<sup>40</sup> Reynolds, Peter J. “The Nature of Experiment in Archaeology.” *Experiment and Design in Archaeology*, Oxbow Books: 1999, p 156.

None of them are paid, despite the fact that they spend countless thousands of dollars on their hobbies. Some may sell their work, but more often they teach their techniques instead—and they do so for no more than the cost of the materials used in the class. Their research is as exacting as their craftsmanship, approaching even that of professional archaeologists and historians.

Just as replica buildings can provide a laboratory for experimental archaeology, re-enactors can provide expertise, enthusiasm, and hard work. Of the re-enactment community, only a small percentage are scholars of the above-described exacting sort. Even less-educated members of the community, however, should not be disregarded by the thoughtful preservationist. Some may merely lack the knowledge of proper research techniques. Others may not be suited by intellect or temperament to research or experimentation, but they are nevertheless lovers of history. They are the natural allies of preservationists regardless of their education. Moreover, the re-enactment community is marked in all its organizations by a devotion to stewardship. Just as they are committed to their chosen eras, so they are also committed to leaving event sites better off than when they arrived. One example of this phenomenon is the clearing of Castleton, a property local to Austin, Texas, owned by a former re-enactor. For years, Richard Garriott provided his property free of charge to local re-enactors, mostly medieval and Renaissance, for use in their events. In return, the re-enactors who used the site performed maintenance on the outbuildings and the site itself, assisting his groundskeeper in clearing and burning brush and other difficult tasks. Dozens came when called, and none were paid in anything other than gratitude. Their own gratitude to Mr. Garriott for

the use of his property was the impetus, far more than the simple wish to have an attractive site to use in the future.

Re-enactors of all stripes, therefore, can help further preservation. Preservationists can provide re-enactors with resources for experimental archaeology in order to perform these experiments. Replica buildings can stand in where these experiments would be otherwise unfeasible. Even relatively unskilled volunteers will be willing to assist in the maintenance of sites, particularly if they are taught proper techniques and are given the opportunity to use the site for their events. Re-enactors and other hobbyist historians are a largely untapped and underappreciated resource for preservationists. Investing time and goodwill into reaching these communities can serve to profit all involved. They will have a constructive outlet for their interests and energy. We will expand both our pool of motivated allies and our understanding of what preservation and heritage mean to the communities we serve.

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