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SMOKING AS A FORM OF PERSISTENCE IN A CHRISTIAN NIPMUC  
COMMUNITY

A Thesis Presented

by

JESSICA ANN RYMER

Submitted to the Office of Graduate Studies,  
University of Massachusetts Boston,  
in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

May 2017

Historical Archaeology Program

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SMOKING AS A FORM OF PERSISTENCE IN A CHRISTIAN NIPMUC  
COMMUNITY

A Thesis Presented

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JESSICA ANN RYMER

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## ABSTRACT

### SMOKING AS A FORM OF PERSISTANCE IN A CHRISTIAN NIPMUC COMMUNITY

May 2017

Jessica A. Rymer, B.A., University of Virginia

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Directed by Dr. Stephen Mrozowski

The goal of this thesis is to determine the role that smoking played in the gatherings taking place at the Sarah Burnee/Sarah Boston farmstead and what its presence meant for the Nipmuc who gathered there. Previous work has firmly established that the farmstead functioned as a site of communal feasting for the Hassanamesco Nipmuc using ceramic and faunal evidence, and Heather Law in her 2008 thesis suggested that the site may have operated as an “informal tavern” based on her analysis of the glass assemblage. In all of these studies clay tobacco pipe fragments were utilized for stem bore diameter dating because the size of the assemblage remained small (47 fragments). With the close of excavations in 2013, however, and the writing of the final report, the total number of clay pipe fragments rose to 314, making a more robust analysis possible. Tobacco has both a religious and diplomatic function for Native people, and spatial statistics indicating that smoking and drinking behavior were only generally correlated across the site suggest

preliminarily that smoking may have served additional functions not associated with recreation. To answer the question of what role smoking played in gatherings at the SB/SB farmstead, this thesis will compare the pipe assemblage to that from a documented Nipmuc “gathering place”, the meeting house and school at the Nipmuc praying town of Magunkaquog. Knowing that both Hassanamesit and Magunkaquog were places where Native peoples adopted European goods into their daily practices, this thesis will also compare these pipe assemblages to the pipe assemblage from an Anglo-American tavern, the Golden Ball, for similarities and differences that will illuminate how the Nipmuc may have incorporated European made white clay pipes in Native smoking practices.

## ACKNOWLEDGMENTS

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## CHAPTER 1

### INTRODUCTION

This thesis deals with smoking as a persistent form of cultural practice in a Christian Nipmuc community while examining cultural change and continuity under colonialism. It presents smoking behavior on a continuum rather than viewing the adoption of European made white clay pipes as a break with Native smoking traditions brought about by the trauma of colonialism. I focus on the Sarah Burnee/Sarah Boston (SB/SB) site, once a part of the praying Indian community of Hassanamesco in present-day Grafton, Massachusetts, and occupied in the 18th and 19th centuries by generations of Nipmuc to explore these issues. I also compare it to the Magunkaquog meeting house, another Native site in the area, but one more explicitly social rather than residential, and the Golden Ball tavern, a place of social gathering and smoking for Anglo settlers.

Hassanamesco was one of seven “praying Indian towns” in present-day Massachusetts that worked with preacher John Elliot in the 1650s, permitting him to establish a mission in their communities. For Eliot, this was primarily a way to instruct Native people in Christianity by strictly enforcing English modes of behavior. For Native people, living in a praying town guaranteed access to literacy and English goods and clothing while submitting to colonial authority relieved them of their tribute obligations to the local *sachem* (Cogley 1999:56). Additionally, there was an increasingly urgent

need in Native communities to secure land in the wake of continuous English expansion (Cogley 1999:56). It unclear which of these, if any, was the primary motivation behind the Hassanamesco community's decision to allow Eliot to establish a mission in 1654, but the Nipmuc's tribute obligations to the Mohawks, Massachusett, Wampanoag, Pequot, Mohegan, and Narragansett at one time or another throughout the 17th century may have been a strong contributing factor (Grumet 1995:103; Russell 1980:187).

Hassanamesit originally encompassed 8,000 acres, consisted of twelve farms, and boasted one of the only two churches in all seven praying towns. One of Hassanamesit's two civil rulers was the *sachem* Petavit, who died in 1674 of kidney stones, likely the result of the decrease in corn in the diets of the residents (Cogley 1999:142). With the resounding defeat of Metacom and his allies at the conclusion of King Phillip's War in 1678, the government of Massachusetts approached the seven families who remained at Hassanamesit and offered to purchase the land, setting aside 1,200 acres to be divided between them and placing the proceeds from the sale in a trust under the guardianship of three (white and English) Trustees. In theory the three Trustees were to disperse the interest annually amongst the families but in reality they abused their position of power (Law et al 2008).

Petavit's daughter Sarah Robins and her husband, Peter Muckamaug, returned to Hassanamesit in 1729 to claim her portion of the land. Although it was in her husband's name under English law, Sarah left the land to her daughter, a common tradition among Native groups in southern New England, and one that would last for four generations. In Nipmuc society, women were responsible for agricultural production, and therefore owned the land. Sarah Robins' daughter, Sarah Muckamaug, would in turn pass the land

on to her daughter, Sarah Burnee, who then willed it to her daughter, Sarah Boston. By this time portions of the parcel had been sold off to meet various debts, many of which were to English neighbors for sickbed care, and Sarah Boston's daughter Sarah Mary would sell the remaining twenty acres in 1854, after four generations of continuous ownership by Nipmuc women.

While my analysis is directly influenced by previous studies of the site that focused on how the inhabitants used material culture to navigate a changing socio-political landscape, my focus on white clay pipe fragments, combined with the recent trend within historical archaeology moving away from hybridity as a framework for discussing persistence, presents an opportunity for a different perspective on the material.

### **Theoretical Background**

There are multiple issues that confront archaeologists studying colonialism, but the most pernicious is the idea that somewhere in the past lurks an “authentic” native culture that present-day Native Americans must precisely resemble lest they forfeit their identity as native people. From this point of view, and to an older generation of archaeologists, incorporation of European material goods into daily practice is therefore a sure sign of acculturation, of “becoming less Indian and more European or white”, as noted in a recent critique (Silliman 2009:227). In the acculturation model, native culture is cast as less complex and forced to “adapt” with acculturation as the inevitable result of contact with a more dynamic colonizing culture (Den Ouden 2005:19).

The idea of the existence of a “pure” native culture has survived in part thanks to the U.S. federal recognition process, in which deviation from so-called “traditional” lifeways can be seen as a loss of authenticity by the non-archaeological community. As a

result, “American historical archaeologists have learned to fixate on the elements of Native life that have remained the same over the course of the Colonial project in order to support the survival of Native identity and community” (Law Pezzarossi 2014:355).

Hybridity therefore emerged as an attractive alternative to acculturation.

Many authors (Law Pezzarossi 2014; Lightfoot 2005; Loren 2015; Silliman 2015) interested in issues pertaining to colonialism have referred to Homi Bhabha’s (1994) definition of hybridity as a continuous process that actively subverts the dominant narrative. A departure from acculturation, adopting hybridity as a theoretical framework afforded greater agency to marginalized or subaltern groups by interpreting those aspects of the dominant culture that had been adopted by the less powerful as conscious choices that allowed them to navigate the dichotomies imposed on them by dominant forces. For archaeologists working with Native Americans in particular, this meant that European goods (such as white clay pipes) found on Native sites did not represent a loss of Native culture but rather survival strategies that helped Native people adapt to a harsh new world. More practically, hybridity has been applied to those material objects recovered from Native sites that don’t fit comfortably into one category or another, such as glass worked into tools, often because they have been modified in some way.

The field of archaeology is currently undergoing a shift as archaeologists actively try to de-colonize the practice of archaeology. As archaeologists recognize that descendants are stakeholders and should be active participants in the archaeological process, many have noted that in recent archaeological scholarship the ability to be hybrid tends to be attributed to the colonized and not the colonizer the majority of the time (Law Pezzarossi 2014; Liebmann 2011; Loren 2015; Silliman 2009, 2015). Though

not necessarily surprising given the influence of Bhabha's writings on archaeologists working in postcolonial studies, the application is problematic given that European colonists chose to employ certain Native technologies and strategies just as Native people employed European ones. Yet, they are discussed with very different frameworks, often ones that permit change while staying the same, unlike the lingering acculturation models that posit the opposite.

Recently, however, archaeologists have begun to question the effectiveness of hybridity as a theoretical framework. The main critiques are summed up by Stephen Silliman (2015) and Matthew Liebmann (2015) but others (Card 2013; Dawdy 2008; Law Pezzarossi 2014; Loren 2015) have echoed their concerns. Liebmann (2015) does not want to rid us of hybridity entirely because unlike other concepts hybridity makes explicit the power dynamics that are constantly being negotiated in a colonial situation. Instead, he urges archaeologists to re-train themselves to think of hybrids as the mixing of cultural differences rather than of two entities and to start applying the concept to the colonizing forces as well as the colonized. The latter of course has been done, notably by Kathleen Deagan (2013) and also by Heather Trigg (2005). However, searching for these new hybrid cultural forms seems to inadvertently shift the conversation *away* from how certain cultural forms have persisted and *toward* how they have changed. Silliman (2015:14) however believes that hybridity "is poised to ultimately fail as anything truly useful for archaeologists" and instead suggests focusing on persistence or survivance as ways to balance the demands of both the *longue duree* (situating the colonial encounter within the scope of indigenous history) and the *short puree* (viewing colonial encounters

and their rapid mixing as a prominent turning point in indigenous histories) (Silliman 2012:114,118).

White clay pipes do not fit neatly into the category of hybrid objects. In fact, they are normally not considered hybrid objects at all. Instead, they are categorized as another object of European manufacture that Native people adopted as a result of colonial encounters. But if we actually consider what a white clay pipe *is*- an object manufactured by Europeans in imitation of a Native object and also one designed to ingest a plant that was domesticated by Native Americans- then we need to consider that these artifacts, when they are being used by Native people, are more suited to answering questions about persistence and culture change than hybridity. On the other hand, when used by Europeans and their descendants, perhaps the pipe is the quintessential hybrid after all, but in the hands of colonized, not colonizer. My analysis is therefore well situated to take advantage of the current theoretical climate, particularly when it comes to exploring archaeologies of persistence.

At the forefront of archaeologies of persistence are the concepts of practice and identity (Panich 2013; Pauketat 2001; Silliman 2009). Practices bring past experiences into the present each time they are enacted (or acted out) by an individual or group (Pauketat 2001:3), ordered by the *habitus* to ensure “correctness” and constancy over time (Bourdieu 1990:54); however, life does not happen in a vacuum, and what a person or group is able to do is constrained by time and place. Practice is therefore always in a process of “becoming” rather than being reproduced perfectly each time (Panich 2013:109). A constraint can be any number of things depending on the time or the place, including but not limited to meaning, environment, or identity (Pauketat 2001:5).

Recognizing constraints are important because they help us as archaeologists to understand the evolution of practices as they are reproduced. Timothy Pauketat (2001:3) broadly calls this approach the dynamic tradition position.

Identity, or how individuals see themselves in relation to the group as a whole, is a particularly important constraint to highlight when discussing practice at the SB/SB site, or at other Native occupied sites. Clay pipes could be deployed as symbols that smokers could use to communicate information about their identity to the rest of the group, but meanings might vary by gender, class, or among individuals. By the late 17th century, previously independent tribal societies had been completely encompassed by English communities which owned the majority of the land in New England, requiring creativity to maintain seasonal lifestyles (O'Brien 1997:145). One such solution for Native men was to join the nascent whaling industry. Additionally, the previous economy based on communal values was being replaced by a market economy that left Native people vulnerable to the English legal system as disease and warfare ensured that Native people became a minority in their own home (O'Brien 1997:145). For Native women such as Sarah Burnee and Sarah Boston living a century later, how they negotiated their identities was a direct result of how Native society had evolved in response to the aforementioned changes.

Native people in 17th century New England may have additionally begun employing a "marking strategy", the clear and overt expression of political relations, to mortuary rituals and grave goods as a way to counteract political instability, competition, and reorganization (Brenner 1988:150). Items of European manufacture that had been ascribed meaning within the Native value system would have been included (Brenner

1988:151), and may have been seen to possess literal spiritual power as well as symbolic power (Crosby 1988:184). Just as clay pipes served as symbols of stability for the dead to carry into the afterlife, they also served as symbolic representations of identity for the living in the face of societal changes.

A white clay pipe is the perfect example of a symbol. The same pipe could have a different meaning depending on where it was smoked, and these meanings embody the attitudes and behaviors of the past (Cook 1989:209). They reflect both directly and indirectly the beliefs of the individual who uses them. Smoking tobacco was a tangible expression of identity in the face of the constant re-negotiation of identity that 17th century Native people, and the 18th century individuals who followed them, had to contend with. Moreover, as a constraint, identity was one of the ways in which the practice of smoking was able to evolve in response to these social and political changes.

Colonialism undoubtedly marked a turning point for indigenous people. To focus exclusively on it runs the risk of suggesting that Native people broke permanently with their past as a result of European contact, forcing us to treat traditions as static in order to establish cultural continuity. However if we simply start from the “most ancient Paleoindian period” and use it as a backdrop instead of critically engaging with how traditions have evolved over time (Silliman 2012:117) we lose the ability to truly appreciate how traditions can become potent media for negotiation and can themselves generate cultural change (Kertzer 1988 in Pauketat 2001:3). Archaeologies of persistence allow us to examine how Native smoking practices evolved throughout the 18th and 19th

century without 1) implying that Native people had assimilated and 2) ignoring the effects of colonialism on Native societies.

### **Organization of the Thesis**

I have attempted to demonstrate in Chapter 2 that both the practice of smoking tobacco and the white clay pipe have their origins in the deep history of the indigenous peoples of North America. I highlight how the practices of Native Americans directly influenced the evolution of smoking and the form of the pipe in European society to suggest that these artifacts, when recovered on Native sites, should be thought of as the next smoking implement in a long line of evolving pipe forms and materials.

Chapter 3 goes into greater detail on the SB/SB site and introduces the Magunkaquog meeting house and the Golden Ball tavern. As a private residence which on occasion hosted the Hassanamesco community and provided them with food and drink, the meeting house from the praying-town of Magunkaquog and the tavern from Weston, Massachusetts, provide points of comparison for determining if the smoking behavior at the SB/SB site was actually representative of the entire community or reflective of the women who lived there and how these looked when compared to non-Native sites.

Chapter 4 outlines the primary methods used to re-create smoking practices: an analysis of the disposal patterns of pipe fragments in relation to glass fragments, and of the ratios of pipe bowl to pipe stem fragments. Correlation between the disposal patterns of pipe fragments and those of curved glass might suggest that smoking practices were becoming intertwined with drinking practices, while ratios of bowls to stems might indicate how access to smoking materials influenced the practice of smoking. To evaluate

how pipes may have been used as markers to communicate identity, this chapter also presents the methodology for analyzing the maker's marks and decorations on pipe bowls and pipe stems for similarities in meaning to the decorations on sacred stone pipes.

Chapter 5 discusses the results of the analysis in terms of persistence and why the implications for smoking behavior are particularly important for the SB/SB site. Not only has the archaeology suggested that the site served as a focal point, a "gathering place" for the Hassanamesco Nipmuc prior to the establishment of a reservation, it has also played a crucial part in the Nipmuc's struggle for federal recognition, which was denied to them in 2004 under the guidelines for proof used by the Bureau of Indian Affairs. These place a substantial burden on Native people to establish their continued existence as a political and cultural entity separate from mainstream American society. White clay pipes are generally not considered by archaeologists to be Native artifacts or evidence of cultural continuity. This thesis fundamentally questions what exactly it means to use an artifact that is clearly of European manufacture but fulfills a function whose origin is distinctly native and was created for the sole purpose of imitating an indigenous religious practice.

## CHAPTER 2

### A BRIEF HISTORY OF TOBACCO

Clay pipe studies normally trace the genesis of white clay “kaolin” pipes to 16th century England (Atkinson and Oswald 1980; Dallal 2004; Oswald 1975); however, their genealogy actually extends further back in time to another continent entirely. Smoking has been practiced by native peoples since antiquity and is ubiquitous across the western hemisphere. Called *cohiba* in the Caribbean, *uppowoc* in Virginia, *petun* in Brazil, and *piecelt* in Mexico, the word *tabaco*, according to Gonzalo Hernandez de Oviedo, Viceroy of San Dominago in 1516, referred not to the plant but to the pipe (Penn 1901:8). Nevertheless *tabaco*, or tobacco, has come to refer to the plant itself, thanks to early Spanish explorers.

Among native peoples in New England, smoking stone pipes in sacred or ceremonial contexts appears to have largely been done by men (Nassaney 2004:127,132; Russell 1980:47,162; Trubowitz 2004:154). Men grew tobacco, the only crop not grown by women, and were buried with their stone pipes. While stone (sandstone or soapstone) seems to have been the preferred material for making pipes for ceremonial uses, casual smoking from pipes made of less durable materials seems to have been commonplace among women and children in some areas of New England. Clay, wood, and lobster

claws are all documented examples of pipes which may have served a more mundane or even recreational purpose (Russell 1980:159-160; Trubowitz 2004:146, 150,158). Roger Williams observed that

generally all the Men throughout the Country have a Tobacco-bag with a pipe in it, hanging at their back; sometimes they make such great pipes, both of wood and stone, that they are too foot long, with men or beasts carved, so big and massive, that a Man may be hurt mortally by one of them; but these commonly come from the *Mauquauwogs*, or the men eaters, three or four hundred miles from us...They take their *Wuttanauog* (that is, a weak Tobacco) which the Men plant themselves, very frequently; yet I never see any take so excessively, as I have seen Men in Europe (Williams 1643:55).

The form of the tobacco pipe has been constantly evolving. Tubular stone pipes from eastern North America date as early as 2000 BP (Norton 2008:4) and were among the items traded to the south, the west, and into the Great Plains (Drooker 2004:75-6; Russell 1980:186), the “three or four hundred miles from us” mentioned by Williams. These were characteristic of the Early Woodland period. With the Middle Woodland period came platform or “monitor” pipes, so named for their resemblance to the iron sided Civil War ship of the same name. In their simplest iteration they featured a flat platform with a curved bowl in the center; at their most elaborate they were carved into animal shapes, though these were more common in the Great Plains. The elbow style had prominence in New England by the Late Woodland period (circa 1000 BC-AD 1000) (Rafferty and Mann 2004: xi-xii).

Rafferty and Mann (2004) have suggested that the effigy pipe, what Roger Williams describes as the “great pipes, both of woods and stone...with men or beasts carved,” was the dominant pipe form until the 11th century, when the elbow style gained prominence. While still considered the elbow style, by AD 1300-1400 the pipe bowl and pipe stem were being joined at right angles (Rafferty and Mann 2004: xi). This was a marked departure from the “calumet,” or effigy style pipe. Calumet pipes were notable for being carried in two pieces, the bowl and the stem being joined only during use with the stem playing an important role in ceremonies (Trubowitz 2004:149). It is difficult to ascribe a sacred versus secular function to pipes carried in two pieces versus pipes made in one piece, however, because certain secular pipes also came in two pieces, utilizing a simple reed stem with a clay pipe bowl, for example. Calumet pipes and the calumet ceremony are usually associated with the peoples of the Great Plains, though it did eventually make its way to the Eastern Woodland peoples through the vast trading network connecting the coast to the interior. Of the purposes of the calumet ceremony, concluding treaties or declaring war was the occasion most often witnessed by European observers, and the calumet pipe gained the erroneous moniker of “peace pipe” as a result.

New England peoples preferred smoking tobacco to snuff or chewing tobacco. *Nicotania rustica* was the tobacco strain grown in the area (Nassaney 2004:13; Russell 1980:161) and was considered bitter by the colonists, paving the way for the success of Virginia tobacco, a hybrid strain of *Nicotania rustica* and *Nicotania tabacum*, a strain from the Caribbean. Although the colonists found the taste of their tobacco bitter, New England peoples routinely blended it with other plants, including sumac, sweet fern, leaves of the cardinal flower, red willow, and dogwood (Russell 1980:161).

## **The Role of Tobacco in Society**

The tobacco plant itself had multiple functions. Marcy Norton (2008:11) writes that native peoples saw tobacco as essential for their “physical, social, and spiritual well-being.” The following description of smoking, included by W.A. Penn in *The Soverane Herb*, elaborates on Norton’s assertion:

They think that their gods are so marvelously delighted therewith; wherefore they make hallowed fire, and cast some of their powder therein for a sacrifice. Being cast in a storm upon the water, to pacify their god they cast some up into the air and into the water; so a weir for fish being newly set up they cast some therein and into the air; also after an escape of danger they cast some into the air likewise (1901:3)

In terms of “physical well-being,” the medicinal functions of tobacco included its use as a painkiller, antiseptic, and as a cure for toothaches (Norton 2008:1; Nassaney 2004:130; Russell 1980:158-160). Roger Williams (1643:35) observed that “they generally all take *Tobacco*...for two causes; first, against the rheum, which causes the toothache, which they are impatient of: secondly, to revive and refresh them”. He additionally describes the hot-house as a place where men sat for “an hour or more, taking tobacco, discoursing and sweating together” to purge their bodies of disease (Williams 1643:158).

The smoking of tobacco also had a role to play in social interactions. While it played a role in various ceremonies, it played a crucial role in hospitality (Drooker 2004:73-74; Norton 2008:28, 49-50; Russell 1980:45,160; Trubowitz 2004:146). In formal greeting ceremonies the smoking of tobacco essentially functioned as a fictional adoption, creating symbolic kinship ties that allowed the parties involved to trade with

one another, enter into an alliance, or otherwise engage in acts of political necessity (Drooker 2004; Trubowitz 2004).

Tobacco played a key role in Native New Englanders spiritual well-being as one of the tools of *powwows*, or shamans. Their responsibilities included healing the sick, casting spells (for good or ill), and divining the future (Cogley 1999:64; Nassaney 2004:12; Simmons 1986:39; Williams 1643:112,158). Individuals aspiring to become powwows went without food or drink to induce visions where Hobbamock (Abbomacho), also called Cheepi, appeared to them as an animal, fish, serpent, or bird. A *pniese*, the advisors to the *sachem*, also sought visions of Hobbamock, but these were specifically chosen for the ordeal, which involved hallucinogens. Hobbamock was apparently terrifying to behold and was associated with the color black, death, the deceased, and the “cold northeast wind” (Simmons 1986:39). Despite his terrifying nature he was the most approachable of the native pantheon. According to Roger Williams (1643:110,111), when he inquired as to whether or not God made the world, he was given the names of 37 deities. Kautantowwit, or Cautantowwit, the Creator, the “great South West God, to whose House all Soules go, and from whom came their Corn” (Williams 1643:110), was as equally responsible for a good harvest as he was for disease or injury.

The *powwows* were seen as a significant obstacle to establishment of the mission because Hobbamock, the *manito* who granted these visions, often appeared in the form of a serpent to devotees. Rogers Williams (1643:158-159) describes them as priests and conjurers of the likes of Simon Magus, the sorcerer who battles the apostle Peter in the book of Acts, who worked great cures “by the help of the Devil” to extort money from the populace. William Simmons (1986:62) suggests that native people viewed the

Puritans' missionary efforts as dueling between shamans, and disease and constant warfare would have made it seem as though the Christian god was winning. Shamanism continued among the Narraganset, Niantic, Mohegan, and Pequot into the 1740s before appearing to finally collapse as an institution in the 18th century (Simmons 1986:160). Although Cheepi/Hobbamock was pushed to the periphery, powwows remained important folk healers.

Tobacco likely also played a role in annual rituals in the early spring, late summer (when the corn ripened), and midwinter, though both Simmons (1986) and Russell (1980) agree that descriptions of these "seasonal rites" are lacking in primary sources as Europeans were either not a witness to such events or chose not to include their observations of them. Of these, Roger Williams (1643:111) only writes that

Of this Feast they have public, and private and that of two sorts. First in sickness, or [Drought], or War, or Famine. Secondly, After Harvest, after hunting, when they enjoy a calumet of Peace, Health, Plenty, Prosperity, then Nickommo, a Feast, especially in Winter,...once a year in their kind of Christmas feasting.

Initial perceptions of tobacco varied among Europeans. Jacques Cartier remarked that while the native people found smoking "most wholesome," when he and his crew attempted to smoke "we found it bit our tongues like pepper" (Penn 1901:9). Benozzi of Milan, while traveling through Hispaniola between 1541 and 1546, witnessed tobacco being used in trances and dubbed it "a wicked and pestiferous poison" (Penn 1901:9). John Eliot, the missionary responsible for the creation of Hassanamesco and the other praying towns, "denounced tobacco", and 17th century Puritans initially "abhorred the fume of the pipe" (von Gernet 1988:372; Fairholt 1968:111 in Nassaney 2004:131).

Europeans accepted what were ultimately “pagan” religious rituals precisely because of the meaning that native peoples attributed to them (Norton 2008:9; Penn 1901:6, 7), acquiring a taste for tobacco because taste “encompassed the sense that a certain time of day or a particular situation” required the smoking of tobacco (Norton 2008:9). There are two other prevailing theories for explaining tobacco’s popularity that other authors accept but Norton ultimately rejects. The first, biological determinism, posits that Europeans, unaware of the addictive properties of nicotine, became addicted to tobacco and in this way created widespread demand. The second, cultural constructivism, suggests that tobacco was widely accepted in Europe for its purported medicinal qualities. That nicotine is addictive cannot be denied; however, this cannot be the sole reason for the widespread use of tobacco. The idea that smoking became widespread due to its purported medical properties may have some merit. Though tobacco’s medicinal uses may have initially been a convenient way to skirt the issue of its pagan origins, by the 17th century smoking was seen as an effective, over-the-counter medicine, and members of every social class “took tobacco for their health” (Penn 1901:30; Trubowitz 2004:146). Sailors swore it was a cure all:

it cures any grief, dolor, imposture or obstruction proceeding of cold or wind, esp. in the head or breast. The fume taken in a pipe is good against Rheum, Catarrhs, hoarseness, ache in the head, stomach, lungs, breast: also in want of meat, drink, sleep, or rest (Penn 1901:28).

There were plenty, however, who saw the leaders of the day, such as Sir Walter Raleigh, indulging in tobacco and picked up the trend. In all likelihood it was a combination of medicine and taste that lead to tobacco’s popularity in Europe.

## **Incorporation into European Society**

Hernandez de Toledo, a physician sent by Phillip II of Spain to investigate the products of Mexico, is credited with introducing tobacco to Europe, but sailors had likely picked up smoking before he brought several cuttings back to Spain in 1559. Toldeo brought back tobacco for “medicinal purposes and for ornament” (Penn 1901:12). Jean Nicot, the French ambassador to Portugal, introduced tobacco to the French queen Catherine de Medici in 1561, who renamed it The Queen’s Herb for its curative properties. It arrived in England in 1586, thanks to Ralph Lane, the governor of Virginia, though Sir Francis Drake and his crew had presumably been smoking tobacco prior to its formal introduction at court. Sir Walter Raleigh, the perennial favorite of Elizabeth I, popularized smoking, though it is unclear if Elizabeth herself smoked.

Her successor, James I, was not so accommodating. When Captains Amidas and Barlow presented James with two Virginia Indians and some tobacco, the king later remarked “the pity of it is that the poor, wild barbarous men died, but that vile barbarous custom is yet alive” (Penn 1901:16). In the first year of his reign he published a “counterblast” against tobacco, raised the import duties on Virginia leaf, and outlawed its cultivation in England. This proved disastrous to the fledgling colony, and in 1624 James was forced to prohibit the importation of tobacco from anywhere except Virginia, though he placed limits on how many pounds planters could export. The clergy were also on his side, claiming that smoking was “a great incentive to drunkenness” (Penn 1901:71). Several other rulers followed suit: in Russia, smoking was punishable by whipping on the first offense and execution for the second; the Turks hanged smokers.

James's successor, Charles I, shared his dislike, as did Oliver Cromwell. Despite heavy persecution, the 17th century was dubbed "The Smoking Age" in England (Penn 1901:67). Even the Puritans, who "as a body originally detested and abhorred tobacco...soon fell prey to its all-conquering virtues" (Penn 1901:73). Sir Walter Raleigh had ensured that smoking was considered an essential qualification of a gentleman, and it had become a "genteel accomplishment" by the beginning of the 18th century (Hackwood 1909:380). It was so prevalent, in fact, that the Massachusetts Bay Colony had to pass a law in 1669 that fined 12 pence to anyone caught smoking within 2 miles of the meeting house (Penn 1901:82).

Smoking was irrevocably linked to drinking, though 17th century observers were at a loss as to whether smoking caused one to drink *less* because the pipe distracted from the drink, or *more* because the smoke dried out the throat. Invariably the latter view prevailed and smoking became linked to drinking in excess, leading to James I's prohibition on smoking in ale-houses. This didn't last, and smoking rooms became commonplace in taverns and ale-houses, both of which began providing pipes for patrons once the cheap clay variety became widely available. The ale-house became the principal means of purchasing tobacco for the "middling sort" and proved to be a lucrative side business for proprietors (Clark 1983:134).

The discovery circa 1590 that pipes could be made cheaply from clay established the pipe-making industry in England. English soldiers settling in the Netherlands between Anglo-Dutch wars introduced pipe making to the Dutch, though it was their wives who plied their trade whenever the conflict began again (Dallal 2004). Initially made with bulbous bowls and flat heels, later spurs, in the 17th century English pipe makers began

producing elbow-style pipes in imitation of those smoked by Native Americans specifically for use as trade goods in the Americas (Huey 2008:43; Noel Hume 1969:305). Bristol pipe maker Edward Bird has been credited with the idea (Huey 2008); however, there is doubt as to whether this campaign was successful in appealing to Native Americans. In 17th-century New England, at least, native people preferred their own pipes to imported clay ones when it came to ritual (Huey 2008; Nassaney 2004:133; Turnbaugh 1976:75), and the area actually saw a “renaissance” in stone pipes thanks to European metal tools that made carving much easier.

Decreasing faith in shamans may have led to new ideas about smoking tobacco (Nassaney 2004). The disruption of a semi-nomadic, seasonal lifestyle made traditional gendered divisions of labor difficult to maintain and may have encouraged women to challenge social rules about smoking in light of their increased agency and participation in the market economy (Nassaney 2004; O’Brien 1997:150). In this instance society-wide smoking was not an imitation of the secular European smoking practices but a gamble by all members of society to connect with cosmological forces to combat rampant disease and warfare, a kind of “democratized shamanism” (Nassaney 2004:133). While mortuary evidence indicates that smoking was still strongly associated with men, the effigy pedestals found buried with young women in cemeteries at Long Pond in Connecticut, RI-1000 in Rhode Island, and Titicut in Massachusetts might actually be stone pipe stems without their bowls, implying that women were beginning to be associated with smoking as well (Nassaney 2004).

## CHAPTER 3

### SITE BACKGROUND

While no stone pipes were recovered from the SB/SB farmstead, it is possible that Sarah Robins, Sarah Muckamaug, Sarah Burnee, and Sarah Boston held similar attitudes towards smoking as Nassaney (2004) proposes. Were there other differences in the way tobacco was being consumed by the site's inhabitants? What, if any, changes to the meaning or practice of smoking can be identified archaeologically between the 18th and 19th centuries? In considering how to answer these questions and bearing in mind that the smoking of tobacco was becoming less restricted society-wide, I decided to compare smoking behavior at the SB/SB site to smoking behavior at the Magunkaquog meeting house and Golden Ball tavern. While the Sarah Burnee/Sarah Boston farmstead was both a private home and a community gathering place, the Magunkaquog meeting house was strictly a Nipmuc gathering place. Comparing these two sites allows us to test if the smoking behavior at the SB/SB site was truly reflective of changes in smoking behavior in 18th century Nipmuc society as a whole or if it reflected the personal preferences of Sarah Burnee and Sarah Boston.

#### **The Sarah Burnee/Sarah Boston site**

The Sarah Burnee/Sarah Boston farmstead sits on Keith Hill in what is now the town of Grafton, Massachusetts. The original Sarah, Sarah Robins, was the heir of the

*sachem* Petavit (excavators now believe her to be his daughter). She returned to Hassanamesit with her husband, Peter Muckamaug, in 1729 to claim her portion of the 1,200 acres that was to be divided after the sale of Hassanamesit. The couple had been residing in Providence, Rhode Island, during King Phillip's War, possibly as indentured servants (Mrozowski et al 2015:16). Both of their children, daughter Sarah and son George, remained in Providence. Sarah became an active member of the Hassanamesco community, agreeing to care for one of her neighbor's orphaned children and joining the community's petition to the General Court in 1744 requesting new Trustees. The complaint by the seven petitioners, four of whom were women, centered on the fact that the current Trustees not only required residents to travel a great distance to collect interest but had in fact not paid that interest in two years (Mrozowski et al 2015:19-20). The General Court granted their petition and appointed new Trustees.

Sarah Robin's daughter, Sarah Muckamaug, returned to Hassanamesit sometime in the early 1740s to care for her during an illness (Mrozowski et al 2015:19). By this point Peter Muckamaug had died, and Sarah Robins had remarried. Sarah Muckamaug had grown up in Providence as an indentured servant in the home of John Whipple, a politician and lawyer. While in Providence she had a relationship with, and was possibly married to Aaron Whipple, a slave in the household of Colonel Joseph Whipple, the brother of her employer John Whipple. Sarah and Aaron had four children together: Rhoda, Abigail, Abraham, and Joseph. Sarah left Providence with baby Joseph around 1740 to return to Hassanamesit, leaving her older children indentured with the Brown family (Mrozowski et al 2015:21). Along the way she stopped at the Wilkinson farmstead, a family with who she may have been familiar with from her time with the

Whipple family. It was at this farmstead that Sarah and Aaron fought and ended their relationship (Law et al 2008:18-19). After her return to Hassanamesit Sarah would meet another African-American man, Fortune Burnee, with whom she would have another child, the only daughter who she named Sarah.

Sarah Robins died in 1749. Although it was in her husband's name under English law, Sarah left the land to her daughter, a common tradition among Native groups in Southern New England, and one that would last for four generations. This is impressive considering that other families in the Hassanamesco community had already begun selling their land by 1730 (Mrozowski et al 2015:17). Though women in Nipmuc society were responsible for agricultural production and therefore owned the land they worked, names were also important to the matrilineal "willing" of land (Law et al 2008:19, Mrozowski et al 2015:23). The name "Sarah" seems to have been linked to ownership of the land in this particular family, as exemplified by the fact that it was not Sarah Muckamaug's first-born daughter Rhoda who received the name and the land, but her last-born, the only child born on the Hassanamesit property (Law et al 2008:19, Mrozowski et al 2015:23).

Sarah Muckamaug passed the land on to her daughter, Sarah Burnee, after her death in 1751, but not before her husband (Fortune Burnee) was forced to sell off part of the parcel to meet the debts incurred by her sickbed care. Despite having an able-bodied husband, the town of Grafton had moved Sarah from her home and into the care of an English neighbor for the duration of her "long sickness" (Law et al 2008:20), driving Fortune Burnee into debt. Creating situations such as this as a way to acquire Native land was a common practice among 18th century English colonists, and Sarah Muckamaug

and Fortune Burnee were by no means the only victims (O'Brien 1997:151). Crop destruction and encroachment were other popular methods of achieving the same goal (Den Ouden 2005).

Sarah Burnee was only 7 at the time of her mother's death, and her father would collect interest on her behalf until she came of age in 1765, when she turned 21 (Mrozowski et al 2015:24). At this point Sarah faced another threat to retaining the family land in the form of her half-brother Joseph Aaron, the child Sarah Muckamaug brought with her from Providence. Joseph had spent his childhood indentured to the Daniels family before returning to Hassanamesit to work the family land with his sister Sarah. Here English and Nipmuc values collided when Joseph claimed that by working the land he deserved ownership, with Timothy Paine, one of the Trustees, going so far as to say that the division should favor the son (Mrozowski et al 2015:25). Despite the efforts of Sarah Burnee and her husband Prince Dam to prove that Sarah Muckamaug and Aaron Whipple were never married, the General Court did approve the division of the land between Joseph and Sarah. Interestingly, the Court awarded Sarah the house, barn, rye and wheat fields in the settlement.

Sarah's husband Prince Dam joined the Massachusetts militia and perished in the Revolutionary War. She re-married to Boston Phillips, with whom she had a son and a daughter, Sarah Boston Phillips. The years following the Revolution had not been kind to the Hassanamesco community. In 1785 the community, including Sarah Burnee, petitioned the General Court, claiming they had never received the interest due to them (Mrozowski et al 2015:26). Despite the petition, the community never saw the money.

Thus after the death of her second husband in 1797, Sarah Burnee was forced to sell more portions of her land to pay for the funeral expenses (Mrozowski et al 2015:27).

Her daughter Sarah, who came to be known locally as Sarah Boston, was the last matriarch to reside on the property. Sarah held a variety of jobs to help her mother pay down their debt, working alternately as a farm hand and in odd jobs around the town (Law et al 2008; Mrozowski et al 2015). Law (2008, 2014) notes that Sarah Boston had quite a reputation in the town of Grafton, who remembered fondly her drunken exploits and larger-than-life reputation as a “wandering Indian”; however, many of the recollections of Sarah Boston seem to be colored by Victorian stereotypes of Native women that characterized them as masculine (Mrozowski et al 2015:29). By describing Native women in this way, 19th century chroniclers were able to position them as falling short of feminine ideals and perpetuate the notion of women like Sarah Boston as the “last of their race”.

Sarah Boston and her brother divided the family land between them after their mother’s death. Sarah herself had three children, two boys and a daughter, Sarah Mary. She was forced to sell off portions of her dwindling land to support her children at least three times, the last being compensation for sickbed care and medical expenses (Law et al 2008:28). By the time of her death in 1837 only 20 acres of the original parcel remained, which Sarah Mary would sell in 1854, after four generations of continuous ownership by Nipmuc women.

Excavations of the farmstead were conducted by the Andrew Fiske Memorial Center for Archaeological Research at the University of Massachusetts Boston (formerly the Center for Cultural and Environmental History) on behalf of the Grafton Land Trust

beginning in 2003, with completion of the final season in 2013. The site consists primarily of the remains of the house foundation and cellar, a “yard” area containing an outdoor hearth, and a midden in the northeast corner of the site. The material culture recovered roughly dates to a period from 1750 to 1840, with a spike between 1790 and 1830, indicating that it related primarily to the occupations of Sarah Burnee and her daughter, Sarah Boston. Thus, the site is referred to as the “Sarah Burnee/Sarah Boston site”. A combination of ceramic, metal, glass, and faunal evidence converged to suggest that the SB/SB farmstead also functioned as a communal gathering place for the Hassanamesco Nipmuc prior to the establishment of a reservation.

Approximately 125,000 artifacts recovered from the site. Sixty-four percent of the total artifacts were ceramics; of these, 35.5% were refined white earthenwares such as creamware and pearlware, and 28% were coarse earthenware. Guido Pezzarossi (2014) was able to identify 106 refined earthenware vessels, the majority of which were serving or drinking vessels such as tea cups, tea pots, mugs, and tankards. Excavators (Mrozowski et al 2015:157) have cited this high proportion of tablewares, drinking vessels, and teawares as one of the lines of evidence to suggest that communal feasting occurred at the site. Similarly, the glass assemblage was almost entirely dedicated to drinking vessels such as decanters, wine glasses, and tumblers (Law 2008) which suggests that alcohol was being served in large amounts. Further evidence from the metal assemblage, such as the recovery of 70 eating utensils, suggested that community-consumed meals (feasting) were occurring at the site (Law et al 2008, Mrozowski et al 162). Analysis of the faunal assemblage (Allard 2010, 2015) indicated that Sarah Boston and her mother ran a successful farm with numbers of animals comparable to those of

their Anglo-American neighbors, suggesting that not only were they physically able to participate in the Native practice of food sharing at communal gatherings but actively did. Amelie Allard (2015) additionally found differences in the faunal material in the yard and the foundation that point to the yard as an area where feasting took place. While the faunal material from the yard suggested that food was being both prepared and consumed there, the material recovered from the foundation indicated that only food preparation was taking place inside the home.

### **Magunkaquog**

The New England Gazetteer described the town of Magunkaquog as being situated “south-westerly from Boston about 24 miles, nearly mid-way between Natick and Hassanamesit” on 3,000 acres (Hayward 1857:264). The approximately 11 families were led by Pamphaman, described as “a sober and active man”, and were instructed in Christianity by Job, who was “well accepted for piety” (Hayward 1857:264). Magunkaquog was established in 1669 (Cogley 1999:145), the seventh and last of the “old” praying towns. Its genesis lies in a 1660 survey of Natick, the first of the old praying towns, which established that English colonists were encroaching on Natick’s boundaries. Eliot petitioned the General Court for 3,000 additional acres, creating the Magunkaquog plantation (Mrozowski et al 2009:439). The new town was located partially within the boundaries of Natick and partially on the 3,000 additional acres.

Living in the praying towns meant abiding by strict rules meant to reinforce Godly behavior and deliberately undermine Native society. Domestic relations and work habits in particular were singled out. Men were put to work in the fields and building houses,

which they considered effeminate work, while women, barred from the fields, were taught to weave and sew. Sexual activity outside of marriage was strictly forbidden, and in Natick, under the Nonatum code, single men could be fined 20 shillings if they were caught engaging in sexual activity. To encourage English dress, women were fined 2 and 6 pence for publically exposing their breasts (Cogley 1999:53).

Strict enforcement of these rules was of course impossible. Eliot had envisioned the Native residents of the praying towns coming to salvation by witnessing the “upright living” of their English neighbors (Cogley 1999:4), but the Massachusetts General Court insisted that he create a code of behavior after the establishment of Nonatum. In fact, Eliot only very rarely visited the outlying towns like Hassanamesit, Okommakoamesit, and Nashabak. Punkapoag and Magunkog (or Magunkaquog) were visited more frequently due to their proximity to Natick. Eliot would visit Natick twice a month and travel to the other settlements in the intervening weeks (Cogley 1999:145). Daniel Gookin also visited Magunkaquog in 1674 in his role as Superintendent of Indian Affairs for the colony of Massachusetts.

Like the residents of Hassanamesit, the residents of Magunkaquog were targeted by both sides during King Phillip’s War and endured raids by the Mohawk afterwards. And like the residents of Hassanamesit, they were approached to sell their land in 1715. Harvard University had been left monies for the purchase of land in the will of Edward Hopkins, with the stipulation that it would be used to help English colonists. Harvard decided to purchase Magunkaquog and lease out the land to English colonists in order to fulfill the terms of gift. The deed was ultimately signed by 15 individuals from the town

of Natick. Additional lands from the surrounding area were added to the original purchase by the General Court, and the newly created township was renamed Hopkinton in honor of Edward Hopkins, now famous as the starting point of the Boston Marathon. The original 3,000 acres of the Magunkaquog plantation were renamed Ashland. According to *A History of Harvard University*, the deed was signed by

Thomas Waban, Samuel Abraham, Solomon Thomas, Abraham Speen, Thomas Pegun, Isaac Nehemiah, and Benjahmin Tray, a committee or agents for the Indian proprietors of the plantation of Natick. The signatures afford no very high idea of the state of learning among the Natick Indians. Those composing the committee, were, no doubt, men of consequence among them; yet of the whole seven, two only, Waban and Tray, wrote their names themselves, and that not very well, particularly the latter; the remaining five made their marks, each different from the others (Pierce 1833:103).

Of the sale itself, Samuel Sewall wrote only in his diary that “at Natick the Indians of the Committee executed the Parchment Deed for the Land at Magunkaquog and paid the Proprietors Three pounds apiece” (Collections of the MHS, p. 62, Mrozowski et al 2009:442). The Magunkaquog lands were leased for 99 years at an annual rate of three pence an acre, though this contract “proved unsatisfactory” for both the tenants and the Trustees because the leases did not contain stipulations for the tenants to renew their leases at the conclusion of the 99 years (Pierce 1833:104). We can assume that, because of the stipulations in Hopkins will, that the unsatisfied tenants were the English inhabitants of Magunkaquog (now Hopkinton).

Archaeological excavations carried out by the Public Archaeology Lab (PAL) of Pawtucket, Rhode Island, and the Andrew Fiske Memorial Center for Archaeological Research at the University of Massachusetts, Boston (formerly the Center for Cultural and Environmental History) determined that the Nipmuc inhabitants of Magunkaquog did not simply pack up and leave after the sale of their land in 1715. Rather, the archaeological evidence uncovered first in 1996 and then in 1997-1998 points to a period of occupation that ended in 1750, a full thirty-five years after the initial sale.

The Fiske Center excavations in 1997 and 1998 expanded considerably on the 1996 PAL survey. The excavations focused on three areas, “one where PAL archaeologists had uncovered a small concentration of 17th century European material culture, a second where a deep depression was uncovered, and a third area containing two large wells” (Mrozowski et al 2009:443). While the depression turned out to be a well sounding dating to the 19th century, the small concentration of 17th century material was discovered to be associated with a substantial stone foundation built into the slope of Magunco Hill. “The majority of the material culture recovered from the site came from the area within and immediately surrounding the foundation, with the exception of iron kettle fragments strewn across the yard” (Mrozowski et al 2009:447). The assemblage contained ceramics, glassware, bottle and drinking vessels, clothing items, smoking pipes, and a small collection of quartz crystals (Mrozowski et al 2009:447). A small collection of faunal material was also recovered and found to be butchered using typical 17th and 18th century English techniques. Based on the small size of the faunal assemblage and the other material culture, the Fiske Center excavators concluded that the

structure served as a meeting house for the community rather than a year-round residence. It likely would have served as a “gathering place for teaching, possibly worship” and was likely “set aside for the infrequent visits of Eliot or Daniel Gookin” (Mrozowski et al 2009:447).

Of particular importance to my analysis is what the excavators refer to as a layering of Christian and native religious beliefs at Magunkaquog. A “small but significant” (Mrozowski et al 2009:454) assemblage of quartz crystals was recovered from inside the foundation. Three of these were found inside the corners and were placed during the building’s construction, a practice which had deep roots in Native American society (Murphy 2002). Eliot was blunt about his desire to use the praying towns as a method of instructing the native peoples of New England in “civility” and “religion” and firmly believed that if native people could observe the “upright living” of English Christians that they would want to emulate it (Cogley 1999:4,5). The placement of crystals in the foundation of the Magunkaquog meeting house is indicative of the praying town experiment’s failure to completely erase native spiritual beliefs. Mrozowski et al (2009:453) additionally suggest that certain English goods were valued for their spiritual strength within native cosmology based on the “near identical” ceramics, bottle, cooking vessel, sewing implements, and smoking pipes that were recovered from the Magunkaquog foundation as were recovered from the native cemeteries at Natick analyzed by John Kelly (1999). Kelly (1999) compared the grave goods in three “praying Indian” cemeteries to two native cemeteries that were not associated with the mission, finding English goods, including white clay tobacco pipes, in the assemblages.

## **The Golden Ball Tavern**

The SB/SB site exhibits characteristics of both a private residence and a community gathering place. The pipes of the SB/SB assemblage number in the hundreds (375) rather than the thousands, as one would expect in a domestic assemblage (Bragdon 1981:36). The variability in vessel forms and function, including a high proportion drinking vessels such as tumblers, are similar to what one might expect in a communal gathering place (Bragdon 1981:35). As such, recent work has focused on Sarah Burnee and Sarah Boston's willingness to on occasion host their neighbors and provide them with food and drink (Allard 2015; Law Pezzarossi 2014; Mrozowski et al 2015; Pezzarossi 2014). Taverns, smoking, and drinking were inseparable in 17th and 18th century Anglo-American life, and alcohol in particular was integral to it (Bragdon 1981:27-28). The Golden Ball tavern serves as a point of comparison for what this type of smoking behavior might look like in an Anglo-American context, and the relationship between smoking and drinking should give clues about whether the lack of correlation between smoking and drinking at the SB/SB site actually reflected Nipmuc attitudes or the personal preferences of the women who lived there. This distinction will be crucial in allowing us to examine how identity may have influenced the evolution of smoking practice as a constraint.

The process for selecting an appropriate Anglo-American comparison drew on Rockman and Rothschild's (1984) analysis of the differences in the material culture recovered from urban taverns and rural taverns. They argue that urban taverns emphasized recreational activities like smoking and drinking, while rural taverns emphasized food service and lodging (Rockman and Rothschild 1984:116). Rockman and

Rothschild use a Brainard-Robinson Coefficient of Similarity, a statistical technique based on the same idea behind Ford's seriation technique, that similar units will have similar percentages of artifacts (Marquardt 1978:264). The formula used by Rockman and Rothschild is:

$$S_{Rij} = 200 - \sum_{k=1}^n |P_{ik} - P_{jk}|$$

The degree of similarity between artifact assemblages is illustrated by the coefficient.

The maximum agreement between two assemblages is 200, while the greatest difference is 0. To determine which type of tavern assemblage it would be the most appropriate to compare the SB/SB assemblage to, rural or urban, I tested the SB/SB site against the four taverns that Rockman and Rothschild use in their analysis. With a coefficient of 150, the SB/SB site was the most similar to the most rural of the taverns that Rockman and Rothschild analyzed, the Wellfleet (Table 1).

	Pipe %	Ceramic %	Glass %	% of Total	Coefficient
<b>Boston-Wellfleet</b>	24%	25%	1%	50%	150
<b>Boston - John Earth</b>	37%	33%	3%	73%	127
<b>Boston - Jamestown</b>	35%	69%	34%	137%	63
<b>Boston - Lovelace</b>	65%	89%	24%	178%	22

Table 1: Coefficients describing the similarity of the SB/SB assemblage to the assemblages used by Rockman and Rothschild (1984), calculated by John Steinberg, Andrew Fiske Memorial Center for Archaeological Research.

It is important to note that I am not suggesting that the Sarah Burnee/Sarah Boston site *was* a rural tavern. Instead, I wanted a “control” on what social smoking for Anglo residents looked like.

Potential tavern sites were evaluated for comparison based primarily on two criteria: that they were in operation during a similar time period as the SB/SB site and were considered “rural.” Tavern owners who exhibited Loyalist sympathies were likely to have their establishments destroyed, and thus the Golden Ball represents one of the few Anglo-American taverns to have continued to operate after the Revolution. Excavators (Gary and Randall 2006:24) note that the archaeological deposits at the Golden Ball do not contain “stereotypical tavern waste” (i.e. “large quantities of materials related to leisure, smoking, and beverage and food consumption”) and posit that it may be related to the Golden Ball’s position as a rural tavern. However, they also note that this could be a result of the locations of previous excavations, which focused heavily on the ells as opposed to the main structure.

In addition to being “rural”, the Golden Ball was also one of only two taverns surveyed to occupy relatively the same date range as the SB/SB site. Isaac Jones received his inn license in 1770 and managed to keep the Golden Ball open until 1792 despite two serious political blunders in 1774 and 1775. In April of 1774 a mob ransacked the Golden Ball because Jones had made the unwise decision to purchase tea during a boycott of the wildly unpopular Tea Act. No serious damage occurred, but Jones again faced unfavorable press when in February of 1775 he allowed two British spies to stay at the Golden Ball. However, by 1777 he was contracted to move goods for the Continental Army and was considered a “probationary patriot” after signing on oath of allegiance

(Gambriel and Hambrick-Stowe 1977). After his retirement from public life in 1792 the Golden Ball ceased to operate as a tavern. In 1803 Jones divided the property in half, willing the bar room, parlor, and kitchen to his son and leaving his unmarried daughters the kitchen ell and above bedroom.

The Golden Ball has been the subject of five archaeological excavations related to the division of the property. The first professional archaeological investigation was conducted in 1977 and focused on the east ell. Additional investigations into the east ell occurred in 1983 and revealed that it was constructed in the 1780s, not after the tavern closed its door as was previously thought (Elia 1989; Gary and Randall 2006:21). Excavations were conducted again in 1988 behind the house to locate the barn and in 1990 to investigate the south ell (the kitchen willed to Jones's daughters) and the west lawn. Frederica Dimmick concluded that the area had been used for household trash disposal throughout the 19th century (Gary and Randall 2006:23). The most recent excavation was undertaken by the Andrew Fiske Memorial Center for Archaeological Research in 2006 and focused on the Northeast Lawn where excavators hoped to uncover evidence of the doorway to the 18th century tavern taproom.

Excavators from the Fiske Center noted a "distinct depositional pattern" to the pipe fragments (Gary and Randall 2006:45). Test units 2 and 3, along the side of the house, contained the highest number of pipe fragments; the test units further away (TUs 4 and 5) contained only 14 fragments combined. These deposits are interpreted as the result of tavern patrons throwing broken pipes out the taproom window and doors rather than an intentional trash deposit. While glass made up 10% of the total artifacts recovered, excavators recovered only 3 fragments of bottle glass from the tavern-era deposits (Gary

and Randall 2006:47). In contrast ceramic vessel fragments, which made up only 17% of the total artifacts recovered, were much more numerous in the tavern-era deposits. This supports the original assumption from the previous excavations (Dimmick 1991; Elia 1989; DePaoli 1989) that as a rural tavern alcohol and tobacco consumption were downplayed in favor of food service.

Ricardo Elia's 1989 excavations recovered a total of 33 pipe fragments, 11 of which can be confidently attributed to the tavern era. Neil DePaoli's 1988 survey of the rear yard turned up 4 stem fragments and 1 bowl fragment, while Frederica Dimmick's 1990 survey of the South Ell and West Lawn turned up 1 stem and 2 bowls, all of which came from a test unit along the south ell. Dimmick (1991) suggested that the area was used for the disposal of kitchen refuse in the early 19th century after the tavern closed but before Isaac Jones left the western half of the tavern to his son. DePaoli (1989) indicated that the lawn area was used for the disposal of household trash into the 20th century. Combined with the 2003 results of the Fiske Center excavations, the pipe fragment distribution suggests that the area of tobacco pipe usage was concentrated in the taproom, however, I focus mainly on the pipe material recovered by the Fiske Center project because this particular excavation was the only one that was concerned specifically with the building's use as a tavern.

## CHAPTER 4

### METHODS AND ANALYSIS

The conclusions drawn by excavators about the SB/SB site (Law et al 2008, Mrozowski et al 2015) and the Magunkaquog meeting house (Mrozowski et al 2009) share a common theme of Native individuals using English goods in Native ways; whereas the assemblage from the Golden Ball Tavern represents how these same goods would have been used in an English context. To understand how smoking behavior was evolving in response to the changing socio-political landscape of southern New England, I required a metric to examine how the practice of smoking was being enacted and how identity may have been deployed at the SB/SB site. Practices are constantly being reproduced and brought from the past into the present each time they are acted out; however, because individuals are not perfect practices are not reproduced exactly each time. To understand how practices were being reproduced at the SB/SB site, I focused on the disposal patterns of pipe bowls and pipe stems as compared to curved glass. If the disposal patterns indicated that the two behaviors were correlated, it might indicate that the practice of smoking was becoming intertwined with the practice of drinking, was becoming more recreational, and not indicative of “democratized shamanism.”

In addition to the distribution of pipe fragments, the ratio of bowl fragments to stem fragments is also important to understanding smoking behavior because Native

people were barred from being served in taverns (Bragdon 1981:27; Law 2008:126), meaning that access to smoking implements may also have affected the practice of smoking. Clay pipe studies have suggested that because of the length of pipe stems by the 18th century a clay pipe was still useable even after its stem had been broken. Following this logic, as a general rule the number of pipe stems in an assemblage significantly outnumbers pipe bowls (Bradley 2000; Noel Hume 1969; Oswald 1975). Excavators of the Belcher Wintering Station site near Port Refuge in the Canadian high arctic analyzed both the distribution of pipe fragments and the ratio of bowl fragments to stem fragments within that distribution (Richie 1978). The distribution of pipe fragments indicated the areas of tobacco pipe usage on the site, while the bowl to stem ratio determined the type of pipe consumption (Richie 1978:135). The tendency of pipe stems to break means that there is a higher probability that they will be found on a site than pipe bowls; however, the presence of pipe stems alone does not necessarily imply smoking behavior as the stem could have fallen off as a smoker was passing through. They propose that when “a smoking population can travel away from its source of smoking supplies, there will be a low number of bowl fragments deposited at the source in relation to stem fragments”, but if the smoking population is restricted to the area around its source of pipes, “the number of bowl fragments in relation to stem fragments will be high because the bowls are being used and discarded there” (Richie 1987:135). Based on the premise that the longest a pipe stem ever reached was 12 inches, the ratios of bowls to stems should be approximately one bowl fragment for every four stem fragments in the first half of the 18th century, and one bowl fragment for every one and a half to two stem fragments for

pipes manufactured after 1780, when pipe stem length began to shrink as the cutty style came into vogue (Bradley 2000:126-127).

The second metric involved pipe bowl designs and decoration, which functioned as signals to the larger social group when the pipe is in use. The ability of the same material culture to possess different meanings in different contexts is the essence of what a symbol *is* (Hodder 1982:9). There is a body of evidence that suggests that the designs on white clay pipes may have appealed to Native people because they evoked certain aspects of Native spirituality. Excavators at the Magunkaquog site have argued that certain English goods were completely “subsumed into a Native cosmology (Mrozowski et al 2009:253), and at the Sylvester Manor site in New York it has been posited that certain decorative styles or marks on Dutch pipes, particularly the diamond pattern, may have also appealed to Native people based on their cosmology (Gary 2007:103). Additionally, the star iconography on locally made Chesapeake pipes in Virginia have also been correlated with Powhatan astrological observations and are believed to suggest tobacco smoke rising to the heavens and the Powhatan deities (Sikes 2003). Knowing that stone made pipes experienced a renaissance in 17th century southern New England and are documented as having spiritual significance and ritual importance, I analyzed the designs on both the Magunkaquog and SB/SB pipes for similarity to stone effigy pipes to determine if a similar phenomenon was taking place in New England.

### **Pipe bowl and Pipe stem Design**

Three-hundred and seventy-five white clay pipe fragments were recovered from the SB/SB farmstead (Table 2). Of these, 89 fragments (79 bowls and 10 stems) were

decorated. Twenty-one fragments (18 bowls and 3 stems), separate from the decorated examples, bore maker's marks typical for the time period. A mean date of

<b>Part</b>	<b>Count</b>
bowl	234
bowl/heel/spur	2
bowl/stem	4
bowl/stem/heel	2
bowl/stem/spur	3
heel	4
mouthpiece/stem	1
spur	1
stem	123
stem/heel	1
<b>Total</b>	<b>375</b>

Table 2 Count of Pipe Fragments by part, SB/SB site

1749 was calculated for the assemblage using Binford's regression formula; however, because 31% of the pipe stem assemblage is made up of pipe stems with stem bore diameters of 4/64th of an inch, the Binford date cannot be trusted. Binford (1962) and others (Bradley 2000; Harrington 1978; Mallios 2005) have pointed out that the regression formula should not be used on pipe stems manufactured after 1770 because at this point pipe stem length begins to decrease, since prior to this date pipe stems could be as long as 14 inches. Harrington's original histogram, upon which Binford's formula is based, places pipe stems with bore



Figure 1 Marked pipe from the SB/SB site (Photo credit: Melody Henkel)

diameters of 4/64th of an inch in the 1710 to 1800 range. As the dates of occupation for the SB/SB site are 1750 to 1830, we can safely assume that some of the pipe stems were manufactured after 1770 and are skewing the Binford date.

The dates of manufacture for the marked pipes are consistent with the dates of occupation for the SB/SB site (Table 3), although pipes dating to the period when Sarah Boston was residing at the site by herself (1790-1830) are more numerous. The 12 examples of the “TD” pipe, in particular the “tilde” (Oswald 1966) or “vine and grape” (Harris and Smith 2005) decorative motif above and below the letters (Figure 1), is particular to post-Revolution America and may have been manufactured especially for export from Great Britain (Oswald 1966:86). This design has been recovered extensively from both American and British army camps during this time (Oswald 1966; Larrabee 1971). While the mark is believed to have appeared in the mid-18th century, by the 20th century the firm of Duncan McDougall of Glasgow alone possessed 22 variations

(Bradley 2000:112). The Gouda coat of arms noted in the table was initially used to distinguish higher quality “porcelain” pipes from the lower quality, “ordinary” variety, but in reality buyers confused the two to such an extent that the Dutch began marking the lower quality with the coat of arms and leaving the higher quality pipes unmarked (Larrabee 1971:62).

<b>Maker's Mark</b>	<b>Count</b>	<b>Part</b>	<b>Date</b>
bit of vine and grape (TD)	2	bowl	1740-1800
cartouche on base of heel, 13 under crown (Gouda coat of arms)	1	bowl/heel/stem	post-1740
cartouche on base of heel, 15 under crown (Gouda coat of arms)	1	bowl/heel/stem	post-1740
embossed IH within circle of railed dots	1	bowl	unknown
GW on heel	1	heel	1770-1825
GW on heel	1	bowl/stem/heel	1770-1825
illegible/indeterminate	2	spur	unknown
illegible/indeterminate because broken	1	stem	unknown
illegible/indeterminate because broken	1	spur	unknown
R, D or B (partial)	1	bowl	1733-40, 1749
T with vine and grape (TD)	2	bowl	1740-1800
T within a circle impressed, probably TD makers mark	1	bowl	1740-1800
TD without vine and grape	2	bowl	18th/19th century
TD with vine and grape	3	bowl	1740-1800
<b>Total</b>	<b>20</b>		

Table 3 Maker's Marks, SB/SBsite

The designs on the decorated pipe bowls are also representative of the time period (Table 4), particularly the examples with leaves or fluting. This type is emblematic of the “heavy baroque style of decoration which would come to dominate the Victorian period” towards the end of the 18th century (Bradley 2000:114). Of the 89 decorated pipe bowls, 23 are fragments of pipes with British royal coat of arms. Though they are only fragments of the flowering vine found on the Hanoverian coat of arms, their similarity to the complete example recovered from the Magunkaquog meeting house is obvious. These examples can be tentatively dated to 1770-1790 (medium sized leaves and some flowers) or 1780-1820 (smaller leaves and more flowers) by comparing them to the examples provided by Atkinson and Oswald (1980:382-9). The other 66 designs are either rim rouletted or have some variation on dots and lines. The exception to this is a dots and lines example, which also has a diamond pattern. The majority of these designs occur on bowl fragments that are too small to accurately tell what the complete design looked like, and therefore cannot be accurately dated.

<b>Decoration</b>	<b>Count</b>	<b>Part</b>	<b>Date</b>
alternating solid and dotted lines	1	bowl	indeterminate
band of dots	1	bowl	indeterminate
armorial (embossed leaves on branch)	6	bowl	18th century
embossed lines	3	bowl	indeterminate
embossed lines/dots	1	bowl	indeterminate
armorial (floral design, possibly sunburst)	2	bowl	18th century
fluted	6	bowl	indeterminate
fluted with stars	1	bowl	indeterminate
armorial (fluting with leaf design)	1	bowl	18th century

illegible/indeterminate	17	bowl	indeterminate
impressed floral design	1	bowl	indeterminate
incised rim bands	1	bowl	indeterminate
lines, molded	1	bowl	indeterminate
lines, parallel, thin	1	bowl	indeterminate
molded	1	bowl	indeterminate
molded bands	1	bowl	indeterminate
molded bands with dots	1	bowl	indeterminate
molded bands with leaves	3	bowl	indeterminate
molded leaf/vine	2	bowl	indeterminate
molded lines, thick	1	bowl	indeterminate
molded lines, thin	1	bowl	indeterminate
molded, possibly floral design	1	bowl	indeterminate
molded, shell-like	2	bowl	indeterminate
molded, wheat design	1	bowl	indeterminate
pillar-molded, possibly vine design	1	bowl	indeterminate
raised lines	1	bowl	indeterminate
ribbed	1	bowl	indeterminate
ribbed molding	2	bowl	indeterminate
rouletted, ribbed with barley motif	2	bowl	indeterminate
rouletted, vertical incised lines with molded floral design	1	bowl	indeterminate
rouletting	10	bowl	indeterminate
rouletting, embossed lines	1	bowl	indeterminate
stamped linear and diamond pattern	1	bowl	indeterminate
armorial (embossed stars)	1	bowl/stem	18th century
armorial (ribbed with leaf/vine)	1	heel	18th century
bands of stamped dots alt. with solid line	1	stem	indeterminate
lines and dots	1	stem	indeterminate
molded	1	stem	indeterminate
molded, alternating dots, zig-zags, and lines with KH	1	stem	1710-1750
molded, dots	1	stem	indeterminate
molded, dots and lines	2	stem	indeterminate

raised lines (on bowl)	1	stem/bowl/spur	indeterminate
molded bands	1	stem/heel	indeterminate
rouletting	1	stem/mouthpiece	18th century
<b>Total</b>	<b>89</b>		

Table 4 Decorated Pipe Bowls and Pipe Stems, SB/SB site

Seven hundred and fifty-nine white clay pipe fragments were recovered from the Magunkaquog meeting house (Table 5).<sup>1</sup> Mrozowski et al (2009) note the stem bore dates suggest a period of occupation between 1700 and 1750. Of the 399 bowl fragments, 16 had maker's marks and one stem fragment had a maker's mark on the heel. Unlike the SB/SB site, only one of the pipe bowls was decorated, with rim rouletting. The marks were typical examples that one would expect from the time period.

<b>Part</b>	<b>Count</b>
bowl	370
bowl/heel	1
bowl/spur	1
bowl/stem	26
heel	1
spur	3
stem	353
stem/heel	3
stem/heel/bowl	1
<b>Total</b>	<b>759</b>

Table 5 Count of Pipe Fragments by Part, Magunkaquog Meeting House

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<sup>1</sup> According to the catalog, there should be 771 fragments. Several issues arose when going through the catalog. Firstly, I physically counted more pipe fragments than were recorded in the catalog for 10 contexts. Secondly, for the 43 contexts where I counted fewer pipes than were recorded in the catalog, 36 of these contained pull tags, indicating the missing pipes did in fact exist and were physically located away from the collection. Thirdly, I counted 27 fragments that were labeled with contexts that were not present in the catalog at all. Rectifying these issues is beyond the scope of this thesis; therefore, I only addressed the pipes that I have physically accounted for in my analysis.

Armorial pipes, or pipes bearing the British Royal Coat of Arms, were manufactured beginning in the decades 1740-1750 and continued to be made after 1850 (Atkinson and Adrian Oswald 1980:363). The coat of arms is typically that of the House of Hanover, which ruled the kingdoms of Great Britain and Ireland after the ousting of the Catholic House of Stuart in 1714 until the death of Queen Victoria in 1901. Bradley (2000:112) notes that “ethnic” or “patriotic” pipes became popular in the 19th century as pipe makers “began to cater to ethnic and national sentiments” (Table 6).

<b>Maker's Mark</b>	<b>Count</b>	<b>Part</b>	<b>Date</b>
BI or BH on heel	1	stem/heel	1720-1750
cartouche with I_, possibly C or G	1	bowl	unknown
indeterminate/illegible	2	bowl	unknown
indeterminate/illegible	3	bowl/stem	unknown
partial cartouche, no letters	1	bowl	unknown
RT	1	bowl	1678-1713 possibly to 1720
R TIPPET (possible, mark is cut off)	2	bowl	1713-1720
R TIPPET in cartouche on bowl	1	bowl/stem	1713-1720
R TIPPET in cartouche with RT stamped beside	1	bowl	1713-1720
RI within circle	1	bowl/stem	1720-1750
rim rouletted	1	bowl	unknown
rosette within circle (incomplete)	1	bowl/stem	1720-1750
royal arms (lion and unicorn)	1	bowl/stem/spur	1770-1790
TD in heart cartouche with fleur-de-lis	1	bowl	18th/19th century
<b>Total</b>	<b>18</b>		

Table 6 Marked Pipe Bowls and Pipe Stems, Magunkaquog Meeting House

Excavators at the Golden Ball Tavern recovered 142 pipe fragments from five test units along the northeast side of the tavern, including 103 stems and 39 bowls. Twelve bowl fragments had maker's marks; eight of these had the initials "TD", unsurprising given that the tavern was operating in the late 18th century. Information on whether or not these examples contained the tilde was unavailable.

### **Pipe Fragment Distribution**

Pipe stems were concentrated in the SB/SB cellar/foundation (Figure 2), but in 1938 the structure was demolished with a bulldozer and it was necessary to determine if the pipe stem distribution was the result of the post-depositional episode in 1938 or the 18th century behavioral processes. Based on the distribution of curved glass and pipe stems in the cellar/foundation and trash midden, it was hypothesized that the deposition of pipes and curved glass were the result of smoking and drinking in the house while the deposition of flat glass and ceramics was the result of trash disposal. To test if these deposits were in fact related to the suggested behavioral practices and not the result of the bulldozing episode, ten bags of each artifact type from excavation units within the foundation were counted and weighed.

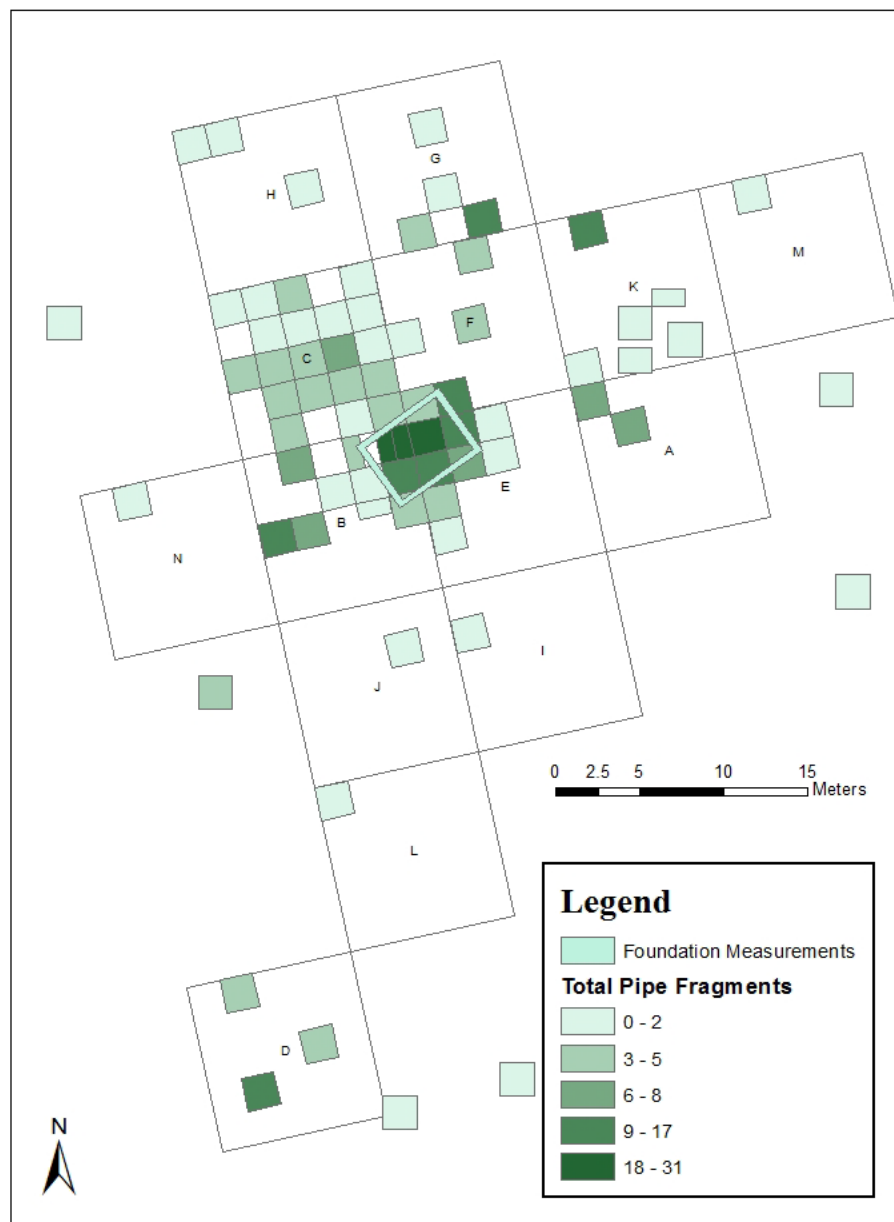


Figure 2 Distribution of Total Pipe Fragments, SB/SB site

The result was that counts and weights for all artifact classes were correlated and highly significant, the result of behavioral differences in different contexts rather than post-depositional processes. The highest correlation was between the count and weight of flat glass ( $r = 0.993$ ,  $p < 0.001$ ), followed by pipe stems ( $r = 0.905$ ,  $p < 0.001$ ), pipe bowls ( $r = 0.691$ ,  $p = 0.002$ ), and curved glass ( $r = 0.656$ ,  $p = 0.055$ ) (Appendix A, Table

1). Pipe bowls were also highly correlated with pipe stems, suggesting that similar processes were involved in both the deposition and post-deposition of both elements of the pipe. Because curved glass had the lowest correlation between count and weight despite having an equal sample size, this suggested that curved glass was the “anomalous category” and subject to a different depositional process than pipe stems, whose counts and weights were highly correlated.

The high density of pipe fragments in the cellar/foundation suggests that the smoking population in this case was confined to this particular area of the site, which makes sense if a large gathering was taking place within the home rather than during work outside the home. This is a departure from Anglo-American homesteads and plantations, where pipe stems were often concentrated around work areas (King 1988; McFaden et al 1999; Muraca et al 2003; Neiman 1980). The fact that pipe stem fragment weights and counts are so highly correlated in each unit further suggests that these deposits were the result of smokers breaking their pipe stem but continuing to use the pipe in the same vicinity. Pipe stems therefore probably were recovered where they were initially broken- in and around the home.

Curved glass had the lowest correlation between count and weight out of all the artifacts, despite having a comparable sample size, suggesting that, unlike pipe stems, it was not being recovered where it was broken. If curved glass was subject to different disposal patterns, it could be as simple as discarding a broken bottle to keep the pieces from being stepped on. However, it could also indicate that unlike pipe stems, curved glass was being disposed of in a way that was not related to space in which it was used- in this case the house (cellar/foundation).

## Spatial Analysis Using ESRI ArcGIS

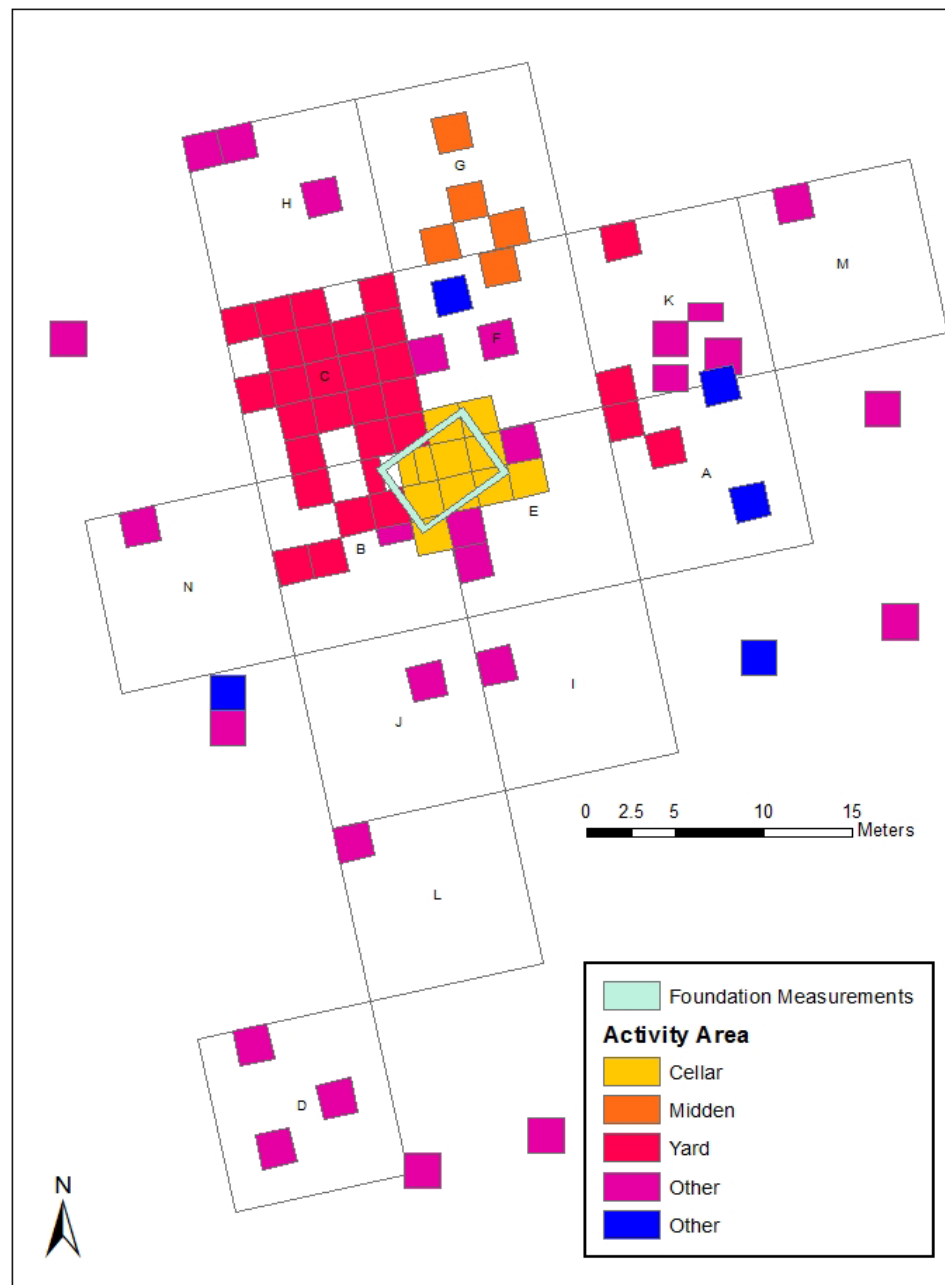


Figure 3 Distribution of SB/SB units by Refuse Area

I analyzed the site using ESRI ArcGIS, dividing the SB/SB site into four analytical categories based on refuse area: the cellar/foundation, the “yard”, the midden,

and “other” (Figure 3)<sup>2</sup>. The cellar/foundation again contained all excavation units that were wholly or partially within the boundaries of the house foundation. The units included in the midden were those that were identified with that feature, while the “yard” comprised units between the foundation and midden that contained evidence of an outdoor hearth as well as a sheet midden. The category of “other” was comprised mainly of units on the edge of the site that contained little to no artifacts and could not be linked to either of the refuse areas mentioned above.

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<sup>2</sup> There are two categories of “other” on Figure 3. The magenta units refer to the category “other” referenced in the text. The blue units refer to units with null values.

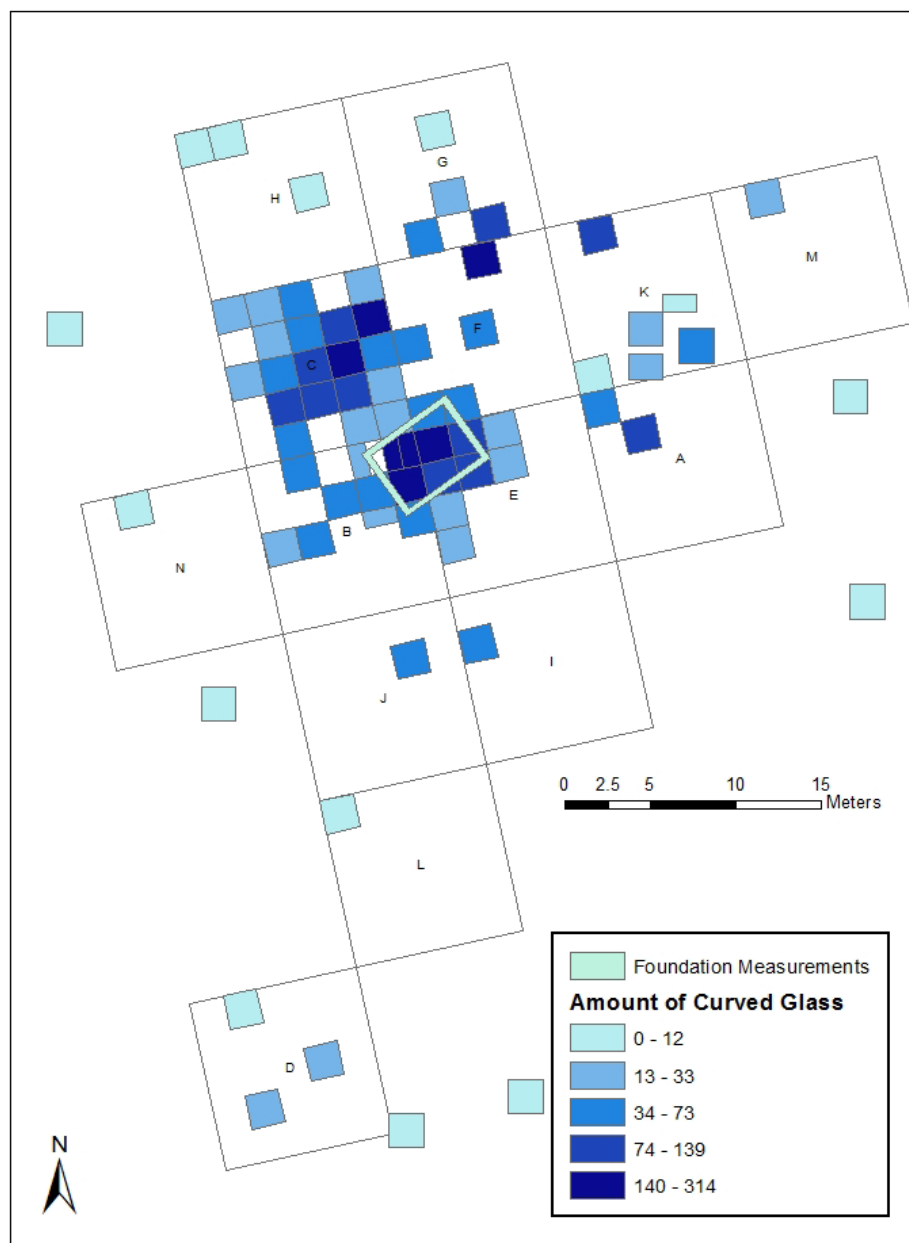


Figure 4 Distribution of Curved Glass by Excavation Unit, SB/SB site

The distribution of pipe fragments and curved glass appear to be concentrated in the cellar/foundation while curved glass is also concentrated in the midden and yard (Figure 2, Figure 4). To determine if these apparent concentrations were random or the result of different disposal patterns, I measured the spatial autocorrelation of pipe and

glass distribution by units. This measures the degree to which they tend to be clustered together in space or dispersed. I used Morans I, a statistical measure of autocorrelation. The results of Morans I showed that both total pipe fragments (Moran's Index = 0.21,  $z = 8.96$ ,  $p < 0.001$ ) and total curved glass fragments (Moran's Index = 0.15,  $z = 6.45$ ,  $p < 0.001$ ) were clustered at the site. This test indicated that it was highly improbable that these artifact concentrations were accidental, rather, the clusters represented patterns in the material.

I then focused on the artifact concentrations themselves, running a cluster analysis using Anselin Local Morans I to highlight where units with high counts of curved glass and high counts of total pipe fragments were clustered. Units containing curved glass or pipe fragments either contained high counts of these artifacts and were clustered or were randomly distributed. Units with high numbers of total pipe fragments were clustered in only the cellar/foundation; the other three activity areas- midden, yard, and other- were not significant (Figure 5). Interestingly, units with high numbers of curved glass were clustered not only in the cellar/foundation but in the midden and yard as well (Figure 6).

I had initially hypothesized that if smoking and drinking behavior were correlated at the SB/SB site, it might mean that smoking practice was becoming intertwined with drinking, becoming more recreational and less spiritual. I further hypothesized that smoking and drinking behavior at the SB/SB and Magunkaquog sites would be similar, and would differ from smoking and drinking behavior at the Golden Ball tavern. The results of the Anselin Local Morans I, showing that both pipe fragments and curved glass were clustered in the foundation made it necessary to conduct further statistical analysis in ESRI ArcGIS to test this hypothesis. The clusters might suggest that bits of broken

pipes and curved glass were being disposed of immediately after they ceased to be functional in areas where smoking and drinking activity occurred; however, while this makes sense for the clusters of pipe fragments in the house and the midden, it is unclear why broken bottles and tumblers would be disposed of in the yard where food was being prepared in an outdoor oven.



Figure 5 Anselin Local Morans I Results (Total Pipe Fragments) SB/SB site



Figure 6 Anselin Local Morans I Results (Curved Glass), SB/SB site

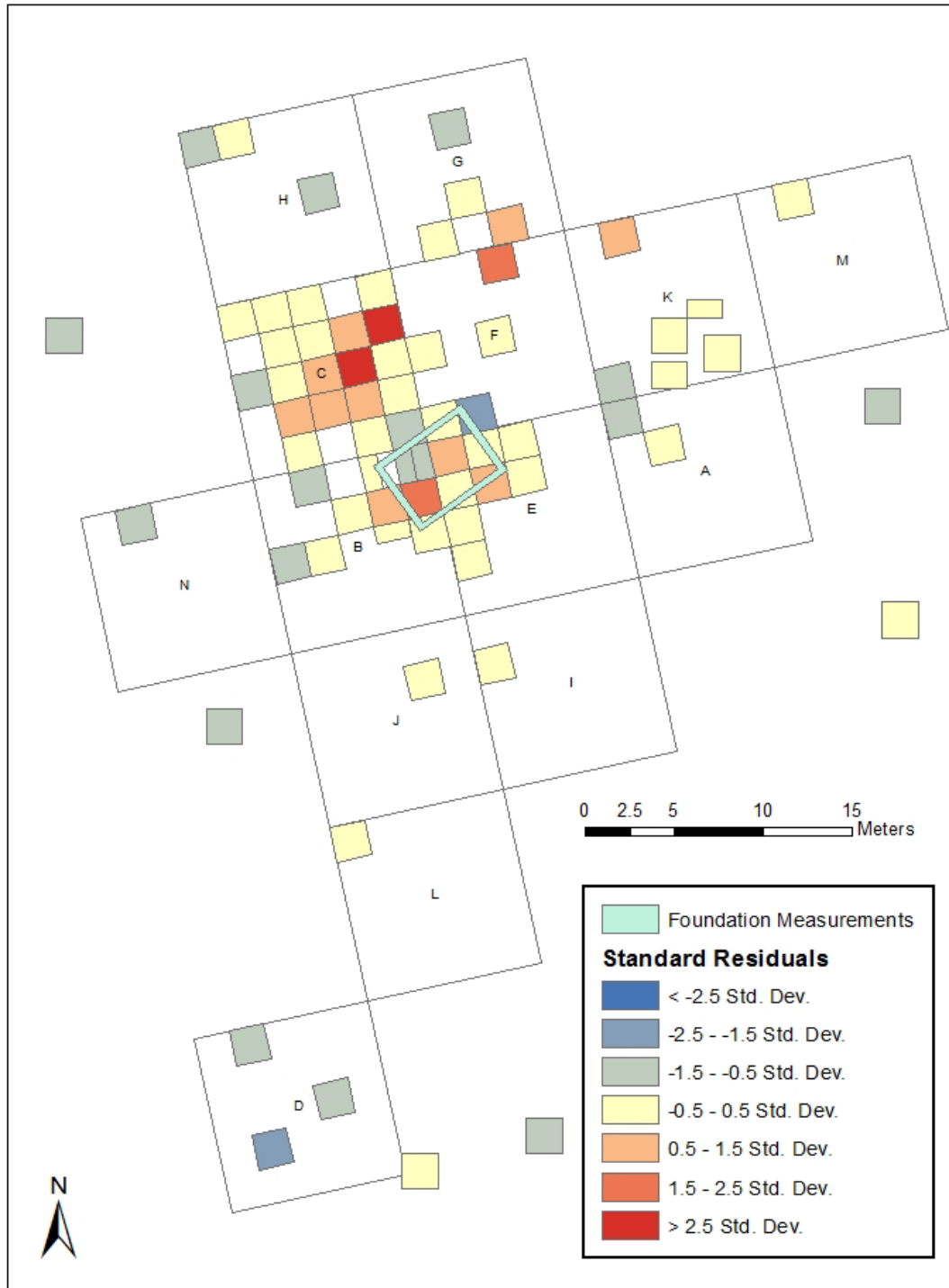


Figure 7 Standard Regression Results, SB/SB site

Since there were no significant clusters of pipes in the yard to explain this pattern, I utilized a standard regression formula (using the ordinary least squares regression tool

in ArcGIS spatial analyst) where total pipe fragments per unit was the dependent variable and the total amount of curved glass per unit was the independent variable, to determine just how often the disposal of pipes would predict where curved glass was being disposed. Total pipe fragments and curved glass were significantly associated ( $R^2 = .35$ ,  $F(1)$ ,  $p < 0.000$ ). The standard deviation indicated that pipes could explain 35% of the variation in curved glass across the entire site, but units where pipes did not predict curved glass were most frequent in the yard (Figure 7). These units represent the greatest deviation from the expected results, the “residuals”. To see where these units clustered together, I ran a second cluster analysis, Anselin Local Morans I, on the residuals. The result was that units where pipes do not predict curved glass cluster in the yard and the southern portion of the midden (Figure 8).

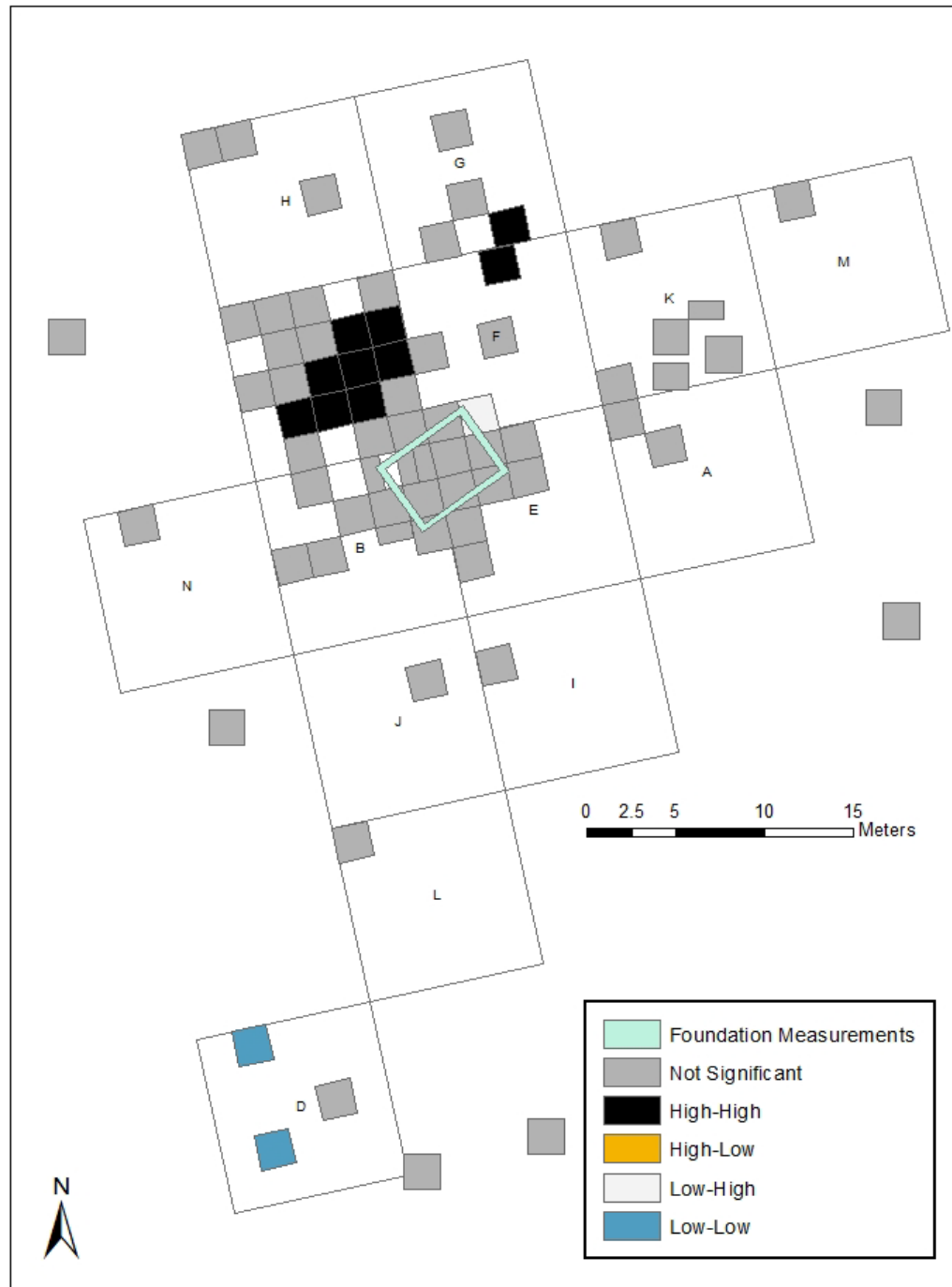


Figure 8 Anselin Local Morans I Results (Residuals), SB/SB site

The portion of the yard where these units are clustered is located in excavation block C, where an extensive sheet midden was also found. Excavators believe that this was formed when heavy rains washed the top of the trash midden downslope. This also

explains why pipes do not explain curved glass in this particular area. As most pipe fragments were disposed of where they were broken, they were not thrown away in the midden along with broken bottles and tumblers and thus were not part of the midden portion that was washed downslope. Unlike a broken pipe stem, a broken bottle or tumbler would have posed a hazard to the drinker and would have been thrown out immediately while a broken pipe is still usable and its fragments small and easily overlooked. Since some pipe fragments were recovered from the midden, it is plausible that the amounts of curved glass and pipe fragments in this feature represent the efforts of Sarah Burnee and Sarah Boston to clean house after their guests had left.

The dates of occupation of the Sarah Burnee/Sarah Boston site would further suggest that the ratio of bowl fragments to stem fragments should be 1:1.5 to 2. Table 7 summarizes the ratios for the four activity areas. Per Richie (1978: 136), “in calculating this ratio, any portion of a bowl, including the shank-bowl juncture, is counted as a bowl fragment regardless of how much stem is still intact because the functional, smoking portion of the pipe is represented.”

<b>Refuse Area</b>	<b>Bowl Fragment/Stem Fragment Ratio</b>
Cellar/foundation	1/0.66
Midden	1/0.43
Yard	1/0.66
Other	1/0.60

Table 7 Ratios of Bowl fragments to Stem fragments, SB/SB

As indicated by Table 7, the ratio of bowl fragments to stem fragments in each area is closer to 1:1 than 1:1.5 or 1:2, while the average bowl to stem ratio across the site is 1:0.88. As a comparison, at the Belcher Wintering Station, the ratio of bowls to stems was 1:1.3. Richie (1978:136) calls this ratio “almost one to one” and concludes “tobacco

pipes were being consumed on the site to an intense degree...by a relatively immobile smoking population.” The ratio from the SB/SB is arguably closer to 1:1 than the Belcher site. While the residents of and visitors to the SB/SB site were not isolated in the same way as the Canadian naval expedition (by geography), their status as “others” placed a similar geographic restriction on where they could smoke, producing the bowl to stem ratio.

The ratio of bowls to stems from the Magunkaquog meeting house foundation- 399 bowl fragments vs. 360 stem fragments- is practically one to one as well. The 1:1.1 ratio is even closer to 1:1 than the Belcher ratio, suggesting a smoking population geographically isolated near its source of their pipes.<sup>3</sup> The lack of availability of GIS data from the Magunkaquog meeting house further prevented me from undertaking a statistical analysis similar to the one undertaken for the SB/SB site. Therefore, it is possible that these ratios do not truthfully represent areas of tobacco pipe usage. Unlike the Sarah Burnee/Sarah Boston site, however, the remains of only three wine bottles were recovered during the course of the excavations, indicating that alcohol was consumed at the meeting house in much smaller quantities than at the SB/SB farmstead, perhaps due to the fact that the meeting house also served as the residence of Daniel Gookin, the Superintendent of Indian Affairs, when he paid visits to Magunkaquog. Mrozowski et al (2009) noted that if the wine bottles do in fact represent evidence of consumption of

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<sup>3</sup> Additional pipe fragments at Magunkaquog were recovered were recovered from test units dug by PAL as part of their survey, (Stephen Mrozowski, personal communication September 22, 2016). However, it was unclear if the approximately 60 fragments were stem or bowl fragments in the documents that were available to me at the time of this writing. They have not therefore been included in these ratios.

alcohol by the Nipmuc then their presence would seem to run counter to Puritan teachings that condemned excessive liquor consumption (Mrozowski et al 2009: 450).

The ratio of bowl fragments to stem fragments at the Golden Ball is 1:2.6, well above Bradley's hypothesis for the end of the 18th century but in line with what Richie (1978) would expect of a transient population. This is likely due to the fact that a rural tavern would be less likely to supply pipes for patrons to use, requiring travelers to take their broken (but still useable) pipe with them after they moved on.

## CHAPTER 5

### DISCUSSION

Many authors writing about the SB/SB site have asked how Sarah Burnee, Sarah Boston, and other Native individuals utilized material culture to navigate a world that was rapidly changing. Some have suggested that the ceramic assemblage at the SB/SB site represents a “tactical and/or unintended mimicry” of European notions of domesticity that served to camouflage Sarah Burnee and Sarah Boston’s “otherness” in the eyes of their Anglo-American neighbors (Pezzarossi 2014:147), but this does not seem to be the case with smoking behavior at the site. The distribution of pipe fragments and curved glass suggest that smoking and drinking were not well correlated at the SB/SB site, as they would have been at English alehouses or urban taverns. The ratio of pipe bowl fragments and pipe stem fragments also might suggest that the farmstead and Magunkaquog meeting houses served smoking populations that were geographically restricted rather than transient, unlike rural taverns such as the Golden Ball.

The disposal patterns suggested that there were similarities in the smoking behavior at the SB/SB and Magunkaquog sites, but differences in smoking behavior between these sites and the Golden Ball tavern. The lack of correlation between white clay pipe fragments and curved glass at the SB/SB site suggests that smoking behavior and drinking behavior were not well correlated, and the lack of alcoholic beverage

containers and serving vessels at Magunkaquog suggests something similar. Only three wine bottles were recovered from the Magunkaquog foundation in contrast to the over 700 pipe fragments, suggesting that smoking and drinking were linked even less so than at the gatherings at the SB/SB farmstead. Alcohol consumption seems to have been more acceptable at the gatherings at the SB/SB site than those at Magunkaquog, as evidenced by the identification of a minimum of 45 glass vessels, including 6 wine bottles, 15-20 tumblers, 1-5 decanters, and 2 wine glasses at SB/SB (Law Pezzarossi 2008:83). The formal role that the Magunkaquog meeting house played in the community, including its use as a schoolhouse, is likely the reason for this disparity. Minimum vessel counts were unavailable for the Golden Ball glass assemblage; however, at least 9 vessels, including tumblers and goblets in addition to wine bottles, flasks, and pharmaceutical bottles were identified (Gary and Randall 2006:42), and both bottle fragments and stemware were found in the South Ell builder's trench (Elia 1989:19). Although I was unable to undertake a similar spatial analysis at the Golden Ball, the disposal patterns of curved glass and pipe fragments appear to be unrelated to one another, based on the reports. Broken bottles and glasses appear to have been consigned to trash middens, while pipe fragments are concentrated outside of the taproom windows and were likely disposed of by simply tossing the broken bit of stem outside.

While all three sites possessed pipe stem and pipe bowl designs typical of the late 18th and early 19th century, particularly the ubiquitous "TD" pipe bowls, the differences in the ratios of bowl fragments to stem fragments suggested that the smoking populations in the Nipmuc communities were confined to an area in proximity to their source of pipes. Individuals who came to smoke at these gatherings knew that they could afford to

throw away the entire pipe, perhaps, in the case of the SB/SB site, the source was Sarah Burnee or Sarah Boston herself. However, the phenomenon can also be explained by suggesting that individuals who had to dispose of their pipes knew that they could easily return home and pick up a new one, and thus arrived at gatherings with the pipes that had been broken down to the point of being almost unusable. This would reaffirm that these structures served as a focal point for a community who resided close by. By contrast, the smoking population at the Golden Ball tavern would have been highly transient, which is consistent with the Golden Ball's status as a rural tavern that accommodated travelers passing through on their way to or from Boston and would not have provided pipes to guests.

In the course of the analysis of disposals patterns, it became clear that where all three assemblages were similar was with respect to the number of ceramics, which significantly outnumbered the amount of curved glass and pipe fragments (Table 8).

<b>Site</b>	<b>Ceramics % of Total</b>	<b>Pipes % of Total</b>	<b>Curved Glass % of Total</b>
<b>SB/SB</b>	65	< 1	3
<b>Magunco</b>	85	5	< 1
<b>Golden Ball</b>	17	2	< 1

Table 8 Percentage of ceramics, total pipe fragments, and curved glass of the overall percentage

These data suggest an emphasis on food storage and/or preparation and service over alcohol consumption at all three sites. Amelie Allard (2010, 2015) has argued in her analysis of the faunal material at the SB/SB site that food sharing at the gatherings at the SB/SB site sprang from “deeply rooted traditions of communal sharing” in the Native American community that ensured the well-being of the entire community. By contrast Rockman and Rothschild (1984) suggest that the emphasis on food service at rural

taverns such as the Golden Ball was a business decision that came about because these types of establishments were not urban enough to successfully run a business on alcohol consumption alone.

None of the white clay pipes recovered from either the SB/SB site or the Magunkaquog meeting house have designs similar to stone effigy pipes, which were usually carved in the shape of humans or animals, particularly birds (Turnbaugh 1976, Figure 9) and were considered to be living things imbued with souls (Rafferty 2004:19).

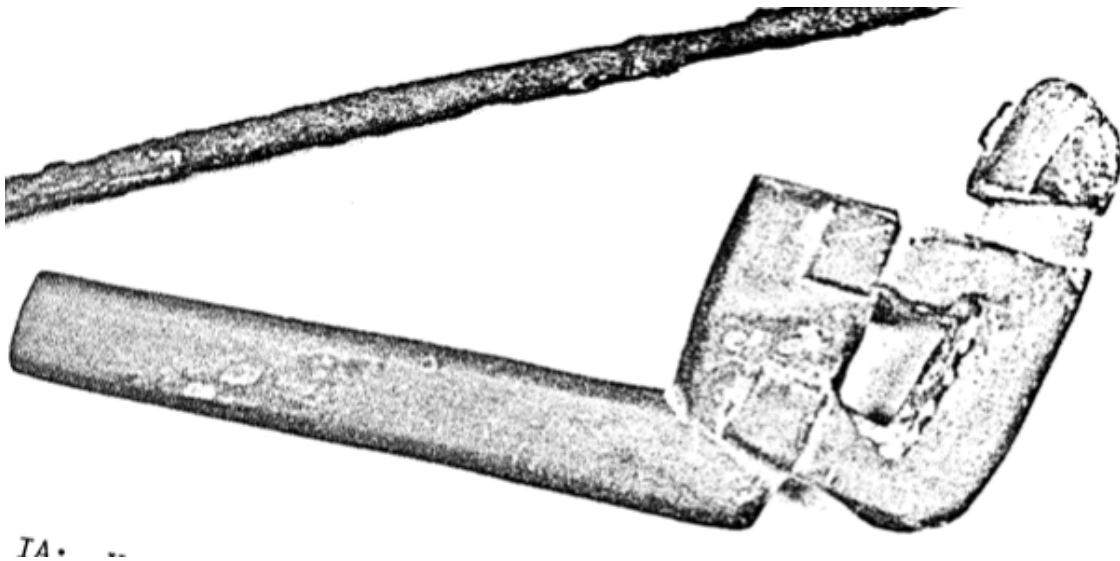


Figure 9: Stone Effigy Pipe from Rhode Island (Turnbaugh 1976:79, Plate 1A)

Furthermore, while the final report on the SB/SB site (Mrozowski et al 2015) concluded that the presence of ceramics such as tin-glaze earthenware in later deposits indicated that they were being passed down from mother to daughter, the marked pipes at the SB/SB site do not show any evidence of being purposefully curated this way because the earliest pipes do not date to before the occupation of Sarah Burnee.

While the designs on the pipes fragments from the SB/SB and Magunkaquog sites do not themselves suggest that the spiritual part of smoking practices was being

reproduced, we might infer that it was based on other lines of evidence. Despite running contrary to Puritan teachings, the amount and variety of grave goods, especially imported ones, in Native cemeteries increased throughout the 17th century (Brenner 1988; Crosby 1988; Kelly 1999). Excavators have suggested that certain English goods recovered from the Magunkaquoog meeting house, in use a century later, were also “subsumed into Native cosmology” and “prized for their spiritual strength” based on the inclusion of similar items in native cemeteries at Natick and Punkapoag (Mrozowski et al 2009:453).

These grave goods included ceramics, bottles, metal cooking vessels, and clay pipes. In addition examining the list of grave goods in the Natick and Punkapoag cemeteries that were mentioned in the Magunkaquoog report and analyzed by Kelly (1999), I examined the lists of grave goods recovered from four other Native cemeteries in southwestern Massachusetts and Rhode Island (Brenner 1988; Crosby 1988) and consulted reports analyzing the contents of others from New England (Nassaney 2004, Turnbaugh 1976). Smoking pipes of European manufacture were not present in all of the graves surveyed, but they were present, sometimes with stone pipes of native manufacture, clay pipes of native manufacture, both, or by themselves. In certain graves (Brenner 1988, Crosby 1988, Nasseny 2004, Turnbaugh 1976) clay pipes were always present with remains that had been identified as male; however, there were at least three female burials that contained white clay pipes, and one male burial that contained a clay effigy pipe (Kelly 1999:94).

Some authors claim that this accumulation of European goods was a way for some native individuals to seize power as military losses and European disease eroded

traditional bastions of authority, and suggested that placing these goods in their graves insured their status in the afterlife (Brenner 1988:152,153). Others suggested that these same goods made their way into native graves because they were seen to possess great *manit*, or spiritual power because of their efficacy, strangeness, or association with the English God (Crosby 1988:184). When tobacco was smoked at the gatherings hosted by Sarah Burnee and Sarah Boston it was being done so almost a century after these burial practices. However, I do not believe that it is completely unreasonable to suggest that the act of placing European manufactured clay pipes into graves and the act of using them to smoke tobacco were structured by the same *habitus*, particularly if we are discussing this in terms of the evolution of practice. If the placement of not just stone pipes but white clay pipes in the graves of men AND women represents an evolution of smoking practice, then we can view two women (Sarah Burnee and Sarah Boston) smoking tobacco at community gatherings as an example of how women's changing identities were contributing to its continuing evolution.

After King Phillip's War in 1675, many of the changes in gender roles that had already been occurring accelerated rapidly. Landlessness increased to the point where wandering became associated with native people in white consciousness (O'Brien 1997:152); Sarah Boston herself was remembered as a wandering Indian woman (Law 2008, Mrozowski et al 2007). Though whaling and military service created some semblance of semi-nomadic lifestyles for men, this left women without the kin networks that would have supported them when they were old, sick, or infirm. Native women often had to rely on their white neighbors who often charged them for care, which happened to

both Sarah Muckamaug and Sarah Boston. The Sarahs' situations were not unique; many women lost their land when they were forced to sell it to pay off debts, often for in-home care. However this also represented a period of increased agency for native women as handicrafts allowed them entrance into the capitalist economy. "Artisanal activities" like basket making expanded beyond seasonal activities done during down time to a year round means of support (O'Brien 1997:150), and basket making implements were among the metal tools recovered from the SB/SB site (Law Pezzarossi 2014, Mrozowski et al 2015). Including smoking as a part of their presentation of self may have been an additional way for Sarah Burnee and Sarah Boston to reflect this new agency and mark themselves as leaders in a community where women outnumbered men (Mandell 19998:80).

Does the evidence suggest that smoking behavior at the SB/SB site represented a persistence of a cultural practice? The evidence certainly does not suggest that smoking behavior was becoming intertwined with the consumption of alcohol as it was for their Anglo-American neighbors. Given that the SB/SB site was also a private home, this could have more to do with the personalities of Sarah Burnee and Sarah Boston than it does with reproducing broader social practice; however, the fact that there is a larger number of pipe bowl fragments than pipe stem fragments suggests that it is not that simple. The archaeological evidence has affirmed that these women were not living in poverty but in a style on par with their Anglo-American neighbors (Law et al 2008; Mrozowski et al 2015; Pezzarossi 2014), even possessing ceramics that were common in households of the "middling sort" (Mrozowski et al 2015:155), a conclusion that the

makers marks and pipe bowl/stem decorations support. If this household was re-using broken pipes, it was not because they could not afford to buy new ones. Perhaps the same values that prompted these women to provide food for communal feasting prompted them to provide tobacco pipes to their neighbors as well.

As I discussed in Chapter 1, white clay pipes, though manufactured by Europeans, were created in imitation of Native smoking pipes and sold to Native people, who incorporated them into a pre-existing tradition of smoking tobacco. This tradition has a rich history that has included many pipe forms, with the white clay pipe representing the latest in a long line of smoking implements. To consider a white clay pipe in the context of a Native household such as the Sarah Burnee/Sarah Boston farmstead to be a hybrid object rather than a “native object” would be, I believe, erroneous. If the essence of a hybrid object is the mixing of cultural differences (Liebmann 2015), it would be more apt for archaeologists interested in clay pipe studies to begin considering white clay pipes recovered from English sites as hybrid objects, which would highlight the conflict inherent in the practice of smoking for Europeans. For a society that insisted on its own religious and cultural superiority and regularly used that to justify enslaving others, it is ironic to consider that they became avid consumers of tobacco despite its centrality “in the religious practices of the pagan ‘savages’ whom they had conquered” (Norton 2008:3). While I remain unsure if hybridity is completely useless to historical archaeologists, I do believe that when discussing Native sites it is better if hybridity is left in our theoretical quiver, so to speak.

Since the Nipmuc were denied federal recognition in 2004, archaeology has come to play a crucial role in their ongoing struggle to establish themselves as a continuous political entity. With so much at stake, I have made a conscious effort to focus my analysis on persistence rather than hybridity. My aim was to avoid inadvertently shifting the discussion towards how smoking practice had changed in the century immediately preceding King Phillips War and instead focus on how it persisted as a cultural form that had always been evolving. The evolution of tradition is not, and should not be interpreted, as a loss of authenticity, but rather as an example of cultural persistence. When we think of traditions in our everyday lives, we usually think of them as something that impedes change, persistent, unchanging, and old-fashioned (Pauketat 2001:1), because conventional knowledge tells us that traditions must be static in order remain “traditional”. Yet traditions are anything but static. They are in fact dynamic, constantly being brought from the past into the present and enacted by individuals and groups of people. Human beings make active choices, and “the process of social reproduction does not replicate society exactly” each time (Nassaney 2004b:337). Prior excavations have established that the Sarah Burnee/Sarah Boston site functioned as a gathering place for the local Hassanamesco, and this thesis has not uncovered any evidence to dispute this. Rather, the smoking evidence indicates that this site served a source of pipes for a geographically and socially isolated population who came together to reproduce a practice that reinforced group identity, but in a way that helped them navigate a changing world.

## APPENDIX A

### REPORT ON COUNT VERSUS WEIGHT OF PIPE AND CURVED GLASS FRAGMENTS AT THE SARAH BURNEE/SARAH BOSTON FARMSTEAD, JOHN STEINBERG JANUARY 28, 2014

Counts and weights for glass and pipes are generally correlated (Table 1). The correlation is complex and is probably the result of behavioral differences in different contexts, rather than post-depositional processes. The relationship with the most significant correlation is the count of flat glass against its weight (Figure 1) and that relationship has an  $R^2$  of over 0.98 (where the count explains over 98% of a flat glass sample's total weight—Figure 1). Also highly correlated are the count of pipe stems and their weight (Figure 2). The third most significant correlation is the count of pipe bowls against their weight (Figure 3). All of these are highly significant. Additionally, the count of bowls is highly correlated with both stem counts and weights. This suggests that similar processes were involved in both the deposition and post-deposition of both elements of pipes. Bowls are also significantly correlated with flat glass (both counts and weights) but not curved glass. Interestingly, the count of curved glass is not significantly correlated with its weight (Figure 4). However, the  $R^2$  is still high (0.43), but not nearly as high as the other categories. Although the sample is somewhat smaller ( $n=9$ ) than the pipe database ( $n=17$ ), the correlation of flat glass ( $n=9$ ) is the strongest of any of the correlations, suggesting that curved glass is the anomalous category. Specifically, the depositional processes that account for curved glass is different than pipes or flat glass.

Table 1. Pearson correlations of counts and weights of a sample of unit-levels. Bold numbers indicate the correlations between an artifact category's counts and weights.

		<b>Curved (g)</b>	<b>Count curved</b>	<b>Flat (g)</b>	<b>Count flat</b>	<b>Stem (g)</b>	<b>Count stem</b>	<b>Bowl (g)</b>
<b>Curved (g)</b>	Pearson Correlation							
	Sig. (2-tailed)							
	N							
<b>Count curved</b>	Pearson Correlation	<b>0.656</b>						
	Sig. (2-tailed)	0.055						
	N	9						
<b>Flat (g)</b>	Pearson Correlation	<b>0.472</b>	<b>0.639</b>					
	Sig. (2-tailed)	0.2	0.064					
	N	9	9					
<b>Count flat</b>	Pearson Correlation	0.56	.793*	<b>.993**</b>				
	Sig. (2-tailed)	0.117	0.011	0				
	N	9	9	11				
<b>Stem (g)</b>	Pearson Correlation	-0.112	-0.422	<b>.774**</b>	<b>.794**</b>			
	Sig. (2-tailed)	0.774	0.257	0.005	0.003			
	N	9	9	11	11			
<b>Count stem</b>	Pearson Correlation	0.326	-0.097	<b>.867**</b>	<b>.873**</b>	<b>.905**</b>		
	Sig. (2-tailed)	0.391	0.803	0.001	0	0		
	N	9	9	11	11	17		
<b>Bowl (g)</b>	Pearson Correlation	-0.341	-0.426	0.562	0.587	<b>.539*</b>	0.36	
	Sig. (2-tailed)	0.37	0.253	0.072	0.058	0.026	0.155	
	N	9	9	11	11	17	17	
<b>Count bowl</b>	Pearson Correlation	-0.33	-0.376	<b>.622*</b>	<b>.656*</b>	<b>.797**</b>	<b>.757**</b>	<b>.691**</b>
	Sig. (2-tailed)	0.385	0.318	0.041	0.028	0	0	0.002
	N	9	9	11	11	17	17	17

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

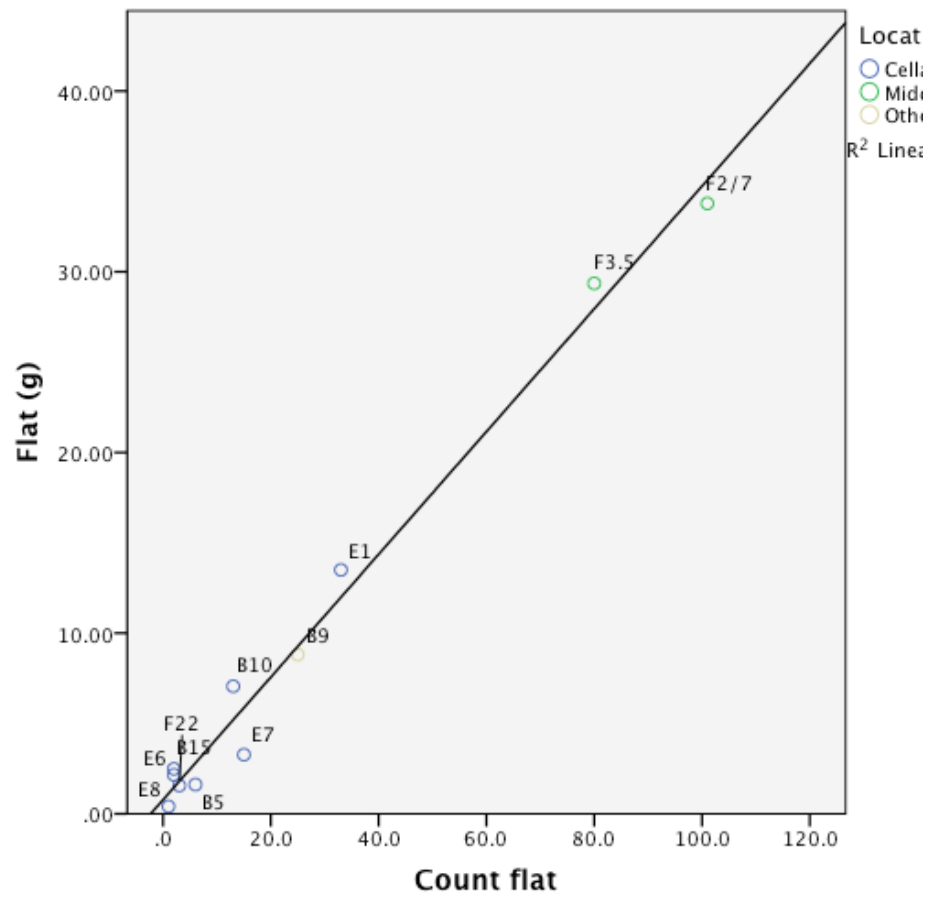


Figure 1 Counts vs. weights of Flat glass by unit.

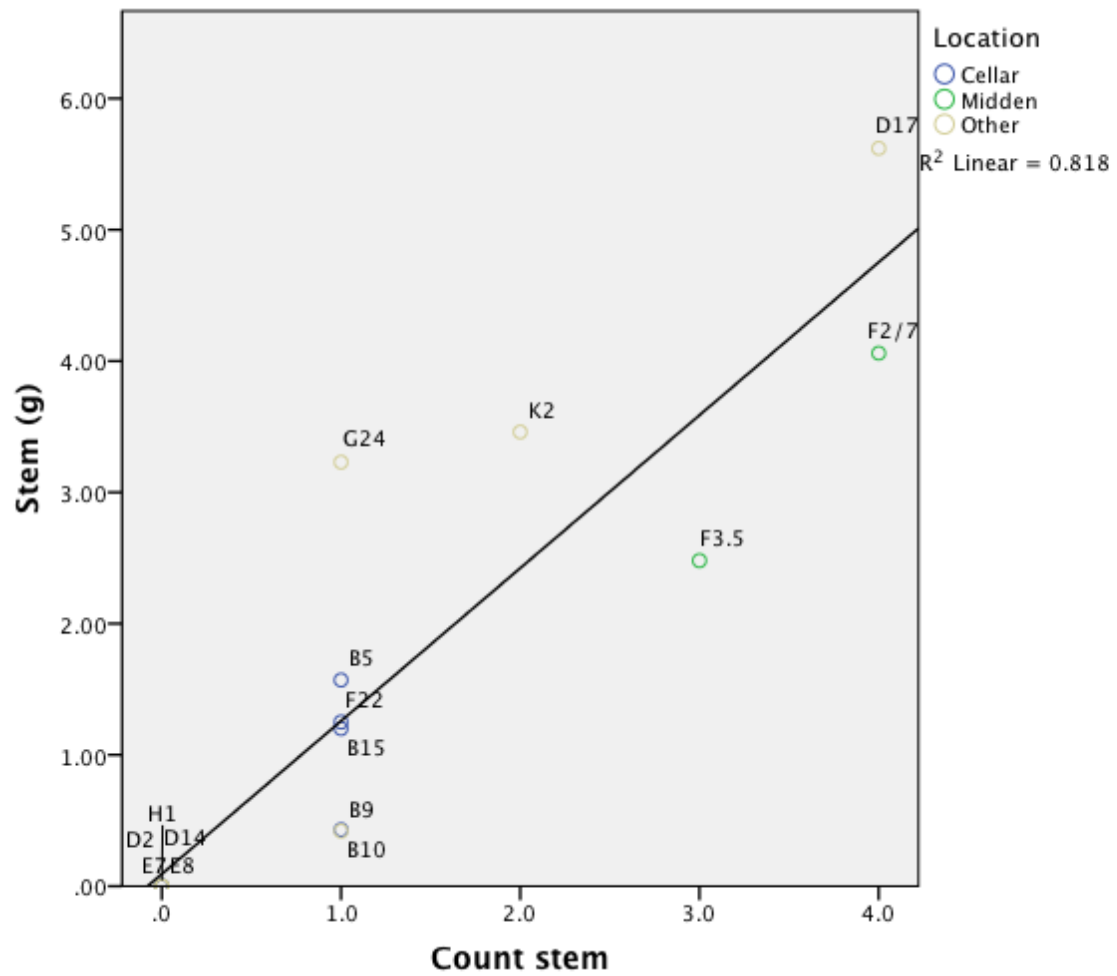


Figure 2 Counts vs. weights of pipe stems by unit.

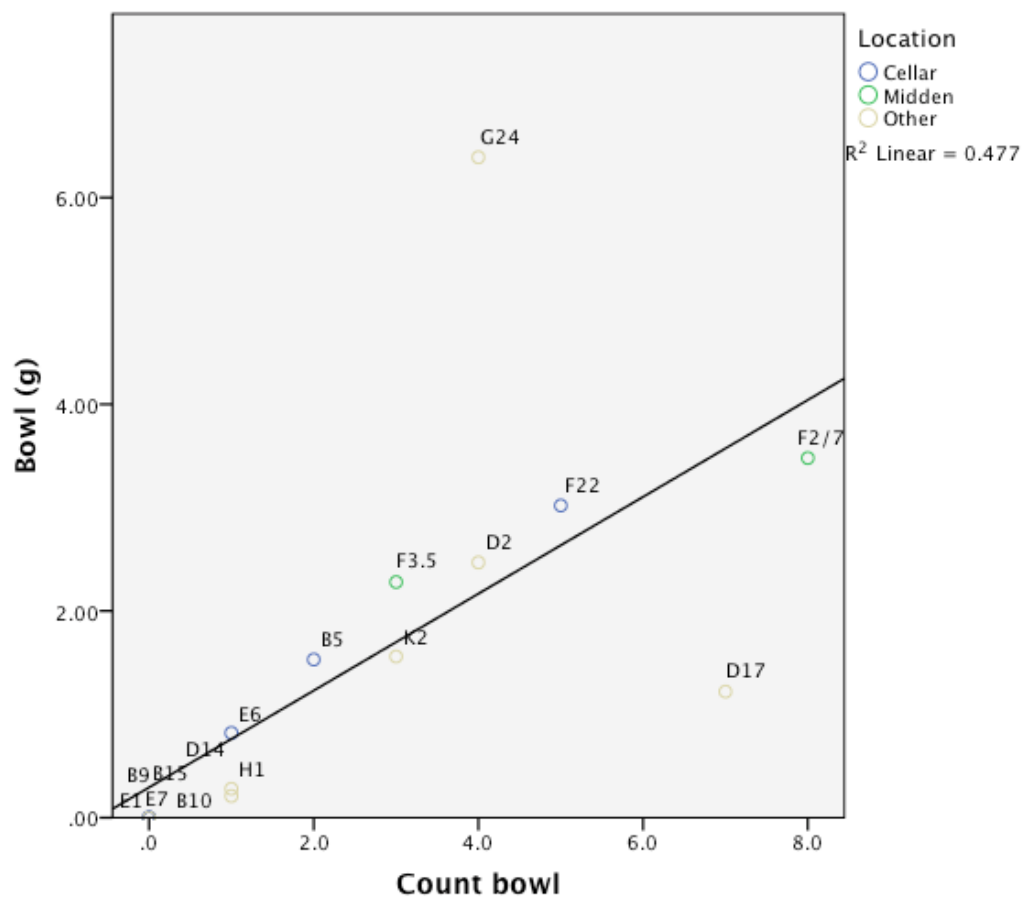


Figure 3 Counts vs. weights of pipe bowls by unit.

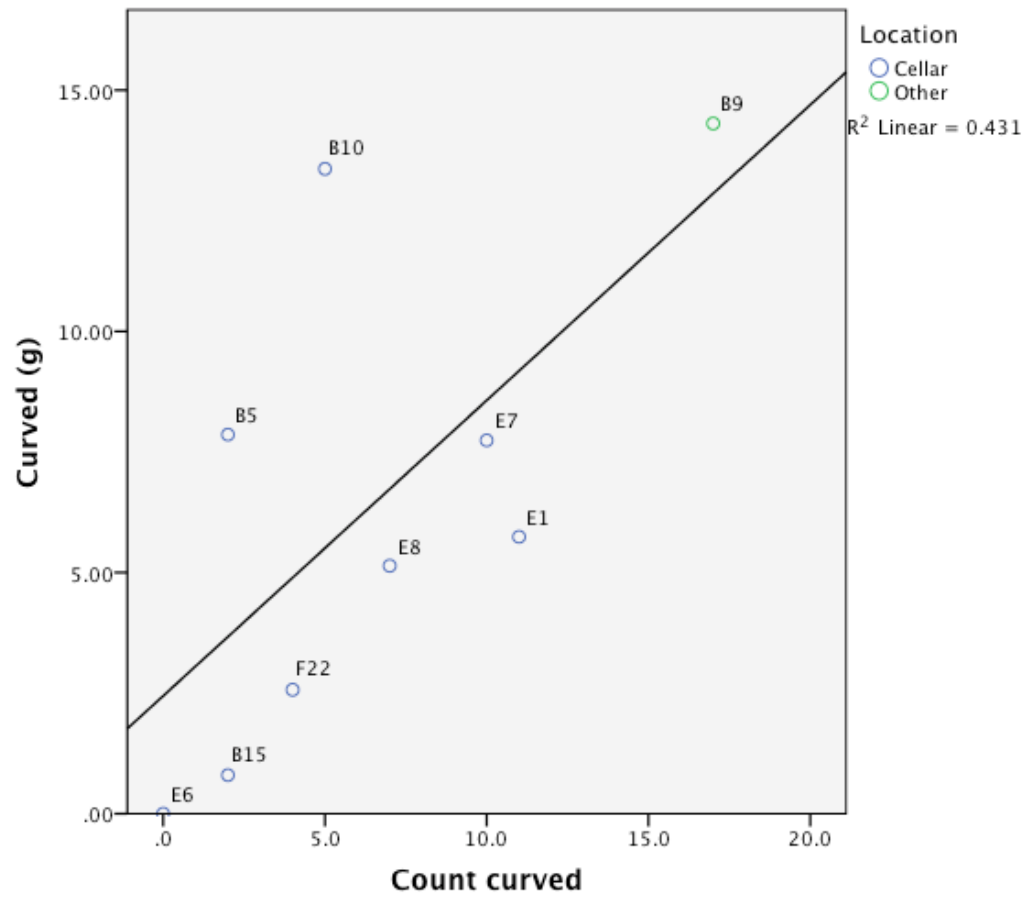


Figure 4 Counts vs weights of curved glass by unit.

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