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Clay pipes and the habitus of tobacco consumption. An archaeological study of tobacco consumption, with special reference to seventeenth century Trondheim

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Abstract
This article is based on research conducted for my MA thesis submitted in 2009. The study concerns clay tobacco pipes and their research potential. Clay pipes comprise a major archaeological artefact group for the period covering the seventeenth to nineteenth centuries. They have been the subject of extensive research; however, much of this deals with matters related to typology and dating. The following study aims to show how local, contextual studies can provide a point of departure for the discussion of social, political and geographical differentiation in the consumption of tobacco. Using Bourdieu's concept of *habitus*, the research agenda has been to identify the social identities of the earliest tobacco smokers in Norway, with particular reference to seventeenth-century Trondheim. This paper describes three case studies representing different social contexts, and advocates a theoretical approach aimed at activating an artefact group that has previously been somewhat neglected theoretically. This study demonstrates that contextual analysis can provide an effective basis for the discussion of *habitus*, social differentiation and even gender-based questions relating to the social significance of tobacco consumption in Trondheim.

Introduction

Clay tobacco pipes comprise one of the major artefact groups associated with post-medieval archaeology. They provide a useful chronological tool for archaeological excavation due to their suitability for typological dating. However, although numerous clay-pipe studies have been produced, archaeological research into tobacco consumption has rarely been theorised. Attention has been focused almost exclusively on clay pipes as functional artefacts, and little attempt has been made to examine them closely in their social contexts (Cessford 2001). As a result, researchers perpetuate conventional explanations concerning the practice of smoking which tend to promote a 'standardized' narrative for the introduction of tobacco into Europe, with little or no consideration of the complex mechanisms which are associated with this practice.

Tobacco (with sugar, coffee, chocolate and tea) was an exotic commodity associated with what has been referred to as a pre-industrial consumer revolution which resulted in part from the European colonial expansion into the Americas from the sixteenth century onwards (Baram 1999:139; Goodman 1993). The Europeanization of the practice of smoking was constituted in a world of changing political configurations and consequently provides a potential source for the investigation of political and social confrontations. Matthew Johnson (1996) has noted that clay pipes, as artefacts of tobacco consumption, are tied into a very wide matrix of changes connecting production and consumption, authority and resistance, and old and new worlds (Johnson 1996, 183-86).

This article asserts that clay pipes can provide a point of departure for discussing social, political and geographical differentiation in the mass consumption of tobacco, and outlines ways in which this information can be used in a wider analytical perspective. It advocates a theoretical approach designed to activate an artefact group that has previously been somewhat neglected theoretically. The following discussion aims to review the state of international clay pipe research in order to outline what we know (or think we know) about clay pipes and early smoking practices. In addition, it aims to identify the social mechanisms associated with the spread of tobacco (with special reference to England and France), and, finally, through the analysis of three sites with different contextual character, to identify differentiated social contexts of tobacco smoking in seventeenth-century Trondheim (Loktu 2009).

Clay pipes and the habitus of tobacco consumption

The role of clay pipes as a social phenomenon can be illuminated through the concept of *habitus*. The concept was originally formulated by Aristotle, but its contemporary usage was introduced by Marcel Mauss (1934) and later developed by the French sociologist Pierre Bourdieu (1977). *Habitus* is difficult to formalise, but can be understood in terms of viewing human behaviour within frameworks of conscious and unconscious social codes. Cognitive structures control how human beings relate to the social reality. *Habitus* is reflected through objective divisions of different social structures, such as age, gender and social class, for example (Ritzer 2007, 175). Bourdieu relates *habitus* to material culture, *habitus* being learned through an involvement with culture (enculturation) which includes the material world (Dark 2002, 184). Furthermore, *habitus* involves cultural differentiation between social groups. Individuals' social background and education give them access to different types of social arenas, and also define their preferences and tastes. The differences that are created between social groups are constantly reproduced through socialising and heritage; in other words, *habitus*



Figure 1: This portrait was painted in Genoa in 1790, and depicts Captain Petter von Erpecom holding a map in his right hand and a long clay pipe in his left. Photo: Nordenfjeldske Kunstindustrimuseum.

determines how and with whom we choose to socialise (Bourdieu, 1996; Carle 1995, 351; Ritzer 2007, 173-183; Schiefloe 2003, 240).

Consequently, the concept is highly relevant for the archaeological interpretation of consumption practices, since individuals express themselves through cultural consumption in varied ways. Portraits, poems and literature depicting smoking in the seventeenth and eighteenth centuries (figure 1) appear to indicate that smoking within certain social groups was related to specific preferences, such as *how*, and maybe also *where* and *when* individuals chose to smoke (what we today would call 'cool').

The smoking practices of the Amerindians clearly had a great influence on the materiality of European tobacco consumption (Goodman 1993; von Gernet 1995). However, smoking using clay pipes was just one of several ways of consuming tobacco, which also took the form of taking snuff, smoking cigars, chewing tobacco and eventually, smoking cigarettes. Consequently, clay pipes must be seen as one element in a larger 'tobacco consumption package' (Cessford 2001) and should be interpreted in a wider perspective. For instance, we might ask who in particular adopted the practice of clay-pipe smoking, and why did they choose this particular form of tobacco consumption rather than others?

This suggests that the spread of smoking should be considered as a consequence of social strategies within and between different social groups, where tobacco consumption and its material expression are closely connected with the users' social environment. Archaeologists should aspire towards a contextual approach, in which clay pipes are identified as part of a social strategy closely linked to the formation of the users' social identity. However, clay pipes should also be viewed in the context of a range of other factors associated with the practice of smoking, such as health, addiction, politics and trade.

International clay pipe research: trends and status

Despite the large amount of literature dealing with clay pipes, until recently comparatively little space has been devoted to theorising the subject matter. A review of international published clay pipe research conducted over the last 60 years reveals that, prior to the last decade, the most popular topic concerned discussions of problems relating to the use of clay pipes as a chronological tool, in particular their use in typological dating (Loktu, 2009). This over-emphasis on the chronological aspects of clay pipes could have a number of reasons. In Norway, clay pipe research has, in common with post-medieval archaeology as a whole, been almost entirely neglected as a result of the lack of legal protection of terrestrial archaeological remains post-dating the Protestant Reformation in AD 1537. The Norwegian Cultural Heritage Act[1] stipulates that only terrestrial archaeological monuments and sites that pre-date AD 1537 are automatically protected by law (§ 4). As their most important use has been to date stratigraphic sequences, the treatment of clay pipes in archaeological reports generally isolates them in a specialist artefact section, typically in the form of an appendix. In the case of maritime archaeology, however, shipwrecks that are older than 100 years, as well as hulls, gear, cargo and anything else that has been on board, or parts of such objects, are legally protected (§ 14). Consequently, as clay pipes first appear only after 1537, this differentiated conservation policy tends to create an exaggerated bias towards maritime contexts and the role sailors played in tobacco consumption.

Furthermore, the collection of clay pipe material, both on land and in maritime contexts, has tended to be haphazard, and done without any research agenda. As Craig Cessford (2001) has noted in the case of English clay pipe research, clay pipe material appears to have been collected without keeping in mind why it is being collected. Consequently, the data is usually put to very limited use in research terms. Clay pipes and other post-medieval artefacts belong to what might be termed 'the familiar recent past'. They are not conceived of as alien or different but as something that

[1] Riksantikvaren (Directorate for Cultural Heritage) – www.riksantikvaren.no.

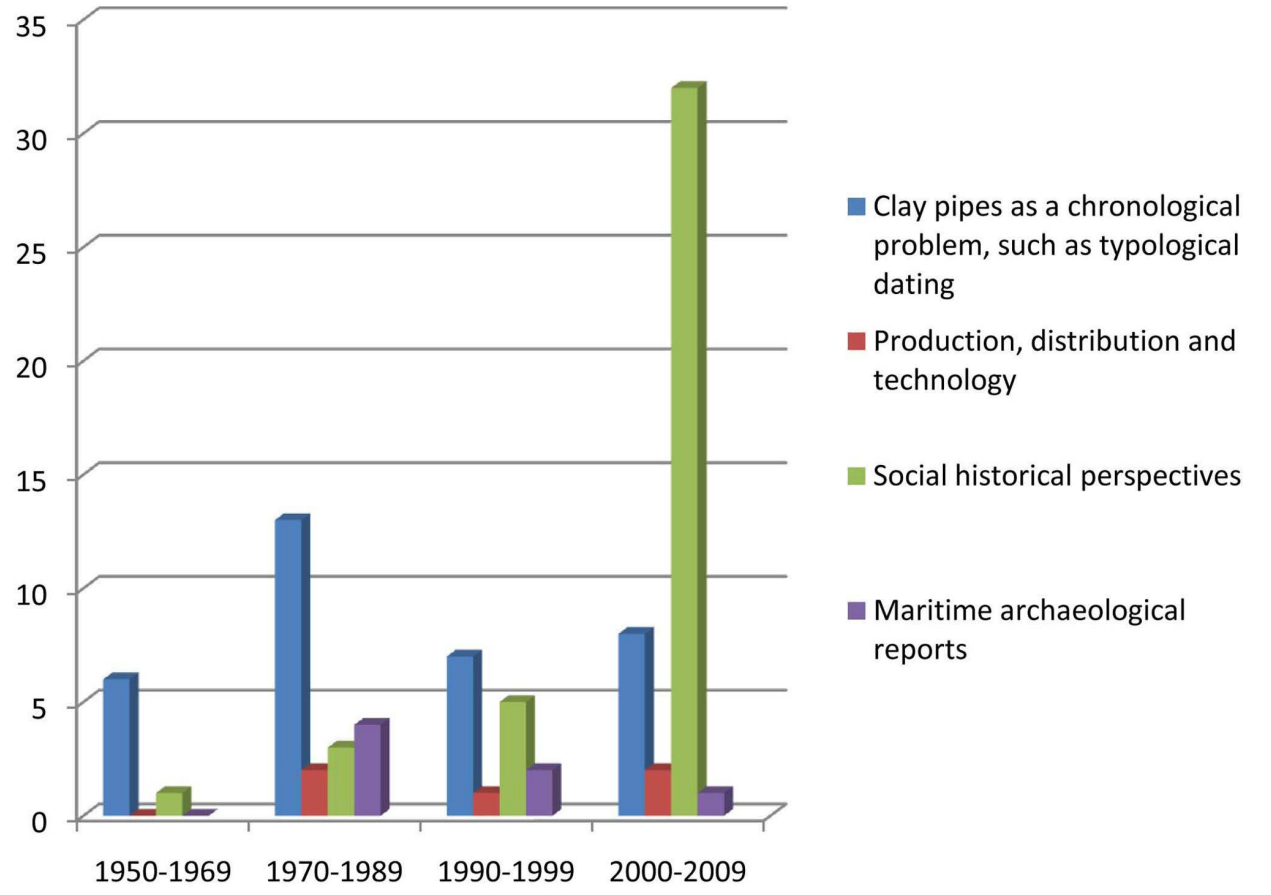


Figure 2: The table provides an overview of the main trends in international clay pipe research. The most popular topic over the last 60 years has been problems connected with the use of clay pipes as a chronological tool. During the last ten years there has been a marked shift from unbalanced material studies towards contextual, social-historical approaches (Loktu, 2009).

is already understood, and their role and function do not require explicit discussion because we already think we know what they are (Cessford 2001).

However, as shown in figure 2, there has been a marked shift in perspectives within clay pipe research during the last ten years away from functional-typological material studies towards more contextual, social-historical approaches. This is especially apparent in contributions from North America and Australia where historical-archaeological studies are well-established, and also in research conducted in North-western Europe, Africa and the Middle East (e.g. Agbe-Davies 2006; Baram 1996, 1999; Baram and Ward 2006; Brighton 2004; Dallal 2004; Dixon 2006; Fox 2002; Hartnett 2004; Higgins 1995; 1997; Huggert 2008; Rafferty and Mann 2004; Reckner 2001; Saidel 2008; Williamson 2006). This reflects theoretical developments within the archaeological discipline as a whole (see for example Dark 2002; Hodder and Hutson 2003; Trigger, 2006). Archaeologists now seek to emphasise and explore the social mechanisms attached to the role of tobacco within a historical period characterised by increasing colonialism, consumerism and enlightenment. An example of this is the examination of Amerindian tobacco consumption and the role of these practices in these peoples' interaction with European colonists (see e.g. Rafferty and Mann, 2004).

Sailors and the Introduction of tobacco in Europe

The spread of tobacco has primarily been connected with the influential role of Atlantic sailors, whereby 'the lower classes were undoubtedly introduced to smoking in European seaports by sailors returning from the New World' (von Gernet 1995:75). The evidence for this is based on eyewitness accounts of how Europeans were initiated into smoking practices, as well as clay pipe finds from shipwrecks. However, there seems to be little awareness of the social motivations behind these imports.

Since the eyewitness accounts were those of individuals who belonged to the upper strata of society, contemporary painted and literary portraits might represent a biased and selective point of view. Consequently, the historical literature portrays sailors in a uniform way, whereas in fact this profession encompassed a wide range of social groupings, as described by Knut Weibust in *Deep Sea Sailors* (1976). With reference to their *habitus*, sailors must have existed within different social arenas, each based

on different social criteria. In the sixteenth century, for example, life on board ship reflected the wider hierarchical society, with captains representing the upper class and deck boys the lower class among the crew (Westerdahl 2005). Another factor is that international and local seaman cultures were distinct from each other. Atlantic expeditions could last for years, something which created a characteristic and distinctive sociological system (Weibust 1976). On the other hand, many sailors participated in shorter sailing trips (e.g. between the North Sea and the Baltic Sea). In such instances, the period of isolation being much shorter, the sailors' ethnic and geographic origins would have had more significance on board. These seaman cultures formed differentiated sociological groups, defined by ethnic origin and identity, for example. However, being part of the local maritime culture was considered inferior to participating in the Atlantic expeditions. Consequently, local seamen where not considered by contemporary observers to be as interesting as the Atlantic sailors, a bias which might be reflected in the historical records (Westerdahl 2005).

Another distinction that has not been fully recognised in archaeological research is the difference between the physical provenance and the social distribution of clay pipes. Artefacts found on shipwrecks must be viewed in terms of their on-board social contexts in order to understand the role of sailors as social distributors of smoking practices. However, when it comprises cargo, the pipes should of course instead be considered in terms of the nature of the *habitus* at their destination.

The Europeanization of tobacco consumption

According to Goodman (1993) the popularisation of tobacco in Europe was a result of gradual social alterations resulting from 1) the expeditions to America, 2) an interest in medicinal plants, and 3) legitimization by the European courts (Goodman 1993, 48-49). Following Columbus's arrival in the Americas in 1492, tobacco was regularly brought to Europe as one of many exotic curiosities. Increasing European contacts with native Amerindians introduced them to tobacco consumption, but it was not until the middle of the sixteenth century that Europeans began to fully appreciate the nature and implications of tobacco consumption (von Gernet 1995; 69).

Throughout this early phase, tobacco was gradually incorporated into European cosmology (Goodman 1993, 37; Peacey 1996, 1). Amerindian societies located tobacco within a specific cosmology in which the art of healing was a critical component. In addition to valuable metals, plants were also of economic interest to the colonists, and particularly plants with medicinal qualities. The Europeanization of tobacco during the sixteenth century therefore involved presenting tobacco as a herbal remedy or panacea rooted firmly within European medical tradition[2] (Dickson 1954; Goodman 1993, 54). Tobacco was introduced to European culture by a number of different actors who operated contemporaneously. These actors were required to report their activities to their national courts. The expeditions to America were closely tied into the courts' political activities through ambassadors and learned physicians such as Francisco Hernandez, André Thevet, Jean Nicot, and Nicolas Monardes (Goodman 1993, 37-55).

In England, the preferred means of consuming tobacco was by the smoking of clay pipes. Throughout the reign of Queen Elizabeth I,[3] England was an expanding colonial nation. Numerous English adventurers explored the possibilities presented by the discovery of the New World (Bugge 1925, 285-286; Goodman 1993, 37). Smoking as a fashion seems to have been inspired by Sir Walter Raleigh, a well-known explorer, member of court and favourite of Queen Elizabeth (Dallal 2004; Oswald 1975, 5). Although Raleigh was not the first person to introduce tobacco to the English court, he has been given the honour of popularising it. He financed several expeditions to the New World, where his colonists explored the coast from North Carolina down to Florida, and he became a legendary figure well known for his love of tobacco smoking. Raleigh smoked openly at the English court, even in front of the queen. With her approval, the popularity of tobacco increased within the aristocracy (Dallal 2004, 219-221; Peacy 1996, 1).

The pipe eventually became both the instrument and symbol of tobacco consumption throughout most of north-western Europe (Goodman 1993, 66-7). Its distribution might be understood in terms of the concept of *mimicry*. In sociology the concept illuminates imitations between different social categories, and is conceptualised by Homi Bhabha in *The Location of Culture*, 1994, 85-92). Individuals tend to copy the behaviour of other individuals they want to be identified with. This means that *habitus* both produces and is produced by the social world. Historical records suggest that the practice of smoking was constituted in relation to the identity of the experienced adventurer in a time of increasing colonial expansionism. The colonial wars influenced the European mentality and eventually led to changes in how male identity was perceived in western society (Smith 2002). This identity originated in conceptions associated with the individuals who introduced tobacco into north-western Europe, most notably role models such as soldiers, sailors and adventurers (Brooks 1952, 60-66). This was an era in which masculinity, risk-taking, violence, and sexual performance tended to be intertwined and heavily emphasized as the ideal characteristics of a gentleman. This may have inspired a demand for new symbols of manliness, especially ones that were legitimized by connections to important national enterprises such as war and imperialism (Smith 2002, 162).

[2] Research has shown that Nicotina Rustica, the tobacco species propagated throughout prehistoric Northern America, produces altered states of consciousness and even hallucinations if ingested in significant doses (Goodman 1993, 69).

[3] 1558-1603

In the light of this, other forms of tobacco consumption elsewhere might reflect social and political factors which contrast with those in England. In France, for example, taking snuff was the preferred way of consuming tobacco. This practice might have been considered to be more 'decadent' and 'delicate' by the French upper class and aristocracy. Tobacco was introduced into the French court by the French ambassador to Portugal, Jean Nicot. As in the case of Sir Walter Raleigh and England, Nicot was not the first person to import tobacco into France. Tobacco was quickly popularised within the court's *habitus* because he used it medicinally to relieve pain experienced by the queen.

At the outset, the taking of snuff was highly ritualised. Snuff was contained in snuffboxes, or tabatiéres, which became exclusive and much sought-after prestigious objects. In late seventeenth- and early eighteenth-century France snuffboxes became a medium of creative expression for artists and craftsmen (Bramsen 1965, 23; Goodman 1993, 47-8, 73-4). The French taste for smoking tobacco did not reach a level comparable to that in England until the middle of the eighteenth century (Price 1973, 8). This national differentiation in forms of tobacco consumption might be a reflection of the constant rivalry between the two colonial powers, as well as different trading patterns and social 'triggers'.



Figure 3: Jean Nicot (1530-1600) was the French ambassador to Portugal in 1559-1561. Photo: Bardenfleth (2002).

Social contexts of tobacco smoking seventeenth century Trondheim

The material analyses presented in this paper aim to investigate material from several archaeological sites in the town of Trondheim, each of which represents a different social and historical context. The intention has been to identify different social arenas in which smoking was practiced, and to highlight the development of a local smoking culture. The reader must bear in mind that the quantities of clay pipes described here as "many", "few", "sparse" and so on, are relative terms. Most pipe material recovered from terrestrial excavations consists of fragmented stems; however, few attempts have been made to determine the number of pipes these stems represent.[4] Consequently, providing an estimate of the number of clay pipes that might be considered to represent either "many" or a "few" within and between historical periods is problematical. (ie, we have little basis for knowing what constituted large and small amounts historically, and these may also have varied from period to period.

A great number of clay pipes have been collected during excavations in Trondheim during the twentieth century. However, few attempts have been made to analyse this material, with the exception of a study by Anna Petersén (2000) and unpublished studies by Ian Reed.[5] In Norway, there are few systematically documented archaeological remains post-dating the Protestant Reformation in AD 1537. Excavations have had different objectives determined by the current national conservation policy and research agendas. In Trondheim furthermore, most remains from post-medieval periods have been disturbed and reused as levelling material as a consequence of a substantial street regulation following the great city fire in 1681 (Lunde 1977, 171). Consequently, due to the lack of systematic documentation of post-medieval layers and the possibility of contamination, the material must be approached with a critical eye. The sites selected for this study are considered to be relatively well documented archaeologically and historically.[6] Possible sources of error will be discussed during the site presentations. The interpretations must, however, be seen as a tentative starting point, although future research might change the suggested picture.

Several attempts have been made to reconstruct the social topography of seventeenth-century Trondheim using historical and archaeological sources. The most important sources have been King Magnus Lagabøter's city law for *Nidaros,* originating from 1276,[7] and a map dated 1658,

[4] An attempt was made for the material at *Søndre gate 4* (Loktu, 2009), and will be presented in connection with the following site analyses.

[5] Both work at NIKU, Trondheim. The work presented here has been dependent on kind help from these contributors, through their personal notes and comments.

[6] Pers. comm. Ian Reed, NIKU Trondheim.

[7] This contains a detailed account of the town's nightwatchmen's regular patrol route (Lunde, 1977:171-173).

produced by the Swedish surveyor Oluf Naucler (Lunde 1977, 171-173). The present study is mainly based on the research of Henry Berg (1951) and Gudmund Stang (1981). Later contributions have criticised these publications (e.g. Blom 1956; Christophersen and Nordeide 1999). However, the sites described in this paper (figure 3) are considered to correlate well with written records.

Sites 1 and 2 are both located in the town centre, called respectively *Søndre gate 4* and *Folkebibliotekstomta* (the Public Library site). These sites encompass social arenas inhabited by seventeenth-century citizens, and represent two different periods of the local seventeenth-century smoking culture. Site 3 is called *Herrehuset* (a large timber building housing domestic and administrative functions associated with the District Governor), and is located in the former Archbishop's Palace. Following the Reformation in 1537, the palace became royal property, and by the seventeenth century was occupied by the king's local representative, the *lensherre* or District Governor (Nordeide 2003, 15). This site correlates in time with site 1 but comprises a distinctive form of social context.

Folkebibliotekstomta (the Public Library site)

The clay pipe material from *Folkebibliotekstomta* includes some of the earliest traces of tobacco smoking in Trondheim. However, the material is extremely sparse, and derives from an insecure archaeological context. The excavation reports from 1973-1985 indicate that only 'representative selections' of post-medieval artefacts were collected due to the project's priorities and resources (Nordeide 1989, 122). However, given its poorly documented archaeological context, this material's representativity can be called into question. It is possible that the number of pipes collected does not reflect the amount originally deposited due to subjective preferences in their selection and the nature of the excavation methods used to recover them. Although the material was collected from well preserved wooden cellars and latrines, these contexts were not systematically documented (ibid. 122).

Only five clay pipes with preserved bowl, heel mark and parts of the stem were collected from this site. In addition there were a few fragments with heel marks and stem fragments. The majority can be dated to the period 1600-1640 (figure 4). The most frequent heel mark is 'IR', associated with several pipe makers in London during the same period[8] (Oswald 1975, 34). While the vast majority of Trondheim's clay pipe material as a whole is Dutch (mostly produced in Gouda), a preliminary impression is that the earliest pipes found here might be predominantly English in origin (most notably those dating to the very earliest period of clay pipe occurrence, *c.* 1600 to 1620).[9] Given that the pipes from *Folkebibliotekstomta* are almost exclusively English, we might speculate as to whether this reflects the nature of the import trade during this particular period, or alternatively, a pattern produced by a selective preference for a particular form of pipe by a particular social group at the time?

Contemporary written records suggest that these pipes can be associated with citizens of the upper social stratum in the early seventeenth-century town. According to Stang (1981), the area encompassed by *Folkebibliotekstomta* was occupied by merchants at this time. Most were immigrants of foreign extraction who formed a group which exerted a near monopoly on the local export trade (figure 5). The mercantile elite lived in the eastern part of the urban area, beside the river *Nid*. This comprised an inner circle of wealthy and powerful citizens, such as landowners and mayors (Stang 1981, 62). Some of the early seventeenth-century town's wealthiest families therefore occupied the area covered by the excavation (Christophersen and Nordeide 1999, 292). Among the citizens that lived here are the craftsman *Jens Denisøn* and mayor *Anders Christenssøn*. There were also traders, sea captains and other wealthy men (Nordeide 1989, 128).

It is with this self-aware mercantile social group that we can associate the post-medieval remains at *Folkebibliotekstomta*. In addition to clay pipes (which by themselves do not necessarily reflect status), the archaeological record at the site produced other indicators of a high-status lifestyle in the form of fine glasswares and imported ceramics, including Chinese porcelain. The quality of these goods testifies to a standard of material culture that equates closely with that enjoyed by elite groups elsewhere in major European contexts (Christophersen and Nordeide 1999, 292). This suggests that a social network may have existed within the *habitus* of these wealthier citizens in which new ideas and trends were adopted socially. Since the pipe material was found in association with other high-status artifacts, we can assume that the pipes may also have been part of the habitus of higher class citizens. However, we must bear in mind that another social group is probably represented within this context; namely, servants. Consequently, the pipes' association with the practices of either master or servant remains insecure due to the poor contextual documentation.

We might also ask how the material reflects the nature of urban society as a whole. The clay pipes from *Folkebibliotekstomta* are associated with a high status area occupied by upper class citizens, and are therefore not necessarily representative of smoking practices elsewhere in the town. However, in Trondheim generally, there are comparatively few clay pipes which can be dated to the earliest part of the seventeenth century, in contrast to the evidence for increasing tobacco and pipe consumption after about 1640.[10] This suggests that smoking was less widespread in the town during the early part of the seventeenth century, a supposition which correlates well with historical references to the introduction of smoking

[8] www.museumoflondon.org.uk
[9] Pers. comm. Ian Reed, NIKU Trondheim.
[10] Pers. comm. Ian Reed, NIKU Trondheim.

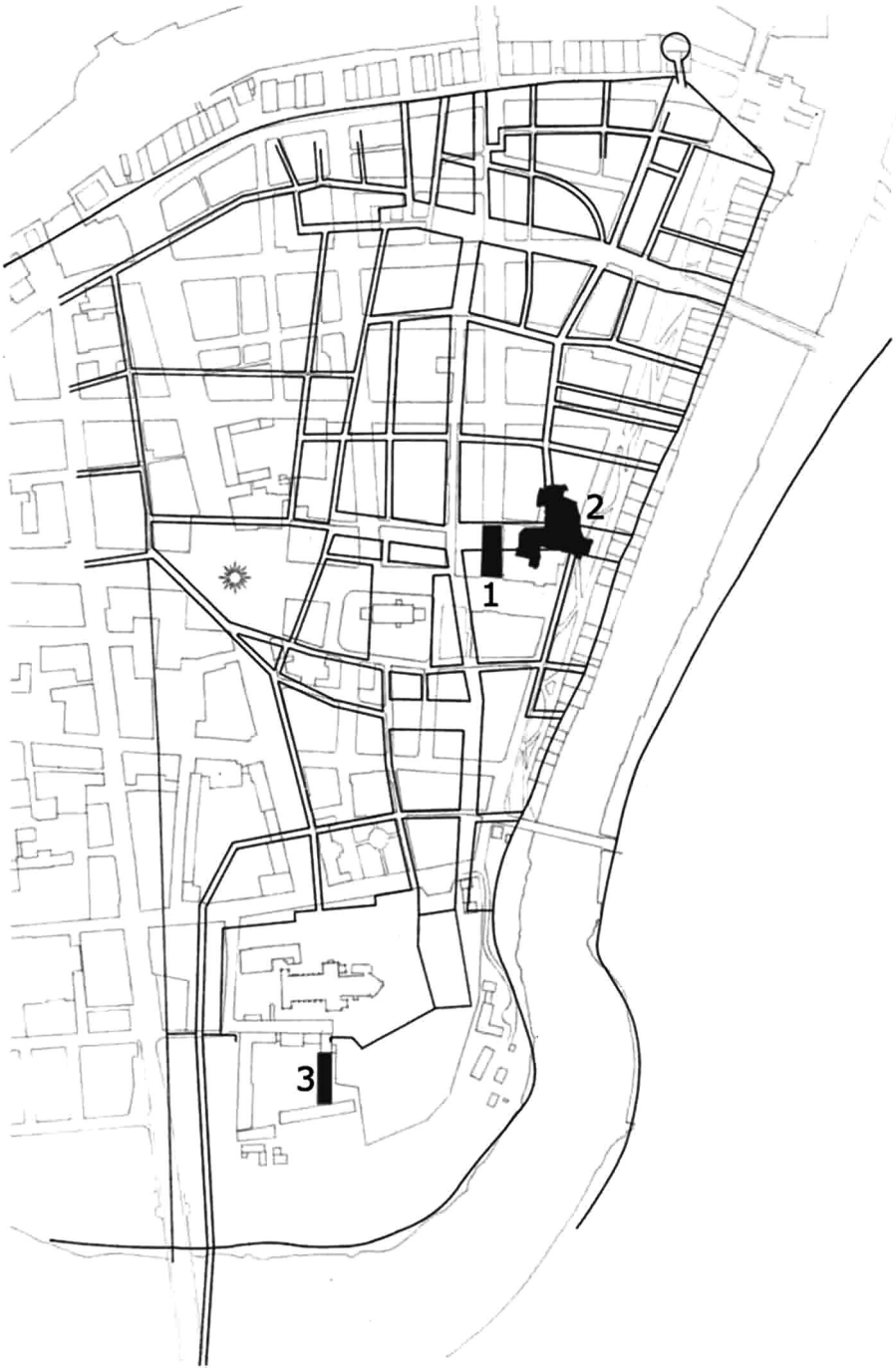


Figure 4: This map shows the location of the three sites investigated in this study: 1) *Søndre gate 4,* 2) *Folkebibliotekstomta,* and 3) *Herrehuset*. The map represents Trondheim before (black) and after (brown) the urban regulation by Cicignon in 1681 (Lunde, 1977). Illustration: L. Loktu.

(see Goodman 1993). Differentiations in the distribution of early clay pipes may therefore provide a tentative indication of the nature of smoking at specific sites during this particular period.

Søndregate 4

The excavated pipe material from *Søndre gate 4* was found in association with a large wooden house located in the old town centre pre-dating the urban replanning following the fire in 1681. During the excavations in 1971 archaeologists recovered clay pipes from two wooden wells and beneath the floor of the house's cellar. The material at this site has a well-defined chronological context, since it was sealed by the 1681 fire layer.[11]

[11] Excavation notes at NIKU Trondheim.



FIGURE 5: THE MOST FREQUENT HEEL MARK AT *FOLKEBIBLIOTEKSTOMTA* IS 'IR', WHICH WAS REGISTERED UNDER SEVERAL PIPE MAKERS IN LONDON DURING 1610 TO 1640 (OSWALD, 1975:34). PHOTO: L. LOKTU.

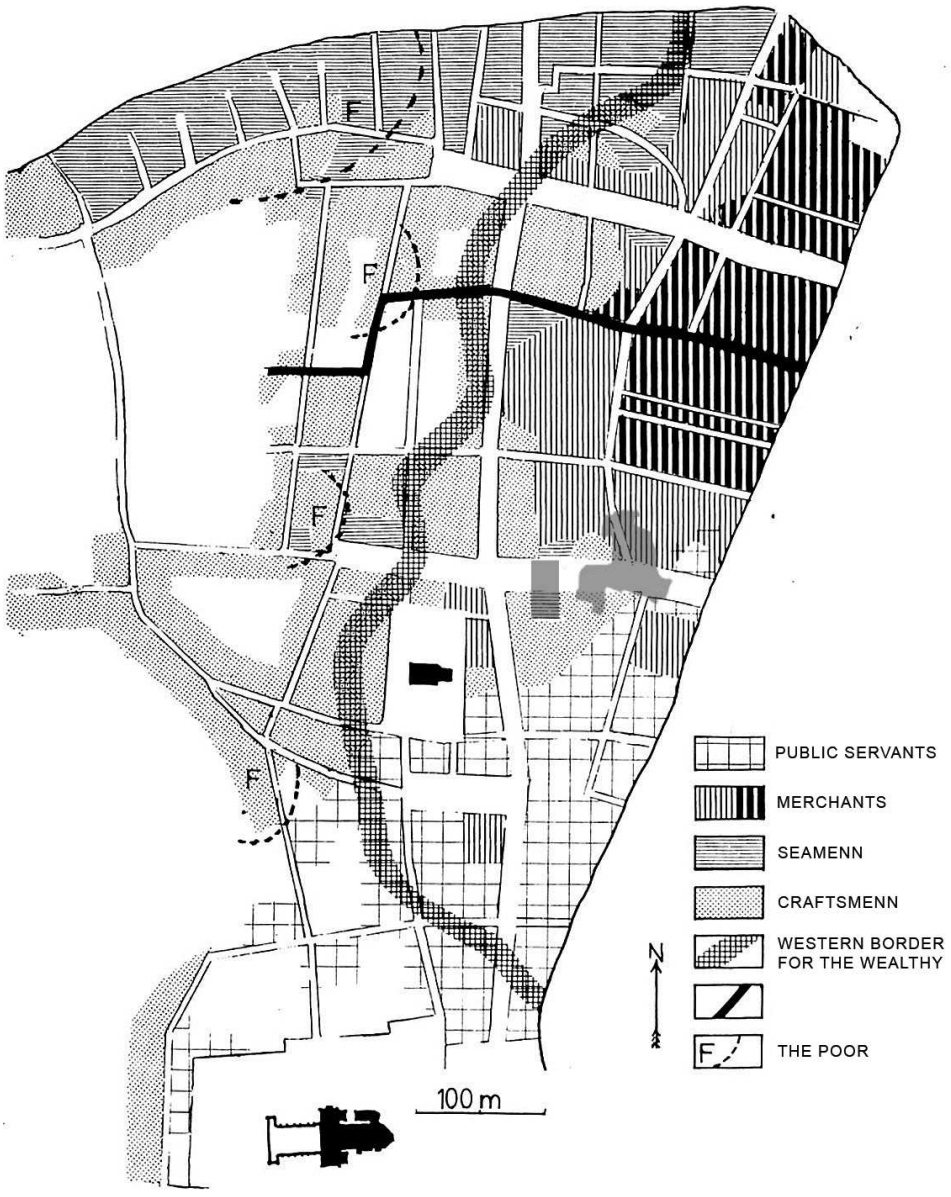


FIGURE 6: ACCORDING TO GUDMUND STANG'S (1981:63) RECONSTRUCTION OF SOCIAL TOPOGRAPHY, THE AREA RELATED TO *FOLKEBIBLIOTEKSTOMTA* (THE PUBLIC LIBRARY SITE) WAS OCCUPIED BY MERCHANTS, MANY OF FOREIGN EXTRACTION, WHO CONTROLLED THE EXPORT TRADE. THE AREA RELATED TO *SØNDRE GATE 4* WAS LOCATED IN A BORDER ZONE BETWEEN DIFFERENT SOCIAL GROUPS AND MIGHT THEREFORE REFLECT A POTENTIAL ARENA FOR SOCIAL INTERACTION. THE SITE LOCATIONS HAVE BEEN TRANSPOSED ONTO STANG'S MAP BY THE PRESENT AUTHOR.



Figure 7: Jonah pipes might have had a symbolic association with political conflicts and changes during the seventeenth century, and they are especially associated with sailors (Duco, 1987; Dallal, 2004). This pipe was one of several Jonah pipes found at the *Søndre gate 4* site, some of them unused. Photo: L. Loktu.

The material represents a step forward in time as the majority of the clay pipes can be dated to the period 1660-1680. The total amount of fragments recovered was 1,556, of which 86 were intact bowls. The material is plentiful compared to the small amount from *Folkebibliotekstomt*a, and tends to be very standardised. This made it a suitable sample for making an attempt at estimating the number of pipes these stems represent. The weight of a sample of pipe material from one of the wells[12] indicates that the total amount of stem fragments might represent approximately 156 clay pipes. The majority of the pipes originated from the Netherlands and can be dated to around 1660-1680. The most common heel mark is OA, probably *Onwen Andriesz* who was a registered pipe maker in Gouda by 1660-1671.[13] Other well-known pipe forms found at the site are so-called *Jonah pipes* (figure 6) and pipes bearing the *Tudor rose*, which had a symbolic connection with the political conflicts and changes during the seventeenth century (Dallal 2004; Duco 1987).

According to Berg's (1951) reconstruction of urban tenement plot ownership, the wooden house was the property of *Morten Rochlitz*, a customs officer (figure 7). Berg notes that after Rochlitz's death in 1680 the property was inherited by his widow, Anna Christensdatter. The records further indicate that Anna brewed beer and ran a *tavern* in order to support herself as a widow (Berg 1951, 114-115). In addition to the clay pipes, a large amount of fine drinking glasses were found which may indicate the presence of a tavern at the site (Moen 1971). Berg's information suggests that the tavern was in existence a year before the catastrophic fire in 1681. However, there are some indications that it may have been in existence even earlier. The makers' marks suggest that the pipes were produced several decades prior to 1680. Of course, there might be a number of explanations for the considerable discrepancy between the times of their production and use. The pipes might for some reason have been held in long-term storage. There is also the possibility that they are copies, or that the written records are ambiguous or unreliable.

However, according to the probate inventory held by the newly widowed Anna in 1680, the building was a small three-roomed house containing an iron stove, tables, chairs, benches, cupboards and beds. This list of furnishings might correlate well with an inventory for a tavern or guesthouse. However, it probably reflects the nature of the household *before* Anna took over the estate, and may suggest that Anna (and her husband?) may have been running a tavern before Rochlitz's death in 1680.

The evidence from Søndre gate 4 casts light on gender-related questions regarding pipe smoking and its public consumption. Men and women performed different roles in society at this time, and these were often linked to divisions of labour and to divisions of authority and power (McKee 2004). Tobacco pipe use is often considered to be an exclusively male activity (Dixon 2006, 65). Consequently, pipes tend to be associated with male practices such as public drinking. A man with a pipe at his mouth and a glass in his hand was an image frequently portrayed in seventeenth-century French, Dutch and Flemish paintings (Goodman 1993, 66-7). However, women were also sometimes portrayed as smokers in literature during the first decades of the seventeenth century, although this was usually in broadsheets and pamphlets attacking tobacco

[12] N10655 consisted of well-preserved bowls with long stems.
[13] goudapipes.nl

(Smith 2002, 166). Using as broad a temporal context as possible to illuminate female interaction in public drinking, Dixon (2006) points out how women have traditionally been closely associated with taverns and brewing. A DNA sample retrieved from a tobacco pipe stem excavated in a Virginia City saloon revealed that a woman had used the pipe, evoking questions about female roles in public drinking houses (ibid.). Women also took part in Gouda's clay pipe production. Some 27 women were registered in seventeenth-century clay pipe production in the Netherlands; however, this number doesn't include women who do not appear in the historical record, such as wives, daughters and so on (Dallal 2004, 230).

According to Stang's (1981) reconstruction of urban social topography, the tavern was located in a border zone between different social groups and might therefore reflect a potential arena for political and social interaction (figure 5). Among the social groups who inhabited the area were public servants of the king, sailors, merchants and craftsmen. By 1670, tobacco was a commodity of mass consumption in Europe (Goodman 1993, 59). In addition to clay pipe finds from the town in general, the material from *Søndre gate 4* reflects an increase in tobacco smoking with standardized patterns of import trade. Some unused *Jonah pipes* (figure 6) within the site material might also indicate that pipes were sold at the tavern. English pipes form a smaller proportion of the material, in contrast to the earlier situation noted on *Folkebibliotekstomta*. The evidence from *Søndre gate 4* suggests that smoking was a social practice connected with the public consumption of alcohol.

The Archbishop's palace

At the Archbishop's Palace, the majority of the clay pipes discovered during the excavations in 1991-1995 can be related to building K284, called *Herrehuset* (Petersén, in prep). According to historical records, Olof Parsberg, the District Governor of the county of Trøndelag from 1629-1642, constructed the building in 1640. The building was destroyed in 1672 (Lysaker 1989, 26, 37; Petersén 2000, 145). The recovered material correlates chronologically with this period of occupation, but is much more fragmentary than that recovered from *Søndre gate 4*. The total amount of fragments was 395, of which 33 were bowls. The pipes' attributes, notably their typology, marks and decoration, suggest that almost all were produced between the 1640 and 1672. The majority of the heel marks can be dated to 1660-1680. This is supported by an analysis of the amount of pipes associated with different sequences of flooring which suggests that most of the pipes were deposited after 1660 (Loktu 2009).

The house was a large two-storeyed wooden building containing several rooms with differentiated functions, such as rooms for housing guests, entertaining and collecting taxes (Bazely *et al.* 1993, 194). The upper storey was part of the representative area, and included a large hall in the southern part, called the 'king's hall'. The ground floor was divided into eight rooms, the northernmost being reserved for servants. The southern part was reserved for tax collection (Lysaker 1997, 22). Most of the pipes in *Herrehuset* were found in one particular room, defined as *skredderstuen* (a room used for needlework) in the written records. Anna Petersén (2000) has conducted a functional analysis of artefacts from the building's ground floor, in which this particular area was identified as a servants' room. Together with the distribution of knives (for eating), coins and tokens, the analysis reveals the distribution of the clay pipe material in the building. If the distributions of clay pipes and eating knives are compared, they occur together exclusively in this particular room in which the central fireplace is also located (figure 8). This indicates that *skredderstuen* was a place for relaxing, eating and interaction for the social groups represented by the governor's servants and soldiers (Petersén 2000, 182).

The limited distribution of clay pipe fragments within the Archbishop's Palace suggests that smoking was allowed only within specific areas (and maybe at certain times of the day). This suggests that the Archbishop's Palace, being royal property, was a more controlled and supervised environment constituted by the king and his representative. The fact that clay pipes occur here first only after 1640 might indicate that the governor adhered obediently to the tobacco prohibition introduced by King Christian IV and which lasted between 1632 and 1643. However, the practice of smoking here seems to have been a social act of consumption. Although this was not a public place, as was the case in *Søndre gate 4*, the written records suggest that *Herrehuset* might have been a form of 'public space' within the Archbishop's Palace.

ConclusionInternationally, there has been an increasing interest in social-historical aspects of clay pipes and tobacco consumption during the last ten years due to theoretical and methodological developments within the discipline of historical archaeology. However, as regards Norwegian clay pipe research, its pursuit has been hampered by the absence of legal protection of terrestrial archaeological remains that post-date the Protestant Reformation of AD 1537. This restriction has created a situation where post-medieval artefacts in general have been neglected by researchers and considered more of a curiosity than a valuable source of knowledge.

This article has attempted to demonstrate how clay pipes and tobacco consumption are associated with complex social mechanisms, as well as geographic and political differentiation in time and space. The study shows that close contextual analysis is relevant for the discussion of *habitus*, social differentiation and even gender-based questions related to tobacco smoking in Trondheim. Three case studies in the town have demonstrated the possibility of identifying different social arenas in which smoking was practiced, and also highlight some trends in the development of a local smoking culture. The evidence suggests that the earliest forms of tobacco consumption in the town might be exclusively related

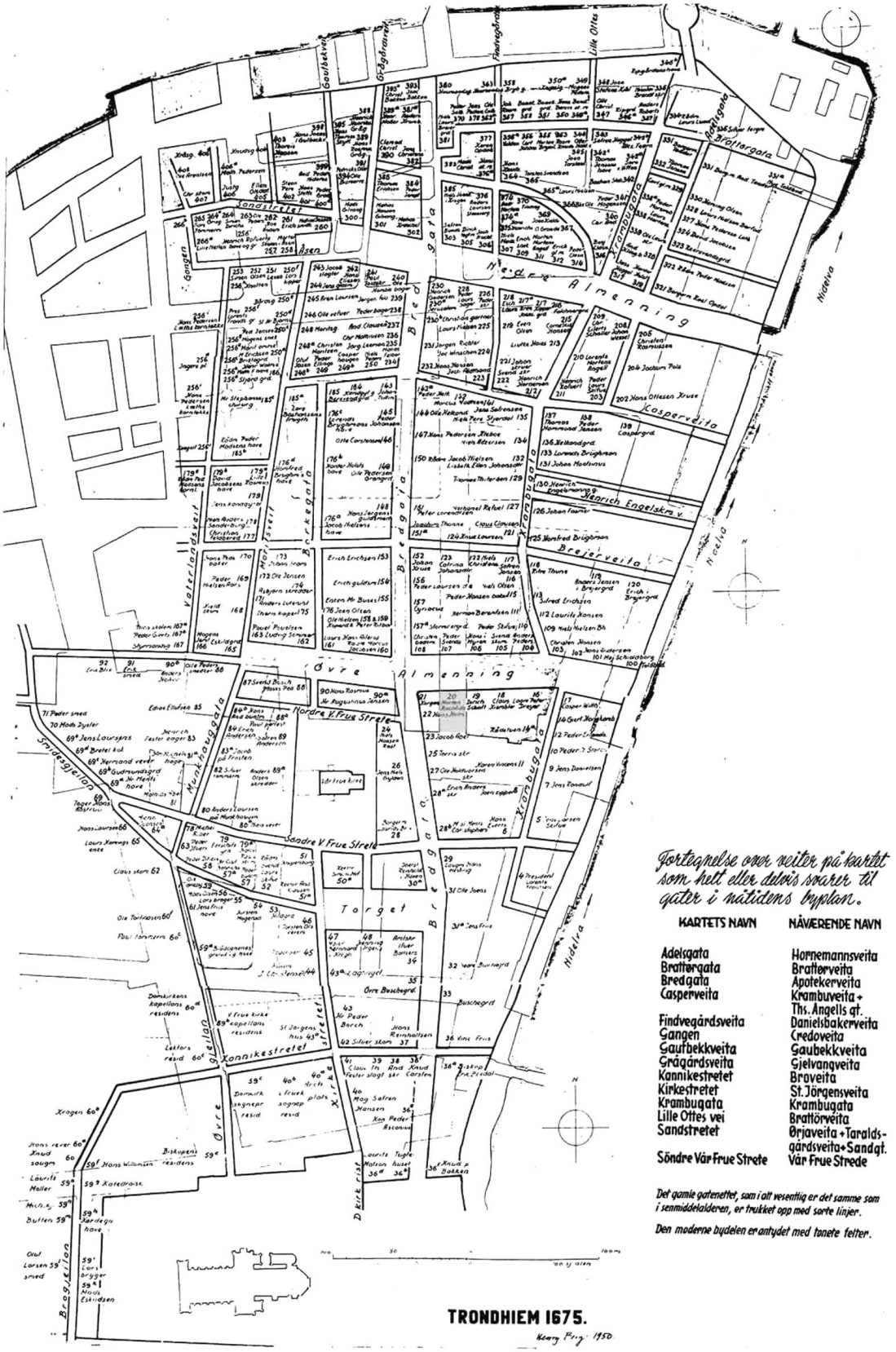


Figure 8: According to Henry Berg's (1951: 114-115) reconstruction of tenement plot ownership in 1675, the material from *Søndre gate 4* can be associated with the property owned by *Morten Rochlitz*, a customs officer. After Rochlitz's death in 1680, Berg notes that his widow, *Anna Christensdatter,* ran a tavern and brewed beer at the property between 1680 and 1681 in order to support herself.

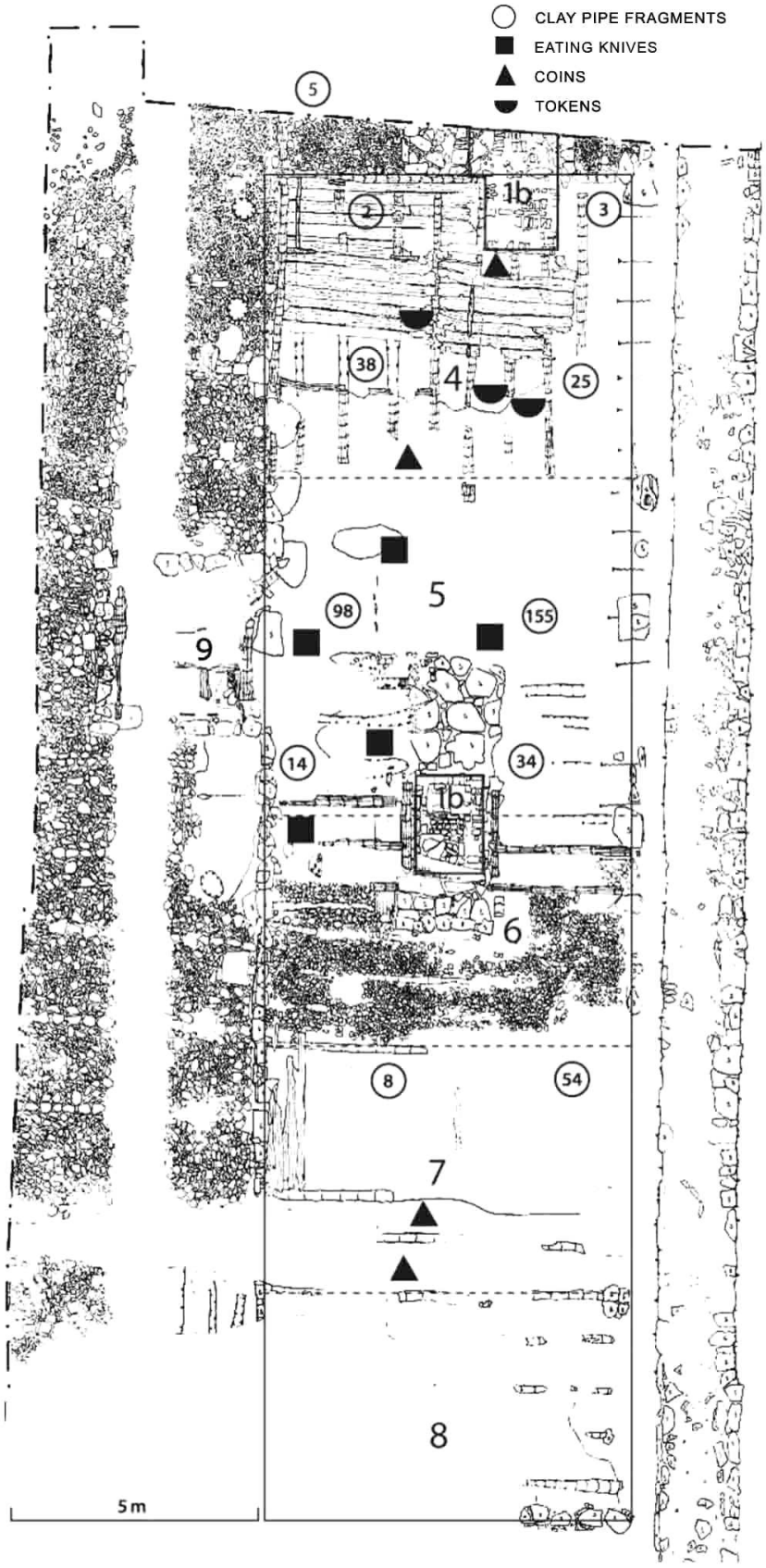


Figure 9: Anna Petersén (2000) conducted a functional analysis of artefacts from the ground floor in *Herrehuset*. Together with eating knives, coins and tokens, the study reveals how the clay pipe material is distributed within the building. If the distributions of clay pipes and knives are compared, they appear together exclusively in the room called *Skredderstuen* where the central fireplace is located. This suggests that this particular room was a place for relaxing, eating and socialising, including smoking. Illustration: L. Loktu (after Petersén, 2000:182).

to social experimentation within elites with European associations, as shown by the archaeological record at *Folkebibliotekstomta*. However, it seems apparent that tobacco use began to rapidly permeate much of European society at about the same time, and further research might alter this suggested development. Certainly, by 1670 tobacco use in Europe had reached proportions of mass consumption. As this process progressed, differentiation in social identity might have been expressed through different forms of tobacco consumption. The evidence at the *Søndre gate 4* tavern and the Archbishop's Palace suggest that smoking (maybe in addition to the adoption of more refined manners) was a social habit associated with eating, relaxing and the public consumption of alcohol. The Archbishop's Palace, however, being royal property, would have been a more controlled and supervised environment than an urban tavern.

In order to identify the social distribution of tobacco, one must study tobacco consumption within its social and political framework. Of course, this article has not dealt with other aspects of smoking, such as health and addiction. Hopefully, future research will result in similar studies involving other contexts for tobacco-related practices. These might include, for example, other social arenas in early post-medieval Scandinavian towns, such as areas occupied by lower social classes, seventeenth- and eighteenth-century industrial sites, military depots and hospitals, as well as a variety of non-urban contexts, such as Saami sites, whaling settlements on Svalbard, well-preserved shipwrecks and coastal settlements. By analysing clay pipes we might be able to discern differentiation in the impact of globalisation in particular social cultures or sub-cultures. Comparative analyses of specific rural environments in relation to urban centres using clay pipes may provide valuable perspectives regarding local responses to mercantilism, urbanisation and modernity. Clay pipes can provide insight into when, how and by whom these large-scale changes were adopted or rejected in space and time.

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