

The archaeology of mercantilism: clay tobacco pipes in Bavaria and their contribution to an economic system

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SUMMARY: Based on the first extensive research into Bavarian clay tobacco pipes dating from 1600 to 1745, this paper synthesizes written sources and material culture with the aims not only of contributing to post-medieval ceramic studies but also of examining the implementation and impact of a tobacco monopoly within an early modern state. After discussing the methodology, pipes are examined as a medium for mercantilist-driven actions and as indicators of socio-cultural change. The archaeology of Bavarian clay tobacco pipes throws light on the operation of an economic system and on only partly recorded or unrecorded activities such as smuggling and illicit manufacture.

INTRODUCTION

The year 1648 was not a good one for the Bavarian elector Maximilian I (1573–1651). The Peace of Westphalia had brought an end to the Thirty Years War, but the events of the preceding decades had left him almost bankrupt and his realm on the verge of collapse. Bavaria had been devastated by war, rural depopulation, rampaging bands of soldiers, crop failures and epidemics. Amongst Maximilian's plans to recapitalize state finances and reconstruct the realm were economic reforms, which were inspired by early mercantilist ideas. Agricultural production was supported, trading companies were established and monopolies such as the wheat-beer monopoly (*Weißbiermonopol*) were introduced.¹ His successor, Ferdinand Maria (1639–79), was raised in this spirit and continued his father's economic policy. During the second half of the 17th century tobacco began to play a major role in society. While Maximilian and his wife had tried to combat the rapid spread of tobacco smoking in Bavaria, Ferdinand Maria realized that nothing could stop this new practice and decided instead to profit from it. In 1669 he introduced a tobacco tax and in 1675 founded a

tobacco monopoly that lasted, except for a decade, until 1745.² The monopoly had a significant impact on most people's lives. This paper tells the story of the role clay tobacco pipes played in the implementation of the monopoly as part of the Electors' mercantilist ideas.

Between 2002 and 2007 detailed archaeological analysis was undertaken of 9,427 clay tobacco pipe fragments found in present-day Bavaria and adjacent Austrian territories, once closely connected politically to Bavaria.³ The study concentrated on heel fragments⁴ datable to the period from 1600 to 1745 (Fig. 1). As the first large-scale research on clay tobacco pipes in German archaeology, let alone in Bavaria, there were few scholarly studies to build on and few methodological discussions of this aspect of post-medieval material culture. Before this study, Bavarian researchers of post-medieval ceramics and historians thought that local clay-tobacco-pipe production did not start until the 19th century, when the term *Pfeifenmacher* (pipe maker) was first recorded in written sources.⁵ Earlier pipes found in Bavaria were said to have been imported either from the well-known Dutch industries such as at Gouda or from their German competitors in the Westerwald



FIG. 1

Bavarian clay tobacco pipes: typical rosette decoration and moulded letter marks, end 17th century.

area on the eastern bank of the river Rhine. So, the main research aims were not only to classify and date the pipes, but also to assess the evidence for local production in Bavaria in the 17th and 18th centuries. As the study progressed, it became apparent that the clay tobacco pipes had far more to offer. Placed in their cultural-historical context, they became the key to understanding how one of the major monopolies was conducted. This paper is thus divided into two parts. The first deals with the pipes as archaeological artefacts, their classification and their contribution to post-medieval ceramic studies. The second presents these results in the historical context of 17th- and 18th-century Bavaria and its mercantilist policy. Hence this paper is not only about classification methods, but also about new insights into the interpretation of material culture.

CLAY TOBACCO PIPES AND CERAMIC STUDIES

Post-medieval archaeology is a young academic discipline in Germany. Consequently, it is not

surprising that there are few methodological discussions regarding the classification of large collections of post-medieval artefacts and none of this particular artefact group, which had never been studied before at this scale from an archaeological viewpoint.⁶ Faced with taxonomical problems, a principal objective was to find a method of classifying Bavarian clay tobacco pipes, an essential prerequisite to establishing their chronology.

METHODOLOGY

An attempt was made to order the surviving pipes according to the terms used in 17th- and early 18th-century price lists.⁷ This approach was inspired by the work of George L. Miller, who argued that synthesizing archaeological and historical information is best achieved by applying historical terms used by the craftsmen who had produced the artefacts.⁸ In other words, the aim was to achieve a cognitive typological order based on the ideology of the period to be studied.⁹ However, it soon became clear that this method could not be applied to Bavarian clay tobacco pipes, because the documents list and sort the pipes by material (clay,

wood or metal) or by the length of their stems.¹⁰ The only exception found was the addition of the word 'Madame', but it is not certain what kind of pipe was meant by this term.¹¹ So, the pipes had to be classified by decoration, technique and shape.

TYPOGRAPHY

The few archaeological papers published in southern Germany dealing with clay tobacco pipes usually try to classify them with the help of the well-established typology of Gouda pipes compiled by Don H. Duco.¹² This is mainly because the Gouda pipe industry played an important role in the export of Dutch pipes and in the transfer of both craftsmen and manufacturing techniques to Germany. However, recent research has shown that, despite many overlaps and similarities between German and Dutch pipes, the German industry has its own characteristics and techniques.¹³

The main distinctive feature of the Gouda typology is its chronologically linear sequence. It soon became clear that the Bavarian shapes and decoration lacked this kind of linearity. The prehistorian E. Sangmeister has drawn attention to exceptions to 'unilinear evolution'. He also pointed out the ambiguity of the term 'typology', meaning both a classification in its descriptive sense and a chronological order of its types.¹⁴ Sangmeister

proposed the term 'typography' for non-linear typologies free of chronological aspects. Although this term was originally used by typesetters,¹⁵ it seems appropriate for the sequence of Bavarian pipe types.

So, there are no chronological implications in the typography presented in Figure 2. All determinable fragments of heel pipes were classified in three main groups based on decorative technique. Class A pipes are undecorated. Class B includes ones with manually applied decoration, such as heel stamps, rouletting and milling. Class C, made up of 2,205 pipe fragments with moulded decoration, is the only class that has been sub-divided (Fig. 3). Class C types were ordered by the density and degree of decoration, starting with the least decorated (C1) and ending with those that are the mostly richly adorned (C5). The 42 fragments which could not be allocated to one of these five were assigned to type C6. This system has been adapted from classification methods used for Roman samian ware.¹⁶

Type C1 is made up of pipes which only bear initials and which are otherwise plain. Type C2 consists of pipes with plain bowls and decorated stems showing, for example, several successive beadings. Pipes of type C3 are marked on each side of the bowl only with rosettes formed of

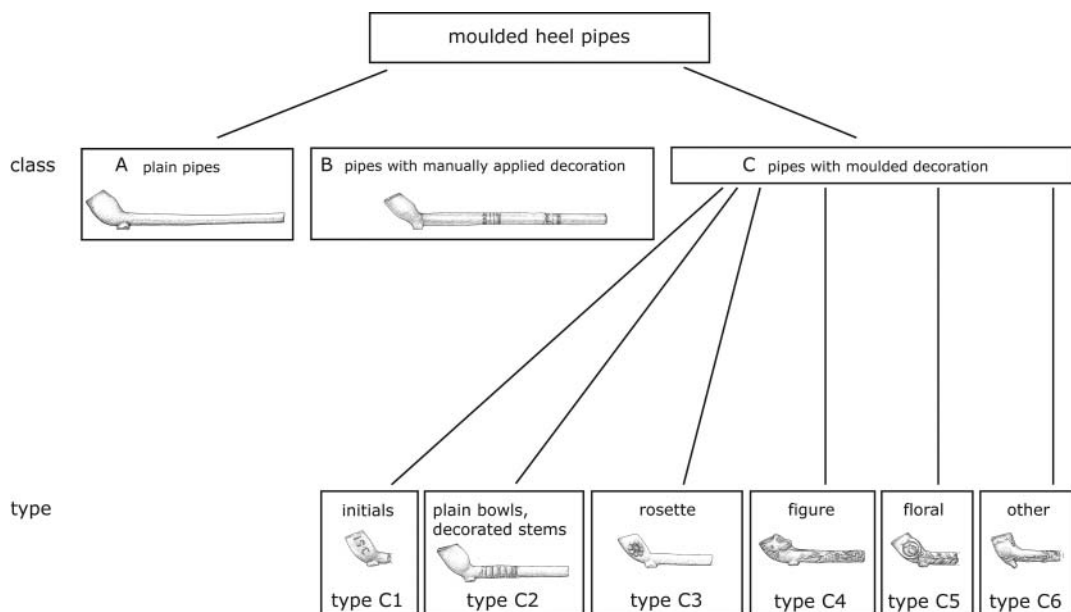


FIG. 2

Bavarian clay tobacco pipes: typography of heel pipes, c. 1600–1745.

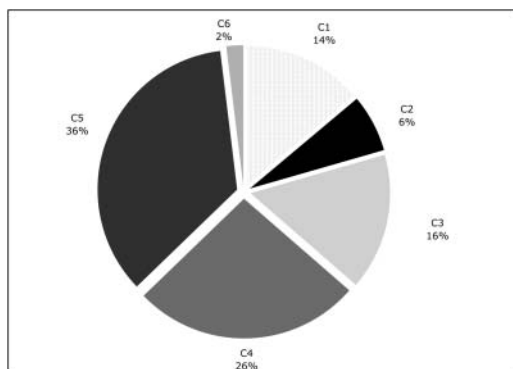


FIG. 3

Bavarian clay tobacco pipes: percentage distribution of moulded decoration by type (based on 2,205 fragments).

concentrically arranged dots, which are sometimes combined with initials. Examples of type C4 have human or animal faces, positioned on the pipe bowl so that they face the smoker. Stems of these pipes are in most cases shaped like fish or crocodiles, but sometimes have floral ornamentation instead. Type C5 was covered all over with floral decoration so closely arranged that the pipe maker seems to have suffered from a *horror vacui* (Fig. 4).

Each type in the catalogue of Bavarian heel pipes¹⁷ (an outcome of the analysis) has been assigned a code consisting of the class letter and a number, the first number denoting the type. Often a pipe model comprises several moulds from one or more sites. For example, catalogue number C5023 (Fig. 4) is represented by 38 fragments formed in the same mould and found at two sites, whereas catalogue number C419 is made up of three fragments, from the cities of Amberg (Upper Palatine), Augsburg (Swabia) and Erding (Lower Bavaria) (Fig. 5). X-ray fluorescence analysis (see p. 266)

has shown that the three fragments of this type were made from Amberg-area clays.¹⁸

CHRONOLOGY

As the chronological non-linearity of Bavarian types and bowl shapes was evident from the variety of clay tobacco pipes on which datable moulded letter marks occur, other methods had to be used to date the unmarked pipes. Several models were placed in a sequence with the help of stratigraphic information and stylistic comparisons with datable pipes from elsewhere in Germany and from the Netherlands, and by their association with coins and documented buildings. These methods were assessed separately and then combined to create absolute chronologies of the production period of each decorative class and type.¹⁹ The chronology of the pipe bowls (Fig. 6) was derived from these and the datable letter marks.

Research in England and the Netherlands suggests that in most cases the development of pipe bowls is more or less linear in nature, starting with the smaller ones and increasing in size over time.²⁰ A slightly different pattern of development was observed in Bavaria. Small bowls are the oldest in the sequence (Fig. 6:1.1, 2.1, 3.1, 4.1, 5.1, 6.1). Gradually bowls became larger, although several sizes were often made at the same time. This is true of almost all bowl shapes, especially the biconical bowls (Fig. 6:3), which make up 57% of all surviving pipe bowls.²¹ Small, medium-sized and large Form 3 bowls co-existed from c. 1660 to 1710. As small pipe bowls are not necessarily earlier than larger bowls, archaeologists should not rely on bowl shape alone to date pipes, but must also employ other criteria such as marks. It is not the first time that the co-existence of different styles, thought to vary in date, has been noticed in post-medieval ceramic studies.²² Archaeologists need to be aware of this methodological problem.

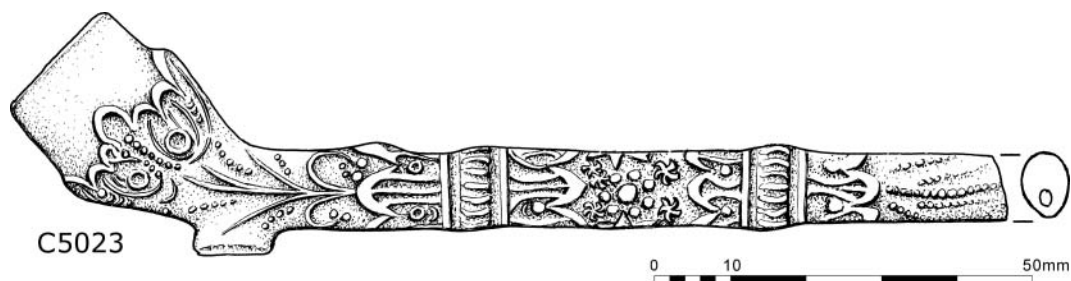


FIG. 4

Bavarian clay tobacco pipe model C5023, c. 1630–50. Represented by 38 fragments formed in the same mould and found at two sites.



FIG. 5

Bavarian clay tobacco pipe model C419, c. 1630–60. Represented by three fragments from three sites.

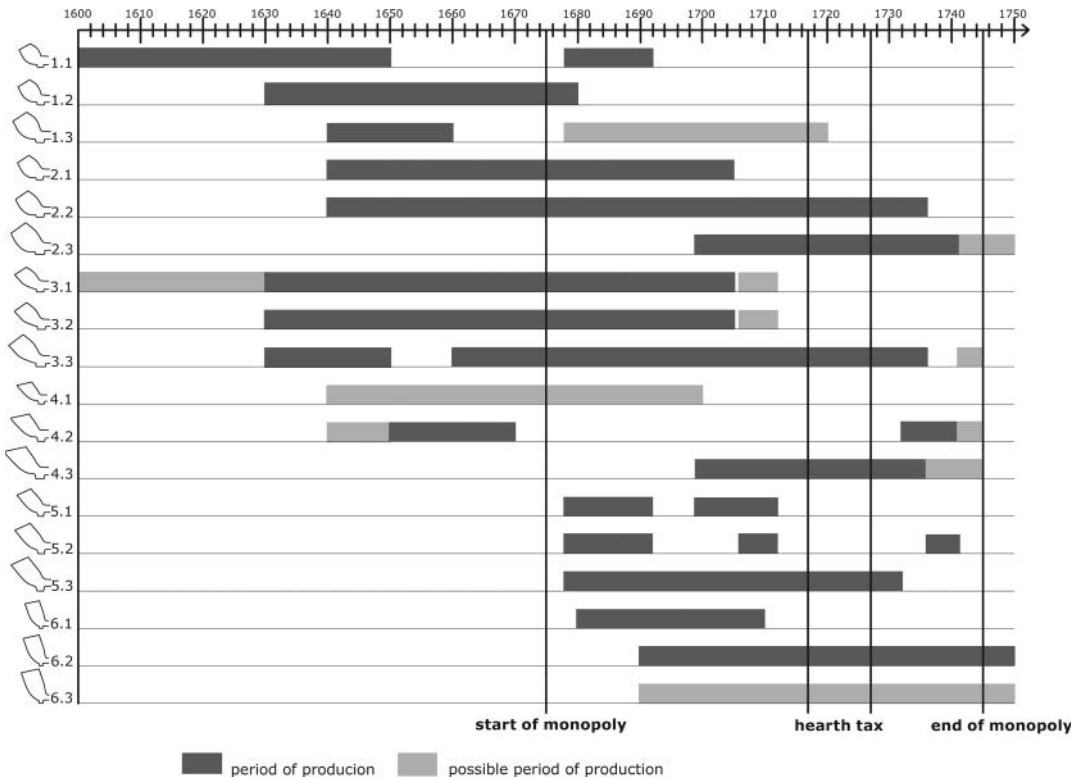


FIG. 6

Bavarian clay tobacco pipes: chronology of bowl forms. Six main forms (1–6) distinguished, each in three sizes (1–3).

CLAY-TOBACCO-PIPE PRODUCTION IN BAVARIA IN THE 17TH AND 18TH CENTURIES

The misapprehension about the late start to clay-tobacco-pipe making in Bavaria arose from the region's distinctive terminology and craft structure. In the Westerwald area, where Germany's largest and most important pipe industry was located, pipe makers were called *Pfeifenbäcker* (pipe bakers) and enjoyed the status of a craft organized and supported by a guild.²³ This was not the case in Bavaria, where neither a self-contained profession nor pipe-maker guilds existed and where tobacco pipes were made by potters as by-products. Consequently, as the profession of pipe maker did not exist, the search for the term *Pfeifenmacher* in Bavarian documents, such as craftsmen lists, was fruitless. The researchers' conclusion was obvious: the absence of the term *Pfeifenmacher* meant that there was no local pipe production.

Scant and fragmentary as the documentation is, a variety of sources prove that clay tobacco pipes were made in Bavaria in the 17th and 18th centuries. Some show that tobacco pipes were part of the potters' repertoire rather than products of a distinct profession. The most noteworthy of these is the Nuremberg potters' ordinance issued in 1675. Article 15 states that only potters who have acquired the rank of master can make tobacco pipes.²⁴ The decree shows not only that tobacco pipes were produced in Nuremberg in potters' workshops, but also that they were already made in 1675, if not earlier.

Archaeology and chemical analyses provide additional evidence of local production. Pipe wasters were excavated in a pottery workshop in Kröning (Landshut district, Lower Bavaria), an area well known for its potters and extensive trade in ceramics (Fig. 7). The pipes — which are datable to the first half of the 18th century — are in the same buff fabric as the local earthenware, in contrast with the off-white pipes made elsewhere. The shape of the Kröning pipes is distinctive. Their bowls are not quite cylindrical and are positioned almost orthogonally to the rather short stem. Their heels are thorn-like and quite long with a pointed spur situated not below the bowl, but tucked beneath the stem (Fig. 8; Fig. 6:6.1–6.3). The known examples of Kröning pipes are plain and quite frequently glazed in blue or turquoise, a characteristic of the earthenware made in this area. Kröning is the first excavation in Bavaria to provide evidence for the production of clay tobacco pipes, but it is also the only post-medieval potter's workshop investigated in the state.²⁵

As well, 53 samples were analysed with a Wavelength Dispersive X-Ray Fluorescence



FIG. 7

Green-glazed stove tile depicting a smoker and inscribed 'DER GERVCH', meaning 'the aroma' (after Mehler 2007b, 31). Made in Kröning (Landshut district, Lower Bavaria).

Spectrometer in order to establish whether and, if so, which Bavarian clays had been used to make the pipes.²⁶ Four regional groups could be distinguished by the similarity of their chemical components (Fig. 9). Not only did the data lead to the identification of production in, for example, Amberg and Passau, but it was also possible to distinguish different workshops and their products. All the pipes analysed were made of local clay. This is not surprising since Bavaria offers several deposits of pipeclay, a white-firing clay poor in iron and rich in aluminium oxide, which could be used without further preparation.²⁷

Archaeological and historical research has identified seven pipe-production sites in present-day Bavaria (Fig. 10). They stretch across eastern Bavaria, whereas none have yet been identified in the western part, perhaps because no pipeclay deposits are known in Swabia, the province which makes up most of western Bavaria. As well, apart from the pipes found in Augsburg, hardly any were available for study in this area.

CLAY TOBACCO PIPES AND BAVARIAN MERCANTILISM

This section moves beyond archaeological ceramic studies to present a new interpretation of Bavarian



FIG. 8

Kleinbettenrain (Landshut district, Lower Bavaria): early 18th-century clay pipes of Kröning type found in potter's workshop. 1–2. unglazed; 3. blue glaze; 4. turquoise glaze.

clay tobacco pipes. It emphasizes their main value, the contribution they make to understanding how an economic system was implemented in detail and how they indicate socio-cultural change.

HISTORICAL BACKGROUND

In order to understand the Bavarian clay-tobacco-pipe industry, it is necessary to consider the cultural history of tobacco smoking in what is now Bavaria and the absolutist tobacco policy of the Electorate of Bavaria (1623–1806).

Bavaria now consists of the seven administrative regions of Upper, Middle and Lower Franconia, Swabia, Upper Palatinate, Upper and Lower Bavaria (Fig. 11). Of these, Franconia and Swabia only became part of Bavaria in the early 19th century. Upper and Lower Bavaria and Upper Palatinate were the core areas of the electorate, which was granted to Maximilian I after his victory at the Battle of the White Mountain during the Thirty Years War. Excluded from this territory were a number of small enclaves such as Kempten and Passau, both Catholic archdioceses, and free

imperial cities such as Regensburg and Augsburg.²⁸ Thus, present-day Bavaria unites an area of about 70,000 km², which formerly consisted of several territories in different political and ecclesiastical jurisdictions. The history of smoking and tobacco policy is thus as manifold and complex as Bavaria's territorial situation in the early modern period. Only recently has part of it been studied in detail.²⁹

The first written evidence for the consumption of tobacco in Bavaria dates to 1601. In a letter to a friend, Bernhard Doldius, a physician from Nuremberg, noted that a group of Englishmen had asked for tobacco as soon as they entered his town and were delighted to find a great deal of it. He also complained that people could be seen smoking on the streets of Nuremberg almost every day.³⁰ During the following decades the new custom of smoking tobacco spread rapidly throughout Bavaria. It is often said that the many foreign soldiers involved in the Thirty Years War were responsible for spreading the habit. By the mid-17th century at the latest many documents testify to the widespread use of tobacco in every corner

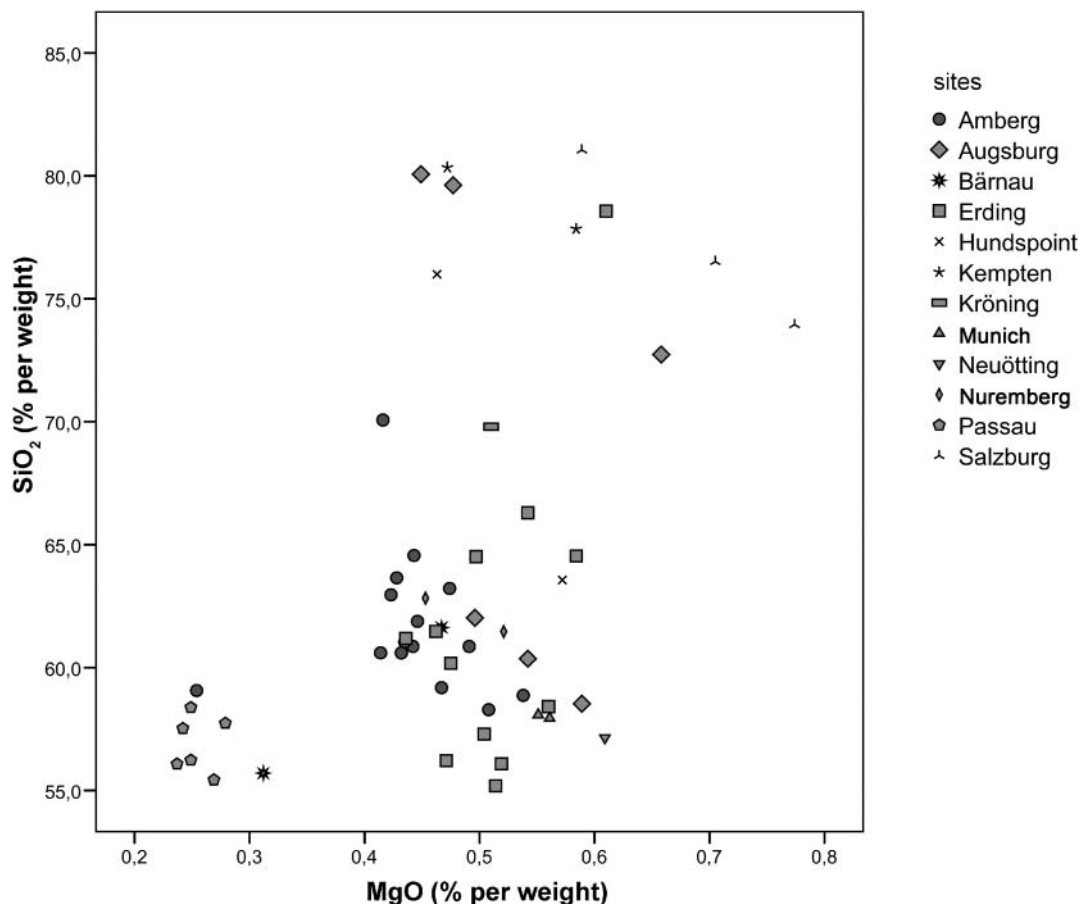


FIG. 9

Bavarian clay tobacco pipes: Wavelength Dispersive X-Ray Fluorescence Spectrometer analysis of 53 pipes by site. Variation diagram of silicon and magnesium oxides (diagram, Markus Helfert, Römisch-Germanische Kommission).

and social class of Bavaria, sometimes even practised in an unusual manner inspired by the Orient (Fig. 12).³¹ As elsewhere in Europe, Bavarian clergymen and aristocrats condemned this bad habit.³² In 1652 the regent Maria Anna³³ saw no other choice than to ban smoking. It was the first of a series of such bans; a similar one, prohibiting smoking in public places, came into force on 1 January 2008.

Maria Anna's attempt to stop people smoking was unsuccessful. Her son, Elector Ferdinand Maria, changed the official stance towards this suspicious plant and in 1669 decided to profit from smoking by taxing tobacco (Fig. 13).³⁴ As tobacco smuggling made it difficult to collect most of the tax due, in 1675 he established what historians usually refer to as the Bavarian tobacco monopoly.³⁵ It would be more correct to name it the tobacco and

pipe monopoly, because it was not restricted to tobacco alone but included as well smoking accessories. The monopoly was called the *Appalto*³⁶ and was part of Ferdinand Maria's economic policy, derived from mercantilist ideas, which in the 17th century influenced most rulers of the principal European trading nations. In many of these countries local tobacco cultivation played an important role.³⁷ Bavarian electors of the late 17th century were influenced by the economic theories of Johann Joachim Becher (1635–82). He and other German scholars propounded their own model of mercantilism called *cameralism*, concerned with topics such as agriculture, manufacture and technology.³⁸ By introducing the *Appalto* Ferdinand Maria intended to raise revenue and to increase local production. Tobacco could no longer be imported and a high duty was imposed on the small

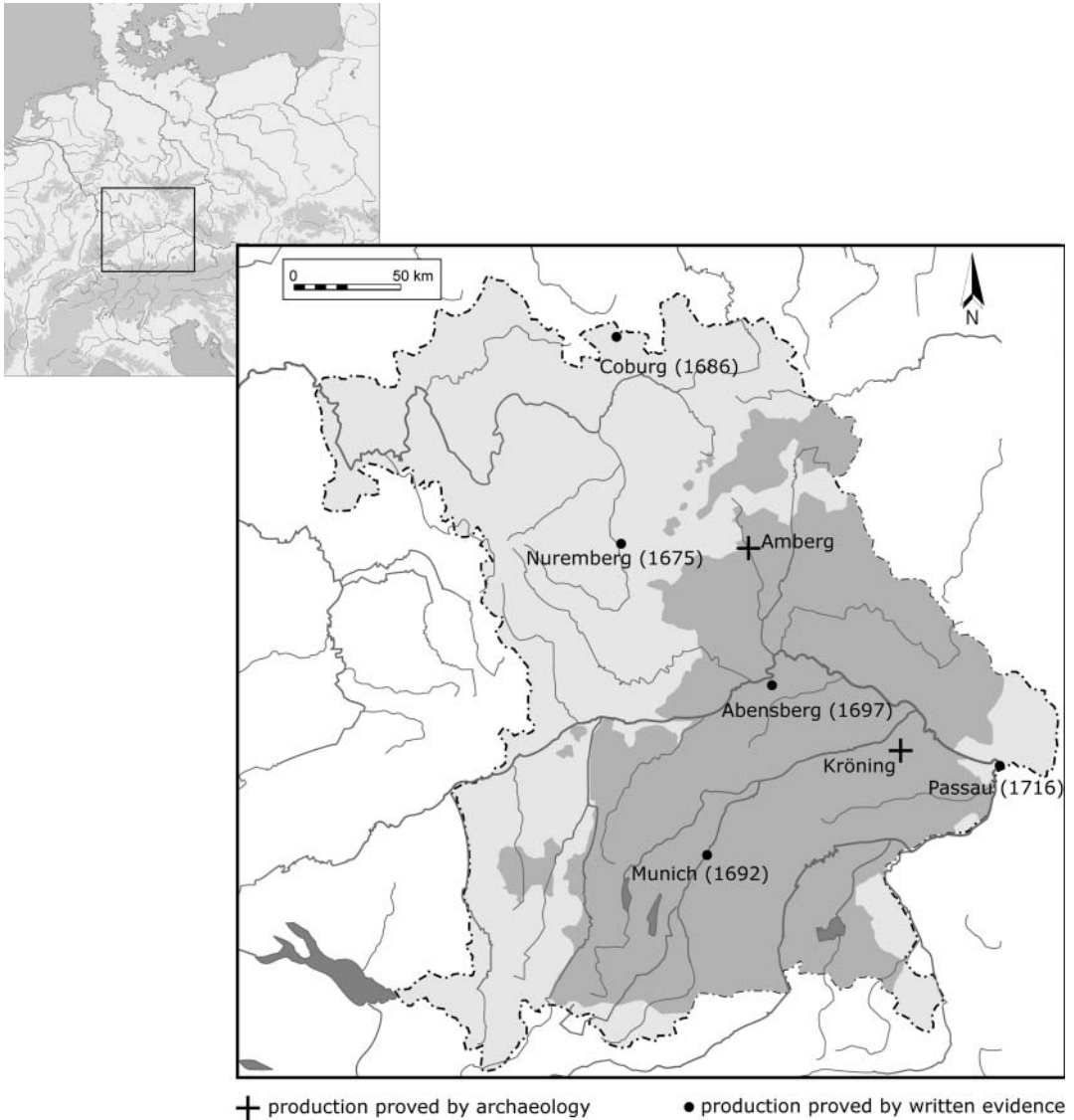


FIG. 10

Bavarian clay tobacco pipes: location map and identified production sites. Dark grey: the Electorate of Bavaria; light grey: present-day Bavaria; earliest references in brackets (map, Kristine Ruppel, Römisch-Germanische Kommission, and Thomas Pertlwieser, University of Vienna).

quantities allowed into the electorate.³⁹ His and his successors' tobacco policy is well documented, but almost nothing was written about the equipment to smoke tobacco. The few records that do mention pipes show that they were part of the monopoly. Foreign pipes were either prohibited or burdened with extremely high taxes to protect local production.⁴⁰

The monopoly was not implemented by the state, but by private businessmen who rented it at a high annual charge. In 1675 the Italian Pietro Bignami was the first to be granted the *Appalto*. He was the only person in the electorate allowed to organize pipe production and to import smoking accessories in order to meet local demand. As the monopoly was only valid in the electorate, the free

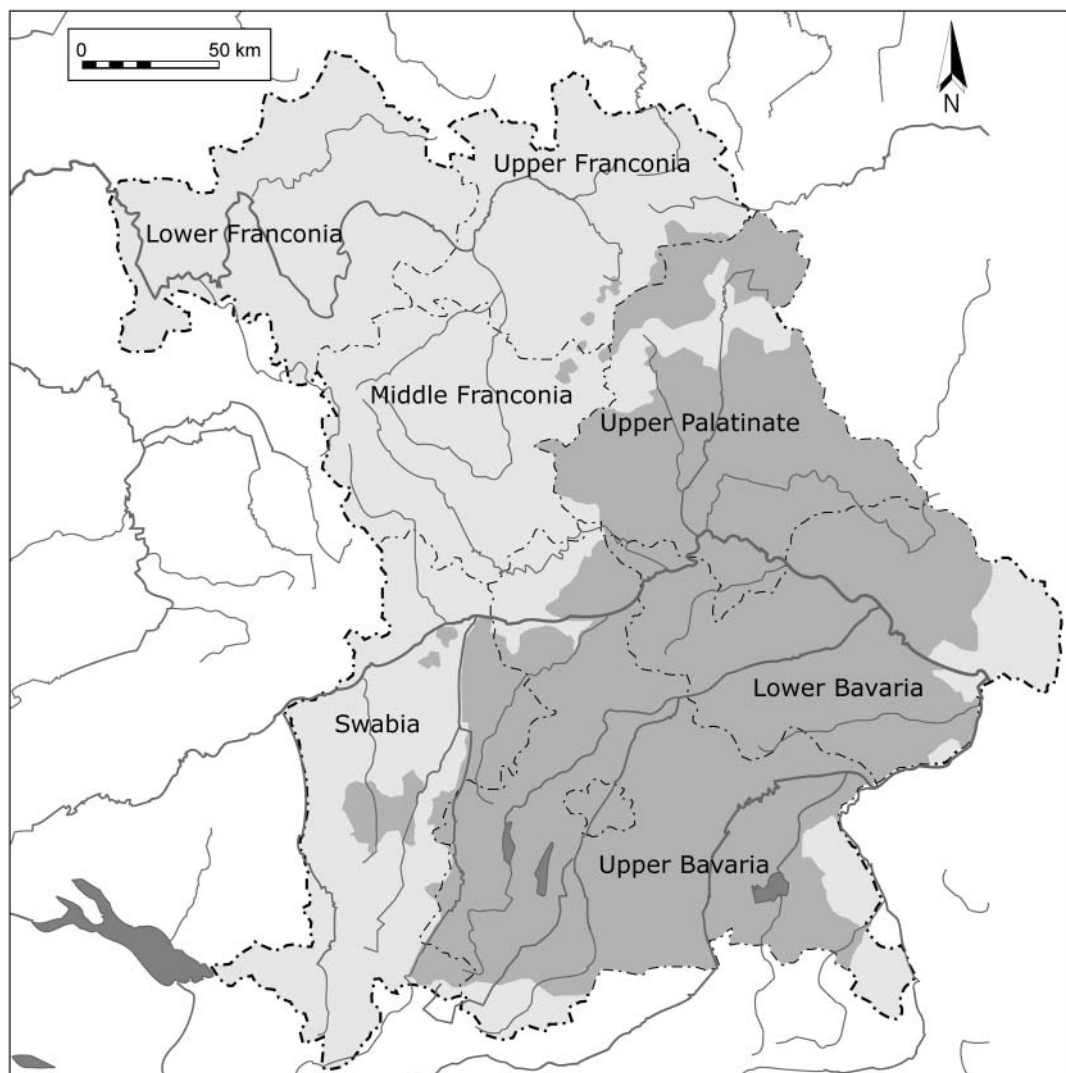


FIG. 11

Bavaria in the 17th century and today. Dark grey: the Electorate of Bavaria; light grey: present-day Bavaria (map, Kristine Ruppel, Römisch-Germanische Kommission, and Thomas Pertlwieser, University of Vienna).

imperial cities, archduchies and other enclaves enclosed within the realm were exempt and free to secure their own tobacco and pipes. This territorial patchwork made it extremely difficult to enforce the monopoly.⁴¹

Pietro Bignami's tenure was not a success and he was replaced after seven months by Leonhard Pistrich, a merchant from Nuremberg. Pistrich was succeeded by a series of other *Appaltators* (see Table 1), of whom the most remarkable was

Johann Senser, a clever and diplomatic businessman, who held the office from 1678 to 1699 and again from 1706 to 1712. He was the first to make a fortune out of the monopoly.⁴² Senser set up a series of main stores (*Hauptniederlagen*) and tobacco factories,⁴³ where pipe makers were probably also employed (Fig. 14).

Before the monopoly clay tobacco pipes were made by potters in their own workshops. Presumably this was stopped the moment the monopoly



FIG. 12

How to construct a makeshift water pipe in order to enjoy oriental smoking pleasures. 1678 Dutch woodcut, reproduced in a German translation printed in Nuremberg (after Witgeest 1718, 119).

was introduced, because it would have been easier to prevent illicit production and to mark the pipes (see next section) in the monopoly's tobacco factories. A document records that in the second half of the 17th century 'tobacco pipes were produced [in a tobacco factory near Munich in der Au] by the hundred thousand per mill 2 fl. 30 kr. The potter got 1 fl. 30 kr. per mill'.⁴⁴

In 1717 the monopoly was interrupted for ten years, when in its stead was exacted a hearth tax (*Herdstättengeld*), paid by every householder whether he smoked or not. It was due twice a year and was raised repeatedly during the course of its existence.⁴⁵ As a result few documents survive which deal with tobacco policy in this decade.

A new *Appalto* was introduced in 1727, when Elector Charles I Albert (1697–1745), who later became the Holy Roman Emperor Charles VII, came to power. It was granted to the Austrian Carl Roman Meyern, who organized his privilege on the lines of the Habsburg tobacco monopoly. Despite its reintroduction the hearth tax was retained, imposing a double tax burden on the Bavarians. Thereafter the Bavarian tobacco and pipe monopoly was held by five more *Appaltators*, either individuals or companies, until it was abolished in 1745 (Table 1).⁴⁶

CLAY TOBACCO PIPES AS INSTRUMENTS OF CONTROL

One of the most remarkable and characteristic features of Bavarian clay tobacco pipes from the period of the monopoly (1675–1745) is that they were marked in a distinctive way. Whereas in England and the Netherlands pipes usually bear the initials or names of pipe makers, Bavarian ones were labelled with the marks of the *Appaltators* and their consortium members.⁴⁷ Not a single pipe maker's mark has yet been identified. As Bavarian marks were formed in the pipe mould, they appear in relief. This is in distinct contrast with the marks impressed on Dutch and English pipe heels and bowls. Bavarian marks consist of two or more letters and can be found on the pipe bowl, the side of the heel or the stem. Frequently the letters are ligatures, i.e. joined together (Fig. 15).

This way of marking pipes was required by the state. In a decree concerning the *Appalto* of Johann Senser issued on 11 June 1679, the Elector ordered that all pipes and tobacco should be marked I.S.C., the abbreviation of the trade name Johann Senser & Consorten.⁴⁸ In 1728 a similar labelling order was renewed. By comparing the initials on the pipes with recorded *Appaltators* and their partners, nearly all the marks could be identified as the initials of monopoly holders (Table 1; Fig. 16). The written sources are incomplete; however, the pipes show that this marking system was established at the beginning of the monopoly and lasted as long as it operated.

A few pipes were marked with the Bavarian coat of arms, either applied with a stamp or

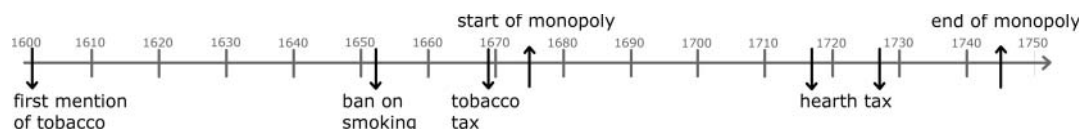


FIG. 13

Time line of main events in Bavarian tobacco history, 1600–1745.

TABLE 1

List of holders of the Bavarian tobacco and pipe monopoly, their dates of tenure and their marks (holders and dates derived from Micheler 1887 and Nadler 2007; for marks, see Fig. 16).

<i>Appalto holder (Appaltator)</i>	Start	End	Mark
Pietro Bignami	1675	1676	?
Leonhard Pistrich and his son-in-law Georg Pirkenauer	1676	1677	LP
Johann Senser & Co. (three merchants from Munich called Scaguler, Oppenrieder and Vapichler)	1678	1686	ISC RV
Johann Senser & Co. (Scaguler, Oppenrieder, Georg Angerer until 1699)	1686	1692	ISC AG
<i>Tabakregie</i> under Johann Senser	1692	1699	CBT and ISC
<i>Tabakregie</i> under Johann Achilles Reißner	1699	1705	CBT
Johann Senser & Co. (Anna Maria, Countess Fugger; Johann Franz, Baron Baumgarten; Franz Baar)	1706	1712	ISC
Franz Baar; Johann Franz, Baron Baumgarten; Anna Maria, Countess Fugger; Johann Christoph Paur	1712	1715	?
Johann Franz, Baron Baumgarten; Anna Maria, Countess Fugger; Max Joseph, Count Fugger	1715	1717	?
Carl Roman Meyern	1727	1730	?
Johann Puntifesser, Johann Georg Fellerer, Johann Andreas Madlseder, Kilian Deisenrieder	1730	1732	BTA
Unknown	1732	1736	CBT
Johann Christoph Best & Co.	1736	1741	BC or PC
Count Ferdinand Joseph von der Wahl	1741	1744	CBT
Joseph Dietrich & Co.	1744	1745	CBT



FIG. 14

Obermenzing (now within Munich): tobacco (in centre) and dyeing factory of Johann Senser. Building demolished in 1769 (engraved by Michael Wening, 1701) (after Schmid 1983, fig. 57).

moulded. This mark was first mentioned in a decree issued on 24 February 1728, but already appears on pipes at the end of the 17th century (Fig. 17). According to this and other documents, stamps were handed out to the *Appaltator*'s contracted concessionary partners outside the realm (e.g. in Nuremberg), who then had to mark the tobacco and pipes to be imported into Bavaria.⁴⁹

So, pipe model C345 (Fig. 17) was produced either outside the realm at an unknown production site for the Bavarian market or inside the electorate and marked this way for a reason which is not recorded in the surviving documents.

Although not explicitly stated, this peculiar marking system must have been introduced as a measure to enforce the monopoly. Pipes could be

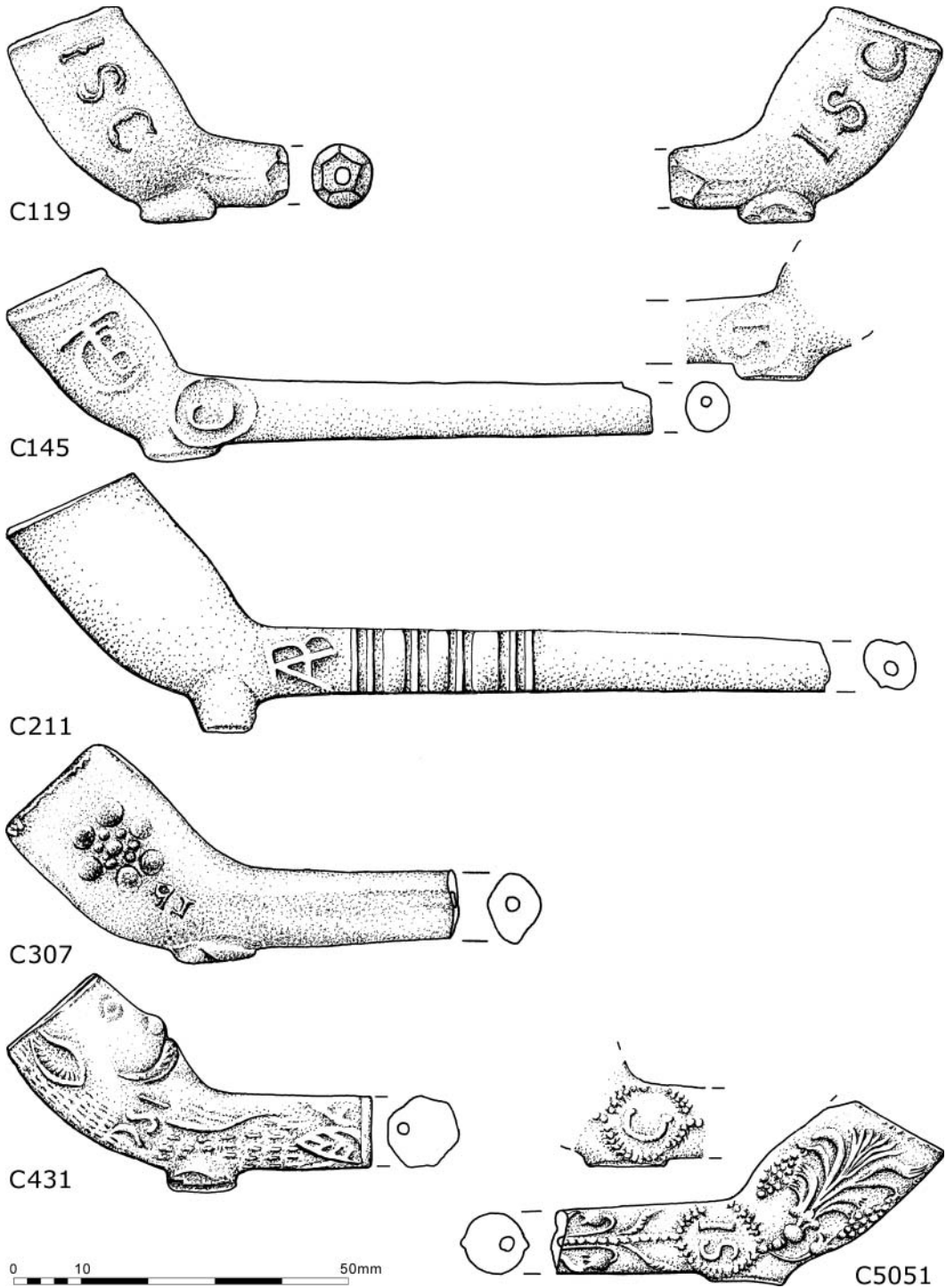


FIG. 15

Bavarian clay tobacco pipes: some *Appaltator* marks, 1675–1745. For dating, see Table 1.

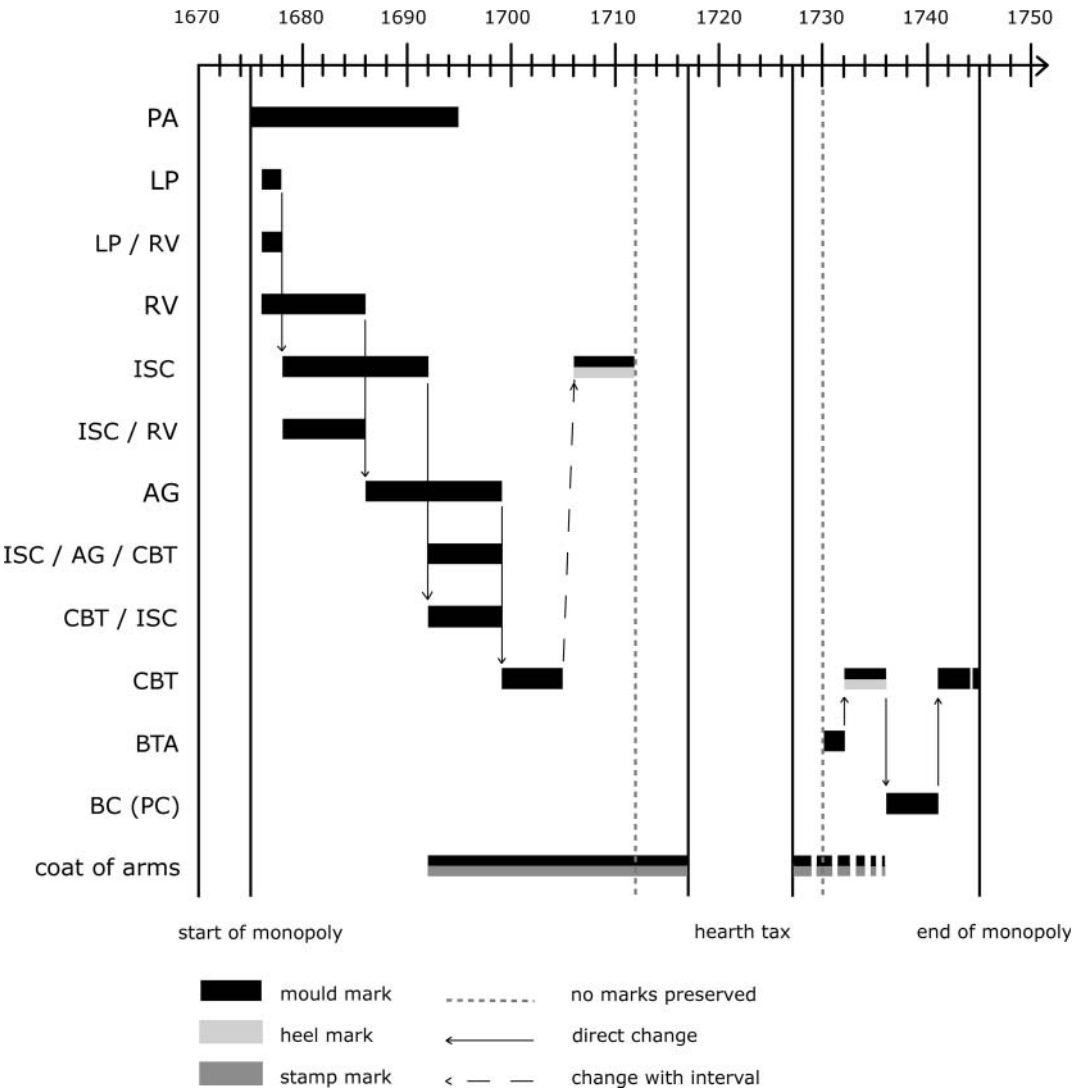


FIG. 16

Bavarian clay tobacco pipes: Gantt chart illustrating the dating sequence of *Appaltator*'s initials.

checked, whereas once tobacco was separated from its wrapping it would have been difficult to judge whether the smoker was consuming tobacco bought legally inside the realm or smuggled from abroad. The moulded marks on pipes were permanently and clearly displayed, usually in large letters (Fig. 15:C119), and showed immediately that its owner had purchased the heavily taxed monopoly goods. From this perspective the Bavarian marks can be interpreted as tax labels similar to those found on modern cigarette packs.

The monopoly was enforced by a special mounted police squad established by Ferdinand Maria in 1677, two years after the monopoly was introduced. The *Überreiter*, as they were called, rode through the realm with the main task of inspecting smokers, carriages, market-places and tobacco and pipe salesmen. They were not salaried, but were rewarded on a bounty basis, receiving a share of the confiscated goods and of the fine,⁵⁰ which motivated them to hunt for malefactors. Fines and punishments were draconian. Not only

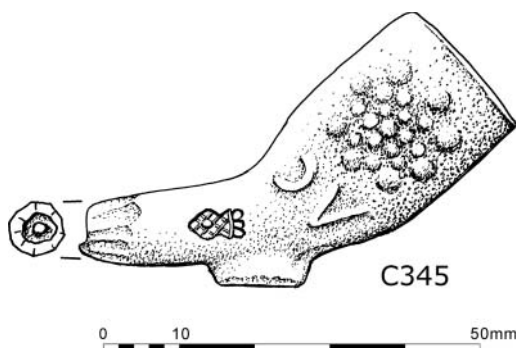


FIG. 17

Bavarian clay tobacco pipe model C345, 1692–99, with inverted initials AG and impressed Bavarian coat of arms with ISC/CBT on the other side (not illustrated). Represented by three fragments from two sites.

were unmarked contraband tobacco and pipes confiscated, but a fine of 60 to 100 times the value of the tobacco was also imposed on the culprit. Repeat offenders were threatened with pillory, prison, forced labour and even whipping. According to a decree issued in 1689, penniless first-time offenders were pilloried with the smuggled tobacco strung around their neck.⁵¹ Culprits could also be denounced in public by having to wear a *Schandkragen*, or ‘collar of disgrace’, a large iron chain on which hung oversized wooden pipes and playing cards to denote tobacco or pipe smugglers and gamblers (Fig. 18).

Needless to say, the *Überreiter* were not treated with either sympathy or respect. Several documents give vivid insights into the turmoil which arose during their inspections. In all the known cases conflict was triggered by clay tobacco pipes. In the summer of 1729 the city of Aichach



FIG. 18

Erding (Lower Bavaria): *Schandkragen* (‘collar of disgrace’), late 17th or early 18th century, used to denounce tobacco and pipe smugglers in public. Inner diameter of chain: c. 0.80m (reproduced by permission of the Bayerisches Nationalmuseum München).

(Swabia) reported that four *Überreiter* entered the *Froschmayrbräu* tavern, which was full of young men drinking. The *Überreiter* checked the smokers' pipes and confiscated one of them, presumably because it did not bear the monopoly mark. A quarrel ensued and the publican threw the participants out of the tavern. Then in front of the building the dispute grew to involve about 80 people and nearly ended in the lynching of the *Überreiter*, who managed to escape.⁵²

CLAY TOBACCO PIPES, THE MONOPOLY AND SMUGGLING

In practice, the Bavarian tobacco and pipe monopoly was almost impossible to enforce because of the electorate's political geography. Seventeenth-century maps of Bavaria look like a patchwork. Countless enclaves and river borders allowed smuggling to flourish. Tobacco and pipes were cheaper and relatively easy to obtain outside the realm.⁵³ The only enforcers, the *Überreiter*, consisted of only 40 men, and were in reality powerless in the face of the electorate's size and topography.

Bavarian clay tobacco pipes are not only valuable dating tools for the archaeologist, but also significant because of their potential to indicate the extent to which Bavarians acquired the monopoly's products or smuggled goods. However, such information is difficult to pin down.⁵⁴ Although contraband clay tobacco pipes of the period from 1675 to 1745 can be recognized by the absence of an *Appaltator*'s mark, only bowls, heels or the front part of the stem were marked. The distribution of sufficiently complete unmarked pipes shows that even in Munich, the capital of the realm, smuggled smoking accessories were used throughout the period of the monopoly (Fig. 19). As most clay tobacco pipes in Bavarian assemblages are very fragmented, presumably many more contraband pipes circulated.

Another way to evade tax may have been to buy pipes with the *Appaltator*'s mark counterfeited, which local potters could easily have made and sold without public servants noticing. Some types may indicate illicit production. Those made in the first half of the 18th century in the Kröning area are plain and without the initials or the Bavarian coat of arms (Fig. 8). Three explanations are possible. They may have been illicit, made between 1717 and 1727 (when the monopoly was substituted by the hearth tax), or destined for export, for example to Tyrol, with which there was a long-established trade in ceramics.

Illicit trade is suggested by the Dutch clay pipes, which were of far better quality and found even in Munich, where the elector's residence was

situated. They were legally imported into Bavaria by Johann Senser & Co. in ever-diminishing numbers and taxed highly.⁵⁵ Some of those found may have been imported by Senser, but others were presumably brought into the country illegally. Other foreign pipes once belonged to alien travellers and soldiers, such as the English pipe made in London around 1700 and lost on the battlefield of Blenheim in 1704.⁵⁶

Bavarian pipes have also been found abroad. Pipes of the earlier phases of Johann Senser & Co.'s *Appalto* (1678–92) have turned up in the four enclaves of Passau (Fig. 15:C119), Freising, Regensburg and Augsburg (Fig. 17:C345). The inhabitants of these cities, who did not have to pay the high monopoly prices, may nevertheless have satisfied some of their demand with Bavarian pipes. However, it is more likely that they were left there by Bavarian travellers.

An unusual burial in the town of Deggendorf in Lower Bavaria may provide another kind of evidence for smuggling. Here clay tobacco pipes may give a clue to the social identity of a corpse. In 1989 in the city's Schaching district 296 burials were excavated from an early modern cemetery. A man in his fifties lay face down in a crouched position and with both arms at an unnatural angle; and he was orientated north–south. Unidentifiable iron fragments were found beneath his stomach (Fig. 20:2). A decayed leather pouch under his right side contained three medallions, cutlery and four coins suggesting a burial date shortly after 1700 (Fig. 20:1). It also held four pipe fragments, three of them non-Bavarian. As Deggendorf was in the electorate, the man may have been smoking pipes which he should not have possessed. The way he was buried suggests he was refused a normal burial. Although other explanations are possible, it has been argued that the deceased was a contrabandist or vagrant living from smuggling tobacco and pipes. These people were considered social outcasts who had neither citizenship nor domicile.⁵⁷

CONCLUSION

Research into Bavarian clay tobacco pipes of the period from 1600 to 1745 started as an artefact study with the aim of establishing a typography and chronology of locally produced pipes, which archaeologists could use as dating tools. The deciphering of the marking system, so far unknown in other clay-tobacco-pipe industries, revealed other aspects, offering insights into changes and processes in Bavarian society during the late 17th

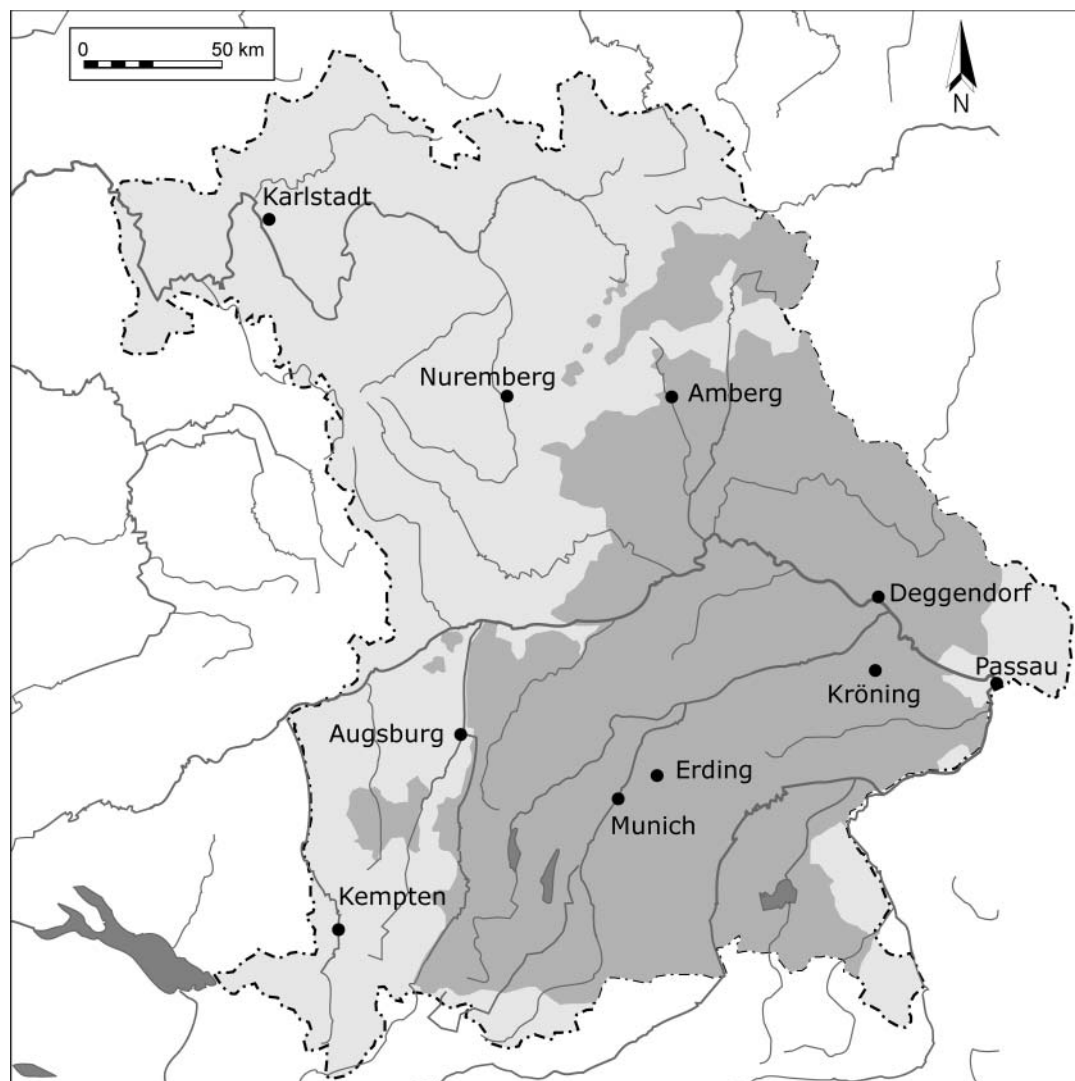


FIG. 19

Distribution in Bavaria of clay tobacco pipes without *Appaltator* marks, 1675–1745. Dark grey: within Electorate of Bavaria and therefore illicit (map, Kristine Ruppel, Römisch-Germanische Kommission, and Thomas Pertlwieser, University of Vienna).

and early 18th centuries. The production and development of clay tobacco pipes were evidently influenced and controlled by the Bavarian state. Not only does their distribution indicate which social groups consumed tobacco and where the pipes of distinctive workshops were produced and traded within the realm, but the pipe-marking system also reveals socio-cultural and political

changes and processes. Unmarked and foreign pipes suggest the criminal circulation and use of contraband. The clay tobacco pipes found in Bavaria symbolize the autarchic nation state and its limits in the face of globalization. This research demonstrates how material culture can illuminate the economic and political structures of an early modern society.

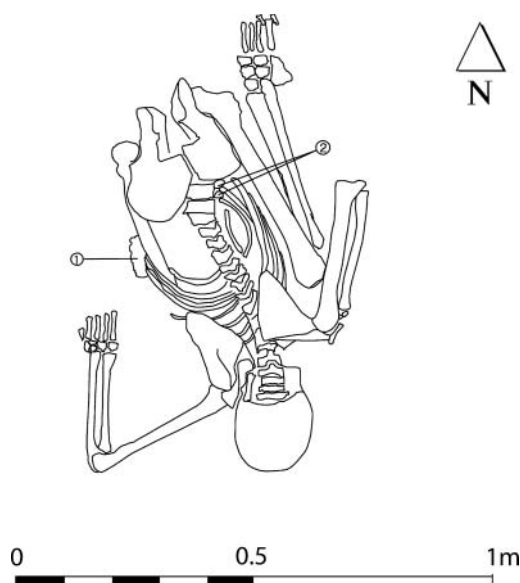


FIG. 20

Schaching cemetery in Deggendorf (Lower Bavaria): some grave goods from a burial datable shortly after 1700. 1. leather pouch containing three medallions, four coins, cutlery and four clay-tobacco-pipe fragments; 2. unidentifiable iron fragments.

ACKNOWLEDGEMENTS

This paper summarizes my PhD thesis on 'Clay Pipes in Bavaria: Chronological and Historical Studies', which was submitted to the Department of Prehistory and Early History, at the University of Kiel in October 2007 (Mehler 2009). I thank the following friends and colleagues for their kind and unfailing support in many different ways: Claus-Michael Hüssen and Gerd Riedel (Ingolstadt), Adi Hofstetter (Passau), Michael Nadler (Munich) and Helmut Szill (Erding). Dorothee Möhle (Ingolstadt) did a fantastic job in drawing the clay tobacco pipes. Thanks also to Paul Mitchell (Vienna) and Paul Courtney (Leicester) for valuable comments and for taking on the difficult task of correcting my English. I also wish to thank Pöschl Tobacco GmbH for their commitment.

NOTES

¹ Albrecht 1998, 199–200, 939–48, 1095, 1098–9.

² Nadler 2007, 15, 32–153.

³ This study formed the basis of the author's PhD thesis. The sample was derived from chance finds (80%) and from archaeological excavations, of which only 10% is stratified.

⁴ Locally produced stub-stemmed pipes can be found all over Bavaria and Austria, but were not part of this analysis.

⁵ On the problem of the different craft terms, see Mehler 2007c.

⁶ Anthropological studies of the Westerwald clay-tobacco-pipe industry have been undertaken by Martin Kügler (1995).

⁷ Mehler 2009, table 11.

⁸ Miller 1980, 1.

⁹ On cognitive classification, see Eggert 2001, 143–5.

¹⁰ Mehler 2009, table 11.

¹¹ Similar semantic problems were experienced by Higgins 1997, 130–1.

¹² Duco 1987, 27.

¹³ Kluttig-Altman & Mehler 2007.

¹⁴ Sangmeister 1967, 211; also Eggert 2001, 142.

¹⁵ Stressed by Eggert 2001, 199.

¹⁶ Ettlinger *et al.* 2002, 44–5, 148–51.

¹⁷ Mehler 2009.

¹⁸ Mehler 2009, table 10.

¹⁹ Mehler 2009, figs 56–60, 62–4.

²⁰ Duco 1987, 27; Oswald 1975.

²¹ Mehler 2009, fig. 25.

²² Barker & Majewski 2006, 226.

²³ On the clay-tobacco-pipe industry in Westerwald, see Kügler 1995.

²⁴ Schultheiß 1956, 32–3. For other examples of written sources mentioning local clay-tobacco-pipe production in Bavaria, see Mehler 2009, ch. 11.

²⁵ Mehler 2007b.

²⁶ The analysis was carried out by Gerwulf Schneider, Berlin. Chemical elements listed in Mehler 2009, tables 9–10.

²⁷ For Bavarian pipe-clay deposits, see Mehler 2009, table 7.

²⁸ Albrecht 1998, 63–7, 577.

²⁹ Nadler 2007.

³⁰ Mehler 2009, ch. 14.1.

³¹ Mehler 2009, table 1.

³² e.g. Balde 1657.

³³ Archduchess Maria Anna of Austria (1610–65) was the second wife of Elector Maximilian I and mother of his successor Ferdinand Maria. After Maximilian's death in 1651 she acted as regent until her son could succeed his father in 1654 (Albrecht 1998, 163).

³⁴ Nadler 2007, 16.

³⁵ e.g. Nadler 2007, 48–153. With the exception of Bavaria and Prussia Germany was a free-trade area for tobacco (Goodman 1994, 214).

³⁶ The Italian term *appalto* means a contract or farm and in Tuscan dialect the place where state-monopoly products are sold (Zingarelli 1970, s.v.). It probably derives from the Latin *ad-pactum*; during the period of the electorate of Bavaria the term was used to

describe the state-run tobacco monopoly (Nadler 2007, 296).

³⁷ Even in remote Iceland attempts were made to cultivate tobacco in the early 18th century (Mehler 2002, 65–6).

³⁸ Nadler 2007, 14–15. On Becher and cameralism, see Johnson 1964; Wakefield 2005.

³⁹ Nadler 2007, 15.

⁴⁰ e.g. the 1692 inventory of the electoral tobacco stock (Mehler 2009, ch. 14.7). As well as various kinds of tobacco, it lists more than 145,000 locally produced clay pipes and only 400 imported from the Netherlands.

⁴¹ Nadler 2007, 51–5; Mehler 2009, ch. 14.2.

⁴² Nadler 2007, 51–72.

⁴³ von Zwehl 1983.

⁴⁴ von Freyberg 1836, 451. For a list of tobacco factories in Bavaria, see Mehler 2009, table 2.

⁴⁵ Nadler 2007, 94–106.

⁴⁶ Nadler 2007, 106–53. The monopoly ended in 1745 but was revived for a short period between 1769 and 1772 (Nadler 2007, 171–83).

⁴⁷ There were no tobacco monopolies in the Netherlands and England (Goodman 1994, 214).

⁴⁸ Micheler 1887, 21; Mehler 2009, ch. 14.5.

⁴⁹ Mehler 2009, ch. 7.18; Nadler 2007, 125.

⁵⁰ Nadler 2006, 11.

⁵¹ Nadler 2006, 8–10.

⁵² Nadler 2007, 235.

⁵³ e.g. in 1678 a Traunstein merchant illegally imported 340lb (c. 150kg) of tobacco from Salzburg (Rosenegger 1999, 123).

⁵⁴ On the problem of distinguishing legally from illegally traded items see Deagan 2007, 102.

⁵⁵ Mehler 2009, ch. 14.7.

⁵⁶ The only English example so far found in Bavaria (Mehler 2006).

⁵⁷ For further information on the burial see Mehler 2007a, 28–31. For contrabandists and vagrants in early modern Bavaria, see Küther 1983, 8, 65, 73.

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SUMMARY IN FRENCH, GERMAN, ITALIAN AND SPANISH

RÉSUMÉ

L'archéologie du mercantilisme: les pipes à tabac en terre cuite de Bavière et leur contribution à un système économique

Basé sur les premières recherches extensives sur les pipes à tabac en terre cuite bavaraises datant de 1600 à 1745, cet article synthétise les sources écrites et la culture matérielle avec pour objectif non seulement de contribuer aux études de céramiques postmédiévales, mais aussi d'examiner la mise en œuvre et l'impact d'un monopole du tabac dans un état moderne. Après la présentation de la méthodologie, les pipes sont examinées en tant que moyens pour des actions mercantiles et en tant que révélateurs de changements socioculturels. L'archéologie des pipes à tabac en terre cuite bavaraises met la lumière sur l'opération d'un système économique et sur des activités seulement partiellement rapportées ou non telles que la contrebande et la fabrication illégale.

ZUSAMMENFASSUNG

Die Archäologie des Merkantilismus: Tonpfeifen in Bayern und ihr Beitrag zu einem wirtschaftspolitischen System

Der Artikel basiert auf der ersten umfassenden Studie zu bayerischen Tonpfeifen aus der Zeit von 1600–1745. Dabei werden Schriftquellen mit Sachkultur gemeinsam analysiert, um nicht nur

einen Beitrag zur Erforschung neuzeitlicher Keramik zu leisten, sondern auch um die Umsetzung und die Auswirkung des Tabakmonopols innerhalb der neuzeitlichen Gesellschaft aufzuzeigen. Nach einer Diskussion der Methodologie erfolgt die Darstellung der Tonpfeifen als Medium für merkantilistische Handlungen und als Anzeiger für soziokulturelle Veränderungen. Somit macht die Archäologie der Tonpfeifen Bayerns nicht nur die Durchführung eines wirtschaftspolitischen Systems deutlich, sondern auch Handlungen, die nur teilweise oder gar nicht in Schriftquellen erwähnt sind, wie z. B. Schmuggel und illegale Produktion.

RIASSUNTO

L'archeologia del mercantilismo: pipe da tabacco di ceramica in Baviera e il loro contributo al sistema economico

Basandosi sulla prima ricerca estensiva sulle pipe da tabacco bavaresi databili fra il 1600 e il 1675, questo articolo è una sintesi delle fonti scritte e dei dati della cultura materiale e si propone come scopo, non solo di contribuire agli studi sulla ceramica post-medievale, ma anche di esaminare l'installazione e l'impatto di un monopolio del tabacco all'interno di uno stato della prima età Moderna. Dopo le considerazioni di carattere metodologico, le pipe sono prese in esame come

mezzo per azioni dettate dal mercantilismo e come indicatori dei cambiamenti socio-culturali. L'archeologia delle pipe da tabacco bavaresi chiarisce le dinamiche di questo sistema economico e di operazioni solo in parte documentate — o non documentate — come il contrabbando e la manifattura illecita.

RESUMEN

La arqueología del mercantilismo: pipas de arcilla de fumar en Bavaria y su contribución a un sistema económico

Basado en el primer estudio exhaustivo de pipas de arcilla de fumar en Bavaria fechadas entre 1600 y

1745, este artículo resume fuentes escritas y cultura material con el objeto contribuir a los estudios ceramológicos postmedievales, además de examinar la implementación e impacto que tuvo un monopolio de tabaco en un estado de principios de la Edad Moderna. Tras la metodología, las pipas se estudian como un medio conductor de las acciones dictadas por el mercantilismo y como indicadores de cambio socio-cultural. La arqueología de las pipas de arcilla de fumar en Bavaria nos ilumina en las operaciones de un sistema económico y actividades, parcial o totalmente recogidas en las fuentes, tales como el contrabando y manufactura ilegal.

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