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Cover Page Footnote
I would like to express my gratitude to the late Maurits van Lennep, who made an (unpublished) study of 17th- and 18th-century TIel. Ian and Cees van Lidth de Jeude showed me the historical studies of the family. Sebastiaan Ostkamp (ROB, Dutch State Service for Cultural Heritage, Amersfoort) helped in every way with the plates and text. Further thanks for corrections go to Cora Laan (Erasmus University, Rotterdam), Arnold Carmiggelt (The Hague), Wim Veerman (Town Archives, Tiel), Jaap Kottman (ROB), Michael Klomp (Archeological Service, Zwolle) and Hans van der Meulen (PKN, Dutch Pipological Circle) for reading and commentating on the text. The flora and fauna discussions were made possible with the help of Henk van Haaster (BIAX, Zaandam) for which I thank him. The pictures and maps were made by the ROB photo service and Hidde Heikamp (SPA, Foundation for the Promotion of Archaeology). Finally I would like to thank Gavin Williams (ADC, Archaeological Service Center, Bunschoten) and Paul Huey (Cohoes, N.Y., U.S.A.) for editing and correcting my English.

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The Van Lidth de Jeude Family and the Waste from Their Privy: Material Culture of a Wealthy Family in 18th-Century Tiel, the Netherlands

Michiel H. Bartels

This study uses the comprehensive material culture of the 18th-century privy of the regent family Van Lidth de Jeude in Tiel (the Netherlands). The analysis takes advantage of the secondary sources that are common in the Netherlands to evaluate the privy contents. The archaeological finds are interpreted with the aid of historical documents, contemporary literature and probate inventories, and the content of the privy is set against the background of an 18th-century provincial town in the heart of the Netherlands. This combined study reveals much surprising information about the daily and private lives, personal history, gender aspects and socioeconomic status of the Van Lidth de Jeude family.

Cette étude offre une analyse détaillée de la culture matérielle comme il est d'usage aux Pays-Bas afin d'analyser le matériel mis au jour lors de la fouille de la latrine du XVIIIe siècle de la famille régente Van Lidth de Jeude de Tiel, aux Pays-Bas. En combinant les méthodes analytiques dans l'étude du matériel avec les inventaires homologués et le matériel trouvé dans la latrine, le contenu de la latrine est examiné à la lumière du contexte d'une ville de province du XVIIIe siècle au cœur des Pays-Bas. L'étude et la comparaison de toutes les catégories d'artéfacts avec les données historiques ainsi que les inventaires homologués révèlent bien des informations et soulèvent plusieurs questions à propos de l'histoire de la famille Van Lidth de Jeude.

In deze studie is gebruik gemaakt van de veelomvattende materiële cultuur van een 18de-eeuwse beerput van de Tielse regentenfamilie Van Lidth de Jeude. Bij analyse zijn de in Nederland veel voorkomende secundaire bronnen gebruikt om de opgegraven inhoud te evalueren. De archeologische vondsten worden geïnterpreteerd door gebruik te maken van historische bronnen, literatuur van tijdgenoten en boedelinventarissen. Hiermee wordt de opgegraven inhoud van de beerput in de historische context van een 18de-eeuwse provinciestad in het hart van Nederland geplaatst. Deze gecombineerde studie leidt tot veel verassende informatie over het dagelijkse en privé leven, de persoonlijke geschiedenis, de gender aspecten en de welstand van de familie Van Lidth de Jeude.

People, privies, and probate inventories

In the town of Tiel, located in Gelderland in the central Netherlands riverine area (FIG. 1), a large privy was excavated during an archaeological project in 1995. The privy was situated on the lot of a mansion at the Koornmarkt (Wheat Market). It was immediately apparent that this was not an ordinary privy; the content was extremely rich and varied. Within a few weeks it was possible to date this 18th-century privy using historical sources to the period 1701–1778. The privy and the objects it contained had been used by the regent family, Van Lidth de Jeude.

The excavated material proved to be suitable for answering a range of questions usually posed by archaeologists, such as the provenance, use, and status of the material. Also, more detailed questions about gender, growth of the household, and family life could be answered. These questions are presented against their historical background with the help of local historical sources and the study of probate inventories for the central and eastern portion of the Netherlands.

Dutch historical archaeology and the study of material culture are underdeveloped. Central questions or aims within the discipline are lacking. Within the field of privy research a general methodology and academic goals are also needed. This problem extends from the way material is collected to the manner in which it is finally studied and presented. The Dutch archaeologist and historian Arnold Carmiggelt has stressed this point. Recently he initiated controversy by suggesting that, as long as there is an absence of questions to discuss and of common goals within the disci-

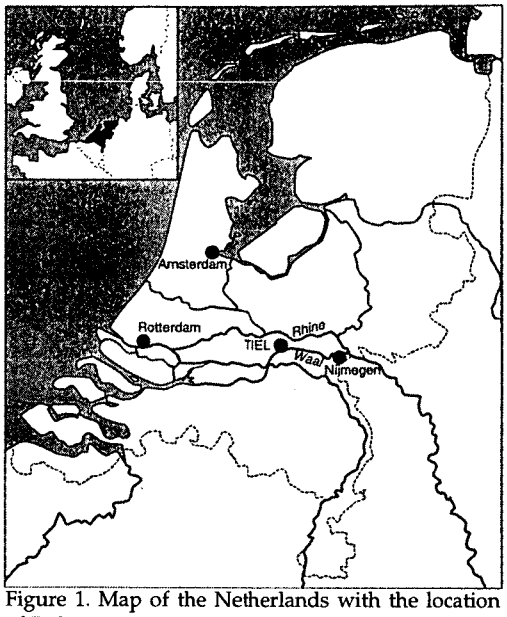


Figure 1. Map of the Netherlands with the location of Tiel.

pline, historical archaeology in the Netherlands will remain at a low level (Carmiggelt 1998: 22). Susie West indicates that for England such discussion and internal debate in historical archaeology has only recently started. The aim of "postmedieval" archaeology is, according to her, "to put the material results of human action in context, ...to gain information about placements of artifacts, structures and features in relation to each other ... [and] to find material evidence from things people construct, own, modify or discard." Central to this are the changing social, political, and ideological patterns and the creation of a modern identity. Answers to these questions can be reached only by studying social construction, kinship, work relations, leisure time, and political opportunities (West 1999: 2–3).

The value of privy research can be realized only by setting the material within a historical context using, for example, probate inventories. However, examples of well-excavated and documented privies for which there are associated probate inventories dating from the same period are rare (Laan 2003). For the 18th-century, a century where many properly excavated privies and useful probate inventories are available, one goal should be to associate the contents of a privy to specific inhabitants and not the owners or landlord of the lot or house. This association can then be used to reconstruct the actual historical and social background of the inhabitants as consumers. Through analysis of the material, recognition of different functional elements or activities within a household can further refine the interpretation of the records, clarifying the roles of men, women, children, servants, etc. in a household. As more and more privies of a specific period in the Netherlands are analyzed and compared, regional, economic, and other cultural differences will come to light.

The first rule of privy research is to insure proper excavation and consistent study of the material so that the data can be compared later. Since the early 1970s, hundreds of privies have been excavated by archaeologists (FIG. 2). More than that have been looted by treasure hunters. Looted privies have, from an academic point of view, no value. Of the privies excavated by archaeologists until now only a few hundred have been published. Current privy research has four levels. The most basic level is that of dating and inventorying the ceramics. An example is the series *Corpus Middeleeuws Aardewerk* (Corpus of Medieval Pottery) (see Hupperetz 1998). At the second level, artifact categories such as glass and metal are studied. The popular method for this is use of the Deventer System. This system generates a typological chronology and allows comparison between assemblages (Bartels 1999: 425–426). The third level addresses not just the artifacts but also the flora, fauna, and waste groups, as, for example, in Veere (Vreenegoor and Kuipers 1996) and in Amsterdam (Baart, Krook, and Lagerweij 1986). The fourth level, which associates all the categories of artifacts with the historical documents, is seldom reached (Bitter, Dijksta, and Roedema 1997; Ostkamp, bitter, Roedema, and Van Wilgen 1998).

Two schools have emerged in the study of probate inventories: the cultural historical approach and economic-historical approach (compare Dibbits 1998 and Schuurman 1989). There is also a difference due to the historical periods. Until the mid-16th century, probate inventories exist only for the upper classes. Around 1600 more probate inventories began to be drawn up to divide inheritances prop-

Figure 2. Watercolor painting of the privy and some items recovered from it. Painting by Petra Werkman, 1995.

erly. From the 17th to the 19th centuries the making of a probate inventory was in many households a standard procedure. Two kinds of inventories that must be distinguished are those from the countryside (Schuurman 1989) and those from towns (Dibbits 1998; Koolbergen 1997; Voskuil 1997; Wijsenbeek-Olthuis 1987). With urban inventories the historical period and the location of the town is important. From a South Holland town such as Delft a picture emerges that is different from that of the Gelderland town of Doesburg, for example. The economic role of the two towns in the 18th century was different, resulting in a difference in the pattern of consumer behavior in the two populations.

The way a probate inventory was recorded may also depend on the personal bias of the official. Family and relatives may stress some points more than others. On a farmstead the stock, fields, and machines will be more important than the cups and saucers, while in an urban context the bedclothes and utensils prevail. The route that was followed in making an inventory is also significant. From this the rooms and spaces can be reconstructed, something that usually is not possible with privies (Laan 2003). Of course, the location of a privy is also significant as a factor that determined the content of the privy. By comparing probate inventories by town, period, and economic group, it is possible to observe a certain regularity and variety.

Wijsenbeek discovered that in 18th-century Delft, five economic classes could be discerned. These classes underwent change in three developmental periods. The poorest, the so-called "pro-deo" group, did not possess in the beginning of the century the most important utensils such as cups and glasses. By the middle of the century they had items such as curtains, matting, and decorative porcelain and Delftware ceramics. The few mattresses that were present were of inferior quality. Iron cauldrons were used for cooking, and the entire family ate directly from the pot. Sometimes the poorest households possessed redware bowls, simple glasses, and cups with handles. At the end of the century in this group furniture including tables and chairs could be found everywhere, and this group also possessed many statuettes (Wijsenbeek-

Olthuis 1997: 210–212.). In the second to poorest group at the beginning of the century, the possession of furniture was extensive, and almost everyone had bed clothing. In the middle of the century an economic decline occurred, visible in the amount of decorative ceramics and tablewares. The numbers of paintings and pieces of furniture such as chairs also declined. In the third group, the lower middle class, a steady increase of wealth could be witnessed, however. Every member of the family had his or her own bed clothing and other private goods. This continued through the entire 18th century. The middle and upper middle classes lived in a less sober manner. Naturally they possessed luxury goods as tablecloths, silver cutlery, and forks. The amount of decorative Chinese porcelains at the start of the 18th century was extensive, while at the end of the century porcelain was regarded as vulgar and lost status. In the upper class an excessive amount of furniture, table silver, paintings, sculptures, and, above all, decorative and table porcelains could be found. With jewelry and accessories it is apparent that as the century passed the amount of diamonds grew, leaving pearls second. At the end of the century some austerity can be detected in the areas of decorative items, ceramics, and miscellaneous items (Wijsenbeek-Olthuis 1997: 213–215). A similar process occurred among the upper middle classes and upper classes in Doesburg (Dibbits 1998: 301).

Eighteenth-century Tiel

The discovery of the privy at the Koornmarkt

In the spring of 1995 the R.O.B. (the Dutch State Service for Archaeology) dug a test trench perpendicular to the Koornmarkt. The primary goal was to determine if the Ottonian layers (900–1050) at a depth of 2 m or more below street level were still intact (FIG. 3). Attention was also given to the upper strata with the late- and post-medieval periods. The full length of the trench revealed a garden wall from a former mansion (FIG. 4). Such 17th- to 18th-century garden walls are typified by their buttresses. Some have survived to the present day (FIG. 5), despite the fact that the town of Tiel was 80% destroyed in 1944 and 1945. No building escaped the war undamaged. On the east side of the garden wall a rectangular privy had been built. This privy most probably had

Figure 3. View of the privy excavations underway shortly after its discovery. The person on the right is sifting.

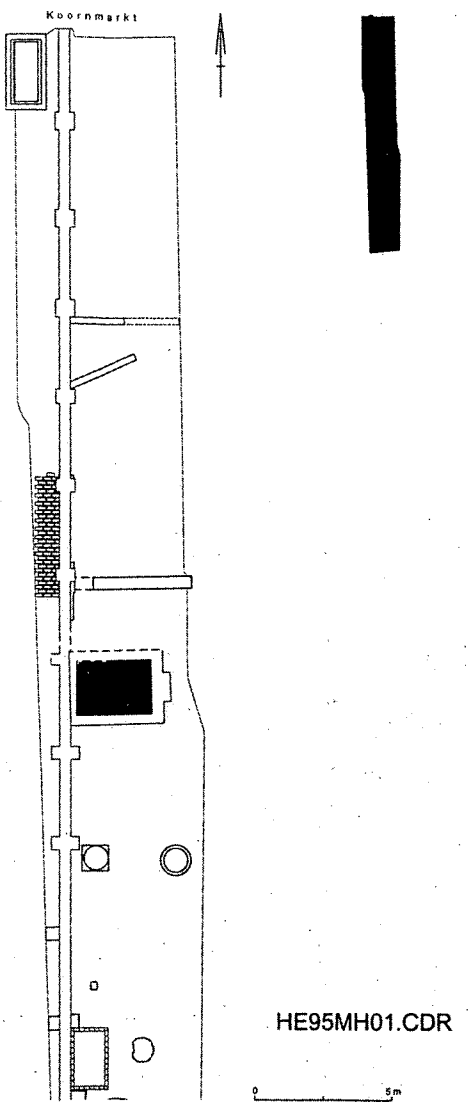


Figure 4. Plan of the excavation area, with the privy interior shaded black. To the left of the privy the garden wall runs the length of the excavation.

one chute. To the south was located a water cistern. The privy had a vault that had collapsed or was demolished in the late 18th or 19th centuries, a date that was determined from the ceramics and pipe bowls. Due to the fall of debris from the vault, almost the entire fill of the privy was mixed. The stratigraphy was therefore lost. In the fill of the privy small red chips could be seen. These chips were complete or fragmented lacquer seals from letters. The entire privy was carefully excavated. Leather, wooden objects, textiles, large bones, and glass objects were collected by hand excavation together with the ceramics. Approximately 4 cubic m of the fill were sifted through a 4 mm mesh, and some was kept for ecological analysis. Of this fill approximately 1 cubic m of residue was left behind after sifting. About 25% of this residue consisted of cherry pits.

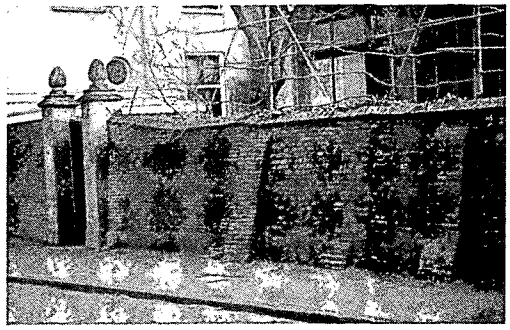


Figure 5. One of the few old garden walls still remaining on the Binnenmolenstraat in Tiel.

The lacquer letter seals were stabilized immediately and were partially analyzed, initially by Maurits van Lennep. These lacquer seals, used to seal letters, are commonly recognized and identified as "sealing wax," but they are actually not wax at all. This sealing wax was made of "lacca, or lac," a secretion produced by certain tiny insects in the East Indies. (A different type of sealing wax was made from a mixture of bees wax, turpentine, olive oil, rosin, and coloring.) (Anon. 1771: II, 858; III, 938). Ceramics, glass, and the other categories of artifacts then followed the stabilization of the lacquer seals. The arms that were depicted on the majority of the letter seals appeared to be identical; chattillon arms with three vertical poles and "fragments of fur" above the figure of a jumping fox (FIG. 6). This coat of arms belonged to the regent family of Van Lidth de Jeude. Three stoneware decanting bottles were also discovered (s2-fle-10) with the initials CPVLDI (Cornelis Philip van Lidth De Ieude) in cobalt blue. (The artifact code number "s2-fle-10" is from the Deventer System, explained in the appendix.) Historical research in the town archives indicated that a large house once stood on this lot. On December 18, 1701, it was given to Cornelis Philip van Lidth de Jeude (born October 23,

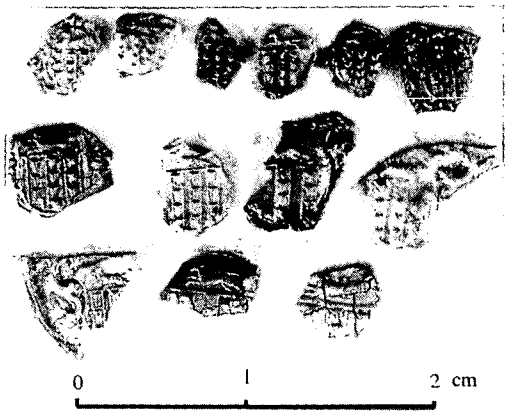


Figure 6. Lacquer seals with the coat of arms of the Van Lidth de Jeude family.

1670; died August 27, 1737) and Margaretha Christina Wijnen (born April 28, 1679; died January 26, 1754) by her family as a wedding present. The mansion had a value of 3,000 Dutch guilders (#316, no. 417, verponding fol. 10+11:19, County Archives, Tiel). With this evidence the users of the privy can be identified as the Van Lidth de Jeude family. Occupation of the house by the family ended in 1778, when Henrica Wilhelmina, the last unmarried daughter from the marriage of Cornelis and Margaretha, passed away.

Tiel and the Van Lidth de Jeude family in the 18th century

To understand the Van Lidth de Jeude family in 18th-century Tiel, it is first necessary to understand the town and its community in that period. Tiel is situated on the northern bank of the river Waal, which is the lower course of the river Rhine, where the river Linge branches off into the hinterland of the Betuwe. The Waal is the main waterway between the North Sea and coastal towns such as Dordrecht and Rotterdam in the west. To the east are Nijmegen and the German Rhineland with major towns including Duisburg and Cologne. In the early 18th century, Tiel was politically situated in the Republiek der Verenigde Nederlanden (Republic of the United Netherlands), in the state of Guelders (Gelderland). In this state Nijmegen was the most important town, followed by Tiel, Arnheim, and Zutphen. Tiel was situated in the district of the Lower Betuwe (Ambt Nederbetuwe) in the quarter of Nijmegen (Kwartier van Nijmegen). The entire area around Tiel, between the rivers Lek and Waal, belonged to this district. The population of Tiel and the Lower Betuwe in 1795 numbered 3,203 plus 7,761, or a total of 10,964 people (Gorissen 1956: 9). The political power of Tiel was nevertheless very limited compared to Nijmegen and the coastal provinces.

In the 17th century, the Dutch Golden Age, the town could be characterized as the seat of the local peers and wealthy patricians. The local companies and factories produced exclusively for the local market (Lennep 1978: 156). This is in sharp contrast with the large factories and companies in Holland and Zealand that produced for the European and world markets. Tiel was a minor participant in trade, and those who wanted to participate in an enterprise went to Nijmegen, Dordrecht, Wesel, or Bremen (Lennep 1978: 163). In the 17th century, the town was almost in a state of collapse, caused by economic depression, and many houses became derelict (Lennep 1978: 167). Tiel in the 18th century can be characterized as a provincial town with regional importance (Boomgaard and Lases 1993: VIIb-1). Population growth occurred in the 18th century due to a revival of agriculture and animal husbandry. After the cattle plague of 1710 the entire district of the Lower Betuwe revived. Service and small-scale industries such as breweries and oil mills also flourished.

The four classes

In general four population classes can be defined in the 18th-century Netherlands. Naturally, within these groups many subtle distinctions can be made. The upper class consisted of the peerage (high nobility), the gentry (lower nobility), and the aristocracy or regents (non-peer). Some lived from private means; others relied on their income. The peers in Tiel were the counts of Van Welderen and Van Brakel, whilst the Van der Steen family was gentry and the Van Lidth de Jeude family regents (FIG. 7). The upper class consisted of about 20 families who divided among each other the important and most profitable jobs. The petty bourgeois, including shopkeepers and retailers, was much larger. Primarily this

middle-class, literate group held civil service positions or owned a medium sized or small company. The artisans and workmen made up the lower class. Usually they worked for someone or had their own small businesses. The last group were the poor and the paupers, a group that was relatively small in the early 18th century but increased after 1750.

The population figures for Tiel in the 18th century through 1810 were: 1700 = 2000; 1750 = 2500; 1796 = 3203; and 1810 = 3877.

The social geography of the population

The inhabitants of Tiel lived in different quarters, streets, and alleys according to class. Class distinction could differ within quarters or even streets. In the 18th century the wealthiest lived near the *Burense Poort* (Buren Gate) on the Hoogeinde. This was within the town walls and was the most spacious and comfortable location (now it is St. Walburgstraat/Kalverbos). Prices for the houses in the early 19th century were as much as 10,000 Dutch guilders (fl.). The wealthy lived on the Ambtmansstraat-Koornmarkt (FIG. 8). This street is still broad, and the mansions have extensive gardens. Prices for houses could range from 2,000 to as high as 5,000 Dutch guilders (FIG. 9). The Van Lidth de Jeude family had their mansion on the Koornmarkt. Comparing prices in Tiel with those in Amsterdam, a house in Amsterdam of the same size in the same period would cost between fl. 25,000 and 30,000, although it must be taken into account that about 20% of the building costs in Amsterdam went for foundations. This was not necessary in Tiel. Middle class streets were Agnietenstraat and Weerstraat. On the Weerstraat the quality shops were also located. Tolhuisstraat, a long and narrow street, was inhabited by the lower middle class and had small grocery and professional shops. The Waterstraat was one of the cheaper streets, where the lower middle class and the workers lived. In this street an average house in the 18th century cost around

Figure 7. The Van Lidth de Jeude family painted by W. Kessel in 1724. From left to right are Henrica Wilhelmina, Johan Richard, Philip François, Magteld, Cornelis Philip, Christina Margaretha, Willem Albert, Margaretha Egelbertha, Cornelis Everhard, Bernd, and Christiaan Osewald (as an angel floating above).

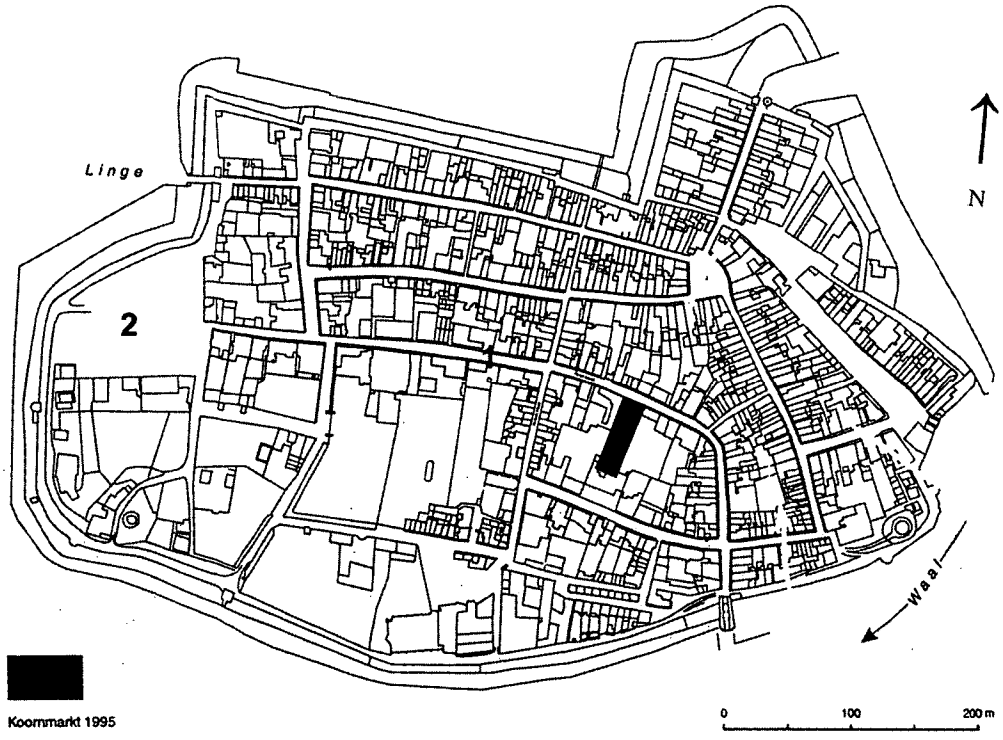


Figure 8. Map of Tiel, Gelderland, in 1830, showing the locations of the Ambtmansstraat-Koornmarkt (1) and the Kalverbos (2). The blackened area is the location of the excavation.

fl. 50. The poor lived mostly in Zandwijk, a quarter on the northeastern edge of Tiel.

The economic and political position of the family

Pols has defined the regents' class for 18th-century Gelderland. Regents had to be wealthy, and this wealth had to be well exposed. It was necessary to hold an important position in one of the local, provincial, or national governing bodies and to hold a seat in councils or commissions. The regents' lifestyle distinguished them from the rest of the population by their use of status symbols such as clothing, housing, and speaking French. The political attitude was conservative and Protestant Reformed. The regent had a family coat of arms and an academic title, preferably in law. For the men, membership of the local club was usual. The Groote- or Heeren Sociëteit (Men's Club) in Tiel was established in 1764. Of the 38 first members, five came from the Van Lidth de Jeude family. The formation of clubs and societies was a general phenomenon in the Netherlands. The local élite distinguished themselves by such activity from the rest of the population. The élite could encounter each other in a relaxed environment, read or hear the latest news, or have a drink together (see Smit 1989: 7–13). Sons would go to the Latin School and later on to one of the universities. Girls were taught at

Figure 9. View of the Koornmarkt from the west about 1900. The photographer was standing in front of the family's house.

home by a governess where they learned French and German, to dance, to draw, to play music, to do needlework, and, above all, to learn polite behavior. It was indispensable to have property including a mansion in the town and an estate in the countryside, together with a large area of land. If possible the family had a carriage, a chaise, some horses, and sometimes even a small yacht. Having two to five servants in the house was common (Pols 1996: 103).

The Van Lidth de Jeude family was among those regents mostly in the local governing bodies. The highest government in the town was the Magistrate, selected from the peers, aristocracy, and upper middle classes. The Magistrate consisted of seven burgomasters, alderman, and councilors. Two of those were "governing burgomasters" of which one was the chairman of the Magistrate. Cornelis Philip and later Johan Richard van Lidth de Jeude were burgomasters but never dominated the Magistrate. Arent van den Steen was one of the most powerful figures in the body. Oligarchy, nepotism, and the "old-boy-network" were typical of the Magistrate. This nepotism is illustrated by an act in November 1722, when bailiff J. van Welderen stepped down from his office and handed the office over to his son. Van den Steen and Cornelis Philip van Lidth de Jeude, absent at this meeting, disagreed over this matter. The decision was, however, pushed through (Ranshuysen 1993: VIIa-3).

In the 18th century the Van Lidth de Jeude family was Protestant. Their family name, consisting of two names, might suggest otherwise. "Van Lidth" simply means "from the village of Lidt," which is a village still located on the south bank of the lower course of the River Maas, some 5 km south of Tiel. The second part of the name, "De Jeude," appears in 1301 in the archives of Flanders and the Netherlands. From then on the name appears as "De Jode," "De Joode," or "De Joede." The name meant in Dutch "the Jew." No evidence of Jewish religion or descent within the family has yet been found, however. The earliest De Jeudes were probably Catholic along with most of the population before the Protestant Reformation of the late 16th century.

Important functions within the town council were those of the judge, town secretary, registrar, tax officer (*kwartiersontvanger*), and commander of the local garrison. The career of Cornelis Philip van Lidth de Jeude commenced as vice secretary. Between 1668–1702 he became secretary of Tiel and Zandwijk. He succeeded his stepfather in 1702 as "Head of Taxes of the Quarter of Nijmegen in Tiel," and he stepped down from this office in 1727. From 1716 until his death in 1737 he was councilor in the local government in Tiel. He occupied the office of Burgomaster in 1718, 1719, 1731, and 1732. Apart from the positions as Burgomaster, members of the Van Lidth de Jeude family also held the office of Head of Taxes (Lidth de Jeude, Lidth de Jeude, and Lidth de Jeude 1995: bijlage 1a-22). This duty was to make certain that each year the amount of tax set by the Quarter of Nijmegen was raised in the Lower Betuwe district and the town of Tiel. This was a risky task. The Head of Taxes subscribed the set amount and had to secure the amount with his own property and cash. When he was believed to be trustworthy and wealthy enough, the Quarter of Nijmegen elected him as Head of Taxes (Ontvanger Generaal). In case the set amount was not raised, the difference had to be made up at his own expense. More taxes could be levied to cover this risk, and the profit could increase to 10 or 20% of the total sum. In the depression years before 1710 the levied amount varied between fl. 60,000 and 70,000. Regularly the family had to put in their own capital to reach the set sum. After 1710 nice profits were made.

The actual collection of the tax in the town was done by the so-called "*suppoosten*" and in the countryside by the village collectors (*dorpsontvangers*). They received a percentage of the levied tax, as this was also a dangerous job. The money of the entire district was kept at the house on the Koornmarkt. In the profitable years an amount of fl. 6,000 to 12,000 could be made, a substantial amount of money at that time.

Apart from their income as Head of Taxes, the family also had their properties. The value of the mansion on the Koornmarkt in the 18th century could be estimated between 3,000 and 5,000 guilders. Besides the house, the family also owned the estate and farm De Grote Brug,

on the Grotebrugse Grindweg, the road towards Amerongen, with many acres of land and with leasehold farms and tenants on it. The average price of an estate in Gelderland was fl. 15,000 (Pols 1996: 106). The estate is still the property of the family. The farm was only recently demolished and much of the land sold. The tenants of the family paid them twice, first for the lease of the farm and land and secondly the district tax.

The personal property of Cornelis Philip and Christina can be estimated between fl. 30,000 and 40,000. Based on this figure, it is obvious that the family was extremely wealthy.

Growth and education of the family

Cornelis Philip was a lettered person. Before he wed Chistina on December 18, 1701, he obtained his degree in law at Utrecht University with the thesis *De tacito sive legali pignore*. His wife Christina was not academically educated but was most probably taught by a governess. The marriage was, with nine children, fruitful. The first daughter, Henrica Wilhelmina, lived from her birth (March 1, 1703) until her death (October 22, 1778) in the Koornmarkt mansion. She never married and had no children. In the family painting she sits at the far right. The second child was Jan Richard (July 18, 1704). He married on January 6, 1728, a noble lady, Maria Rachel Biël, and left home. They had three children, and from them the majority of the Dutch branch of the family descends. He followed his father as Head of Taxes. In the painting he stands at left with a long fowling piece at ease. The third child, the second daughter, was Megteld (born March 19,1706; died May 24, 1761). Like her older sister, she never married, had no children, and lived until her death at the Koornmarkt. She is standing to the left behind her father with a cake on a plate held in her hands. The fourth child was Margaretha Engelbertha (born July 11, 1707; died October 9, 1766), and like her two older sisters she remained unmarried. The fifth child and second son was Cornelis Everhardt (born June 9, 1709). He remained unmarried as well but became, with his brother, Head of Taxes in 1727. As an unmarried man he stayed with his unmarried sisters in the Koornmarkt mansion until his death on September 12, 1770. The sixth child and third son, Bernd (born July 21, 1710; died January 15, 1737), served in his short life as a lieutenant in the Dutch State army with the Holland infantry regiment of De Malprade en De Guy. His younger brother, and the fourth son, Philip François (born March 18, 1712; died January 10, 1739) was also a soldier and served as a lieutenant with the Holland regiment of Doys. Both were raised at home but later on were sent to wherever the regiments were quartered. In the family painting Bernd stands on the far left, and Philip François is the third from the left.

The fifth son and the eighth child, Willem Albert (born March 5, 1713; died December 28, 1778), went far in life. He gained his degree in law in Utrecht and became head of the import and export taxes (Controleur der Convooien en Licenten) of Tiel in 1742. He married Juliana van Vinceler on June 14, 1743. From this marriage one son was produced, the father of the still-surviving branch of the family. After his marriage he left the house at the Koornmarkt. He then filled functions within the local government such as alderman, and he occupied the position of burgomaster in 1751, 1752, 1764, and 1773. Later he was director (*bewindhebber*) of the WIC (West India Company) and VOC (East India Company). Willem Albert is in the painting as a little boy in front of his mother. The ninth child and youngest son, Christiaan Osewold, had a very short life (born January 6, 1715; died June 18, 1715). He is painted as a little angel floating above the family. Data on the family have been taken from the 19th-century handwritten "Familieboek Van Lidth de Jeude" (Lidth de Jeude, Lidth de Jeude, and Lidth de Jeude 1995: I, bijlage IA-20-28; Maurits van Lennep, personal communication).

Organization of the household

From 1701 to 1737 the household management was probably in the hands of Christina. Besides her tasks as mother of eight children, she presumably dealt with the finances and organization of the household. The purchasing of goods, the menu, the reception of guests, and the supervision of the servants were her

responsibilities. How many servants were active in the household is unknown. Usually there were a valet for the master of the house, one kitchen maid, and two cleaning maids (Pols 1996: 94). Families of the high peers usually had approximately five servants. The wages of the servants were around fl. 60 per annum per person, and so relatively cheap. On special occasions additional servants were hired. The laundry, cleaning, cooking, shopping, receipt of messages, and food service itself was more than enough work for a day. It is not known if all or which activities took place in the house, in the annexes, or in the courtyard. The two outbuildings that can be seen on 18th-century maps could also have served as a horse stable/carriage shed, summer kitchen, laundry facility, or chicken shed. The family possessed probably one carriage with a horse. Cornelis Philip could make use of the State Yacht for official journeys. Most towns and villages could most easily be reached by water. Only during the summer were the roads around Tiel in good condition. The rest of the year they were full of potholes and slippery. In the late 18th century the construction of sand, gravel, and paved roads was commenced, although before 1830 the condition of the roads remained dreadful (Lennep 1978: 164; Broeke and Bouwens 1992: 39–40).

Additional documentary research is needed to determine more exactly the daily activities of the family. The boys would have gone to the Latin school in Tiel. Later they went to Utrecht for an academic education that would have cost the family approximately 6,500 guilders for four years (Pols 1996: 103). The family would have attended social functions where the ladies of the family were invited by other families, had tea together, made music, or did their needlework. The gentlemen went on the hunt, drank, and sniffed and smoked tobacco together. Once in a while there would have been a dinner or a small celebration or party at the home of the burgomaster. Until 1737 the most important duty of the master of the house was the taxes. This must have led to many letters and much correspondence. The official mail including invitations for meetings or minutes went by state postal service and was usually not sealed. Personal letters were exchanged using a private service and were sealed with lacquer seals. After 1737 it may have been quieter in the house. Most of the men had left to marry or for military service. In the house, only mother Christina, the fourth son Cornelis Everhard, and the two unmarried sisters Henrica and Megteld remained. In the end Henrica was left behind, and her brother Willem Albert sold the house after her death.

The material culture from the privy

All categories of finds, including the lacquer seals, have been studied. The entire sifted sample was not scanned for all materials because it was simply too large. An inventory by category (ceramics, glass, etc.) is in the appendix. The following study of the objects is not by their material but by their functional category. Within the assemblage some essential forms from the mid-18th century are underrepresented, such as polychrome plates, bottle type gl-fle-25, and pipes. Some objects belong to the period before ca. 1740, and some belong to the period after ca. 1760. The redwares, white earthenwares, and some of the drinking glasses cannot be assigned to a single period because they were used during the entire century. During the project 30 other 18th-century privies were studied as well. In comparison, it is clear that significant forms and types of decoration are absent in this assemblage (see Bartels 1999) (FIG. 10).

Dining

The fill of the privy mainly included items that dealt with eating or drinking. Five groups can be recognized: tablewares and cutlery, glasses and beakers for cold non-alcoholic and alcoholic beverages, food remains, cooking implements, and tea and coffee services.

Tablewares can be divided between dining plates, bowls, dishes, and those attributed to condiment sets. The dating of the plates can categorized into types that are early (1700–1750) and late (1750–1775). (For summaries on fabrics, decorations, and provenance see Bartels 1999 and Kottman 1999a.) From the early period, 1701 to 1735, most of the material is Delftware from Delft. From this group of 75 plates most are painted in blue on white, or are undecorated (22 pieces). Polychrome-deco-

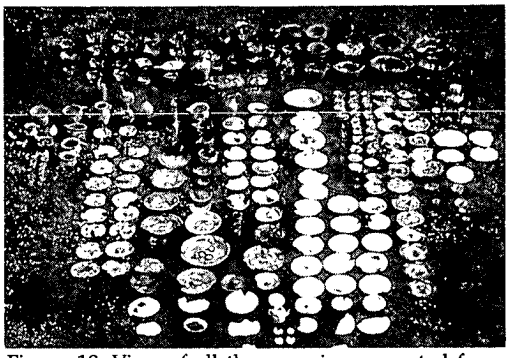


Figure 10. View of all the ceramics excavated from the privy.

rated plates are not present. In all, nine "services" were counted. The largest service had five plates, the smallest only two. The decoration in general was copied from the Chinese; landscapes, however, are absent (FIGS. 11, 12). Plates with the family coat of arms have not been found. The presence of bowls and dishes indicates that the table was meticulously set. There are no visible repairs on the plates, nor were any of the plates intensively used. Chips or signs of intensive wear even at the center of the dishes could not be detected on the plates of either period.

With the Delftware plates it was obvious that they were carefully painted. The lines are narrow and straight, and the fill between the lines was completed with a lot of detail. After 1760 much of this detail and precision was lost. In the last quarter of the 18th century the painting was coarse, though the decorations are sometimes similar. The plates of Chinese porcelain (p-bor-5) could belong to the early as well as to the late period. The second chronological group consists of "industrial" wares such as creamware and white salt-glazed stoneware. This group can be dated between 1760 and 1778. The English stoneware plates are undecorated, but they have scalloped or feather edges. All but one of the 26 creamware plates are undecorated. They have a scalloped or feather edge, and some of them have an impressed mark with "Spode" or "Wedgwood." One of the plates comes from Echternach in Luxembourg and is hand painted under the blue glaze. Besides that, large (r-bor-7) and small Lower Rhine plates (r-bor-2) have been found. The latter ones cannot be closely dated (FIG. 13). It is difficult to say if Delftware plates were used in this period, but with the amount of careful decoration it is not likely. European porcelain among the tablewares is also absent.

To serve the table, bowls, dishes, and lobed dishes were used. Delftware bowls dating from the early period and dishes painted with blue flowers were found. Only some of them are entirely white. Delftware bowls from the second period and lobed dishes as well as "industrial" type dishes were discovered. One Delft bowl (f-sch-1) carried the mark of the *De Drie Vergulde Astonnekens*. In the industrial category the oval dishes in cream- and stoneware are worth mentioning (s3-sch-1, iw-sch-1). One large majolica bowl had a heraldic decoration but could not be dated to one of the periods.

To season the meals condiments including salt and pepper were used. The condiments were put in "representative" containers. These containers were usually made of silver, glass, or pewter. Of these only the glass saltcellars were recovered. In all, eleven pieces could be counted, most of them rare. One is very special with a pushed-up foot with arches and raspberry prunts (gl-zou-6) (Kottman 1999b). For cutlery, other than a knife (fe-mes) and three pewter spoons (sn-lep-2+3), nothing was found.

Study of probate inventories in Maassluis and Doesburg indicates that among the élite during the first half of the 18th century it was common to set the table abundantly. This happened less with pewter, but more with Delftware plates. On special occasions the expensive dinner services were used. With these "Sunday" or "special occasion" services extreme care was taken. The tradition of bringing one's own cutlery faded away. The practice of buying cases of cutlery and setting the table with identical knives and spoons became common. During the week ordinary cutlery was used, but on Sundays or special occasions the special cutlery was brought in. Apart from that, the table was also set in style with small jam dishes, dessert plates, gravy boats, soup bowls, and a fine tablecloth and napkins. In the first half of the 18th century bowls and dishes were introduced to the lavishly-set table (Dibbits 1998: 130–132, 136). The setting of the table and its various components was a serious business for those who

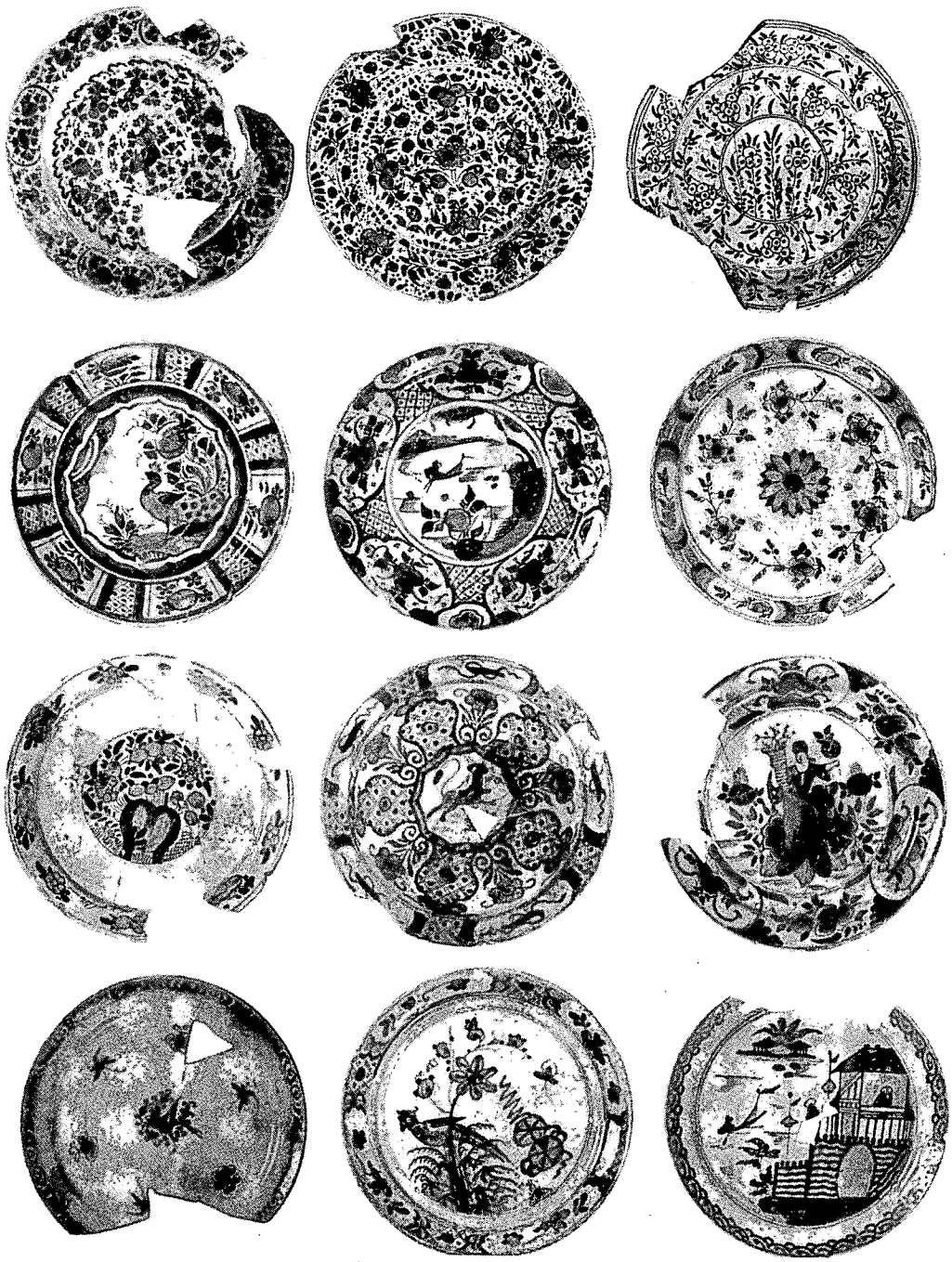


Figure 11. Delft plates, including those with straw-flower and mimosa patterns (top row). The plate at lower left is 23 cm in diameter (Bartels 1999: 805).

had to keep up with fashion. At least one 18th-century Dutch book, a book published in 1761 in Amsterdam, explains how to set a table for from four to twenty persons (NN 1761: 144).

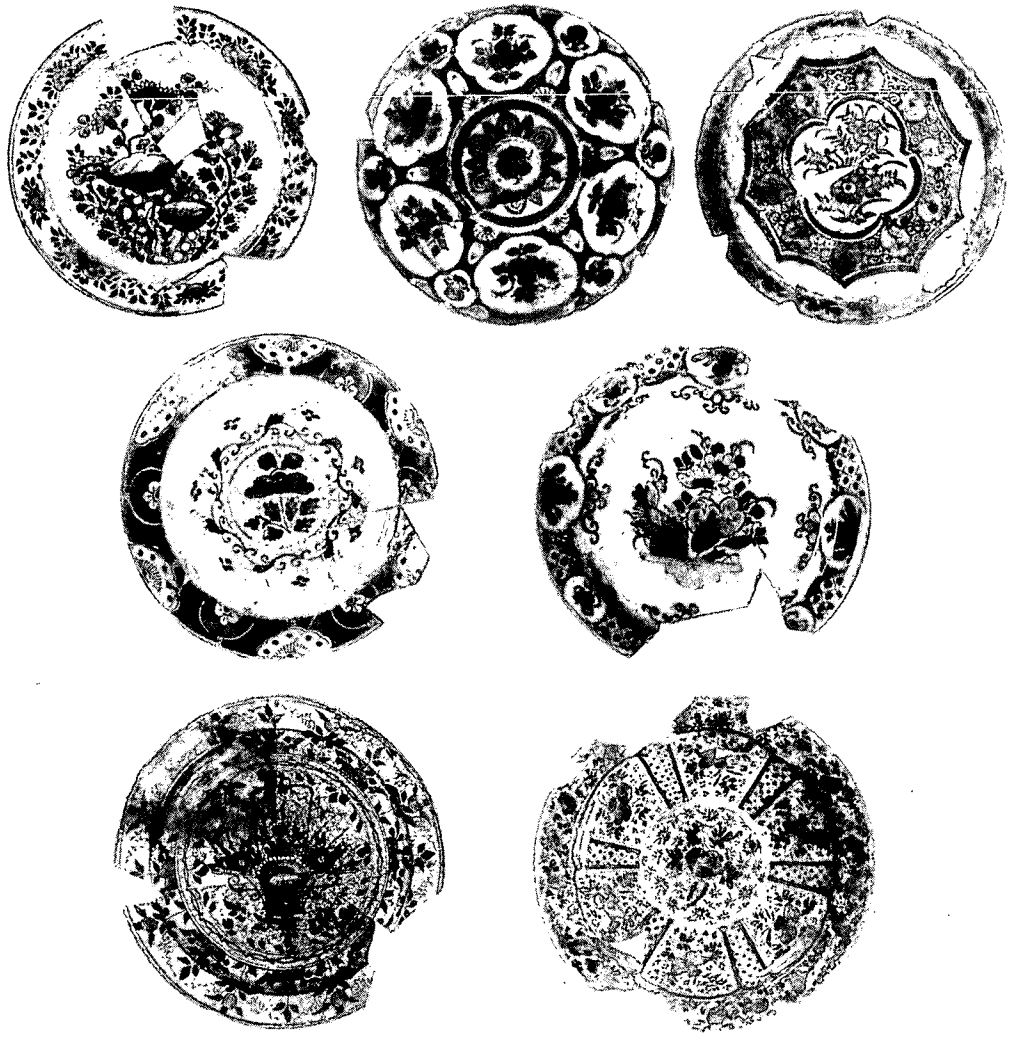


Figure 12. Delft plates in various floral patterns. The lower left plate is 31.2 cm in diameter (Bartels 1999: 809).

Drinking

From the early period, 1701 to 1740, 49 wine bottles were found. Bottle types from this period are the gl-fle-19, -22 and -23. The most frequently found bottle is the gl-fle-22, which has a wide variety in technical terms. Type gl-fle-19 has an oval body and is, in general, more high and wide than the other types from this period (FIGS. 14, 15). Wine bottles were sealed using corks of real cork oak. The corks were kept in place with tiny wires of brass or other metal. Many of these wires were found, possibly an indication that sparkling wine was drunk. A lead seal used to seal a wine cask has the name "Ferrara" on it, possibly indicating that entire barrels of Mediterranean wine were present. Lead caps or lacquer wine seals have not been found.

Besides wine, mineral water was also drunk in this period. This came from both glass and stoneware bottles, the so-called "P-jugs" (s2-fle-5) (FIG. 16). Because the Dutch had a profound dislike for drinking water, the use of this drink was probably for medical reasons. The four stoneware bottles of the s2-fle-10 type are remarkable (FIG. 17). The shape is very round and differs from contemporary bottle types. Scratched on the shoulder and painted

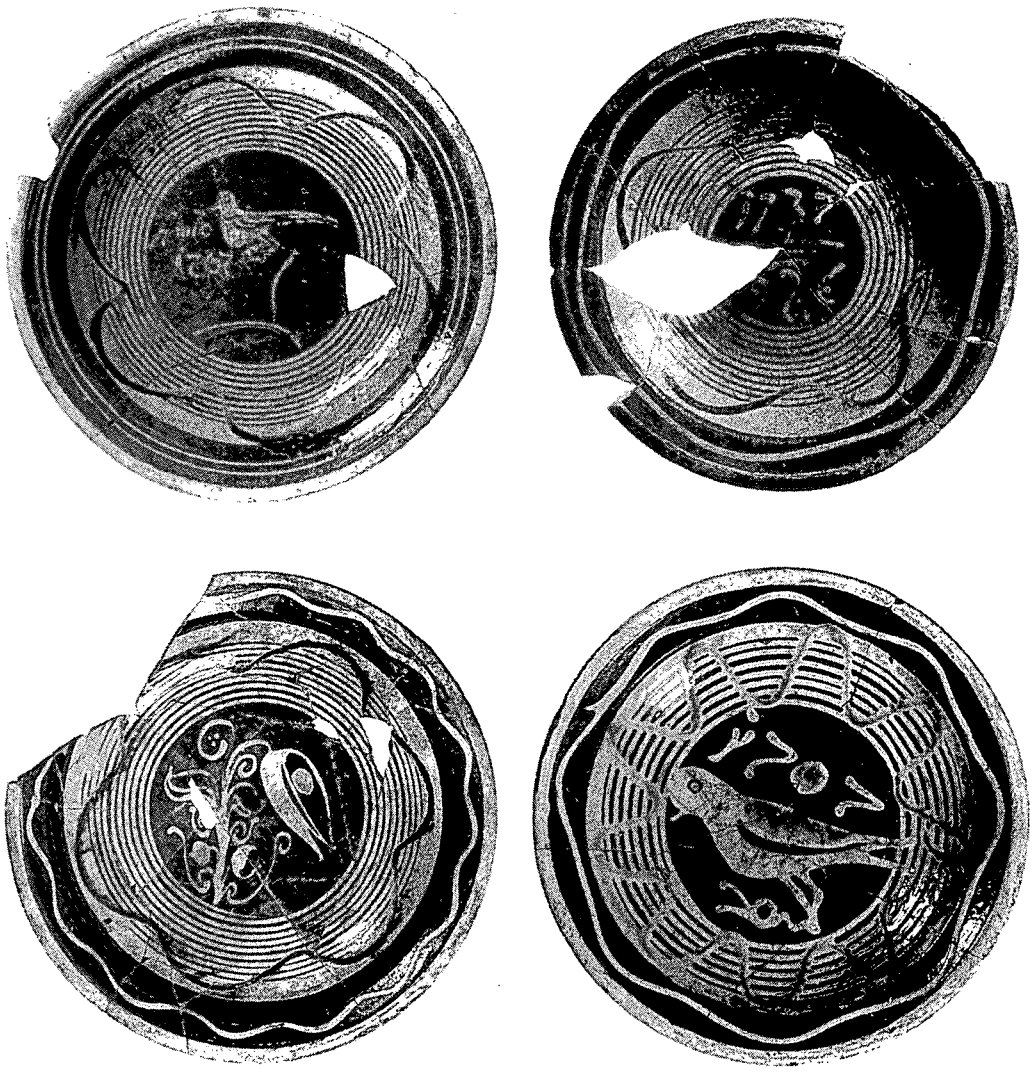


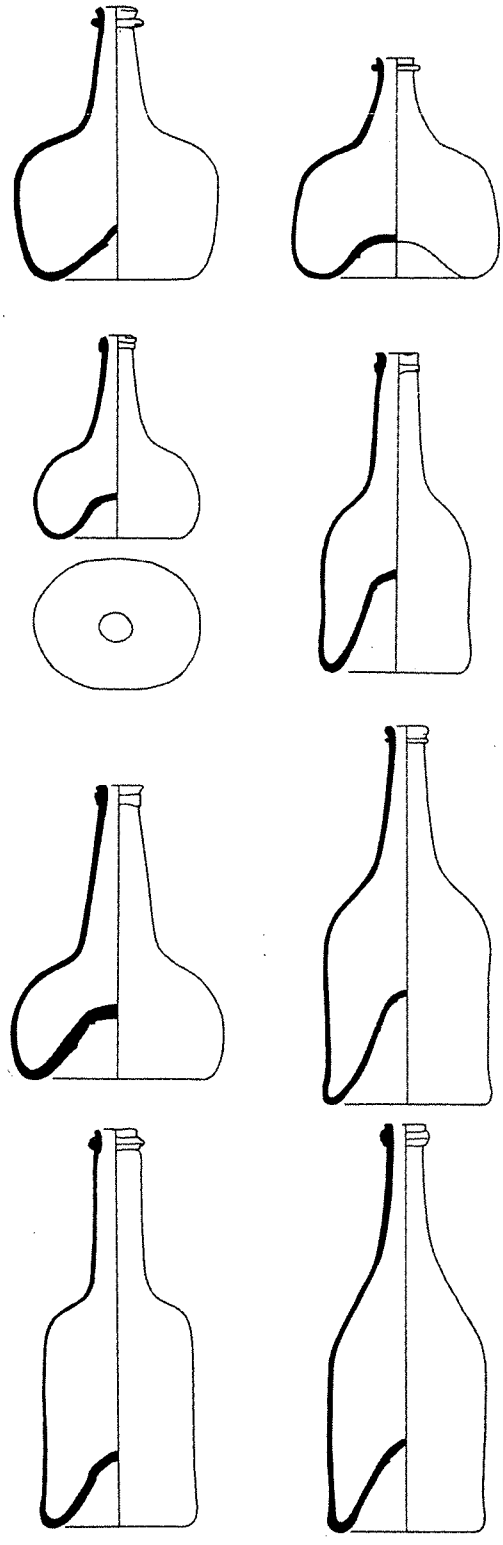
Figure 13. Red earthenware plates from the Lower Rhine valley. The plate dated 1767 is 40.7 cm in diameter. The plate dated 1737 is 30.5 cm in diameter (Bartels 1999: 647–648).

with cobalt blue are the initials C.P.V.L.I., which stand for Cornelis Philip van Lidth de Jeude (born October 23, 1670; died August 27, 1737). These luxury custom-made bottles indicate a special content, probably a liquor or spirit of some sort.

From the late period between 1760 and 1778 there are thirteen bottles, scattered over five types (gl-fle-24, -25, -26, -55, -74). The bottles show that the cylindrical shape replaced the round shape; the bottles became higher and straighter towards the end of the 18th century (see FIGS. 14, 15). The stoneware bottles of this period belong to the late P-jugs (s2-fle-2) and the almost cylindrical types (s2-fle-9).

Drinking glasses for wine, port, and liquor

The drinking glasses can be divided chronologically into four periods or groups: "antique," first period (1701–1740), second period (1760–1778), and glasses that were in use during both periods. One "antique" commemorative glass (gl-kel-14) has on the bowl a



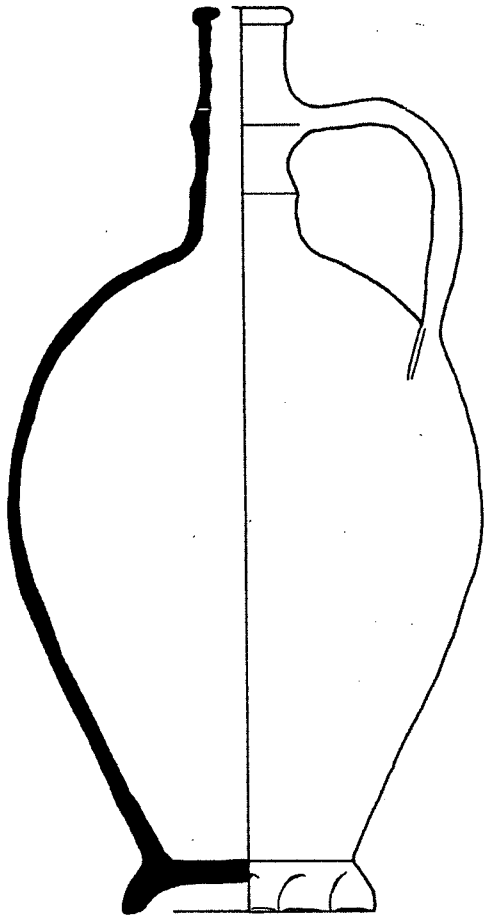


Figure 14 (top left). Examples of bottle types, left to right, top to bottom, gl-fle-19, gl-fle-22, gl-fle-23, gl-fle-24. The height of gl-fle-19 is 22.2 cm (Bartels 1999: 973, 975–977).

Figure 15 (left). Examples of bottle types, left to right, top to bottom, gl-fle-25, gl-fle-26, gl-fle-55, gl-fle-74. The height of gl-fle-25 is 19.6 cm (Bartels 1999: 977, 985, 991).

Figure 16 (above). Typical Westerwald stoneware "P-jug," height 31 cm (Bartels 1999: 551).

diamond engraving with the maxim "Het Welvaren Van De Koning" meaning "To the well being of the King." On one side are the crowned arms of King and Stadtholder William III (1650–1702), surrounded by the motto of the Order of the Garter "HONY SOIT QUI MAL Y PENSE," while on the other side a person in military dress is depicted. Possibly this piece was signed or dated; if so, however,

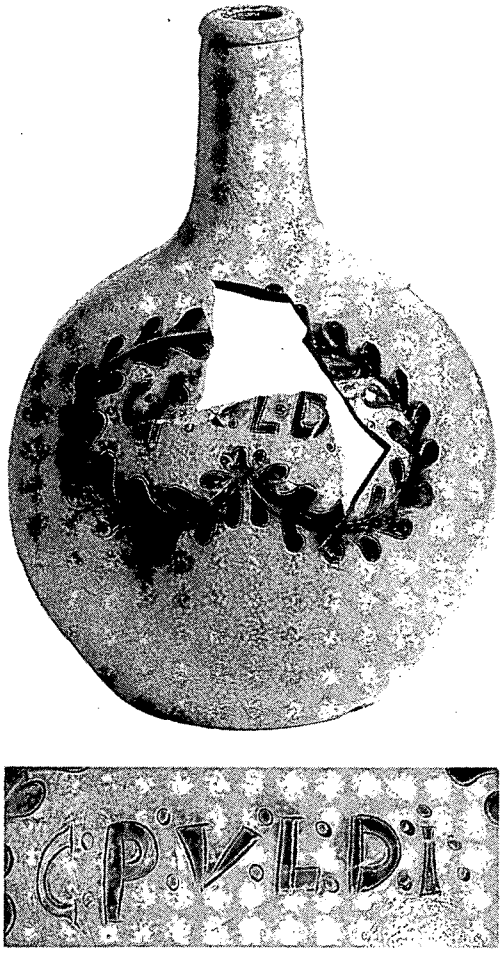


Figure 17. Stoneware bottle (s2-fle-10) with the initials C.P.V.L.D.I. The height is about 26 cm.

it is hardly legible. The glass was presumably manufactured for the occasion of the coronation of William III as King of England in 1695 (FIG. 18).

Among the glasses of the first period (gl-kel-1, -2, -3, -8, -38) the gl-kel-38 is remarkable because it is very thin-walled. It may be a continental imitation of English products (FIGS. 19, 20). Next, types gl-kel-21, -23, -63 and -67 represent drinking glasses from the period 1760 to 1778 (FIG. 21). With these types the variety that could be seen in the glasses of the first period also occurs. The gl-kel-23 can be found in variations with a massive stem and an air bubble or with twisted opaque white spiral threads.

Drinking glasses (gl-kel-2, -6, -22, -66) appear throughout the whole period 1701 to 1778 (see FIG. 20). Some are carefully finished, such as the gl-kel-66, which has a facetted stem. The gl-kel-6 type appears in stems with five, six, or eight sides, with or without knops. The number of glasses per type is remarkable, sometimes even 20 pieces with identical decorations were found. Many glasses have a black efflorescence, which indicates lead as an ingredient. In general the lead glass is an indication of more expensive glasses, although this may be questioned for the badly finished ones (Cora Laan, personal communication).

Based on the different types of decorations within one type of glass, or single types of glasses with one decoration, it seems that the glasses were purchased in series. The largest sets are made up of twenty, fifteen, or eleven identical pieces. Eleven types or decorations are present within sets ranging between four and nine pieces. Of thirteen types only one or two examples can be counted. It seems as if entire series were bought at a time and that they formed, together with the plates, a harmonious set on the table. Some types (gl-kel-2) were possibly manufactured for a longer period so they could be replaced if they broke.

Wine was drunk from larger glasses, while liquor (gl-kel-23) or spirits (gl-kel-21) was drunk from smaller ones. A 19th-century record in the Netherlands indicates that in the 17th century more than 25 kinds of liquor could be purchased, and these were mainly drunk by women (Dibbits 1998: 141–142). The wine in this century came from many parts of Europe. Rhine and Mosel wines were popular, as were French wines such as Bergerac, Pyrenean, and Languedoc. Spanish wines were regularly consumed. Red wines came from the Canary Islands, and a type of sherry came from the Iberian mainland. From the equipment lists of the East India Company it is well known what kinds of wines were on sale, what their prices were, and in what containers the vintners bought and sold them (Gawronski, 1996: 259, 263). Wine was exported in oak barrels and bottled in Holland. There is no connection between the shape of the bottle and the provenance of the wine, however. The vintners' guild in Tiel was small but of high prestige. The vintners belonged to the upper middle class. The wine drinking etiquette at the table has been described in detail in the Dutch book pub-

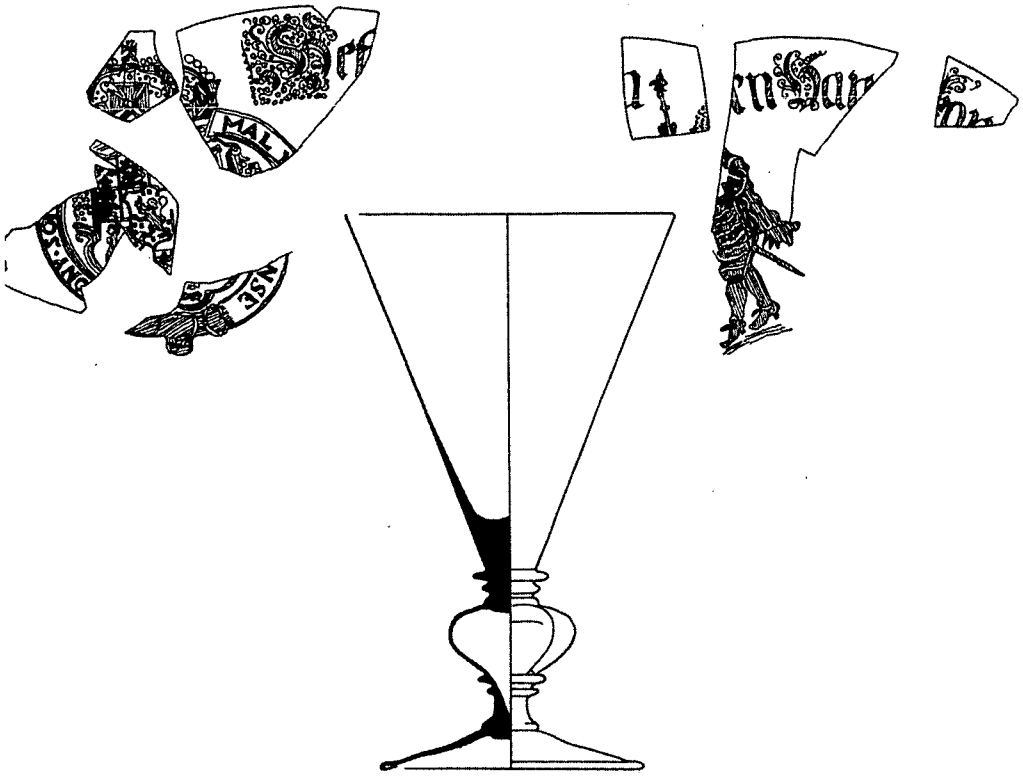


Figure 18. Commemorative glass (gl-kel-14) made of clear glass with engraving to celebrate the coronation of William III in England. The height is 18.5 cm (Bartels 1999: 1002).

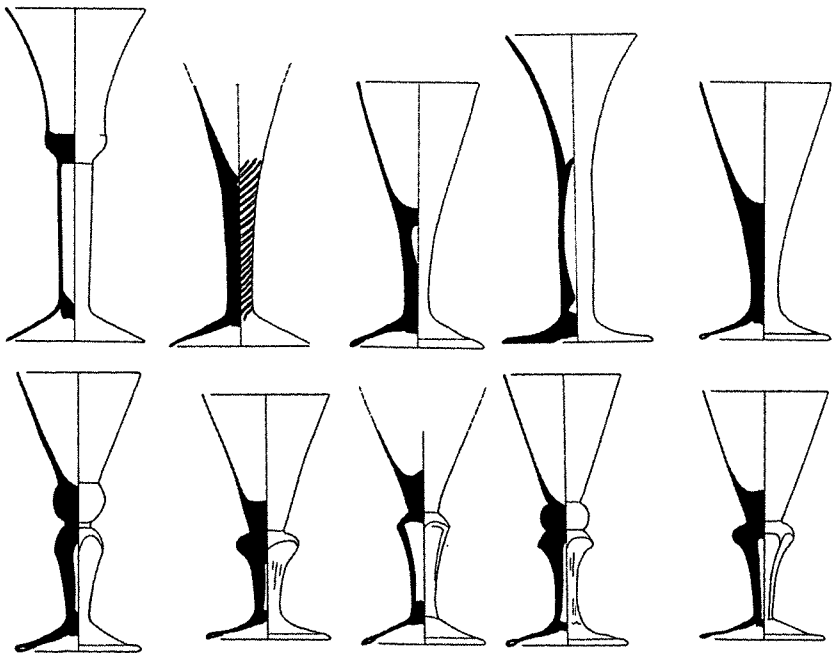


Figure 19 (right). Drinking glasses from the first period, types from left to right, top row, gl-kel-1, the other four gl-kel-2; bottom row, the first four gl-kel-3, the last gl-kel-6. The height of the upper left glass is 18.7 cm (Bartels 1999: 996–999).

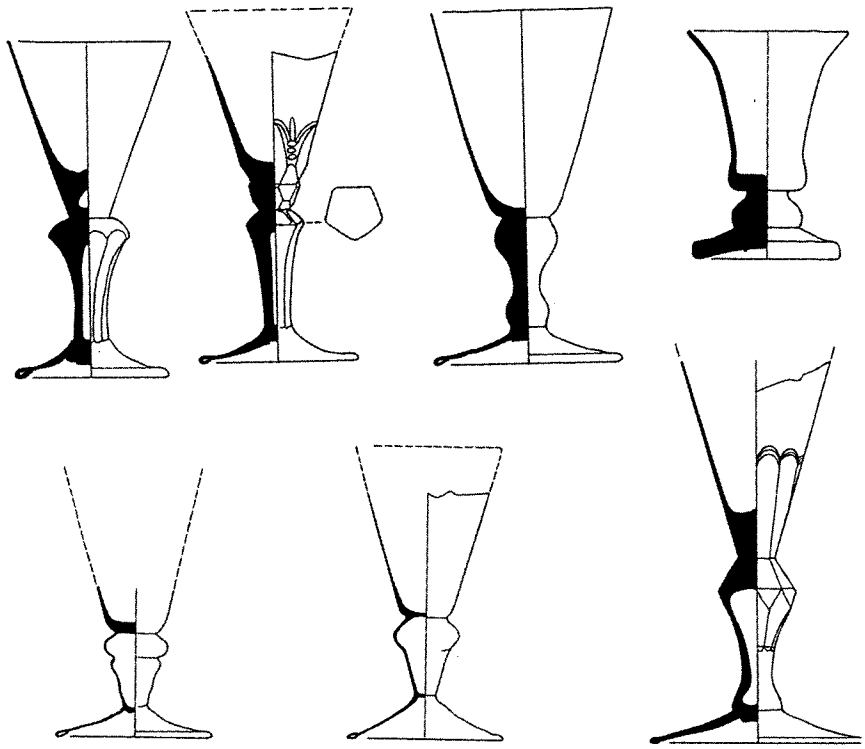


Figure 20 . Drinking glasses from the first period and from both periods, types from left to right, top row, gl-kel-6 (both periods), gl-kel-6 (both), gl-kel-8 (first period), gl-kel-22 (both); bottom row, gl-kel-38 (first), gl-kel-38 (first), gl-kel-66 (both). Height of upper left glass is 14.8 cm (Bartels 1999: 999, 1001, 1004, 1008, 1015).

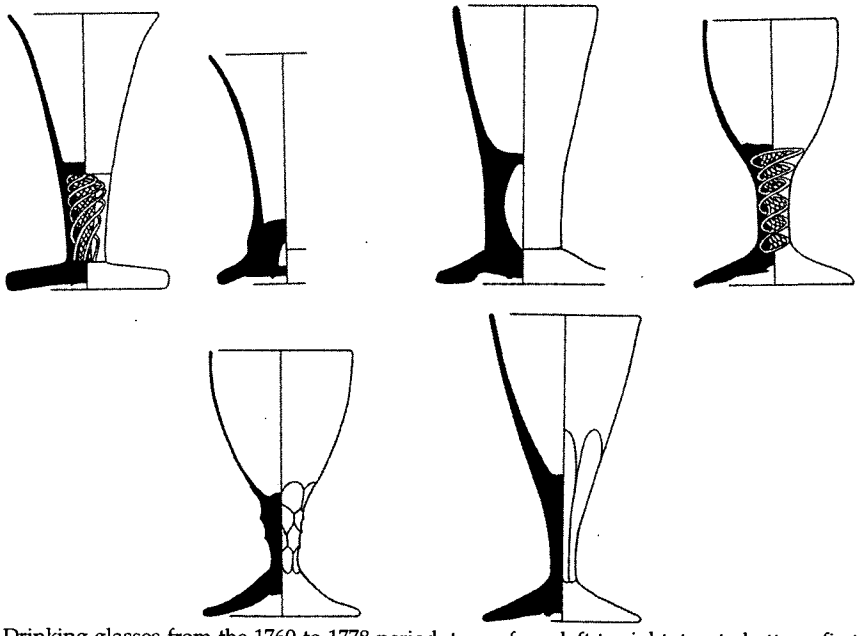


Figure 21. Drinking glasses from the 1760 to 1778 period, types from left to right, top to bottom, first three gl-kel-21, then gl-kel-23, gl-kel-63, gl-kel-67. The height of the upper left glass is 12 cm (Bartels 1999: 1003–1005, 1014–1015).

lished in 1761, a handbook for the "perfect Dutch kitchen maid." It instructs:

> First present your friends a glass of red wine to welcome them. With a large company it is foolish that everyone drinks to everyone's health, because you are all thirsty and it will take too long. Keep the maid at the table to serve more wine. It is not courteous to kiss the lady next to you, when you drink to her health. It is unmannered to stand up and kiss the ladies on the other side of the table. Do not press the others to finish their glasses to get served a new glass yourselves, because the drinking is to everyone's joy. Never stand up from the table after dinner without thanking Our Lord. Do not fold your napkin, this is the work of the servants (NN 1761: 135–137).

The number of drinking glasses recovered from this privy is high. However, historical research has pointed out that renting glasses and services for special occasions was, among these classes, quite common (Dibbits 1998: 139).

Beakers and beer

The large glass beakers that were found can be dated from 1701 to 1778. The ones with thick bases are usually early and with thinner bases are later; they were used for the consumption of beer. The small beakers of identical shapes were used for lemonades, juices, and wine. All the Bohemian beakers (gl-bek-6) have a wheel-engraved decoration, and from the quality of the engraving it can be determined they were the more expensive kind.

Beer was brewed in Tiel and in the countryside. The breweries in Tiel were among the smaller factories. A brewery stood even on the Koornmarkt itself, in spite of protests. The members of the guild of beerpullers transported beer in barrels. They pulled it on sledges from the breweries to the pubs, inns, and the quayside (Lennep 1978: 164, 171). It could be transported for domestic use in jugs or bottles.

Besides alcoholic beverages, other non-alcoholic beverages were drunk. The presence of seeds of elder- and other berries could indicate that juices and lemonades were drunk. How much (butter)milk or water was consumed in the household and whether there were specific beakers for them is unknown.

From the number of glasses it may be concluded that more wine than beer was drunk. However, due to the fragility of the finds and the varying amounts that could be drunk from different vessels, this is not certain.

Food

Archaeologically the food remains can be split up into bones, nuts, seeds and pits, and pollen. Food remains, originally used not as bones or seeds but as ingredients for a certain dish or meal, cannot be dated, of course, unless there is stratigraphic context. Recipes that could have been used will be reconstructed along with the archaeological order of the food: meats, fowl, fish, shellfish, farinaceous foods, vegetables, fruit, condiments, and miscellaneous foodstuffs.

Meats. Meat came from large animals, small animals, and wild mammals. The first sample of bones was collected by hand during the dig and was not taken from the residual material left after sifting. These are mainly the large bones. The second sample was taken from a box (22 liters) of dry residual material from sifting. From these two samples it can be concluded that the large bones are barely present in the sifted residue. In the first hand-collected sample, cattle, sheep/goat, and pig are present. It is remarkable that, compared to 16th- and 17th-century bone samples from other privies, the number is very small. The group of wild mammals is limited to hare bones, while large game such as deer or roe are not present. Chicken, pigeon, and wild duck were also eaten, however.

The extremely low number of bones from the first sample can be explained. In 1995, on an identical lot to the west in the same street, in the back of a garden, trash pits were discovered. These trash pits contained a large number of butchered bones and offal from large animals (Bartels 1999: 407, plate 43, section a, no. 302). It is possible that the residents of mansions on the Ambtmansstraat and Koornmarkt simply dropped their garbage from dining rooms and their kitchen refuse into a privy while the offal was dumped in the back of the yard or thrown into a larger, second privy. Another possibility is that only butchered meats were eaten. The best meat

came from the Jewish butchers in Tiel. The kosher laws guaranteed the best veal and mutton (Lennep 1978: 172). The consumption of large amounts of meat was, from a financial point of view, not a problem for the family. The game and fowl probably came from their own hunting grounds.

Fish and shellfish. Both fresh- and saltwater fish were eaten. Freshwater fish such as eel and carp were caught in the waters surrounding Tiel. These still are good fishing waters. Saltwater fish like cod, haddock, and flatfish were imported from the coast. Herring came fresh, smoked, or salted to the market. Shellfish were also eaten fresh. Mussels, transported from Zeeland or that vicinity, could stay fresh for four days when the temperature of the water in which they were transported was kept the same as the water in which they originally lived. These four days were sufficient to reach Tiel by river. Mussels eaten in the fall and winter had the best chance of arriving fresh, and they tasted better (Haaster 1997: 150–151). The same was probably true for the imported crabs and scallops (FIG. 22). Oysters, like scallops, which were in demand among the rich, are absent in the samples.

The import of fresh saltwater fish and shellfish was for a river town like Tiel not problematic. From analysis of the samples it can be said that the variety of fish was relatively low. When this sample is compared with samples from the Waterlooplein privies in Amsterdam it can be seen that those contained a wide variety of different kinds of fish. Also, the more expensive kinds were represented there, while in Tiel only the most common types were found (IJzereef 1987). Mussels were common in Holland, and apparently in the hinterland where there was easy access by water they were considered nothing special. Crabs and scallops may, however, in contrast to the fish and mussels, be regarded as high-status foodstuffs.

Cereals, fruits, and vegetables. The use of cereals and fruit in the household is easier to demonstrate than of vegetables. Cereals leave chaff and grains; fruit leaves seeds and stones. The amount is overwhelming. Among the grains are common types such as oats, barley, buckwheat, and rye. In addition, a large amount of rice was discovered.

Figure 22. Crab remains from the privy. The scale is in centimeters.

Cereals were readily available in Tiel. The Betuwe and surrounding regions have plenty of high quality soils for growing cereals. The cereals from poorer soils, such as rye, could possibly have come from the provinces of Drenthe or Brabant where sandy soils were cultivated. Rice was imported on a large scale into Tiel. This can be deduced from the complaints of the beerpullers' guild. In the mid-18th century they complained about the lack of work due to the low imports of rice. This suggests that in other years, when there were no complaints, rice imports gave them work and that it was a rather common foodstuff (Lennep 1978: 168). There were many recipes with rice to make foods such as cakes, cookies, and porridge.

The cycle of fruit produced by trees in the Betuwe starts at the end of May with cherries, followed by plums, after which apples, medlars, and pears come. In September and October sweet chestnuts, walnuts, and hazelnuts can be picked. The fruits from bushes, including black and red currents, goose- and dewberries, brambles, raspberries, and bilberries, are ripe in summer and were harvested in great numbers. Fruits from plants like strawberries and melons were also harvested in summer. It is remarkable that fruits which might seem exotic, such as almonds and peaches, are domestically cultivated, as also to some extent are grapes and figs.

Evidence of vegetables such as cabbage, lettuce, carrots, beets, and turnips was not present. Cucumbers, beans, and the pollen from peas were, however, found. Spices and condiments such as black pepper and black

mustard were also found, while analysis of the pollen remains reveals the presence of cloves and anise. Other seeds in the sample come from plants that nowadays would be categorized as weeds from the field. Those weeds grew well into the 20th century (Henk van Haaster, BIAX, Zaandam, personal communication).

It is no surprise that much of the fruit is found in the Betuwe. Already in the 17th and 18th centuries the Betuwe was called the "apple cellar" of Holland and Frisia. The pears and apples were regarded as the best in the land. In the 19th century it was the largest supplier of fruit to the entire country, a position it keeps to this day (Bieleman 1992: 143–144). From the privy about 250 liters (!) of fruit remains such as nuts and pits were found. The cherry pits range from small to large, with colors ranging from buff to deep red. Among the plum pits there are also various colors and sizes. This could indicate that different varieties were eaten or used for special purposes such as cakes. In the 15th century, 30 varieties of pears and 50 varieties of apples were known. An order catalogue from a "garden center" in 1789 lists innumerable fruit trees, among which are eight kinds of peach trees (Haaster 1997: 86). Raspberries, brambles, and strawberries are still cultivated in large amounts in the Betuwe. Tiel had the highest production of jams and marmalades in the country in the 19th and 20th centuries. In the 18th century, new varieties of strawberries were imported from North and South America, and the local varieties vanished.

Fruits including peaches and apricots have been cultivated since the 16th century in the Netherlands along warm, sunny, and sheltered exterior walls of towns and houses. Peaches were grafted onto the branches of willows. The presence of evidence of these two fruits in the 17th and 18th centuries is a good indicator of wealth. Figs were incidentally cultivated but mainly imported (Haaster 1998: 3–5). Grapes could be grown in places identical to those of apricots and peaches, though they would never be eaten as they could never fully ripen. Seedless currents were imported from 1500 onwards; seedless raisins were available from around 1600 (Haaster 1997: 65). The seeds that were found could very well belong to varieties that were not seedless, and raisins were given to children as laxatives. They also were used in many recipes. Anise does grow in the Netherlands and was used for sweets, drinks, and as a condiment.

Vegetables, like fruits, occurred in great numbers in the Betuwe. Twice a week, on Mondays and Fridays, the farmers went to sell their goods at the market in Tiel. The shop owners often complained about the competition and the bargain prices. Many kinds of vegetables were used in the household, but the use of only the cucumber, often pickled, and of dried beans can be archaeologically proven. No evidence of lemons or oranges either in fresh, pickled, or preserved form has been found. The seeds from lemons and oranges disintegrate, but in privies in Dordrecht the "crowns" of fruit (the attachments from the branch to the fruit) have been found, indicating the import of fresh fruits (Henk van Haaster, personal communication). Possessing an orangery was, among the upper classes, a sign of taste and wealth. The family probably did not have one at their urban residence. Other ecological status indicators missing in this privy include the coconut, the olive, and the peanut. These are found in the privies of the wealthy in Amsterdam and in their country estates such as in Beverwijk (Hulst and Weber 1999: 10).

Eggshells were found in large numbers, but the total number could not be determined. From the size, color, and thickness of the shells, it can be said that chicken as well as duck eggs were eaten.

Cooking

Food was prepared before it came to the table. It was prepared in earthenware pots, pipkins, and bowls. The cooking vessels were made of red and white earthenware. The pipkins were large, more than 28 cm in diameter, square of shape, and in most cases with a redware lid. Small pipkins from the Lower Rhine area have also been discovered. Finally five skillets and a frying pan were excavated.

For evidence of the preparation of food a strainer, bowl, and some Lower Rhine plates with a date were found. Possibly some of the simple red and white earthenware cups were used in the kitchen. As for the redware jugs, it

is difficult to determine if they had a function only in the kitchen. The large white earthenware jugs had a definite function in the kitchen. The slaughtering bowl that was found may have been used to make sausages or other meats. Metal implements for the preparation of food were, apart from a small grater, missing. Large storage pots of earthen- or stoneware were also absent.

Thirteen pipkins and a few pans were all the cooking implements that were excavated. This small number is an indicator that the kitchen was probably not close to the privy but was located nearer to the rooms of the house. It also suggests that much of the cooking took place in metal pots and pans. Earthenware vessels were used in the cooking of specific dishes, such as stews. The 18th-century probate inventory of Lieutenant Bettinck from Doesburg on the river IJssel illustrates the use of metal objects in the kitchen. The inventory consists of pots, pipkins of brass and iron, and a large number of other metal utensils for cooking on an open fire, including gridirons, trivets, and pot hangers. In other inventories metal pancake pans for large and small pancakes, the so-called *poffertjes*, skillets, and waffle irons are listed (Dibbits 1998: 127–128).

Wooden kitchen implements such as canisters, barrels, trenchers, chopping boards, butter skimmers, and lids are occasionally found both in inventories and in privies but, however, in relatively low numbers. From the content of privies and inventories it can be concluded that even in wealthy households an open fire was used for cooking. It cannot be proven that cast iron stoves were used. The presence of iron cauldrons and coal, however, may indicate this. Typical pans for cooking on a stove, such as the Frankfurt wares and *kachelpannen* with the characteristic flat base, have not been found. The coal could have been used for heating in an iron stove. The absence of large numbers of redware cooking pots can be explained inversely: the number of earthenware cooking implements may be inversely proportional to the number of metal cooking implements.

The total absence of storage pots is remarkable. This possibly can be explained by the late-18th-century introduction of Langerwehe- and Cologne-type stoneware pots, the purple stoneware *Baaren*, and the blue-gray Westerwald pots. A second possible explanation is that the family did not need much storage. With their wealth, all food could have been bought fresh. Thirdly, it may be surmised that the privy was far away from the pantry so that the broken pots were not discarded into this privy.

The cooking of certain specific recipes with special utensils can be proved only for some dishes. From the presence of skillets it can be concluded that thick sauces were made. For reconstructing the entire dinner, only cook books of that period can be used, but when food is made using those recipes delicious meals can still be made. For example, the 1761 edition of the handbook for "the perfect Dutch kitchen maid" has recipes for *Ryst-koekjes* or rice-cookies, made of rice-porridge, biscuits, sugar, eggs, and cinnamon; for *Taart van kreeft en krab*, lobster-crab pie with boiled shellfish and herbs in a pie-pan in a crust, and for *Appelgebak*, or apple pie made of sliced apples with cream and sugar (pears or plums can also be used) (NN1761: 41, 44–45, 47, 53-54, 123). For *Haas*, or young hare, the hare was first skinned and then larded with bacon, grilled till half done, and fried in butter. The sauce was made by taking the gravy, with flower, and adding cinnamon and cloves, two beer glasses of wine, and a beer glass of vinegar. The sauce was then cooled, sieved, and boiled again with lemon peel (NN 1761: 53–54). For *Mosselen*, or boiled mussels, the mussels were put in a net and boiled well in a large cauldron with hot water and an onion. The sauce was made of butter, vinegar, ginger, and pepper (NN 1761: 123).

Warm drinks; tea, coffee, and chocolate

The drinking of tea and, later, coffee and chocolate occurred in the 17th century, but it was mainly during the 18th century that it became common practice in the Netherlands. In almost all privies tea and coffee wares are found. These objects consist mainly of teacups with matching saucers, teapots, hot plates, sugar pots, and creamers; slop bowls are also found. From the privy of the Van Lidth de Jeude family tea sets from two periods were excavated. The tea and coffee sets from the early period consist mainly of Chinese porce-

lains, belonging to nine different tea sets as follows; one cup is made of provincial Chinese porcelain: set 1, dragon chasing the pearl (1 cup, 3 saucers); set 2, eight panels with flowers (1 c, 2 s); set 3, fishers on the lake (3 c, 6 s); set 4, willow and mountain (2 c, 2 s); set 5, willow and incense burner (3 c); set 6, erotica scene (2 c); set 7, coffee color and willow (3 c, 2 s); set 8, coffee color and chrysanthemum (2 c); set 9, on-the-glaze black and gold, (1 c, 2 s).

About 30% of the objects have an exterior coffee color, while one object has a cafe-au-lait color (p-kop-11); the remaining objects are blue and white. Ordinary shapes (p-kop-1, -2) are found together with more rare kinds (p-kop-11 and -12). One small teapot is made from Yixing red stoneware. Besides the Chinese wares, remains of Delftware tea service were also excavated. Many cups and saucers are of common types (f-bor-8 and f-kop-1, -2). Most of these forms have a polychrome design with red, green, and brown. Besides the Chinese shapes, special shapes such as the "crowcup-like" type (f-kop-12) and the porringer (f-kop-13) appear as well.

From the late period, tea sets of Chinese, English, and Continental origin were found (FIG. 23). The brown stoneware cups and the white salt-glazed stoneware crab-shape teapot illustrate this. Scratch-blue white salt-glazed stoneware is absent. A few Meissen-type saucers (ep-bor-1) were found. The creamware cups and saucers sometimes have a band of pearls, but none of them are painted. Teapots are made of Staffordshire redware (ir-the-8) and creamware (iw-the-5). The cubical hot plate is of white earthenware and probably was manufactured in Frisia or Brabant.

From the teawares found in the first period it can be concluded that Chinese porcelains from the Kangxi (1700–1720) period were used. From both periods many cups and saucers appear occasionally in large sets (FIG. 24). Most of the shapes are rather common; the molded shapes with panels are more rare. Apart from the commonly found "dragon with pearl" decoration, more elaborate and rare decorations were found. From the material it cannot be said which is coffee or teaware. The coffee wares are in general a little larger. Coffee was commonly drunk from a saucer. The excavated Delftware tea sets are decorated

Figure 23. Teapots and teaware from the privy.

in both blue and polychrome. Polychrome sets are mainly found within an urban context. The one Yixing teapot from this period was not large enough to pour tea for the entire family. Presumably silver teapots were used as well. It cannot be determined if the presence of Chinese and Delft teawares indicates a status division in the household. Both wares were very low priced. The family may have used the overglaze-painted Chinese cups. Possibly the tea sets were given to the servants when sets became incomplete. There is also a possibility that the different wares were used for various occasions. It can be concluded from the total absence of chips, cracks, or repairs that the teawares were of low value to the family and that they were simply thrown away when they were slightly damaged.

During the second period fewer teawares were used; however, the variety increased. It is difficult to say how much of the Kangxi and Qianlong (1740–1760) porcelains and the Delftwares were still in the house. In the second period Chinese cups each with a handle, which were five times as expensive, were not found. A quick transition was made to English teawares, the forms of which, apart from the teapots, are nevertheless of the more common shapes.

The coffee cups are somewhat larger than the teacups, though both types of cups could have been used for either beverage. Neither tea leaves nor coffee grounds were found in the excavated samples. The anise may indicate that anise milk, a hot drink, was drunk.

The quantity of teaware surpasses that of most privies. Not only the quantity, but also the completeness and the number of sets as

Figure 24. Porcelain cups and saucers from Jingdezhen, China: (top left) saucer, Qianlong period, decorated in black and gold, diameter 12.7 centimeters; (top right) saucer, Kangxi period, blue decorated, diameter 7.5 cm; (center) cup, Kangxi period, blue decorated, diameter 8.3 cm; (lower left) cup, Kangxi period, blue decorated, diameter 6.5 cm; (lower right) cup, Kangxi period, blue decorated, diameter 12 cm. The painting on the Kangxi saucer depicts a "dragon chasing the pearl" (Bartels 1999: 851, 852, 865, 869).

services are significant. The presence of sets shows that most of the material dates from the second and third quarter of the 18th century; in the first quarter sets were not so common.

No beverage changed social life in Holland as markedly as tea and, later on, coffee. Drinking tea was quickly accepted by society as a whole. The "tea visit" phenomenon was present among all classes. Analysis of probate inventories from Maassluis shows that the first teapots appeared in the early 18th century in the houses of the Burgomaster, the navigating officer, and the keeper of the orphanage. It is not clear if entire tea sets were present. In the late 17th century, teawares occurred occasionally, and in the early 18th century most of the time cups and saucers were mentioned. In the mid-18th century complete tea sets are regularly found. In Doesburg a middle class household owned between 100 and 177 pieces of porcelain, while an upper-class household had more than 177 cups, saucers, and other teaware items (Dibbits 1998: 150–153). In the first quarter of the 18th century in Delft, the poorest households lacked teawares, but in the middle of the century this had changed. Their teawares were either Delftware or porcelain. In the middle and upper classes there was either a low or extremely high amount of porcelain. There was a change in the late 18th century in the possession of porcelain, with the upper and middle classes cutting down on the Chinese porcelains (Wijsenbeek-Olthuis 1997: 210–215). During the entire century only the best was good enough for the table, and quality earthenware and porcelain replaced the pewter. French and "German" porcelain, as well as stone- and creamwares, were preferred above Chinese porcelains. The goal was to set both the dinner table and the tea table as uniformly as possible (Wijsenbeek-Olthuis 1992: 103).

The tea, and not coffee, was drunk in the most pleasant room of the house. Among rich

families, after a lavish dinner with much wine, tea was drunk to end the meal. Usually fresh fruit was eaten with the tea. During ordinary days at regular intervals tea was drunk together with the servants. Dibbits reports that tea was a "Protestant" drink (Dibbits 1998: 158–159). Tea did not have the intoxicating elements of alcohol, and it improved domesticity.

No useful data are available on the sale of tea and porcelain in Tiel. Amsterdam was the center of the tea and porcelain trade. Both came in very large amounts. The availability of these products in Tiel must not have been a problem. Apart from a retail porcelain trade, second-hand and wholesale markets also existed. The second-hand trade existed with material from junk shops, estates, and bankruptcies. At these sales the goods were purchased not only by the poor but also certainly by the middle classes and the wealthy. This last group preferred the fashionable goods such as modern furniture from Holland (Dibbits 1998: 58).

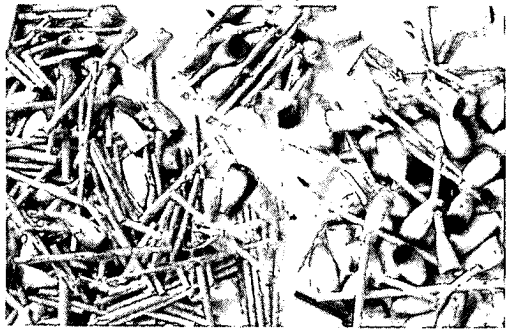
Smoking and chewing

Objects that can be linked to the use of tobacco were found in large numbers in the privy: clay pipes, fire pans for use as ashtrays, lighters, and a spittoon. All parts of clay pipes, the stems, bowls, and mouthpieces, were present. The number of mouthpieces is smaller than that of the bowls. The minimum number of pipes is 144. These can be sorted into four categories by quality: *porcelijn, fijn, slegt* (bad), and *grof* (coarse). The maximum date range is 1690–1820, though the whole group can be divided in two periods, 1700–1745 and 1760–1778. In between these periods a dip is evident (FIG. 25).

Remarkably, from the first period many pipes of the more expensive quality (*porcelijne* and *fijne*) from Gouda (76 pieces) and a somewhat smaller number of cheaper (*slegte* or *groffe*) pipes from Gorinchem (36 pieces) were found. Fewer pipes can be attributed to the second period: sixteen are of *porcelijne* and seven of *groffe* quality. In both periods it is apparent that the stems that are still attached to the bowl were rather long and that the degree of stain from smoking was rather low. This indicates that the smokers did not use the pipes for long before they broke. It is noteworthy is that in both periods both good and inferior pipes were used. The smokers in the house clearly preferred the best quality, from Gouda, and the pipes made in the factory of Willem van Mansvelder were the favorite. Redware or white earthenware fire pans were used as utensils in smoking. The Delftware spittoon (f-kwi-) was square and on every side had a floral decoration in blue. This was used for spitting during smoking. Also, chewed tobacco was disposed of into the spittoon. Oval wooden boxes with oval lids were found, and these might have been used to keep chewing tobacco.

In the Lower Betuwe "home tobacco" was grown before 1618. The tax registers on tobacco are available for the entire 17th- and 18th-century period. In 1618, 40- guilders of tax were raised, and around 1678 this grew to fl. 140 and fl. 200-. After 1698 it was even more, having increased to fl. 300- per annum. Record years in growing and taxation were 1765 with fl. 1.000- and 1789 with fl. 1.062-. The tobacco trade in Tiel can be divided into the wholesale trade, where the tobacconist bought large quantities, and the retail trade which was at approximately 30 locations in the town were tobacco for private use could be obtained. In 1751 Andries Bogenaar set up a chewing tobacco factory. The tobacco trade flourished so greatly that sometimes transportation problems occurred (Lennep 1978: 179–180). The tobacco pipes imported from Gorinchem and Gouda were transported along the river. From the finds it can be concluded that the pipe factories of Frans and Jacob van

Figure 25. Gouda and Gorinchem tobacco pipe bowls and stems from the privy.



de Velde and Dirck Entvogel had a trading outlet in Tiel.

The social use of tobacco was accepted in the 18th-century Netherlands, but its personal use differed in every social group. Women as well as men smoked tobacco. In the countryside women smoked more than men. Smoking occurred inside the house, usually after tea. The smoking of tobacco was seen as rather unrefined; it was far more "civilized" to chew tobacco. By chewing, one showed good manners. Chewing was "civilized" as long no one spat. Smoking and chewing during cooking or dinners was deemed improper (Dibbits 1998: 145–149).

In the family home, smoking and probably chewing tobacco was common. In the early period (1701–1745) relatively more smoking occurred with higher quality pipes than during the second period (1760–1778). The pipes were probably most often thrown away before they broke. The difference in quality during the first period is striking, possibly indicating that some members of the household, for example the servants, had to use the lesser quality pipes. During the second period, when only the sisters and the single brother remained in the house, it is clear that there was less smoking than in the previous period. The large number of pipes from the first period suggests that the men were the smokers in the house and that the ladies smoked less or did not smoke. It cannot be determined whether the men in the family smoked "home tobacco," tobacco imported from Virginia or the West Indies or Brazil, or a blend.

Heating and lighting

Coal, cinders, and ash found in the privy are an indication of the heating of the house. The coal consists of pieces, while the cinders are smaller particles. Ash was found in the fill as white clusters. The absence of a larger amount of forged iron nails may indicate that cut firewood instead of scrap wood from the wharves or a building site was used. A half-burned wax candle and a candleholder (fe-kho-1) indicate the use of candle light. Candlesticks occur many times in the probate inventories of the wealthy. Candles can be used only once and are usually consumed completely. Candle snuffers or pullers were not found, but these are found in other privies (Baart, Krook, and Lagerweij 1986: 138). Oil lamps using rapeseed oil were a markedly cheaper source of light than candles, but evidence of ceramic lamps was absent. Oil lamps with glass tubes were used in the 18th century but are not usually found in privies earlier than the 19th century (Jaap Kottman, ROB, personal communication). Light from natural sources was probably most important. The transparent and slightly green window glass that was found indicates that this 18th-century house probably had large square sash windows.

Cast iron stoves were used in urban households from the 16th century onwards. The advantages were that they could be moved in summer and winter time to other rooms, and the air in the house stayed clean because the stove pipe could go right out the window making a large chimney unnecessary. Stoves were fired with peat or coal. In the 18th century stoves were normal in the typical urban household (Fock 1997: 464). Coal was imported from at least the 10th century onward from the Rhineland and other regions into Tiel.

Leisure time

Various items leisure time were found. These can be divided into the following categories: play and fancywork. Toys were typically small-size miniatures of real objects. Smaller than the children's toys are the doll house items; these were, however, not used by children but by adults for play. Among the children's toys there was a wooden boat made from an oval box of larch wood. The mast and rudder were painted red. Other toys are a wooden ball and a jumping jack of pewter. A die with a core of lead that was found was a toy or game implement. A miniature tea service may have belonged to the children or the doll house and consists of a white earthenware teapot (w-min-), a stoneware "*pispot*" (s2-min-), and two red- and silver-painted wooden plates (FIG. 26). Besides this a 12-cm-high lacquer doll's head was recovered, but the composition of this material is still not clear.

The small brass scissors (cz-scc-2) used for sewing or embroidery illustrate fancywork (Klomp 1999: 299–300). Two thimbles (cz-vih-4) and a large number of pins and needles were found among the sifted sample. Still more small pins were found in further sorting the material from the sifted organic residue. The last count made a number of around 300. A worked ivory needle case was also excavated (FIG. 27). An extraordinary find was a bobbin, used for making lace and indicating high status. Comparable finds are known from Rotterdam, where bobbins made of buxom wood (*Busus sempervirens*) and snakewood (*Brosimum guianense*) were found. Also that privy could be associated with the Burgomaster family of Abraham Jansz de Reus, living in the early 17th century (Carmiggelt 1997: 242–245). Only one cloth seal, showing the Amersfoort coat of arms, could be found. The town of Amersfoort was known for the production of "*bombazijn*," a coarse fabric intended for work clothes (Klomp 1999: 302).

The children formed an important element in the Van Lidth de Jeude household. The daughters may have used the miniature tea set items. The toy boat was presumably constructed at home. The boat floats and may have been able to sail. It is not known if there were ponds of water in the garden where the boat could have been used. In the late 18th century a "Nuremberg shop," also known as a toy shop, opened its doors. The shopkeeper, H. W. Loon, sold toys there. These included prams, various toys made of brass and tinplate, and tobacco boxes and lanterns (Lennep 1978: 175).

Figure 26. Miniature toy chamber pot (top) and teapot (bottom). The toy chamber pot, or "*pispot*," is of Westerwald salt-glazed stoneware decorated in blue, height 3.4 cm. The toy teapot is of lead-glazed white earthenware decorated with brown spots, height 4.1 cm (Bartels 1999: 602, 755).

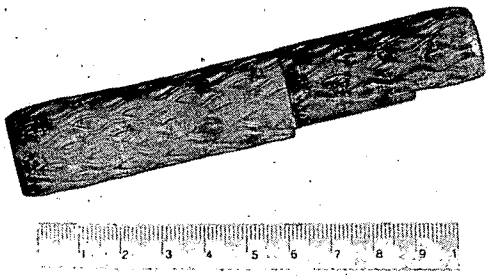


Figure 27. Decorated ivory needle case.

Clothes, shoes, and accessories

Items that can be associated with clothing form a large part of the assemblage. The metal items consist of buttons from uniforms, dresses (pb/sn+cz-kno-), collars (cz-kkn-1), cuff links (cz-mkn-1+2) for shirts, "*kopple-passants*" (cz-kpp-1+2), and parts of buckles. Buckles were found in simple and in elaborate styles. Wire loops and hooks were found in large numbers. Items of clothing include silk stockings and a hair-ribbon. Other items of clothing were not found, though some 50 patches of different fabrics could be retrieved. An important find is that of a dozen black strips of whale bone, identified by Frits Laarman of the ROB. These black strips typically are flat and have incisions at a regular interval of 2 to 3 cm. These have been interpreted as the hoops of crinolines or the ribs of a corset (FIG. 28). The shoes consist of two children's and five adult-size shoes. Besides that, a large number of lace tips (cz-nes-2) were found. These were used not only on leather or textile shoelaces but also on laces for underwear, trousers, and coats.

Accessories that were used with clothing or on the body were also discovered. A round ivory tiara, three walrus ivory combs with teeth on one side, and three double-sided toothed horn combs were excavated (FIG. 29). The horn combs were used as nit-combs or wig-combs (FIG. 30). Curls from human hair were found, though it cannot be said if they belonged to a wig. The cut-off braid certainly had belonged to someone in the household. Jewelry consists of a gold filigree ear ring or pendant (au-han-4) (FIG. 31). There were also a silver pendant with a small stone or gem (ag-han-) and a brass button (cz-han-3) that could be attached to cloth with a needle and thread.

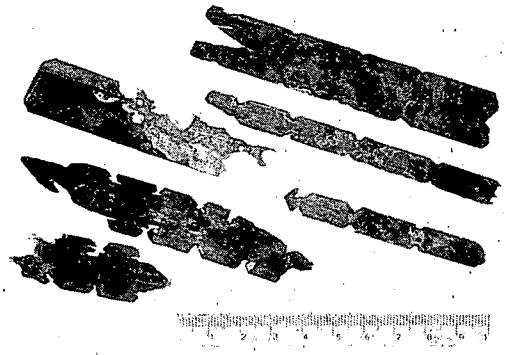


Figure 28. Strips of black whale bone from the hoops of crinolines or ribs of a corset.

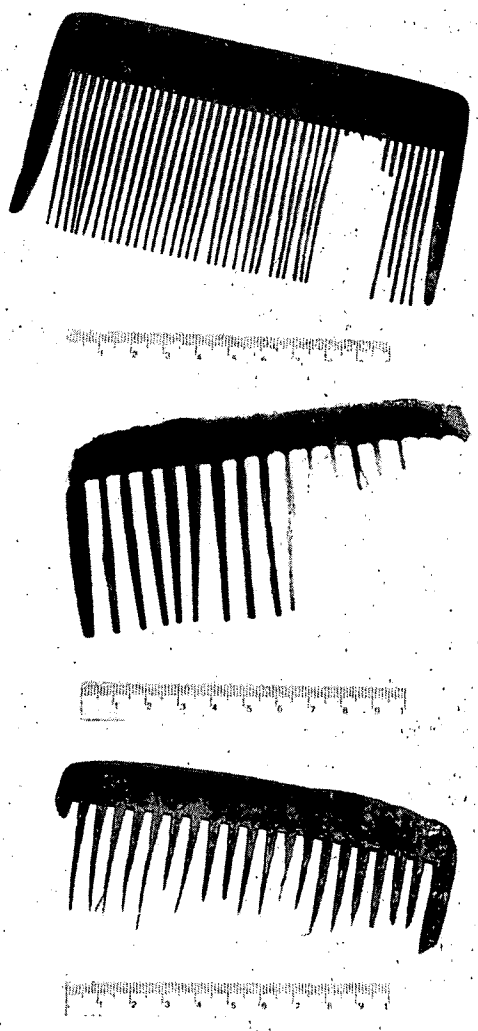


Figure 29. Walrus ivory combs.

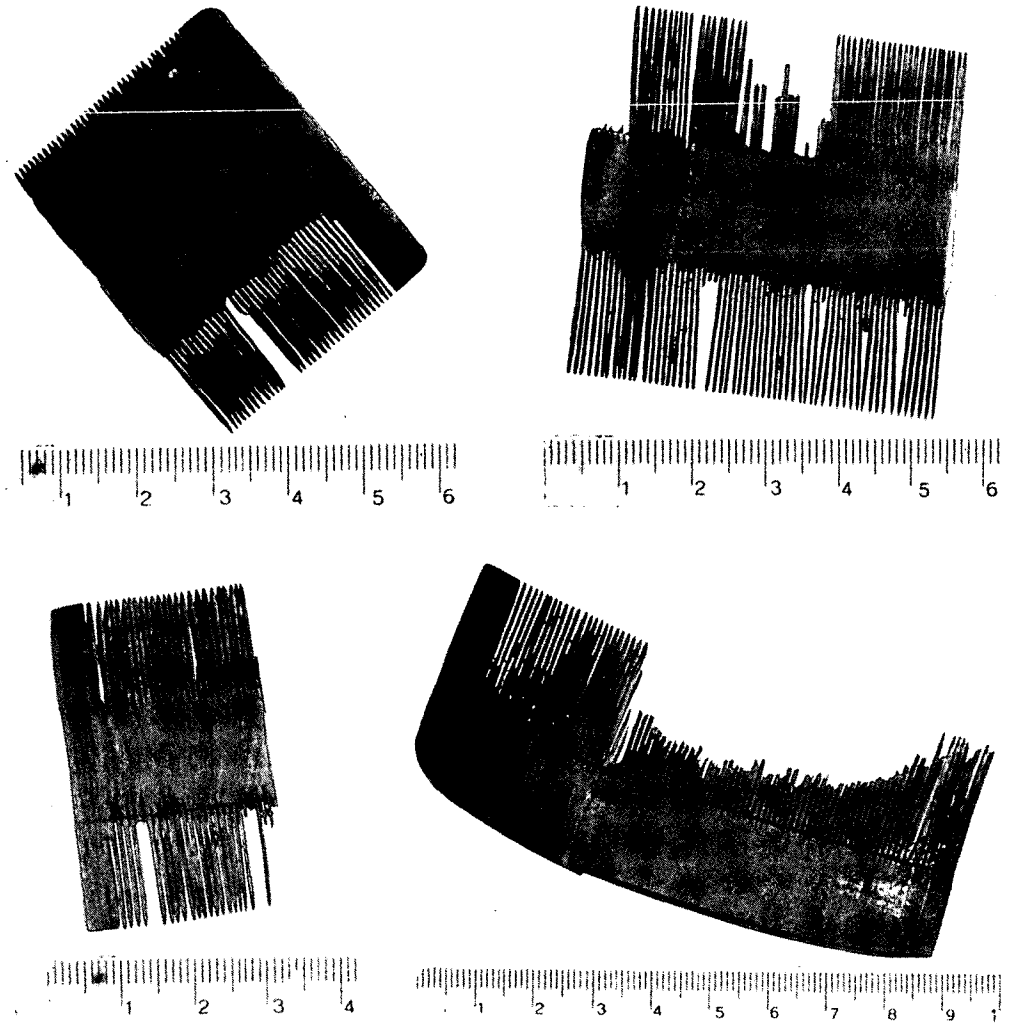


Figure 30. Horn combs for wigs or for removal of lice (nits).

A finger ring was discovered that was made of horn. One of the four fans was found intact, although the fill of the privy had seriously affected it. The ribs of the second fan were of an oriental style. Even the end ribs were elaborately made. The third fan was inlaid with mother of pearl. The fourth one was made of thinly-sawn bamboo (FIG. 32).

The small amount of clothing that was found can possibly be explained as evidence of thrift. Although the family probably wore very expensive costumes made of the better fabrics, much care was taken of them. In Tiel all kinds of cloth, from "*Leidse baai*," a very coarse fabric, to chintz, were sold. In addition, textiles for tablecloths and bedclothes, such as Flemish and Silesian linen, were sold (Lennep, 1978, 174–175). The servants were often given the cast-offs of their masters and the left-over patches from needlework (Pols 1996: 105). The children's clothing was passed down from the older to the younger ones. The number of wire loops and hooks indicates that the clothes were mended. The needles and pins used for fancywork in leisure time would also have been used for mending the clothes. The stockings that were found were of good quality and show only some mending. Crinolines were like corsets, and wigs were typical items of fashion at this time.

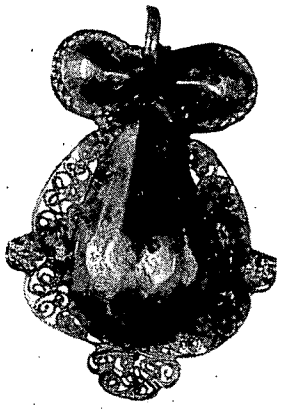


Figure 31 (left). Gold pendant with filigree, total height 2.3 cm.

The jewelry and accessories were expensive items and mostly were bought for special occasions. Weddings were used to flaunt one's wealth and status. Amounts between fl 2,000- and fl 5,000 just for the wedding dress and the accessories such as a tiara or fan were normal among the upper class. In the making of a probate inventory, jewels, a much-wanted item, were seldom missed. Gold and silver jewelry was inherited from mother to daughter in all classes except the paupers. Amongst the valuable gems, red coral and pearls were often found and inherited as well. Pols (1996: 94–96) describes all the expenses for items bought for the wedding of the De Vree sisters of Arnheim. The probate inventory of the Bettinck family in Doesburg illustrates how much jewelry the upper class owned (Dibbits 1998: 361–362, 303). Fans are found occasionally in privies, gold and silver jewelry is rare, and gems and pearls in privies are, to the writer's knowledge, not known in the Netherlands.

Working, writing and reading

Objects that can be connected to writing and reading are numerous. These objects tell something about both the office work and the leisure time of the family. Some fragments of laid paper have been recovered from the fill, but a possible watermark could not be deciphered. Writing implements that were found include slate pencils and wooden holders for a nib. Nibs made of metal or quill are absent. Among the glassware are small inkpots (gl-fle-33).

The amount of mail received must have been large, evidenced by the immense number of lacquer seals that was found (Bartels and Van der Hoeven 2003; Bartels and Van der Hoeven 2005). Approximately 120 intact and partially recognizable seals representing more than 50 different depictions of arms or initials were excavated. In addition, more than a thousand small fragments of lacquer seals came from the sifting. The actual number of seals is estimated to be around 450. The Van Lidth de Jeude family coat of arms in the oval and diamond-shaped frames were directly identifiable. Coats of arms from other local regents and peers such as Cock van Delwijnen, the Van Galen family, and Burgomaster Van Hoytema of Zaltbommel have been identified. Also, official mail seals were found. One seal was made of wax instead on lacquer. That the family sent sealed mail themselves could be established from the stump of lacquer. Signet rings or stamps were not excavated. The par-

Figure 32. Parts of bamboo and bone fans.

ents, the boys, and also the girls could read and write. All children automatically wore their family coat of arms in their signet rings. The diamond-shaped frames were for unmarried women, while the oval-shaped frames were for males and married ladies. From the lacquer seals only the incoming mail can be reconstructed, and from their number it can be concluded that there was a lot correspondence between family members, especially the unmarried females and their Utrecht cousins.

The three round concave glasses (gl-bri-1) indicate that reading glasses were used. The book clasp pin (cz-bsp-1) indicates the possession of books. The number of books, of course, was surely much larger than this single book, but it cannot be concluded from the finds in the privy that the family members were well-read. Archival research has demonstrated that aristocratic families possessed many books and that reading was popular. From surviving books it is known that some in the family must have been fluent in Latin. A Latin book on eloquence now in the collection of C.C. van Lidth de Jeude of Echteld was given to Johan Richard van Lidth de Jeude (born. July 18, 1704) for his 19th birthday. The possession of books and paintings throughout the 17th and 18th centuries was quite common among the wealthy and has been the subject of extensive study.

A hammer with a varnished head of walnut and a painted oak handle is a remarkable find. The hammer was unsuitable for hammering nails, and, while it may have been used in the kitchen or as part of a child's carpenter set, such a use would seem too extravagant. It may have been used as a ceremonial hammer by one of the men in the house, perhaps in the function of a chairman. The few jettons (cz-rek-4) and coins (cu-mun-) are not indicative of the wealth of the inhabitants of the house. Money was, of course, not kept in the privy.

Interior and exterior

Seventeenth- and 18th-century building ceramics such as tiles and bricks were limited in the privy. Only some large lumps of debris were pulled out. A large amount of white wall plaster was found, but paint or wallpaper remains were not present on the plaster. One fragment of leather wall covering with a stamped motif was the only wall decoration excavated.

The flower pots, cache pots, and flower pot saucers (r-blo-, iw-blo-1, s2-bor-2) indicate that the interior was brightened with flowers and plants (FIG. 33). Garden flower pots are usually more robust and larger. The few large brass rings may have belonged to the curtains. The loose bars of wood, together with birds' feeding bowls (r-vog-1, gl-vog-2) and the hemp seed, indicate that there were birds in a cage. The birds had an ordinary feeding bowl of redware (r-vog-1) and, unusual for this period, one made of glass (gl-vog-2). The two skulls of cats show that more pets were present. Cats were a standard part of a household, mainly to keep the mice away but probably also as pets. Evidence of the two dogs shown in the painting, a lap dog and a hunting dog, was not found. Dogs may have been buried at a special location. Skeletons of buried dogs are frequently found in rural areas near farms. Moreover, the two dogs depicted in the painting may not have existed in reality, since dogs are commonly included in such portraits.

The privy was situated outside the house next to the wall of the courtyard, but not much waste from the outdoors was found in the fill. Trimmings from the plants or shrubs were absent. A water lock (r-kui-1) for a chicken feeder could be reconstructed, however; it was used to keep water for chicks at a safe, controlled level so that the chicks could not drown. Remarkably, the bones of swifts were found. This bird stays exclusively in the air and nests under roofs and in barns.

Body care and personal life

Among the sanitary objects there are twelve chamber pots (*pispots*) from various sources including the Westerwald (s2-pis-3), Frisia (r-pis-16), Holland (r-pis-35), and Delft (f-pis- 4). Generally the chamber pots are of common types, of a rather large size, with wide rims, and characteristic of the 18th century. The number of chamber pots is actually rather low, and this can be explained by the use of metal chamber pots (not found, how-

Figure 33. English white-bodied earthenware flower pot with greenish lead glaze and green-decorated molded or turned rings, height 8.3 cm, and English deep dish or saucer of lead-glazed buff-bodied mocha ware, decorated with a band of black and white slip and white bands of molded beads, diameter 12.4 cm (Bartels 1999: 883, 936).

ever). The presence of chamber pots shows that bathrooms were not located on all floors. The chamber pots and bathrooms would not all have been emptied into the privy because the privy would have been filled up too quickly. No evidence of emptying was found. The feces were at least partially taken away or dumped somewhere else. Five brushes of the most common kind were found and could have been used for cleaning the house and the facilities. Hay, detected in the sample, may indicate that besides the wooden brushes hay sweepers were used. The many loose pieces of textile may have been used as toilet paper.

The two mouse traps made of iron wire show that rodents were around (FIG. 34). Bones of mice are absent. The traps are too small for rats. The vermin were kept under control with cats and mouse traps. These traps are called basket traps, because the mice were caught when they crawled in and could not leave. The mice were later drowned, and the trap was used again. The advantage over the clamp trap is that it left no traces in the pantry. Many mouse traps were produced in Neroth, near Altena in Germany (Ginzler 1989).

Male body care is represented by a shaving bowl (f-sbe-2) (FIG. 35) that was used with a separate soap bowl. The maker's mark has the initials of the Delft-based potter Jan Gaal. For female body care there are non-specific objects like glass (gl-fle-45, -49) and porcelain (p-fle-2) perfume bottles. Perfume could have been used also by the men, however. The nit combs were also used by both sexes. The watering jug

Figure 34. Two iron wire mouse trap cages, length of each 9.6 cm (Bartels 1999: 1062). The iron wire has a copper/zinc coating.

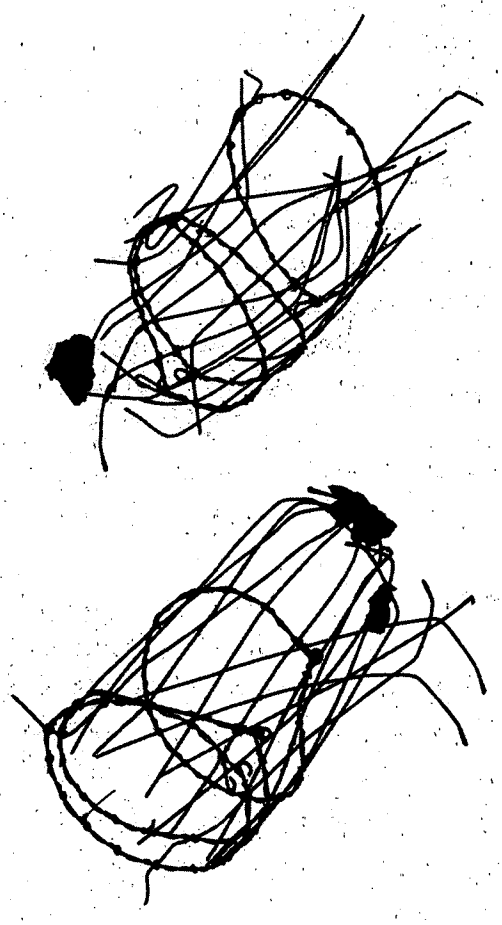


Figure 35. Tin-glazed Delft barber's bowl, fluted, with decoration in blue of flowers, foliage, and a cock fight (in the center). The mark on the base is that of Jan Gaal of Delft. The vessel diameter is 28.3 cm (Bartels 1999: 830).

and the wash bowl (?)(m-kom-1) may have been used for personal washing. Bathing was not popular in this period.

Ointment pots were found in a series of seventeen, (w-zal-1, -2, -3, and -4) amongst them some rare types. Together with 85 medicine bottles, it cannot be said what they contained, other than ointment or oil. They may have served medicinal or cosmetic purposes. The same goes for the mineral water bottles, where the use of water may have been for health, but the same bottles could have been re-used as liquor bottles (gl-fle-9, -10, -11, -15, -16, -33). In the fill two kinds of intestinal parasites were detected. These did not necessarily live in human intestines, since they may also have come from pigs' intestines. Health problems, however, are indicated by rotten and pulled molars. Oral hygiene was probably rather poor. The use of the toothbrush, occasionally found in late 18th- and 19th-century privies, had not been adopted by the family by this time.

Signs of a personal tragedy are the remains of a skull fragment, a piece of mandible, and a shoulder blade from an infant, a seven-month-old fetus. Premature birth occurred many times in the 18th century and was usually fatal for the baby (Klein-Hofmeier 1998: 3). This was a tragedy not only for the mother but also for the entire family. That the Van Lidth de Jeude family suffered from infant mortality is shown in the family painting. The last son of Cornelis Philip and Christina, the five-month-old baby Christiaan Osewold, is depicted flying as an angel above the family.

The death of a seven-month-old fetus cannot have resulted from an abortion, since this would have been fatal for the mother. This baby was a natural premature birth. If the premature stillborn baby were the child of a legitimate spouse in the family, it would have been buried in the church or in the family grave just outside the church. Illegitimate children who lived were left with the mother or were given to an orphanage to hide family shame. At least three interpretations are possible: 1) if the child was legitimate but was not baptized, it could not be buried in church ground, and the family "kept it quiet;" 2) it may have been a baby of one of the unmarried Van Lidth de Jeude daughters, since an unmarried mother from a regent's family would have been a major disgrace requiring the shame to be

hidden; or 3) the child may have been conceived by one of the family men or a male servant with one of the maids, revealing illicit sexual activity that had to be kept secret.

Conclusion

The 18th century in the Netherlands was an era of mass production and mass consumption of goods. In this early capitalist society the manufacture of furnishings, textiles, and ceramics increased. There were increases not only in the production at home, but also in the imports from elsewhere in Europe and overseas. Both the probate inventories and the archaeological evidence from privies show that relative scarcity in the 16th century was replaced in the 18th century by abundance for the middle and upper classes. Even the lower classes enjoyed the growth of wealth to a certain extent. Within every town and within every segment of the population there was a great specialization in the way products were consumed. Durable goods and only some of the common moveable goods can be traced with probate inventories. Privy research, however, reveals both the goods that were directly consumed, such as meat, fish, vegetables, and fruit, and partially the moveable goods. The durable goods are generally absent in privies.

A systematic approach is necessary in order to research specialization within the material culture of households. Only when the entire fill of a privy is sifted in layers and studied is it possible to construct a representative "privy inventory." These privy inventories must be set up in a way that they can be compared. A method for this is the Deventer System frequently used in the Netherlands. To compare privy inventories large samples are needed, which means that privies should be excavated on all sites where they are found. When the privy inventories of one period, for example 1700 to 1750, are compared with the available probate inventories and historical sources, the patterns of economic status and specialization become clearer. The relativity of both sources can be weighted, and a more certain socioeconomic answer about the life and position of an individual or a family can be given. To make a statement based on one single privy in the center of Tiel is, of course, not possible. Comparative materials from the 18th century have only recently been excavated. Of privy assemblages numbers 300 through 312 in Tiel, the only assemblages comparable in period are number 305 and number 308 (Bartels 1999: 428–429). Assemblage 305 has only redwares and a little tin-glazed ware but no porcelain. Assemblage 308 belonged to a school and has a completely different pattern. The excavations at Tol-Zuid (1997) and Agnietenhof (1999) in Tiel produced assemblages of household waste that have not yet been studied.

Status indicators are of great importance in the study of assemblages from privies. With ceramics and glass from the 18th century four variables are important: price, number, variety, and completeness. The separation of the finds into functional categories has the advantage of bridging the traditional categorization of objects by material (glass, textile etc.), revealing which functional categories may not be represented. Within this studied assemblage, a remarkably low number of cooking implements and of larger bone fragments shows that this was not a "kitchen privy" but that it was situated closer to the rooms of the house. The amount of fruit and crab shows that the unusable table waste went into the privy and that the remaining (fish) bones went back to the kitchen. The family set their table in the style of the time, and they probably set an example in fashion on a local or regional level. Status differences also can be seen in the study of the pipes assemblage. The design of the interior and the exterior is, however, difficult to trace through evidence from the privy. Toys and items for leisure are more evident and can be used as status indicators. They have even made it possible to distinguish sex and age. This is also partially true for clothes, shoes, and accessories. The lacquer seals from the letters form a clear sign of wealth and status. The evidence of hygiene shows a hidden side of the family. They had the more common chamber pots and a nice but common shaving bowl. As with the cooking items, certain metal objects clearly are missing. While this distortion on the one hand makes it difficult to interpret some objects, on the other hand it provides information that cannot be found in archives or inventories.

The remains from the privy of the family Van Lidth de Jeude indicate that they consciously distinguished themselves from the lower and middle classes, but they displayed their wealth without ostentation or tastelessness. The symbolism of respect without conspicuous abundance is the core of the socio-economical significance of this privy and the heart of Protestant wealth. The family was aware of their status and behaved accordingly, and there were few that were superior in status or to whom they owed respect. Their wealth was probably even greater in the first period (1701 to 1745) than in the second period (1760 to 1778).

The comparison of this assemblage with other finds of the same order still remains to be done. Some assemblages would suit quite well for this purpose. The excavated material associated with a Burgomaster of Nijmegen or of Zutphen, and also some assemblages from Alkmaar, could be used. The content of the privy of the Batenburg Mansion, associated with the regent family of Roukens, would be useful for this (Thijssen 1991), as also for that of the Burgomaster Opgelder from Zutphen (1744–1785) (Michel Groothedde, personal communication). Such a study could address questions on the regionality of products as well as the association of trash with the number and sex of the individuals represented by it. A further aim of this comparative study would be a greater understanding of the urban élite and their material culture in general.

Addendum

During the summer of 2001 the remaining lacquer seals from the privy were studied. In all, 450 seals were found, of which 83 are identifiable as to family or a person. Heraldic and historical research identified about 40 individuals and the families who corresponded with them. From the seals, three socio-economic groups can be discerned. The first group is an official network of officials from other towns in Gelderland. The second group is a regional group within the Tielerwaard and Bommelerwaard areas. The third group consists of family and relatives, and the fourth group includes official and semi-official contacts in the city of Utrecht. Because the shape and compositions of the various coats of arms are based on family relationships and on gender, marital status can be determined. Consequently, further research on the seals may provide insights into gender-based networks of women in the household and their female relatives in other towns.

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Appendix 1: A Short Introduction to the Deventer System and the Catalog

The Deventer System was first developed in 1989 in the town of Deventer, the Netherlands, for describing the ceramics and glass from closed complexes, in this case privies and waste pits. The system is based on the Minimum Vessels (MV) within a privy. Because most of the objects are often archaeologically complete or easy recognizable as belonging to a certain shape, this is in this case regarded as an appropriate procedure. Every item is given a code. A three-item code is the core of the system; lists are made which together form the inventory of the privy. The three-item code is built up of fabric-shape-type number, for example "f-kop-1." With this code a beginning is made in the description of metal objects.

The advantage of this system is that it restricts the description of large numbers of objects to a single line in an inventory, naming the Deventer code, amount, weight, and sometimes provenance. When an item is first published it is accompanied with a "catalogue entry" giving nine specific details. This entry also has a line drawing of the section and shape and in most cases a photo of the item and specific details such as marks and decorations.

The Deventer System was specifically developed for closed complexes with a short date range (usually no more than 50 years) and is not applicable to all archaeological features. However, items can be used as a reference.

Fabric

The fabrics of the objects are, for example in the case of local redwares (r-), of known or unknown provenance. Only the major production sites and some minor workshops in the Netherlands are known. The same is true, for example, of stonewares. In the case of tin-glazed wares and "industrial" fabrics it is often hard to tell exactly from where they come. Neutron Activation Analysis (NAA), microscopic clay sample study, or electron analysis is difficult to carry out for the large amounts of material with which Dutch archaeologists often deal. Therefore, the Deventer System group chose to abstract the fabrics to a medium-specific level. If the provenance of a fabric or object can be specified by a code, for example, "D" or "d" (CERTAIN, probable) will be added in a column. The list of fabric and provenance codes is given below.

Shape

Most of the 13th-century and later products found in the Netherlands belong to a limited number of general shapes. Items for cooking, for example, will be skillets or pipkins, and for drinking there are jugs and cups. These general shapes have a three-letter code originating from the Dutch word for this item. The advantage of this mnemonic code is that it relates to the object, where a number would be unrecognizable. The entire syntactic discussion of how to name items was curbed by this, because the shapes are hidden in a code rather than revealed in a flow of regional and academic names for an item. The shapes are restricted to a certain definition (Bartels 1999: 521–526). In glass and ceramics the codes have identical meanings and definitions. For example "-kop-" will be "cup" in redware, Bohemian glass, and pewter.

Type-number

When an item of a certain fabric ("f," for fayence or Delftware) and a certain shape ("kop" for cup) is found, it receives a number. This number, for example "1," is unique and

may only be used for this shape. The next item found of the same fabric but of a different shape within the shape definition will be "2," and so on. The problem occurs where the range of one shape ends and the other begins. Because of the generality and the (proto-) industrial character of most objects, the distinction between two type-numbers is in most cases clear.

Advantages

The advantages of the Deventer System are many. First, the amount of information on one item is limited to one line, and long descriptions of objects are no longer needed. Secondly, an already-published object within the Deventer System does not need to be published again; just the code can be used.

By standardizing the types, comparisons can be made between privy "inventories" within blocks, districts, and even towns or regions. In theory it is conceivable that an infinite number of shapes and type-numbers can be created. This guarantees that the description of diversity is secured. In practice, it can be seen that the number of type numbers stabilizes, and only the special or local shapes have been added in the last few years. About 30% of the type numbers cover 80% of the objects from seven centuries. A typology of objects arises from the progress in describing new items. Because all the objects within the typology have a date (object date, use date, date range) they form a chronology. By plotting the various types through time, a seriation can be created, establishing a typological chronology. When this is done for the seventeen places were the Deventer System is used now, most of the country will be covered.

Disadvantages

Within every system there are, of course, disadvantages. The first problem is regionality. Potters and their apprentices did use each other's forms, decorations, and techniques. Even clays were transported frequently. In some centuries it is easy to tell from where specific shapes or fabrics come, and usually the local varieties are hard to identify. If this can be done, for example by studying kiln wasters, it is often found that one producer's material looks very diverse. This variety is sometimes lost within the three-item code. However the diversity can still be traced from the inventories.

Because the sizes of one type are still the same type, the smaller and larger sizes of a jug cannot be distinguished. To prevent this, the codes L (large), M (medium) and S (small) were introduced with, amongst others, redware pipkins and skillets. These size codes are limited to ranges in height and diameter. For example, redware pipkins up to 15 cm in diameter are S (small), 15–25 cm are M, and >25 cm are L (large). In other cases, type numbers are given for certain forms; a Delftware saucer for a teacup is "f-bor-8," whilst the identical shape occurs as a plate as well. This one has another code.

Describing decoration of objects is the field of both art historians and archaeologists. The consequence of this is that the nomenclature is often mixed and not standardized. More integration of the two disciplines will lead to more uniformity.

The second or third life of an object, for example the storage pot later used as a chamber pot (*pispot*), and afterwards as a whitewash pot for painting a wall, cannot be described in the single Deventer System code. For this only the full computer entry can be used.

Where Are We Now?

Within ten years data were published or are in preparation from different complexes in 24 places. The date range of all complexes reaches from the mid 13th till the early 20th century. This is the period that the privies and trash pits were in use in Dutch towns. Not just household trash has been published, but also kiln waste has been examined (Alkmaar, Delft, Enkhuizen, Oosterhout, Zutphen).

In all more than 28 fabrics, 81 shapes, and more than 1300 different types of ceramics, besides more than 450 types of glass, have been published so far. In all more than 250 complexes have been examined and published. Professionals as well as amateur groups are using the system for both recording and publishing their finds. Because the work takes place at various places in the country, a system to administer the new types and to coordinate the progress was set up. The central catalogue is in Alkmaar, where all draft versions are checked and the finally new type numbers are given. A catalogue of all types of ceramics is being updated every half year and sent to all participants. Archaeological services and groups will be able to subscribe to the digital Deventer System, containing all data and many entries, at low cost beginning in the winter of 2004. Regular updates will follow in coming years.

The plans for the future are to build a word-wide accessible website on the Internet where all types, dates, and decorations can be

found. The goal of being able to draw conclusions from all the material and data gathered is growing nearer. When a critical number of inventories of a certain period is collected, it will be possible to paint a broader picture of consumption, trade, wealth, and style. It seems now, as most of the privies date from the 18th century, that the first integrated step will be taken in the study of the material culture of that century. For difficult periods such as the mid 15th and late 13th centuries, this will take more time.

Codes used in the Deventer System.

Fabric codes in the order used in the Deventer system (all codes used so far in the system are named).

Code	*Fabric*
s1	non-industrial stoneware without surface treatment
s2	non-industrial stoneware with surface treatment (wash, glaze etc.)
s3	industrial stoneware
s4	near stoneware
s5	proto stoneware
s6	Asian stoneware (not Yixing)
s7	French stonewares (Martincamp, etc.)
jy	*jyddepot*, handmade Danish blackware
g	grayware
r	redware
rm	redware from the Meuse valley
w	whiteware
wm	whiteware from the Meuse area
ha	hafner wares (Rhine, Meuse, Dutch)
db	Dieburg ware
wa	Werra ware (German, Dutch)
we	Weser ware
dw	Western-German decorated wares; Ochtrup, Wildeshausen etc. (not Lower Rhine)
m	majolica
f	Delft ware (faience)
i	Italian wares
sp	Spanish wares (tin-glazed, amphoras, etc.)
po	Portugese wares (tin-glazed, redwares, etc.)
d	German tin-glazed ware
p	Asian porcelain
ep	European/industrial porcelain
iw	industrial whiteware (cream-, pearl-, whiteware, etc.)
ir	industrial redware and proto-industrial redware (Delft, Staffordshire, Yixing, Dresden)
iz	industrial blackware (basalt- and blackware)
ik	colored industrial wares

Shape codes (only the codes in the table are named).

Code	*Dutch name*	*English name*
bak	*bakpan*	frying pan
bek	*beker*	beaker
blo	*bloempot*	flowerpot
bor	*bord*	plate
bri	*brilleglas*	spectacle glass (lens)
bsp	*boeksluitpen*	book clasp
dek	*deksel*	lid
dra	*draad*	wire
fle	*fles*	bottle
fls	*flessluiter*	bottle top
ges	*gesp*	buckle
gew	*gewicht*	weight
gil	*glas in lood*	window lead
gra	*grape*	pipkin
han	*hanger*	pendant
hon	*hoofdnaald*	needle eye
kan	*kan*	jug (one handle)
kel	*kelkglas*	drinking glass
kho	*kaarshouder*	candle holder
kkn	*keelknoop*	throat button
klh	*kledinghaak*	hooked tag
klo	*kledingoog*	wire loop
kno	*knoop*	button
knp	*knop*	button
kom	*kom*	bowl
kop	*kop*	cup
kpp	*koppelpassant*	belt buckle
kui	*kuikendrinkbak*	birds' feeding bowl
kwi	*kwispedoor*	spittoon
lep	*lepel*	spoon
man	*mand*	basket
mes	*mes*	knife
min	*miniatuur voorwerp*	miniature object
mkn	*manchetknoop*	sleeve button
mun	*munt*	coin
nag	*nagel*	forged nail
nes	*nestel*	lace tag
pis	*pispot*	chamber pot
pla	*plaat*	foil
plo	*plooischotel*	lobed dish
pot	*pot*	pot
ras	*rasp*	grater
rek	*rekenpenning*	jetton
rin	*ring*	ring
roe	*roemer*	roemer
rto	*riemtong*	strap end
sbe	*scheerbekken*	barbers' bowl
scc	*scharnierschaar*	scissors
sch	*schaal*	oval platter
slb	*slachtbak*	butchering bowl
slt	*boeksluiter*	book clasp
spe	*speld*	pin
stb	*strijkbout*	iron
stk	*steelkom*	skillet
sto	*stoof*	chafing box
tes	*test*	fire pan
tex	*textiellood*	cloth seal
the	*theepot*	teapot
val	*muizenval*	mouse trap
ver	*vergiet*	strainer
vez	*verzegellood*	seal lead
vfl	*vogelfluit*	bird whistle
vih	*vingerhoed*	thimble
vog	*vogeldrinkbak*	bird feeding bowl
wlo	*wijnlood*	wine lead
zal	*zalfpot*	ointment pot
zou	*zoutvaatje*	salt cellar

Provenance codes. CAPITAL = certain, lower case = probable.

Code	*Provenance*
BD	Bohemia or Germany
BZ	Bergen op Zoom
CH	China
D	Delft
DN	Germany or The Netherlands
DU	Germany
EN	England
EU	Europe
F	Frisia
FC	Frechen
H	Holland
HK	Hendrik de Koning, Delft
IG	Jan Gaal, Delft
LX	Luxemburg
MA	Meuse area
MS	Meissen
NE	The Netherlands or England
NL	The Netherlands
NR	Lower Rhine
PW	De Pauw (The Peacock), Delft
ST	Staffordshire
WB	West Brabant
WW	Westerwald

Function codes.

Code	*Function*
t	tea or coffee ware
d	dinner ware
f	fowl keeping
w	wine drinking attributes
bw	beer and water drinking attributes
c	cooking
s	sanitary
i	interior decoration
b	body care
p	playing
hs	heating and smoking tobacco
ps	pouring and storing

Appendix 2: Contents of Van Lidth de Veude Privy, Tiel, Netherlands

Table 1. Ceramics, Glass, and Metal. (*N*=Number; *Prov.*=Provenance; *Wt.*=Weight *Fun.*=Function)

Ceramics

Common name	*Deventer code*	*N*	*Prov.*	*Wt.*	*Fun.*
saucer for flower pot	s2-bor-2	1	WW	0.2	i
mineral water bottle	s2-fle-2	1	WW	}	a
mineral water bottle	s2-fle-5	1	WW	}	a
mineral water bottle	s2-fle-9	1	WW	}	a
decanter VLDJ initials	s2-fle-10	4	WW	}	a
mineral water bottle	s2-fle-	1	WW	5.3	a
jug, M	s2-kan-	1	WW	0.25	d
bowl, M	s2-kom-2	2	WW	1.1	c
teacup	s2-kop-3	1	WW	0.25	t
doll-size pisspot	s2-min-	1	WW	}	p
pisspot	s2-pis-3	3	WW	3.8	s
storage pot, S	s2-pot-7	1	WW	0.8	ps
saucer	s3-bor-1	1	EN	0.05	t
plate	s3-bor-4	4	EN	}	d
plate	s3-bor-5	1	EN	}	d
plate	s3-bor-6	1	EN	2.25	t
lid for teapot	s3-dek-3	1	EN	0.015	t
bowl, brown stoneware	s3-kom-	1	EN	0.05	d
teacup	s3-kop-1	1	EN	0.05	t
cup, brown stoneware	s3-kop-4	1	EN	0.275	t
oval platter	s3-sch-1	1	EN	0.55	d
teapot	s3-the-7	1	EN	0.2	t
miscellaneous	s3-	2	EN	0.05	
flower pot, M	r-blo-	1	NR	0.075	i
flower pot	r-blo-	1		0.675	i
plate, M	r-bor-2	2	NR	0.45	d
plate, L	r-bor-7	3	NR	3.375	c
plate, M	r-bor-10	4	NR	3.75	d
plate	r-bor-	2	NR	0.2	d
lid for pipkin	r-dek-5	1	NR	0.275	c
lid for pipkin	r-dek-6	1		0.425	c
lid for pipkin, L	r-dek-7	1		1	c
pipkin, cyl. shape	r-gra-12b	3	BZ	4.3	c
pikin, M	r-gra-53	3	BZ	7.35	c
pipkin, S	r-gra-64a	1		0.375	c
pipkin	r-gra-65	1	BZ	3.8	c
pipkin, M	r-gra-67	1	BZ	3.8	c
pipkin, S	r-gra-105c	1	NR	0.275	c
pipkin	r-gra-	1		0.45	c
jug, M	r-kan-5	3		1.6	ps
jug, L	r-kan-43	1	NR	1.2	ps
jug, S	r-kan-44	1	H	0.65	p
bowl, M	r-kom-1	1	F	0.4	c
bowl	r-kom-23	1	NR	0.3	c
cup, L	r-kop-2	1		0.4	d
cup	r-kop-5	1		0.225	d
cup	r-kop-8	2	NR	0.56	d
cup	r-kop-35	2		0.625	d
water-lock chickenf.	r-kui-1	1		0.7	f
pisspot	r-pis-16	1	F	1.3	s
pisspot	r-pis-35	2	H	2.45	s
pisspot	r-pis-36	1		1.475	s
storage pot	r-pot-2	1	H	1.525	ps
extinguishing pot	r-pot-3	1	BZ	3.925	hs
pot, M	r-pot-	2	F	1.275	ps
pot, M	r-pot-	1	H	1.2	ps
butchering bowl	r-slb-	1	WB	0.2	c
iron	r-stb-	1		0.25	b
skillet	r-stk-2	1		}	c
skillet	r-stk-3	2		}	c
skillet	r-stk-	2		1.4	c
fire pan	r-tes-2	7		3.425	hs
fire pan	r-tes-3	6		3.35	hs
fire pan	r-tes-	1	F	0.375	hs
colander	r-ver-	1	F	1	c
bird whistle	r-vfl-	1		0.025	p
bird water bowl	r-vog-1	1		0.75	f
ointment pot	r-zal-	1		0.01	b
unknown	r-	3	NR	1	
unknown	r-	2		0.425	
frying pan	w-bak-1	1	fc	0.3	c
pipkin, M	w-gra-19	2		0.6	c
pipkin, M	w-gra-24	1	fc	0.325	c
jug, S	w-kan-12	1	f	0.475	c
jug, XL	w-kan-16	1		2.6	ps
jug, M	w-kan-	1	f	0.425	ps
cup	w-kop-5	1		0.1	t
teapot, XS	w-min-	1	f	}	p
pot, S	w-pot-10	2	fc	0.7	c
chafing box	w-sto-1	1		0.425	t

fire pan	w-tes-1	1	fc	1	hs
fire pan	w-tes-2	1	f	0.325	hs
teapot	w-the-	1		0.05	t
ointment pot	w-zal-1	8		}	b
ointment pot	w-zal-2	3		0.7	b
ointment pot	w-zal-3	2		0.06	b
ointment pot	w-zal-4	2		0.05	b
ointment pot	w-zal-	2		0.01	b
unknown	w-	1	f	0.03	
unknown	w-	2		0.07	
pot, M	wm-pot-1	1	MA	0.75	c
plate	m-bor-	1	F	}	d
bowl, L	m-kom-6	1	F	1.95	d
plate, M	f-bor-2c	3	D	0.5	d
plate, M	f-bor-2c	2	PW	0.675	d
plate, M	f-bor-3c	2	D	0.9	d
plate, M	f-bor-3d	1	d	0.45	d
plate, M	f-bor-5c	26	D	6.625	d
plate, M	f-bor-5d	16	d	5.925	d
plate, M	f-bor-6c	9	D	1.5	d
plate, M	f-bor-6c	1	HK	0.275	d
plate, M	f-bor-6d	2	d	0.3	d
plate, M+L	f-bor-7c	3	D	0.625	d
plate, M	f-bor-7c	1	PW	0.3	d
saucer	f-bor-8c	11	D	0.07	t
plate, L	f-bor-10c	1	D	1	d
plate, L	f-bor-10d	1	d	0.55	d
plate, M	f-bor-11d	2	d	0.675	d
plate, L	f-bor-15c	3	D	0.45	d
plate, M	f-bor- c	3	D	0.05	d
plate, M	f-bor- d	1	d	0.05	d
jug, M	f-kan-4	1	D	0.75	ps
bowl, M	f-kom-2	1	D	0.625	d
bowl, L	f-kom-3	1	D	1.175	d
teacup	f-kop-1	4	D	0.175	t
teacup	f-kop-2	3	D	0.075	t
cup, L	f-kop-12	1	D	0.175	t
cup, L	f-kop-13	1	D	0.2	t
teacup	f-kop-	1	d	0.005	t
spittoon	f-kwi-	1	D	0.15	hs
pisspot	f-pis-4	4	D	}	s
pisspot	f-pis-	1	D	3.35	s
lobed dish, M	f-plo-4	2	D	0.55	d
lobed dish, M	f-plo-9	1	PW	0.36	d
octagonal dish	f-plo-11	2	D	0.55	d
lobed dish	f-plo-	1	d	0.06	d
barber's bowl	f-sbe-2	1	IG	0.625	b
square dish	f-sch-1	4	D	1.43	d
ointment pot	f-zal-1	2	d	}	b
ointment pot	f-zal-3	1	d	0.26	b
unknown	f-	1	d	0.05	
saucer	p-bor-1	9	CH	}	t
saucer	p-bor-2	3	CH	}	t
plate	p-bor-4	1	CH	}	d
plate	p-bor-5	2	CH	0.725	d
saucer	p-bor-6	12	CH	}	t
saucer	p-bor-9	3	CH	}	t
saucer	p-bor-	5	CH	0.6	t
perfume bottle	p-fle-2	3	CH	0.18	b
bowl, M	p-kom-1	1	CH	0.125	d
Kraak bowl	p-kom-6	1	CH	0.075	d
bowl	p-kom-	1	CH	0.05	d
teacup	p-kop-1	21	CH	}	t
teacup	p-kop-10	3	CH	}	t
teacup	p-kop-11	9	CH	}	t
teacup	p-kop-	7	CH	0.5	t
canister/tobacco pot	p-pot-2	1	CH	0.125	i
saucer	ep-bor-1	2	EU	}	t
saucer	ep-bor-1	1	Mß	0.3	t
flower pot	iw-blo-1	1	ST	0.225	i
plate, deep, M	iw-bor-2	2	EN	0.4	d
plate, L	iw-bor-3	1	LX	1.75	d
plate, M	iw-bor-4	5	ST	}	d
plate, M, scalloped	iw-bor-4	9	EN	}	d
plate, M	iw-bor-6	7	EN	9.1	d
plate	iw-bor-	2	EN	0.025	d
basket	iw-man-	1	EN	0.025	d
jug, M	iw-kan-	1	ST	0.125	t
bowl, M	iw-kom-6	6	EN	1.75	d
teacup	iw-kop-1	11	EN	0.33	t
teacup	iw-kop-	1	h	0.02	t
oval platter	iw-sch-1	2	EN	0.525	d
teapot	iw-the-5	2	EN	0.1	t
teapot	ir-the-8	1	EN	0.15	t
teapot lid	iz-dek-	1	EN	}	t
bowl, M	iz-kom-2	1	EN	0.2	d
saucer	ik-bor-1	1	EN	0.1	t
total		414		143.42	

Glass

Common name	*Deventer code*	*N*	*Prov.*	*Wt.*	*Fun.*
beaker	gl-bek-6a	25	BO	2.83	bw
beaker, foot, star	gl-bek-6b	2	BD	0.2	bw
beaker, foot octagon	gl-bek-6c	3	BD	0.31	bw
beaker, antique	gl-bek-8	1	Dn	0.03	bw
beaker	gl-bek-23	4	BD	0.34	bw
beaker, tulip shape	gl-bek-25	4	0.32	bw	
beaker, tulip shape	gl-bek-25a	3	nl	0.39	bw
beaker, cylindrical	gl-bek-25b	1		0.038	bw
beaker with panels	gl-bek-26	5	BD	0.06	bw
footed beaker	gl-bek-41	7	nl	0.43	bw
beaker, tulip, octag.	gl-bek-58	3	nl	0.20	bw
beaker, indet.	gl-bek-1			0.075	bw
spectacle glass	gl-bri-1	3		0.026	b
lid	gl-dek-2	1	nl	0.019	d
lid	gl-dek-10	1	nl	0.12	d
bottle, medicine/oil	gl-fle-3	7	DU	0.24	b
bottle, octagonal	gl-fle-4	1	DU	0.033	w
wine bottle	gl-fle-6	3	nl	1.45	w
bottle, 4-sided L	gl-fle-7	2	Dn	1.42	w
carafe (blue)	gl-fle-8	1	nl	0.203	w
bottle S, oil/perfume	gl-fle-9	13	Dn	0.507	b
bottle S, oil/perfume	gl-fle-10	3	Dn	0.262	b
bottle S+ES, med/perf	gl-fle-11	59	Dn	2.315	b
bottle S, med./perf.?	gl-fle-15	4	Dn	0.076	b
bottle ES, med./perf?	gl-fle-16	3	DU	0.023	b
water bottle,	gl-fle-18	1	du	0.32	bw
water bottle,	gl-fle-18	1	nl	0.32	bw
wine bottle	gl-fle-19	3	en	2.75	w
wine bottle	gl-fle-22	43	NE	19.275	w
wine bottle	gl-fle-23	3		2.184	w
wine bottle	gl-fle-24	1	nl	0.525	w
wine bottle	gl-fle-25	3	nl	0.525	w
wine bottle	gl-fle-26	1	nl	0.725	w
inkpot	gl-fle-33	3	Dn	0.064	i
perfume bottle	gl-fle-44	1		0.005	b
perfume bottle	gl-fle-45	1		0.031	b
perfume bottle	gl-fle-49	2	BD	0.03	b
wine bottle	gl-fle-55	1	nl	0.575	w
wine bottle	gl-fle-74	5	nl	2.875	w
bottle, wide mouth	gl-fle-76	1	nl	0.575	w
wine bottle	gl-fle-77	2		1.425	w
bottle indet (wine)	gl-fle-	26		13.726	w
drinking glass	gl-kel-1	5	nl	0.466	w
drinking glass	gl-kel-2	50	nl	4.99	w
drinking glass	gl-kel-3	20		2.213	w
drinking glass	gl-kel-6	8		0.8	w
drinking glass	gl-kel-8	8		0.615	w
drinking glass	gl-kel-14	1	nl	0.12	w
drinking glass	gl-kel-21	9		1.349	w
drinking glass	gl-kel-22	2		0.258	w

drinking glass	gl-kel-23	5		0.568	w
drinking glass	gl-kel-38	6	nl	0.198	w
drinking glass	gl-kel-63	1	nl	0.12	w
drinking glass	gl-kel-66	1	DU	0.119	w
drinking glass	gl-kel-67	9		1.022	w
drinking glass, indet	gl-kel-	5		0.18	w
storage pot	gl-pot-1	1	nl	0.032	sp
roemer	gl-roe-2	4	DN	0.22	w
bird seed dish	gl-vog-2	1		0.018	i
salt	gl-zou-1	5	nl	0.048	d
salt	gl-zou-5	1	BD	0.05	d
salt	gl-zou-5	2		0.085	d
salt, on high foot	gl-zou-6	1		0.09	d
salt	gl-zou-7	2		0.08	d
indet	gl-	6		0.26	
beaker fragments	gl-bek-			0.53	bw
drinking glass frag.	gl-kel-			0.182	
indet colorless				1.712	
window glass				not weighed	
total		411		74.171	

Metal

Common name	*Deventer code*	*N*
copper coin	cu-mun-	2
book clasp	cu/zn-bsp-	1
wire	fe-dra-	4
bottle top	sn-fls-2	1
buckle	cu-zn-ges-7	1
buckle	cu/zn-ges-8	1
buckle	cu/zn-ges-9	1
buckle	cu/zn-ges-10	1
buckle	cu-zn-ges-11	1
buckle	cu/zn-ges-12	6
belt-clasp	cu/zn-gsl-3	1
weight	pb-gew-	1
window lead	pb-gil-	3
silver pendant	ag-han-1	1
golden pendant	au-han-4	1
copper pendant	cu/zn-han-	1
copper pendant	cu/zn-han-3	1
needle eye	cu/zn-hon-1	1
candle holder	fe-kho-1	1
throat button	cu/zn-kkn-1	1
hooked tag	cu/zn-klh-1	13
wire loop	cu/zn-klo-1	8
button (cast)	cu/zn-kno-3	1
button (hammered)	cu/zn-kno-5	1
button	cu/zn-kno-	1
button	pb/sn-kno-4	1
knob	cu/zn-knp-1	1
knob	cu/zn-knp-2	1
kopple passant	cu/zn-kpp-1	1
kopple passant	cu/zn-kpp-2	1
pewter bowl (porringer)	sn-kom-	1
pewter spoon	sn-lep-2	1
pewter spoon	sn-lep-3	1
peweter spoon	sn-lep-	1
knife	fe-mes-	1
tin deer (jumping)	pb-min-3	1
sleeve button	cu/zn-mkn-1	1
sleeve button	cu/zn-mkn-2	1
nail	fe-nag-	1
lace-tag	cu/zn-nes-2	13
unknown	cu/zn-onb-	1
unknown	fe-onb-	1
unknown	pb-onb-	2
foil	pb-pla-	3
grater	cu/zn-ras-1	1
jetton	cu/zn-rek-4	2
ring	cu/zn-rin-	6
strap end	cu/zn-rto-	1
book clasp	cu/zn-slt-	1
pin	cu/zn-spe-2	25
scissors (small)	cu/zn-scc-2	1
cloth seal	pb-tex-1	1
seal lead	pb-vez-1	2
mouse trap	fe-val-1	2
thimble (cast/turned)	cu/zn-vih-4	2
wine lead	pb-wlo-	2
total		136

Table 2. Tobacco Pipes.

Total weight: 3075 grams. Minimum number: 144
Date: 1701–1778; date range: 1690–1820.
Quality: s = poor (*sleght*); r = coarse fabric; g = fine quality; p = fine quality, highly finished.

Provenance	*Date*	*Type*	*Quality*	*N*
Gouda	1720–1740	2h; tea table	g	9
Gouda	1730–1750	3h; tea table	g	2
Gouda	1730–1750	3h; tea table	p	3
Gouda	1740–1770	3h; tea table	g	1
Gouda	1740–1750	3h; tea table	p	11
Gouda	1770–1790	3h; Batavia coat of arms	p	2
Gouda	1760–1780	3h; AVB	p	2
Gouda	1760–1790	3h; LVD	p	1
Gouda	1690–1720	2h; kr. KB	g	1
Gouda	1720–1740	2h; kr. KB	g	1
Gouda	1710–1740	2h; kr. AP	p	3
Gouda	1700–1730	2h; KSV	g	1
Gouda	1710–1740	2h; Gouda tower + GT	p	4
Gouda	1730–1750	3h; Gouda tower	p	1
Gouda	1710–1740	2h; windmill	g	9
Gouda	1710–1740	2h; Amsterdam coat of arms	g	3
Gouda	1730–1750	2h; small sailing boat	p	2
Gouda	1760–1780	3h; kr. chafing dish	p	1
Gouda	1760–1780	3h; kr. 56	p	1
Gouda	1790–1820	3h; kr. 56	g	1
Gouda	1730–1740	2h; key	g	7
Gouda	1750–1780	3h; key	g	1
Gouda	1750–1770	3h; Haarlem coat of arms	g	1
Gouda	1730–1750	3h; three fleur de lys	p	5
Gouda	1750–1770	3h; kr. wine barrel	p	1
Gouda	1700–1730	2h; Delft coat of arms	g	1
Gouda	1700–1730	2h; IVS	p	2
Gouda	1710–1730	2h; parrot in ring	g	1
Gouda	1720–1740	2h; PD	g	1
Gouda	1740–1770	3h; kr. 35	g	2
Gouda	1710–1730	2h; AOS	g	1
Gouda	1740–1770	3h; flounder	p	1
Gouda	1710–1730	2h; man on a chair?	?	1
Gouda	1690–1720	2h; makers mark	g	1
Gouda	1750–1780	3h; kr. 4	g	1
Gouda	1720–1740	2h; star	g	1
Gouda	1700–1730	2h; AGV	g	1
Gouda	1750–1770	3h; swine	p	1
Gouda	1750–1780	3h; kr. GN	g	1
Gouda	1710–1730	2h; PRK	g	1
Gouda	1700–1730	2h; sun	p	1
Gouda	1720–1740	2h; egg basket	p	1
Gouda	1750–1780	5h; kr. 16	g	1
Gouda?	1740–1760	8l; putti on goat, r; flowers	r	1
Alphen	1740–1760	3h; kr. 9	g	1
Gorcum?	1690–1740	2 no mark	r	9
Gorcum	1720–1750	7l; SIS	r	9
Gorcum	1710–1750	2 no mark	r	6
Gorcum	1690–1730	2l; I r;B*	r	1
Gorcum	1690–1730	7l; IB	r	1
Gorcum	1690–1730	7l; rose + IB r; rose	r	1
Gorcum?	1700–1750	7l; rose r; rose	r	3

Gorcum	1730–1760	7l; three master r; kr. KW	r	1
Gorcum	1780–1800?	7l; kr. N + KW	r	1
Gorcum	1755	7; 1755 + kr. A + KW	r	1
Gorcum?	1700–1740	2l; T r; crescent*	r	1
Gorcum	1760–1790	7l; kr. 18 + IWS	r	1
Gorcum?	1720–1760	7l; N (or K) H and I	r	1
Gorcum	1760–1790	7l; kr. IG	r	3
Gorcum	1760–1780	7l; k. DB r; I:G	r	1
Gorcum?	1740–1760	7l; PI	r	1
Gorcum?	1740–1770	8l+r; flowers below tree	r	1

* letters on side of the heel.

Name stamps on stems:

7x D.M.VELDER/IN GOUDA (Dirk Mansvelder)
2x D.M.VELDER/
1x .F EN I.van*/*DE.VELDE*
(Frans and Jacob van de Velde)
2x /*DE.VELDE*
2x KOFFY/PYPE
2x DIRCK*/ENTVOGEL (Dirck Entvogel)
1x DIRCK.ENT:/
2x /IN GOUDA
1x ?:DE?
1x DE LIEDE?
1x ?IHO?

Distribution of pipes by provenance:

Gouda (95 ex.)	66.0%
Gorinchem (42 ex.)	29.2%
Alphen a/d Rijn (1 ex.)	0.7%
Unknown (6 ex.)	4.1%

Distribution of pipes by quality:

Coarse fabric (43 ex.)	29.9%
Fine (51 ex.)	35.4%
Fine, highly finished (43 ex.)	29.9%
Unknown (7 ex.)	4.8%

Table 3. Miscellaneous Objects.

Wood

Item	*N*
Ball	1
Barrel, small	1
Boat, toy	1
Bobbin	1
Book cover	1
Box, oval	2
Box, round	2
Brush, large, oak	5
Button	4
Cork, normal	3
Cork, large	1
Dish, with red paint	1
Dish with silver paint	1
Fan, bamboo	1
Furniture, knob, fraxinus	1
Hammer, taxus, walnut, oak	1
Knife handle, buxus	2
Knobs, various	7
Planks, loose, various	5
Penholder, ebony	1
Kindle wood	4
Spindle	1

Leather

Item	*N*
Wall decoration leather	1
Children size shoes	2
Adult size shoes	5

Textile

Item	*N*
Stockings, silk	4
Band, silk	1
Various fragments	50

Bone

Item	*N*
Balena, strips, whale	7
Comb, tiara, horn	3
Comb, nit comb, bone	2
Comb, ivory, walrus	1
Die, bone	1
Fan, ivory and m. of pearl	3
Lock plates, horn	2
Needle case, bone	1

Lacquer

Item	*N*
Statuette/Doll	1
Seals	450>

Various

Item	*N*
Braid (human)	1
Vat paper	1

Table 4. Animal and Human Bones.

Two samples were studied. The first consists of the larger bones collected by hand during the excavation and the first sifting through 4-mm mesh screen. The second was taken from 22 liters of the material remaining in the screen after sifting. From this 22 liters, 10 liters of bones could be sorted out. It is believed this represents about 10% of the total number of bones from the sifting.

Sample 1. Bones collected by hand (N=326).

Taxon	*N*	%	*W(gr)*	%
Domestic mammals				
Cattle (*Bos taurus*)	122	52.8	6891.0	79.9
Sheep/Goat (*Ovis aries/Capra hircus*)	57	24.6	1212.3	14.0
Pig (*Sus domesticus*)	36	15.5	458.0	5.3
Cat (*Felix catus*)	2	0.1	1.8	
Unidentified	14	5.2	57.0	0.6
Wild mammals				
Hare (*Lepus europaeus*)	15	100.0	38.6	100.0
Birds				
Domestic fowl (*Gallus gallus*)	12	42.8	11.6	34.9
Mallard (*Anas platyrhynchos*)	14	50.0	19.2	57.8
Pigeon (*Columbo livia*)	1	3.5	2.0	6.0
Woodcock (*Scolopax rustica*)	1	3.5	0.4	1.2
Fish				
Cod (*Gadus morhua*)	11	21.5	41.0	75.0
Flatfish (Pleuronectidae)	19	37.2	8.6	15.7
Pike (*Esox lucius*)	6	11.7	2.8	5.0
Haddock (*Melanogrammus aeglefinus*)	3	5.8	0.6	1.0
Eel (*Angullia angullia*)	1	1.9	0.1	0.1
Carps (Cyprifomes)	2	3.9	0.2	0.3
Invertebrates (not in total count of sample 1)				
Crab (Crustacae)	xx			
Scallop (*Pecten maximus*)	2			
Escargot (*Helix pomatia*)	3			
Mussels (*Mytilus edulis*)	xxx			

Sample 2. Bones from the sifting (N=850).

Taxon	*N*	%	*W(gr)*	%
Domestic mammals				
Cattle (*Bos taurus*)	3	15.8	25.2	34.6
Sheep/Goat (*Ovis aries/Capra hircus*)	5	26.3	20.8	28.5
Pig (*Sus domesticus*)	5	26.3	25.4	34.8
Cat (*Felix catus*)	6	31.5	1.4	1.9
Wild mammals				
Hare (*Lepus europaeus*)	7	100.0	2.4	100.0
Birds				
Domestic fowl (*Gallus gallus*)	9	22.5	2.8	54.9
Mallard (*Anas platyrhynchos*)	2	5.0	0.8	15.6
Pigeon (*Columba livia*)	3	7.5	0.6	11.7
Swift (*Apus apus*)	1	2.5		
Songbirds (Passeriformes)	2	5.0		
Indeterminate	23	57.5	0.9	17.6
Fish				
Cod (*Gadus morhua*)	6	5.7	4.0	
Flatfish (Pleuronectidae)	15	14.4	0.6	
Pike (*Esox lucius*)	2	1.9	0.1	
Haddock (*Melanogrammus aelefinus*)	4	3.8	1.4	
Eel (*Anguilla anguilla*)	2	1.9	0.4	
Carps (Cypridindae)	6	5.7	0.1	
Herring (*Clupea harengus*)	13	12.5		
Indeterminate	56	53.8	1.2	
Human				
7 month prenatal (*Homo sapiens*)	3 (not in sample)			

Table 6. Pollen and Spores.

Pollen percentage based on a 100% presence of trees and non-aquatic plants. Wild plants are omitted.

Type	%
Tree pollen	
Alder (*Alnus*)	1.8 %
Willow (*Salix*)	0.9
Ash (*Fraxinus*)	2.6
Hazel (*Corylus*)	0.9
Chesnut (*Aesculus*)	0.9
Common Elder (*Sambucus nigra*)	0.9
Culture crops	
Barley-type (*Hordeum*-type)	17.5
Rye (*Secale*)	6.1
Buckwheat (*Fagopyrum esculentum*)	20.2
Chervil (*Anthriscus cerefolium*)	2.6
Anise (*Pimpinella anisum*)	0.9
Pea (*Pisum sativum*)	1.8
Horse bean (*Vicia faba*)	1.8
Clove (*Syzigium aromaticum*)	1.8
Various and parasites (x = 1-10 spores; xx = 11-99; xxx = 100-999).	
Arcella	x
Ascaris	xxx
Trichuris	xx

Table 7. Botanical Remains.

A sample of 150 liters of soil was sifted. The analysis of the soil continued until no new types were encountered, which was after 17 liters were analyzed. Then the numbers were multiplied on the basis on the total volume of the sample.
(x = 1-10 seeds; xx = 11-99; xxx = 100-999; xxxx =>999).

English and (Latin) Name	*N*
Cereals	
Cultivated Oat (*Avena sativa*)	x
Six-row Barley (*Hordeum vulgare*)	x
Rice (*Oryza sativa*)	xxx
Buckwheat (*Fagopyrum esculentum*)	xx
Common Millet (*Panicum miliaceum*)	x
Bread Wheat (*Triticum aestivum*)	x
Cereals (Cerealia)	xxxx
Fruits	
Fig (*Ficus carica*)	2446
Melon (*Cucumis melo*)	x
Cornelian Cherry (*Cornus mas*)	xxx
Wild Strawberry (*Fragaria vesca*)	44440
Crab Apple (*Malus sylvestris*)	xxxx
Medlar (*Mespilus germanica*)	xxxx
Black Mulberry (*Morus nigra*)	xx
Juniper (*Juniperus communis*)	xx
Apricot (*Prunus armeniaca*)	xxx
Wild/Dwarf Cherry (*Prunus avium/cerasus*)	xxxx
Plum (*Prunus domestica* subsp. *domestica*)	xxxx
Bullace (*Prunus domestica* subsp. *insititia*)	xxx
Almond (*Prunus dulcis*)	xx
Peach (*Prunus persica*)	xx
Sloe/Blackthorn (*Prunus spinosa*)	xxxx
Pear (*Pyrus communis*)	119
Currant/Gooseberry (*Ribes*)	1626
Black Currant (*Ribes nigrum*)	xx
Red Currant (*Ribes rubrum*)	xx
Rose (*Rosa*)	xx
Dewberry (*Rubus caesius*)	119
Blackberry/Bramble (*Rubus fruticosus*)	2846
Raspberry (*Rubus idaeus*)	339
Bilberry (*Vaccinium*)	367
Grape-vine (*Vitis vinifera*)	xxxx
Nuts	
Sweet Chestnut (*Castanea sativa*)	x
Walnut (*Juglans regia*)	xxx
Hazelnut (*Corylus avellana*)	xxx
Vegetables and pulses	
Common Purslane (*Portulaca oleracea*)	70
Cucumber/Gherkin (*Cucumis sativus*)	xx
Field Bean (*Vicia faba*)	xx
Spices and condiments	
Black pepper (*Piper nigrum*)	xxx
Black Mustard (*Brassica nigra*)	34
Oil and fiber plants	
Turnip (*Brassica rapa*)	136
Hemp (*Cannabis sativa*)	xxx
Winter crop weeds	
Corncockle (*Agrostemma githago*)	xx
Cornflower (*Centaurea cyanus*)	85
Corn Buttercup (*Ranunculus arvensis*)	xx
Wild Radish (*Raphanus raphanistrum*)	xx
Sheep's Sorrel (*Rumex acetosella*)	191
Summer crop weeds	
Shepherd's-purse (*Capsella bursa-pastoris*)	70
Pale Persicaria (*Persicaria lapathifolia*)	17
Fat-hen (*Chenopodium album*)	70
Nettle-leaved Goosefoot (*Chenopodium murale*)	17
Yellow Bristle-grass (*Setaria pumila*)	51
Grassland	
Creeping Bent/Fiorin (*Agrostis stolonifera*)	70
Soft-brome (*Bromus hordeaceus* subsp. *hordeaceus*)	17
Perennial ruderals	
Cleavers (*Galium aparine*)	xx
White Dead-nettle (*Lamium album*)	17
Various	
Bottle Sedge (*Carex rostrata*)	17
Nightshade (*Solanum*)	34
Heather/Ling (*Calluna vulgaris*)	xx