ENGLISH POTTERY AND PORCELAIN
OF THE
EIGHTEENTH CENTURY

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1. **Biscuit** - White porous clay, first stage after being fired and before decoration and glazing.

2. **Glaze** - Glossy substance applied to the surface of pottery and porcelain.
   a. **Lead Glaze** - The porcelain of Bow, Chelsea, and other early factories contained about 40 percent of oxide of lead.
   b. **Over-Glaze Decoration** - Decoration after the surface has received its transparent glaze. This decoration admits to a wider range of colors. On hard paste it stands flat on the surface, on soft paste it is partially incorporated.
   c. **Under-Glaze Decoration** - Decoration applied to unglazed surface when in biscuit state; the whole is then covered with transparent glaze and refined.

3. **Paste** - The body of the material which porcelain is made.

4. **Porcelain** - Commonly called china; is distinguished from pottery by being translucent.

5. **Printing** - Transfer of printed patterns onto china.

6. **Transfer Printing** - A process used at Liverpool and at Worcester in which the design from an engraved copper plate was transferred to specially prepared paper and applied to ware. Black and brown were the main colors used.
Introduction

This paper is the result of 12 weeks of research and approximately 25 hours of actual handling of English pottery and porcelain in the Reeves Collection of Washington and Lee. It has been my hope that during this period of time that I could be able to learn to distinguish the different types of English china and to learn something about the history and manufacture of these pieces. Finally, I had hoped to apply the knowledge that I have gained from research and work to the types of potsherds being uncovered at the Liberty Hall excavation. Most of these goals have been met, but unfortunately, some goals have not been reached. I have learned a great deal about the history of the various English factories, the types of pottery and when they were being produced, and the characteristics that distinguish the china of one factory from that of another factory.

There have been some problems in my study of the eighteenth century English china. First of all, most books dealing with this subject approach the pottery not by the specific type, but instead by the factories. Therefore, the specific types of china discussed in this paper will be examined as the histories of the factories are discussed. Discussing the pottery types by factories does not tamper with the effectiveness of using pottery types as dating objects. It should be understood at the beginning, that the dates of the pottery types only give a hint to the date of their manufacture, and these dates are not to be used as
dates of occupation for the site. Transport of the pottery from the place of manufacture, to the colonies, and then to the Liberty Hall site, could take months or years. The dates discussed in this paper can be used as minimum dates of occupation.

Another major problem encountered, has been in the methods used by the authorities on pottery in their identification of pottery types. These experts rely heavily on identifying whole pieces rather than sherds, and they also depend heavily on the manufacturer's mark. At Liberty Hall, we have found a great number of potsherds, none of which are very big and none of which have been assembled in the laboratory. Archaeologists have been able to identify fragments, but things are made much easier if pieces are assembled so patterns and structures of semi-whole pieces can be observed. A great deal of emphasis is placed on the manufacturer's marks. We have found none of these impressed or glazed marks during the course of our excavations. Even if we do find marks on the sherds, they should come under immediate suspect because many factories stole marks from other factories. Also, replacement pieces for broken sets often bore the mark of the original manufacturer and not the mark of the factory that made the replacement piece.

English pottery can be broken down into two large groups: porcelain and earthenware. Earthenware is any type of pottery that is not translucent. Earthenware is usually referred to as soft paste porcelain. Soft paste is a mixture of clay and
glass and shows a very porous and glaze absorbing surface when broken. The soft paste porcelain bears traces of sand and the glaze is clouded with black specks and bubbles that are identifiable under a magnifying glass. This type of pottery can easily be marked with steel. Most all of the pottery produced in England during the 1700s was soft paste wares.

In China, during the 4th or 5th century, true porcelain was first produced. The English tried for centuries to produce true hard paste porcelain, but did not succeed until the 1740s. Hard paste porcelain is made by mixing china stone (petuntse) and china clay (kaolin). Hard paste porcelain does not warm easily to the touch, will resist a hard point or file, fracture concoidally, and will not absorb coloring. Porcelain is also translucent rather than opaque like soft paste earthenware. Hard paste porcelain was only made in England from about 1770 to 1800.
The Factories: History and Wares

Chelsea - The Chelsea factory started producing its first pieces in 1747. The early pieces were very much like milk glass and when held to the light showed pin pricks of greater translucency, due to the high percentage of lime used in its paste. The Chelsea pottery can be divided into four periods of production based on paste, glaze and decoration of the different periods.

a. First period of the incised triangle and raised anchor mark (1747 - about 1750) - the pieces of this period can usually be identified by the figures of birds which bear the mark of an anchor which is cushioned on a tiny oval pad of clay.

b. Red anchor period (1750s) - the paste is much harder than the first period. There is a general absence of pinpricks, but there are large patches of greater translucency called "moons" in the pieces. Beneath the bases of plater and dishes, one can find three or four spur marks where the pieces have rested on a stand while being fired in the kiln.

c. Gold anchor period (1750s) - During this period, there were fewer flaws in the potting of the wares than in the previous two periods. Also, there was a clearer glaze used which showed a greenish pooling in recessed areas. The patterns which dominated this period were Chinese and flower scenes. Rich
reds and birds were used on the Chinese and flower scenes, but polychrome flower scenes were also common.10

d. **Chelsea-Derby period (1770-1782)** - In 1770, the owners of the Derby factories took over the operation of the Chelsea factory. This alliance was in existence until 1783 when Chelsea pottery ceased to be produced. This period marks a shift from the production of fine ware to that of domestic wares. The pieces of this period are extremely rare so we probably won't find any examples of this period at Liberty Hall.11

Some very distinguishing characteristics of Chelsea pieces is that insects or floral sprays will often be painted over flaws in the paste. Till the last period, all of the Chelsea wares were very finely painted and finished and had great weight. This factory catered mainly to the aristocracy and their rich tastes, so it is very unlikely that we will find examples of the Chelsea wares at Liberty Hall.

**Bow** - The Bow factory had a very short history (1744-1776), but it was a factory that catered to the needs of the ordinary man. The wares of Bow were usually large services of sturdy paste which was potted and was usually conservatively decorated in blue and white.12

Bow's soft paste porcelains showed some new innovations to the pottery industry in England. The first glossy porcelain
included crushed calcined bones mixed with pipe clay. Much of this bone-ash was imported from the American colonies as a "produce of the Cherokee nation" and called "unaker" by the natives. Unaker was used to give increased strength to the paste. About 1755, the pipe clay was replaced by ground up Chinese porcelain. The first Bow glazes were very milky, but after 1749, a lead glaze was used which gave a greenish tint to the hollows.

Often, Bow pieces are octagonal, plain round, or wavey edged pieces that usually are decorated in a Chinese motif with a powder blue. The most distinctive pattern of the time before 1760 is the "Blue Nunkin" pattern that is done in cobolt blue. Another distinctive practice of the Bow factory was to use a knife to make clearer the outlines of patterns. Etching with a knife made the patterns more detailed. The red or blue dagger and anchor mark was distinctive of Bow wares. The potting of these wares is very out of proportion and sometimes heavy. The bottoms of the basins and dishes are usually twice as thick as the sides. The pieces are overly marked with imperfections and often yellowish or greatly discolored due to the lead glaze that was used.

**Derby** - William Duesburg started this factory in the early 1750s with the intent to produce practical, but well-decorated wares that did not cater to any specific group of patrons. Over the years, the Derby group took control of the Chelsea, Bow, and Longton Hall factories, but the wares of these periods can be discussed in respect to each of the three factories, because the
Derby owners did not try to change the line of wares produced by each of these factories. So, in order to talk about Derby pottery, you really have to talk about four factories and their wares after Derby took over the factories.

The earliest Derby porcelain was a glassy, chalky white that was very thinly glazed which was relatively free from flaw and blemish and had a pale yellow translucency. The Derby patterns became standards for most of the factories in England except for Worcester. Outlined flower petals and flower sprays were very common. Cispids in crimson and gray, fine sea and landscapes, and striped wavy patterns in gray, crimson, and dark blue were very popular and common Derby patterns. Japanese patterns were the most popular of all patterns and occurred late in the 18th and early in the 19th century, and were richly colored in blue and red and often were gilted.

Longton Hall - William Littler, a pioneer of English pottery, founded this factory in 1750 but it only lasted for 10 years and was closed in 1760. Littler was forced to close because no one bought his wares; they were unusual, but not attractive on practical.

The paste was very similar to that of Chelsea with a translucency that varied between green and cloudy yellow. The potting was very heavy and flaws abounded. Many of the pieces had bluish globs on the bottom of them. The years from 1757-1760 were the struggle years of the factory, so Littler was forced to start making molded domestic wares. The pieces were molded with
scrolls and floral reserves, basketwork, flutes, fruit, flowers, and leaves. Chinese patterns were used, but these were always very sketchy and one on underglazed blue. The most prominent and distinctive characteristic of Longton Hall wares was the use of the double scrolled handle. Also, no transfer printing was ever done at this factory.

Lowenstroft - This factory was founded in 1757 and made soft paste porcelain wares for domestic use. The soft paste contained about 20% bone ash, so it was very similar to Bow porcelain. Tea wares and sauce boats with anglicized Chinese patterns in blue were the most prominent wares from the Lowenstroft factory.

In 1771, a new manager came to the factory, and several changes were made: (a) over-glazed blue come into use (b) copies of Worcester patterns and potting were used (c) transfer printing in underglaze blue was started (d) the Worchester crescent and the Dresden crossed swords marks were put on all of the blue and white pieces. Before 1773, most of the footrims had a blue painted workman's mark, but after 1773, most pieces aren't marked in any way. There also is usually a brownish discoloration of the glaze.

Worcester - This factory has been producing pieces since 1751 which have been used as models to which all other pottery has been compared. Worcester produced pottery that was practical, sturdy, decorative, and able to stand up to heat and hot water. The factory is still in operation today, but the work that receives
the most widespread attention comes from the "Wall Period" from 1752-1783. The period is named for Dr. Wall, the owner and driving force behind the factory for many years.

The paste of Worcester wares was composed mainly of soapstone (stealite) up until the 1790s. Then, bone-ash was used which gave the potting a much stronger body that was much whiter in color. The glossy glaze was filled with tiny bubbles and had a slightly bluish tint to it. By transmitted light, the pieces prior to 1775 showed a light greenish or yellowish tinge but most pieces afterward had the bluish hue.

The painted wares of Worcester were always of the Chinese motif, and men with long slender hands and birds with long tails were very characteristic of these hand painted pieces. About 1755, the decorators and engravers at the Worcester factory perfected and put into production transfer printing of designs onto ceramic vessels. This invention revolutionized the pottery industry so that more pieces could be produced at a much faster rate without losing the quality of the decoration. Between 1775 and 1760, crimson and powder blue flowers were the dominant patterns at the Worcester factory. After 1760, Japanese patterns were very popular, and from 1770 on til the end of the Wall period, grounds of different light colors with patterns of Chinese motifs, birds, and flowers dominated. Worcester made their marks on pieces in underglazed blue. The crescent was used most often but sometimes a script "W" was used. Many times, the marks were camouflaged in with the pattern. The Worcester underglazed blue
pieces have a depth and quality unlike any other English factory, and more nearly approach the oriental quality of depth. Caughley-Coalport - Many people often refer to the pottery from this factory as "the poor man's Worcester." Although both Worcester and Caughley try to capture the feel and look of Chinese blue and white porcelain, Caughley was never quite as good and always seemed to be detained and harsh. The factory was started in 1772 but was sold in 1799 and moved to Coalport in 1814 so we are only concerned with the Caughley era of this pottery.

The Caughley porcelain was almost matte in color and was very often pitted. Most of these wares are printed and are distinguished by their elaborate blue borders interrupted by scrolled areas containing landscapes. The pattern that this factory was most famous for was the "Willow Ware" pattern. Nothing like this pattern was ever seen in China, but the pattern contained a crowding of anglicized Chinese motifs.

Liverpool - This name refers to the collective pottery products produced by several potters in Liverpool England. The earliest known producer of pottery in this area was Robert Podmore who began production in the year 1755. During the Chafer's Period (1775-1765), the pottery produced at Liverpool looked much like that of Worcester. The potting was thin and neat, the paste had a green translucency, and the glaze was thin, glistening, and bluish-green when it pooled in hollows. There are some very distinguishing features of Liverpool wares: (a) the foot rim slopes inward (b) the handle's upper terminal is either cloven
or shaped like snakes in order to get a better grip. (c) Helmet creamers were the most common product between 1765-1780 and (d) by 1765, most of the potting structures and glaze flaws had been eliminated.32

There is one blue and white design that is found on no other factory's wares. This pattern consists of a slender, double trunked palm tree standing before a fence that disappears to the right behind what seems to be five upright boards surmounted by a peony.33 A trellis border is on most pieces of blue and white. Printing began at Liverpool between 1765 and 1769. There were several standard patterns that were heavily printed in black, sepia, brown, purple, and red. Some of these patterns were "Tea Party," "King of Prussia," "Parrot and Fruit," "Ruins," and "William Pitt."

**Wedgwood** - Josiah Wedgwood started his own operation about 1752 after working for a few years at other factories in England. Little did he know that his work would change pottery production from a mere craft to art work. His early wares (before 1770) were everyday wares that were very hard to distinguish from the products of other factories. However, after about 1760, Wedgwood introduced "Queens" or creamware to the world which became an instant success.34 Creamware became the household and decorative ware of the remainder of the century.

Wedgewoods real success came after he became a partner with Thomas Bentley in 1769. From 1769 to 1780, they produced their extraordinary decorative wares. Some of the more
famous wares from this period are the imitation black onyx, basalt, marble, and jasper wares. Also, Wedgewood was very famous for his many cameo works that were put on the above mentioned pieces. In 1799, Wedgewood introduced pearlware which took the place of creamware as the most used domestic ware of the day.

Leeds - The factory at Leeds was established late in the 1750s with its main producte being creamware. Most of this ware had open-worked borders and either had no pattern, was printed, or had an under-glazed pattern with over-glazed enamel for color. These pieces were very well documented because pattern books were released from the factories in 1785, 1786, 1794, and 1814.

The Leeds creamware was distinguished from that of Wedgewood by its lighter weight and a lead glaze that showed a greenish color when pooled in crevices. Also, there are usually about 3 spur marks on the front and 9 on the back of most plates. Patterns, when they appeared, were colored in green, lilac, buff, or red. Finally, the best period for Leed's creamware was between 1783 and 1800.

Pottery Types of Liberty Hall

The information that I have collected on the types of pottery that has been uncovered at Liberty Hall may seem a little skimpy at first glance. However, there are some very good conclusions that can be drawn from this information about the relative age ranges of many of these sherds. As I have mentioned before, all of the books that I have researched have dealt directly with
the factories that produced pottery, and not with the specific types.

Creamware - First discovered in 1740 by Thomas Astbury, it was not successfully manufactured and distributed until much later. "Cream" or "Queen's" ware was first produced and distributed by Josiah Wedgewood in 1775. It was developed because of a court ruling denying potters the use of china stone or china-clay in their wares. So, calcined flint and Devonshire clays were used to produce creamware. This is often called "Queen's" ware because it was given patronage by the queen who was delighted with the physical and aesthetic qualities of it. Cream ware was very versatile in its usage and was used for domestic services of plain, good design, and far more fanciful elaborately modelled center pieces, cruets, vases, and other ornamental ware.

Most of the potsherds that we have found at Liberty Hall has been creamware. However, there has been very few decorated pieces uncovered. This would lead one to believe that these potsherds were from a domestic, everyday set of china that perhaps was used for such purposes as serving meals to the student body or to a family. The undecorated creamware servings were very common and inexpensive, and the loss of a piece from the set would not have been too great a loss. Decorated wares would be more personal and probably would not have been used a great deal for serving the students. For a description of the creamware patterns and distinguishing between the different factories, reference should be given to the previous section with special interest
given to the Wedgewood and Leeds factories.

Pearlware - This was totally conceived of and first massed produced by Wedgewood in 1799 as a whiter bodied creamware. The date of production of pearlware gives us an excellent chronologic fix on the pearlware that we have been finding at Liberty Hall. As best as I can determine, pearlware was not produced by any other factory until at least 1801. There can be some confusion about the term pearlware, so I will try to dispel the misunderstanding. When reading a source on potting, if the name Pearl Ware is seen, then one should not confuse this with the pearlware that we have found at Liberty Hall. Pearl Ware is the name given to a type of pottery that was colored to look like Mother of Pearl. It has a shell like lustre and was introduced by Wedgewood earlier in the 18th century. The pearlware that has been found at Liberty Hall is a whiter version of creamware. It has blue rather than yellow or green pooling in the crevices of the piece. Pearlware, like creamware is a pottery type that has a variety of uses but is used mainly for domestic service. We have also found, what has been identified as polychrome pearlware. This has been confused with delftware which I will cover later in this paper.

Willow ware - This is the popular name given to any pottery that bears the famous Willow pattern. This pattern is merely a copy of the usual Chinese landscape, complete with temples, islands, bridges, fences, rocks, and flying birds all drawn in an angli-
cized manner completely lacking in perspective. Most of these wares were printed blue and white by the Caughley factory, although Wedgewood did produce a limited amount. This also was an inexpensive domestic ware.

**Delftware** - This is any clay colored ware that has been coated with either opaque or white glaze (containing tin) in order to make the ware appear white bodied. The soft paste was fired at a low temperature and then had the tin glaze applied. The glaze was soft and easily wiped off, so the patterns were very broad and had little detail. The glaze was just too absorbant to have detailed patterns. There was a decline in use of delftware after 1750 because it was too fragile and all production stopped in 1785 because of the widespread use of creamware. The major centers of delft production in the 18th century was Lambeth Bristol, and Liverpool.

The patterns for delftware changed depending on the popular pattern of the day. Many English delft patterns were copies of Dutch patterns which copied the original Chinese patterns. These patterns became very stylized with pogodas that had square windows and flower sprays of unknown origin. A practice that was very common in delftware was to create pieces bearing dates and names to commemorate some event. These were usually done for marriages, births, or as gifts. The colors used in making the patterns were usually cobolt blue, iron red, antimony yellow, copper green, and magnesium browns and purples. These colors were put on the piece in a very broad and flippant manner.
There has been some debate as to whether certain pieces found on the dig are English delftware, or polychrome pearlware. I would have to be inclined to say that the polychrome pearlware would be the most accurate description because the paste is white instead of being brown. If true delft is ever found, we can be certain that it was produced before 1785.

**Mocha ware** - This is very similar to the marbled pieces produced by Wedgewood, but the pattern is more tree-like. The unusual pattern is the reaction of a dark acid colorant to the pale tinted alkaline slip or base cover. These wares are mainly late 18th century utility wares such as jugs, mugs, etc.

We have found only one or two sherds of mocha ware at Liberty Hall and we can tentatively place a date of the 1790's on these pieces. These wares were very common and very inexpensive because they were used for utilitarian purposes.

**Feather-edged** - This group of sherds makes up the third largest group that we have found at Liberty Hall. Unfortunately, I could find absolutely no mention of the feather-edged pattern in any of the source books that were studied. From my trip to the laboratory at the University of Tennessee, I learned that both blue and green feather-edged plates are very indicative of a certain time span. Further study of these pieces should be very helpful to the interpretation of the site.
Conclusions

It would seem that from the abundant amounts of undecorated pearlware, creamware, and the large amounts of featheredge pottery, that the Liberty Hall Academy was not an extremely affluent institution. These were very common wares that were used in domestic purposes and were not at all expensive. However, we could look at it from another perspective; if the area that we are working in is truly the steward's house, then a large set of inexpensive china would be needed to serve the student body their meals at the steward's house.

We now have some specific limitations and ranges with which to work. We know that delft was not produced after 1783. Also, pearlware was not introduced and mass produced until 1799. Of course, we don't know how long it took for orders to be filled and shipped to the United States from England and then delivered to Liberty Hall.

Further study of the factories, their patterns and potting structures, are needed before we can properly discuss the entire subject of the English pottery of Liberty Hall.
Footnotes

1 Hayden, Arthur; Chats on English China, 1930, London, Ernst Benz Ltd., p. xxiii.
2 Ibid.
5 Ibid., p. 145.
6 Ibid., p. 32.
8 Ibid.
9 Ibid., p. 27.
10 Ibid.
11 Ibid., p. 28.
12 Ibid., p. 29.
14 Fischer, p. 30.
15 Ibid., p. 31.
16 Hayden, p. 62.
17 Fischer, p. 53.
18 Ibid., p. 56.
19 Hayden, p. 22.
20 Fischer, p. 58.
21 Ibid.
23 Ibid.
24 Fischer, p. 43.
25 Ibid., p. 36.
26 Ibid., p. 40.
27 Hayden, p. 83.
29 Fischer, p. 48.
30 Ibid., p. 63.
31 Ibid.
32 Ibid., p. 63.
33 Ibid., p. 66.
34 Godden, p. 337.
36 Honey, p. 110.
37 Godden, p. xv.
38 Honey, p. 107.
39 Godden, p. xxii.
40 Fischer, p. 14.
41 Godden, p. xi.
42 Honey, p. 101.
43 Ibid.
44 Godden, p. xvii.
Bibliography


Figure 41. Some typical handles. (a) Longton Hall; (b) Bow; (c) Liverpool; (d) Bristol/Worcester; (e) Lowestoft; (f) Worcester.

(from Fischer, 1962)

Figure 40. Some typical foot-rim sections. (a) Worcester; (b) Liverpool; (c) Caughley; (d) Lowestoft.

(from Fischer, 1962)
14. Borders (Figs. 1–3)

The majority of the borders pictured are of Chinese origin, and they were naturally copied by various factories, who in turn copied from each other. The selection shown here makes no claim to be comprehensive—there are many others differing only in detail from those chosen for reproduction. It should be realised, moreover, that some of them may be found on specimens originating in factories other than those mentioned.

BOW. d, dd, ii.
CHELSEA. d.
CHELSEA DERBY. oo.
CAUGHLEY. c, k, m, ce, ff, hh, jj.
DERBY. kk.
LIVERPOOL. d, f, r, y, z, aa, bb, cc, dd, gg, ii.
LOWESTOFT. l, s, t, u, v, w, x, nn.
WORCESTER. a, b, c, d, e, f, g, h, i, j, k, m, n, o, p, q, dd, mm.

Although many of the borders are found in both printed and painted form, the following are usually printed:—

c, n, bb, cc, ee, ff, hh, ii, and jj.

(from Fischer, 1947)
ENGLISH BLUE AND WHITE PORCELAIN

FIG. 2

180
BORDER DECORATION

**FIG. 3**

18* 181
Chemical Analysis

Separation of Bone-ash paste of Bow and Lowestoft from others.

Steps:
1) Portion of the body of the object is denuded of glass.
2) Hydrofluoric acid is added to exposed paste.
3) Allow to stand for 2 to 3 minutes.
4) Wash off with a solution of ammonium molybdate.
5) If yellow color appears, phosphate is present and bone-ash has been used. Indicative of Bow and Lowestoft.