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Warne and Letts stoneware: A case study in ceramic interpretation

Davis, Kathryn Jo, M.A.
University of Delaware (Winterthur Program), 1985

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WARNE AND LETTS STONEWARE:  
A CASE STUDY IN CERAMIC INTERPRETATION

By
Kathryn Jo Davis

A thesis submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Master of Arts in Early American Culture

August 1986
WARNE AND LETTS STONEWARE:
A CASE STUDY IN CERAMIC INTERPRETATION

By
Kathryn Jo Davis

Approved:

Ellen Paul Denker, M.A.
Professor in charge of thesis on behalf of the
Advisory Committee

Barbara M. Ward, Ph.D.
Acting Director, Winterthur Program in Early
American Culture

Richard B. Murray, Ph.D.
Associate Provost for Graduate Studies

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INTRODUCTION

Thomas Warne and Joshua Letts were stoneware potters working in New Jersey from about 1800 to 1815. Their stoneware, family history and the archaeological remains of their potting site provide a case study of stoneware craftsmanship in South Amboy, New Jersey, a primary center of nineteenth-century stoneware production. Although family genealogies and land records have been documented, no account books, price lists or advertisements were found for Warne and Letts' pottery business. This dearth of written documents led to the decision to investigate their work through the use of their stoneware vessels as primary documents.

Warne and Letts were father and son-in-law and their partnership was a link in a larger network of potteries related by kinship or training that spanned the period from the middle of the eighteenth century through the nineteenth century, and extended from Philadelphia to Canada. Genealogical information demonstrates that they were related through kinship ties to no fewer than four other ceramic manufactories in the South Amboy area and

1
several others as far away as Philadelphia and Canada through family or workshop associations. This suggests that kinship was an important aspect of craft organization among early nineteenth-century potters. Tracing the relationship of Warne and Letts to these other potters serves to place them within a chronology of an inherited stoneware tradition and illustrates the transmission of styles and techniques among potters.

The strength of the family orientation of their business enterprise is supported by the close physical proximity of the Warne and Letts potting site to that of Warne's father-in-law, James Morgan, Sr.. Ceramic historians, James Brown and Robert Sim, found and excavated the sites only a quarter mile from each other in Cheesequake, New Jersey, conveniently located near Cheesequake Creek on which the pottery was shipped by boat to be sold. The field data from Sim and Brown's excavations provided important additional non-verbal information regarding the potter's work habits: the proliferation of pot shards reflects the extent and type of the loss during the firing process, range of forms and a representation of types of decoration for the identification of pots not labeled with a maker's name.
Because many Warne and Letts crocks are signed with their names and dated, and a significant number of them are available for study, they are an ideal group of artifacts for scholarly analysis. Quantification and comparison of characteristics of the stoneware such as vessel size, shape and decoration provided an approach to understanding the potters' habits of workmanship. Patterns emerging from this analysis revealed information about production, marketing and the cultural milieu in which the potters lived and worked. For example, consistency among the pots in form, capacity, weight and surface decoration prove that Warne and Letts were mass producing their wares. The pots are very similar to each other: capacities are standardized and designs are repetitive. Additionally, the surface finish of the pots was not refined. This supports the conclusion that the pots were rapidly turned out in response to economic considerations.

The analysis began with an in-depth description of the artifacts. Various techniques such as measurement, description, photography and drawing were utilized in making visual and quantitative comparisons of the structural components of the objects. A basic information worksheet was devised to standardize the description and
measurement of each crock. The overall proportions and measurements were compared on the basis of their "essential components," in this case, their profile or shape. Visual assessment of the proportion was effected by overlapping silhouettes drawn from photographs of the vessels (see Figure 6a-c Chapter III). Quantitative comparison was accomplished by measuring prominent vessel characteristics. Examination and description of these "essential" (having to do with form) components as well as those considered to be "nonessential" (having to do with ornament)—was the first step in discovering the material and mental processes involved.

Warne and Letts' stoneware business was typical of many of the small family potteries that operated in early nineteenth-century New Jersey. An examination of their business through their stoneware, their family records, archaeological evidence, and related written documents elucidates some of their production and marketing techniques, and craft organization.
NOTES TO INTRODUCTION

CHAPTER ONE: THE POTTERS

Thomas Warne (b. 1763-d. 1811-13) and Joshua Letts (dates unknown), father and son-in-law, were potters in Cheesequake, New Jersey. They were related by kinship or workshop to other stoneware potters along the Atlantic seaboard. Tracing their relationship to these other potters exemplifies the transmission of styles and techniques among potters and illustrates the traditional apprenticeship system under which they worked. Additionally, an examination of the lives and working techniques of other potters in close association with Warne and Letts contributes to our understanding of those of Warne and Letts who left scant verbal evidence of their lives and partnership.

In 1786 Thomas Warne married Mary Morgan (d. 1838), the daughter of the late Cheesequake potter, James Morgan, Sr. (1734-1784) (see Chart 1). Thomas Warne may have apprenticed in the stoneware craft in Morgan's shop. This assumption is based on a similarity between the style of ornamentation on Morgan's wares and that on shards found at the Warne site, and the situation of their
MAP 1. Map Showing Cheesequake Area, present day
(Taken from Rand McNally New Jersey Road Map)
Map 2. Warne and Letts Site in Cheesequake, New Jersey, present day

Scale: 1 mile = 2 1/2 inches
(Taken from Hagstrom's Middlesex County Atlas)
CHART 1: WARNE GENEALOGY

Thomas Warne = Mary Lord Carhart  
(b. 1652- d. 1722) (b. 1668- d. 1713)  
m. ca. 1698

Joshua Warne = Elizabeth Throckmorton  
(b. 1706- d. 1758)

Heleny Disbrow = Joshua Warne  
(b. 1744- d. 1802) (b. 1740- d. 1814)  
m. 1762

Elizabeth Warne = Obadiah Herbert  
(b. 1739- d. 1822)  
m. 1765

Obadiah Herbert, Jr. = Sophia Van Wickle  
(dau. Jacob and Sarah Van Wickle)

Mary Morgan = Thomas Warne  
dau. Capt. (b.1763-d.1811) (b. 1765-d.1794)  
James Morgan (potter)  
m. 1787 Daniel Morgan

Helenay Warne = Joshua Letts  
m. 1805 (potter)

Margaret Warne = Benjamin Lent  
m. 1820 (potter)
two kiln sites. Sim notes that "unmarked fragments from what is apparently the earliest period [of production at the Warne and Letts site] have coiled-line decoration like that found on 1776 dated pieces from the Captain James Morgan pottery one-half mile to the west."¹ The form of Morgan's wares is not the same as that of Warne's later work, however the early fragments found at the Warne site were not compared for form with Morgan's wares, and it is therefore unknown whether the forms were similar.

There is a possibility, however, that Warne was trained by members of his own family. Another Thomas Warne (b.ca.1652-d.1744) and his son John, may have been potters in South Amboy. John was probably still alive in 1815, although elderly.²

Most references assign a starting date of about 1800 for Warne's independent stoneware business because of the earliest dated pot bearing Warne's name. This early signed jar belonging to Judge Harold Pickersgill of Perth Amboy was dated 1804. It was documented but later destroyed in a fire.³

The year 1785, however, has also been suggested as a starting date for the Warne operation. Warne would have been twenty-two years old in 1785, old enough to have
finished his apprenticeship and started his own pottery business. If Warne had apprenticed at James Morgan Sr.'s shop, and James Morgan, Jr. took it over upon his father's death in 1784, it may have been an appropriate time for Warne to begin potting on his own.

Because his name is marked on much of his stoneware, Thomas Warne was probably the master craftsman as well as the owner of his ceramic manufactory, yet according to his probate inventory he was not a wealthy man. (See appendix B for Warne's inventory.) The inventory taken room by room reveals a small house that included a dining room, parlor, kitchen, bedroom and outdoor shed. It was sparsely furnished, and therefore modest. The inventory listed a total estate value of $69.87, and included "2 Frames & weels (sic) for Turning w[ar]e . . . 8.00." Although not a wealthy entrepreneur himself, Thomas Warne's family owned land in Cheesequake, and the Warne family, like the Morgan family, was an old and respected one in Cheesequake.

The Warne family was descended from Thomas Warne, (ca.1652-1722) one of the original twenty-four proprietors of East Jersey. He removed to the new world from Ireland in 1683. Warne was granted 400 acres of land, and owned another 1,000 acre tract near present-day Matawan Borough.
and Madison Township. It was Thomas Warne's grandson, Thomas Warne (d. 1744), and his children who may have been connected with a pottery business in South Amboy. ²

Another Cheesequake resident, Joshua Letts, joined Warne in his potting enterprise about 1806, the same year he married Thomas Warne's daughter, Melinay Warne ⁷ (see Chart 2, Letts' Genealogy). 1806 was also the year that dated pottery began to show the names of both Warne and Letts stamped onto it. Joshua Letts worked as a partner in the Warne and Letts business until Warne's death, and continued to run the operation in Cheesequake until about 1815 when he died or left Cheesequake. Surviving stoneware attests to three distinct phases in the manufacturing partnership; some is marked with Thomas Warne's name and probably pre-dates 1806, some marked "Warne and Letts" spans their partnership years, and the group marked "J. Letts" dates from the time Warne died, about 1811, to about 1815 when Letts apparently discontinued working at the site.

The Warne and Letts pottery site was situated in a marshy area of Cheesequake containing rich clay deposits. A dock to accommodate water traffic, probably to ship the wares, was built upon the Cheesequake Creek only a mile from the Warne and Letts site. The clay pits used by
CHART 2: LETTS GENEALOGY

William Letts = Elizabeth Laud
(d. 1702) m. 1667
(weaver; arrived in America in 1665; moved to
Perth Amboy in 1686)

Francis Letts
(b. 1669-d. 1742)

John Letts
William Letts

Abraham Letts

Peter Letts

William Letts

Francis Letts = Mary

Peter Letts

Elija Letts = Mary Disbrow
(b. 1756-d. 1772)

Elisha Letts = Mary Disbrow
(b. 1756-d. 1772)

Nancy Letts = Xerxes Price
(b. 1779) (potter)

Joshua Letts = Melany Warne (dau. Thomas Warne, potter)
(potter) m. 1805

William Letts

John Letts
Warne and Letts were located in close proximity to the road that lead to the dock.

When Thomas Warne died, the property on which the stoneware manufactory stood passed to his wife, Mary Morgan Warne (d. 1838). Presumably during this time Joshua Letts was still potting at the same site. Mary Morgan Warne, in turn, deeded the land in June 1815 to her brother, James Morgan, Jr. (b. 1759-d. 1822). The land appears in his 1822 probate inventory. The property was then inherited by James Morgan, Jr.'s granddaughter, Catherine Bowne (b. 1808) who owned it until 1839 when it was deeded to Charles Morgan, a son of James Morgan. Because of marked pot shards it has been suggested that potting activity continued there for a brief time after Warne and Letts discontinued work. Stoneware shards marked "B. Lent" were recovered at the site. Benjamin Lent was married to Thomas Warne's daughter, Margaret Warne (see Genealogical Chart 1).

Other pot shards are stamped with the names "Vale & Knowles," of whom no more is known at the present. Catherine Bowne or Charles Morgan who owned the land may have employed several potters including Lent, Vale and Knowles, or may have leased the property to them.
In addition to "B. Lent" and "Vale & Knowles" shards, a complete stoneware jug gives further indication of later potting activity at the Warne and Letts site. The jug is labeled "L. Riggs/August the 5th/1819." The design on the jug shows an elaborately incised flowering vine and eagle shield with the inscription "Liberty For/Ever__" as if the letters continued to spell "Everyone" but were scratched out. David B. McGrail, in an interview February 4, 1984, reported that he had come to this conclusion about the inscription after having spent much time examining the jar. The inscription is similar to the Warne and Letts inscription, "Liberty For Ev." (Other than the inscription, the overall form of the jug is quite unlike those produced by Warne and Letts.) Riggs is reported to have invested in shares of the pottery manufactory on that site about a week before the piece was inscribed, the jug, therefore, being a type of presentation piece to commemorate the event.14

James Morgan (b. 1734-d 1784) was the first member of the South Amboy pottery clan to which Thomas Warne and Joshua Letts belonged by marriage,15 (see Chart 3, Morgan Genealogy). He owned a stoneware pottery supplied with clay from his own bank. Dated shards of the Morgan pottery trace the operation to 1775, although its
CHART 3: MORGAN GENEALOGY

Charles Morgan (b. 1640) (arrived in America 1663)

Charles Morgan (b. 1650–d. 1719) (born New York City, moved to Perth Amboy c. 1698)

Charles Morgan (b. 1683–d. 1750) (innkeeper in New Jersey)

Capt. James Morgan = Margaret Roetus Evertsen (b. 1734–d. 1784) (b. 1731–d. 1827) (potter; innkeeper)
m. 1754

Gen. James Morgan, Jr. = Ann Van Wickle (b. 1757–d. 1822) m. 1805

Mary Morgan = Thomas Warne (b. 1784–d. 1809) m. 1811

Sarah Morgan = Jacob Van Wickle (b. 1772–d. 1835) (potter) m. 1811

Ida Morgan m. Nicholas Van Wickle

Margaret Warne = Benjamin Lent m. 1806

Melinay Warne = Joshua Letts (potter)

Nicholas Van Wickle (potter) (b. 1786–d. 1837) m. Ida Morgan (b. 1792–d. 1862)

Catherine Bowne (Jaques) granddaughter of James Morgan Jr. (possibly dau. of Daniel Morgan and Elizabeth Warne)

Sophia Van Wickle m. Obediah Herbert
inception was probably much earlier. Morgan's kiln was located near the head of Cheesequake Creek\textsuperscript{16} (see Map 2), and his clay bank, which continued to be used well into the nineteenth century by others, was situated at the mouth of the Creek near Raritan Bay.

James Morgan, Sr. had at least seven children, three of whom figured prominently in the stoneware business in the area:\textsuperscript{17} James, Jr., Mary and Sara. His eldest son, James Morgan, Jr. (b. 1757-d. 1822) was a partner in the stoneware manufactory, "James Morgan & Co," in South River Bridge, only a few miles from Cheesequake, beginning in 1805 with two potters, Jacob van Wickle and Branch Green.\textsuperscript{18}

James Morgan, Jr. was married to Anne Van Wickle, the niece of his partner, Jacob Van Wickle. James Morgan, Jr.'s sister, Sara Morgan (b. 1772-d. 1835) was married to Jacob Van Wickle.\textsuperscript{19} Morgan's other sister, Mary Morgan (d. 1838) was married to the potter, Thomas Warne (see Genealogical Chart 3). James Morgan Jr.'s probate inventory of 1822 presents a clear idea of how he lived as a wealthy company owner and land holder\textsuperscript{20} (see Appendix C for Morgan's probate inventory).
Because the inventory was very detailed and taken room-by-room, it suggests vividly the floor plan of Morgan's house. It seems to have been a large Georgian-style house with a parlor, hall, dining room with closet, an east bedroom and a west bedroom on the ground floor. The second story had a northwest bedroom as well as northeast and southeast bedrooms. Alvia Martin describes General Morgan's estate as a mansion called "Sandcombe" sitting on a bluff on the north side of the mouth of Cheesequake Creek, off of the current highway 35. Additionally, there was a garret, a cellar, kitchen chambers, a cowshed, a barn, and a "meadow". His furnishings were sumptuous, and the total of his estate was valued at $20,302, not including the value of the land.

The inventory also names three black slaves: Kate (no value because she was old), and Hannah ($75.00) listed under "kitchen chambers," and "One black man a slave for life (named Ben) 175.00." His orchard, hay, grain mill, beehives, hogs, cattle and other animals and tools reveal that he had a farm. A clay bank was mentioned as was a skiff, a wagon, twelve cords of wood and "new stoneware on the premises," all evidence that he was involved in the pottery business until his death. Additionally, he was a Major General in the War of 1812 and served in the 12th
U.S. Congress as a member of the Federalist Party from 1811 – 1813.23

Other scattered bits of information give further glimpses into their lives. For example, the Morgans and the Van Wickles were accused of slave running in 1818 and indicted; this story is told in a pamphlet entitled, "Flesh for Sale" by George Miller.24

A comparison of the Morgan and Warne inventories, although a decade apart, offers an idea of the discrepancy in material wealth between the two. The brothers-in-law were both in the pottery business and presumably both were potters at some point in their lives. Nevertheless, the difference in the values of the two estates is great. James Morgan Jr. may have been more of an investor or entrepreneur than a laborer. His inventory shows that he had far-ranging business interests, in addition to his military and political careers. He probably inherited land and clay rights from his father, and later owned James Morgan & Company Pottery.
Warne, on the other hand, simply remained a potter for most of his life. He may have been a master craftsman because his name was on his pottery and he and his partner, Joshua Letts, no doubt owned the business.

The Van Wickles provide another example of the importance of kinship and family in the pottery business. They were another prominent potting family in Old Bridge, in the South Amboy area near Cheesequake (see Genealogical Chart 4). Nicholas Van Wickle worked for a time as a potter with his father, Jacob Van Wickle. Nicholas Van Wickle married his first cousin, Ida Morgan, daughter of James Morgan, Jr. and Anna S. Van Wickle.

Branch Green, a potter, and third partner in James Morgan & Co. in South River Bridge, does not appear to have been related by marriage to any of the potters in South Amboy. However, it was he who provided one link in the potting network between New York, South Amboy, and Philadelphia carrying his knowledge and habits of workmanship with him. In 1802, Green advertised in Troy, New York for journeyman potters and apprentices. By 1805 he was working with James Morgan, Jr. and Jacob Van Wickle in South Amboy, only to move again and establish a pottery business in Philadelphia by 1809.
CHART 4: VAN WICKLE GENEALOGY

Nicholas Van Wickle = Catherine Boice
(d. 1790) m. 1749

Simon Van Wickle = Catharine Johnston
(b. 1752-d. 1825) (d. 1828)

(b. 1784-d. 1869) m. 1805

Nicholas Van Wickle (potter)
(b. 1757-d. 1822) m. 1805

Ida Morgan = m. Nicholas Van Wickle

Jacob Van Wickle = Sarah Morgan
(b. 1770-d. 1854) (potter)

Sophie Van Wickle = Obediah Herbert
(b. 1772-d. 1835) (sister of Gen. James Morgan and Mary Morgan)

Ida Morgan = m. Nicholas Van Wickle

Obediah Herbert (son of Eliz. Warne and Obediah Herbert)
It is through Branch Green that we may learn more about the probable type of shop organization and division of labor at the Warne and Letts manufactory. In an 1802 advertisement in Troy, New York, Branch Green advertised for journeyman potters and "lads about 15 or 16 years of age as Apprentices." The advertisement hints at the division of labor in his Troy stoneware manufactory while announcing that the work offered to the two journeymen "will be confined to the turning of stoneware." Much of the work that did not require the journeymen's skill of turning was probably carried out by the apprentices.25

Digging, cleaning, grinding, and mixing the clay, weighing it and preparing it for turning, storing the newly turned vessels, and loading and firing the kiln are just some of the other tasks associated with ceramic production, in which the apprentices may have been involved. (They were not exclusively responsible for all of these tasks.)26

Thus, shop organization and division of labor maximized efficiency and assured standardization by putting those skilled laborers who were able to turn the pottery to that task, while others attended to separate assignments. In this way the journeymen, for example, would soon become accustomed to turning out wares
repeatedly in the sizes and shapes in which his shop specialized. Others also would be able to complete their allotted tasks with a high degree of efficiency, for their attention and time was not divided, but instead focused on a particular set of duties. Although this method of workmanship and shop organization exemplified Branch Green's Troy Manufactory, the approach was quite likely to have been similarly employed by the South Amboy potters for whom Branch Green later worked. Warne and Letts and the Morgans who entered the trade by apprenticing in a family of potters, had been trained and were working in a traditional manner. Since traditional training methods were still in operation in the early nineteenth century it is likely that Warne and Letts workshop organization in Cheesquake was similar to that advertised by Green in Troy, New York.

Benjamin Lent was another potter from Troy, New York who later worked in South Amboy and married into the Warne family. Benjamin Lent married Margaret Warne (the youngest daughter of Thomas and Mary Morgan Warne) on August 19, 1820. From 1819 to 1825 Benjamin Lent worked in Troy, New York, possibly apprenticing to a relative, George Lent. (George Lent worked in Troy from 1814 to 1824 and later moved to Lansingburgh, New York.) In 1826,
Lent and his family moved to Caldwell, New Jersey where he operated a pottery. From about 1829 to 1831 the Lents most likely lived in Cheesequake where Benjamin Lent was working at the Warne and Letts pottery site. He later carried his knowledge of the stoneware craft to Canada, where he eventually established a redware business. Although he did not produce stoneware in Canada his stoneware background was strongly reflected in his redware vessels forms. Trade designs and techniques were easily exchanged among potters like Branch Green and Benjamin Lent who moved often during their pottery careers, and who had family connections in the pottery business. Similarities in form, decoration and technique are seen in the work of some of the Cheesequake potters as well, probably because of contact with each other. For example, a jug attributed to a Cheesequake-area pottery has a coggle around the shoulder that is also found on several Warne and Letts jars (see Figures 1a and b). Similar shards found at both the Warne and Letts site and in Old Bridge suggest that several potters were sharing ideas, exchanging tools, moving from one potting site to another or possibly sharing a common kiln (see pot shard, Figure 2a).
Figure 1a. Ovoid jar with handles by Van Wickle and Morgan, Monmouth County Historical Association, 79.528.40. Gift of J. P. Remensnyder.
Figure 1b. Detail of ovoid jar with handles by Van Wickle and Morgan, Monmouth County Historical Association, 79.528.40. Gift of J. P. Remensnyder.
Figure 2a. Stoneware shard, Warne and Letts, New Jersey State Museum, 34.170. Letters "RNE" from word "WARNE."

Figure 2b. Stoneware shard, Warne and Letts, New Jersey State Museum, 34.164.
Figure 3. Redware jar, anonymous, Newark Museum, 76.204.
A red earthenware crock in the collection of the Newark Museum supports this theory of an exchange of ideas and tools, along with the movement of potters (see Figure 3). The crock features a coggle design around the shoulder that is identical to designs found on Warne and Letts' stoneware (see the Warne and Letts jar in Figure 10, and pot shard, Figure 2b). Because of the difference in shrinkage rates of earthenware and stoneware, the impression is slightly larger on the earthenware example. The same tool, however, was used on both crocks. Since no redware shards were ever found at the Warne and Letts site, it is highly unlikely that the earthenware pot was made by them. It is conceivable, however, in light of the relationship between the Warnes and Benjamin Lent and the fact that Lent is known to have made redware at one time, that the pot was made by Lent or by some other potter closely related to the South Amboy potters.

The kinship relationships that existed between the potters working in South Amboy suggest more than similarities in the ceramics alone; they point to an important aspect of organization in the pottery trade. Common practice was to apprentice as a potter, meet the master's daughter and marry into an existing potting family, and thus into the knowledge of the craft and the
trade system. The extensive network which spanned the East Coast from Philadelphia to Canada and included Warne and Letts' potting relatives and co-workers is not the only example of kinship ties within the ceramic craft.

Other potting families from New York, Georgia and Pennsylvania may be cited as similar examples. The Remmey family potting business in New York City carried on for generations from the mid-eighteenth century into the mid-nineteenth century. At one point, the Remmeys married into the Crolius Family, also in the New York stoneware business. John Burrison shows in his book, *Brothers in Clay*, how the nearly fifty potters in Jugtown, Georgia from the 1830s to the present day, were "all kin by blood or marriage." Burrison found that, like the potters in South Amboy, the craft tended to be carried on by successive generations in one family, and that it was common to "become family" by marrying into the potting clan. Pennsylvania stoneware potters also typically passed the potting tradition on to younger generations in a family. Some families continued potting for years, from the mid-nineteenth century to the early twentieth century.

While vessel form and decoration are distinctive among Warne and Letts pots, their style was congruous with
the popular forms and decorative motifs of the day. Similar artifacts from other manufactories speak to this conclusion, while the genealogical information shows that communication between interrelated potters was common and design exchange was likely. The Warne and Letts stoneware firm did not, therefore, exist in isolation, but was included in a potting network in which communication was maintained among potters along the Eastern seaboard.
NOTES TO CHAPTER ONE


2Alvia D. Martin, At the Headwaters of Cheesequake Creek (South Amboy, N.J.: Madison Township Historical Society, 1979), pp. 44-45, 118.


5Probate Inventory of the Thomas Warne Estate, 11 June 1814, New Jersey State Archives: Wills, number 10520L.

6Martin, Cheesequake Creek, pp. 20-22, pp. 44-45.

7The birth and death dates of Joshua Letts are unknown. For information on the history of the Letts family in Cheesequake, see Martin, Cheesequake Creek, pp. 34-37. The Letts family in Cheesequake was descended from William and Elizabeth Laud Letts, who were married in Elizabeth Towne, N.J. in 1667. They later moved to Perth Amboy, and their descendants were established in Cheesequake by 1704.

8Martin, Cheesequake Creek, p. 122.

9Ibid, p. 46.


12 Ibid, p. 118.


15 James Morgan, Sr. was not the first stoneware potter in the area. On the contrary, he inherited, in the late eighteenth century, an extant stoneware tradition. He is, however, the first documented potter in the specific family with which this study is concerned.

It is possible that the Morgan pottery may have been founded in the late 1740s by the Staats or States family from Holland, based on similar potshards at both the Morgan and Staats sites. Adam, Matthias and Peter Staats settled on Cheesequake Creek, and Matthias is said to have worked later with General Morgan. "To date, no documentary proof of this has been found. At any rate, designs used for decoration at a pottery in Greenwich, Connecticut believed founded by Adam Staats, closely match fragments from the dump at this pottery and so far, no other pottery dump has been found in the area which might mark the Staats site, if there was one." Lura Woodside Watkins, Early New England Potters and their Wares (Cambridge: Harvard University Press, 1950), p. 178 and Brown, "Notes on New Jersey: Stoneware Potters Before 1850." A William State is mentioned in General James Morgan Jr.'s probate inventory, and may have been related to the same Dutch family that settled in New Jersey and later Connecticut.

16 The Morgan site was discovered on the southwest corner of Highway 34 and Cottrell Road, about one-half mile from the Warne and Letts site, on the opposite side of Rt. 34. For more information on the potting site and James Morgan's clay bank, see Martin, Cheesequake Creek, p. 117. Additionally, James Morgan, Sr. was a captain in the Revolutionary War and owned an inn at Cheesequake. Martin, Cheesequake Creek, p. 56.
Martin, Cheesequake Creek, p. 32. James Mitchell points out in his article, "The Potters of Cheesequake, New Jersey," that two other daughters of James Morgan, Sr. married men with possible potting connections. "Abigail married Joseph Rue, whose occupation is unknown, although John L. Rue, a member of a later generation, bought the Swan Hill Pottery in South Amboy in 1860 and moved it to Matawan in 1880. Margaret married Amos Stout, who may have been related to Samuel Stout, the potter at Washington, now called South River, in the 1830s," (p. 323).

Trenton True American, 22 July 1805.
Jacob Van Wickle (b. 1770–d. 1854) was a freeholder from South Amboy from 1812 to 1827, and a Middlesex County common pleas judge from about 1808 to 1843 (and possibly longer). For more information see Brown, "Notes on New Jersey: Stoneware Potters Before 1850".

Probate Inventory of the James Morgan, Jr. Estate, 2 December 1822, Joseph Downs Manuscript and Microfilm Collection, Winterthur Museum Libraries, number 55.126.8.

Martin, Cheesequake Creek, p. 33.

The clay bank was located near the Raritan Bay where a boat would have been useful for transporting clay and wares. "Morgan's clay pit and dock was located at the corner of the railroad near the mouth of Cheesequake Creek." Martin, Cheesequake Creek, p. 121.

Ibid, p. 33.


Troy Northern Budget, 11 February 1801, advertisement for Branch Green, potter, quoted in Susan H. Myers "Handcraft to Industry: Philadelphia Ceramics in the First Half of the Nineteenth Century" (Masters thesis, George Washington University, 1977.)

See Jeannette Lasansky, Made of Mud: Stoneware Potteries in Central Pennsylvania, 1834–1929 (Lewisburg, Pennsylvania: J. Lasansky/Union County Bicentennial Commission, 1977); and John A. Burrison, Brothers in Clay: The Story of Folk Pottery (Athens, Georgia: The
University of Georgia Press, 1983) for further discussion of workshop organization and division of labor.


28 While in Cheesequake, the Lents are said to have lived in a house owned by a Joshua Letts, perhaps the brother-in-law of Margaret Warne Lent. At that time, the site of the Warne and Letts operation was probably being managed by Catherine Bowne, owner of the property, and cousin of Margaret Warne Lent. See Rupp, "The B. Lent Pottery," pp. 39-43.

29 Rupp, "The B. Lent Pottery," p. 142. Benjamin Lent and Margaret Warne had separated by this time. (After leaving Cheesequake they moved together to Sodus, New York where, after a few years they separated.) Benjamin Lent went to Niagara Peninsula, Lowth Township, Upper Canada where he founded his redware pottery and remarried.

30 Monmouth County Historical Association, New Jersey Stoneware, pp. 7, 12.

31 Correspondence between James Brown and Robert Sim reveals that no evidence of redware was found on the Warne and Letts site, which they excavated. James S. Brown and Robert Sim Papers, New Jersey State Museum, Trenton, N.J..


33 A young man could be 'adopted' into a local clay clan by marrying the patriarch's daughter, then serving an internship in his in-law's shop, or alternatively, by first being hired to help a potter with few or no sons but several daughters at home, later marrying one of these after an acquaintance blossomed. He was also eligible to join a pottery family if his sister married a potter's son. Another common pattern was for members of different pottery families to marry each other. The effect of these various kinds of intermarriage,
whether intentional or not, was to absorb outside competition and consolidate the dynasties." Burrison, Brothers in Clay, pp. 43-44.

34 See genealogy/chronology charts for potters in Lasansky, Made of Mud, pp. 54-56.
CHAPTER TWO: THE POTTERS' MILIEU - RESOURCES
AND THE STONEWARE BUSINESS

Several sources of information compensate for the fact that no business records or advertisements have been found for Warne and Letts stoneware. Archaeological evidence, an examination of the geographical location of the Warne and Letts site, contemporary advertisements for other stoneware potteries, and extant stoneware pieces by Warne and Letts help place the potters in their milieu.

The Warne and Letts site was discovered and informally excavated by Robert Sim and James Brown in the late 1940s and 1950s. Robert Sim was an entomologist who worked for the New Jersey Department of Agriculture. He collected early New Jerseyana and was intensely interested in local history. He died in 1956. James Brown, who shared Sim's interests, was a writer for the Asbury Park Press, now retired, and has often reported on New Jersey pottery discoveries. In October, 1983, I travelled to Cheesequake with Mr. Brown where he identified the approximate location of the site. The site is located in the Cheesequake section of Madison Township on the north side of what is now Route 34, a short distance east
of old Landing Road (sometimes called Dock Road). The road still leads to Cheesequake Creek and what is left of the shipping dock.

The correspondence between James Brown and Robert Sim, and their field notes, are now a part of the New Jersey State Museum's archival collections. In one of these notes Sims described the site and how it came to be identified, "There was much loss during the baking process. After months of preparation, and nearly a week of firing and cooking, many articles came out too cooked, blistered or cracked to have any commercial value. They were thrown out on a dump heap back of the factory; and there they are today, the only remaining evidence on the spot of a thriving factory." (See Figures 2a and 2b for examples of pot shards found at the Warne and Letts site.)

Extant Warne and Letts pieces examined for this study fell into six categories: ovoid jars with and without handles, tall jars without handles, jugs, pitchers and low "butter crocks." Fragments of these vessel forms were unearthed at the Warne and Letts site in addition to a teacup (now part of the Monmouth County Historical Association collection), shards of chamber pots, beer mugs and flasks, colanders, cups, bottles, bowls, and ink wells.
The Warne and Letts pottery was situated in a marshy area of Cheesequake noted for its rich clay deposits. The high quality blue stoneware clay found in this part of New Jersey and nearby New York is unique. Staten Island, Long Island, Manhattan, the Amboys and Woodbridge, New Jersey are all included in the Raritan Formation of stoneware and other clays; they made this area among the first in America to begin production of stoneware. Stoneware clay is obtained from open pits.

This consists in digging the material from open pits or cuts of variable size. Where the pit is small, it is commonly the custom to use pick and shovels to dig the clay, and, indeed, this method is necessary in those cases where the clay is not of uniform quality from top to bottom, or where a number of layers of different kinds, as terra-cotta, fire and stoneware clay are present. It is then necessary to strip off each one separately and place it in a separate storage pile. This is notably the custom in Woodbridge and Perth Amboy districts of N.J. . . .

A 1903 map from Heinrich Reis' *Geological Survey of New Jersey, "Distribution of the Principal Clay Bearing Formations of New Jersey,"* shows that the South Amboy area, encompassing such sites at Cheesequake, Old Bridge, South River and Sayreville, is part of the formation of Cretaceous-Raritan sands and clays that are useful for making stoneware and brick.⁴
Early U. S. Geological Surveys of New Jersey are helpful in locating potter's clay pits, and in identifying clay types from each pit. These early studies identified the mineral components of the clay from various areas and layers. Used in conjunction with clay samples taken during the 1860 U. S. geological survey (available at the New Jersey State Museum in Trenton) these studies might be matched with known clay pits and compared to the clay content in finished vessels. The mineral content for vessels by a given maker may be relatively consistent, while at the same time they may contrast with the mineral content of vessels originating elsewhere. The initial testing of a Warne and Letts Stoneware crock and a Van Wicklen water cooler from the Winterthur collection show a significant difference in composition. This type of analysis, when more thoroughly pursued, may eventually result in a method of determining clay origin or verifying the makers of anonymous pots that match the content of marked vessels.

There are many problems inherent in such a study. For example, the stoneware clays of different types in any given pit may be in layers and it is likely that potters used a mixture of several of these types of clays. Reis states, "The better grades of stoneware are commonly made
of a mixture of two or more clays. Furthermore, temper was added to clays to reduce shrinkage in firing. Tempers often included sand, ground bricks, coke or graphite, which would change the mineral content of the original clay. The content analysis is, nevertheless, another method available for studying ceramics, and has not previously been used extensively. Any information gained from this analysis may be added to similar future studies.

The availability of stoneware clay in the South Amboy region prompted early manufacture of stoneware pottery. Cheeseguake and other small towns in the immediate South Amboy locale such as South River, Old Bridge, Monroe, Madison, Sayreville and Washington, comprised a major center for the production of household stonewares. At least twelve regional stoneware manufacturers in operation from 1775 to 1850 are currently known through site excavations, advertisements and surviving pots or pottery fragments. This quantity of stoneware production from a number of businesses in a single area was not likely to have been supported solely by a local market. Distribution of stoneware from Cheeseguake was not confined to the immediate South Amboy area. As early as 1810 Charles C. Laurence advertised in Philadelphia for his stoneware manufactured in Burlington,
New Jersey. While no advertisements have been found specifically for Warne and Letts stoneware, several other aspects of their business indicate that they were among the potters marketing wares well beyond the perimeters of Cheesequake, including the large quantity of extant stoneware, archaeological remains, and the name and location markings on the pots themselves used as advertising. The location of Cheesequake for shipping and its situation near a large agricultural expanse that provided a market for South Amboy stoneware further support the assumption that Warne and Letts stoneware was exported beyond the local limits of Cheesequake.

This assumption is based partially on the conclusion that South Amboy was not able to absorb the entire output of the Warne and Letts business combined with that of the other local stoneware manufactories. The nearly fifty extant pieces examined for this paper, the many others not examined, and the archaeological fragments indicate that Warne and Letts' total production was great, (see Charts 5-10, Chapter III), though theirs was only one of many shops producing stoneware in the area. Furthermore, South Amboy was ideally located as a center for shipping. The convenient availability of water transportation made it possible for manufacturers to ship
their wares out of South Amboy. Cheesequake Creek served as the source of transportation for shipping both clay and crockery, as well as for refining the clay for use. (Raw clay must be mixed with large quantities of water and then crushed, thus water was indispensable to the process of potting.) A dock to accommodate traffic was built upon the waterway only a mile from the Warne and Letts site.

In the early nineteenth century Cheesequake was a part of South Amboy, which was, in turn, a south ward of Perth Amboy (see Maps 1 and 2). Perth Amboy is located in Middlesex County at the point where the Raritan River empties into Raritan Bay. Only a short distance across the Bay is New York City, a prime marketing area for South Amboy clay and stoneware. The Hudson River, which leads north to areas in New England, was also conveniently accessible from Perth Amboy.

While long-distance export of finished stoneware from New Jersey may have been prohibitively expensive because of its weight and bulk and the lack of efficient transportation, New Jersey clay was nevertheless taken to New England in large quantities. Transport of clay began\(^{10}\) in the mid-eighteenth century and became common by the early nineteenth-century as it became more economical.
Export of New Jersey and New York stoneware clay supplied Massachusetts, Connecticut, and upper New York, as well as Philadelphia with clay that could not be obtained locally. 11

William A. Whitehead, in his 1856 history of Perth Amboy, described early water travel between New Jersey and New York, as slow, but nevertheless eagerly undertaken:

As late as 1816 travellers left New Brunswick for New York at six o'clock in the morning, at nine were off Amboy, at eleven reached Elizabethtown Point, and at one o'clock in the afternoon arrived at the end of their voyage. 12

He even adds that there was "frequent traffic" between Pennsylvania and New York although the trip took many hours. This gives some idea of the proximity between the Amboys and New York for cargo as well as passenger travel during the early nineteenth century.

The large agricultural expanse between the Amboys and Philadelphia provided a local market for South Amboy stoneware, because it was utilized in preserving produce and keeping dairy products cool. The rich soil surrounding South Amboy was ideal for farming and as late as 1912 a New Jersey State Bureau of Statistics report claimed:

The land on which South Amboy is built is high and the climate is healthful . . . the soil of
the surrounding country is excellent, and practically all of the garden vegetables used in the city are raised in these adjoining farms.\textsuperscript{13}

The dense population of this agricultural expanse is emphasized in another source:

A stage line between Burlington and Perth Amboy began operating in 1706, connecting the Colony's first post offices . . . The land between Trenton and New Brunswick was one of the most densely populated rural areas in the country according to Peter Kalm, the Swedish naturalist who travelled in Pennsylvania, New Jersey, New York and in South Canada from 1748 to 1750.\textsuperscript{14}

While South Amboy was settled primarily by British immigrants, the surrounding land was populated and worked by German and Dutch farmers, many of whom cultivated orchards.\textsuperscript{15} Both the Germans and English who populated the area had traditions of stoneware use. Before glass jars and tin cans came into wide use in the middle of the nineteenth century, stoneware vessels were essential to food storage because they were impervious to water and light. Stoneware does not need to be glazed and, thus, does not react with acidic foods as would lead-glazed wares. Robert Sim, described the practice of food preservation in rural New Jersey:

A springhouse, usually of dressed stone blocks, was built so that a sunken part of the floor—a rectangular basin—was under a few inches of running water. Dairy products and other perishables in stoneware containers to be kept especially cool were put there.\textsuperscript{16}
Thus consumers of stoneware were found in both rural and urban areas throughout New Jersey and commercial centers in Pennsylvania and New York. The combined resources and demand for wares transformed this area into a major center for the production and marketing of stonewares and stoneware clays the beginning in the mid-eighteenth century.

Further artifactual evidence supporting the conclusion that Warne and Letts were exporting their wares beyond South Amboy is found on the stoneware itself. Thirty-six of the pieces examined (seventy-six percent) are marked with the name and/or location of the maker: the phrase "WARNE & LETTS S. AMBOY. N. JERSY" (sic) and variations of this are stamped onto the sides of the wares. The lettering functioned not only as a decorative device, but also as advertising. By including such identification, their wares were distinguished from other stonewares.

Advertising directly on the wares as a system of marketing was no doubt important to South Amboy manufacturers because of the obvious competition from New York. Evidence of this competition is seen in Morgan & Company's 1805 advertisement promising that their pieces were "10 or 12 percent lower than can be bought in the
city of New York, and the ware not inferior to any made in America. \(^{18}\)

Were the potters themselves retail merchants or did they sell to retailers? Evidence in advertisements indicates that some did both. Morgan & Company's 1805 advertisement offered pots by the dozen and by the piece so that merchants could buy in bulk and consumers could buy individual items. "Orders from Merchants in the country, and others, will be received, and executed as above" (See Appendix A). F. A. Kleine's price list of 1827 in Washington (part of South Amboy), New Jersey gives "Wholesale Prices per Dozen" and "Retail Prices pr. Piece"\(^{19}\) (see Figure 4).

The Warne and Letts pottery business was typical of the many small family stoneware operations that were established and thrived during and immediately after the American Revolution when an overall lack of foreign imports raised the level of activity for handicraft production in America.\(^{20}\) Warne and Letts were partners from about 1806 to 1811, when Warne died, and Letts continued the business until about 1815. These dates (1806 to 1811) span the duration of a trade embargo that prevented British imports from entering America. Although Warne was potting earlier than 1806 as part of an
Figure 4. Stoneware advertisement, F. A. Kleine, Washington, South River, New Jersey, 1827. Courtesy, The Henry Francis dePonit Winterthur Museum, Joseph Downs Manuscript Collection, 58x30.2.
established stoneware business it is more than a coincidence that a major period of their production lasted from the 1806 non-importation act through the War of 1812, until the Treaty of Ghent was signed in 1815, which finally ended the war. During these years trade with Britain and Europe was cut off initially to curb the harassment of American merchant ships by the British and, later, because of the War of 1812. American potters were obliged to fill the gap in imports and, consequently, production and small family businesses burgeoned. Although the actual business records for the Warne and Letts manufactory are missing, the artifacts themselves combined with contemporary advertisements from South Amboy offer insight into the production and distribution of the stoneware. While conclusions about production, consumption, pricing and marketing cannot be considered final without the collaboration of written documents, this study presents a summary of ways in which to maximize the compiling and interpretation of information obtained from a group of related ceramic artifacts. The methodology for stoneware analysis, the measurement, quantification and interpretation of patterns in the pots, reflects some aspects of the social history behind them and may be applied to other groups of ceramic objects.
NOTES TO CHAPTER TWO


4 Ibid, map insert.

5 Compositional analysis on the five initial pieces was conducted by the Winterthur Museum Analytical Laboratory on the bottom of the stoneware vessels because of the absence of glaze there. Counts for potassium, calcium and titanium were picked up in the analysis and were presented as 1) raw counts, 2) ratio of counts, and 3) percentage of counts for each by the laboratory. Percent of elements relative to each other was used to compare one piece to another to determine any relationship between them. Two Commeraw stoneware vessels (New York, early 19th century) were compared and were found to be similar, especially for the percent counts for titanium which were 51.53% for one crock and 59.13% for the other. Quoting from the report

We also see a similar analogy existing between the two Crolius pieces with regard to the percent counts for Titanium, 33.24% and 30.85%. It appears that the difference between the two groups (Commeraw and Crolius) based on the percent counts for Titanium is large. Of course, one must keep in mind that it is dangerous to draw any hard and fast conclusion from such data at this point when we only analyzed two objects from each group. Analyses of the remaining two pieces, the stoneware crock by Warne and Letts (59.1780) and the water cooler by Van Wickle.

50
(55.588) appear to be quite different from each other.

This initial mineral analysis was not performed on all of the Warne and Letts vessels, and because of the time-consuming nature of the study and the need for many examples, it was not completed in time for use in this study. Subsequent work by George Reilly at the laboratory may provide interesting evidence to be studied in conjunction with this work.


Arthur W. Clement, *Our Pioneer Potters* (York, Pennsylvania: The Maple Press Company, 1947), p. 20, "The township of South Amboy, Middlesex County, N.J., included until 1838, the present townships of South Amboy, Monroe, Madison, Sayreville and the part of the present town of East Brunswick, which contains Old Bridge and Washington. The dates at which the towns above-named were set off from South Amboy are as follows: Monroe in 1838, Madison in 1869, and Sayreville in 1876. In 1860, a part of Monroe was incorporated into the town of East Brunswick. Stoneware made in any of these towns before the dates above stated would be marked 'South Amboy'."

James R. Mitchell, "The Potters of Cheesequake, New Jersey," in *Ceramics in America*, ed. Ian M. G. Quimby, (Charlottesville: The University Press of Virginia, 1973). Mitchell lists the potters: Warne and Letts; James Morgan, Sr. and Jr.; Jacob Van Wickle, Morgan and Branch Green (Old Bridge); Nicholas Van Wickle (Old Bridge); Nicholas Van Wickle and Asher Applegate (Manasquan, later called Herbertsville); B. Lent (at the Warne and Letts site and Caldwell, N.J.); Vale and Knowles (at the Warne and Letts site); H. Humiston with Cummings, Stockwell and Warner (South Amboy); Xerxes Price and Henry French (Roundabout, later called Sayreville, 1801-1830); William H. Hancock, Congress Pottery (South Amboy, 1828-1840); J. B. Pewtress (Perth Amboy); Asher and Evert Bisset (before 1815 to 1840); Jacob Eaton and Samuel Stout (1831-1845, in Washington, now called South River); F. A. Kleine (Washington, 1827).
Although not all of the stoneware potters who were contemporaries of Warne and Letts will be identified, a number are known through their sites or wares. Some names are mentioned in James Morgan, Jr.'s inventory. Under "Bonds and Notes," for example, are found the Applegates, E. Price, who may have been Ebenezer Price, the father of the potter Xerxes Price, and "Armstrong and Wentionk." John Warne, who was related to Thomas Warne, is also mentioned, and according to Alvia Martin, is thought to have worked as a potter at one time. Alvia D. Martin, At the Headwaters of Cheesequake Creek, (South Amboy, N.J.: Madison Township Historical Society, 1979), p. 45.


Peter O. Wacker, The Cultural Geography of Eighteenth Century New Jersey (Trenton, N.J.: New Jersey Historical Commission, 1975), p. 56. While the earliest settlers of the area were Dutch, the English took over in 1664 when Charles II issued a land patent to his brother, James, the Duke of York, for ownership of the land from the St. Lawrence River to the Delaware River. To promote settlement, the land was originally patented in 1665, but sold in 1682 for about $17,000 to twelve proprietors, each of whom took a partner in the venture. "South Amboy was
established as one of the largest governing bodies of land in 1685 as part of the British Colony of East Jersey. Originally it was eighteen miles wide, with an area of sixty-four thousand acres. It was bordered by the South River on the West, extended to the Monmouth County line on the southeast and bordered by the Raritan River and Bay on the north and northeast." Martin, Cheesequake Creek, pp. 3, 18, 26.

The next year, under the government of these men, Middlesex County was established along with the Counties of Essex, Monmouth and Bergen. The boundaries of Middlesex County were often in dispute, however, and they were changed in the years 1713, 1822, 1847 and 1866. See Martin, Cheesequake Creek, p. 19. The areas around Perth Amboy, Freehold and along the Raritan Valley were peopled by Scots whose migrations started about 1683, and continued through 1867. See Harry B. Weiss, The Personal Estates of Early Farmers and Tradesmen of Colonial New Jersey, 1970-1750 (Trenton, N.J.: New Jersey Agricultural Society, 1971), p. 1. "Middlesex County population statistics show that by 1790, of a population of 20,253 people, 35% were English or Welsh and 19% of Scottish origin; 23% were German and 18% Dutch; and blacks and French accounted for the remaining 7% and 4% respectively." Wacker, Cultural Geography of New Jersey, p. 56, Table 15.

The high percentage of extant signed wares may be due in part to the fact that marked or highly ornamented objects are often more attractive to collectors, and thus preserved in disproportionately high numbers to the "less interesting" anonymous artifacts. Even so, the number of marked wares found for this study is significant enough to imply export beyond South Amboy.


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For a general discussion of ceramic production in this era see Myers, "Handcraft to Industry," Chapters One and Two, pp. 6-51, passim.
CHAPTER THREE: A RESEARCH APPROACH

From the compilation of object measurements, comparison of silhouette drawings and analysis of decoration, a set of "rules" can be identified for both form and ornamentation. Henry Glassie postulates,

There are small sets of rules that define the limits within which [the craftsman] can modify the concept according to his taste and talent and the taste an pocketbook of his client.¹

These rules define the "internal logic" of the artifact—the underlying structure that is the sum of what makes an object a "stoneware jar," particularly a "stoneware jar made by Warne and Letts," beyond which the artifact would lose its integrity.² Vessel measurements were taken to determine the "set of rules" governing the manufacture of Warne and Letts wares. The measurements reflect specific methods of workmanship and "logic" imposed on them by the potters. Warne and Letts stoneware is similar in appearance because the method of workmanship in production was consistent. Consistency was maintained by means of repetition. Replication in size and shape (or minimization of the degree of variation for any given
vessel characteristic) was controlled either mechanically or by means of skill acquired through repetition.

For the analysis, a group of forty-seven stoneware pieces were examined and their characteristics quantified. The pieces were either marked with the names of Warne and/or Letts, or had been previously attributed by ceramic scholars to Warne and Letts on the basis of design motifs compared to the extant marked pots or pot fragments from the Warne and Letts pottery site.

Initially, the pots were categorized by form (ovoid jars with and without handles, jugs, pitchers, tall "straight-sided" jars without handles, and low "butter crocks") (see Figures 5a-f), then by capacity and weight. The overall proportions and measurements were compared on the basis of their "essential components," in this case, their profile or shape (see Figures 6a-c). "Essential components" of an artifact are those having to do with its basic form or structure. "Non-essential components" are those having to do with surface ornament "which can be removed without affecting the artifact's basic structure."4

In the article "Folk Art," Glassie discusses both the concept of "essential components" within an artifact,
Figure 5a-f. Silhouette drawings of vessel forms.

5a. Ovoid jar with handles.

5b. Ovoid jar without handles.
5e. Tall "straight-sided" jar.

5f. "Butter" crock.
Figure 6b: Measurements, Newark Museum jar, number 47.10.

- 19" rim circumference
- 3/4" lip height
- 6" diameter
- 23" mid circumference
- 15 1/4" base circumference
Figure 6c: Two jar silhouettes overlayed; Smithsonian .219 measurements left; Newark Museum 47.10 measurements right.
and regional variation of the profiles of several stoneware jugs. He compares silhouettes of the jugs to demonstrate their simultaneous functional equality and aesthetic diversity, based on culturally held preferences and traditions about the "proper" shape of a jug. For this study, silhouetting the objects was a useful tool in determining which "characteristics" or parts of the crocks were "essential components" and would be measured for the analysis. First, photographs were taken of the vessels, and the images printed so as to maintain a consistent scale. Then, profile drawings taken from the photographs were overlaid to determine how close in profile and shape the crocks actually were. Usually the silhouettes were extremely similar. This visual "test," although useful, is somewhat imprecise—the measurements of the actual vessels convey their similarity in size and proportion more accurately. Capacity was noted in order to organize the pots into categories for the analysis, but also to determine whether the pots were sold in standard sizes. It was concluded that they were (see Charts 5-10).

Weight is necessarily related to the size of a vessel, because clay was weighed during the manufacturing process to insure replication of standard capacities. Specific measurements of their profiles or shapes were
noted: the circumference of the rim, the middle at the widest point and the base; the diameter of the mouth or opening; the overall height of the jar and the height of the rim; and finally, the wall thickness (see Figure 7). This quantitative data is organized in Charts 5-10. Measurements of the jars revealed significant frequency of standard sizes, from one-half gallon to three and one-half gallons in total capacity.

Standardization was originally adopted to facilitate the buyer. Retailers and consumers looked for specific sizes, and later in the nineteenth century, most stoneware was labeled with a "gallon" size stamp.

Standardized capacity is expected for utilitarian stoneware of this type. Advertisements for stoneware list vessels in standard gallon capacities. Although no advertisements for Warne and Letts stoneware have been found, a contemporary nineteenth-century advertisement for pottery by F. A. Kleine in Washington, New Jersey (adjacent to Cheesequake) exemplifies the types and sized of pottery which were available from other stoneware manufactories in the immediate South Amboy region (see Figure 4, Chapter II). It says that "Pots, Jugs, Strait and Bellied Jars, [and] Pitchers" were sold in gallons and fractions of gallons from one-eighth to four gallon
Figure 8a. Outline of incised "scalloped swag" motif taken from three different Warne and Letts crocks.

1.

2.

3.

Figure 8b. Outlines overlaid to demonstrate similarity.
capacities. Also, an advertisement for stoneware from James Morgan & Co., South River Bridge, New Jersey in 1805 lists pots and jugs for sale in three, two, one and fractions of gallons, and jugs in quarts and pint sizes.\textsuperscript{6}

In addition to form, ornamentation (the "non-essential component") was analyzed. Design motifs were found to be repeatedly applied to wares by means of various tools such as stamps and coggle wheels. Also, rubbings taken from the incised decoration on the pots reveal by their similar size and shape that some were outlined using a stencil or were applied with a stamp (see Figures 8a and 8b).

These methodologies have been applied to Warne and Letts stoneware in order to understand why the wares are distinctive among other types of stonewares and what technological and cultural influences lay behind their manufacture. Generalizations about frequencies and proportions of each vessel type and capacity were drawn from the charts and the data subsequently interpreted in terms of stoneware production and marketing.

By measuring the various characteristics and determining the range of variation within each category, it became apparent that most vessel characteristics varied
under 1 inch and no single characteristic varied more than 3 1/2 inches. Thus, 3 1/2 inches was the potters' range of "acceptable" variation, part of the "set of rules" for production of Warne and Letts stoneware. 3 1/2 inches is the limit within which the potters worked, and the limit beyond which Warne and Letts stoneware would lose its integrity or distinction as "Warne and Letts stoneware."

The slight variations exhibited in vessel form, decorative elements, repetition, symmetry and overall aesthetic qualities reflect preferences or options selected by the potters within the narrow "set of rules" that guided the production process. In general, the least variation among the crocks is seen in overall form. Next, variation within a still narrow but less constricting set of decorative options constitutes ornamentation. And, finally, the greatest degree of variation is exhibited in the "surface finish" of the crocks. This progression from least to greatest variation parallels the degree of control the potter held over each subsequent step in production.

**Form Frequency**

Of the types of Warne and Letts crocks examined, the "ovoid jars with handles" comprised the largest group,
with twenty-two jars. "Straight-sided" or "tall" jars and "ovoid jars without handles" were the next largest groups with nine and eight of each type respectively. Five jugs were included in the study along with two pitchers, and only one "butter" crock, for a total of forty-seven vessels. The significant quantity of ovoid jars with handles probably reveals its relative importance as a stoneware form. It may have been popular with consumers due partly to its all-purpose shape, including a wide mouth and handles, which are especially useful on jars of this large capacity. On the other hand, the pitcher seems to have been a relatively rare form among stonewares in general according to some ceramic historians, and indeed, only two were available for this study.

Vessel Size According to Type

The handled, ovoid jars (known in nineteenth-century terms as "pots" or bellied jars) were manufactured in the largest capacities and widest variety of sizes for the stoneware group overall. Because no vessels of this type smaller than one gallon were found for the analysis, their capacity was reported in gallons (rather than in quarts, as has been done for most other vessel forms). Within this sample group, the handled, ovoid jars measured as large as three and one-half gallons.
with a variety of half-sizes between the smallest and largest jars.

Because of the relatively small sample of each vessel type, it is difficult to assess whether or not the other stoneware forms were made in similar variety of sizes. For example, two, two and one-half, and three quarts sizes were measured for the ovoid jars without handles. This vessel type without handles was made in considerably smaller capacities than those with handles. Their lack of handles reflects the inherent utility of this size without them—the weight of the full jar would still be easy to lift without handles.

Jugs were measured in one, four, and eight quart (one gallon) capacities. Straight-sided jars ("strait jars") \(^{10}\) without handles were made in various quart sizes: two, two and one-half, four, five and six quarts in capacity. Each of the two pitchers measured one gallon in capacity and the one low "butter" crock was two and one-half gallons in capacity.

Stoneware made by F. A. Kleine in Washington, New Jersey (near Cheesequake) was advertised in the following gallon sizes: one-eighth, one-fourth, one-half, one, one and one-half, two, two and one-half, three, three and
one-half, and four gallon capacities. Stoneware made by James Morgan & Company was advertised in gallon sizes including one-sixteenth, one-eighth, one-fourth, one half, one, two and three gallons (see Appendix A). The odd fractions of gallons recorded in Chart 1 for Warne and Letts ovoid jars with handles possibly reflect a slightly inaccurate attempt at the closest "standard" size, for instance, one and one-eighth gallon was probably meant to be one gallon. Similarly, the Warne and Letts jugs were measured in capacities corresponding to the one-quarter gallon, one gallon and two gallon capacities found in both Kleine and Morgan's advertisements. The range of fraction sizes for ovoid jars without handles and the straight-sided jars, however, seems to indicate that Warne and Letts sold a wider range of smaller (quart) sizes than did Kleine or Morgan.

Vessel Measurements

The quantitative data shows that within the various capacity groupings for each vessel form (i.e., "one gallon ovoid jar with handles"), the height, diameter, circumference and weight measurements tend to vary within only a few inches or pounds of each other.
Ovoid jars with handles: Within this category (see Figure 9) the largest variation in height was found in the 2-1/2 gallon capacity group at one and one-half inches. The one-gallon jars varied within one and one-quarter inches, two-gallon jars by less than one inch, and three-gallon jars by three-quarters of an inch. The average jar weight within the one-gallon capacity category varied between four pounds, eight ounces and five pounds, eight ounces--only one pound difference. No set of measurements varied more than three inches and the largest weight discrepancy was two pounds, seven ounces (see Chart 5). These were extreme variations, however, as most measurements for height, diameter, circumference and weight hardly varied.

Ovoid jars without handles: Sets of measurements for the ovoid jars without handles (see Figure 10) never varied more than two inches or eight ounces within any category (see Chart 6). Again, these measurements were the extreme examples. The middle circumference measurements for the 2 to 2 1/2 quart jars showed the greatest variation with two inches difference between the smallest and largest measurements, whereas the same circumference measurement for the three-quart capacity varied only one-quarter inch.
Figure 9. Ovoid jar with handles, by Thomas Warne, New Jersey State Museum, 352.27.
Figure 10. Warne and Letts ovoid jar without handles, Newark Museum Collection, number 56.91.
## Chart 5: Ovoid Jars With Handles

<table>
<thead>
<tr>
<th></th>
<th>Capacity</th>
<th>Height</th>
<th>Diameter</th>
<th>Weight</th>
<th>Lip Circumference</th>
<th>Middle Circumference</th>
<th>Base Circumference</th>
<th>Lip Height</th>
<th>Wall Thickness</th>
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</thead>
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<tr>
<td>PRVT 1</td>
<td>1</td>
<td>8 1/2</td>
<td>7</td>
<td>5 8</td>
<td>21 7/8</td>
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<td>59</td>
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<td>4 8</td>
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<tr>
<td>PRVT 5</td>
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<td>9</td>
<td>7 1/4</td>
<td>4 8</td>
<td>22</td>
<td>24</td>
<td>17</td>
<td>1</td>
<td>3/8</td>
</tr>
<tr>
<td>WTHR</td>
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<td>9 1/4</td>
<td>6</td>
<td>5</td>
<td>3 1/2</td>
<td>19</td>
<td>23 3/4</td>
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<td>5 8</td>
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<td>23 3/4</td>
<td>15 3/4</td>
<td>1</td>
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<td>6 3/4</td>
<td>5 8</td>
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<td>1/2</td>
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<td>8</td>
<td>8 14</td>
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<td>1/2</td>
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<td>25</td>
<td>30 1/4</td>
<td>20 1/4</td>
<td>1</td>
<td>1/2</td>
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*Estimated (unable to measure)

**Unable to measure
**CHART 5: OVOID JARS WITH HANDLES (CONTINUED)**

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<th>Height</th>
<th>Diameter</th>
<th>Weight</th>
<th>Circumference</th>
<th>Circumference</th>
<th>Circumference</th>
<th>Lip Height</th>
<th>Wall Thickness</th>
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<td>gal.</td>
<td>in.</td>
<td>in.</td>
<td>lb.</td>
<td>oz.</td>
<td>in.</td>
<td>in.</td>
<td>in.</td>
<td>in.</td>
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<td>NJSN 352.27</td>
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<td>warped</td>
<td>9 1/4</td>
<td>12 4</td>
<td>29</td>
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<td>22 1/4</td>
</tr>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
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<td>warped</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MCHA 512.5</td>
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<td>warped</td>
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<th>Weight</th>
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<th>Circumference Middle</th>
<th>Circumference Base</th>
<th>Lip Height</th>
<th>Wall Thickness</th>
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<td>1/4</td>
</tr>
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<td>5 3/8</td>
<td>3 8</td>
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<td>7/8</td>
<td>3/8</td>
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<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
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<td>7 3/4</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>1*</td>
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*Estimated (unable to measure)

**Unable to measure
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<tr>
<th></th>
<th>Capacity</th>
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<th>Diameter</th>
<th>Weight</th>
<th>Circumference lip or rim</th>
<th>Circumference middle</th>
<th>Circumference base</th>
<th>Lip Height</th>
<th>Wall Thickness</th>
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<td>10</td>
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<tr>
<td>NJSM</td>
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<td>11 1/2</td>
<td>1 1/2</td>
<td>4 14</td>
<td>5 1/2</td>
<td>24</td>
<td>14 1/2</td>
<td>1</td>
</tr>
<tr>
<td>MCHA</td>
<td>528.25</td>
<td>4</td>
<td>11 1/4</td>
<td>1 3/8</td>
<td>**</td>
<td>5 1/2</td>
<td>24 3/4</td>
<td>17</td>
<td>5/8</td>
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<tr>
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<td>2*</td>
<td>9 4</td>
<td>6 1/2*</td>
<td>31 1/8</td>
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<td>7/8</td>
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<tr>
<td>BKLH</td>
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<td>14 1/2</td>
<td>2</td>
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<td>29</td>
<td>20 1/2</td>
<td>1 1/2</td>
</tr>
</tbody>
</table>

*Estimated (unable to measure)
**Unable to measure
### Chart 8: Tall "Straight-Sided" Jars

| SMTH .213 | 2  | 7 1/2 | 4  | 3  | 12 3/4 | 18 3/4 | 17  | 1/2 | 1/2 |
| BRLN 128.198 | 2  | 7 3/4 | warped | ** | 13 1/4 | 18 1/4 | 15  | 1/2 | 3/8 |
| SMTH .85 | 2  | 8 1/4 | 4 1/2 | 3  | 6  | 14 1/4 | 17  | 16  | 1/2 | 1/2 |
| SMTH .212 | 2  | 8 1/4 | 4 1/8 | 3  | 6  | 13 1/4 | 17 1/2 | 16 1/2 | 3/4 | 1/2 |
| NJSM 336.5 | 2 1/2 | 9  | 4 1/2 | 4  | 10 | 14  | 18 3/4 | 17  | 1/2 | 1/2 |
| SMTH .84 | 4  | 10 3/4 | 4 1/2 | 5  | 3  | 14  | 20 3/4 | 20 1/4 | 3/4 | 1/2 |
| SMTH .83 | 4  | 10 3/4 | 4 1/8 | 5  | 8  | 13 1/2 | 22 1/8 | 16 1/2 | 3/4 | 3/8 |
| **1979** | 5  | 10 1/2 | 4 3/4 | 6  | 15  | 24 1/2 | 20  | 1/2 | 3/4 |
| SMTH 577.17 | 6  | 12 1/2 | 4 1/2 | 7  | 7 1/2 | 13 3/4 | 23 1/2 | 21 1/2 | 7/8 | 3/8 |
| NWRK 47.11 | 6  | 12 1/2 | 4 1/2 | 7  | 7 1/2 | 13 3/4 | 23 1/2 | 21 1/2 | 7/8 | 3/8 |

**Unable to measure**
### CHART 9: LOW "BUTTER CROCK"

<table>
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<th>SMTH</th>
<th>.216</th>
<th>2 1/2</th>
<th>8 3/4</th>
<th>11</th>
<th>9</th>
<th>10</th>
<th>35</th>
<th>36 1/4</th>
<th>32 1/4</th>
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</table>

### CHART 10: PITCHERS

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<tr>
<th>NJSM 77.23</th>
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<th>4 1/8</th>
<th>4</th>
<th>7</th>
<th>14 1/4</th>
<th>22 3/4</th>
<th>16 1/4</th>
<th>1 1/2</th>
<th>1/8</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKLN 128.5</td>
<td>1</td>
<td>11</td>
<td>4 3/4</td>
<td>4</td>
<td>8*</td>
<td>13 1/2</td>
<td>23 1/2</td>
<td>17 1/4</td>
<td>1 1/2</td>
<td>1/8</td>
</tr>
</tbody>
</table>

*Estimated (unable to measure)
Jugs: Measurements for the jug group were fairly similar (see Chart 7; Figure 11). The height and diameter only varied one-half and one-eighth inch respectively, while there was no difference in lip circumference measurements. (The weight was not compared because some jugs could not be weighed.) The largest discrepancy in measurements for the group of jugs as a whole is exhibited for the base measurements for the four-quart jugs, NJSM 352.35 and MCHA 79.528.25, and that is only two and one-half inches.

"Straight-sided" or tall jars: Measurements within the jar category were all under one and three-quarter inches in difference (one and one-half inches for height, one-half inch for diameter, one and one-half inches for lip circumference, and one and three-quarter inches for the middle circumference) except for the base circumference (see Chart 8; Figure 12). The three and three-quarters inch difference in base circumference measurements is the largest for the entire group of stoneware, and represents the most extreme variation. It reflects the nearly straight sides seen on the SMTH .84 jar and more tapering sides of the SMTH .83 jar. However, on the whole, the measurements reveal a remarkable consistency in their degree of similarity. For...
Figure 11. Jug attributed to Joshua Letts on the basis of the coggle design that is also found on pot shards from the Warne and Letts pottery site. See NSJM shard 34.167 marked "MADE BY LETTS/TH AMBOY" (Figure 17). The jug form supports the attribution. New Jersey State Museum, 352.35.
example, the four straight-sided jars of two-quart size vary from seven and one-half to eight and one-quarter inches high, weigh from three pounds, three ounces to three pounds, six ounces, and all other circumference and diameter measurements are within two inches of each other, some being identical in measurement.

**Pitchers and "Butter" Crock:** There were only two pitchers available for analysis, both of which were one-gallon in capacity (see Figures 13a and 13b). They were extremely similar in overall measurement, varying within one inch at most. Variation in height was only seven-eighths of an inch, one-quarter of an inch in diameter, one-half inch for the lip circumference, middle circumference varied only three-quarters of an inch, and the base circumference only one inch. (Weight for Brooklyn 43.128.5 was estimated on the basis of the similarity of all other measurements. See Chart 9.) (It is interesting to note that although the pitcher form is infrequent, the two included in this study are nearly identical not only in measurements, but in ornamentation as well.) Because there is only one "butter" crock in this study it cannot be ascertained if it is "typical" for its form (see Chart 9; Figures 4, 14a and 14b).
Figure 13a. Pitcher by Warne and Letts, New Jersey State Museum, 77.23.
Figure 13b. Pitcher by Warne and Letts, New Jersey State Museum, 77.23.
Vessel Proportion

The ratios of height to each other measurement (diameter and all circumferences) are fairly consistent (see Chart 11) for the ovoid jars with or without handles. There is an approximate 1.3 ratio for height to diameter, lip to height ratio is 2.3, middle circumference to height is 2.7, and base to height is 1.8. For ovoid jars, the middle circumference is the largest and measures over 2:1 to height to retain the appearance of an ovoid jar.

Tall, "straight-sided" jars have shoulder circumferences that measure larger than either rim or base circumferences, and the jar opening (rim) is smaller than the base in circumference. The height to diameter ratio is inconsistent—it does not seem to affect the integrity of the appearance that constitute a "straight-sided" jar. The other measurements do, however, because they are regular. There is an approximately 1:2 ratio for height to shoulder circumference.

Similarly, the height to opening diameter for jugs does not seem to be important to its appearance, while the circumferences are regular. There is a 2:1 ratio for height to lip circumference, a 1:2 ratio for height to middle circumference, and about 1:1.3 ratio for height to base.
### CHART 11: PROPORTION RATIOS

Averages for Each Capacity Category

<table>
<thead>
<tr>
<th></th>
<th>ht. to dia.</th>
<th>ht. to lip</th>
<th>ht. to mid.</th>
<th>ht. to base</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ovoid jar with handles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 gallon</td>
<td>1.3</td>
<td>2.3</td>
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</tr>
<tr>
<td>2 gallon</td>
<td>1.3</td>
<td>2.32</td>
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<tr>
<td>2 1/2 gallon</td>
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<td>2.25</td>
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<td>3 gallon</td>
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<tr>
<td>3 1/2 gallon</td>
<td>1.3</td>
<td>2.4</td>
<td>2.8</td>
<td>1.7</td>
</tr>
<tr>
<td><strong>Ovoid jars without handles</strong></td>
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<td></td>
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<tr>
<td>2 quarts</td>
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<td>2.3</td>
<td>2.7</td>
<td>1.9</td>
</tr>
<tr>
<td>2 1/2 quarts</td>
<td>1.4</td>
<td>2.3</td>
<td>2.7</td>
<td>1.9</td>
</tr>
<tr>
<td>3 quarts</td>
<td>1.3</td>
<td>2.4</td>
<td>2.6</td>
<td>1.6</td>
</tr>
<tr>
<td><strong>Tall jars</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 quarts</td>
<td>1.8</td>
<td>1.6</td>
<td>2.25</td>
<td>2</td>
</tr>
<tr>
<td>2 1/2 quarts</td>
<td>2</td>
<td>1.5</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>4 quarts</td>
<td>1.25</td>
<td>1.2</td>
<td>1.9</td>
<td>1.7</td>
</tr>
<tr>
<td>6 quarts</td>
<td>2.7</td>
<td>1.1</td>
<td>1.8</td>
<td>1.7</td>
</tr>
<tr>
<td><strong>Pitchers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 gallon</td>
<td>2.5</td>
<td>1.3</td>
<td>2.2</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Crock</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 1/2 gallon</td>
<td>1.25</td>
<td>4</td>
<td>4.1</td>
<td>3.6</td>
</tr>
<tr>
<td><strong>Jugs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 (1/8) quart</td>
<td>7.3:1</td>
<td>2:1</td>
<td>1:1.8</td>
<td>1:1.2</td>
</tr>
<tr>
<td>4 (3/4) quarts</td>
<td>8.1:1</td>
<td>2:1</td>
<td>1:2.1</td>
<td>1:1.3</td>
</tr>
<tr>
<td>8 quarts</td>
<td>7.2:1</td>
<td>2.2:1</td>
<td>1:2</td>
<td>1:1.3</td>
</tr>
</tbody>
</table>
The proportions for the pitchers and butter crock are included in the charts. A "rule" for proportion cannot be discovered for these two forms, however, because only one capacity category was found for each vessel type. In general, for the pitcher form, the shoulder measurement is larger than the base or lip, and the base and lip measurements seem to be extremely similar in circumference measurement. The butter crock tapers slightly from top to base, with a very slight swell at the middle circumference.

The "rules" applicable to vessel form, then, include similar proportions in measurement and appearance, and standard capacity. Three and one-quarter inches is the largest discrepancy in circumference measurements among the Warne and Letts crocks examined. Pots generally did not vary more than two inches within each category, and frequently were identical in measurement. Weight in many case varied only by a few ounces.

Capacity remains standardized in most cases. Sometimes deviations from standard capacities occurred, such as one and one-eighth gallons (MTHS 311) or two and one-fifth gallons (NJSM 352.27) which may be attributed to the potter's inaccuracy in estimating the size of the jar in manufacturing. Most likely these jars were meant to be a standard size.\textsuperscript{11}
Ornamentation and Surface Finish

Decoration and surface finish of the stoneware comprises the set of "non-essential" components to be examined. An in-depth description of some of the tool-applied motifs and their methods of application is revealing, in part because the distinctive design motifs have been heavily relied upon in the past for attributing unsigned stoneware to Warne and Letts. Additionally, the varieties of surface decoration and finish obviously reflect that "mass-production" techniques have been used for ornamentation.

Ornamentation: Most ornamentation on Warne and Letts stoneware consists of repeated, tool-applied motifs. Very little ornamentation was applied by the more time-consuming method of "freehand" incising. Related to these time-saving techniques for ornamentation is the minimal refinement of the surface finish of the crockery. That is, rough evidence of the hand-production process is often not smoothed away on Warne and Letts' crocks. The various aspects of surface ornament and finish to be discussed include tool-applied decoration, hand-applied decoration, use of cobalt slip and salt glaze, types of applied handle, clay color, color due to firing the ware and degree to which the surface "finish" was refined.
Incised lines can be quickly achieved on the potter's wheel by bringing a sharp instrument in contact with the jar as it turns. Similarly a coggle wheel can be applied to a pot while it is turning on a wheel, and stamped lettering can easily be impressed with carved wooden, metal or ceramic stamps. Scalloped swags, serrated crescents, and other design could be easily repeated by relying on a stencil. Each of these techniques sped production and decreased the time spent on any one object, thus increasing efficiency and economy.

Among the stamps used in decorating Warne and Letts stoneware, the most distinctive and controversial design is the "LIBERTY :: FOR :: EV" slogan. It is stamped in a rectangular surround with a small hand to the left pointing to the slogan as seen in contemporary broadsides (see Figure 14a). Most sources say it is a patriotic slogan similar to the 1821 New Jersey state slogan, "Liberty and Prosperity," or a patriotic reaction to the French and English effort to curb American shipping prior to the War of 1812. Although more imaginative suggestions have been made as to the nature of the slogan, such as it being a reference to a person (Ev, Evert, etc.), patriotic emblems were not uncommon decoration on stoneware.
Another stamp found on Warne and Letts stoneware is the "double swag and tassel" design which looks like a bow the (see Figure 14b), or tied ribbon with pendants extending from it. If basic elements of the motif are isolated, it is seen to be a swag and tassel on top of another one, looking somewhat like a figure-eight. Warne and Letts stoneware shares this neo-classical motif with the New York stoneware of Thomas Commeraw. Additionally, a similar design may be seen on a jar from Old Bridge, N. J. 79.528.43, in the Monmouth County Historical Association collection. Neo-classical motifs, from swags and tassels to Grecian columns and urns were common elements of design on stoneware jars and other household objects in the post-Revolutionary period. Similar motifs were found on furniture, wall-paper, prints, paintings, fabric, silver and other objects as well as ceramics.

New Jersey and New York potteries were competing with each other, and shared designs were easily accessible through shipment of the stoneware or through movement of the potters. Although the "double swag and tassel" design on the Commeraw and Warne and Letts crocks are very similar in form, the New York swag and tassel is larger than that of the Warne and Letts pots, therefore the same stencil was not used. The glaze color is usually dark
blue on Commeraw's wares and green-blue on Warne and Letts pots. The design on the Old Bridge jar is completely filled in with glaze obscuring the "figure-eight" appearance. On Warne and Letts stoneware, however, only the area within the incised lines is filled with cobalt, if glazed at all.¹⁶

Related to the "double swag and tassel" motif are other variations on the swag design. The most common of these is a "scalloped swag" (what has been dubbed a "holly leaf" by some ceramic historians). The motif is crescent-shaped, as a swag would be, and elaborated with scalloped sides¹⁷ (see Figures 8a and 8b, 9, 12, 13a, and 13b, and 19). These designs are often grouped in pairs on one side of a pot. Sometimes there is one on both the "front" and "back" of a piece. Donald Webster, in Decorated Stoneware Pottery of North America, illustrates a series of variations on the swag and tassel design taken from the stonewares of several different manufacturers.¹⁸ There are swags with and without tassels. Some in addition to Warne and Letts examples exhibit the device of serrating the swag. Thus, after comparing the Warne and Letts motifs with these, one must conclude that these so-called "holly leaves" were actually abstract swag and tassel designs in keeping with contemporary neo-Classical design (see Figure 15).
Figure 15. Comparison of various swag and tassel motifs. Figures a-d taken from Donald Blake Webster, Decorated Pottery of North America, pp. 160-161.

a. Swag and pendant
New York City, late 18th/ early 19th c. by Thomas Commeraw, Winterthur Museum Collection.

b. Abstracted swag and tassels
New York City, early 19th c. by David Morgan, J. P. Remensnyder Collection.

c. "Scalloped Swag" and tassel
probably New Jersey, x. 1800-1810,
J. P. Remensnyder Collection.

d. "Scalloped Swag" (abstracted)
Warne and Letts pitcher,
Brooklyn Museum

e. "Bow-tie" swag and tassel motif found on Warne and Letts, Commeraw and Old Bridge stoneware.

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Warne and Letts did little "freehand" decorating. There are, however, three known Warne and Letts jars which are decorated without use of stencil or other mechanical devices. One is inscribed "Melany Warne" and is incised with a man smoking a pipe (Melany Warne, the daughter of Thomas Warne, married Joshua Letts). Another elaborate example also incised, is a jar in the collection of the Philadelphia Museum of Art depicting three war ships. The third exhibits the hand-incised outline of a bird below the more usual "Liberty For Ev" stamp. (On the other side is S. Amboy, N. Jersy" and a swag motif.) These three jars appear to be exceptional among the Warne and Letts wares, and were most likely gifts for family members or special commissions. Thus, tool-applied decoration seems to be the "rule" for Warne and Letts stoneware and hand decoration the exception.

The various types of handles on Warne and Letts wares may be considered here as decorative motifs since they have not been used in this study to categorize the pots within a particular form. Loop handles are either standing free from the sides of the jar, or pressed to the sides (see Figures 19 and 20). "Mushroom" handles are small solid pieces of clay attached near the shoulder of the pot, resembling half of a mushroom cap (see Figure 6).
A variation of the "mushroom" handle has scalloped edges decorated with impressions of the potter's fingers (see Figure 14).

**Surface Finish:** Other factors such as glaze and coloring contribute to the final appearance of the crocks. All Warne and Letts stoneware is salt-glazed, which gives a colorless and textured, but reflective surface finish to the pot. The glaze makes the stoneware easier to clean and slightly reduces porosity, although stoneware clay is extremely dense and fairly non-porous even without the salt glaze. Many Warne and Letts crocks have a brown, iron-based slip applied to the inside. This type of interior treatment is not consistent among the crocks; some have the iron-based slip, some are salt-glazed inside as well as outside and some are not glazed at all on the inside. From this we may conclude that the crocks were fired in a variety of ways. Some pieces of pottery were stacked mouth-to-mouth in the kiln, and salt glaze thus was unable to form on the interior when salt was thrown into the kiln. These pots often show an unglazed rim or partially glazed rim that looks rough. The pots which are salt-glazed on the interiors were fired uncovered (see Figure 16).
Setting tiles were used to separate pieces of pottery during firing with the largest items placed on the bottom and the smaller objects stacked on top.

The color of the decorative cobalt glaze on Warne and Letts pots ranges from cobalt blue to purple, green-blue, green and brown. The decorative glaze is not used extensively on Warne and Letts stoneware, but usually applied over the stamped lettering, or to fill in the incised scalloped swags, and sometimes to accent the base of the handles.

Theoretically, clay color may be intentionally selected by the potter, but color was not a consistent characteristic among the forty-seven crocks analyzed and, thus, does not seem to have been carefully regulated in production. However, some description is necessary. The colors on Warne and Letts crocks range from different tones of gray to varying tones of brown, a greenish-gray and a yellow "putty" or buff color. Some shards even show pink underneath the burnt surface. Variation in clay color is primarily due to the mixing of different clays, but the length of firing time and kiln temperature also affected the color of the final product. Variation in clay colors among Warne and Letts crocks is not surprising considering the variety of strata of clays available in South Amboy and the number of impurities in any clay sample which help determine its color. In addition, Warne and Letts may have taken advantage of the fact that different clay types affect shrinkage rate and texture.
The surface of Warne and Letts stoneware is not consistently refined. Various characteristics include concentric rings left by potters' fingers where the pots were raised, especially on the insides; finger prints where the handles were pressed to the sides of the jars; inaccurately and hastily applied glaze over decorative elements; warping; discoloration as a result of overbaking; hasty application of stamps which often resulted in double impressions and in one case, produced, upside-down lettering.

Characteristics such as these were not always treated in the same manner by other stoneware manufacturers. For instance, some potters smoothed off the concentric rings that are left as the vessels were raised, but the potters at the Warne and Letts manufactory did not take the time to do so.

Overall, firing or burning the ware accounts for most of the scars, irregularities, varying colors and warping. Apparently these irregularities were tolerated by potters and consumers alike because many pots were major flaws such as warping still exist. While jars with scars and deformities may have been sold at a discounted price, the sale or survival of the pots evidently was not inhibited. Casualties in firing which interfered with the
function of the pot, such as cracking or breakage, seem to have been the only reason for discarding a pot.

These archaeological remains provided another non-verbal source of documentation for the Warne and Letts business. Shards found at the Warne and Letts site are valuable in identifying the potters who worked at the site, when the site was occupied, and in attributing unmarked pots to a maker. For example, one incised fragment found at the Warne and Letts site matched the decoration found on a Chrineyonce Schenck pot marked 1802. This shows activity at the site as early as that date. Examples of many types of coggle designs were found and help identify unmarked but decorated jars as the products of Warne and Letts (see Figure 11). For example, see NJSM jar #352.35 shown in Figure 11. It has a star-patterned coggle design around the shoulder which matches a fragment found at the Warne and Letts site marked "Made by J. Letts/South Amboy: (NJSM piece 34.167) (Figure 17).

Just as patterns seen in repeated dimensions and capacities suggest a list of "rules" governing those options a potter might appropriately select for form, the analysis of ornamentation and surface finish suggests a similar set of "rules." There are five categories under which these rules fall. The first category,
Figure 17: Pottery shard from Warne and Letts site, marked "MADE BY J. LETTS / TH AMBOY", New Jersey State Museum 34.167.
ornamentation, was controlled by the potter. Tool-applied decoration, for example, varied little due to the repetitive effect of the application of a mechanical device, although the potters had several different coggle wheels from which they could choose (see Figure 18). Clay color is another aspect of production which may only be controlled to a certain extent, and in the case of Warne and Letts stoneware, was not strictly controlled. Other clay properties such as shrinkage rate can contribute to irregularities in the appearance of the wares because mixture of clays with different shrinkage rates may result in warped pots. Aside from the most basic variations in style due to the habits or skill of the individual potter, the major element of risk involved in ceramic production is due to firing the ware. Deviation of each object from its intended form may be measured by looking at the average circumference for each type of pot and noting the variation of each. Finally, the degree of refinement of surface finish is an aspect of production which could have been more strictly controlled by the potter, however, Warne and Letts stoneware shows significant variations in finish.

Comparison of Two Jars

In light of these general findings for measurement and ornamentation, two Warne and Letts jars are compared...
Figure 18. Nine Warne and Letts coggle designs.

Monmouth County Historical Association
79.511.5
Smithsonian 1977.0803.210
Newark Museum 56.90

Smithsonian 1977.0803.217

New Jersey State Museum shard

Smithsonian 300894.86

New Jersey State Museum 77.23

Newark Museum 47.11

Smithsonian 1977.0803.211
as a case study to illustrate the overall consistency in size and proportion for the entire group of stoneware and provide an "ideal" standard against which variations among all Warne and Letts jars may be compared. The two jars (Newark Museum jar 47.10, Figure 19; and Smithsonian jar 1977.0803.219, Figure 20) were specifically selected for their continuity in workmanship, similarity in capacity, weight and overall proportions. Here the two artifacts will first be discussed in terms of patterns of workmanship seen in their "essential components" (overall form, internal proportions, weight and capacity), then in terms of their "non-essential components" (decoration and finish), and specific variations from the general pattern that emerges will be noted throughout. For the comparison, the dimension for the Newark Museum jar, 47.10, will be given first, and the Smithsonian jar, 1977.0803.219 (here abbreviated to .219) second.

**Essential components:** The measurements of the two one-gallon capacity, handled, ovoid jars confirm the similarity of their appearance: both are nine and one-quarter inches high, the diameter of the openings on both jars is six and six and one-half inches, the lip circumferences measure nineteen and twenty-one inches, the
Figure 19. Warne and Letts ovoid jar with handles, Newark Museum Collection, number 47.10.
Figure 20. Warne and Letts ovoid jar without handles, National Museum of American History, Smithsonian Institution Collection, number 1977.0803.219
middle and base circumferences are twenty-three and three-quarters inches and fifteen and one-quarter inches respectively for both jars. (According to the charts, all measurements are well within one inch of the average measurements for their category.) The silhouettes drawn by outlining photographs of the two jars reveal their similar proportions (see Figure 6a-c).

The respective weight of the two jars is five pound, three and one-half ounces, and five pounds, eight ounces, a difference of only four and one-half ounces (see Chart 5). (For the one-gallon capacity category, overall weight varies within only one pound, from four pounds, eight ounces, to five pounds, eight ounces.)

The ratios of height to diameter and circumference are extremely close. Height to diameter ratios are 1.5 and 1.4 for each jar respectively, lip circumference to height 2 and 2.2, middle circumference to height is 2.5 for both jars, and base to height is 1.6 and 1.7 respectively. In comparison to the average ratios of all one-gallon ovoid jars, the two jars hardly vary:
The summary, the two jars are extremely similar in size and proportion to each other, and their measurements and proportions are consistent with those for the larger group of stoneware.

**Non-essential components:** Newark Museum jar, 47.10, jar a progression of decorative elements from its rim to its base, beginning with a "collared" rim at the top. The rim, instead of flaring outward slightly at the top as most other Warne and Letts jars do (see Figure 20), is straight and deeply undercut, setting it off from the rest of the jar. Below the rim, the shoulder circumference is ornamented with four incised concentric lines. The incised lines are located at almost the same height as the two applied loop handles, each four inches long and five-eights of an inch wide. Below the incised lines are the stamped makers' marks: "T.W.J.L".: (Thomas Warne and Joshua Letts). A stenciled scalloped swag is incised below the lettering. The swag device is colored cobalt blue and there is a thin wash of cobalt over the
stamped lettering. An incised line encircles the jar at the base.

The Smithsonian jar, .219, has a rim flaring slightly outward and decorated with a diamond-pattern coggle-wheel impression. Below the rim and above the shoulder are two incised horizontal concentric lines. The coggle motif found on the jar rim is repeated below the incised lines. The two applied loop handles on this jar are pressed to its sides, and measure three and one-half inches long and five-eights of an inch wide. There is a single incised line at the base of the jar.

In general the ornamentation seen on these two jars is typical of that found on most other Warne and Letts vessels—ornamentation mainly consists of simple, often geometric shapes dominated by symmetry. The processes used are incising, coggling and stamping with application of some cobalt or other mineral pigment. Design motifs distinctive for Warne and Letts stoneware in particular are the scalloped swag design and the coggles seen on these two jars, as well as the "Liberty For Ev" stamp not found on either of these jars.

Repetition and symmetry are basic elements of ornamentation on Warne and Letts stoneware. The design
on jar 47.10 is repeated on both sides of the jar, although one side is missing a large chip in the surface. (The initials "J. L." and the end of the right side of the swag impression remain on this side of the jar, indicating what the complete design had originally been.) Additionally, the lettering and crescent exhibit their own internal symmetry. The lettering, considered as a decorative motif, has an even number of letters (four), and is therefore, symmetrical. There is one crescent above the lettering which is also internally symmetrical because it has an even number of scallops on each side, if it is divided in half vertically.

Repetition as seen on the crocks, may be defined to include the concentric lines incised at the neck and base of most of the crocks. They repeat or emphasize the undulation of the shape of the jar. On stoneware, this type of ornamentation and definition of the shape "reinforces the visual effect of the form"28 see Figures 9, 11, 12, 14a and 14b, 19, 20).

Comparison with Unmarked Jar

A previously unattributed ovoid jar with handles appeared to be a Warne and Letts jar because of the visual proportions and decorative elements. On the basis of
measurements which show a consistent pattern of workmanship in the production of Warne and Letts stoneware. This previously unattributed, privately owned jar, PRVT 1, may be attributed to the Warne and Letts manufactory (see Figure 21).

**Essential Components:** When measured, its dimensions and weight were found to fit within the range of measurements taken for the jars of one-gallon capacity (see Chart 5). At most, the circumference measurement of the rim is one and seven-eights of an inch larger than the average circumference measurement for all one-gallon jars (twenty inches), and well within the potters' range of acceptable variation seen in the group of stoneware as a whole (under 3 1/2 inches). Other measurements are between one-fourth of an inch and one inch of the average measurements seen for all jars. Weight for this group ranges from four pounds, eight ounces to five pounds, eight ounces, variation within only one pound, and jar PRVT 1 weighs five pounds, eight ounces. While this unmarked jar's measurements are not absolute confirmation that it was made by Warne and Letts, the measurements are very similar to other Warne and Letts jars.

**Non-essential components:** Measurements combined with visual assessment provide strong evidence to
Figure 21a. Ovoid jar with handles, privately owned, PRVT 1.
Figure 21b. Ovoid jar with handles, privately owned, PRVT 1.
attribute the jar to the Warne and Letts manufactory. PRVT 1 has a slightly flaring rim, similar to that of Smithsonian jar .219. Below the rim, the shoulder is ornamented with concentric incise lines, as are most other Warne and Letts jars. The handles are 3 1/8 inch long and 3/4 of an inch wide. The amorphous cobalt design on both front and back of the jar is similar to that on other labeled Warne and Letts jars. An incised line encircles the jar at the base.

For this type of utilitarian crockery, quantity production is desirable. Repetition in manufacture speeds production and ultimately increases profits. Stoneware vessels produced by Warne and Letts were not meant to be unique, but to be repeated, and indeed, the outstanding principle reflected in the vessel forms and ornamentation is repetition. Vessel forms were turned so many times that eventually a potter could reproduce previous work without tools for measuring capacity or a scale for measuring the weight. The comparable measurements for the two jars is attributable to repeated methods of workmanship and slight discrepancies to the fact that a pattern or template was not always used.

For instance, in estimating the size and capacity of a finished jar, the potter must know the amount of clay
needed to form an object. The simplest method is to measure the clay by weighing it. Initially the potters actually weighed the clay on a scale, but experience and repetition eventually resulted in the potter being able to accurately estimate the amount needed to create a jar of a certain size. This speeds production.

Measuring tools were often used to make work on the wheel more accurate and expedient, however, after acquiring experience some potters no longer needed them to accurately weigh and measure. Jeannette Lasansky describes a measuring tool in *Made of Mud*.

Charles [Hyssong] had an arm-like device or gauge attached to his wheel. This piece of equipment would swing around and give him an indication of how wide and high a piece needed to be in order to hold a certain volume in gallons; the number of gallons was stamped on the piece. Through long experience at this, he knew how heavy the ball of clay needed to be to throw a certain size crock—or he could refer to his book.

Given the regularity of their stoneware, it is likely that Warne and Letts also used a gauge of this type, at least initially. By means of either the gauge, or long experience in judging the size, the circumference, diameter and height measurements are all fairly consistent within size categories, and height to diameter proportions were maintained. The slight variation from these standard measurements and ratios is due to the factor of approximation or estimation in workmanship.
Additionally, the concentric rings seen on the bottom of some Warne and Letts jars, show that the jars were cut off of a turning wheel with a wire, string, or similar tool (see Figure 22). This method of workmanship allows for greater speed of production because the wheel does not have to be stopped and restarted in order to remove the pot at the end of each turning.

The rough surfaces of the wares further supports the idea that they were being turned out rapidly—the potters did not take the time to smooth rough or uneven features. Coggle wheels and stamps decorated the wares efficiently and rapidly. Thus tools and skill of the potter were combined to increase speed of production that resulted in more wares being turned out in any given period of time.

From this evidence we may conclude that Warne and Letts were mass-producing the pots in standard sizes with regular, repetitive decoration. Because the pots were inexpensive utilitarian ware, and decoration was not their primary function, the potters could not afford to spend much effort to decorate or improve the finish on them. Instead they used tools and work habits to create pots which were consistently the same shape and design. Profits increased with increased efficiency. In
Figure 22. Impression from being cut off a turning wheel on the bottom of Warne and Letts jar, Newark Museum Collection, number 56.90
utilitarian forms such as stoneware, economic profit provided the motivation, as opposed to artistic creation.

Conclusion

Economic and social factors influenced the production of Warne and Letts stoneware and its appearance. The high degree of consistent proportion among Warne and Letts jars reflects regulated workmanship. Cutting the pots off the turning wheel, leaving the ware surfaces unfinished, and using coggle wheels and stamps for decoration are examples of time saving techniques to increase quantity production. For this type of utilitarian crockery, quantity production is desirable because repetition in manufacture speeds production and ultimately increases profits. Stoneware vessels produced by Warne and Letts were not meant to be unique, but to be repeated, and indeed, the outstanding principle reflected in the vessel forms and ornamentation is repetition. This accounts for the comparable circumference and weight measurements in the pieces examined.

Social as well as economic factors influenced the ultimate appearance of Warne and Letts stoneware. At the most basic level, the crocks are utilitarian: they fulfill the function of storage containers. Certain forms
are useful for particular functions—a pitcher is made for pouring liquids, a jug for simultaneous ease of storage and pouring liquids, a wide-mouthed jar for bulk storage. Consumers of stoneware who used these vessels came to expect the availability of various vessel forms. Over time, traditional vessel shapes came to be perceived by both potters and consumers alike as "correct" for their function, and concurrently, aesthetically acceptable. Although the particular forms are not exclusive in their ability to fulfill their utilitarian function, they nevertheless are repeated by force of tradition. In speaking of vernacular architecture in "Eighteenth-Century Cultural Process in Delaware Valley Folk Building," Henry Glassie states,

> It is voguish but incorrect to think of these basic forms as following function. . . . The basic forms were useful; people lived and worked in them, and they did function . . . both economically and aesthetically. But they were not designed to suit idiosyncratic need; they were traditional components, traditionally structured into traditional organizations of space required for psychological comfort.

The same statement may be applied to utilitarian stoneware vessels—they tend to be traditional in form. The shape of a stoneware vessel was as much influenced by the traditions of stoneware use in the community and the culture in which the potter worked as by economic forces in production.
Systematic measurement indicates that potters were working within recognized formal constraints and repeated patterns of workmanship which determined the final appearance of their wares. Economic factors (cost of time, ease and speed of production), social factors (traditional forms and uses), and the limitations of the available materials (clay, tools, skilled labor) combined to produce consistency in the forms.

The potter's concept of his craft is reflected in the pots as well. It may be inferred by the evidence cited above that potters were not investing much time in each pot and were not thinking of themselves as "artists," but instead they were businessmen concerned with the commercial aspects of their craft. Efficiency and economy were of paramount importance. Decoration was minimal, and forms were traditional. Appearance of the stoneware was influenced by tradition, the marketplace and materials. Additionally, potters did not exert their own aesthetic preferences except within a narrow range of appropriate options. Future comparative studies of similar potteries may confirm that it is possible to distinguish Warne and Letts wares from other stoneware.
NOTES TO CHAPTER THREE


The term "craftsman" has been inserted here in place of "folk artist" because in defining "folk artist" and "folk art" Glassie has previously stated in the article that "folk artists" are craftsmen. While the goal of this study is not to apply his arguments in full to determine whether or not Warne and Letts were "folk artists" Glassie convincingly utilizes stoneware as an example of "folk art." Some methodologies derived from his exploration of folk art have been appropriately applied to stoneware here toward a more holistic description and exploration of vessel appearance.


3 Forty-seven vessels were included in the study out of an original group of fifty. Some were determined to be crocks made by a manufactory besides Warne and Letts, or for other reasons could not be included. Only a few of each vessel type were available for analysis. Because most examples were once in private collections (now housed in museums), most are "unusual" or "beautiful" vessels, rather than what may have been "typical" for Warne and Letts. Even so, the group as a whole presents a large enough sample with which to test certain methodologies and draw tentative conclusions.

An information worksheet developed for each piece of stoneware was partially based on E. McClung Fleming's "Artifact Study: A Proposed Model," The Winterthur Portfolio 9 (1974): 153-173. E. McClung Fleming's model for artifact study provides a starting point by which to examine the artifacts in a precise, logical progression. He divides artifact analysis into several components: history, material, construction, design and function.

122
To these five basic artifactual properties he applies four functions: identification, evaluation, cultural analysis and interpretation. This approach results in a cultural analysis that goes beyond simple description, an approach that Fleming suggests as a point of departure for future artifact studies. This technique was applied to Warne and Letts pottery in the initial examination of its structural and decorative components.

4 Henry Glassie, "Structure and Function, Folklore and the Artifact," in Semiotica 7 (1973): 327; also Glassie, "Folk Art," in Folklore and Folklife: An Introduction, ed. Dorson, p. 273. Additional approaches to the material suggested by Henry Glassie's work, especially "Folk Art," "Structure and Function, Folklore and Artifact," and Folk Housing in Middle Virginia, which provide sources for theoretical and practical application of the structural anthropology of Claude Levi-Strauss to folklore and material culture study. Glassie has concentrated primarily on traditional house forms in America, but in his article "Folk Art" he touches on many different kinds of artifacts, suggests the applicability of these theories to a variety of such objects, and encourages others to continue work with diverse artifacts. Henry Glassie, Folk Housing in Middle Virginia (Knoxville: The University of Tennessee Press, 1975).

5 The "silhouette" technique described in the Introduction is demonstrated in a specific comparison of two jars, rather than for each vessel included in the survey.


7 Other vessels and non-vessel stoneware form have been associated with the Warne and Letts site as well. Most, however, were in fragment form and were not useful to the study. Items such as a tea cup, colanders, ink wells and other objects were recovered at the site of the kiln.

To obtain simple fractions, calculations were adjusted no more than .05.


This method of decoration may be better understood with a full description of the coggle wheel and its use. A coggle wheel is a carved circular stamp which leaves an impression as it is rolled over the wet clay. "The coggle wheel, a small circular disc affixed to a handle in much the same way as the front wheel is attached to a wheel barrow, was a distinct improvement over the punch, enabling a worker to decorate a pot by simply rolling the embossed wheel around it rather than laboriously punching on each individual pattern." William C. Ketchum, Jr. Early Potters and Potteries of New York State (New York: Funk & Wagnalls, 1970), p. 9.

Seven different coggle designs have been identified in Warne and Letts pots, and all of them are abstract, usually geometric designs, (see Figures 8, 10, 14, 20a and b).


14 James Mitchell, to Kathryn J. Davis, 14 September, 1983. James Mitchell is a prominent ceramic historian with a particular interest and expertise in NJ stoneware.

15 Ketchum, Early Potters, p. 10.

The "inverted scalloped swag" on Smithsonian jar 1977.0803.210 looks more like a cloud than a swag or crescent—this motif is unusual among extant pots but was probably not unique because it is applied with a stamp or stencil. In a letter to James Brown dated May 10, 1950, Robert Sim mentions a third type of swag motif, the "serrated crescent." "As you doubtless know," he begins, "Warne & Letts things with serrated crescents seem to be much less common than those with the 'holly leaf.'" (New Jersey State Museum Brown-Sim correspondence, May 10, 1950). Although none of the crocks examined for this study were decorated with "serrated crescents," this term likely refers to a motif seen on crocks illustrated in W. Oakley Raymond article, "Remmey Family: American Potters, Part IV," Antiques 34 (July 1938): 31, figure 5 far right. (The difference between these "serrated crescents" and the "scalloped swags" is the larger quantity and more angular quality of the serrations on the crescent for the "serrated crescent.")

Webster, Stoneware Pottery, p. 160.

Ibid, p. 143.

Letter from Robert Sim to James S. Brown, 11/23/52, James S. Brown and Robert Sim Papers, New Jersey State Museum, Trenton, New Jersey. In this letter Sim reports that the decoration has been incised freehand. An illustration of possibly the same or a similar jar is found in W. Oakley Raymond, "Remmey Family: American Potters, Part IV," in Antiques 34 (July 1938), p. 30. The letters spelling "S. AMBOY. N. JERSY" are barely visible to the right of the bird.

"Stoneware derives its very name from its dense and hard nature. The clays suitable for the production of stoneware are coarser than those used for porcelain but are capable of fusing by slowly melting together or vitrifying at high temperatures without losing their original form. . . . Stoneware bodies are generally supposed to mature or vitrify in the temperature range between 1200 degrees and 1300 degrees C." Georgeanna H. Greer, American Stonewares: The Art and Craft of Utilitarian Potters (Exton, Pennsylvania: Schiffer Publishing Ltd., 1981), p. 15-16.

The most common method of glazing stoneware, and that which was used extensively in New Jersey and New York, is "salt glazing." In England a mixture of salt, lead and potash was used, but in America sometimes common table salt sufficed. In England a sophisticated method of
salt glazing was executed by scattering the bottom of saggars with the mixture, or applying the glaze to the inside surface of the saggars where the wares were placed. See T. A. Lockett and P. A. Halfpenny, Stonewares and Stone Chinas of Northern England to 1851 (Stoke on Trent: City Museum and Art Gallery, 1982.) In America, damp salt was simply thrown into the kiln when it reached a temperature high enough to vaporize it. "At the same instant a chemical reaction occurred: salt and water became soda and hydrochloric acid. The hydrochloric acid was exhausted through the flue, and the soda reacted with silica and alumina in the clay body of the objects to form a thin layer of several sodium alumina silicates on the surface of the ware." Mitchell, "The Potters of Cheesequake, New Jersey," in Ceramics in America, p. 320-321.

22 Dark, iron-bearing slips were applied to interiors or exteriors of pots beginning in the nineteenth century. "These were prepared from natural clays, which were usually strained and made into a watery suspension into which the pots were dipped. . . Albany clay became the most popular glaze of this type and was shipped all over the United States as railroad expansion took place, particularly during the last quarter of the nineteenth century and the early twentieth century. . . It is almost impossible at times to distinguish which of these clays, local or commercial, was actually used upon an old pot. Because of this difficulty it has become acceptable, unless the clay is known to be local, to call these glazes Albany Type slip glazes." Greer, American Stonewares, p. 194. The iron-bearing slip on Warne and Letts pots, however, not only predates the commercial distribution referred to above, but was most likely locally made since other types of clay with high iron contents (which determine clay color) were found in South Amboy. Thus, the term "iron-bearing clay slip" is more accurate than "Albany slip." Correspondence with Susan Myers, Associate Curator, Division of Ceramic and Glass, National Museum of American History, Smithsonian Institution, 30 January 1984.

The slip on Warne and Letts pots, in fact, is somewhat lighter in appearance than a true Albany slip. Some of their pots lack this Brown slip altogether and are coated on the inside with a salt glaze (making the color and texture inside and outside uniform) or not glazed on the inside at all.
23 "These hobbyists who call themselves potters talk about 'throwing' pots. But real potters—the old-time potters—'turned ware.' And they 'burned' their ware in a kiln [pronounced kill]; didn't know nothing about 'firing'." John Burrison takes this quote from Jaran Brown, a North Carolina potter, in his book Brothers in Clay: The Story of Georgia Folk Pottery (Athens, Georgia: The University of Georgia Press, 1983), p. 78. Throughout the book the term "firing the kiln" and "burning" in reference to the ware (i.e., "burning the ware"). For clarity to contemporary readers, however, the word "firing" is retained for this study.

24 Other artifacts associated with the Warne and Letts site give clues as to how the pottery was fired. Pieces of saggars and "dog bones" were found among other shards. "Dog bones" are small wads of clay placed between the jars to brace them in firing. They often left scars on the shoulders of the pots where the area was left unglazed. At the site "dog bones" were collected in great number. They show the impressions of the potters hands as he clenched the clay into shape. The methods of stacking and using "dog bones" to brace the ware contrasts with the use of saggars, which are used to protect delicate ware during firing. A sagger is a clay box, often open in the top with holes in the bottom and sides that allow the heat and fumes to reach the piece of ware within. The differences in the interiors of Warne and Letts pots, and the evidence of both "dog bones" and saggars on the Warne and Letts site shows that diverse methods of firing may have been employed within the same workshop. The dog bones and saggars found at the Warne and Letts site have been documented and described by Robert Sim and James Brown. They left extensive description in their notes. See Robert Sim, short typed manuscript in James S. Brown and Robert Sim Papers, New Jersey State Museum, Trenton, New Jersey, July 4, 1953.


26 This "undercut" rim is unusual among the jars examined, with most having the flaring rim which has a more shallow incised line defining it from the rest of the pot. Pot 79.511.5 at the Monmouth County Historical Association has the same type of undercut rim.

27 Glassie, "Folk Art," p. 272-273. Glassie discusses examples of decoration which are typically found...
on folk art objects. While this study is not concerned directly with whether or not Warne and Letts stoneware is "folk art," Glassie includes a useful section on stoneware jugs, and the vessels here exhibit many of the characteristics that Glassie labels diagnostic of "folk art." "The basic form of folk artifacts is never obscured by ornamentation," he says, "Rather, ornament serves frequently to reinforce the visual effect of the form; its elements may be outlined or their shapes echoed in lines drawn on them." Also, "In arranging an artifact's essential components (the elements of its basic shape), the folk artist works with the same laws that he employs in working with non-essential components (ornamentation). . . . The ideal . . . was to form a symmetrical whole through the repetition of individually symmetrical units."

28 Initially, however, tools were used to determine exact measurements and this falls into the category of "workmanship of certainty." This concept is discussed in David Pye, The Nature and Art of Workmanship (London: Cambridge University Press, 1986) in which two categories of workmanship are identified: those of "risk" and "certainty."

29 For example, see the jars MTHS 311 (labeled "WARNE & LETTS"), PRVT 2 (labeled "WARNE & LETTS"), Smithsonian jar 1977.08.3.215 (with an inscription, "MELINAY WARNE" on the other side), and Smithsonian 300.894.84 (labeled "WARNE").


31 Ibid.

SELECTED BIBLIOGRAPHY

Primary Sources


Probate Inventory of the Thomas Warne Estate, 11 June 1814. New Jersey State Archives: Wills, number 10520L.


Secondary Sources


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Interviews


APPENDIX A:
JAMES MORGAN COMPANY ADVERTISEMENT

The True American Trenton Newspaper, 15 July 1805 -
STONE WARE

Whereas James Morgan, Jacob Van Wickle, & Branch Green, have established a Manufactory of Stone Ware at South River Bridge, under the // Firm of // JAMES MORGAN & CO. // They now offer for sale the following Articles at the following Prices, viz.

<table>
<thead>
<tr>
<th>Article</th>
<th>Per Dozen</th>
<th>Per Piece</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 gallon pots or jugs</td>
<td>6 00</td>
<td>68 1/2</td>
</tr>
<tr>
<td>2 &quot;</td>
<td>4 00</td>
<td>37 1/2</td>
</tr>
<tr>
<td>1 &quot;</td>
<td>2 50</td>
<td>31</td>
</tr>
<tr>
<td>1/2 &quot;</td>
<td>1 50</td>
<td>19</td>
</tr>
<tr>
<td>1/4 &quot;</td>
<td>1 00</td>
<td>12 1/2</td>
</tr>
<tr>
<td>1/8 &quot;</td>
<td>75</td>
<td>09</td>
</tr>
<tr>
<td>1/16 &quot;</td>
<td>50</td>
<td>06</td>
</tr>
<tr>
<td>Chamber Pots,</td>
<td>1 75</td>
<td>20</td>
</tr>
</tbody>
</table>
Quart Mugs, 1 12 1/2 12 1/2
Pint d° 75 08

And all the other Ware in proportion according to size.—Which is ten or twelve per cent lower than can be bought in the City of New York, and the Ware not inferior to any made in America.

Orders from Merchants in the country, and others, will be received, and executed as above.

JAMES MORGAN & CO.

South River, June 22, 1805.

(Appeared in newspaper from July 15, 1805 - September 30, 1805.)
APPENDIX B:
THOMAS WARNE PROBATE INVENTORY

A True and Perfect Inventory of all and Singular the goods Chattles and credits of and belonging of the Estate of Thomas Warne and late of the Township of South Amboy In the County of Middlesex deceased made by us whose Names are hereunto Subscribed the Eleventh day of June in the year of our Lord one thousand Eight hundred and fourteen

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Value</th>
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<tbody>
<tr>
<td>6 Siting Chaires</td>
<td>3 00</td>
</tr>
<tr>
<td>4 [illeg.] Chaires</td>
<td>1 50</td>
</tr>
<tr>
<td>2 Tables</td>
<td>4 50</td>
</tr>
<tr>
<td>1 Square Iron Plate</td>
<td>3 00</td>
</tr>
<tr>
<td>1 Pair Cast hand Irons Shovel and Tongs</td>
<td>1 00</td>
</tr>
<tr>
<td>1 Trowel</td>
<td>00 50</td>
</tr>
<tr>
<td>5 Pictors (sic)</td>
<td>00 25</td>
</tr>
<tr>
<td>2 Kettles 1 Spidor 1 griddle</td>
<td>3 25</td>
</tr>
<tr>
<td>1 dressor</td>
<td>00 50</td>
</tr>
<tr>
<td>1 bed &amp; bedding (sic)</td>
<td>11 00</td>
</tr>
<tr>
<td>1 bed bedding (sic) &amp; bedstead</td>
<td>3 50</td>
</tr>
<tr>
<td>1 big chare 1 Chest</td>
<td>3 50</td>
</tr>
</tbody>
</table>
1 stand... 1 00
1 book Case & books... 00 25
1 weel barrow... 3 50
1 barrel... 00 50
2 bedsteds... 3 00
1 Pair brass hand Irons... 1 50
1 lott of old [illeg.]... 3 37
2 Frames & weels for Turning w[ ar ]e... 8 00
1 Stove of 10 Plate... 12 00
1 Iron Pot... 1 25

The above Inventoryed and apraized by us the Subscribers
this 11th June 1814

John Morgan
Peter Brieleu

Probate Inventory of the Thomas Warne Estate, 11 June 1814. New Jersey State Archives: Wills, number 10520L.
APPENDIX C:

JAMES MORGAN, JR. PROBATE INVENTORY

A True and perfect Inventory of all and Singular the Goods chattles rights and Credits of James Morgan late of the Township of South Amboy in the County of Middlesex deceased. Made by us whose names are hereunto Subscribed the Second day of December in the year of our Lord eighteen hundred and twenty two.

<table>
<thead>
<tr>
<th>Description</th>
<th>$</th>
<th>Cents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wearing apparel &amp; Military accoutrements</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Furniture in Parlour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Side Board...</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Sundry Glafs and crockery and slavers...</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Dining Table with ends $30 Eight chairs $16</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>One looking Glafs...</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Sundries on the mantle peice (sic)...</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>One Forte Piano...</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>One Carpet and hearth rug...</td>
<td>25</td>
<td></td>
</tr>
</tbody>
</table>

141
<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three window Blinds...</td>
<td>6</td>
<td>75</td>
</tr>
<tr>
<td>Sundry crockery in the closet...</td>
<td>15</td>
<td>-</td>
</tr>
<tr>
<td>One Pair of Andirons...</td>
<td>3</td>
<td>50</td>
</tr>
<tr>
<td>Five Volumes Washintons (sic) life (by Marschal)</td>
<td>8</td>
<td>-</td>
</tr>
<tr>
<td>Four Volumes Leo the tenth three others bot (sic) of Wm Remmey (?)</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Eighteen V's of the Emporium and Sundry number of various Magazines</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>A likenefs of the Genl. and one of his Ancestor</td>
<td>20</td>
<td>-</td>
</tr>
<tr>
<td>In the Hall</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One Dining Table, One Tea do Six Chairs</td>
<td>20</td>
<td>-</td>
</tr>
<tr>
<td>An Oil cloth on the Floor Two Maps...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In the Dining Room</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One Clock...</td>
<td>35</td>
<td>-</td>
</tr>
<tr>
<td>One Looking Glafs...</td>
<td>8</td>
<td>-</td>
</tr>
<tr>
<td>Amount carried over</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount brought over</td>
<td>$</td>
<td>Cents</td>
</tr>
<tr>
<td>Two Dining &amp; one Tea Table...</td>
<td>9</td>
<td>-</td>
</tr>
<tr>
<td>One Dozen Rush bottomed chairs...</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>Nine small Pictures...</td>
<td>4</td>
<td>50</td>
</tr>
<tr>
<td>Two window Blinds and an oil floor cloth...</td>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>Sundry Crockery in the closet...</td>
<td>3</td>
<td>50</td>
</tr>
<tr>
<td>Four Table &amp; Seven Tea spoons (Silver)</td>
<td>12</td>
<td>50</td>
</tr>
<tr>
<td>One pair of Andirons $3.50 Powder horns and sundries in the lower closet $2</td>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>Two Pair of Shoes &amp; scales with a weight</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Item Description</td>
<td>Quantity</td>
<td>Price</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------</td>
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<tr>
<td>Two cases with Razors...</td>
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<tr>
<td>Sundries in the drawer in the lower closet...</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td><strong>In the back East Bedroom</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two Bed Steads with Bedding...</td>
<td>35</td>
<td>0</td>
</tr>
<tr>
<td>Desk with Book case a Toilet Table with drawers &amp; a portable writing Desk</td>
<td>30</td>
<td>0</td>
</tr>
<tr>
<td>One looking Glafs one pair of Iron Andirons</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Six volumes of the Journal of the House of Congress Three volumes of the laws of</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>the land</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forty bound Book (sic)...</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>Sundry Magazines...</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Two Volumes of Paynes Geography...</td>
<td>5</td>
<td>0</td>
</tr>
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<td>Two Volumes of Voyages with the Maps</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Two Silver watches...</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>One picture...</td>
<td>75</td>
<td>0</td>
</tr>
<tr>
<td>One walking cane and remaining things in the room</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td><strong>The things in the closets...</strong></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td><strong>In the West Bed Room</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two Tables...</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Eight chairs...</td>
<td>6</td>
<td>50</td>
</tr>
<tr>
<td>Four large Books $12 one looking glafs $3</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>One Bed stead $2 One Pair Andirons $1.50</td>
<td>3</td>
<td>50</td>
</tr>
<tr>
<td>Seven sheets $10 50/100 Fifteen Table cloths $30 Fourteen Towels 72 Two small</td>
<td>46</td>
<td>50</td>
</tr>
<tr>
<td>peices (sic) loose linen $4...</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>The N.W. Bed Room Second Story</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One Bed Stead with Bedding...</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>Item</td>
<td>Price</td>
<td>Notes</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>----------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Chest of Drawers</td>
<td>7</td>
<td></td>
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<tr>
<td>Five Mahogany chairs $5 one Table $12/100</td>
<td>5</td>
<td>87 1/2</td>
</tr>
<tr>
<td>one small looking glass $25/100 one pair</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iron Andirons $50/100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Three window curtains $1 Three Pictures</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>25/100</td>
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<td></td>
</tr>
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</table>

The N.E. Bed Room Second Story

<table>
<thead>
<tr>
<th>Item</th>
<th>Price</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Bed stead with Curtains &amp; Bedding</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>One Settee $7 window Curtains and Glafs $7</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Toilet Table $75/100 One Round Tea Table $3</td>
<td>3</td>
<td>75</td>
</tr>
<tr>
<td>Wash Stand with bowl &amp; ewer</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Two Counterpanes $10 One Bed spread $2</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Three home made Bed spreads...</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Three blankets Two Bed spreads...</td>
<td>6</td>
<td>50</td>
</tr>
<tr>
<td>Six chairs $5 Four Pictures $2 The</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>[remain] $1</td>
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<td></td>
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</table>

The S.E. Bed Room Second Story

<table>
<thead>
<tr>
<th>Item</th>
<th>Price</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Five chairs and One Table</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Two Bed steads with curtains &amp; Bedding</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Looking Glafs $ the window Curtains</td>
<td>4</td>
<td>50</td>
</tr>
<tr>
<td>Eight Mahogany Chairs $8...</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>A lot of curtains...</td>
<td>5</td>
<td></td>
</tr>
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</table>

The Small Bed in which is C Morgan's

<table>
<thead>
<tr>
<th>Item</th>
<th>Price</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>One Bedstead with bedding l Table &amp; window</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>curtain</td>
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Up in the Garret

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<th>Item</th>
<th>Price</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Cradle 1 50/100 Two wool wheels</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>$4 50/100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
One Bedstead with Bedding $5 Rag Carpet $2  7
Amount carried over.
Amount brought over. $  
A lot of Cut nails & wrought...  5  
One chest Iron bands $2 One meal chest $4  6  
Two Scythes & cradels...  5  
The remainder of the Lumber with carpit (sic) rags  5  
Six Barrels with feathers...  5  
One childs crib One Bedstead & one desk  2  
One Side Saddle $5 One pair of brafs scales  3  8  
Two flax spinning wheels...  7  
Book case and books...  3  
Two Iron shovels...  1  75  
A lot of window and pipes...  1  
Two and half sides of upper leather and Two Calf skins  20  
Sole leather...  7  
The remainder of the lumber in the West room of the Garret...  2  

The Cellar
A lot of new stone ware  
A lot of stone ware in the cellar...  175  
A lot of old Iron & Paint Kegs near the West door  3  
A seine with ropes...  15  
Six cider Barrels and one Hogshead...  5  
Two Hogsheads & six Barrels with Cider  20  

One Barrel of whiskey $9 60/100 Four Barrels $3  

<table>
<thead>
<tr>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>The remainder of the Lumber in the East cellar</td>
<td>2</td>
</tr>
<tr>
<td>Part of a quarter cask of wine &amp; some Tobacco</td>
<td>15</td>
</tr>
<tr>
<td>Two Barrels of Vinegar $3 50/100 Soap Tub 50/100</td>
<td>4</td>
</tr>
<tr>
<td>Six openheaded casks...</td>
<td>3</td>
</tr>
</tbody>
</table>

**In the Kitchen**

<table>
<thead>
<tr>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Drefser $1 50/100 Two Tables &amp; one stand $2 50/100</td>
<td>4</td>
</tr>
<tr>
<td>Dutch oven and Tin ware...</td>
<td>2 25</td>
</tr>
<tr>
<td>Remainder of the Kitchen Furniture...</td>
<td>15</td>
</tr>
</tbody>
</table>

**Kitchen Chamber**

<table>
<thead>
<tr>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>A lot of old Iron and glass...</td>
<td>2 50</td>
</tr>
<tr>
<td>One Kettle (copper) $2 50/100 Two half Bushel &amp; One Riddle $1</td>
<td>3 50</td>
</tr>
<tr>
<td>Two Bedsead (sic) &amp; Bedding in Kitchen chamber</td>
<td>6</td>
</tr>
<tr>
<td>Remainder of Lumber in d°...</td>
<td>1 25</td>
</tr>
<tr>
<td>Two pair of Brafs Candle sticks $1 50/100...</td>
<td>1 50</td>
</tr>
<tr>
<td>An old negro slave named Kate no value</td>
<td></td>
</tr>
<tr>
<td>A negro slave for life (named Hannah)...</td>
<td>75</td>
</tr>
<tr>
<td>Three grubbing hoes and old and together with all the old iron under the oven shed</td>
<td>5</td>
</tr>
</tbody>
</table>

**Out Doors**

<table>
<thead>
<tr>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>One grind Stone, half Hogshead &amp; one Barrel</td>
<td>2 50</td>
</tr>
<tr>
<td>Ley (sic) [Lye] cask in the smoke House...</td>
<td>2</td>
</tr>
</tbody>
</table>
Potash Kettle, old sled, an ax & Spade 5 50
Wheel Barrow $75/100 Hen coop $25/100 Two Tubs and one Barrel in the Court Yard $1 75/100 2 75
Boat and Kettle... 1 50
thus far by W & B 3d Dce (written in margin)

Under Cow Shed
One carriage... 40 -
One Sulkey... 7 -
Three Casks $1 25/100 Lot of Timber $6 50/100... 7 75
Plank and old boards... 2 50
Two Bunches of shingles and old wag shaft 4 50
Remaining things under Cow shed... 1 -

In the Barn
One grain mill... 9 -
One set of Plaited Harnefs... 8 -
One set Common do 5 -
One do... do... 2 50
Two sets chair Harnefs... 4 -
Five Rakes forks & flales... 2 -
One Lot of Shovels and spads (sic)... - 75
Old Geers and traces... 1 -
Three saddles... 10 -
Flax seed and remainder of things grainery 1 -

Amount carried over.
Amount brought over.
<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saw Cut for scoop shovel</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>One lot of flax</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>One Bay Mare</td>
<td>25</td>
<td>-</td>
</tr>
<tr>
<td>One d°</td>
<td>50</td>
<td>-</td>
</tr>
<tr>
<td>One Bay Horse</td>
<td>50</td>
<td>-</td>
</tr>
<tr>
<td>One Pair of Mules</td>
<td>150</td>
<td>-</td>
</tr>
<tr>
<td>One Horse Waggon</td>
<td>35</td>
<td>-</td>
</tr>
<tr>
<td>One Pleasure d°</td>
<td>30</td>
<td>-</td>
</tr>
<tr>
<td>One Yoke of Red Oxen</td>
<td>50</td>
<td>-</td>
</tr>
<tr>
<td>One Yoke (Red &amp; Brown)</td>
<td>50</td>
<td>-</td>
</tr>
<tr>
<td>Ten Cows the choice of the Stock</td>
<td>140</td>
<td>-</td>
</tr>
<tr>
<td>Eighteen Head of Cattle</td>
<td>144</td>
<td>-</td>
</tr>
<tr>
<td>Three Calves</td>
<td>9</td>
<td>-</td>
</tr>
<tr>
<td>One Yoke of Oxen</td>
<td>45</td>
<td>-</td>
</tr>
<tr>
<td>Five Bags</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>One Sorrel Horse</td>
<td>15</td>
<td>-</td>
</tr>
<tr>
<td>One Bay Mare</td>
<td>12</td>
<td>-</td>
</tr>
<tr>
<td>Two Ox sleds</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>One pleasure sled</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Three Clay on Carts</td>
<td>15</td>
<td>-</td>
</tr>
</tbody>
</table>

In front of the Barn

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>One lot of plank</td>
<td>12</td>
<td>50</td>
</tr>
<tr>
<td>One Lot of Ploughs &amp; Harrows</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>One Horse farm waggon</td>
<td>25</td>
<td>-</td>
</tr>
<tr>
<td>One d°</td>
<td>12</td>
<td>-</td>
</tr>
<tr>
<td>one d° d°</td>
<td>8</td>
<td>-</td>
</tr>
</tbody>
</table>
Two sets of Hay Tackle and lumber in front of Barn...  2  -
Three Hives of Bees...  6  -
Ten Choats (sic) in orchard...  27  70
One lot Casks under Hen House...  1  75
Five fat Hogs and one shoat...  32  -
Six shoats in the pen...  16  20
Two Beef cattle...  24  -
Lumber in Cider Yard...  12 1/2
An old skiff $2 Scoop & chains $5 lot of Boards at the clay bank 50/100  7  50
One ladder...  50

Twenty four Tons of Salt hay in stock on the Meadow as informed 100  -

Twelve Cord of wood at Cheesquakes also Ten Cord on the Neck as stated by Willm Rogers Sold at New York for 24  32
One black man a slave for life (named Ben)  175  -

New Stone ware on the premises supposed worth this charge a mistake entered above [*written and scratched out in the inventory] 150*

Bonds & Notes

Sundry Bonds & Notes amount...  Thousd  $  13.184  59
Specie $143 32/100 notes on different Banks as taken from a Pocket Book $1300...  1443  32
Schooner Susanna...  475  -
One Skiff  8  -
<table>
<thead>
<tr>
<th>Name</th>
<th>Amount Carried over</th>
<th>Amount Brought over</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joseph Bloodgood...</td>
<td>2</td>
<td>71</td>
</tr>
<tr>
<td>Robert Francis...</td>
<td>18</td>
<td>50</td>
</tr>
<tr>
<td>Fredrick Bilard...</td>
<td>18</td>
<td>45</td>
</tr>
<tr>
<td>Samuell Rogers...</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>Henry Rogers...</td>
<td>6</td>
<td>71</td>
</tr>
<tr>
<td>Benson Van Cleaf...</td>
<td>6</td>
<td>88</td>
</tr>
<tr>
<td>Niles Berlew...</td>
<td>6</td>
<td>31</td>
</tr>
<tr>
<td>Peter Hylllear... [Hybler]</td>
<td>13</td>
<td>40</td>
</tr>
<tr>
<td>Asha and David Bissard...</td>
<td>41</td>
<td>-</td>
</tr>
<tr>
<td>William States...</td>
<td>44</td>
<td>25</td>
</tr>
<tr>
<td>Saxton Rice...</td>
<td>32</td>
<td>4</td>
</tr>
<tr>
<td>William Rogers...</td>
<td>7</td>
<td>-</td>
</tr>
<tr>
<td>Bonds and Notes considered as [illeg.]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applegates...</td>
<td>79</td>
<td>85</td>
</tr>
<tr>
<td>Stephen Bloodgood...</td>
<td>23</td>
<td>14</td>
</tr>
<tr>
<td>Timothy [illeg.]...</td>
<td>2</td>
<td>50</td>
</tr>
<tr>
<td>Tracy Disbrow...</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Thomas Roff...</td>
<td>8</td>
<td>93</td>
</tr>
<tr>
<td>[illeg.] against E Price...</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>George [illeg.]...</td>
<td>95</td>
<td>25</td>
</tr>
<tr>
<td>Bal: of clay against (sic) Armstrong &amp; Wentionk</td>
<td>59</td>
<td>38</td>
</tr>
<tr>
<td>John Warne...</td>
<td>80</td>
<td>-</td>
</tr>
</tbody>
</table>
The above aprizement made by Mr. Peter Barclay and Benj R Leaman as far as the note in the Margin dated the 3 of December 1822 and the said Peter Barclay was an aprizer of the whole Inventory

Peter Barclay

Benjn R Leaman

Peter Barclay and Benjamin R Leaman two of the appraisers of the within Inventory being duly Sworn did generally depose and Say that the goods chattels & Credits in the within Inventory Set down and specified were by them appraised according to their just and true respective rates and values after the best of their Judgement and understanding and that Daniel Wilment the other appraiser was present at the Same time and consent in all things to the doing thereof and that they appraised all things that were brought to their view for appraisement

Sworn at New Brunswick

the 16th day of June 1823

before me John Heard

Surrogate
Jonathan Morgan and William Gordon Executors of the last Will and Testament of James Morgan deceased being duly sworn did generally depose and Say that the within writing contains a true and perfect Inventory of all and singular the good (sic) Chattels and credits of the Said James Morgan dec'd as far as have come to their knowledge or possession or to the possession of any other person or persons for their use

Sworn at New Brunswick
the 16th day of June 1823
before me John Heard

Surrogate

Jonathan H. Morgan
William Gordon

Probate Inventory of the James Morgan, Jr. Estate,