be indicative of the presence of a clothing or tailoring shop. At the same time, the lamp glass fragments are present in much greater volume than might be expected from a domestic setting, and the combined lamp glass and clothing items may indeed indicate that the lot housed a dry goods store, or a shop of similar function.

The Activities Group artifacts from Feature 19 conform to expectations. That deposit was formed during the tenure of the Walton and Whann Fertilizer Company on the lot, and the items discarded certainly appear to be non-domestic in the main. Many of the unidentified items may indeed be wagon hardware, and numerous stable related artifacts were recovered. Some confirmation of the projected fill date of this feature was present in the form of electrical related items.

Artifact Pattern Summary

The artifact patterns extracted from the Wilmington Boulevard analytical deposits exhibited excellant internal consistency by type and period. The pre-industrial period occupation levels contained a very high percentage of Kitchen Group items, with an observed range of 73.7% to 90.2%. The Architecture Groups accounted for the bulk of the non-kitchen items, which observed ranges from 9.2% to 23.2%. Ceramics accounted for the overwhelming majority of Kitchen Group artifacts within the pre-industrial occupation levels, with a low percentage of 72.6% observed for Area H Lower Topsoils, and a high total of 95.9% returned for ER B1E in Area B. Bottle glass accounted for the second highest percentage of Kitchen Group artifacts in all cases.

The pre-industrial period features exhibited the least internal consistency of all of the study groupings. Feature 1 from Area D reflected a Kitchen Group percentage of 51.4%, combined with an Architecture Group percentage of 37.2%. The remaining two features (Feature 27 in Area A and the MAAR feature in E) had Kitchen Group percentages of 89.3% and 81.9%, combined with Architecture Group percentages of 5.4% and 10.6% respecitively. Ceramics accounted for a smaller percentage of the Kitchen Groups than they had for the pre-industrial occupational levels, with a range of 50.3% to 54.5%. Bottle glass was proportionately more well represented than ceramics within the pre-industrial period features, with an observed range of 20.6% to 42.0%. The low bottle glass frequency of 20.6% was observed within Feature 1 from Area D, and that feature also yielded a high glassware percentage (18.6%).

The variation noted within the pre-industrial period features may be attributed to one or more factors. First, the contents of those features may have resulted from very short term special activities that led to the deposition of noncomparable collections. Second, the MAAR feature from Area E was heavily disturbed by bottle hunters, and the mixture of the feature contents with older and younger material may have rendered that feature useless for the types of comparisons being attempted. Third, it has been observed that Feature 1 from Area D contained the discards from what appeared to be a high status household as well as trash discarded from a commercial activity (at least including a "slop shop"). Feature 1 from Area D thus contains artifacts discarded from at least two types of functional occupations, and the observed patterns may indeed have been muted by that mixture. A fourth

potential explanation is that features of this type received only certain types of trash discarded from the contributing households, and their contents were therefore not characteristics of the flow of materials leaving a household during that period. A fifth potential explanation is that the sample size from Feature 27 of Area A was too small to support this type of analysis.

The explanation for the irregularities observed within the pre-industrial period features doubtless involves a combination of the above factors. Despite these questions and shortcomings, it was important to study these particular collections and compare them with other patterns.

The artifact patterns extracted from the industrial period occupation levels were similar to those extracted from pre-industrial occupation levels. The percentage of Kitchen Group within the two studied examples ranged from 68.3% to 78.4%, while the Architecture Group percentages ranged from 19.6% to 28.8%. The percentages of ceramics within the Kitchen Groups ranged from 54.8% to 68.4%. Bottle glass accounted for higher percentages of the Kitchen Groups than observed for the pre-industrial period occupation levels, with 30.6% and 39.4%. The patterns extracted from the industrial period occupation levels may reflect primarily domestic activities. The upper topsoils of Area A yielded a MCD of 1834, while the upper topsoils of Area H reflected a MCD of 1840. Both occupation levels probably received discards over a long period of time, and it is hardly surprising that the patterns extracted from those contexts have more in common with the early pre-industrial occupation levels than with the demonstrably later industrial period features from Area H.

The Joseph Dowdall deposits from Area A must be treated as special contexts. Those contexts were deposited between 1848 and 1852, and originated from both a household and from the mineral water bottling concern. At first glance these deposits appear to be very similar to the pre-industrial period occupation levels, as the Kitchen Group percentages range from 75.2% to 89.9%. The Architecture Groups range from 9.3% to 22.7%. The Kitchen Groups exhibit considerable internal variation, with ceramics accounting for a low of 15.7% and a high of 87.1%. Bottle glass (predominately mineral water bottles) accounts for between 12.6% and 84.1% of the Kitchen Groups. There is no doubt in this case that artifact patterns extracted from these deposits reflect the fact that the bottling establishment was present and that Joseph Dowdall discarded his broken bottles on his property. The special nature of these deposits diminishes their comparative value in terms of the project research design. Despite that negative aspect, the Dowdall deposits do provide insights into a combined commercial and domestic occupation site that might prove helpful in dealing with bottling establishments in the future.

The artifact patterns extracted from the Area H industrial period features provide sharp contrast with patterns from other deposits. The two occupation episodes reflected within Feature 2 of Area H, and the apparent single occupation of Feature 11 of the same area yielded very similar artifact patterns. The artifact patterns from those three contexts contained Kitchen and Architecture Groups that were nearly equally represented. Level 2A of Feature 2 exhibited 28.5% Kitchen Group, and 20.7% Architecture Group. Levels 2B and 2C of the same feature contained 41.5% Kitchen Group, and 41.4% Architecture

Group. Feature 11 of Area H yielded 29.0% Kitchen Group and 29.2% Architecture Group. The Feature 2, Level 2A and Feature 11 patterns were affected by an extremely high Activities Group (48.4% and 31.6%) caused by the presence of large numbers of lamp globe glass fragments. The ceramics within Level 2A of Feature 2 accounted for 51.8% of the Kitchen Group, while the ceramics of combined Levels 2B and 2C amounted to 45.2% of that Kitchen Group. The Kitchen Group of Feature 11, which dated slightly later than the combined levels of Feature 2, contained 37.2% ceramics versus 55.5% bottle glass.

The nearly equal representation of Kitchen and Architecture Groups within the Area H features squarely places those features within the "Public Interaction Pattern" model (Garrow 1982:59-66) as discussed earlier in this chapter. The implications of that placement will be discussed after the following consideration of Feature 19 of Area A.

Feature 19 of Area A derived its artifacts from a purely commercial occupation of the lot. The feature was filled around 1900, and the Kitchen Group contained 75.7% of the total artifact content of the feature. The Architecture Group accounted for 17.5% of the total collection. A cursory examination of the pattern derived from this feature indicates that it is similar to the patterns derived for all deposits save the Area H contexts. Closer study of the artifact class constituents does highlight major differences, though. Ceramics only accounted for 5.5% of the Kitchen Group total, versus 80.8% for bottle glass. The ceramic frequency in this feature was outweighed by the frequency of glass ware sherds, with 44 and 98 respectively. The overall constituents of the Kitchen Group confirm that Feature 19 was not associated with a domestic occupation, and that the materials were doubtless discarded by workmen of the Walton Whann Fertilizer Company.

The Architecture Groups recovered from almost all contexts have one characteristic in common. Window glass tended (with a few exceptions) to outweigh all other Architecture Group items by a wide margin. That situation is not common on rural historic sites, and is probably a response to the urban setting of the occupations.

The artifact patterns derived from Wilmington Boulevard can be placed into three broad categories. Those categories are: purely domestic, mixed domestic and commercial, and purely commercial. What appears to be purely domestic patterns were derived from the pre-industrial period occupation levels, the MAAR feature of Area E, and Feature 27 of Area A. Historical and archaeological data indicate that Feature 1 of Area D contained trash from both domestic and commercial occupations. The Dowdall deposits were derived from a combined domestic and commercial occupation, but the patterns from that occupation were skewed by the fact that the commercial component was a bottling establishment. The industrial period occupation levels may well have been derived from combined domestic and commercial occupations. The materials in those contexts were discarded over a long span of time, and indeed probably span parts of the pre-industrial as well as the industrial period occupations.

The features from Area H contained artifacts derived from combined domestic and commercial activities. Those features fit well within the "Public

Interaction Pattern" as proposed by Garrow (1982:59-66). The only purely commercial deposit came from Feature 19 of Area A, and the special nature of that context was noted only through studying the component artifacts at the class level.

The purely domestic artifact patterns from Wilmington Boulevard do not conform to South's (1977) Carolina Artifact Pattern or the Revised Carolina Artifact Pattern proposed by Garrow (1982:58). The Wilmington domestic patterns are similar to domestic patterns derived from the Washington Civic Center Project (Garrow 1982:164), and this may mean that ultimately an urban domestic artifact pattern will be recognized. At this point, though, it is sufficient to state that the Wilmington deposits did have sufficient points of differentiation to demonstrate distinctive patterns for the pre-industrial versus industrial periods. Those differences were, however, based on functional changes within the Wilmington Boulevard area through time.

Minimum Vessel Count Determinations

Minimum vessel counts were run for ceramics and glass vessels within those analytical contexts that contained suitable collections for this type of analysis. Occupation levels could not be used for this purpose as the ceramic and glass collections from those deposits were too fragmentary to support more than broad guesses about their vessel content. The MAAR feature from Area E was also dropped because of the disturbed nature of this context, and the resultant lack of confidence that could be attached to those counts. Nine features were ultimately chosen for application of this technique, of which two dated to the pre-industrial period and seven from the industrial period.

The minimum vessel count determinations were done by first laying out all ceramics or glass from a given subdivision within a context and sorting all sherds following established criteria. Ceramics were sorted by ware and type and ultimately by vessel form. Cross-mends were then made, and the partial vessels were left out until the next subdivision was sorted and mended. All material was catalogued prior to this analysis, and once all portions of a context had been sorted and mended and feature wide cross-mends completed, each vessel was recorded under a unique vessel number (unique within each feature and decorative/ware type). The number of sherds from each context within each vessel was recorded, and that yielded both total sherd counts and cross-mend data. Glass was treated in a similar manner, with sorts done by glass color and form. This system resulted in rapid completion of the minimum vessel counts, and complete data recordation at the sherd and vessel level.

A number of goals were pursued through the minimum vessel count technique. First, this technique provided a means to study the artifacts at a level that would have been familiar to the individuals who purchased, used, and discarded those vessels. Sherd counts are essential within archaeological studies, but since people did not buy ceramics or glass by the sherd, study at the whole (or projected whole) artifact level becomes essential to understanding original functions of those artifacts. Once artifacts can be understood at or near the level at which they were used, the second goal of reconstructing the material cultures of specific households can be pursued.

This in turn provides greater insights into the behavior of individual households and of groups of households, and provides a mechanism for beginning to understand those who generated the archaeological record more on their terms. An additional goal to conducting minimum vessel counts in the case of ceramics, is that this type of analysis is an essential step in applying the Miller (1980) economic scaling method to collections. That method provides good insights into the relative socio-economic position of individual households, and of the socio-economic character of entire neighborhoods. The minimum vessel count method then becomes a vehicle whereby more sophisticated questions can be asked of archaeological collections than can be asked of pattern data. Also, better insights can be gained into the behavioral patterns that produced the archaeological deposits under study.

Two features attributable to the pre-industrial period contained collections suitable for minimum vessel count determinations. Feature 1 of Area D yielded 207 identifiable ceramic vessels and 86 glass vessels. Feature 27 of Area A contained a much smaller (and thus less useful) collection of 28 ceramic and six glass containers.

The complete ceramic minimum vessel count for Feature 1 of Area D is presented in Appendix E, Table 3. A diversity of decorative/ware types were represented in that feature, but only eight vessels represented by 41 sherds fall into the "late" types described by Garrow (1982:230-241). Study of the content of the feature and available historical documentation indicate that the feature was filled between 1790 and the 1820s, and that the material within the feature derived from an upper socio-economic household and later small retail shops. Table 56 presents the number and percent of vessels by functional type recovered from this feature.

TABLE 56. Ceramic Vessels Within Functional Groups from Feature 1, Area D

Functional Group	Number of Vessels	Percent
Food Service	159	76.8%
Food Preparation	22	10.6%
Decorative	2	1.0%
Hygiene	15	7.3%
Toy	-	-
Beer Bottle	-	-
Miscellaneous	-	-
Unknown	8	3.9%
Inkwell	1	0.5%
Totals	207	100.1%

The functional types shown on Table 56 represent groupings based on projected original function. The food service group includes tea wares and other table

wares, while the food preparation group contains mixing bowls, storage jars, jugs, and the like. The decorative group is composed primarily of flower pots, but can also include vases and figurines. The hygiene group is made up of chamber pots and wash basins and pitchers. The toy group encompasses marbles, miniature tea sets, and porcelain dolls. The ceramic beer bottle group is restricted to stoneware bottles thought to have contained beer, and those forms are only present within contexts dating from the mid-nineteenth century and later. That category was separated from food storage to highlight beer bottles as rough time markers. The miscellaneous group contains vessels that could not be placed within established functional groups. The unknown category includes those vessels that were obviously distinct from other described vessels, but could not be directly attributed to a specific form. The inkwell group is self-explanatory, but in the case of Feature 1, contained an unusual marked "Wedgwood" basaltes ware inkwell.

An unusually large percentage of restorable vessels was recovered from Feature 1 of Area D. Table 57 reflects the percentage of completeness of the ceramic vessels, determined by roughly estimating the original vessel sizes in relation to that portion present in the collection.

TABLE 57. Percentage of Completeness of the Area D, Feature 1 Vessels

Percentage of Completeness	Vessel Count	Percentage of Vessels
0-5%	24	11.6%
5-25%	35	16.9%
25-50%	39	18.8%
50-75%	23	11.1%
75-100%	86	41.5%
	207	99.9%

Over 50 percent of the vessels were therefore more than 50 percent complete, while only 11.6 percent were represented at what amounted to the single sherd level. Those figures lend credence to the functional groupings achieved, and indicate that the feature was not filled with mixed material derived outside the lot.

A total of 86 glass vessels was recovered from Feature 1 of Area D. The minimum vessel counts for the Feature 1 glass by form and color are presented in Appendix E, Table 4. A summary of the vessels present by functional groupings is presented in Table 58.

The glass functional groupings are self-explanatory. The combined tumbler and glassware lines are somewhat higher than might be expected, but this might be related to the relative ease of identifying those particular forms. The percentage of vessel completeness may provide an answer to that problem. Slightly more than 76 percent of the tumblers and glassware vessels in the

TABLE 58. Glass Vessels Within Functional Groups from Feature 1, Area D

Functional Group	Number of Vessels	Percent
Apothecary	16	18.6%
Wine/Spirit	22	25.6%
Culinary/Condiments	2	2.3%
Tumbler	32	37.2%
Glassware	8	9.3%
Soda/Mineral Water	-	-
Beer	-	-
Personal	5	5.8%
Miscellaneous	1	1.2%
Totals	86	100.0%

collection were less than 50 percent complete, while more than 41 percent of the glass bottles were greater than 50 percent complete. Bottles are difficult to reconstruct in comparison to tumbler and glassware forms, and minimum vessel counts had to be done based on studies of the finishes present. This means that there is probably a tendency to grossly understate the number of glass bottles present while achieving greater accuracy for types such as tumblers and glassware.

The second pre-industrial deposit that was found to be suitable for minimum vessel determinations contained a relatively small sample. Feature 27 of Area A yielded 28 ceramic vessels and six glass containers. Table 59 presents the ceramic vessels present by functional groups.

TABLE 59. Ceramic Vessels Within Functional Groups from Feature 27, Area A

Functional Group	Number of Vessels	Percent
Food Service	6	21.4%
Food Preparation	9	32.1%
Decorative	1	3.6%
Hygiene	1	3.6%
Toy	-	-
Beer Bottle	-	-
Miscellaneous	-	-
Unknown	11	39.3%
Inkwell	-	-
Totals	28	100.0%

The vessel group percentages achieved from this feature are somewhat different from those from Feature 1 of Area D, and the difference may well be due to sample size. Over 77 percent of the ceramic vessels were less than 25 percent complete, while only 3.7 percent were over 50 percent complete. The ceramic sample extracted from this feature was determined to be too small to support a Miller (1980) analysis. Further, it is possible that Feature 27 contained mixed materials taken at least partially from topsoil deposits.

The six glass vessels taken from this feature included one wine/spirit bottle, one glassware, and four unknown forms. That sample was also too small to provide insights into the household that generated those discards.

The industrial period deposits that were suitable for generation of minimum vessel counts for ceramics and glass included three contexts from Area A assignable to the Joseph Dowdall occupation, three contexts from Area H contained within two features, and Feature 19 of Area A. These contexts are basically the analytical features from the industrial period, and exclude the occupation levels from Areas A and H assigned to the industrial period plus one Dowdall context (ER A19Z1) that yielded ceramic and glass collections that could not be combined with the other Dowdall contexts or analyzed on its own.

The individual Dowdall contexts will be briefly discussed later in this section, but for now the ceramic and glass vessels will be combined for ease of presentation. The three Dowdall contexts used for this analysis yielded 413 ceramic vessels (Appendix E, Table 5) and 180 glass containers (Appendix E, Table 6). Table 60 presents the ceramic functional groups and the numbers and percentages of vessels present within each.

TABLE 60. Ceramic Vessels Within Functional Groups from the Dowdall Features

Functional Group	Number of Vessels	Percent
Food Service	209	50.6%
Food Preparation	106	25.7%
Decorative	22	5.3%
Hygiene	16	3.9%
Toy	-	-
Beer Bottle	-	-
Miscellaneous	1	0.2%
Unknown	59	14.3%
Totals	413	100.0%

The Dowdall features appear to contain a low food service percentage in relation to the food preparation category. The unknown form percentage is

relatively low, at 14.3 percent. The percentages of vessel completeness within the three features were low, with only 20 vessels from the entire assemblage listed at greater than 50 percent complete. That factor may have skewed the functional group interpretations, although nearly 86 percent of all vessels were identifiable by form.

The high food preparation count and the extraordinary vessel total from this five year occupation span may indicate that at least some of the ceramics came from a source other than use and attrition within the household associated with the Dowdall occupation. This does not mean that these materials came from outside the lot. One logical interpretation is that at least some of the ceramics came from food preparation activities on-site for the workers in the bottling establishment. This could account in part for the extraordinary 82.6 vessels per year attrition rate observed for those deposits. That figure appears to be far too high for a household, particularly when compared to the 18.5 per year attrition rate noted for the D1 deposits within the Washington Civic Center Project (Garrow 1982:129-132).

The glass vessels recovered from the Dowdall deposits appear to be consistent with the known site functions. Those vessels are summarized by functional groups in Table 61.

TABLE 61. Glass Vessels Within Functional Groups from the Dowdall Deposits

Functional Group	Number of Vessels	Percent
Apothecary	14	7.8%
Wine/Spirit	6	3.3%
Culinary/Condiments	-	-
Tumbler	4	2.2%
Glassware	9	5.0%
Soda/Mineral Water	127	70.6%
Beer	-	-
Personal	1	0.6%
Miscellaneous	4	2.2%
Unknown	15	8.3%
Totals	180	100.0%

The glass vessel sample is dominated by the soda/mineral water functional group. That is certainly consistent with what is known about the site, as Joseph Dowdall bottled mineral water (and sasparilla) on the lot. Low percentages of completeness were noted in virtually all cases with the Dowdall glass.

The three features suitable for minimum vessel count determinations among the Dowdall contexts (Features 15, 17, and 25) exhibited widely disparate

percentages within the ceramic and glass functional groups (Figure 63). Feature 25 was a barrel privy that produced a MCD of 1850.2. That feature yielded the highest food service and lowest food preparation percentages among the ceramics and highest apothecary and lowest mineral water among the glass vessels. Feature 17, with a MCD of 1849.7 contained intermediate percentages for food service and food preparation vessels, but the highest mineral water bottle achieved from all deposits. That feature was a surface dump that had been deposited on the back slope of the property. Feature 15, a shell-filled trench, yielded the lowest food service percentage and highest food preparation percentage. That feature, with a MCD of 1849.8, contained the second highest percentage of mineral water bottles, but also the second highest percentage of apothecary bottles. The highest percentage of spirit bottles derived from the Dowdall deposits was found within that feature, and the percentage of glassware present was the highest achieved for all deposits.

The variations noted in the Dowdall contexts were discussed in the earlier artifact pattern section of this report. At that time, it was stated that the pattern data indicated that the contents of Feature 15 had most likely been discarded from the Dowdall household, while the contents of Feature 17 most likely came from the mineral water bottling business. Feature 25 was judged as containing discards from both sources. The results of the minimum vessel count determinations do not support this interpretation. Feature 25, with its high food service and lower food preparation percentages appears to be closer to expectations for a purely domestic deposit. Feature 15, on the other hand, has a greatly inflated food preparation percentage, although the glass vessel percentages (less the mineral water bottles) do not appear to be out of line for a domestic deposit. There is little doubt based on the percentages that Feature 17 received a large portion of its discards from the mineral water bottling business.

The very high food preparation percentage achieved for Feature 15 requires interpretation. Redware vessels are more common within that feature (Appendix E, Table 7) than any other, and the redwares primarily fell within the food preparation functional group. It is possible that those vessels simply represent specialized discards from Dowdall's household kitchen, but it appears more likely that the contents of this feature reflect yet another facet of the Dowdall occupation. In this case, it appears likely that Feature 15 received discards from food preparation for the workers within the bottling concern, as well as trash discarded from the Dowdall household. That interpretation cannot be proven with available data, but it is a potential explanation that should be cross-checked on future investigations of this site type.

Three contexts within two features in Area H yielded samples suitable for minimum vessel determinations. Feature 2 of Area H (a barrel privy) was excavated in three arbitrary levels, of which the top level and bottom two levels resulted from different discard episodes. Level 2A of Feature 2 is, therefore, treated as a separate context from Levels 2B and 2C. The third context from Area H was a barrel privy designated as Feature 11.

Level 2A of Feature 2 yielded 51 ceramic and 50 glass vessels. The full breakdowns of both vessel types are presented in Appendix E, Tables 13 and

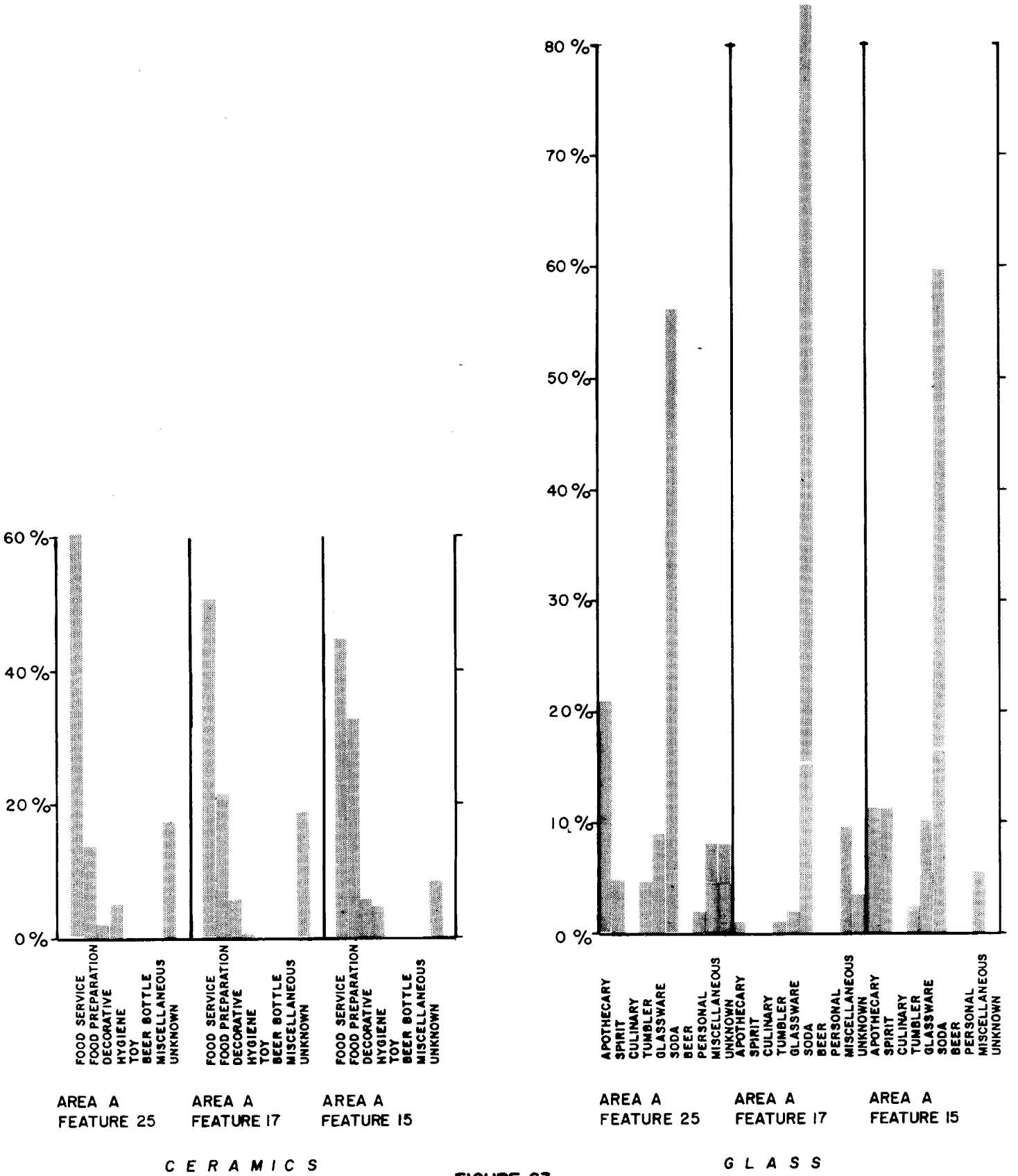

FIGURE 63

PERCENTAGE OF CERAMIC AND GLASS VESSELS WITHIN FUNCTIONAL GROUPS, DOWDALL FEATURES

14. Table 62 presents the ceramic functional group counts and percentages from this feature.

TABLE 62. Ceramic Vessels by Functional Groups Within Level 2A of Feature 2, Area H

Functional Group	Number of Vessels	Percent
Food Service	35	68.6%
Food Preparation	4	7.8%
Decorative	3	5.9%
Hygiene	2	3.9%
Toy	2	3.9%
Beer Bottle	-	-
Miscellaneous	-	-
Unknown	5	9.8%
Totals	51	99.9%

Feature 2 ceramics exhibited a fairly even distribution of vessel completeness. A total of 44.3 percent of the vessels were 50 percent complete or more, with 45.7 percent exhibiting less than 50 percent completeness. The fairly high food service percentage achieved from Level 2A of this feature indicates that at least the ceramics from this feature came from a domestic occupation.

The glass vessels by functional groups from Level 2A of Feature 2 are presented in Table 63.

TABLE 63. Glass Vessels by Functional Groups Within Level 2A of Feature 2, Area H

Functional Group	Number of Vessels	Percent
Apothecary	8	16.0%
Wine/Spirit	4	8.0%
Culinary/Condiments	5	10.0%
Tumbler	11	22.0%
Glassware	4	8.0%
Soda/Mineral Water	10	20.0%
Beer	-	-
Personal	1	2.0%
Miscellaneous	6	12.0%
Unknown	1	2.0%
Totals	50	100.0%

The vessel completeness of the glass generally paralleled that of the ceramics. The completeness tables show that 46.7 percent of the glass from this feature was 50 percent or more complete.

The ceramic functional group percentages from Levels 2B and 2C of Feature 2 were similar to those from Level 2A. Table 64 presents the ceramics by functional groups from those levels.

TABLE 64. Ceramic Vessels Within Functional Groups from Levels 2B and 2C of Feature 2, Area H

Functional Group	Number of Vessels	Percent
Food Service	95	77.2%
Food Preparation	9	7.3%
Decorative	9	7.3%
Hygiene	4	3.3%
Toy	1	0.8%
Beer Bottle	-	-
Miscellaneous	1	0.8%
Unknown	4	3.3%
Totals	123	100.0%

The food service group within Levels 2B and 2C is slightly higher than observed for Level 2A, but the food preparation percentages are virtually identical. The other differences between the contexts is that Levels 2B and 2C exhibited lower percentages of toy and unknown forms than Level 2A.

The glass vessels by functional groups from Levels 2B and 2C of Feature 2 are presented in Table 65.

The glass vessel functional groups from Levels 2B and 2C of Feature 2 exhibit different percentages than those observed for Level 2A of the same feature. The observed differences may indeed offer further support for the interpretation that Level 2A was deposited from a different household or occupation than Levels 2B and 2C.

Feature 11 of Area H returned a modest sample of 21 ceramic vessels and 34 glass containers (See Appendix E, Tables 17 and 18). That feature probably dated to the 1860s, while the Feature 2 contexts can be firmly tied to the 1850s.

The ceramic vessels by functional groups recovered from Feature 11 are presented in Table 66.

TABLE 65. Glass Vessels by Functional Groups Within Levels 2B and 2C of Feature 2, Area H

Functional Group	Number of Vessels	Percent
Apothecary	27	36.0%
Wine/Spirit	7	9.3%
Culinary/Condiments	2	2.7%
Tumbler	17	22.7%
Glassware	2	2.7%
Soda/Mineral Water	11	14.7%
Beer	-	-
Personal	3	4.0%
Miscellaneous	5	6.7%
Unknown	1	1.3%
Totals	75	100.1%

The vessel percentages from Feature 11 are similar to those from the Feature 2 contexts, but the sample size is too small to make that comparison meaningful.

TABLE 66. Ceramic Vessels by Functional Groups Within Feature 11, Area H

Functional Group	Number of Vessels	Percent
Food Service	14	66.8%
Food Preparation	1	4.8%
Decorative	2	9.5%
Hygiene	1	4.8%
Toy	-	-
Beer Bottle	-	-
Miscellaneous	1	4.8%
Unknown	2	9.5%
Totals	21	100.2%

The glass vessels from Feature 11 are presented by functional groups in Table 67.

Sample size was again probably too small in the case of glass vessels to support meaningful interpretations.

Feature 19 of Area A yielded 23 ceramic and 66 glass vessels. The full breakdown of both vessel types are presented in Appendix E, Tables 19 and 20. Table 68 presents the ceramic functional group counts and percentages from this feature.

TABLE 67. Glass Vessels by Functional Groups Within Feature 11, Area H

Functional Group	Number of Vessels	Percent
Apothecary	10	29.4%
Wine/Spirit	2	5.9%
Culinary/Condiments	3	8.8%
Tumbler	11	32.4%
Glassware	3	8.8%
Soda/Mineral Water	2	5.9%
Beer	-	-
Personal	1	2.9%
Miscellaneous	1	2.9%
Unknown	1	2.9%
Totals	34	99.9%

TABLE 68. Ceramic Vessels Within Functional Groups from Feature 19, Area A

Functional Group	Number of Vessels	Percent
Food Service	7	30.4%
Food Preparation	4	17.4%
Decorative	3	13.0%
Hygiene	1	4.4%
Toy	-	-
Beer Bottle	-	-
Miscellaneous	-	-
Unknown	8	34.8%
Totals	23	100.0%

The ceramic vessel counts from this feature reflect the specialized nature of this deposit. The seven food service vessels consist of three cups, one saucer, and three plates. One bowl and three storage vessels or jug forms complete the food preparation group. All three decorative vessels are flower pots, while the single hygiene vessel is a chamber pot. The high "unknown" group reflects the fact that all vessels were 50 percent or less complete. The vessels from this feature do not reflect a household inventory, which is hardly surprising as the feature was on a totally commercial lot at the time it was filled.

The glass vessels from Feature 19 provide confirmation to the commercial interpretation. The glass vessel summary is presented in Table 69.

TABLE 69. Glass Vessels Within Functional Groups from Feature 19, Area A

Functional Group	Number of Vessels	Percent
Apothecary	4	6.1%
Wine/Spirit	28	42.4%
Culinary/Condiments	-	-
Tumbler	13	19.7%
Glassware	3	4.5%
Soda/Mineral Water	8	12.1%
Beer	-	-
Personal	2	3.0%
Miscellaneous	8	12.1%
Unknown	-	-
Totals	66	99.9%

Wine/spirit and soda/mineral water bottles combine to form over half of the total feature 19 glass container sample. Tumblers and glassware accounted for over half of the remaining forms. The two personal bottles were perfume bottles, and the miscellaneous group included storage jars and bottles of unknown function. Again, the functional group representations within this feature are not representative of household discard. Much of the glass apparently entered the feature as a result of activities of workmen that were best concealed from management. Simply stated, the feature was probably a good place to conceal empty wine and whiskey bottles. The remaining bottles doubtless were also discarded by workmen, although the presence of the perfume bottles may stretch that interpretation within what should have been a male dominated commercial venture (the fertilizer business). In total, the functional groups achieved for Feature 19 are consistent with what might be expected given the known activities on the lot during the late nineteenth century.

The ceramic functional groupings noted for the Wilmington contexts are presented in Figure 64. Two contexts, Feature 27 of Area A and Feature 19 of Area A, have little or no comparative value with other domestic breakdowns. The sample recovered from Feature 27 was simply too small and too fragmentary to be reliable. Feature 19 received its discards from a purely commercial concern, and it is, therefore, not useful for direct comparisons with domestic deposits. Sample size and completeness also intervened in that instance to hamper the utility of the sample. A third set of contexts, the Dowdall features, came from both domestic and commercial discards, and cannot be interpreted as deposits that originated from a single discrete household. The remaining deposits present certain interpretive problems, but should be useable for inter-site comparisons. Feature 1 of Area D did originate from at least two occupations, but the vast majority of the ceramics may be attributable to a single household. The Area H deposits represent combined domestic and commercial deposits, but the ceramics probably came from the domestic component.

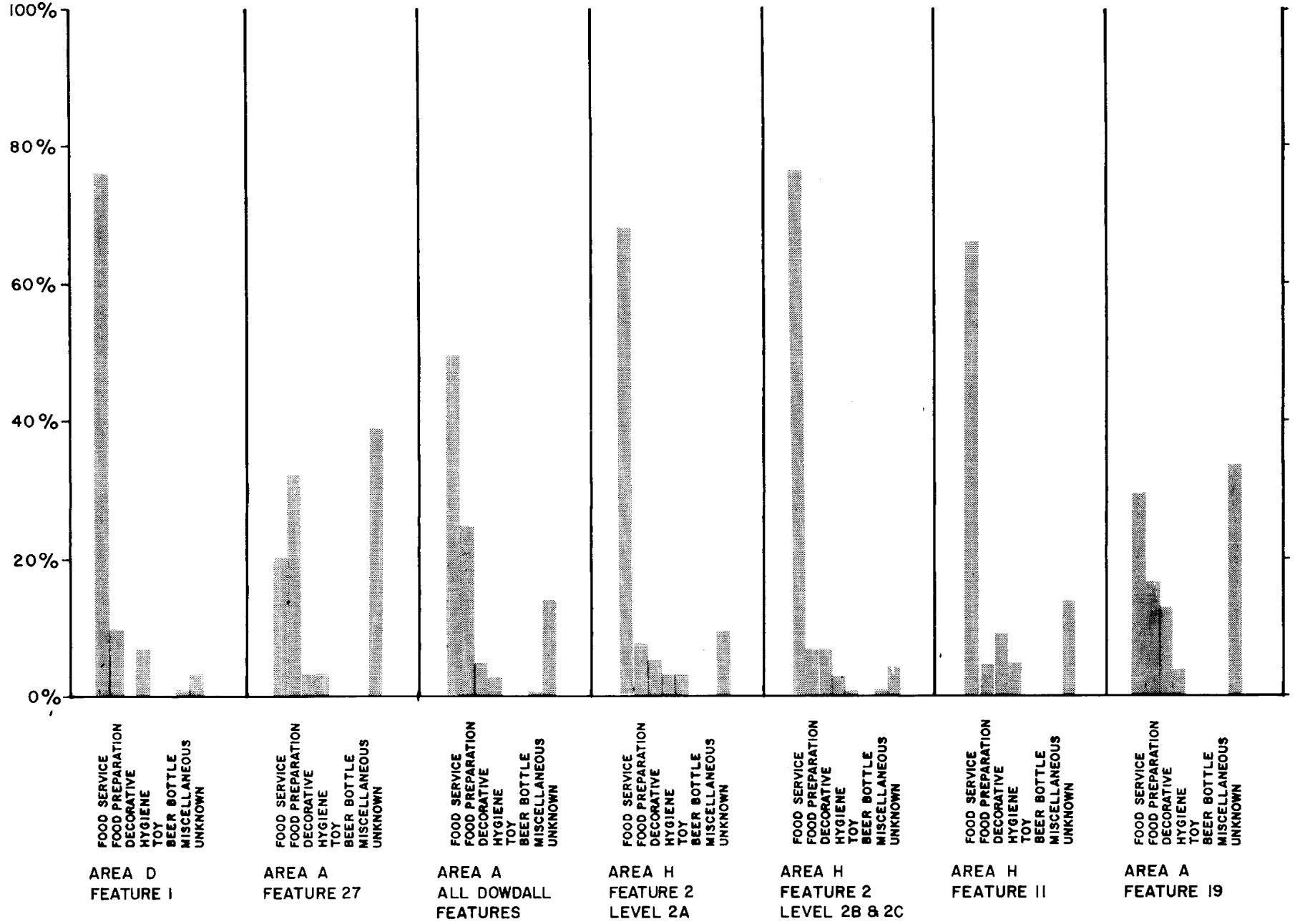

FIGURE 64

PERCENTAGE OF CERAMIC VESSELS WITHIN FUNCTIONAL GROUPS – WILMINGTON FEATURES

The contexts from Areas D and H have one striking characteristic in common. All four contexts yielded a very high food service percentage (66.8%-76.8%) in relation to all other functional groups. Those figures compare favorably to the food service percentages achieved from a mid-nineteenth century domestic context in Washington, D.C. (Garrow 1982), and an early and mid-nineteenth century contexts from Alexandria, Virginia (Cressey et. al. 1982) (Figure 65). Eventually, the types of functional group distributions noted from Areas D and H in Wilmington, and the Washington and Alexandria sites might be recognized to be signatures of nineteenth century domestic related deposits.

The glass functional groupings from the Wilmington analytical contexts are presented in Figure 66. The percentages achieved for Feature 27 cannot be used for comparison because of the small sample size (six vessels) recovered from that context. Also, the Dowdall contexts are not comparable to the other Wilmington contexts because of the special nature of the Dowdall deposits. Feature 19 was a strictly commercial deposit, and the extremely high wine/spirit percentage (42.4%) probably represents attempts by workmen of the Walton and Whann Fertilizer to conceal on-the-job consumption of alcoholic beverages.

The remaining contexts appear to have been somewhat variable. The percentage of apothecary bottles within the Area D cistern and the three Area H contexts, ranged from 16 to 36.0%. The wine/spirit percentages ranged from 5.9% to 9.3% within the three Area H contexts, and accounted for 25.6% of the glass containers from the D cistern. The culinary/condiments type accounted for between 2.3% to 19% of the glass containers within those contexts, while tumbler percentages ranged from 22% to 37.2%. Glassware ranged from 2.7% to 9.3%, while soda/mineral water bottles represented from 5.9% to 20% within the Area H features. Soda/mineral water bottles were absent in the Area D cistern, but that feature predated the introduction of those bottle types. Beer bottles were absent in all contexts, while personal bottles accounted for between 2% and 5.8% of the assemblages. The miscellaneous forms ranged from 1.2% to 12%, and unknown forms absent in the Area D cistern ranged from 1.3% to 2.9% for the Area H features.

The glass container percentages derived from the Wilmington Boulevard analytical contexts are somewhat different from the results achieved from a similar analysis of Area D1 in the Washington Civic Center Site (Figure 66). Those differences may be due to the very high "unknown" category noted for the Washington Civic Center context. Hopefully this analysis technique will be further tested on future sites in order to determine if the glass container assemblages are indeed patterned on historic sites.

Ceramic Set Analysis

A surprisingly small number of ceramic sets were recovered from the project area. Of the seven identified sets (Table 70), (excluding tea ware sets), six were from contexts dating to the industrial period. This temporal distribution is to be expected given the increased popularity and production of ceramic sets in the middle of the nineteenth century (Garrow 1982:107).

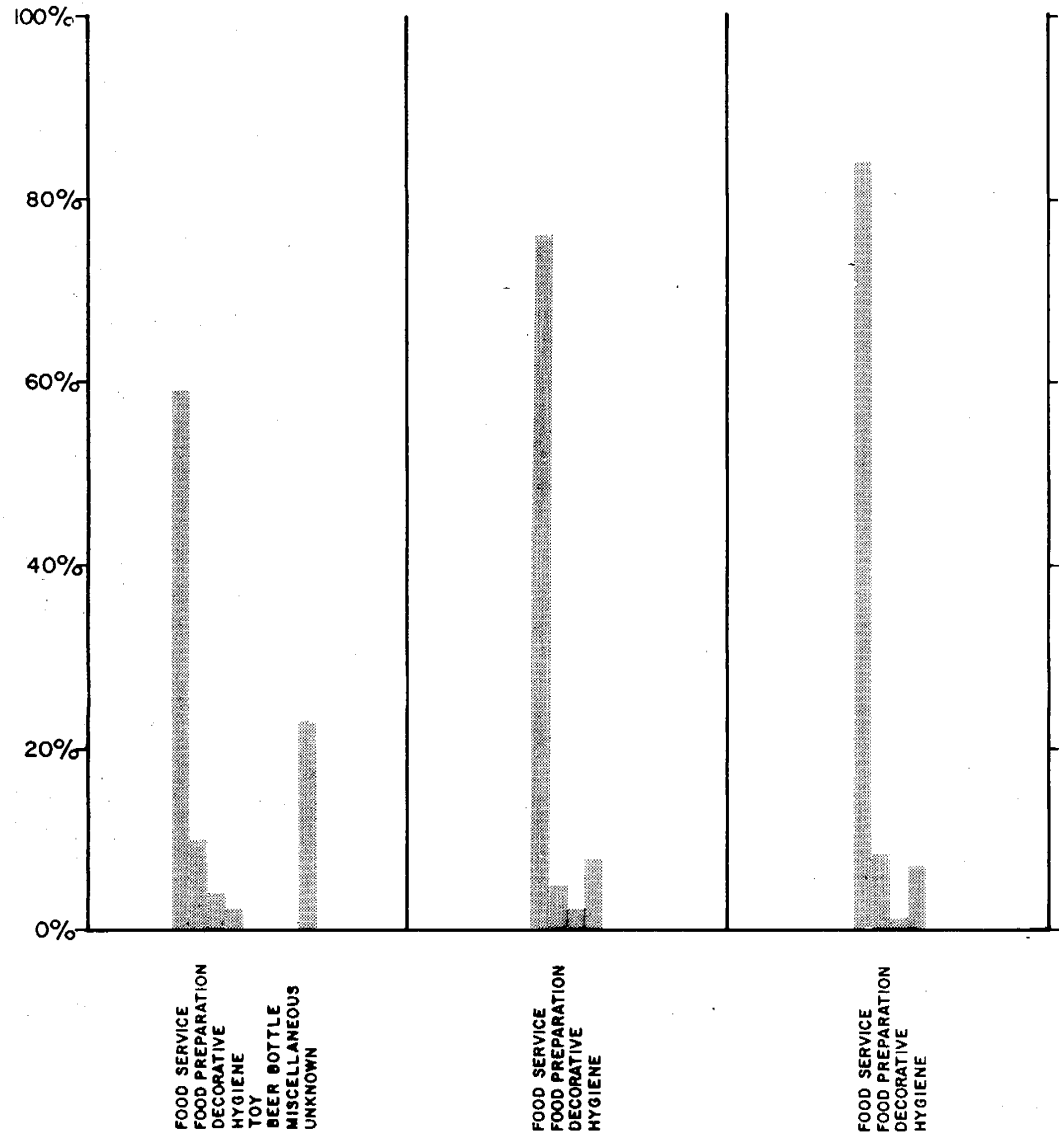

FIGURE 65
PERCENTAGE OF CERAMIC VESSELS WITHIN FUNCTIONAL GROUPS – AREA DI, WASHINGTON D.C. CIVIC CENTER SITE (GARROW 1982) AND KING STREET SITE, ALEXANDRIA, VIRGINIA (CRESSEY et al 1982)

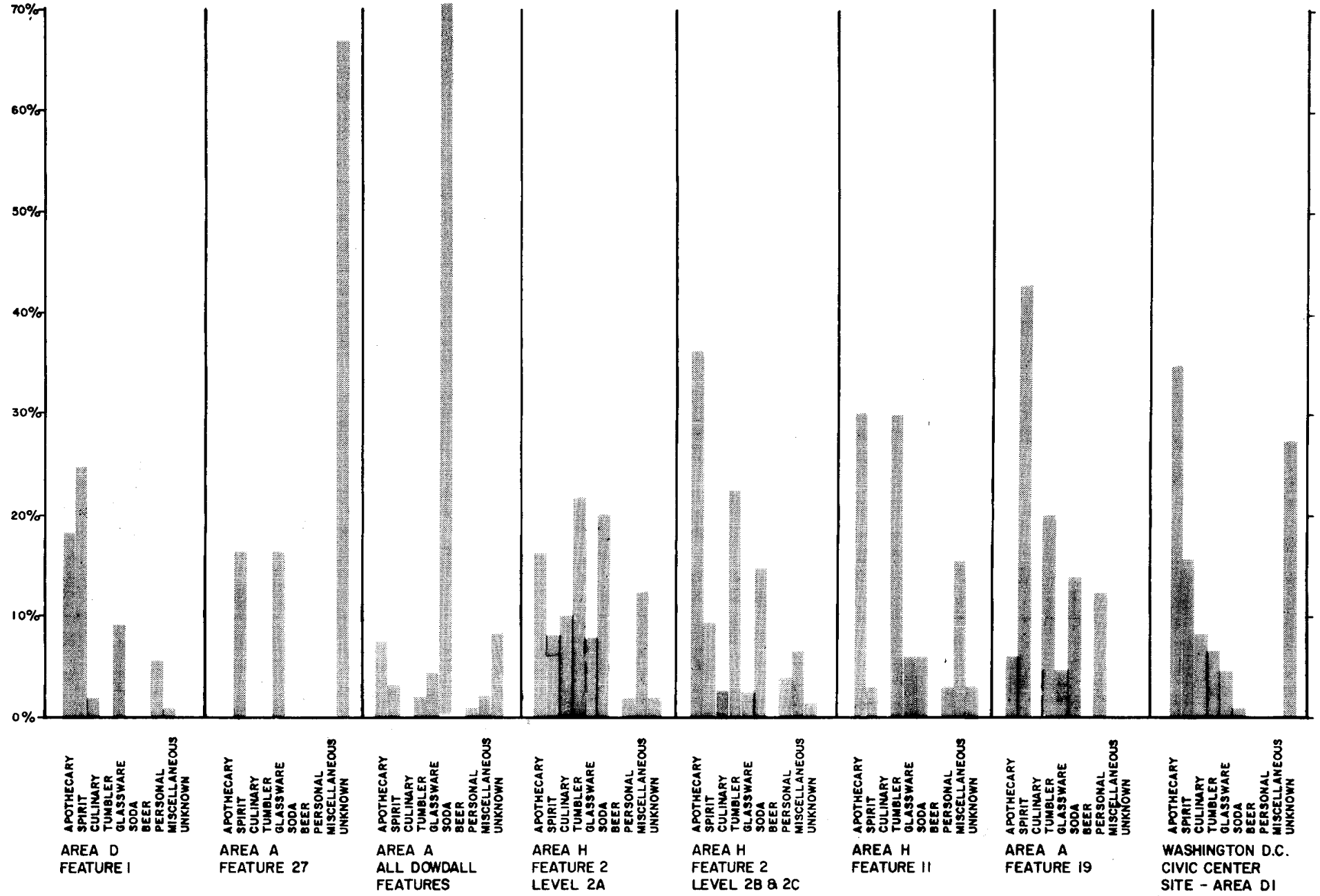

FIGURE 66 PERCENTAGE OF GLASS VESSELS WITHIN FUNCTIONAL GROUPS, WILMINGTON FEATURES AND AREA DI, WASHINGTON D.C. CIVIC CENTER SITE (GARROW 1982)

TABLE 70. Ceramic Sets (not including Tea/Coffee Sets)

Full Sets:

Provenience	Type	Forms	Comments
Area A, Features 15 and 17	Late Blue Transfer Print	Saucers: 1 Plates: 11 Serving Bowls: 1	Plate sizes are 7" and 8"
Area A, Feature 15	Sponge Decorated	Cups: 1 Saucers: 1 Plates: 1	

Remnant Sets:

Provenience	Type	Forms	Comments
Area D, Feature 1	Pearlware, Blue Edged	Bowls: 1 Plates: 1	Plate size is 7"
Area A, Features 17 and 25	Late, Blue Transfer Print	Cups: 1 Platters: 1	
Area H, Feature 2 Levels 2B and 2C	Late, Blue Transfer Print	Saucers: 1 Plates: 2	
Area H, Feature 2, Level 2C	White-bodied Ironstone	Saucers: 2 Plates: 1	
Area H, Feature 2 Level 2C	White-bodied Ironstone	Saucers: 1 Platters: 1	

The set dating to the pre-industrial period was recovered from Area D, Feature 1, the cistern/privy. The set consisted of two vessels, a pearlware, blue edged bowl and plate, made up of 8 sherds each. This plate and bowl may not have been part of a matched set purchased at the same time, as formal sets of edged vessels have not been indicated in the literature. These vessels may indicate an attempt to purchase vessels that are close in appearance, as Miller (1974) found at the Tabb's Purchase site. If these two vessels are part of a set or attempted set derived from separate purchases, they would represent a remnant table setting of what appears to be every-day ceramics, As noted earlier, this feature contained several blue edged plates, which had a low purchase price. In addition, the plates carried different edged designs, supporting the hypothesis that the edged vessels from this feature were not part of formal sets, but were purchased as vessels having the same color and design elements.

Ceramic sets dating to the industrial period were recovered from three features, Features 15 and 17 in Area A, and Feature 2 in Area H. The two features from Area A, which were associated with the Dowdall occupation of the lot, contained two sets. Feature 15 contained a set of sponged decorated vessels, made up of one cup (12 sherds), one saucer (4 sherds), and one plate (1 sherd). Sets of this type of decoration, were more likely to have functioned as tea sets as opposed to table settings. The plate may have been used for serving tea foods.

The second set from Area A consisted of one saucer (2 sherds), eleven plates (73 sherds), and one serving bowl (2 sherds), all with a late blue transfer printed blue willow pattern decoration. This set was present in both Features 25 and 17. The presence of the set within the two features supports the combining of the features as deposits related to the same lot occupation, i.e. Dowdall.

The frequency of vessels in this set is consistent with the ceramic attrition rate established by Garrow (1982) for assemblages from this period. Thus, this set probably represents a normal discard rate of ceramics from a household associated with the Dowdall Bottling Works. In addition, the presence of a single table set in these features suggests that the deposits were associated with a single household. If more than a single household contributed trash to the deposits, multiple sets would be have been recovered.

In addition to these two sets, two of the Dowdall features contained a set remnant. This remnant set consisted of a late, blue transfer printed cup (1 sherd) and platter (1 sherd). These two vessels exhibited a printed motif not found on other Dowdall ceramics. The presence of this remnant set suggests that Dowdall used a second set of printed vessels, or that these vessels represent the last few dishes remaining of a formal set, which was replaced with the blue willow pattern vessels. As with the willow pattern set, this set remnant supports the linkage of Feature 17 and 25 to the Dowdall occupation of the lot. This remnant set does not mean that a second household contributed material to these deposits. If this was the case, more vessels of this set would have been recovered.

The three remaining sets dating to the industrial period, which are in fact set remnants, were recovered from Area H, Feature 2, a barrel privy. One of the remnant sets consisted of a late blue transfer printed saucer and two plates, with 11 and 15 sherds respectively. The other two set remnants were white-bodied ironstone vessels, with molded designs along the rims. One set consisted of two saucers (8 sherds) and one plate (2 sherds). The second included one saucer and one platter, with 5 and 3 sherds respectively. The printed set remnant was found in both level 2B and 2C, while the ironstone sets were both recovered from level 2C. This linkage between the two levels suggests that the two levels may be part of the same deposit.

The presence of these three set remnants suggest that either more than one household may have deposited refuse within the feature, or that these remnants represent the use life of three ceramic sets used over time by one household. A third hypothesis is that a formal matching set was not used by the household associated with the barrel privy deposit, but a miss-match of different ceramic vessels constituted the table setting used by the lot's

occupants. It is not likely that more than one or two households deposited trash into the privy, given the small size of the barrel. Thus, the association with at least two households is possible. The two other hypotheses are equally valid, given the possible time span represented by the ceramic assemblage in the privy (at least seven to eight years) and the low socio-economic level of the occupants of this lot during the middle of the nineteenth century.

Tea Ware Sets

Of the thirteen tea ware sets recovered from the project area, five were from pre-industrial period contexts, and seven from industrial. All tea sets dating from the pre-industrial period were from Area D, Feature 1, the cistern/privy. The types and sizes of these sets are listed in Table 71. The Chinese porcelain sets consisted of one with two cups with 4 sherds, and two saucers with 12 sherds. The second set included three cups and one saucer, with 33 and 4 sherds respectively. The cistern contained a large number of overglazed Chinese porcelain vessels, as is evident in the minimum vessel counts (Appendix E, Table 3). Minimally five different design motifs were identified on these porcelain vessels, but only two groups of vessels could be interpreted as actual tea sets. The presence of two identifiable porcelain tea sets, and the presence of several other porcelain tea ware vessels with differing design elements, suggest that either (a) these vessels represent the replacement of tea wares over time, with only portions of the sets being discarded in the cistern, or (b) several porcelain vessels were used as one or more tea sets, regardless of the different design motifs. It should be noted that the type of decoration on these porcelain vessels were the same (overglaze, hand painted), thus they could be considered a type of set, but not following the formal definition used in this report.

The remaining tea ware sets from this feature included two blue transfer printed pearlware sets, one with one cup and one saucer (4 and 3 sherd respectively), the other made up of four cups and three saucers of 10 and 25 sherds each. In addition, there were two hand painted polychrome, pearlware sets. The polychrome sets included one with one cup (8 sherds) and two saucers (14 sherds) and the second consisting of one cup and one saucer, with 9 sherds each. With the presence of these four additional sets within the cistern, it appears that either all these sets, including the two porcelain sets, represent replacement sets over time from a single household, or that more than one household contributed material to the cistern.

As discussed earlier, the materials within the feature may have originated from more than one occupation of the lot. The earlier material was associated with upper socio-economic level households; and material dating after 1810 may have been associated with middle level socio-economic households. This suggests that the porcelain tea vessels may have been used by the upper level households, while the printed and polychrome vessels, which were less expensive, were used by the later middle socio-economic level household. An alternative explantion is that the cheaper wares were used by the earlier household occupation, but that the economic position of this household improved during the later years of their occupation of this lot, permitting the purchase of more costly wares. There are unfortunately insufficient data to test these hypotheses, but the latter hypothesis does suggest the

TABLE 71. Tea/Coffee Sets: Complete Sets and Set Remnants
Area D, Feature 1, Levels 7 and 8

Set Number	Form		Type
	Cups	Saucers	
1	2	2	Chinese Polychrome
2	3	1	Chinese Polychrome
3	1	1	Pearlware, Blue Transfer Print
4	4	3	Pearlware, Blue Transfer Print
5	1	2	Pearlware, H. P. Polychrome
6	1	1	Pearlware, H. P. Polychrome

Number of Sets	Number of Vessels	Type
2	8	Chinese Polychrome
2	9	Pearlware, Blue Transfer Print
2	5	Pearlware, H. P. Polychrome

importance of examining a household's developmental cycle when interpreting the types of material goods purchased by a household.

Tables 72 and 73 list the tea sets from the two industrial period contexts, the Dowdall features from Area A, and Feature 2 from Area H. Feature 15 in Area A contained one set with one sponged decorated cup (12 sherds) and one saucer (4 sherds). Feature 15 also produced two additional sets, one consisting of three late, blue transfer printed vessels: two cups (9 shreds) and one saucer (12 sherds). The second set included one cup (1 sherd) and one saucer (1 sherd), also decorated with a late, blue transfer print. A third late blue transfer printed set was recovered from Feature 25, in Area A. This set included one cup (4 sherds) and four saucers (6 sherds). The pattern for this latter set has been identified as "Singanese", which dated from 1851-1969 (Godden 1964:237).

Feature 15 and 17 shared a set of flow blue tea wares, consisting of two cups and one saucer, with 10 and 9 sherds respectively.

As discussed earlier it appears that a single household deposited trash into the three features. Following this premise, the tea sets listed above also were used by a single household. These sets probably represent tea set replacements discarded during Dowdall's occupation of the lot. It should be noted that none of these tea vessels match Dowdall's table settings. This suggests that Dowdall purchased table settings and tea sets of non-matching design motifs, but with matching methods of decoration, i.e. printed, and

TABLE 72. Tea/Coffee Sets: Complete Sets and Set Remnants
Dowdall Features (Features 15, 17, and 25)

Provenience	Set Number	Form: Cups	Form: Saucers	Type
Feature 15	*1	1	1	Sponge Decorated
Feature 15 and Feature 17	2	2	1	Flow Blue
Feature 15	3	2	1	Late Blue Transfer Print
Feature 15	4	1	1	Late Blue Transfer Print
Feature 25	5	1	**4	Late, Blue Transfer Print, "Singanese" Pattern

Number of Sets	Number of Vessels	Type
1	2	Sponge Decorated
1	3	Flow Blue
3	10	Late, Blue Transfer Print

* Part of Larger Ceramic Set
** Matches with two saucers from Area A, Feature 28, Level 4

TABLE 73. Tea/Coffee Sets: Complete Sets and Set Remnants
Area H, Feature 2

	Set Number	Form: Cups	Form: Saucers	Type
Level 2A	*1	1	1	Late, Hard Paste Porcelain
Levels 2A and 2B	2	1	1	White-bodied Ironstone

Number of Sets	Number of Vessels	Type
1	2	Late Porcelain
1	2	White-bodied Ironstone

* vessels are miniatures
Note: all ironstone vessels had molded designs

matching color, i.e. blue. This purchase pattern may have been idiosycratic, but was more likely due to the absence of matching tea and table settings, in terms of design motifs, in local markets. As with the table settings discussed earlier, these tea wares link Features 15 and 17 to a single lot occupation during the mid-nineteenth century, i.e. Dowdall's.

Only two tea sets, or set remnants, were recovered from Feature 2 in Area H. One, a demitasse set, consisted of one late, hard paste porcelain cup (1 sherd) and saucer (3 sherds). The second included two white bodied ironstone vessels. One vessel was a cup (3 shreds), the other a saucer (8 sherds), each with a molded design along the rim. As with the Dowdall tea sets, the tea set remnants and table set remnants in Feature 2 in Area H do not match. This suggests that complete formal sets, which included both table and tea wares, were not purchased by the household or households that contributed trash to this barrel privy, or that such formal types of sets were not available in local markets.

The remnant table sets discussed earlier, linked levels 2B and 2C of Feature 2. The tea ware analysis shows that one of the remnant tea sets was recovered from both Levels 2A and 2B. This suggests that all three arbitrary levels in this feature may be part of the same depositional activity, although given the arbitrary nature of the excavation levels it is still possible that two distinct occupations are present.

This analysis of ceramic sets has provided several different types of data, which permitted further interpretation of the selected analytical features from the project area. In addition, statements on the use life of sets, purchasing of sets, and representativeness of various deposits, are also possible based on this analysis.

Area A, Dowdall Features

The table settings and tea ware sets in Area A demonstrated the linkage of Features 15, 17, and 25 to a single occupation of the study lot. Based on the MCD's of these features, and the ceramic and glass mark date ranges, these sets would have been used by Joseph Dowdall, or one of his employees, during his 5 year residency of the lot. It appears that Dowdall disposed of the remnants of a blue transfer printed table setting, which was then replaced by the blue willow set, which in turn was deposited at a normal attrition rate, within the three features. If the replacement table settings (the willow vessels) were purchased by Dowdall during his occupation of the lot, this set had a use life of minimally 5 years, with an attrition rate of 2.6 vessels per year.

In terms of representativeness of the Dowdall related material assemblages recovered from the three features, the ceramic set data suggest that these assemblages may represent the total range of ceramics that were present in Dowdall's "china cabinet". This is based on the presence of a large table ware setting, and many remnant teas sets within the three features. Additional support of the representativeness of these materials is that all of the known refuse bearing deposits in this lot, which would have contained trash disposed by the Dowdall household, were excavated.

Finally, the set analysis clearly demonstrates the linkage of the three features to a single household. Only one large table setting was recovered from these features, in addition to the remnants of an earlier set. In addition, absence of complete, multiple sets also suggest that these deposits were associated with a single household.

The table and tea sets from the Dowdall deposits demonstrate the nature of sets in the mid-nineteenth century. Table sets and teas sets did not match in terms of specific design motifs, but were purchased in order to comprise a group of vessels that did match in terms of color and/or method of vessel decoration. A table setting of this period would, for example, consist of matching blue willow table wares, and a tea set that matched the table wares in terms of color. Another possible combination would have been a table setting of matching color and design motifs with an associated plain undecorated or minimally decorated tea set. It may not have been until later in the nineteenth century that matching (in terms of design motifs) table and tea sets were the norm.

Area D, Feature 1

The sets recovered from the pre-industrial context, Feature 1 in Area D, do not provide a straight forward series of interpretations as did the Dowdall materials. The presence of both porcelain vessels of the same decorative techniques, and the printed and polychrome vessels may indicate that more than one household deposited ceramics in the feature. An alternative explanation is that the household that occupied the lot during the late eighteenth and early nineteenth century used a wide range of decorative types for their tea and table settings. Unfortunately, there are insufficient data to test those explanations. It is not possible, then to relate these materials to one household, as done with the mid-nineteenth century features in Area A.

It is not possible to link the sets in Feature 1 to specific socio-economic groups, given the fragmentary nature of the sets. However, it is highly probable that the porcelain tea sets were used by an upper socioeconomic level household due to its high purchase price. The purchasing power of a middle level group would be such that buying Chinese porcelain vessels would be prohibitive, unless the household was making an effort to materially demonstrate their socio-economic aspirations.

The sets from Feature 1 in Area D do provide some data on the consumption patterns of the lot's occupants. As complete formal sets containing both table and tea wares of matching design motifs were very rare at the time of the feature's use life, the lot's occupants attempted to purchase wares that were similar in both color and method of decoration. This is evident in the large number of chinese porcelain tea wares of the same type of decoration, but different design elements. This is also the case with the one remnant table set (or possible tea ware set) discussed earlier, which consisted of a blue edged pearlware bowl and plate. These two vessels were probably used along with the many other blue edge vessels found in the feature. It was noted above that these other vessels all had different edged designs.

Area H, Feature 2

As with the sets from Feature 1 in Area D, those from Feature 2 in Area H demonstrated that the ceramic sets, and possibly the remainder of artifactual materials in the feature, do not represent the full range of ceramic materials used by the lot's occupants. This hypothesis may be incorrect, however, if the lot's occupants did not use or attempt to purchase matching ceramic vessels for their table settings. It should be recalled that the occupants of this lot during the middle of the nineteenth century were members of low socio-economic level groups. Thus, the purchasing of such matching sets may not have been part of their consumer behavior as it was for the middle and upper level groups.

No statements are possible on the use life of the sets recovered from this feature, as the sets were all remnants or parts of sets, and because the depositional time range of the feature assemblage is unknown.

There is an additional ceramic set, or rather tea ware set remnant, recovered from the project area, which has not been discussed. One porcelain, gilt decorated tea set was recovered from Feature 19 in Area A. The vessels from this feature, which was a large subsurface structure dating around 1900, included 1 cup (6 sherds) and one saucer (1 sherd). Little can be said about this set remnant, except that it was probably used by the owner's or workers of the Walton and Whann Fertilizer Company, which occupied the lot in the late nineteenth and early twentieth century.

Analysis of Economic Values of Ceramic Assemblages

A major goal of this project was to study the relative socio-economic levels of the residents of the project area through time, and to characterize how those socio-economic levels changed in response to industrialization. Two analytical techniques that can be applied to archaeological collections were chosen as means of pursuing that goal. Both techniques were relatively new, and it was hoped that this project would not only benefit from the use of those techniques, but that it would be possible to test the applicability of the techniques for use on future projects.

The first technique was devised by Cara Wise (1976), and involves establishing ratios of certain types of ceramics within collections at the sherd level. Those ratios are then expressed in terms of two status indices, which theoretically should yield insights into the rough socio-economic position of the household or households that generated the study collection.

The second technique applied to the Wilmington ceramics was developed by George Miller (1980). That technique requires that minimum vessel counts be developed, and applies relative ceramic values based on actual period price fixing lists and catalogues. Miller tested this technique on collections from six sites, and the technique has been further tested and verified on the Washington Civic Center Project (Garrow 1982:115-128).

The Wise Analysis

The Wise Analysis (1976) employs the ratio of refined and porcelain wares to coarse wares (Status Index I), and the ratio of refined to porcelain wares (Status Index II) to derive two status index values for a collection. This method employs sherd counts, and would thus have more general applicability to overall collections than the Miller (1980) technique if it produced valid status indices. The Wise Analysis was applied to both occupation levels and features from Wilmington Boulevard in an attempt to test the technique for applicability to addressing the project research design. Tables 74 and 75 reflect the Status Index I and II values for the various analytical contexts within the Wilmington Boulevard Project. The data from those tables are presented graphically in Figures 67 and 68.

TABLE 74. Wise Analysis Status Indices: Pre-Industrial Period Deposits and Features

Provenience	Coarse Ware	Refined Ware	Porcelain	Total	Index I	Index II
Area B, Marsh Soil Deposits	751	127	28	906	0.21	0.22
Area E, Market Street Lot	523	232	40	795	0.52	0.17
Area E, Second Street Lot	914	831	65	1810	0.98	0.08
Area D, Feature 1	395	944	197	1536	2.89	0.21
Area D, Topsoil Deposits	492	417	22	931	0.89	0.05
Area H, Lower Topsoil	144	97	7	284	0.72	0.07
Area A, Lower Topsoil	3621	3201	131	6953	0.92	0.04
Area A, Feature 27	86	31	2	119	0.38	0.06

The highest Status Index I value among the pre-industrial contexts was derived from Feature 1 in Area D. Historical data do suggest that a relatively high status household contributed to the Feature 1 deposit, but there is no reason to believe that household enjoyed a markedly higher socio-

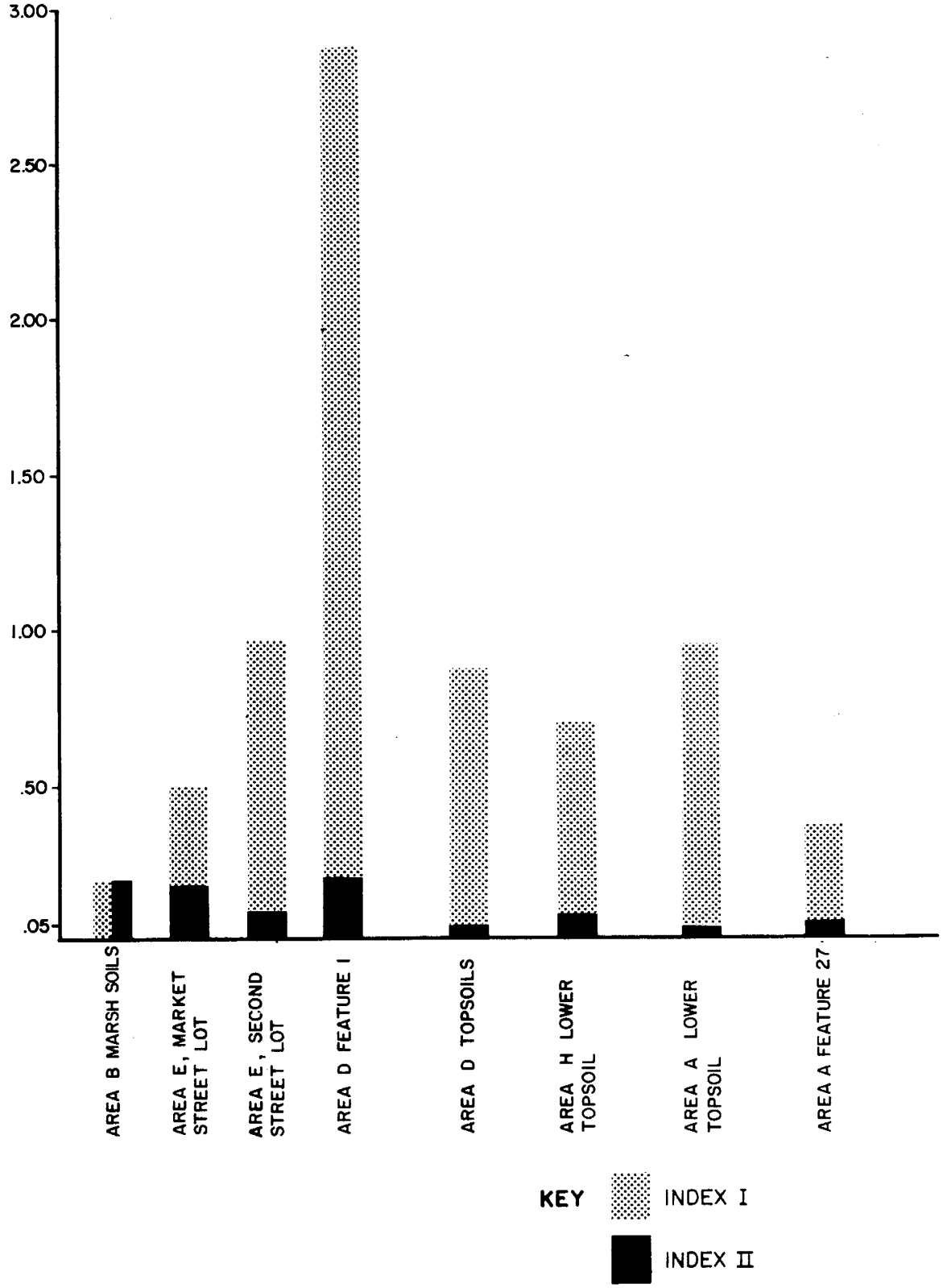

FIGURE 67

WISE ANALYSIS, STATUS INDICES PRE-INDUSTRIAL DEPOSITS AND FEATURES

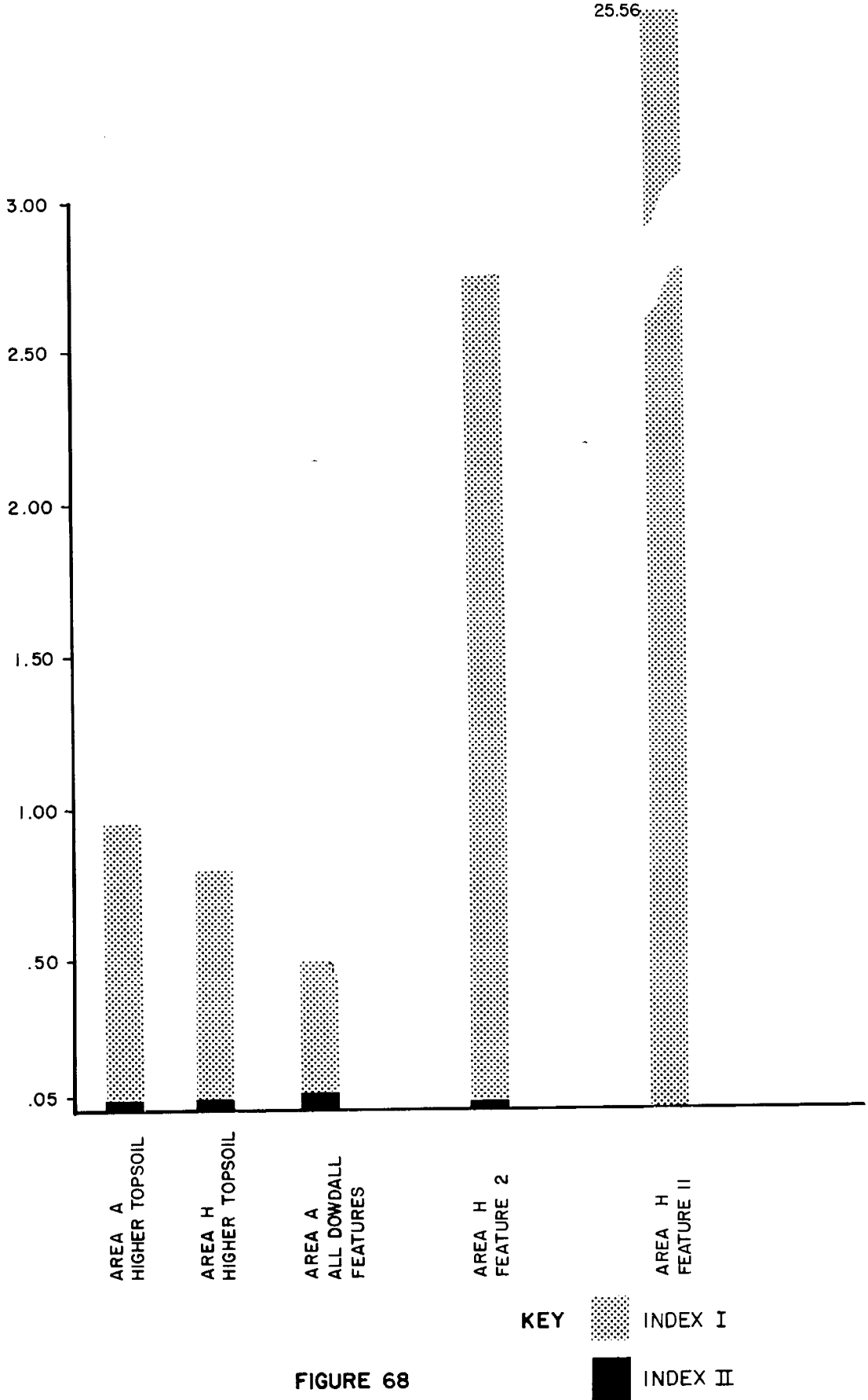

FIGURE 68
WISE ANALYSIS,
STATUS INDICES
INDUSTRIAL DEPOSITS
AND FEATURES

economic status than the households that discarded the items found in pre-industrial contexts in Area E or A. The higest Status Index I value achieved for all deposits was derived from Feature 11 in Area H. The Status Index I value of 25.56 for that feature is 8.8 times as high as the next highest value (achieved for Feature 1 of Area D). Feature 11 did contain a sufficient sample to support a Miller analysis, but review of the collection indicated that the value of that collection would have been rather low. Feature 2 of Area H yielded a high Status Index I value of 2.76, the third highest value achieved from the collections. That feature, or at least Level A of that feature, did scale high in the Miller analysis, but in the case of the Wise analysis it is likely that that method measured factors such as technical advances in ceramic production or other factors unrelated to ceramic cost. Features 2 and 11 of Area H were two of the lastest contexts recovered during the Wilmington Boulevard Project. It is probable that the Wise analysis simply reflected the rise in popularity of refined wares as food service and preparation vessels during the second half of the nineteenth century that occured at the expense of coarse wares. If this is indeed the case it would invalidate the results achieved through use of the Wise analysis.

TABLE 75. Wise Analysis Status Indices: Industrial Period Deposits and Features

Provenience	Coarse Ware	Refined Ware	Porcelain	Total	Index I	Index II
Area A, Higher Topsoil Deposit	903	848	23	1174	0.96	0.03
Area H, Upper Topsoil Deposit	96	70	3	169	0.76	0.04
Area A, Feature 17	703	435	24	1162	0.65	0.05
Area A, Feature 15	1863	703	20	2586	0.39	0.03
Area A, Feature 25	230	261	19	510	1.22	0.08
Area A, All Dowdall Features	2796	1399	63	4258	0.52	0.05
Area H, Feature 2	550	1501	17	2068	2.76	0.01
Area H, Feature 11	18	460	-	478	25.56	-

The Status Index II values achieved for the various Wilmington contexts exhibit little differentiation. This index is a simple reflecter of the ratio of refined wares to porcelains within a collection, and the assumption was that collections with higher porcelain ratios would equate to higher socio-economic levels. The historical and archaeological data derived for the Wilmington Boulevard Project has demonstrated that multiple socio-economic levels were present within the project area, and that the socio-economic profile of the area changed perceptibly through time. The Status Index II does not mirror those expected differences.

The Wise Analysis may work well on purely eighteenth century sites, or on sites earlier than those represented within Wilmington Boulevard. It is obvious, however, that this technique did not work on the Wilmington Boulevard collections. Further research may indicate that the technique is too simplistic to capture the range of variables that render one ceramic assemblage of greater or lesser initial economic value than another assemblage.

Miller Analysis

Miller's analysis (1980) measures the relative economic value, or cost, of nineteenth century ceramic assemblages. This economic scale is based on the index values assigned to certain refined wares, expressed in relation to cream colored wares, or cc wares. CC wares consistently represent the least expensive refined earthenware available in nineteenth century markets (Miller 1980). Miller developed economic indices based on establishing a fixed value of 1.00 for cc wares through time. The value of other refined wares is then expressed in relation to the 1.00 index value for cc wares at specific points in time.

Only five features in the project area contained suitable ceramic assemblages for a Miller analysis. These features included Features 15, 17 and 25 in Area A (the Dowdall features), Feature 1 in Area D (the cistern/privy), and Feature 2 in Area H (a small barrel privy). As discussed earlier, the other features in the project area had ceramic assemblages too small for such an analysis, or were found to contain displaced refuse from unknown sources.

Tables 76 to 84 present the ceramic economic scaling data from these features, following the procedures developed by Miller (1980). The manner in which gaps in Miller's indices were handled is shown in the tables' footnotes.

Figure 69 presents the results of the ceramic economic scaling data in the format used by Miller in his 1980 article. Note that the three Dowdall features were combined for this figure. This was done because the three features are in fact related to a single occupation, as do the sample sites Miller used in his figures. A separate figure was developed with the individual Dowdall features (see Figure 70). These three features will be examined separately in a later discussion, but are combined for the following discussion.

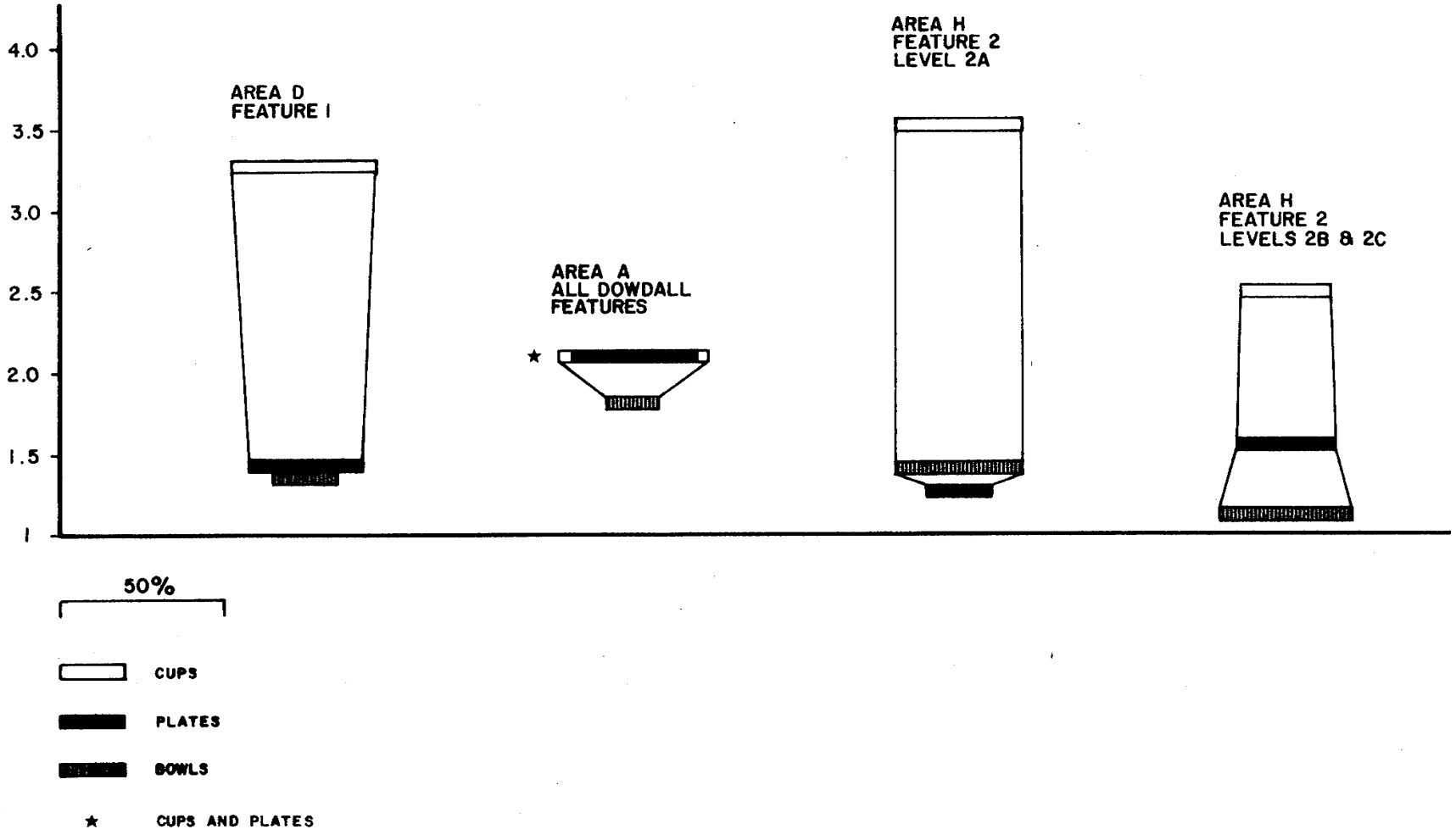

FIGURE 69

ECONOMIC SCALING OF CERAMICS
FROM WILMINGTON AREA D, FEATURE I,
AREA A, DOWDALL FEATURES,
AND AREA H, FEATURE 2

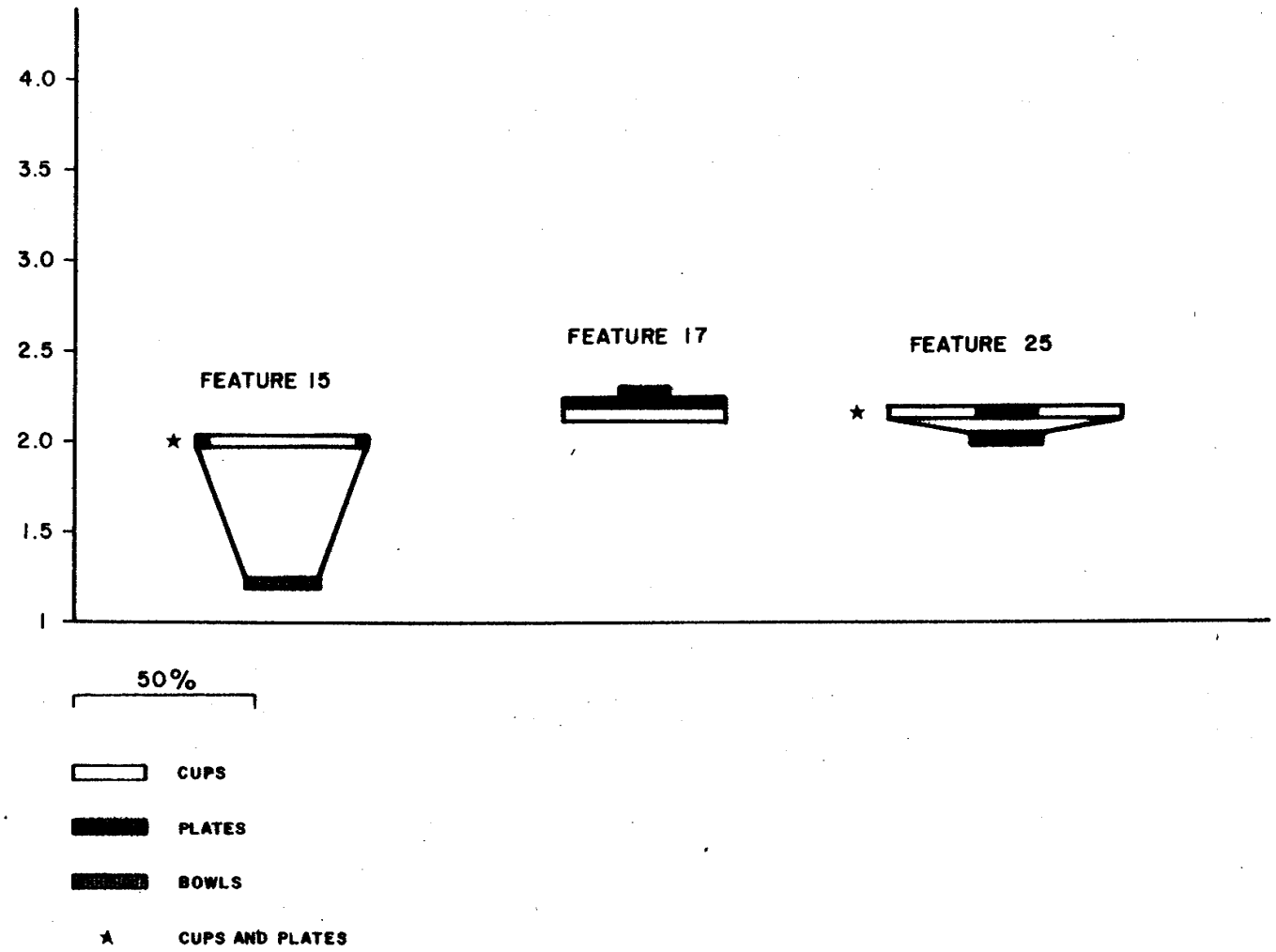

FIGURE 70
ECONOMIC SCALING OF CERAMICS
WILMINGTON, AREA A, ALL DOWDALL FEATURES
FEATURES 15, 17, AND 25

TABLE 76. Ceramic Economic Scaling Data
(following Miller 1980)
Area D, Feature 1, Levels 7 and 8

Form	Type	Scale (1796)	Number	Product
Cups	*Porcelain	4.00	18	72.00
(all unhd.)	CC ware	1.00	1	1.00
	Painted	1.80	8	14.40
	Printed	3.40	14	47.60
Average Value: 3.29		Totals:	41	135.00
Plates	CC ware	1.00	9	9.00
	Edged	1.29	21	27.09
	Painted	1.67	1	1.67
	Printed	3.86	3	11.56
Average Value: 1.45		Totals:	34	49.32
Bowls	CC ware	1.00	5	5.00
(1846	**Plain Pearlware	1.00	1	1.00
Index	***Edged	1.20	1	1.20
Used)	Painted	1.60	3	4.80
	Dipped	1.20	6	7.20
	Printed	2.80	2	5.60
Average Value: 1.38		Totals:	18	24.80

*1824 index for porcelain used
**1796 CC ware index used
***1796 index for dipped used

TABLE 77. Ceramic Economic Scaling Data
Area A, Feature 15

Form	Type	Scale (1846)	Number	Product
Cups	+Porcelain	3.70	1	3.70
	CC ware	1.00	2	2.00
	++Ironstone	2.45	1	2.45
	Painted	1.23	2	2.46
	+++Dipped	1.23	2	2.46
	++Flow Blue	2.45	3	7.35
	Printed	2.45	6	14.70
	+++Sponged	1.23	1	1.23
Average Value: 2.02		Totals:	18	36.35
Plates	CC ware	1.00	2	2.00
	Edged	1.13	4	4.52
	*Painted	1.75	1	1.75
	Printed	2.63	11	28.93
	**Sponged	1.13	1	1.13
Average Value: 2.02		Totals:	19	38.33
Bowls	CC ware	1.00	2	2.00
	Painted	1.60	1	1.60
	Dipped	1.20	2	2.40
Average Value: 1.20		Totals:	5	6.00

\+ Based on percentage difference between printed unhd. and porcelain unhd. for 1857 Index
++ 1846 Index for Printed unhd. used
+++ 1846 Index for Painted unhd. used
* Based on percentage difference between painted and edged for 1838
** 1846 Index for edged used

TABLE 78. Ceramic Economic Scaling Data
Area A, Feature 17, All Levels

Form	Type	Scale (1846)	Number	Product
Cups (all unhd.)	+Porcelain	3.70	2	7.40
	++Ironstone	2.45	4	9.80
	Painted	1.23	3	3.69
	Flow Blue	2.45	1	2.45
	Printed	2.45	5	12.25
	+++Sponged	1.23	2	2.46
	*Plain Pearlware	1.00	1	1.00
Average Value: 2.17		Totals:	18	39.05
Plates	**Porcelain	4.29	1	4.29
	CC ware	1.00	2	2.00
	++Ironstone	2.63	3	7.89
	Edged	1.13	3	3.39
	++Flow Blue	2.63	1	2.63
	Printed	2.63	7	18.41
	Plain Pearlware	1.00	1	1.00
Average Value: 2.20		Totals:	18	39.61
Bowls	Painted	1.60	1	1.60
	Printed	2.80	3	8.40
	***Sponged	1.20	1	1.20
Average Value: 2.24		Totals:	5	11.20

\+ Based on percentage difference between porcelain unhd. and printed unhd. for 1857 Index
++ 1846 Index for printed unhd. used
+++ 1846 Index for painted unhd. used
* 1846 Index for CC ware used
** Based on percentage difference between porcelain and printed for 1838 Index
*** 1846 Index for dipped used

TABLE 79. Ceramic Economic Scaling Data
Area A, Feature 25, All Levels

Form	Type	Scale (1846)	Number	Product
Cups	+Porcelain	3.70	3	11.10
	CC ware	1.00	2	2.00
	++Ironstone	2.45	2	4.90
	Painted	1.23	3	3.69
	Printed	2.45	3	7.35
	+++Sponged	1.23	1	1.23
Average Value: 2.16		Totals:	14	30.27
Plates	*Ironstone	2.63	1	2.63
	Edged	1.13	1	1.13
	Printed	2.63	1	2.63
Average Value: 2.13		Totals:	3	6.39
Bowls	Dipped	1.20	2	2.40
	Printed	2.80	2	5.60
Average Value: 2.00		Totals:	4	8.00

\+ Based on percentage difference between printed unhd. and porcelain unhd. for 1857 Index
++ 1846 Index for printed unhd. used
+++ 1846 Index for painted unhd. used
* 1846 Index for printed used

TABLE 80. Ceramic Economic Scaling Data
Area A, All Dowdall Features
(Features 15, 17, and 25)

Form	Type	Scale (*)	Number	Product
Cups	Porcelain	3.70	6	22.20
	CC ware	1.00	4	4.00
	Ironstone	2.45	7	17.15
	Painted	1.23	8	9.84
	Dipped	1.23	2	2.46
	Flow Blue	2.45	4	9.80
	Printed	2.45	14	34.30
	Sponged	1.23	4	4.92
	Plain Pearlware	1.00	1	1.00
Average Value: 2.11		Totals:	50	105.67
Plates	Porcelain	4.29	1	4.29
	CC ware	1.00	4	4.00
	Ironstone	2.63	4	10.52
	Edged	1.13	8	9.04
	Painted	1.75	1	1.75
	Flow Blue	2.63	1	2.63
	Printed	2.63	19	49.97
	Sponged	1.13	1	1.13
	Plain Pearlware	1.00	1	1.00
Average Value: 2.11		Totals:	40	84.33
Bowls	CC ware	1.00	2	2.00
	Painted	1.60	2	3.20
	Dipped	1.20	4	4.80
	Printed	2.80	5	14.00
	Sponged	1.20	1	1.20
Average Value: 1.8		Totals:	14	25.20

* See Tables 79 to 81 for scale

TABLE 81. Ceramic Economic Scaling Data
Area H, Feature 2, Level 2A

Form	Type	Scale (1858)	Number	Product
Cups	Ironstone	4.00	5	20.00
(all unhd.)	*Painted	1.23	1	1.23
Average Value: 3.54		Totals:	6	21.23
Plates	CC ware	1.00	1	1.00
	Ironstone	1.80	1	1.80
	Edged	1.00	1	1.00
Average Value: 1.27		Totals:	3	3.80
Bowls	CC ware	1.00	3	3.00
	Ironstone	2.00	3	6.00
	Dipped	1.10	3	3.30
Average Value: 1.37		Totals:	6	12.30

* 1846 Index for painted unhd. used

TABLE 82. Ceramic Economic Scaling Data
Area H, Feature 2, Level 2B

Form	Type	Scale (1855)	Number	Product
Cups	CC ware	1.00	1	1.00
(all unhd.)	Ironstone	3.60	5	18.00
	*Painted	1.23	1	1.23
Average Value: 2.89		Totals:	7	20.23
Plates	CC ware	1.00	1	1.00
	Edged	1.25	1	1.25
	Printed	1.50	3	4.50
Average Value: 1.35		Totals:	5	6.75
Bowls	CC ware	1.00	3	3.00
	**Ironstone	2.00	1	2.00
	***Dipped	1.10	7	7.70
Average Value: 1.15		Totals:	11	12.70

* 1846 Index for painted unhd. used
** 1855 Index for printed used
*** 1855 Index for sponged used

TABLE 83. Ceramic Economic Scaling Data
Area H, Feature 2, Level 2C

Form	Type	Scale (1855)	Number	Product
Cups (all unhd.)	*Ironstone	3.60	2	7.20
	**Painted	1.23	3	3.69
	***Printed	3.60	3	10.80
	+Sponged	1.17	3	3.51
Average Value: 2.30		Totals:	11	25.20
Plates	++Ironstone	1.50	2	3.00
	Edged	1.25	2	2.50
	Flow Blue	2.50	2	5.00
	Printed	1.50	9	13.50
Average Value: 1.60		Totals:	15	24.00
Bowls	+++Dipped	1.10	15	16.50
Average Value: 1.10				

* 1856 Index for ironstone unhd. used
** 1846 Index for painted unhd. used
*** 1856 Index for ironstone unhd. used
\+ 1871 Index for sponged unhd. used
++ 1855 Index for printed used
+++ 1855 Index for sponged used

TABLE 84. Ceramic Economic Scaling Data
Area H, Feature 2, Levels 2B and 2C

Form	Type	Scale (*)	Number	Product
Cups (all unhd.)	CC ware	1.00	1	1.00
	Ironstone	3.60	7	25.20
	Painted	1.23	4	4.92
	Printed	3.60	3	10.80
	Sponged	1.17	3	3.51
Average Value: 2.52		Totals:	18	45.43
Plates	CC ware	1.00	1	1.00
	Ironstone	1.50	2	3.00
	Edged	1.25	3	3.75
	Flow Blue	2.50	2	5.00
	Printed	1.50	12	18.00
Average Value: 1.54		Totals:	20	30.75
Bowls	CC ware	1.00	3	3.00
	Ironstone	2.00	1	2.00
	Dipped	1.10	22	24.20
Average Value: 1.12		Totals:	26	29.20

* See Tables 84 and 85 for Scale

Feature 1, Area D

Though Feature 1 in Area D apparently contains artifactual material from more than one household, it is the only pre-industrial feature available from the project area suitable for a Miller analysis, and thus warrants discussion. Feature 1 exhibits a large gap between the index value for cups and the values for plates and bowls (see Figure 69). This suggests that the households using the cistern focused their ceramic purchases on tea wares rather than table settings (Plate 102). As discussed in the ceramic set analysis section, these tea wares were predominantly Chinese overglaze, hand painted, porcelain. If this feature was used by only one household, the resultant economic values would suggest that the household put much value in the socially important "tea" ceremony. The low cost of the bowls and plates suggests that the household may fall into the middle socio-economic level category, with the porcelain cups possibly representing aspirations toward a higher socio-economic level. If as indicated earlier, the cistern deposits were from several different households, the ceramic values seen in Figure 69 would require different interpretations. The values may represent two or more middle to lower level socio-economic level households and a high socio-economic level household(s), with one or more of these households putting much of their ceramic purchases into porcelain tea wares.

Regardless of which of the above scenerios are correct, the cistern ceramic assemblage was not associated with a high level socio-economic household, at least in terms of the ceramic purchases. The deposit probably represents a low to middle socio-economic level household(s) whose ceramic values mask the indices of the relatively higher socio-economic household(s) that also contributed material to this feature.

Feature 2, Area H

The pattern analysis discussed earlier demonstrated that this feature contained two different deposits, one including Level 2A, the other including both Levels 2B and 2C. The graphic representation of the economic indices for Level 2A, shown in Figure 69, is similar to Feature 1 in Area D (Plate 103). This suggests that the two deposits are comparable in terms of ceramic consumer behavior.

The relatively high ceramic value exhibited by Level 2A of Feature 2 may be due to one of a number of factors. That refuse in the privy may indeed have been deposited by a relatively high socio-economic household that occupied Area H at a time when the rest of the neighborhood was composed of fairly low socio-economic households. A second potential explanation is that the Miller scale simply is not accurate for deposits that date as late as Level 2A of Feature 2, but since that technique appears to have worked on other similar deposits that seems unlikely. The most logical explanation appears to be that Area H was inhabited by a household of declining socio-economic position at the time Level 2A of Feature 2 was filled, and that the Miller analysis measured a level of status they no longer enjoyed. Comparison of the artifact patterns from this context and Feature 11 of the same area has been presented in an earlier section of this chapter. The patterns achieved from the two contexts were not only very similar, but were unique to the project area in terms of the Activities Group representations. Feature 11 did not

PLATE 102 TABLE SETTING FROM FEATURE 1, AREA D

PLATE 103 TABLE SETTING FROM FEATURE 2, AREA H

contain a sufficient ceramic sample to support a Miller analysis, but study of that collection indicated that cc wares predominated, followed by undecorated ironstone. Based on the pattern data, and speculation concerning the declining status of the contributors to Level 2A of Feature 2, serious attention must be given to the idea that the two contexts were filled by the same household, with Feature 11 further chronicling the social and economic decline of that household.

The ceramic economic scaling data derived from Levels 2B and 2C of the feature corroborate the historical evidence. Levels 2B and 2C show a lower ceramic value than either Level 2A, or Feature 1 in Area D. The household(s) associated with these lower deposits in Feature 2 placed most of their ceramic purchases into tea or coffee wares, as did the households associated with the other features. This suggests the continued social importance of tea and coffee, even in a lower level socio-economic household.

Dowdall Features

The combined Dowdall features (15, 17, and 25) in Figure 69 show a very different configuration compared to the other three deposits. The relative economic value of cups, plates and bowls used by Dowdall is very similar. Dowdall was not purchasing expensive tea/coffee sets, as was evident in the other features. Figure 69 shows that Dowdall's ceramics were somewhat less costly than those purchased by the households using the cistern and depositing material in the top level of the barrel privy in Area H; and somewhat higher in cost than the ceramics from the lower level of the barrel privy on H. These differences are more apparent in the comparisons of mean ceramic value, which will be discussed later in this chapter. Given the position of the Dowdall ceramic values in Figure 69, Dowdall would be classified as a middle to low socio-economic level individual.

By combining the Dowdall features for Figure 69, there is a masking of some variation in the economic values of the three features. Figure 70 shows the configurations of the ceramic assemblages from the features. Features 17 and 25 are very similar, but both are different from Feature 15. Though the relative cost of plates and cups is comparable among the features, the cost for bowls in Feature 15 is quite lower than that for bowls in the other two. Feature 15 had the highest redware count of these three features, and as will be discussed in the faunal analysis, the feature also had the highest shell count in the entire project area. These data, in addition to the high frequency of redwares in the form of storage vessels, suggest that ceramic artifacts from Feature 15 were associated with food preparation activities and other kitchen related functions. The inexpensive bowls in this feature were also probably used in these kitchen activities. Thus, the configuration of Feature 15 in Figure 70 may be partially the result of the kitchen origin of the ceramic materials. This interpretation is supported by the pattern analysis of this feature, and refined by the minimum vessel counts. The latter demonstrated that materials in Features 15 were probably associated with food preparation for Dowdall's household and for the workers of the bottling concern.

The possible socio-economic value of the ceramics from the three features, as shown in Figure 70, is not different from the position of the combined

features in Figure 69. In comparison to the other deposits, each of the Dowdall features indicates that Dowdall can be characterized as a lower to middle socio-economic level individual.

The ceramic values of the features from the Wilmington Boulevard project area have been compared to those derived from Miller's sample sites (1980) and the Washington, D.C. Civic Center site (Garrow 1982). Figure 71 shows the configuration of these other sites for comparison to the Wilmington deposits. The two contexts from the tenant farmer's house exhibit the lowest economic scaling, followed by the Jonathan Hale log cabin. Those sites and deposits with the next highest values include the glass factory worker's house, the material from the factory itself, all of the Dowdall features, and Levels 2B and C from Feature 2 in Area H; though the latter context is somewhat lower in economic value than the other three contexts. Those sites and deposits falling in the upper values of this sample, include Area D 1 from the Civic Center site, Walker's tavern, and Feature 1 from Area D in Wilmington, as does Level 2A, of Feature 2, also from Wilmington.

In terms of over all consumption patterns, cups usually have the highest value. This pattern suggests that the most costly ceramic purchases were for tea or coffee wares throughout the time periods represented in this sample of sites and deposits. Bowls were consistently the least costly vessel form. This low cost value for bowls may reflect their use in food preparation activities rather than food service.

Another observation from Figure 71, is the spread between the values of the different vessel forms among the different contexts. The tenant farmer's site, the tavern, the log cabin, and the combined Dowdall features all have the three vessel forms clustering in terms of ceramic value. The next group of contexts with similar spread of ceramic values includes the glass worker's house, and the glass factory. The next cluster includes the Civic Center site and Levels 2B and C in Feature 2; plus, to some extent, Feature 1 in Area D and Level 2A from Feature 2 in H. These observed spreads in the vessel form values suggests a pattern in which the contexts with the lowest economic values have the least spread in vessel form values, while those contexts with higher overall ceramic economic values have a higher value spread. The tavern, of course, does not fit that assumption, but the tight clustering of values in that case probably relates to the commercial food and drink service orientation of that business.

It is somewhat difficult to compare the relative position of these sites and deposits using Figures 69 and 71. To permit easier comparisons, a mean ceramic value was calculated. This value is simply a summation of all values within an assemblage, and is derived by summing the indices for cups, bowls and plates, and dividing this sum by the total number of ceramic vessels. Table 85 presents the calculations of the mean ceramic value of Miller's sites, the Civic Center site, and the Wilmington deposits. Figure 72 graphically shows these mean values, with the sites and features presented in chronological order. The mean ceramic values appear to cluster in three groups. Those contexts with the lowest values include the two tenant farmer contexts and the log cabin. The next highest group includes the glass factory worker's house, all the Dowdall features, and Levels 2B and 2C from the barrel privy in Area H. The value for the glass factory lies between

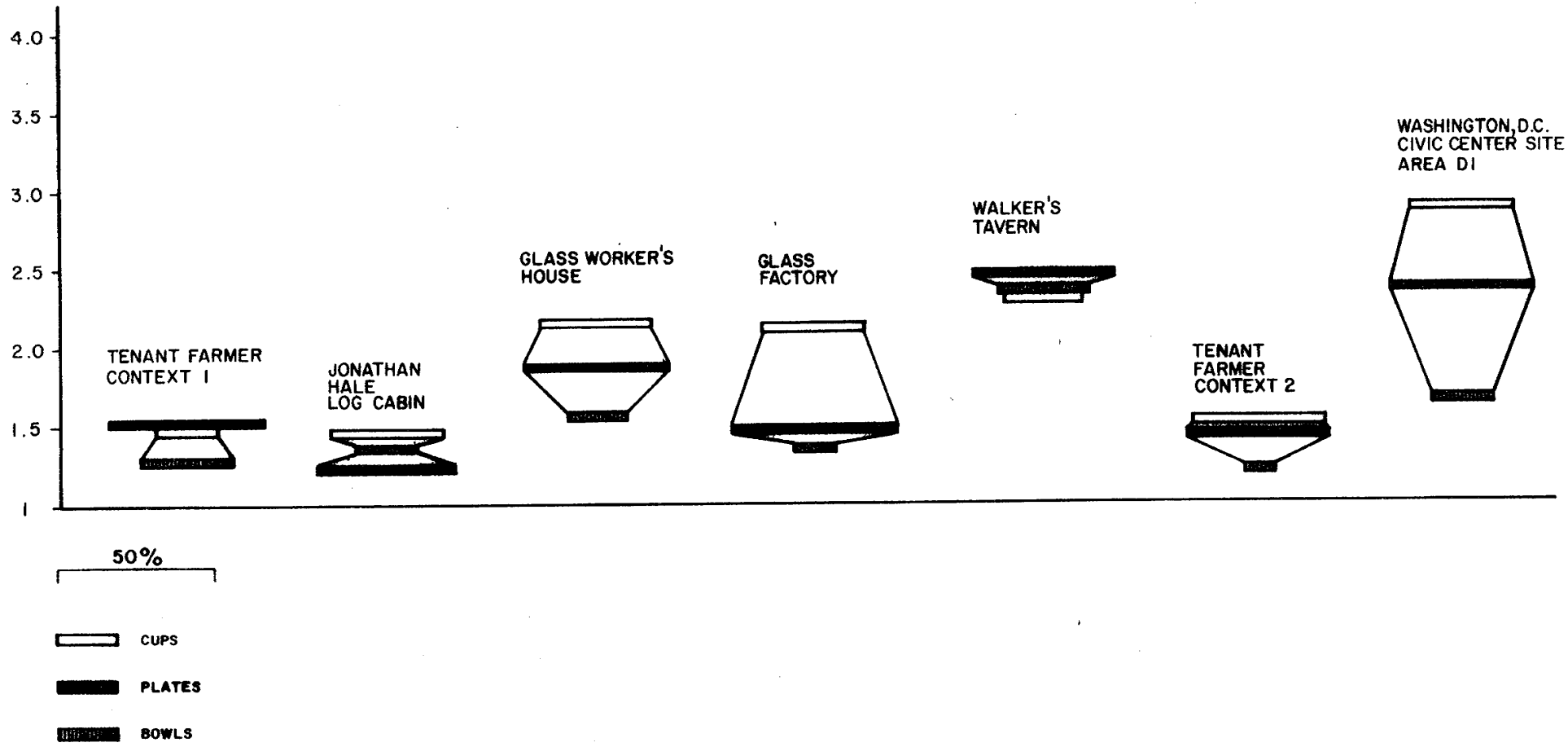

FIGURE 71
ECONOMIC SCALING OF CERAMICS
FROM MILLER'S (1980) SAMPLE SITES AND
AREA D1, WASHINGTON D.C.
CIVIC CENTER SITE (GARROW 1982)

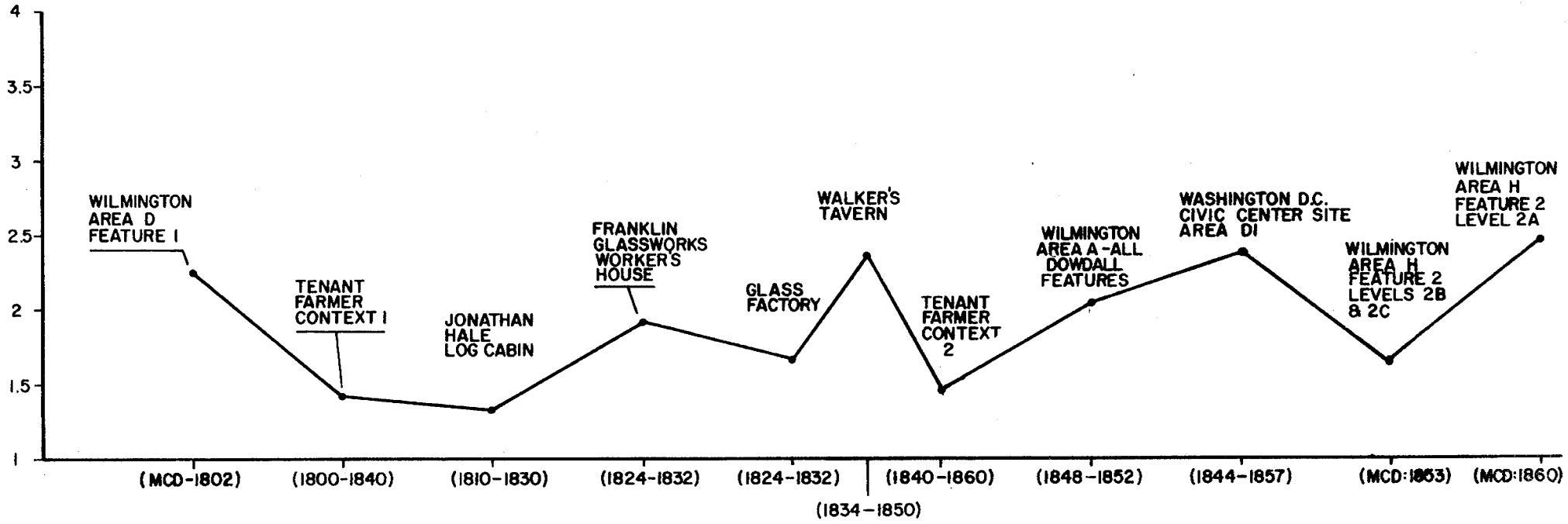

FIGURE 72

MEAN CERAMIC VALUES
FROM MILLER'S (1980) SAMPLE SITES,
AREA DI, WASHINGTON D.C. CIVIC CENTER SITE;
AND WILMINGTON, BY CHRONOLOGICAL ORDER

TABLE 85. Mean Ceramic Values Derived from Miller's (1980:36-37) Sample Sites; Area D1, Washington, D.C. Civic Center Site; and Wilmington Features

A: Tenant Farmer (ca. 1800-1840) Context 1

Form	Number of Vessels	Product*
Cups	3	4.32
Plates	8	11.86
Bowls	5	6.47
Totals	16	22.65

Mean Ceramic Value: 1.42

B. Jonathan Hale Log Cabin (ca. 1810-ca. 1830)

Form	Number of Vessels	Product*
Cups	17	24.72
Plates	20	24.64
Bowls	8	10.87
Totals	45	60.23

Mean Ceramic Value: 1.34

C. Franklin Glass Works - Worker's House (1824-ca. 1832)

Form	Number of Vessels	Product*
Cups	33	70.92
Plates	44	81.72
Bowls	17	26.20
Totals	94	178.84

Mean Ceramic Value: 1.90

* based on number of vessels by index value; see Miller 1980

TABLE 85. (continued)

D. Glass Factory (1824-ca. 1832)

Form	Number of Vessels	Product*
Cups	21	44.28
Plates	33	48.45
Bowls	8	10.97
Totals	62	103.70

Mean Ceramic Value: 1.67

E. Walker's Tavern (ca. 1834-ca. 1850)

Form	Number of Vessels	Product*
Cups	9	20.75
Plates	16	39.08
Bowls	10	23.20
Totals	35	83.03

Mean Ceramic Value: 2.37

F. Tenant Farmer (ca. 1840-ca. 1860) Context 2

Form	Number of Vessels	Product*
Cups	18	27.02
Plates	19	27.21
Bowls	4	4.80
Totals	41	59.03

Mean Ceramic Value: 1.44

TABLE 85. (continued)

G. Washington D.C. Civic Center Site (ca. 1844-ca. 1857)

Form	Number of Vessels	Product*
Cups	31	88.82
Plates	42	98.46
Bowls	17	28.00
Totals	90	215.28

Mean Ceramic Value: 2.39

H. Wilmington, Area D, Feature 1 (MCD:1802)

Form	Number of Vessels	Product*
Cups	41	135.00
Plates	34	49.32
Bowls	18	24.80
Totals	93	209.12

Mean Ceramic Value: 2.25

I. Wilmington, Area A, Feature 15 (MCD:1850)

Form	Number of Vessels	Product*
Cups	18	36.35
Plates	19	38.33
Bowls	5	6.00
Totals	42	80.68

Mean Ceramic Value: 1.92

TABLE 85. (continued)

J. Wilmington, Area A, Feature 17 (MCD:1850)

Form	Number of Vessels	Product*
Cups	18	39.05
Plates	18	39.61
Bowls	5	11.20
Totals	41	89.86

Mean Ceramic Value: 2.19

K. Wilmington, Area A, Feature 25 (MCD:1850)

Form	Number of Vessels	Product*
Cups	14	30.27
Plates	3	6.39
Bowls	4	8.00
Totals	21	44.66

Mean Ceramic Value: 2.13

L. Wilmington, Area A, All Dowdall Features (1848-1852)

Form	Number of Vessels	Product*
Cups	50	105.67
Plates	40	84.33
Bowls	14	25.20
Totals	104	215.20

Mean Ceramic Value: 2.07

TABLE 85. (continued)

M. Wilmington, Area H, Feature 2, Level 2A (MCD:1860)

Form	Number of Vessels	Product*
Cups	6	21.23
Plates	3	3.80
Bowls	6	12.30
Totals	15	37.33

Mean Ceramic Value: 2.49

N. Wilmington, Area H, Feature 2, Levels 2B and 2C (1853)

Form	Number of Vessels	Product*
Cups	18	45.43
Plates	20	30.75
Bowls	26	29.20
Totals	64	105.38

Mean Ceramic Value: 1.65

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these two groups. The upper value contexts, consist of the tavern site, the Civic Center site (Area D1), the cistern in Area D, and the upper level in Feature 2 in Area H (Level 2A).

One interesting observation of the mean ceramic values (Figure 72), is that deposits related to households of similar socio-economic levels exhibit similar relative values in both the pre-industrial and industrial periods. This will be discussed further in the synthesis chapter.

In preparing the data for the Miller analysis, several interesting vessel form correlations were observed. Table 86 presents the precentages of cups to plates to bowls for Millers's sites, the Washington, D.C. Civic Center site, and the Wilmington features. The percentages among the three vessel forms are fairly consistent among all the sites and features in this sample. Cups and plates usually have the highest percentages among the three forms, with bowls being the least frequent. This consistency is unexpected given the differences in the historically and ceramically measured socio-economic levels of the sites' occupants, and the differences in the contexts' temporal positions.

However, cups and plates do not predominate in the Feature 2, Area H assemblage. There are more bowls in Level 2A than plates. There are more bowls

TABLE 86. Relative Percentages of Plates, Cups, and Bowls from Miller's (1980:36-37) Ceramic Economic Scaling Examples; Area D1 from Washington, D.C. Civic Center Site, and Wilmington Features

	Number	Percent
A. Tenant Farmer (ca. 1800-1840) Context 1		
Plates	8	50.0%
Cups	3	18.8%
Bowls	5	31.3%
	16	100.1%
B. Jonathan Hale Log Cabin (ca. 1810-ca. 1830)		
Plates	20	44.4%
Cups	17	37.8%
Bowls	8	17.8%
	45	100.0%
C. Franklin Glass Works - Worker's House (1824-ca. 1832)		
Plates	44	46.8%
Cups	33	35.1%
Bowls	17	10.1%
	94	100.0%
D. Glass Factory (1824-ca. 1832)		
Plates	33	53.2%
Cups	21	33.9%
Bowls	8	12.9%
	62	100.0%
E. Walker's Tavern (ca. 1834-ca. 1850)		
Plates	16	45.7%
Cups	9	25.7%
Bowls	10	28.6%
	35	100.0%

TABLE 86. (continued)

	Number	Percent
F. Tenant Farmer (ca. 1840-ca. 1860) Context 2		
Plates	19	46.3%
Cups	18	43.9%
Bowls	4	9.8%
	41	100.0%
G. Washington Civic Center Area D1 (ca. 1844-ca. 1857)		
Plates	42	46.6%
Cups	31	34.4%
Bowls	17	18.9%
	90	99.9%
H. Wilmington, Area D, Feature 1 (MCD:1802)		
Plates	34	36.6%
Cups	41	44.1%
Bowls	18	19.4%
	93	100.1%
I. Wilmington, Area A, Feature 15 (MCD:1850)		
Plates	19	45.2%
Cups	18	42.9%
Bowls	5	11.9%
	42	100.0%
J. Wilmington, Area A, Feature 17 (MCD:1850)		
Plates	18	43.9%
Cups	18	43.9%
Bowls	5	12.2%
	41	100.0%
K. Wilmington, Area A, Feature 25 (MCD:1850)		
Plates	3	14.3%
Cups	14	66.7%
Bowls	4	19.0%
	21	100.0%

TABLE 86. (continued)

	Number	Percent
L. Wilmington, Area A, All Dowdall Features (1848-1852)		
Plates	40	38.5%
Cups	50	48.1%
Bowls	14	13.5%
	104	100.1%
M. Wilmington, Area H, Feature 2, Level 2A (MCD:1860)		
Plates	3	20.0%
Cups	6	40.0%
Bowls	6	40.0%
	15	100.0%
N. Wilmington, Area H, Feature 2, Levels 2B and C (1853)		
Plates	20	31.3%
Cups	18	28.1%
Bowls	26	40.6%
	64	100.0%

than both plates and cups in Level 2B and 2C. Based on the historical evidence, these contexts were associated with a lower level socio-economic household(s). It should be noted that the Miller analysis showed Level 2A as falling into the upper portion of the ceramic economic scale. Otto (1977) hypothesized, that lower socio-economic level households used more hollow wares than higher socio-economic groups, because of the types of foods that were prepared and served. If this is true, the results of the Miller analysis for Level 2A in Feature 2, may be questioned. Unfortunately, there are insufficient data to examine this further.