Contextual Analysis of the Use of Space at Two Near Eastern Bronze Age Sites

Part 8: Report on the Pottery Analyses

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1 Introduction

The pottery was recovered from the bulk samples by wet sieving, using 1mm and 3.5mm meshes. The pottery fragments were sorted by 'eye' from the wet sieving residues. The fragments were assigned to fabric types (coarse, medium and fine) and within these groups were sorted according to size. The sizes of fragments (i.e. the maximum dimensions of each fragment) were recorded within 1cm intervals, i.e. less than 2cm, 2-3cm, 3-4cm, etc., and up to and greater than 15cm (Fig. 17). The fragments in each of the size categories were counted and weighed.

The variations in density (i.e. total weight of pottery in grams per total volume of sediment processed in litres) and degree of fragmentation are investigated in this study.

2 Pottery Densities

The mean densities of pottery for the samples in the different context classes were compared with the overall mean values for the sites. At Tell Brak the overall mean is 22.9 g/l and at Kilise Tepe the mean value is 5.6 g/l (Fig. 18).

2.1 Tell Brak: Mean pottery densities – by deposit class (Fig. 1)

The highest mean density of pottery is recorded for the deposit class 'tip, midden, rubbish dump', a value of 45.9 g/l. Other deposit classes with densities above the site mean (excluding the 'mixed/miscellaneous' category[1]) include 'in situ: fire installation contents' (28.1 g/l) and 'pit fills: backfill' (40.8 g/l). Of note is the fact that the lowest density is recorded for the 'occupation sequence: accumulation on floor' deposit class (9.9 g/l).

2.2 Tell Brak: Mean pottery densities – by horizontal context (Fig. 2)

The 'within building: enclosed, unroofed space' has the highest mean pottery density of the horizontal contexts (68.0 g/l; this context comprises 3 samples only). The only other context with a density above the overall mean for the site (excluding the 'mixed/miscellaneous' category) is that described as 'within building: unspecified space' (23.3 g/l). The lowest density is recorded for the 'within building: ritual space', a value of 6.2 g/l. The ratio of densities for contexts in enclosed spaces *versus* unenclosed spaces is 21.6:18.0, indicating that pottery accumulations were slightly greater within buildings.

2.3 Tell Brak: Mean pottery densities – by vertical context (period) (Fig. 3)

The highest density recorded in this classification of the samples is the Middle Uruk period (group II, 53.5 g/l). Samples from the earliest phase (Early/Middle Uruk, group I) also have densities above the overall site mean (34.2 g/l). The later 3rd millennium group (IV) has the lowest mean pottery density (11.5 g/l).

2.4 Tell Brak: Mean pottery densities – by trench (Fig. 4)

Only two trenches have pottery densities above the overall site mean, HS1 (53.5 g/l) and HS6 (34.2 g/l). The lowest densities are for trenches HF1 and HF2 (3.2 g/l and 1.1 g/l respectively).

2.5 Kilise Tepe: Mean pottery densities – by deposit class (Fig. 5)

The highest mean density of pottery is recorded for the deposit class 'in situ deposits' (including fire installation contents), a value of 6.1 g/l (excluding the 'mixed/miscellaneous' category). The only other deposit class which has a density above the site mean is the 'pit fills' class (6.0 g/l). The 'constructional material' and 'occupation sequence' classes both have pottery densities below that of the site mean (5.2 g/l and 5.4 g/l respectively). The lowest density of 2.8 g/l is recorded for the category designated as 'structure', this comprises three samples only.

2.6 Kilise Tepe: Mean pottery densities – by vertical context (period) (Figs. 6 and 7)

[1] The 'mixed/miscellaneous' categories of samples from both sites have little relevance in the analyses.

In the northern part of the tepe (i.e. squares 20-18) four vertical contexts have pottery densities above the site mean: 'Early Bronze Age III' (6.1 g/l); 'Late Bronze Age d-f' (8.4 g/l); 'Middle Iron Age' (7.2 g/l) and 'Later Iron Age' (9.8 g/l). The lowest density is recorded for the 'Early Bronze Age II' context with a value of 3.5 g/l.

In the central part of the tepe (i.e. contexts I-L14) there is only one vertical context that has a pottery density above the overall site mean; the latest period represented (the 'Byzantine' context) has a value of 6.4 g/l. The lowest mean density is recorded for the 'Late Bronze Age d-f' (2.8 g/l). Fig. 7 shows clearly that the older deposits in this area of the site have lower pottery densities than the most recent deposits.

2.7 Kilise Tepe: Mean pottery densities – by trench (Fig. 8)

Seven trenches have pottery densities above the site mean: H18 (8.7 g/l); I20 (9.8 g/l); I19 (6.7 g/l); J20 (8.1 g/l); J18 (22.3 g/l; only two samples were taken from this trench); K19 (5.9g/l) and K14 (6.8 g/l). The lowest density is recorded for trench J19 (3.2 g/l).

3 Pottery fragmentation

This study was based on an assessment of the proportions of the smallest pottery fragments (i.e. with maximum dimensions of less than 2cm) in the different context classes. It was considered that this might be an indication of the relative degree of fragmentation of the pottery (i.e. a larger proportion of the smallest fragments is assumed to represent a greater degree of fragmentation and *vice versa*). The mean percentages of <2cm fragments for the samples in the different context classes were compared with the overall mean values for the sites. For Tell Brak the overall mean is 62.9% and for Kilise Tepe the mean value is 71.6% (Fig. 19).

3.1 Tell Brak: Fragmentation – by deposit class (Fig. 9)

The highest mean percentage of <2cm fragments is recorded for the deposit class 'pit fills: backfill' (67.9%). Other classes with mean proportions above the site mean include 'construction materials: destruction debris' (66.1%), 'occupation sequence: accumulation on floor' (66.8%) and 'fire installation contents' (66.0%). The lowest percentage of <2cm fragments are in the 'tip, midden, rubbish dump' class (50.1%).

3.2 Tell Brak: Fragmentation – by horizontal context (Fig. 10)

The highest mean percentage of the smallest pottery fragments is recorded for the context described as 'within building: ritual space' (72.9%). Other contexts with mean values above the site mean include 'unenclosed, unroofed: craft activity' (70.5%), 'unenclosed, unroofed: other' (63.4%) and 'street/lane'. The lowest proportions of <2cm fragments are in the 'in building: enclosed, unroofed' context (45.1%). The ratio of proportions of <2cm fragments within *versus* outside buildings is 60.2:67.1, suggesting that there is a greater degree of fragmentation in the unenclosed areas of the site.

3.3 Tell Brak: Fragmentation – by vertical context (period) (Fig. 11)

The highest mean percentage of <2cm fragments is recorded for the group III (Ninevite 5) samples, a value of 72.6%. The latest two periods (IV, later 3rd millennium and V, 2nd millennium) have higher mean percentages (62.8% and 61.7% respectively) than the earliest two periods (I, Early/Middle Uruk and II, Middle Uruk; 51% and 53.5% respectively), but neither are above the site mean. The lowest proportion of <2cm fragments is recorded for the earliest period at the site.

3.4 Tell Brak: Fragmentation – by trench (Fig. 12)

Four trenches have mean percentages of <2cm fragments above the site mean: HF1 (74.7%), HF2 (68.5%), HS3 (65.6%) and HS4 (70.9%). The lowest proportions of <2cm fragments are recorded in trench HS6 (51%).

3.5 Kilise Tepe: Fragmentation – by deposit class (Fig. 13)

Three deposit classes have mean percentages of <2cm fragments above the site mean value (excluding the 'mixed/miscellaneous' category): 'structure' (72.7%); 'constructional materials' (71.9%) and 'in situ deposits' (84.9%). The 'occupation sequence' and 'pit fills' classes both have lower proportions of the smallest fragments, 67.8% and 67.9% respectively.

3.6 Kilise Tepe: Fragmentation – by vertical context (period) (Figs. 14 and 15)

In the trenches at the north end of the site it appears that there is a greater degree of fragmentation of pottery in the earliest periods. The 'Late Bronze Age a-c' (78.7%), 'Middle Bronze Age' (79.0%), 'Early Bronze Age III' (86.8%) and 'Early Bronze Age II' (82.3%) contexts all have mean percentages of <2cm fragments above the site mean value. In addition, the 'Later Iron Age' context also has a high proportion of the

smallest pottery fragments (80.8%). The lowest mean percentage is recorded for the most recent period, the 'Byzantine' context, with a value of 61.9%.

In the central area of the site (contexts I-L14) the earliest and latest periods both have high mean percentages of <2cm fragments. The 'Late Bronze Age' and 'Byzantine' contexts have mean percentages of 86.5% and 72.0% respectively. The Iron Age contexts all have low proportions of <2cm fragments ('Early Iron Age' 67.3%, 'Later-Early Iron Age' 61.2%, 'Later Iron Age' 64.5%).

3.7 Kilise Tepe: Fragmentation – by trench (Fig. 16)

Five trenches have high mean percentages of <2cm pottery fragments which are above the site mean value: H20 (83.4%); H19 (75.0%); J18 (80.0%); K20 (76.2%) and K18 (86.0%; J18 and K18 both have only two samples). The lowest proportion of small fragments is recorded in trench I20 (60.4%).