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Chocolate-on-White Ware: Tomb and Tall Vessel Typology at Pella¹

Introduction

Chocolate-on-White Ware is a fine white-slip burnished and decorated ware currently dated from the end of the Middle Bronze Age halfway into the Late Bronze Age. It has been of interest in the Eastern Mediterranean since Flinders Petrie first singled it out as a distinctive ware in his publications of Tall al-‘Ajjūl in the 1930s. Since that time the ware has been recognized at sites over the whole of the southern Levant including ‘Ammān, Jerusalem, Lachish, Jericho, Shechem, Haror, Kabri and Akko. However, the incidence of Chocolate-on-White Ware is numerically more prevalent around the North Jordan and Jezreel Valleys - most notably Pella, Baysān, and Megiddo, as well as Tall Abū al-Kharaz and Tall al-Ḥayyāt. This weight of distribution suggests at least one major workshop was situated in this region (see also McNicoll, Smith and Hennessy 1982: 49; Knapp *et al.* 1988: 90; McGovern 1997: 424; Maeir 2002: 235), with Pella itself a likely candidate, as attested by its unequalled corpus of ‘classic’ Chocolate-on-White Ware from tomb and tall (contra Knapp *et al.* 1988: 90-93).²

This article is prompted by the quantity of stratified Chocolate-on-White Ware (defined below) found at Pella in the massive Late Bronze-Age temple of Area XXXII that has been excavated since 1995 (Bourke *et al.* forthcoming 2003). The article initially compares the relative abundance of open-forms of Chocolate-on-White Ware vessels (kraters, bowls and plates)³ from the stratified deposits of the temple and surrounds, with the pre-

dominantly closed vessel-forms (jars / jugs) from tomb deposits found in previous seasons and for which Pella is well known. The results suggest that elements of the Pella temple Chocolate-on-White Ware corpus were specific to that context - a pattern tested through comparison with the only other stratified corpora of the ware available - Area III at Pella and Tall Abū al-Kharaz in the North Jordan Valley (FIG.1). A relative abundance in the Pella temple of large Chocolate-on-White bowls - and especially those termed kraters - leads to speculation that these vessels were specifically favoured for use in temple rituals.

Excavations to date in and around the Pella temple have cleared the temple interior and a substantial area around the perimeter, but as yet unexcavated Late Bronze Age deposits still remain along the southern wall - so far the richest area for Chocolate-on-White Ware (especially plot XXXIIG). However, whilst the incidence or otherwise of additional Chocolate-on-White Ware from further excavations along the rest of the southern wall would likely change the overall gross numbers, the ‘net result’ from the significant sample size already associated with the temple is firmly established.⁴

Definition: Chocolate-on-White Ware and White Slip Burnished Ware

The definition of Chocolate-on-White Ware and its relationship to other White slip Burnished, White Slip Burnished Painted and White Slip Painted wares needs to be drawn in order to make better sense of the statistics pre-

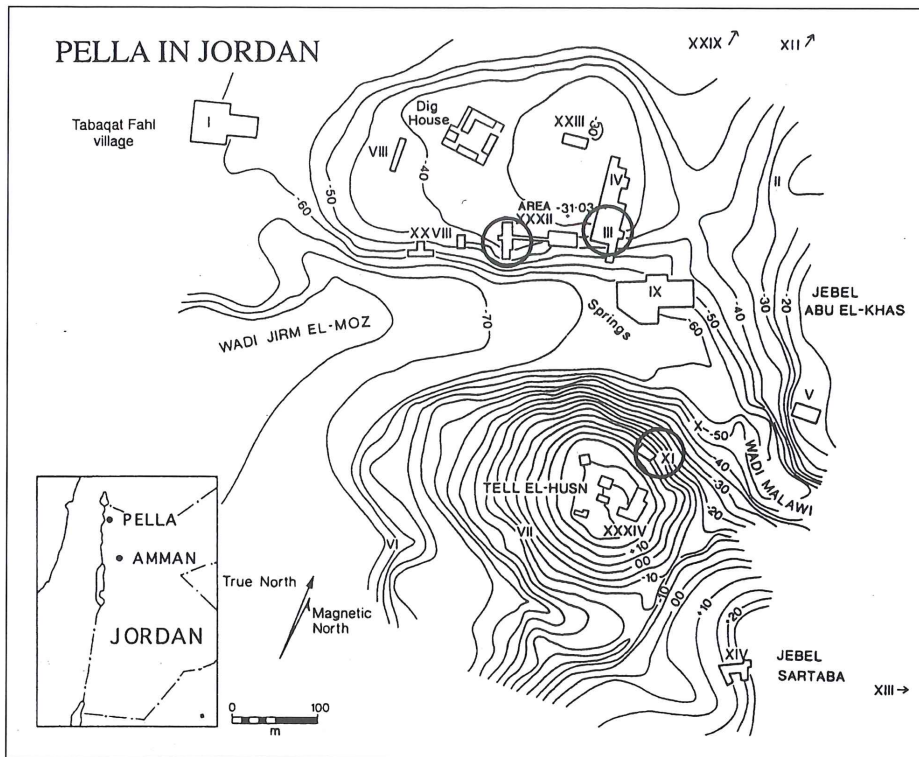
¹ This article presents some patterns observed during research of the Chocolate-on-White Ware from Pella towards a doctoral thesis at the University of Sydney, Australia. The author would like to thank Dr Stephen Bourke, Director of the University of Sydney expedition to Pella in Jordan for comments and advice, Dr Alison Betts for comments and advice, and Dr Tiffany Donnelly for editorial assistance. All errors remain the responsibility of the author.

² The question of Chocolate-on-White Ware’s origins and the possibility of regional workshops is a prime focus of the author’s PhD research. In order to test the numerical bias of the sample to the North Jordan Valley (and specifically Pella), the author is conducting Syn-

chrotron Radiation Induced X-Ray analysis (SRIXE) and Neutron Activation Analysis (NAA) on Chocolate-on-White Ware from Pella in comparison with over ten other sites across the southern Levant. The presentation of Pella as a/the producer of the ware will be the focus of a future publication.

³ An open vessel is defined by a slipped and burnished interior.

⁴ An oral version of this article was presented at the Eighth International Conference on the History and Archaeology of Jordan in Sydney in July 2001, which was substantially reworked for presentation at the Third International Congress of Near Eastern Archaeology at Paris in April 2002.



1. Site map showing excavation areas at Pella, including (circled) Areas III, XXXII and XI (Tomb 62).

sented in this article. Broadly speaking, the author's definition of Chocolate-on-White Ware corresponds to that of Petrie (1931-34); Amiran (1970) and Hennessy groups 1 and 2 (1985), where a densely-burnished white (often thick) slip is decorated with a red to brown (more rarely bichrome) decoration on a variety of well-levigated fabrics (Donnelly 2001: 251). However, it is in the exclusion of non-decorated vessels that the author's definition departs from previous opinions - this ware's distinctiveness from decorated Chocolate-on-White is increasingly more observable today due to the greater numbers of both types now available.⁵

This article asserts that a more rigorous and restricted classification of Chocolate-on-White Ware is desirable on the grounds of taxonomy and terminology ensuring 'Chocolateless-on-White' remains a humorous and speculative jibe.⁶ On a practical level, the lack of distinction between the decorated and non-decorated vessels is misleading and imprecise in terms of creating a visual image of a group. For example, in Rivka Gonen's analysis of Late Bronze Age burials, the listing of Tomb 1100 at Megiddo totals ten Chocolate-on-White Ware bowls and one

jug - eleven vessels in all (Gonen 1992: 42-44). However, a comparison with the original Megiddo report reveals that only one of these vessels actually has any paint, a typical tall narrow-necked jug, whilst all ten bowls are actually undecorated White Slip Burnished vessels.

Precise terminology offering an immediate distinction between decorated Chocolate-on-White Ware and in particular undecorated White Slip Carinated (Eggshell) bowls allows a more accurate quantification and inter-site comparison of the ware with the ultimate possibility of developing the ware's potential as a reliable indigenous dating marker.⁷ The suggestion is not particularly revolutionary, for scholars are already independently recognising the need to make a distinction as with (Maier 2002: 234).⁸ Sometimes the distinction is implicitly recognised, as in the report of the 2000 season at Tall al-'Ajjūl: 'This date [end of Middle Bronze to beginning of Late Bronze] was supported by a number of imported wares, amongst which are Cypriote Red-on-Black, White Slip I, Bichrome Wheel-made, and Black Lustrous Wheel-made and Chocolate-on-White Eggshell Ware' (Fischer 2002: 109). There is recognition here that to sim-

⁵ The number of CoW and WSB vessels from Tomb 62 at Pella (figures in text) is particularly useful for categorically identifying ratios of the ware with typology - the complete nature of each vessel leaving no doubt as to whether they were decorated or undecorated.

⁶ 'Chocolateless-on-White' was a term coined by Dr Timothy Potts who amiably disagreed with Prof. Basil Hennessy (1985) over the issue of combining White Slip Burnished vessels (notably carinated

bowls) with decorated Chocolate-on-White Ware.

⁷ The previously mentioned chemical analyses, combined with Pella's substantial stratified material, afford the opportunity to establish the rationality of this approach.

⁸ Maier (2002: 234) refers to White Slip Burnished as 'White Ware'; 'a group closely related to the COW' but noticeably for the purposes of this study - not actually a part of it.

ply have referred to this material as Chocolate-on-White Ware would have been misleading, for significantly it is the only ware in this list to be qualified by morphology.

In response to these issues, only decorated Chocolate-on-White Ware is considered in this comparison of tomb and tall typology. In particular this means that the non-decorated White Slip Burnished Carinated (Eggshell) bowls are excluded. These bowls have been considered as Chocolate-on-White by the main commentators on the ware, Amiran (1970); Oren (1973); Hennessy (1985); and Fischer (1999), and whilst they are undoubtedly a related group, there are enough differences to justify separation.⁹

Primarily there is a consistent morphological dichotomy between the two groups, which suggests that each is not simply the decorated or undecorated version of the other, despite a comparatively small number of anomalous vessels that diffuse the distinction. In particular these overlaps consist of decorated versions of carinated (Eggshell or White Ware) bowls which are ordinarily a typically White Slip Burnished shape, or plain versions of tall narrow-necked jars and jugs – most often a decorated Chocolate-on-White Ware shape (Hennessy 1985: 106). However, such examples are very much the exception. Of the 163 White Slip Burnished carinated bowls found in Tomb 62 only three have chocolate paint, and other White-Slip Burnished shapes such as torpedo-shaped dipper juglets are never found with painted decoration (Smith and Potts 1992: 72). This typological divide substantially supports the stylistic/technological distinction between the corpora of Chocolate-on-White and White Slip Burnished Wares.¹⁰ In addition, this distinction may also be supported by variations in fabric between the wares, as well as discrepancies of established chronology. For example, White Slip Burnished carinated (Eggshell) bowls begin early in the Middle Bronze IIC but are indistinguishable in form and fabric from those of the Late Bronze Age I (Amiran 1970: 129). The most accepted period for the introduction of Chocolate-on-White Ware is the transition from Middle Bronze to Late Bronze. If the two are not contemporary in their origins, referring to them both as

Chocolate-on-White makes little sense and is confusing when discussing the introduction of the ware as a whole.

In support of this typological divide, a comprehensive elemental analysis may also confirm that such ‘blurring’ at the boundary between White-Slip Burnished and Chocolate-on-White Ware is indeed due to technological and/or chronological sub-groups within each group itself.¹¹ Such a pattern is perhaps already demonstrated by other analyses such as the recent petrographical study of the Chocolate-on-White and White Slip Burnished corpora from Tall Abū al-Kharaz (Fischer 1999). It was demonstrated that the White Slip Burnished (Eggshell) Ware bowls were the only group attributed to Wādī az-Zarqā’ (Fischer 1999: Table 3). The location of this attribution is immaterial here, but of note is that the fabric was distinctive from the seven other Chocolate-on-White Ware groups identified at Tall Abū al-Kharaz, which between them shared only two other clay sources (Fischer 1999: Table 3).

There are other practicalities supporting the division. The exclusion of White Slip Burnished Ware contributes to a more rigorous and meaningful analysis of the decorated corpus. As has been discussed, Chocolate-on-White Ware and White Slip Burnished Ware generally fall into separate typological groups, which in turn reflect distinct functions (container, plate, cup etc). In comparing tomb and tall, the exclusion of the numerous White Slip Burnished carinated bowls in particular, allows greater visibility of function within the decorated Chocolate-on-White Ware corpus from the Pella temple. In the consideration of stratified material on the tall, the division also refines estimated vessel counts – the painted decoration becoming another determinant, in allocating individual sherds to individual vessels and so contributing to a more accurate calculation of the decorated corpus.¹²

The Pella Sample

Based on this demarcation, the total Chocolate-on-White Ware considered in this study from Pella Areas XXXII and III, and Tomb 62 is equivalent to 251 vessels (TA-

⁹ The difficulties of making the distinction are occasionally evident. Hennessy (1985: 105) notes in his Group 4 of White Slip carinated bowls and dipper juglets an unequivocal ‘White Slip dipper juglet (1985: Fig. 2.3)’, but a more hesitant ‘Wheelmade White Slip or Chocolate-on-White ware bowl (1985: Fig 2.4)’. Both vessels are undecorated and the dipper juglet is not burnished – perhaps accounting for Hennessy’s distinction between the two, but only further undermining its inclusion within the Chocolate-on-White Ware repertoire for which burnishing and ‘its excellent finish’ is a distinguishing feature (Amiran 1970: 158).

¹⁰ There are other examples. The 38 kraters in the author’s corpus all feature painted decoration. In the main these were Chocolate-on-White, but also included decorated versions of White Slip and White Slip Burnished Wares. There were no plain White Slip Burnished or White Slip examples.

¹¹ For example, Janine Bourriau’s opinion (personal communication) regarding a proportion of Pella’s White Slip Burnished bowls was that they were self-slipped. This is a reflection of the fine, white clay used for those particular vessels but is distinctive from Chocolate-on-White Ware which is distinguished by its thick white slip.

¹² To ignore the distinction between decorated and undecorated creates doubt as to the comparative proportions of each on the mound, which in turn weakens the comparative proportions of function as embodied within the typological characteristics of each ware (ie. jugs/jars and plates for CoW versus cups/small bowls for WSB ‘Eggshell’ Ware). For example, in a comparison of tomb and tall, the more accurate and easily defined tomb statistics (by virtue of the incidence of complete vessels) would undermine the less complete tall corpus, whose unqualified mix of decorated and undecorated sherds would remain unknown.

TABLE 1. Breakdown of Chocolate-on-White Ware vessel types Pella Tomb 62.

Chocolate-on-White Ware Tomb 62	
Bowls / Plates	34
Kraters	1
Total open	35
Jars / Jugs	51
Cylindrical juglets	3
Amphoriskoi	6
Total closed	60
Total CoW vessels	95

TABLE 2. Breakdown of Chocolate-on-White Ware vessel types Pella Area III.

Chocolate-on-White Ware Area III 'Governors Residence'	
Bowls / Plates	28
Kraters	7
Total open	35
Jars / Jugs	29
Total closed	29
Total CoW vessels	64

TABLE 3. Breakdown of Chocolate-on-White Ware vessel types Pella Area XXXII (to 2001 Season).

Chocolate-on-White Ware Area XXXII Temple	
Bowls / Plates	37
Kraters	22
Total open	59
Jars / Jugs	33
Total closed	33
Total CoW vessels	92

BLE 1-3). Only Pella offers the opportunity to compare substantial quantities of Chocolate-on-White Ware from stratified contexts with extensive tomb deposits. The comparison is illuminating in terms of the differing typology of Chocolate-on-White Ware between the two contexts, and which in turn permits speculation regarding the ware's significance as a part of the temple functions. To

test that the temple/tomb (Area XXXII/Tomb 62) ratio is a specific and genuine pattern rather than an arbitrary one, the results are compared with the different typological ratios found in Pella Area III and Tall Abū al-Kharaz another site with extensively published Chocolate-on-White Ware (Fischer 1999). The dissimilarity between the various groups is seen as demonstrating a real and significant variation in the tomb/tall ratio likely attributable to function within the temple.

Chocolate-on-White Ware from Pella is best known from a number of tomb contexts - and especially Tomb 62 - one of the largest tombs of the Middle to Late Bronze Ages found in the Levant (Potts *et al.* 1985: 205-210; Smith and Potts 1992: 69-75, Pls. 53-59). Within its three chambers was found a total of around 1200 vessels, which included ninety-five Chocolate-on-White vessels (and nearly 260 White Slip Burnished vessels).¹³ In addition to Tomb 62, other Pella tombs of the period have contained Chocolate-on-White Ware but are not included in this study because Tomb 62 provides a sizeable and discrete assemblage (TABLE 1).¹⁴ The stratified tall samples of Chocolate-on-White Ware at Pella were first excavated in the early 1980s from Area III which focussed on a substantial and well-made mud brick building known as the 'Governor's Residence', commandingly situated looking south over the perennial thermal-stream of the Wādī Jirm al-Mawz (Smith and Potts 1992: 40-68). The Chocolate-on-White Ware from Area III is made up of sixty-four individual vessels (TABLE 2).¹⁵

Area XXXII is nearly eighty metres to the west of Area III and similarly looks south over the *wādī*. The Iron Age levels of the temple in XXXII were first found in 1995 with the Bronze Age levels excavated in subsequent seasons (Bourke 1997; Bourke *et al.* 1998; Bourke *et al.* 2003 forthcoming). The Chocolate-on-White Ware from Area XXXII numbers around 135 stratified sherds representing ninety-two vessels (TABLE 3). Also found in relative abundance were other white-slipped painted wares that are superficially related to Chocolate-on-White in terms of (usually coarser) technique and decoration. In this paper vessels of this kind are referred to descriptively as White Slip Burnished Painted and White Slip Painted.¹⁶

Chocolate-on-White Ware in the Temple

Figure 6 shows the comparative proportions of open and closed Chocolate-on-White vessels between Pella's Tomb 62 and temple deposits. It illustrates that the temple and

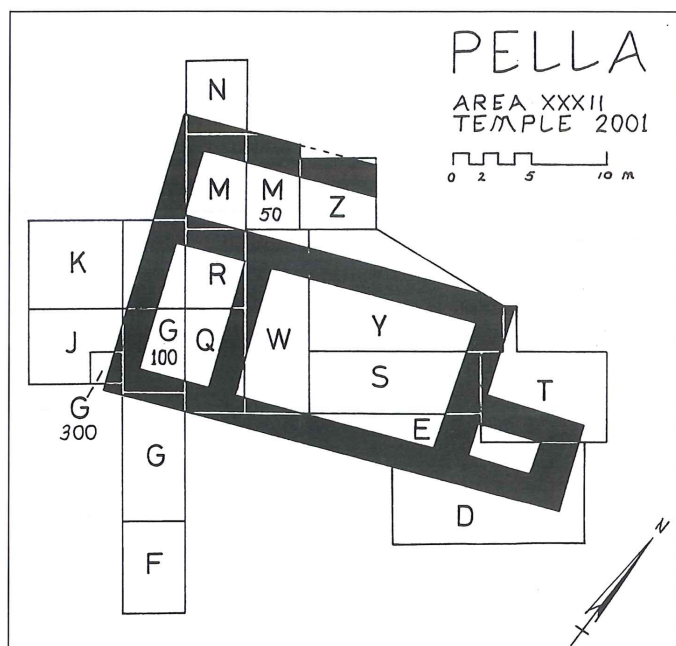
¹³ Amongst the White Slip Burnished vessels were 195 carinated (Eggshell) bowls, and 67 dipper juglets (Smith and Potts 1992: 72).

¹⁴ Other Pella tombs in addition to T.62 with Chocolate-on-White Ware: T.1 (Smith 1973 Pp 171, 201, Pls. 46 & 81), T.18, 19, 20 (McNicol, Smith, Hennessy 1982: 35-53; Hennessy 1985), T.27 (Hennessy 1985), T.77, T.79 (Potts *et al.* 1988), T.94 (Bourke

1997: 107).

¹⁵ Area III's figures include three sherds of Chocolate-on-White Ware from Area IV which adjoins Area III to the north.

¹⁶ These terms are not discrete groups in themselves but rather broad categories of various non-Chocolate-on-White wares.

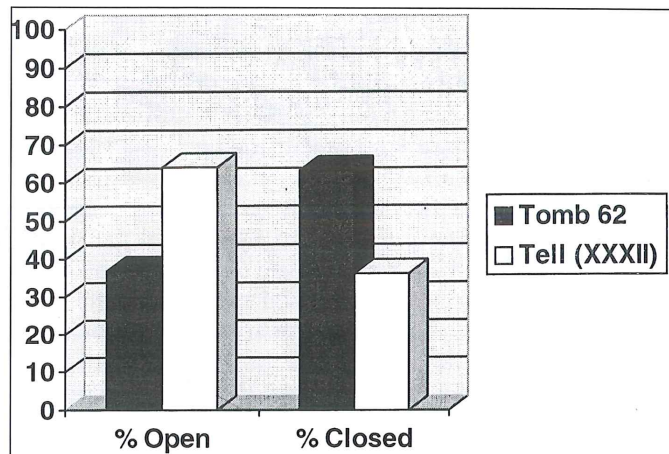


2. Schematic plan of trenches in the temple excavations of Area XXXII.

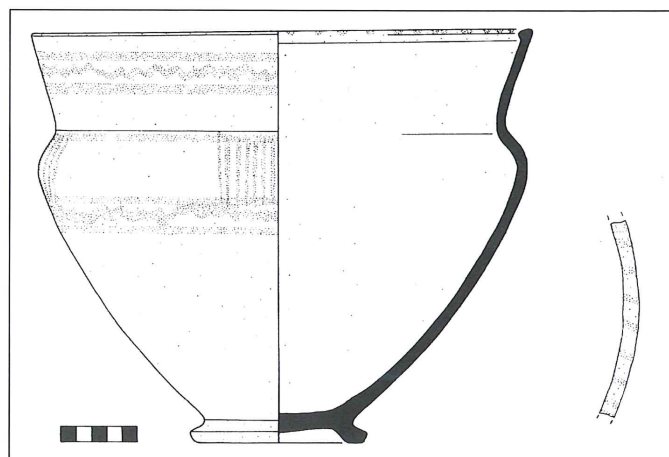
its environs feature close to twice the ratio of open to closed vessels. The comparison with Tomb 62 is inversely proportionate, since the ratio in this instance is twice as many closed vessels as open. Whilst a larger proportion of open vessels is generally expected in a tall context, the pattern in Chocolate-on-White Ware has not previously been demonstrated, and for a time was conjectured to be a purely funerary ware (Bourke pers. comm. 1998). The striking difference between tomb and tall demonstrates a specific typological divide: working from the assumption that pottery found within 'living' contexts on the mound is residual evidence of utility, the greater proportion of open Chocolate-on-White Ware vessels in and around the temple is likely to indicate that Chocolate-on-White Ware was a part of the temple furniture, with the greater proportion of open shapes - and particularly steep-sided bowls or kraters - suggestive of use within (liquid) rituals (FIG. 3).

Kraters

Amongst the open vessels, one type – the flared rim krater or mixing bowl – is of particular significance since it is ordinarily a very rare type in the Chocolate-on-White repertoire, with only a single example found at any site - in Tomb 62 at Pella (FIGS. 4 and 12). This is a distinctive flared-rim type of which several other examples have also been found in the Pella temple. This form's significance to the Pella temple is augmented by its total absence from other temple excavations such as tall Abū al-Kharaz where



3. Pella. Percentage of total CoW open to closed vessels: Tomb and Tall Area XXXII.



4. Krater, outflaring (CN 5487) Pella Tomb 62 (XI T.62 1.2) Finely levigated clay with added fine and occasionally medium (3-5mm) grits, fired to a pink-buff (10YR 7/3) with light grey (10YR 7/1) core at base, burnished white slip (10YR 8/3) on interior and exterior, painted on exterior with reddish brown (2.5YR 4/4) decoration.

kraters tend to be low-rimmed and often with handles (Fischer 1999, Figs. 3.2, 9.6). The rarity of of Chocolate-on-White flared-rim kraters means looking to other wares for parallels. A close typological equivalent for this shape comes from Megiddo, in Red, White and Blue Ware from late Middle Bronze contexts in stratum X (Loud 1948, Pl. 47.11; also Maier 2002). Described by Loud as a chalice – probably by virtue of associated finds and a 'cultic' internal projection – the body profile (the base is missing) is nevertheless reminiscent of the Pella Tomb 62 krater.¹⁷

The context of the Megiddo Red, White and Blue Ware vessel is potentially informative in regards to this shape, coming as it does from locus 2032 in square N 14. This lies directly under the later temple '2048' of stratum

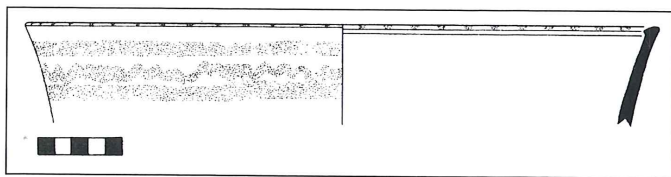
¹⁷ This similarity is of relevance to Maier's speculation that Red, White and Blue Ware is a precursor to Chocolate-on-White Ware

(233-34).

VIII, the stone-rubble base of which penetrated stratum IX (Loud 1948, Figs 247, 401). It was also within locus 2032 that other vessels identified as sacred were found in a variety of slipped and non-slipped wares: five tall pedestal-footed chalices, a fenestrated stand and large shafted bowl designed to surmount a stand (Loud 1948, Pl. 47). Such an assemblage accords with the excavator's opinion that the area was likely a religious precinct in the period preceding the surviving levels of the temple (see below) - indeed the question has been raised that the temple even dates from Stratum X (for a summary of this debate see Gonen 1987). On the strength of the Megiddo and Pella contexts associated with temple precincts, it is tempting to speculate that the otherwise uncommon flared-rim krater was a shape favoured in ritual-specific contexts, in all probability for the mixing and dispensing of liquid such as wine. The use of wine in such rituals is hypothetical but not unreasonable. As related in the 'Story of Sinuhe' Canaan was, already by the Middle Bronze Age, a place where 'wine was even more plentiful than water' (Leonard 1996: 256 fn 12).

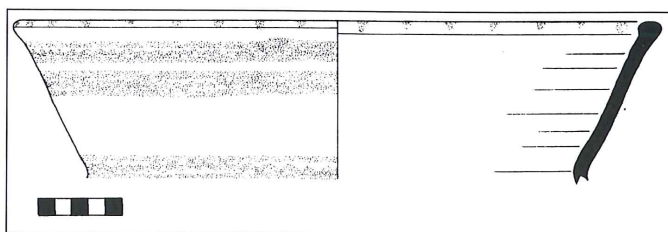
In contrast to the evidence from tombs, Chocolate-on-White Ware kraters (including large bowls of krater-like volume) were comparatively common from the Pella temple area with a total of twenty-three examples discovered to date.¹⁸ A selection of flared-rim kraters are illustrated in FIGS. 5-8, and bowl-types in FIGS. 9-11, the large bowls included on the grounds that they were capable of the same function as the more specialized and distinctive flared-rim krater. Rim diameters of the majority are around 35cms, with one exceptional example exceeding 60cms (FIG. 9). In this study a krater required a minimum rim diameter of 25cms.

The similarity of the flared-rim krater sherds to the complete exemplar from Tomb 62 in FIGS. 4 and 12 (CN 5487) suggests they too had a lower hipped body. FIG. 5 illustrates a stratified example (CN 17906) of the Tomb 62 type with a flattened swollen lip and diameter of 37cms. Another example (CN 18208) is even larger at 39cms (FIG. 6) with a rounded swollen lip and elaborate multiple

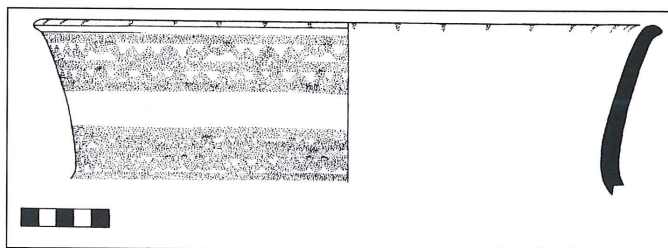


5. Krater, outflaring (CN 17906) Pella XXXIIM 54.9
NB. Colours and size of grits are Munsell standards. Superb finely levigated clay with fine red and grey stony inclusions (5%) and occasional fine (>2mm) white, fired pink (5YR 7/4) at surface and dark orange (5YR 6/6) at core, burnished white slip (7.5YR 8/2) on exterior and interior, painted on exterior and rim with dark red (2.5YR 4/6) decoration.

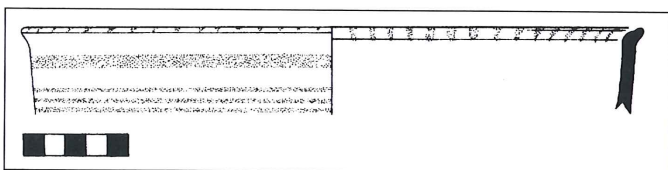
framed wavy-line decoration. The height of this example, if based upon the 4:5 height to width ratio of the complete krater from Tomb 62 (FIG. 4) would be an impressive 31cms. The krater in FIG. 7 (CN 17633) illustrates a similar, if more roughly executed example with a rim of 36cms diameter, and the smallest krater of this type, at 29cms (CN 17966), is seen in FIG. 8. The morphology of the non-flared rim Chocolate-on-White kraters seem to equate with large examples of well-known bowl types. The surviving height of CN 18685 (FIG. 9) makes it difficult to determine its shape unequivocally - though with a diameter of over



6. Krater, outflaring (CN 18208) Pella XXXIIG 420.2
Finely levigated clay with many very fine pebbly inclusions (15%) of clear/yellow and pink quartz, red-black, grey, white and brown with elongated air spaces, fired pink (7.5YR 7/4) at surface and light grey (7.5YR 7/1) at core, burnished white slip (10YR 8/3) on exterior and interior, painted on exterior and top of rim with red-brown (10R 3/3) decoration.



7. Krater, outflaring (CN 17633) Pella XXXIIQ 11.49
Clay reasonably well levigated, very fine and fine pebbly grits (15% of fabric) of clear quartz, dark grey, white and occasional red with elongated air pockets, fired grey (5YR 6/1) at core and orange at surfaces, some spalling on surface. White slip (10YR 8/1) over ext. and int. with close wheel burnishing, irregularly painted on ext. with red (10R 4/6) decoration of two double-framed wavy bands and spaced stripes on rim.

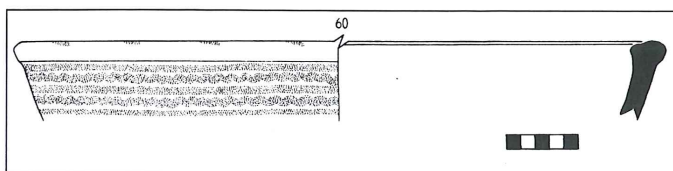


8. Krater, upright out-turned, fragment (CN 17966) Pella XXXIIG 411.6 Superb finely levigated clay, with mainly very fine (and occasionally fine) chert and pebbly grits (5% of fabric) of rusty red, grey, white, and black, well fired to pink (7.5YR 8/3) at surface with light grey (GLEYS 1 7/N) core. Superb quality white slip (10YR 8/2) horizontally burnished with gaps and over painted with yellowish red (5YR 5/8) wheel-applied bands and close stripes on rim.

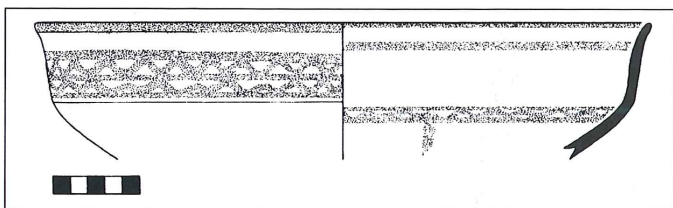
18 There were also four other kraters in varying combinations of White Slip Painted.

60cms its volume is certain to have been capacious. More easily determined shapes include the large carinated bowls with flaring rims illustrated in FIGS. 10 and 11. Photographs of all the sherds from which the vessels were drawn can be seen in FIGS. 13 and 14.

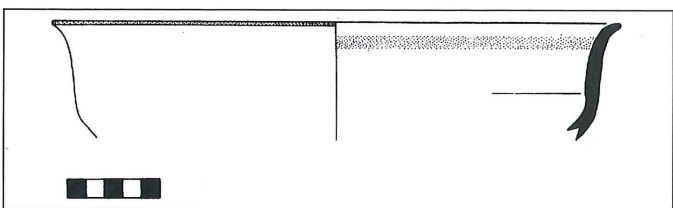
Of the pottery available east of the Jordan River in the late Middle to Late Bronze I, Chocolate-on-White was by far the most labour-intensive and distinctive. Amongst the temple assemblage these vessels would have appeared striking in comparison to the rest of the predominantly buff and painted-buff wares. It is easy to imagine their



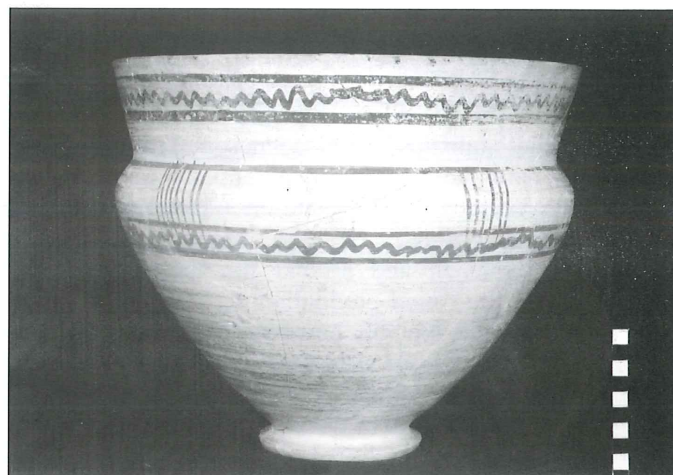
9. Krater, almond rim (fragment) (CN 18685) Pella XXXIIM 60.5 Clay well levigated with added fine and medium pebbly grits (15% of fabric) predominantly chalky white but also pebbly dark grey and occasional red with few medium-sized air pockets, fired grey (5YR 5/1) at core and reddish brown (5YR 5/3) at surfaces, much spalling on surface. White slip (10YR 8/1) over ext. and int. with patches of pink slip (7.5YR 8/4) on ext. and rim, close burnishing on ext. and widely spaced on interior, hand painted decoration on ext. in weak red (10R 4/4), of two framed wavy bands below rim and widely spaced diagonal stripes on rim.



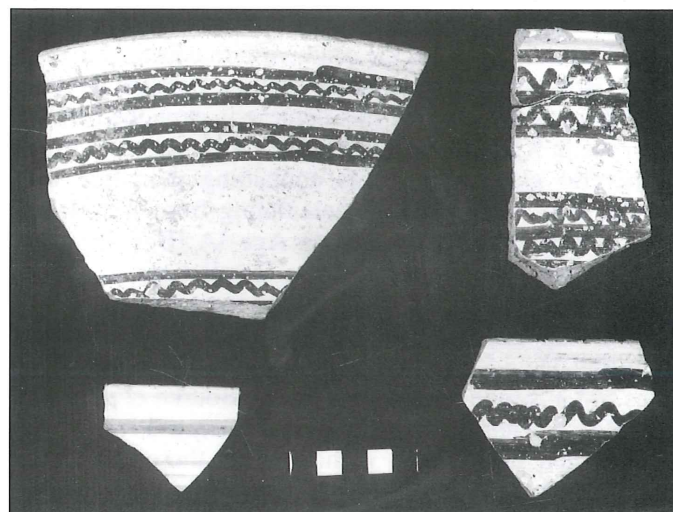
10. Large bowl, carinated (CN 17965) Pella XXXIIG 411.6 Very well levigated dense clay with very fine chert and pebbly grits (5%) of grey, brown, black and occasional chalky white with many minute metallic flecks [mica], well fired to buff (5YR 6/4) on outer surface and light grey (GLEY 1 7/N) at core and inner surface. White to pink slip (10YR 8/3), with spaced burnishing and painted decoration in dark red (10R 3/6) on exterior of hand-painted double framed bands, of careless quality compared to interior decoration of two wheel painted bands at rim, and framed single wavy band with vertical framed cross-hatching.



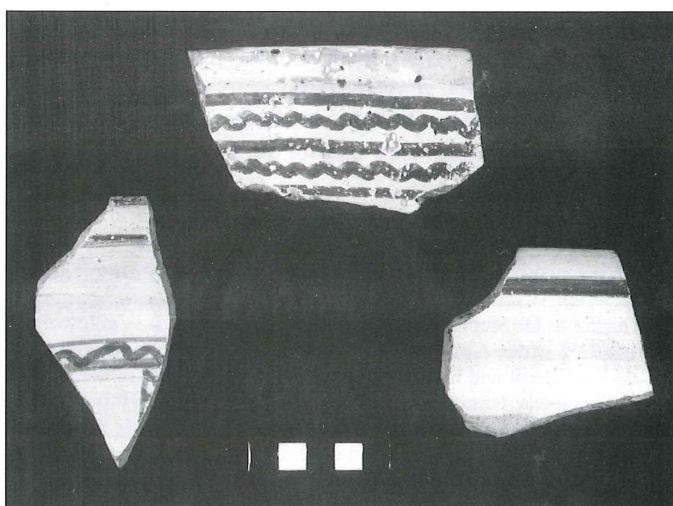
11. Large bowl, flaring rim (CN 18686) Pella XXXIIG 6.17 Clay well levigated with very fine chert and pebbly grits (10%) of predominantly red quartz pebble grits with few grey, black and green-brown (no white), fired terracotta colour (2.5YR 6/6) evenly through whole fabric, some elongated air spaces, no surface spalling. Beautiful white slip (10YR 8/1) int. and ext. fired on rim and lower ext. to orange pink (10YR 8/1), closely spaced burnishing, single wheel-painted red (10R 4/4) band below inside rim and on lip.



12. Photograph of whole krater CN 5487 (also FIG. 4).



13. Photograph of fragments (also Figs. 5 to 8) Left to right: CN 18208, CN 17633 CN 17966, CN 17906.



14. Photograph of fragments; (also Figs. 9 to 11) Left to right: CN 18685, CN 17965, CN 18686.

distinctive appearance favoured them for special purposes in the temple rituals.

Contextual Ratio of Temple Deposits

The contextual statistics of Chocolate-on-White Ware in association with the temple are potentially revealing in terms of the function of Chocolate-on-White Ware in Canaanite religious-ritual. Of the ninety-two vessel-equivalents found in and around the temple in Area XXXII, 58% were found predominantly outside the temple, and 42% inside. Notably however, nearly all (85%) of the 42% inside the temple were from the western 'Holy of Holies' section of the temple in trenches XXXIIM, Q, R, and locus 100 in the north of trench XXXIIG (see FIG. 2).

This concentration of Chocolate-on-White Ware within the Holy of Holies also seems to be significant to the 58% that constituted the exterior sample. Just over half of this sample was from the exterior of the south wall (mainly from Trench XXXIIG at the southwestern corner), adjacent to the Holy of Holies inside the temple. Perhaps the concentration of the ware in this context is explained by the presence in XXXIIF (a trench immediately adjacent to G), of several plaster-lined bins containing miniature buff bowls, jugs, bottles and funnels dating from the Middle Bronze Age IIC to Late Bronze Age IA (Bourke *et al.* 1998: 194-96, Fig. 23). That these installations were possibly of a funerary status is suggested by previous associations of funnels with Middle/Late Bronze Age burials at Pella and Megiddo, as the 'central place of funerary libations in Levantine ancestor worship' (Bourke *et al.* 1998: 194-96; cf. Pitard 1994). If special ancestral-related devotions had been made in honour of these earlier installations the quantity of Chocolate-on-White found nearby suggests it played an important role. It is worth noting that these earlier bins are situated at the current limit of excavation, and there is a possibility that there may be significant deposits in later contexts yet to be discovered adjacent to the bins. We can speculate that the numerous Chocolate-on-White vessels found here were used in preparing libations prior to their dedication adjacent to the southern temple wall, overlooking the perennial Wādī Jirm al-Mawz.¹⁹

Chocolate-on-White Ware at Other Temples

The first published examples of the ware in a specifically

temple context were at the Fosse Temple at Lachish. Olga Tufnell's experience with Petrie at Tall al-'Ajjūl ensured she was familiar with the ware and in 'Lachish II' singled out a striking example for publication in colour (Tufnell *et al.* 1940: 80 pl LXIV: 2). Given that the publication could not be exhaustive, only two examples were positively identified in the publication as Chocolate-on-White and were from a context identified as 'a group of Late Bronze Age dwellings [Houses 100] near the Temple in Area 100' (Tufnell *et al.* 1940: 36).

At Megiddo, a small quantity of Chocolate-on-White Ware is associated with the area of the mound accepted as a long-term religious precinct: "Stratum IX, like the preceding strata, is divided into two sections by what still may be assumed to be the sacred area" (Loud 1948: 102, Fig. 401). From squares O-13 and 14 of this stratum came two typical Chocolate-on-White platter-bowls, found amongst architectural remains immediately to the south of the stone layer underlying Temple 2048 of Stratum VIII (Loud 1948: 102, Pl. 54.11 and Fig. 401).²⁰ The paucity of examples of the ware in contexts near the temple supports the original date ascribed by the excavators to the last half of the Late Bronze Age in Stratum VIII. This contradicts suggestions that the temple began earlier in Stratum X (see discussion in Gonen 1987), which would have coincided with the peak of Chocolate-on-White Ware's production – a scenario the evidence does not support. Unless Pella is proven to be a unique case, a pre-Stratum VIII beginning for the Megiddo temple would have made it reasonable to expect far greater numbers of Chocolate-on-White Ware – a not unreasonable expectation given the ware has a relatively strong presence in the Megiddo tombs and elsewhere on the mound.

A little-known temple context for the ware is Tall Kit-tan just west of the Jordan River, where complete Chocolate-on-White Ware vessels were among the large number of 'elaborate pots' located 'along the south wall and two adjacent rooms' of the temple (Eisenburg 1977: 80). Although lacking details of context, the vessels are fortunately published in colour and appear to include conventional platter bowls of the type seen at Pella, as well as more unusual and probably late types (for Chocolate-on-White Ware) of a chalice and a goblet.²¹ Further south from Pella in the Ghawr at Tall al-Ḥayyāt, Chocolate-on-White Ware was interpreted as indicating a final Middle

¹⁹ Thanks to Dr Stephen Bourke for this suggestion. It is noteworthy that 71% of the Chocolate-on-White found in and around the temple is concentrated inside and outside the western end of the temple - respectively within and just outside of the Holy of Holies. Other possibilities for this south-western concentration outside the temple is that the Ware was used domestically by the temple elite living here in close proximity (unlikely considering the lack of architectural evidence), or they accumulated through 'housekeeping' activities clearing the floor within the temple.

²⁰ The locus of another example from Stratum IX is unknown (field

number b314; Oriental Institute A35307).

²¹ A first-hand examination has not been made, but the goblet in particular is in my opinion at the very end of the chronological range of Chocolate-on-White Ware and may be more accurately referred to as White Slip Painted [Burnished]. The whole corpus appears to cover a broad chronological range from LBI to LBIIA. The preliminary nature of the vessels' publication prevents a more detailed comparison at this stage beyond noting the significance of the ware's association with a temple.

Bronze IIC date for the last MB temple in Phase 2 (Falconer and Magness-Gardiner 1983; 1984; 1989).

Tall Abū al-Kharaz is situated eight kilometres south along the Jordan Valley from Pella and provides the most comprehensive selection of temple-related Chocolate-on-White and derivative White-Slipped Burnished Painted Wares (Fischer 1991a; 1999). An extensive range was found, including material near 'Room 5' in Area 2, which is compared by the excavator to the 'Fosse Temple' at Lachish and dated to 'the very beginning of the second part of the Late Bronze Age, Late Bronze Age II' (Fischer 1991b: 45). The selection of published material illustrates that Chocolate-on-White and White-Slipped Painted Ware was amongst the pottery found in levels predating (though in the vicinity) of the temple. Given the temple's Late Bronze IIA date, Chocolate-on-White Ware is predictably not found within the actual structure (Fischer 1991a, Fig 10; 1993: 282), though in common with Megiddo it seems there is a case for a pattern of successive ritualistic use that explains the presence of Chocolate-on-White Ware residual from earlier Late Bronze I levels under the temple (Fischer 1995, Figs. 8 and 9). This site will be examined in more detail below.

The unequivocal Late Bronze II date ascribed to Tall Dayr 'Allā accounts for its total lack of even residual Chocolate-on-White Ware (Franken 1992). Despite this absence, the numerous examples of Late Bronze II white-slip painted vessels demonstrates that even in the succeeding period there was a predilection in the temple for striking wares with contrasting decoration. Such a ceramic repertoire was superficially reminiscent of the earlier Chocolate-on-White Ware of which they are likely derivative.²²

The evidence from other sites tends to suggest that substantial quantities of Chocolate-on-White Ware in association with a Late Bronze I temple is unique to Pella, but there are two explanations why this appears to be the case. The generally fewer numbers of published vessels from other sites is perhaps partly a reflection of the general nature of most site publications, and earlier lack of familiarity with the ware as a separate type. This was particularly so prior to the 1960s (with notable exceptions covered below) after which it became better known as a distinct ware thanks largely to Ruth Amiran (1970). Perhaps the most relevant factor explaining the lack of Chocolate-on-White Ware at other temples is that they are gen-

erally later structures - the substantial Middle to Late Bronze I remains of the Pella temple being very rarely seen in temple contexts at other sites. The exceptions include the temple at the provincial site of Tall al-Ḥayyāt, or on the periphery of a larger site such as the Fosse Temple at Lachish. In spite of their contemporaneity to Pella, their comparatively insubstantial numbers of Chocolate-on-White Ware is possibly due to the inevitably different character of their assemblage in contrast to that of a large temple at a significant city such as Pella.²³ The relative absence of Chocolate-on-White Ware at surviving temples more akin to Pella, such as Megiddo or even Tall Dayr 'Allā, is explained by the date of these temples to the Late Bronze II - a period by which Chocolate-on-White Ware had been replaced by other slipped and decorated wares.

Comparative Statistical Samples of Chocolate-on-White Ware

The corpus from Tall Abū al-Kharaz is by far the best available and the only one published in sufficient detail to provide a broad statistical comparison of typology with Pella. This site, together with Area III at Pella, are the only two stratified Chocolate-on-White Ware groups available to test whether the Pella temple's statistics are specific to that building's function, and different to the typological ratio found in secular contexts.

Tall Abū al-Kharaz

The Tall Abū al-Kharaz corpus is equivalent to 323 (decorated) vessels - a substantial sample enabling a meaningful typological comparison with the 92 stratified vessels from the Pella temple. The graph (FIG. 15) illustrates the proportions of Tall Abū al-Kharaz Chocolate-on-White Ware, with significantly fewer open vessels than closed (figures extracted from Fischer 1999, Table 1).²⁴ The number of equivalent open vessels totals 143 (44%), in comparison to the total closed of 180 (56%). This is a ratio inversely proportionate to the Chocolate-on-White Ware from the Pella temple, where open vessels were twice as common as closed (FIG. 16). Interestingly, of the three stratified groups presented in this article, the corpus from Tall Abū al-Kharaz comes closest to the greater proportion of closed vessels seen in Pella's Tomb 62 (see FIG. 3).

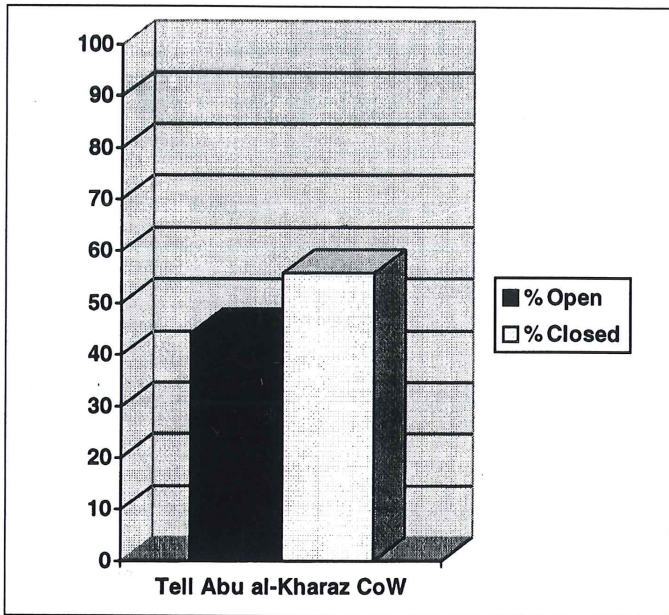
The dissimilarity between the typological proportions from the two sites is significant, though complicated by

²² White-slipped overpainted pottery in D539 accounts for 11 of the 20 registered pottery illustrated, and 21 of 54 examples of the sherd typology (Franken 1992: 115-21, Figs. 7-1 to 7-4). Burnishing is mentioned for the sherd typology, but only a single example from 54 is so described.

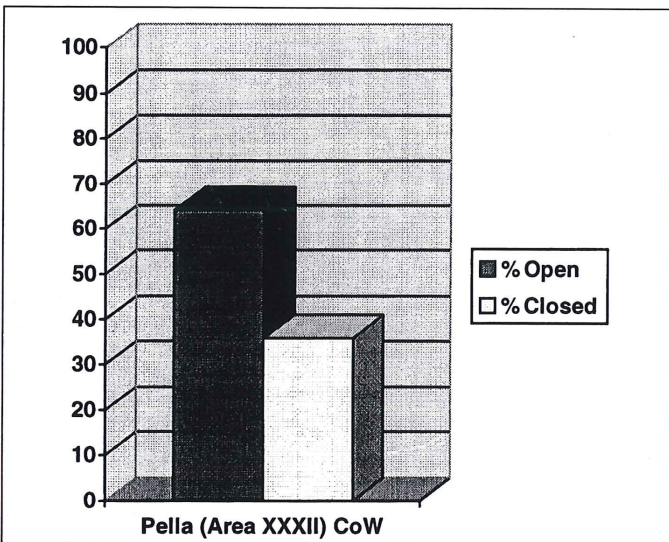
²³ Demonstrating a difference to Pella likely attributable to the provincial nature of Tall al-Ḥayyāt, is the excavator's observation that the ceramic assemblage from the four Middle Bronze Age phases

of the temple demonstrated a tendency through time towards a use of household pottery, ensuring 'the storage functions of Ḥayyāt's temples increasingly resembled those of households' (Falconer 1994: 150-54; 2001: 279).

²⁴ In common with the Pella sample, the figures from Tall Abū al-Kharaz excludes undecorated examples - in the main White Slip Burnished (Eggshell) Ware, and only considers the 323 samples identified as decorated Chocolate-on-White (including bichrome).



15. Tall Abū al-Kharaz. Stratified CoW: percentage of open to closed vessels



16. Pella (area XXXII). Stratified CoW: percentage of open to closed vessels.

the limitations of readily available data. The corpus available from Tall Abū al-Kharaz (Fischer 1999: 6, Table 1) is a mixture from both temple and non-temple contexts across the whole site. The Chocolate-on-White at Tall Abū al-Kharaz comes not only from where the temple is situated in Area 2 (1991: 79-80; 1993: 282-84; 1995: 97-98), but also from the nearby Area 1 (1991: 76-77; 1997: 132-37), and Area 3 (1994: 130), as well as Area 7 (1995: 103), which is

²⁵ Another variable is the nature of the assemblage. Fischer (1999: Table 1) divides the Tall Abū al-Kharaz corpus into Phases IV, V and VI covering a broad chronological range. The result is inevitably a little variability with what the author considers Chocolate-on-White

around 100 metres to the east and closer to the summit of the tall, and Area 9 (1996: 105), around 80 metres south-east of Area 2. Nevertheless, the divergent nature of the Tall Abū al-Kharaz corpus from the temple at Pella suggests that even if the (as yet unknown) temple corpus of that site had echoed Pella's, enough of the sample from non-temple contexts was sufficiently different in its typological ratio to affect the overall sample and create a variance from Pella.²⁵ The conclusion remains for Pella that the markedly larger proportion of open Chocolate-on-White vessels seen in the temple and its environs is distinct to ritual function. Such a typological ratio may yet prove to be typical of Canaanite temples generally, or idiosyncratic and appropriate to wealthy cities such as Pella - with one of the largest temples so far discovered in the region.

Pella Area III

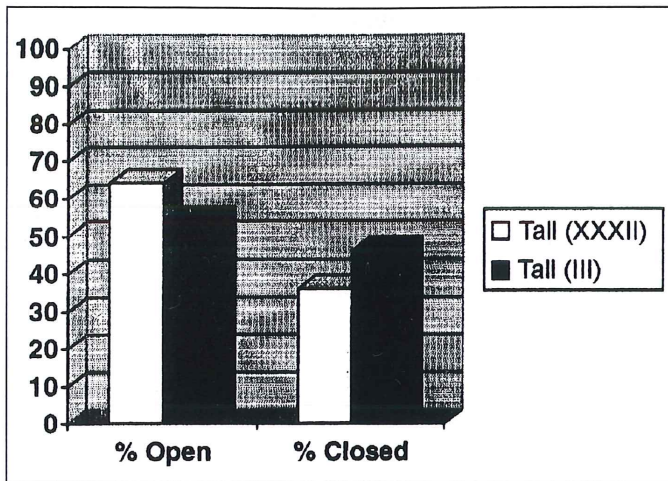
Area III is situated eighty metres to the east of the temple and included the Middle to Late Bronze deposits (Phases VA and VB) of the "Governor's Residence" (Smith and Potts 1992: 47-55). As previously mentioned, this was an attribution supported by the impressive style of building as well as associated finds such as the famous ivory box, indicating a wealthy and high-status section amongst Pella's Canaanite community resided there (Smith and Potts 1992: 51). As would be expected for a labour intensive (and thus expensive) ware, Chocolate-on-White is found in reasonable abundance within the walls of the Governor's Residence. However, the statistical make-up of this sample is different to the Temple, which supports different building functions and/or inhabitants - likely domestic versus ritual.

As FIG. 17 illustrates, there is a smaller proportion of open vessels from the Governor's Residence (III) in comparison to the greater number of open vessels in the Temple area (XXXII). This disparity may be particularly revealing when kraters are specifically considered in the equation. In the Pella temple, kraters made up 25% of the whole sample, whereas in the Governor's Residence kraters constituted only 10%. One explanation that may clarify this dissimilarity between the two contexts is that the greater proportion of open vessels from the temple - and especially kraters, relates to their ceremonial use in that context. It is not unreasonable to imagine that the specific function of a religious structure would have required different vessels-types to that found in a secular building.

Conclusion

As this article has shown, the substantial corpus of Chocolate-on-White Ware discovered over the last twenty-one

Ware or White Slip Burnished Painted wares (eg. Fischer 1999: Fig. 5,7). These latter wares are probably in the main the equivalent of Fischer's Chocolate-on-White II and III which display a degradation of quality over time.



17. Pella. Percentage of open and closed vessels comparing Area XXXII (Temple) with Area III (Governor's Palace).

seasons at Pella provides a unique opportunity to speculate on the function of the ware within the Bronze-Age phases of the temple in Area XXXII. The evidence from the temple strongly suggests that even if ostensibly a fine-ware that was favoured at times for funerary interment, Chocolate-on-White was also one of the 'wares of choice' for use in temple rituals. Typological frequency analysis demonstrates that the Chocolate-on-White Ware from the Pella temple is distinctive in character - and specifically in its proportion of open to closed vessel shapes. The strong presence of Chocolate-on-White in the Pella temple suggests that the use of such fine ware in this context was commensurate with the status of the temple and its servitors, and in such quantities as to suggest a close proximity to a manufacturing centre - in all likelihood Pella itself. Future research combining stratigraphic, elemental and stylistic analysis of the ware will help to determine whether Pella was alone as a manufacturing centre, or whether other contemporary centres existed in the Levant.

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