

DISCUSSION AND CONCLUSIONS

Ceramics, society and economy in the northern Levant

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[A] Contributions to the workshop

One of the primary aims of the Computational Research on the Ancient Near East (CRANE), funded by the Social Sciences and Humanities Research Council of Canada, is to create a framework for the integration and analysis of data from multiple archaeological projects working in the Orontes River watershed (Harrison). This workshop, held under the auspices of CRANE, focused on ceramics, a sub-field that, in Levantine archaeology at least, has often struggled to move beyond typological concerns to address research questions designed to improve our understanding of past social and economic organization (Badreshany and Philip).

In keeping with the initial geographical focus of CRANE, material from sites in the Orontes watershed in western Syria lay at the heart of the workshop. However, it proved possible to extend our coverage to include data emerging from new projects in Lebanon. For the Early Bronze Age (EBA) at least, this has allowed us to compare developments in western Syria (extending roughly from Homs and Hama to the Amuq), to those in the central Levant, an area adjacent to the Orontes, but in which both the ceramic types, and modes of production, appear quite different. The contribution by Sowada *et al.*, which deals with material of Levantine origin found in Egypt, was a late addition to the volume, included because we felt that the topic was closely aligned to our wider themes, and sheds light on the longer-distance connections of our region of interest, critical to the themes of the volume.

Our workshop sought to close the gap between:

1. the detailed site-specific presentations of ceramic evidence which dominate the ceramic literature,
2. generalized inter-regional ceramic studies, which are often focused upon typochronological comparisons, and
3. high level region/period syntheses.

As discussed elsewhere (Philip 2014: 26–27), the limited attention that the latter accord ceramics often appears at odds with the amount of effort put into the recording and presentation of pottery at site level. We therefore sought to bring together a number of specialists, each with a good knowledge of a particular project, who had expressed a desire to improve their knowledge of material from other sites and regions, in an attempt to integrate diverse datasets to better understand long-term developments in the production and distribution of ceramics across the Levant.¹ Wherever possible participants were asked to bring actual material, or failing that, good colour images, of vessels, sherds and petrographic thin-sections.

The 11 specialist contributions in the volume span the period from the initial adoption of ceramics in the northern Levant, during the 7th millennium cal. BC, through its role in the development and sustenance of the complex economies that characterized much of the northern and central Levant during in the 3rd and 2nd millennia cal. BC. Geographically the papers encompass an area extending from the Amuq (Welton) through the plains of inland western Syria (D’Andrea; Vacca), the Orontes Valley (Boileau; Kennedy *et al.*, Nieuwenhuys *et al.*; Shabo), the edge of the Syrian steppe (Mouamar), southwards through Lebanon and northern Jordan (Badreshany *et al.*; Jean; Sowada *et al.*).

[A] Terminology — pastes, wares and fabrics

A key question concerns the analytical value, and at times even the validity, of the classic archaeological groupings which are now deeply embedded in the literature. Such categories include, ‘Dark Faced Burnished Ware’, (DFBW) ‘Combed Ware’ or ‘Caliciform Ware’, terms created by archaeologists many decades ago, and often defined on the basis of poorly stratified material from a limited number of sites. In recent years, as the dataset has improved, researchers have begun to voice doubts as to the coherence, and even value, of these as fundamental units of ceramic analysis (Campbell 2000; 2007). For example, commenting on the difficulty caused by legacy classifications, Nieuwenhuys reveals the existence of vessels manufactured using either calcareous or basaltic fabrics, any of which might fall within the

¹ To some extent this meeting was a continuation of discussions that had begun within the framework of the northern Levant group of the European Science Foundation ARCANE project. We owe a great debt to the continuing support and encouragement of the driving force in this group, the late Jean-Paul Thalmann.

DFBW as traditionally applied, a point which he feels might cast doubt on its value as a unit of analysis.

Of course, ceramics do demonstrate traits which are both temporally and spatially extensive. The 6th millennium cal. BC sees finely-made, painted pottery spread across much of the Fertile Crescent — Nieuwenhuysse (2007) and more recently Cruells *et al.* (2017). In some areas this is preceded by the aforementioned DFBW, that is early Neolithic pottery with a dark surface, which is sometimes highly burnished, although this might be better understood as one aspect of a series of early experiments with surface colouration (Balossi 2017; Nieuwenhuysse and Campbell 2017). In the 4th millennium cal. BC chaff-tempered pottery, albeit showing a range of local variations, extends geographically from the northern Fertile Crescent, along the Orontes Valley, as far south as Tell Nebi Mend (TNM) (Akkermans 1988: 312–18; Giannessi 2012; Mathias 2000: 419–22; Philip 2002: 214), while during the 3rd millennium both goblet forms and Combed Ware jars are very widely distributed (Thalmann and Sowada 2014; Welton and Cooper 2014). Of course, not all widely distributed ceramic traits result from the same process. In some cases, they reflect the widespread adoption of shared methods of clay preparation and firing, in others the wide dissemination of specific cultural practices, for example relating to the consumption of food and/or drink. Some patterns reflect the physical transport of vessels as containers (Sowada *et al.*), or even the movement of potters (Badreshany *et al.*). The point being that when widespread commonalities are detectable within the archaeological record, each has to be explained in its own terms, and in the context of the prevailing forms of social and economic organization.

By way of caution, we note that for Nieuwenhuysse ‘a ware denotes a group of pottery with similar raw materials, fabric preparation, and firing behaviour.’ Following van der Leeuw (1993: 240) these are seen to constitute the invariant ‘backbones’ of the *chaîne opératoire* that cannot easily be separated. However, this categorization excludes shaping methods and decorative style as the basis of ware definition, which, according to van der Leeuw (1993: 240–42), allow a greater latitude of freedom. Nieuwenhuysse did not use these latter attributes to define distinct ware categories, but rather to identify the variability within each ware. Other contributors make a clear separation between ‘wares’ and ‘fabrics’ (e.g. Sowada *et al.*; Vacca; Welton). For these authors, ‘ware’ can include elements of surface treatment, decoration and firing, and may correlate with physically distinctive classes of ceramic, while ‘fabric’ refers to a specific mix of clay and inclusions. This distinction is particularly important in cases where we can see the production of what are recognizably versions of the same ‘ware’, in more than one fabric, as documented in the Amuq (Welton), or the ‘grey wares’ that appear widely during EB IV in the middle Orontes Valley and along the fringes of the Syrian steppe (Boileau; Cooper 2020: 113–14; Kennedy *et al.*; Mouamar). There will also be cases where variants cannot readily be distinguished by the naked eye, making their recognition within a larger ceramic assemblage difficult without widescale microscopic analysis. This underlines the close relationship between analytical methods and the nature of the resulting datasets, a point that has real implications for inter-assemblage comparisons.

This usage rather implies that specific combinations of shape and surface treatment were understood at an emic level, and that these could be executed using different raw materials, perhaps at multiple workshops, and that such vessels would have been viewed by both the consumer and producer as in some way ‘equivalent’. Equally, in both the Amuq (Welton), and in the EB IV assemblage from Acharneh (Boileau), it has been demonstrated that a single fabric could be used to produce a range of vessel forms and ware types. This suggests, either that a single workshop could produce multiple ‘wares’, or that workshops specializing in different products were using essentially the same raw materials — or both. Whatever the case, these developments point to the regular communication of technical knowledge between potters. As these knowledge networks are likely to have spatial and temporal properties that differed from those through which political power was expressed, we now need to tease out these connections and explore their implications for society and economy as per the contributions in Roux and Manzo (eds) (2018).

[A] Neolithic ceramics from the Orontes Valley

While most of the papers in this volume deal with the Early Bronze Age, Nieuwenhuys sheds useful light on the initial appearance of ceramics in the northern Levant, and their subsequent development in the region. In many parts of the Near East, the adoption of pottery involved an initial phase in the early 7th millennium cal. BC, during which the emphasis was on the production and circulation of small quantities of well-made vessels (Nieuwenhuys *et al.* 2010; Tsuneki 2017: 4). These were often dark in colour, produced in a mineral-tempered fabric and frequently burnished (Le Mièrè 2017: 13; Odaka 2017: 66); vessels were probably associated with the cooking and serving of food (Odaka 2017: 67). The evidence from Shir indicates that sites in the Orontes Valley followed this general pattern, and that there, as elsewhere, this early phase of ceramic activity was followed, several centuries later, by the appearance of larger quantities of pottery, produced in coarser fabrics, often tempered with vegetal material, which were used to make ceramic containers associated with the growing need for the storage of agricultural products (Nieuwenhuys fig. 7). In this too, Shir conforms to a broader regional pattern (Le Mièrè 2017: 15), one that extended southwards into Lebanon but is less apparent in the southern Levant (Badreshany 2016).

DFBW fabrics from Shir indicate the presence of both local products and imports; some early vessels were made in basalt-tempered fabrics, which are not consistent with an origin close to Shir itself. However, the presence of basalt-tempered DFBW at Tell Nebi Mend (TNM), located on the Orontes some 80 km to the south (Mathias 2015: 76), in a Ceramic Neolithic occupation dated to the first half of the 7th millennium cal. BC (Mathias and Parr 2015: 66), might indicate a possible source for this material, although laboratory analysis would be required to confirm this. It is worth noting, however, that the inter-site movement of high-quality basalt-tempered Neolithic vessels during the earlier 7th millennium cal. BC, might foreshadow connections running north–south along the Orontes Valley, as posited by Campbell and Phillips (2003: 35) in their study of 6th millennium cal. BC ceramics from the site of Arjoune, located a short way north of TNM.

In fact, combinations of both local and imported material have been identified at a number of contemporary sites (Le Mière 2017: 14, fig. 2), arguing that, from their first appearance, these ceramic vessels were valued as items of exchange, a trait consistent with their connection to food consumption, and associated ideas around commensality and hospitality (Badreshany and Philip 2021). We might surmise, from the rapid involvement of ceramic vessels within exchange systems, that pottery was readily incorporated within pre-existing, and probably complex, networks, of the kind posited by Watkins (2008) and recently modelled by Ibáñez *et al.* (2015; 2016).

[A] Bronze Age ceramics from the Orontes Valley and adjacent areas: the state of play

As the bulk of the contributions in this volume deal with the 3rd millennium cal. BC, we will turn to those next. The broad chrono-typological outline of ceramic developments in the various regions of Syria during the Bronze Age was laid out some 15–20 years ago (al-Maqdissi *et al.* 2002; 2007). Most relevant to the current discussion is Mazzoni's (2002) treatment of the material from what she terms 'Northwestern Central Syria', which successfully described the nature and distribution of the ceramic evidence. Her account of the EB IV period is dominated by the material from Ebla, supplemented by evidence from Braidwood's work in the Amuq (Braidwood and Braidwood 1960). Consideration of earlier phases of the Early Bronze Age depends upon data from a series of small soundings, with the deep sounding at Hama, excavated in the 1930s, providing the key sequence. Since then, our knowledge of the EB IV period has been augmented by additional data from Tell Mardikh (D'Andrea 2018; 2019; Vacca 2014; 2016; 2018) and sites such as Hama (Mouamar 2017; Vacca *et al.* 2018) Qatna (Besana *et al.* 2008; Iamoni 2014; Maritan *et al.* 2005; Mouamar 2015), Ar-Rawda (Castel *et al.* 2014: 24–40; Babour and Mouamar 2020) and Tell Nebi Mend (Kennedy 2015; Mathias 2000).

If we look at Syria more broadly, the volumes provided by the ARCANE project provide useful overviews of relevant EBA ceramics from individual regions. While the volume for the northern Levant has not yet appeared, studies exist for the Jazirah (Rova 2011) and the Euphrates Valley (Sconzo 2015). However, while the probable existence of ceramic sub-regions (Rova 2011: 51) and distinctive components within the wider ceramic industry (Sconzo 2015: 98–100) are flagged, the ARCANE volumes were designed to define and document shape-types, and delineate their space-time distribution. Accordingly, these accounts emphasize archaeological classification and the construction of ceramic chronologies over attempts to address questions pertaining to ceramic production and distribution. At a more synthetic level sit the inter-regional volumes, one of which is devoted to ceramics (Lebeau (ed.) 2014). Most of the contributions deal with a specific ceramic category, and while many of these contain a wealth of useful information, they do not always place the vessel categories that they discuss, within the context of wider ceramic production, within the regions where they occur. If we seek to understand the cultural significance of our material, we need to move beyond shape typologies and the creation of typo-chronological

frameworks, and ask questions that draw upon other aspects of the evidence. So where do the contributions to the present volume take us?

As a group, the papers reflect those regions and periods which have received most attention from archaeologists over the last two decades or so; the extent of research in different regions of the northern Levant has been variable. Of the three papers focused on Lebanon, one deals with EB II–III ceramics from the Byblos region, the Bekka Valley and north Jordan (Badreshany *et al.*), another spans the EB II–IV occupation at Tell Arqa (Jean), while Sowada *et al.* examine EB IV material of Lebanese origin, found in Old Kingdom Egypt. The coverage of sites in inland western Syria is mainly focused upon EB IV. While this, to some extent, reflects the priorities of archaeologists, it also results from the sheer quantity of EB IV occupation in the region, itself a product of the rapid growth in settlement and concomitant increase in the scale and complexity of both political units and the regional economy *c.* 2550–2000 cal. BC (Fortin 2016; Philip and Bradbury 2016; Vacca 2019) during what has been termed the ‘Second Urban Revolution’ (Akkermans and Schwartz 2003: 233). This development is likely to have had a significant impact upon ceramic production and distribution, and thus on associated economic and knowledge networks.

In turn, the sheer quantity of EB IV remains has rendered the earlier phases of the EBA hard to access at many sites, and our knowledge of the late 4th and early 3rd millennia cal. BC remains limited. This makes it difficult to define those assemblages that might characterize a pre-EB IV ceramic sequence (Vacca 2014: 49–52; 2018), and therefore to understand which elements of the better-known EB IV assemblage developed from local precursors, and which were genuinely new.

[A] Mapping and understanding space-time patterning

The studies by Mazzone (2002) and Welton and Cooper (2014) confirm that there is considerable commonality of vessel forms across a zone extending southwards, from Aleppo to Homs, including the Orontes Valley to the west, and with an eastern boundary around the edge of the steppe. There is also a northern — and slightly divergent — extension into the Amuq (Welton 2014; this volume). In broad spatial terms this equates to a core area that is well-suited to cereal production, with the possibility of tree crops in some areas, and significant opportunities for large-scale livestock raising towards its eastern edge (Wilkinson *et al.* 2014). While there are localized variations within this broad area (see below), it seems reasonable to argue that commonality among forms points to comparable modes of producing, storing and consuming commodities, and the widespread emulation of certain styles of social interaction. These, in turn, are indicative of structural similarities in the organization of society and economy across this zone, during the second half of the 3rd millennium cal. BC, that find expression in the documentary record of the Kingdom of Ebla and related polities, and the widespread construction of circular settlements along the edge of the steppe; see Castel *et al.* (eds) (2020).

A second broad ceramic region is now coming into view — that of the central Levant. This encompasses the Syro-Lebanese coast, and most likely the Bekaa Valley (Badreshany *et al.*). The ceramics from this area show connections to those from Syria south of Damascus, and the northern regions of Palestine and Transjordan, although specific details are only slowly coming into focus (Badreshany *et al.*; Braemer 2002; Braemer and Échallier 2000; Braemer *et al.* 2004: 296–355, fig. 590; Nicolle 2002). Compared to the plains of western Syria, both Lebanon and southern Syria are more varied topographically, and political units may have been smaller and more fragmented, and may, in parts of Lebanon, have focused, in addition to subsistence crops, on the production of olive oil and perhaps wine (Genz *et al.* 2016), rather than the emphasis being on cereals and wool, products that characterized much of inland western Syria (Wilkinson *et al.* 2014).

The next stage in our review of the evidence is to pull together a number of observations on vessel forms and associated fabrics; something that may contribute to our understanding of ceramic production and use. The growing density of fieldwork has meant that it is now possible to not only identify distinctive classes of material, but also to examine the way in which these present at multiple locations, and thus delineate the status and space-time trajectories of the various sub-units from which the broader tradition was constituted. Recent work on the various sub-groups which together comprise the ‘goblet’ tradition of the EB IV period, is a case in point (Cooper 2020; Cooper and Welton 2014). Less attention, however, has been paid to possible reasons for the observed space-time patterns, or the potential relationship between these and the dynamics of production, supply and consumption of ceramic vessels, that have shaped the archaeological record. Of course, such questions are hard to address on the evidence of typology alone. Fortunately, while petrographic investigations are relatively new to Syrian archaeology, there is a growing body of work on ceramic fabrics, in-part through the efforts of younger Syrian researchers (e.g. Mouamar 2017; this volume; Shabo).

Many of our contributors provide petrographic and, in some cases, geochemical data, for samples numbering in the hundreds. We believe that the contributions to this volume offer, for the first time, a body of data that is sufficiently large and spatially extensive to allow us to begin to explore the relationship between ceramic styles, fabric, production, and concomitant changes in socio-economic organization, thus allowing us to address the larger research questions noted above. While many of the papers here focus upon the EB IV period, those dealing with Lebanon cover a longer time-span, meaning, therefore, that it probably makes sense to begin with those considering EB II–III material.

[A] Key vessel categories

[B] *Platter bowls*

These are shallow bowls, often with an inverted rim, some with a red-slipped surface; they have long been seen as characteristic of EB II–III in the southern Levant (Bunimovitz and Greenberg 2004: 20–23; Joffe 2018: 48–55). In Syria, platter bowls are well represented in

southern and coastal regions, in the Orontes Valley and, to some extent, at Ebla during EB III, although their representation varies regionally (Vacca and D'Andrea 2020: 136–37). At TNM, Phases Q and P in Trench I (EB II–II and EB III) have been reported as the *floruit* of the form (Kennedy 2015: 180–82; 2020a: 36–39, fig. 2.7), although analysis of the earlier phases of the EBA sequence is not yet complete.

Given current uncertainty over the definition and dating of the pre-EB IV phases in the northern Levant, and the fact that platter bowls appear in the southern Levant before the end of the 4th millennium cal. BC (see below), we might suspect that this was also the situation in west Syria, a situation that finds support in the evidence from the Amuq, where platter bowls appear in both Phases F and G (Welton 2017: 12–13, fig. 2. 1–2, 3.2). Their form suggests an association with the serving or presentation of food in a very visible way, while the range of sizes may indicate that they delivered quantities of food that were intended for more than one person, although, as Kennedy (2020a: 38–40) observes, those in Syria do not attain the large sizes seen in the southern Levant during EB III. Writing about examples from the southern Levant, Joffe (2018: 45) suggests that in the socio-economic world of the EBA, these vessels were connected ‘with expanded recruitment/reward and provisioning of labour in the context of households enlarged by population growth and other extensification strategies’. Such an association, with labour and the feeding of a dependent workforce, appears consistent with the large-scale storage complexes that appear to have characterized public architecture in EB III contexts, in both inland Syria and the southern Levant (Vacca and D'Andrea 2020: 124–27).

In Lebanon, platter-bowls are mainly characteristic of EB II, where they appear in shale-rich fabrics at sites like Arqa, Koubba, Fadous Kfarabid and Byblos (Badreshany *et al.*; Jean; Thalmann 2016: 45, fig. 2, table 1) as well as further south at Sidon (Griffiths 2006: 283–84); the evidence indicates that the form dropped out of the local ceramic repertory around the EB II/III transition (*c.* 2800 cal. BC), though at more southerly sites, such as Sidon, it may have continued into EB III (Doumet-Serhhal 2006: 46, pl. 56. 9–12). In Lebanon, the disappearance of platter-bowls from coastal assemblages, contemporaneously with a shift in production from shale-rich fabrics originating in upland outcrops to calcareous fabrics consistent with coastal clays, appears in keeping with the emergence of new forms of socio-political interaction suggested by the breaking down of previous systems of social organization. In contrast, the southern Levant EB III witnessed the appearance of very large platters (Bunimovitz and Greenberg 2004: 21); it is suggested that the form was caught up in a move to larger scale, more ostentatious consumption, perhaps even with the idea that the larger EB III centres, such as Khirbet Kerak and Tell Yarmouth, had nascent ‘courts’, whose members had to be catered for (Joffe 2018: 57). One possible explanation for the divergent history of the platter-bowl in these two regions, is that it reflects the different routes taken by local agricultural economies, in particular, the relative importance of cereals versus olive oil (and possibly wine) as stores of ‘wealth’ in the two areas.

The presence of platter-bowls in the southern Levant by the late 4th millennium cal. BC, is confirmed by their appearance in the North Canaanite Metallic Ware (NCMW) production of northern Palestine, which appears somewhere around 3100 cal. BC, as well as in limited quantities in ‘local’ fabrics at EB IB sites in northern Palestine (Greenberg and Porat 1996; Joffe 2018: 43–45). Platter-bowls have not been reported from Chalcolithic assemblages in the southern Levant, nor from the Éneolithique Récent at Byblos, and while the situation in western Syria is clouded by the paucity of 4th millennium cal. BC sequences from the area, as noted above, the north seems a likely source for the form. In fact, the large, glossy Grey Burnished Ware bowls, which appear in the southern Levant from EB IA, and which appear to have no northern parallels, might be seen as a local response to the need to feed dependent labourers within the rapidly expanding large settlements of the later 4th millennium cal. BC.

The ultimate inspiration for the platter-bowl form, should probably be sought in the Late Chalcolithic (4th millennium cal. BC) chaff-tempered tradition of north Syria/north Mesopotamia. This area appears to have witnessed ‘increased production through agricultural extensification, enabled by significant expansion of the land under cultivation, such that reduction of inputs and yields per unit area are offset by a larger absolute scale of production’ (Styring *et al.* 2017: 1). Such a process would be consistent with the observed expansion of settlement on the Syrian plains during EB IV (Castel *et al.* (eds) 2020; Wilkinson *et al.* 2014), which would, in-turn, have created a need to draw upon a significant labour force at peak times; a need that went well beyond the capacity of individual households. The documentary sources from Ebla during EB IVA, highlight the problems faced by institutions when having to allocate personnel between essential agricultural work and military service, while the levels of attrition experienced during the latter (Archi 2015: 275–76, 289–91) suggest that labour shortages might have been endemic. Under these circumstances the ability of institutions to adequately feed and supply workers may have been critical to their success, and following Joffe (2018) the growing use of platter bowls would be consistent with such a situation.

[B] Combed vessels

Combing as a style of surface decoration occurs at different points in time, and in a number of different regions (Badreshany *et al.*). Even within its apparent ‘heartland’ of the central Levant during EB III, combing is applied to a particular subset of ceramic products — storage jars and vats — those vessels associated with the production and distribution of olive oil, though some cooking vessels which were made in a different fabric, also bore combing. While combed jars were widely distributed, with numerous examples known from Egypt (Sowada *et al.*; Thalmann and Sowada 2014), vessels with surface combing represent but one component of local ceramic production within the Lebanese coastal zone, which also encompassed jugs, bowls and other vessel forms (Badreshany *et al.*; Jean). Combed vessels have caught the attention of archaeologists being numerous, mobile and easy to recognize.

During EB II, an equivalent range of jars was decorated using a pattern-burnish technique (Badreshany *et al.*; Jean; Thalmann 2016: 40, pl. 5-6, fig. 36). Evidence from Tell Arqa

reveals, that the application of vertical burnish to storage jars during Phase T (EB II), gave way to pattern combing during phases S (EB II/III) and R (EB III). Despite broad continuity in vessel shapes and the overall *chaîne opératoire* (Roux and Thalmann 2016), this change appears to be linked to a move, at least at coastal sites, away from the use of shale-rich fabrics towards calcareous clays. This change is interpreted by Badreshany *et al.* as evidence of a shift away from itinerant potters, using shale-rich clays sourced from upland outcrops, to a coastal industry, perhaps closely associated with new trading polities such as Byblos. This position is compatible with the confirmation, via petrography (Sowada *et al.*), that the origin of CW jars found at the Old Kingdom occupation of Heit el-Gurba in Egypt, was the Lebanese coastal region between Beirut and Tripoli. In contrast to the variety of vessel forms and sources evident in the Early Dynastic Period (Iserlis *et al.* 2019), Egyptian demand now focused on a specific jar form (Sowada 2009: 55–80, 155–58; Thalmann and Sowada 2014: 371, table 3), manufactured in a particular region. So, while combed vessels are distinctive, their development was probably, but one element, in the reworking of an existing local manufacturing tradition by coastal communities, in response to new economic opportunities and political imperatives.

The presence of jars bearing pattern-combed surface treatment in EB IV contexts at Ebla and Tell Acharneh (Boileau; Vacca), raises interesting questions. At the latter site these appear in a shale-rich fabric. However, evidence from sites on the Lebanese coast suggests that production had moved from shale fabrics, to clays of coastal origin by EB III (Badreshany *et al.*; Jean). Moreover, at Tell Arqa (Thalmann 2006; 2016) horizontal combing, rather than pattern combing, was the preferred surface treatment in Phase P (EB IV). These apparent contradictions underscore the need for a thorough investigation of the exact forms, fabrics and chronology of EBA pattern-combed jars from coastal Syria, which remain much less well understood than their Lebanese equivalents.

[B] *Simple Ware*

EB IV ceramic production has often been lumped together through terms such as ‘Caliciform’, or ‘Simple Ware’. There is, however, no single ceramic material that can be termed Simple Ware. Rather, the term, first coined by the Amuq project in the 1930s, has been defined differently by individual field projects, and is currently applied to a number of petrographically distinct fabrics occurring across a wide swathe of north-west Syria. Mazzone (2002; 2013) states that these local Simple Wares are generally characterized by well-sieved, carefully prepared clays, bearing mineral-temper and fired at 700–800°C. They mark a trend towards greater homogeneity and provided a product that was easy to work on a wheel or tournette, and was, thus, suitable for the mass production of a range of vessels, including forms that required relatively thin walls. Corresponding improvements in firing and clay preparation methods can be observed across much of north-west Syria from the mid-3rd millennium cal. BC (Peyronel and Vacca 2014: 206–07). One obvious way to move research

forward is to test the degree to which these different local fabrics did, or did not, fulfil the basic technical criteria laid out by Mazzoni (2013).

In most regions of western Syria one or more fabrics that meet these criteria can be identified. At Ebla more than 80% of ceramic production through EB III and EB IVA was made in local Simple Ware, which was used to produce a range of vessel forms and styles (D'Andrea; Vacca), although within the Ebla *chora*, there existed some local variability in the exact nature of fabrics and firing (Mazzoni 2013: 90). In contrast, in the 'Amuq, Simple Ware was less commonly used for jars than for bowls and goblets (Welton), while Smearred Wash Ware was often produced in the same fabrics as Simple Ware, however, some pottery that conforms to Smearred Wash Ware in terms of vessel shape and decoration, was produced using Metamorphic Fabric F, which is quite distinct from other Amuq fabrics. In the Ghab, Boileau notes that 'Plain Simple Ware' appears in several different fabrics; a quartz-and-sand-tempered fabric that was also used for cooking pots, a glauconitic fabric, as well as a basalt-tempered fabric, which may come from locations further south in the Orontes Valley. At Shairat too, Simple Ware encompasses more than one fabric (Mouamar), with the Painted version accounting for 62% of the EB IVB corpus, and, therefore, outnumbering plain sherds.

Turning to vessel morphology, it is, therefore, no surprise to discover that while a core EB IV 'Ebla' ceramic region can be identified, extending from Tell Tuqan through to Qarqu, the EB IV vessel forms documented at Amuq (Welton 2014; this volume), Acharneh (Boileau) and TNM (Kennedy 2015) are reminiscent of, but distinct from, the former. In terms of ceramic production, and following Chesson (2015: 55) when discussing the EBA in the southern Levant, it seems that while 'people were responding to a broad, regional cultural transformation', the evidence points to local communities adopting, and to some extent reworking, particular components of this wider repertory according to specific local social and economic circumstances, the size and capability of local production, and the nature of pre-existing practices.

[B] *Goblets*

At both Ebla and Arqa (Jean; Vacca) there is a shift over time from an emphasis upon platters, to a focus on goblets and/or cups, although there are differences in the specific vessel forms used at each. The goblet has long been associated with the emergence of drinking practices, wine consumption in particular (Bunimovitz and Greenberg 2004; Joffe 1998; Mazzoni 1994). Interestingly, however, as Welton and Cooper (2014: 337) observe, both the sheer quantity of these vessels, recovered from many areas, and their presence on small 'rural' settlements, argues against an obvious association with elites — who may well have preferred metal vessels. Rather, their ubiquity attests to societies in which particular behaviours had been adopted extensively. Although its impact extended well beyond the elite, such emulation would be consistent with the evidence for choreographed behaviours that are evident in EB IV elite burial practices in the Euphrates Valley and western Syria (Sang 2015; Schwartz 2012), and the existence of regional networks that required the provision of mortuary offerings to the elites in other polities (Archi 2012). Vacca's observation, that

ceramic production at Elba during EB IV involved a narrower range of vessel forms than was the case during EB III, is relevant here. While this would, in part, have reflected the growing specialization, standardization and increased volume of production during EB IV, it might also confirm a growing consensus regarding vessel use — i.e. the choreography of behaviour.

Though the existence of regionally distinct goblet variants is well known (Welton and Cooper 2014: 332–35), there are also significant variations in the ubiquity of the goblet form within local assemblages, and in the timing of its appearance at different sites. In the Amuq (Welton) and at Ebla (Vacca 2015: 5–10; 2016; this volume) evidence for the gradual emergence of the goblet form can be identified; in contrast, the goblet tradition arrived fully developed at TNM during the EB IVA, and was adopted into the existing local ceramic industry. In that sense the situation in the Upper Orontes appears to foreshadow the adoption of goblets further south (Kennedy *et al.*).

Goblets from Ebla appear to show a greater range of decoration than, for example, those documented at TNM. While such diversity may be a regional phenomenon, it may relate to the sheer scale of both production and consumption in the Ebla region when compared to more southerly areas. This contrast emerges when we equate the former — a central site of some 60 ha in extent plus a substantially greater settled area in the surrounding *chora* (see above) — with the region around TNM where surveys (Philip and Bradbury 2016: table 1) suggest a total EB IV settlement extent of somewhere in the region of 30 ha. The range of ceramic diversity may be linked to the scale and complexity of regional socio-economic networks.

Local variations in both the shape and decoration of goblets are becoming clearer (Cooper 2020; Welton and Cooper 2014). For example, the well-known painted goblets, which replaced the corrugated version during EB IVB in a region extending across Hama–Amuq–Ebla, are far less frequent outside this area (Cooper 2020: 114) — they do not, for example, extend to the Euphrates Valley (Welton and Cooper 2014: 334). The goblets from TNM reveal elements of both shape and decoration, (Kennedy 2015: 199–2000; Kennedy *et al.*) that mark them out as a regional variation. In fact, the absence at TNM of painted wavy-line decoration, despite its occurrence at steppe edge sites like ar-Rawda and Shairat, and more southerly sites such as Moumassakhin and Khirbet el-Umbashi (Mouamar 2016: 83–84, fig. 8.1–2), may point to the existence of rather different communication networks on the west and east sides of the Anti-Lebanon range. Mouamar observes that at Sheirat, goblets demonstrate local stylistic peculiarities that distinguish them from the more northerly traditions, while their rims change in step with those of other forms, such as small jars, confirming their place within a local production tradition. Overall, goblets from TNM demonstrate a more limited decorative repertory than do vessels from more northerly sites, while the continuation of corrugated goblets right through EB IV offers another element of differentiation.

Mazzoni (2013: 91) notes a contrast between the relatively large number of goblets recovered at Ebla, compared to the recovery of the spouted jar forms which were used for pouring; only 20 examples of which were identified in Palace G at Ebla (Mazzoni 1994: 250–53). While

this may, in-part, be because sherds from pouring vessels are harder to identify than those from goblets (Kennedy *et al.*), it may also reflect differences in their respective modes of use, and thus breakage rates, perhaps throwing up a distinction between a modest number of drink-dispensing patrons and a much larger body of client-consumers. However, pouring vessels are notably more common at sites in the southern Levant than in Syria (Kennedy *et al.*), while the use of one-handed cups as the preferred small drinking vessel on the Mediterranean coast (D'Andrea and Vacca 2019: 126) points to locally divergent drinking practices, the significance of which requires further study. In a wider sense the decline of platter-bowls and the concomitant growth in the ubiquity of drinking vessels during EB IV, presumably indicates a change in the material expression of social relationships. In the southern Levant, as in Syria, this shift takes place around the end of EB III (Vacca; Bunimovitz and Greenberg 2004). In Lebanon, however, platters disappear rather earlier (EB II/III transition — see above).

[B] Grey ware goblets

Welton and Cooper (2014: 320) and D'Andrea (2017) draw attention to the existence, at sites in the middle and upper Orontes Valley, of a class of goblets with a grey (or red) surface, often bearing linear decoration in white paint. This product was made at a number of sites in this region (Welton and Cooper 2014: 300 n.39) and appears as an import at sites like Ebla and Tell umm-el-Marra. The current papers extend the range of production locations for these vessels to include TNM and Tell Shairat (Kennedy *et al.*; Mouamar). They also confirm, as previously demonstrated for Acharneh, that the use of grey fabrics extended beyond the production of goblets to encompass other vessel forms (Boileau; Cooper 2006: 147, 150).

At Shairat 'grey ware' vessels (Group B) are distinguished from the other main local product by a combination of their fabric, by a process of firing that involved finishing in a reducing atmosphere and, in the case of goblets, by their globular form. In contrast, the other local category, Group A, was made using a fine quartz-rich fabric, embracing a range of vessel forms among which are straight-sided goblets with a distinctive ring or disc base. Groups A and B represent two visually distinctive ceramic 'products', both of which were distributed widely across an area between the Orontes River and the steppe-edge (Mouamar). At TNM, however, grey goblets are the predominant form (69%) with buff wares forming a minority (29%); at Shairat the numbers are more equal (Mouamar). At TNM, in contrast to the situation at Shairat (above), all goblets — grey and buff — were produced in the same local quartz-calcareous fabrics used for most vessels, other than those used for cooking (Kennedy *et al.*). The fact that TNM, which was well situated with respect to agricultural land and water, appears — in ceramic terms — more marginal with respect to the goblet tradition than a steppe-edge site like Shairat, might inform us on the patterns of connectivity in the EB IV period.

The evidence for multiple production centres has made it possible to identify the movement of goblets around western Syria. Grey ware goblets, when found at Ebla, are viewed as imports from the south (D'Andrea 2017: 175; Mazzoni 2013: 91). The highly calcareous

Group C ceramics, which occur mostly as goblets and small jars at Shairat, are identified as products of the Hama-Orontes Valley region; although their geochemical heterogeneity may point to multiple sources. That they are wheel-made, in contrast to the local products which are coil-made and wheel finished, points to a different workshop tradition. At Hama three distinct groups of goblets have been identified on the basis of fabric: as local, or as imports from points east, or south in the Homs region (Mouamar 2017: 85). There is, however, little evidence for imports from the Ebla region. Small quantities of non-local goblets have also been identified at Acharneh (Boileau) alongside the widely used local dolomitic fabrics. While we are used to the movement of ceramic containers, no such function can be attributed to goblets. The most obvious explanation for the presence of small quantities of non-local goblets at a number of sites, is that the exchange or gifting of drinking vessels was in some way implicated in the creation and maintenance of social relations outside the elite sphere.

[B] *Black Wheelmade Ware (BWW)*

The discussion above has a direct bearing on the status of so-called ‘Black Wheelmade Ware’ which appears in EB IV contexts at sites in northern Palestine, the Bekaa Valley and southern Syria (Bechar 2015: fig. 14; D’Andrea 2014a: fig. 5.3) where it mainly takes the form of teapots, goblets and small flasks, with a dark grey to black coloured exterior. As we begin to better understand the variations within the ‘caliciform’ tradition, it has become clear that BWW relates, not so much to the goblets produced at Ebla, but more specifically to the grey wares identified at sites in the middle and upper Orontes Valley (Boileau; Kennedy *et al.*; Mouamar). A recent study (Genz *et al.* in press) has shown that BWW vessels from sites in Lebanon are made using fine-grained, quartz-rich calcareous fabrics. While broadly similar, in terms of clay and technology to goblets from TNM, examples from the Bekaa can be distinguished from the former via their geochemistry, suggesting a different production centre, probably located in the Bekaa Valley. Also of interest is the continuing use of corrugated goblets throughout the EB IV sequence at TNM, in contrast to Ebla, where corrugated goblets come mostly from EB IVA levels, being replaced by painted styles in EB IVB (Kennedy *et al.*). In the Amuq corrugation decreases, but is still present in EB IVB, although it tends to be restricted to a band below the rim, rather than covering most of the body; in some cases there are incised horizontal lines that imitate corrugation (Welton 2014: 345). Corrugation also occurs on vessels from the southern Levant in the later EB IV, on cup forms in particular, e.g. see D’Andrea (2014b: pl. XVII–XIX, XXIII–XXVI), reminding us that while contacts between Ebla and the southern Levant are perfectly feasible, the immediate drivers for ceramic developments in northern Palestine and the Bekaa appear to be the industries of the Homs region (Kennedy 2020b: 238). In fact, the latter and the Bekaa appear to form a ‘border’ zone between the better-documented ceramic traditions of north-west Syria and those of the southern Levant.

Vessel forms (other than bowls) specifically designed for drinking do not really appear in the southern Levant before EB IV (Bunimovitz and Greenberg 2004). However, while attention has largely focused upon the distinctive BWW, and thus the region’s links to inland Syria in the second half of the 3rd millennium cal. BC, ceramic forms associated with drinking, but

with links to the north Levantine littoral, have also been identified (D'Andrea and Vacca 2019: 128–29).

[B] *Painted decoration*

The distribution of painted decoration is very uneven. While some areas of the northern Levant reveal distinctive styles such as the ‘Smear Wash’ and ‘Painted Simple Ware’ of the Amuq, and during EB IVB the painted goblets of Ebla, the practice is not equally common in all areas. In the Homs region, where, interestingly, Neolithic painted ceramics were never adopted on the scale evidenced in more northerly areas (Badreshany and Philip 2021), the use of paint during EB IV is mainly restricted to goblet forms, while it is hardly reported at all within Lebanon, or the southern Levant after EB I, except in the form of an overall slip. In fact, while a significant proportion of the ceramic repertoires of the southern and central Levant bear a red surface, achieved either through the application of a slip, or by burnishing the surface of an iron-rich fabric, this is not generally the case in western Syria, where light-coloured surfaces are the norm. While the significance of this distinction remains unclear, it deserves further attention. The point of interest here, is that it is vessel forms (and we might suppose associated social practices) rather than decorative styles that are being transmitted. This points to the adoption and restructuring of these styles to suit the capabilities and pre-existing routines of local ceramic industries. A case in point is the adoption of goblets as a new feature, within an existing production system (Kennedy *et al.*) at TNM.

That Smear Wash Ware is first documented in the Amuq (Welton) argues for local centres of development from where the idea subsequently spread. The clear association of this decorative style with bowls and jars (but not goblets — although these were painted at Ebla and other places during EB IVB) reveals a relationship between vessel type and decorative techniques. However, smear wash decoration could also be applied to vessels produced in Simple Ware fabrics (Welton: fig. 5), indicating that decorative styles could be carried across a range of shapes and fabrics. This is consistent with the idea that styles of decoration could be learned relatively easily and thus transmitted horizontally between production centres, in contrast with formation techniques and clay/temper recipes, which are usually seen as being more deeply embedded within a particular unit of production and thus transmitted vertically (van der Leeuw 1993: 240–42).

[B] *Typology, manufacture and organization — a brief comment*

Although this topic is too large to address in detail here, there are some useful observations to be made regarding details of typology and their possible relationship to the ceramic industry. Storage jars with a vertical grooved rim were common in the storerooms of Palace G at Ebla and were, most likely, produced in specialized workshops and used to store commodities supplied to the palace (D'Andrea and Vacca 2013: 113–14, 117), i.e. to serve the tributary economy. The grooved rim was probably designed to allow a cloth or cover, of some kind, to be secured. The form continues into the subsequent EB IVB (D'Andrea figs 11.1–2), and is

generally deemed characteristic of inner central Syria (Mazzoni 2002: 77). Thus, the paucity of examples from EB IV contexts at TNM — compare D’Andrea and Vacca (2013:112–13, figs 6.1–6.4) with Kennedy (2015: figs 59–63) — neatly highlights the relationship between the ceramic industry and specific economic models for the mobilization of agricultural staples. It is also worth noting that during EB IVB this shape of rim appears on bowls, eventually becoming one of the most common forms (D’Andrea fig. 16.11–12). These too lack close parallels at TNM (Kennedy 2015: figs 70–74). As the functional requirement for this rim type is less clear on bowls than on jars, we might suspect that grooved-rim bowls indicate that rim-shaping techniques, suitable for the slow-wheel, were simply carried over from jars to bowls as part of the potters’ routine vessel finishing (D’Andrea fig. 21). Its absence from the repertory at TNM ought, therefore, to provide information on the organization of the ceramic industry and the extent of the networks through which technical information was shared. This suggests that we might be able to examine knowledge networks by undertaking inter-site comparisons at overall assemblage level, while simultaneously focusing on the patterning of typological detail and the relationship between specific aspects of vessel morphology and elements of the potters’ technique.

[B] *Holemouth jars (hmj)*

This vessel type has long been viewed as diagnostic of the EBA of the southern Levant, where it is believed to have emerged from local Chalcolithic antecedents, though the form is present at Neolithic and Chalcolithic sites in Lebanon (e.g. Badreshany 2016: 13, fig. 11.7–9). These vessels appear in a variety of forms, fabrics and sizes, are usually flat-based, and were used for both cooking and storage purposes. The form is also known at EBA sites in northern Lebanon, but in a form with an upright rim, that differs from those found in Palestine; in Lebanon the form mainly appears in cooking-pot fabrics (Badreshany and Genz 2009: 55–59; Jean). Interestingly, the assemblage from Sidon has produced hmjs with a wider range of rim shapes, including squared-off forms (Doumet-Serhal 2006: 39, pl. 4.5–7), others more typical of vessels from the southern Levant (Doumet-Serhal 2006: 39: pl. 14.8), and some reminiscent of the forms appearing in northern Lebanon (Doumet-Serhal 2006: 48–49, pl. 67–70). Fabric 3 (Griffiths 2006: 287–88), which contained crushed calcite was used for many — but not all — of the cooking pot forms found in Str 4–6 (Doumet-Serhal 2006: 39, 62–63).

In contrast, Mazzoni’s (2002: 76) claim, that hmjs first appear in north-west Syria during the EB IV period, has recently been confirmed by Vacca (2019: fig. 7) who demonstrates that wide-mouthed cooking pots, with a short everted-rim, characteristic of the EB III and earlier periods, were joined by holemouth cooking pots during EB IVA1 and replaced by the latter during EB IVA2. In the Amuq short-necked vessels are the most common cooking pot form during EB IV, with holemouth jars present in smaller numbers (Welton).

The distribution of hmjs is uneven. Ebla has produced a range of local hmjs with thickened rims (Vacca 2019: fig 11.5–10), and some continuity of fabrics between EB III cooking pot

forms and EB IV hmjs, which argues for local production. However, the form has not been reported from the EB III–IV assemblage from Trench I at TNM (Kennedy 2015: 98–100). That said, hmjs are a notable feature of surface collections undertaken in the nearby volcanic terrain to the west of the Orontes, although in the absence of stratified material they cannot be dated more precisely than to the 4th–3rd millennium cal. BC in general. These vessels appear in basaltic clays, suggesting that they were a local product, and the paucity of flat bases suggests that globular bodies and round bases were the norm (Philip and Bradbury 2010: 157–58, figs 19, 20).

[B] *Cooking wares*

Virtually all of the cases discussed have one or more cooking-ware fabric that is distinct from mainstream production at that site. While the specific functional requirements of cooking vessels makes this unsurprising, interesting questions arise from the specific combination of technical and cultural choices that are evident, the associated modes of production and distribution, and the way in which their distributions, across space and time, compares to that of other contemporary ceramic products — and, of course, the relationship between the producers of cooking pots and those of other ceramic categories. While space prevents detailed discussion here, a number of aspects of cooking vessels warrant farther investigation.

In the southern Levant EBA cooking pots primarily take the form of hmjs, often tempered with calcite (London 2016: 185–87). Calcite temper is also commonly used in the production of cooking pots in the Lebanon (Badreshany and Genz 2009; Griffiths 2006: Fabric 3; Jean). In western Syria, however, cooking pots in basaltic fabrics are common, occurring, for example, at Qarqur (Fabric 7, Graff 2006: 237), Ebla and Tell Tuqan (EB III–EB IVA2; Santarelli 2013; Vacca). All of these sites are located in close proximity to basaltic outcrops.

Calcite-tempered cooking pots are present in the Amuq during EB IV (but not as the predominant fabric) (Welton), at a number of other key sites in western Syria (Graff 2012: 32), and appear at Ebla in EB IVB (D’Andrea). Qarqur is also characterized by the presence, during EB IV, of cooking pots tempered with angular calcite, in this case added to a matrix containing naturally occurring minerals of a volcanic nature (Fabric 5, Graff 2006: 233). At Tell Arqa, calcite was chosen for EBA cooking pots despite the proximity of basaltic geology. In fact, the basalt-tempered Group 7 fabric is seen more as a forerunner of MBA traditions than as a core element of the EBA industry (Jean). However, at Qatna during LB II, the cooking ware fabric is less calcareous than the other pastes, and is basalt tempered (Shabo). Boileau identifies several intriguing temporal changes at Acharneh, including the presence of two different cooking-pot wares during the MBA, one of which contained spathic calcite, and the other basalt. Those of the LBA and Iron Age feature shell temper, a phenomenon that has been observed in cooking pots from LB–Iron I in parts of north-west Syria and the Amuq (Welton *et al.* 2019: 311, fig. 18; Maritan *et al.* 2005: 728), although the reasons for this move to shell temper in LB is not well understood.

While one might assume that most EBA cooking pots were produced close to their locus of use, caution is required: the presence in the Amuq of small quantities of cooking pots made in distinctive fabrics, such as metamorphic H and I, might be indicative of production at specific loci, and the subsequent movement of such vessels. A good example from the southern Levant is the appearance of imported basalt-tempered cooking pots at sites in the north Jordan Valley during EB II (Paz and Iserlis 2009), a vessel form that, as Greenberg (2006: 43) observes, was produced using techniques quite different to those used to make the holemouth cooking pots that were widespread in the southern Levant. While a start was made by Graff (2012), to the best of our knowledge there has been no systematic regional-scale review of the cooking wares of the northern Levant, though recent publications on cooking vessels from the LBA Aegean (Hurby and Trusty (eds) 2017) and the Graeco-Roman world (Spataro and Villing (eds) 2015) provide examples of what can be achieved. As the socio-economic significance of the circulation of cooking vessels may well differ from that of other groups of pottery, we suspect that it would provide an interesting counterpoint to the space-time patterning of more standardized products describe earlier in this review.

[A] Ceramic production and exchange in its socio-economic context

In the case of Syria during the EB IV period, the marked standardization of forms and fabrics, the high level of technical skills demonstrated, combined with the limited differentiation between ceramics occurring at small and large sites — at least within any one local region — all argue against an extensive network of small-scale producers. A system involving large-scale production in a limited number of settings, would appear better aligned with the evidence. While the model of ‘attached’ specialists (Costin 1991) might seem attractive, it is not clear how, under such a system and in the absence of a market economy, village communities would have been able to access large quantities of identical pottery without direct involvement of the state/palace in its distribution.

There is minimal evidence among the documentary sources from Ebla for the activity of potters; (Bonechi 2006: 83). This does not necessarily mean that the acquisition of ceramic vessels was not of interest to the administration; the role of ceramic containers in supporting the tributary economy, and of drinking vessels in social contexts, suggest the opposite. Western Syria is not, however, unusual in this respect; potters and pottery rarely feature in the Linear B tablets from LBA palaces in the Aegean (Knappett 2001: 81), and the gap between the scale of ceramic consumption as evidenced in the Mycenaean palace at Pylos and the limited documentary evidence for the production and distribution of pottery, suggests that the palace did not exercise direct control over these activities (Whitelaw 2001: 51).

In fact, there is little in the ceramic repertory of EB IV Syria that resembles the Kamares Ware of MBA Crete, a ceramic product associated with elite consumption; the production of which required high levels of technical skill (Day and Wilson 1998: 91). This is presumably because, in the case of Syria, high status vessels were produced in metal rather than ceramic, as suggested by the frequent appearance of metals and textiles in the Ebla texts (e.g. Archi 1988; 2002; 2015: 174–78). We may, therefore, envisage a situation in which the palace had

an interest in having a ready supply of ceramics, but no desire to control production directly, and no particular view regarding specific forms and styles, beyond a need for general categories such as storage jars, drinking vessels, etc.

The papers in this volume indicate that in each case production was mainly local. Whitelaw (2001: 65) comments that while the LBA palace of Pylos was the single largest consumer of pottery in its region, the main driver for production was probably the aggregate demand from the smaller sites in its hinterland. The number of EB IV sites recorded, even in the partial surveys of the region around Ebla (Mantellini *et al.* 2013: 185–86, see, in particular, pl. 15 and 16), and the similarity in ceramic wares and forms recovered across the so-called *chora* of Ebla (Mazzoni 2013: 95), suggests that this might also have been the case for the Ebla region, and by extension elsewhere in western Syria.

Given that direct palace control appears unlikely, how might ceramic production have been organized? Late 3rd millennium cal. BC documentary sources from southern Mesopotamia (Steinkeller 1996), provide a model for the way in which potters in contemporary Syria might have interacted with emerging polities (for a slightly different view see Dahl (2010)). These indicate that ceramic production took place in family owned, independent workshops within which skills were passed from father to son (Steinkeller 1996: 248). Skilled potters did not work permanently for the state, but were required to provide specific amounts of service to an institution mainly through the supply of ceramic vessels. In turn the institutions provided potters with land and rations, essential raw materials such as fuel, and additional low-skilled labour when required, a system that is consistent with personnel lists from Tell Beydar that detail craftsmen, including potters, who were in receipt of rations from the palace (Ismail *et al.* 1996: 121). Such a system would explain why, within a particular area, sites of all sizes appear to have accessed much the same range of ceramics. One might also suspect that when supplying village populations, potters were paid either in produce, or, through the provision of labour to work an allotment of land provided by the authorities. Such a mechanism would have allowed village communities to acquire pottery, independently of institutions, while still working within the constraints of a tributary economy. The spread of broadly similar ceramic forms and fabrics in north-west Syria could be characterized by what Joffe (2018: 50) terms, ‘a dialectic between ceramic consumers and producers’ that linked the changing requirements of society and economy to production techniques, mediated by increasingly dense communications, both locally and regionally, that appear to have arisen from an increasingly well-organized and controlled productive economy.

By modelling expected annual ceramic consumption in both the palace and hinterland of Pylos, Whitelaw (2001: 77) estimates that the demand for the entire polity could have been met by somewhere in the region of 100–120 potters. While the numbers will, of course, be different for EB IV Syria, this indicates that it would have been possible to supply a substantial area with ceramics while retaining technical knowledge and high-level skills within a relatively small group of individuals.

The points made above, combined with the limited archaeological evidence for production loci (Peyronel and Vacca 2014: 205), probably imply that the number of highly skilled

potters (as opposed to less skilled labourers) was, in any one area, limited, while the inter-generational transmission of skills would have created a fairly tight, local community of ceramic practice, producing a readily identifiable product. At the same time, given the relatively modest number of skilled personnel involved, we might expect such producers to have had knowledge of potters in neighbouring workshops, and perhaps even those working in other regions — or at the very least their products. Such a situation would provide an explanation for the existence of recognizable regional units of production, in the Amuq (Welton), the Acharheh region (Boileau), around Ebla (D'Andrea; Vacca) and in the Homs region (Kennedy 2015; Kennedy *et al.*), that demonstrate consistency over time while forming variations on a broad regional theme. While the situation described above concerns the EB IV period, it does not seem unreasonable, given the evidence for local ceramic development, to suggest that these units were present on a smaller scale during the first half of the 3rd millennium cal. BC and were, therefore, 'tapped into' rather than created by the palaces. Interestingly, a situation in which the total number of specialist potters in any one area may never have been very large, would have rendered production quite vulnerable to the loss of key personnel. This situation was recently suggested by Baldi and Roux (2016: 247–48) as an explanation for the early appearance, limited spread and subsequent disappearance of wheel-coiled bowls in both North Mesopotamia and the southern Levant during the Chalcolithic.

[A] **Other categories of ceramic production**

We have suggested above that much of the EB IV ceramic production in western Syria was produced by a series of regional workshops; there were probably several such in any one region. We argue that the broad similarity in products reflects the fact that potters across the region were responding to a very particular set of social and economic drivers, and that these shaped the range of products sought. Commonality in production was probably boosted by some sharing of technical knowledge between workshops. Such a scenario would, quite likely, have generated the pattern of local ceramic variations, upon broad common themes, that we observe in the archaeological record. We have also suggested that it is unlikely that ceramic production was under the direct control of the local political elites. Nevertheless, as institutions would, almost certainly, have constituted the single largest source of demand for pottery vessels, their requirements would, surely, have shaped the nature of the overall assemblage.

These posited regional units of specialist production do not, however, fully describe the ceramic record of Syria during the 3rd millennium cal. BC. In addition to the cooking wares discussed above, we can also, currently, identify two groups of material which differed from the foregoing in their shapes, fabrics and methods of manufacture, and that do not, therefore, appear to conform to this characterization. These we argue point either, to alternative modes of ceramic organization, or even, to the existence of communities that existed alongside, and were perhaps only loosely integrated with, the regional political economy.

[B] *Red-Black Burnished Ware (RBBW)*

Not only do the populations associated with RBBW display a distinctive settlement pattern in the Amuq (Batiuk 2013: 465), the pottery itself differs from contemporary ceramic products found in the Levant in terms of forms produced, fabric and manufacturing methods employed, in particular the use of hand-forming, labour intensive surface treatment and low temperature firing (Greenberg *et al.* 2014; Iserlis 2009).

The new radiocarbon chronology for the southern Levant indicates that RBBW appeared there shortly after 2900 cal. BC, and had gone out of use by *c.* 2500 cal. BC (Regev *et al.* 2012; 2019). In contrast, production continued in western Syria some way into the EB IV period (Batiuk 2013: 465; Vacca: fig. 3; Welton), so into the 3rd quarter of the 3rd millennium cal. BC, with RBBW remaining in use alongside the more specialist ceramic industry discussed above. This also suggests that the developmental trajectory of RBBW-using communities in western Syria, may have been rather different from that of those in the southern Levant.

[B] *Basalt-tempered pottery from the Homs region*

The second distinctive ceramic category is comprised of dark-brown basalt-tempered wares characteristic of EBA sites in the volcanic zone west of Homs, the shapes and fabrics of which are markedly different from those found at the contemporary Orontes Valley settlement of TNM, on the east bank of the river. This material is hand-made and displays a limited set of vessel forms, including numerous holemouth jars (Philip and Bradbury 2010: fig. 20.5–13). Specifically, it is worth noting that examples have not been reported among the late 4th and early 3rd millennium cal. BC repertory from TNM (Kennedy 2015), despite its proximity to basaltic terrain. The form is, however, relatively common at sites in southern Syria (Braemer *et al.* 2004: 298, figs 546–50), underscoring the complexity of ceramic regions, or perhaps better, the opaque nature of the transmission of ceramic knowledge outside the major industries described earlier.

As both these ceramic categories differ from the ‘Simple Ware’ industries in terms of forms, fabric and manufacture, we interpret them as indicative of social groups and territories that were not fully engaged in the more intensive economies that characterized the plains of western Syria during the mid–late 3rd millennium cal. BC, and in the reproduction of which the Simple Wares played a major role.

[A] *Next steps*

We believe that several key points arise from this volume. Firstly, it seems evident to us that there is a connection between ceramic distributions and the nature of regional economies. We sense that there is a clear connection between the distribution of the standardized industry, which can be characterized as ‘Simple Ware’ production, and a particular form of intensive

agricultural economy intended to furnish tribute for local institutions. We suggest that this production would have been in the hands of specialist potters, but can see no evidence to indicate direct palace supervision. Rather, we argue that the role of institutions as the single largest consumer in any one region, would have allowed their needs to shape the overall ceramic repertory, thus generating the apparent uniformity of products between urban and rural sites within any one region.

The marked commonality of forms and styles across regions, and between vessels made in different fabrics, points to the exchange of information between potters at different loci of production. However, the elements of local differentiation between regional repertories are consistent with Chesson's (2015), notion of widely understood common cultural expressions that were adopted in ways appropriate to specific local circumstances. Future petrographic and geochemical research should allow us to determine the location of the main production centres, map out their respective zones of distribution, and assess the strength of links between each.

In addition, we note the existence of two classes of hand-made ceramics that appear to be associated with groups that had a very different — perhaps partial — relationship to the regional political economy. This may have taken the form of the provision of seasonal labour, and/or the supply of livestock, rather than cereals. In fact, the very existence of these groups during the 3rd millennium cal. BC serves to throw into sharp relief the distinctive nature of the Simple Ware production system, and its associated economy.

A second region characterized by a set of broadly similar ceramics is the central Levant (which probably encompassed Lebanon, coastal Syria, and northern parts of Jordan and Palestine). In this case, however, the association is with an economy in which the mobilization of liquid products, olive oil in particular, was key. Here, with the exception of cooking vessels, production was characterized by one main *chaîne opératoire* (Jean; Roux and Thalmann 2016). Even the clear temporal shift in the fabric appearing at coastal sites (Badreshany *et al.*), indicates less a change in technology, more a change in the location and organization of production. This is consistent with emerging polities taking a close interest in the ceramic hardware that was required to service the regional economy — as seen in Syria, albeit in a different form.

Our volume has also served to highlight some major gaps in our knowledge. While our strong focus on the EBA has allowed us to develop many of the points made above, the more limited representation of papers dealing with earlier (Nieuwenhuys) and later periods (Shabo), demonstrate that until we expand this approach to embrace other time periods, we will be unable to place the changes we see during the 3rd millennium cal. BC within a longer temporal sequence of varied forms of ceramic organization.

We also need to research the ways in which technological knowledge was being communicated. In this, ceramic expertise may have formed one aspect of an exchange of technical information relevant to craft production more widely. As we have seen, more systematic attention could usefully be accorded to the shapes, wares, production and

distribution of cooking vessels, although it is already apparent that the knowledge networks linked to this vessel class are likely to have differed from those associated with Simple Ware. And, of course, the inter-regional communication networks associated with technology are unlikely to map directly onto those based around kinship or the exercise of political power, and so may open a door towards the kind of multi-layered understanding of past societies that we should aim to create.

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