This PDF file of your paper in Cooking up the Past belongs to the publishers Oxbow Books and it is their copyright.

As author you are licenced to make up to 50 offprints from it, but beyond that you may not publish it on the World Wide Web or in any other form.
A offprint from

COOKING UP THE PAST
FOOD AND CULINARY PRACTICES IN THE NEOLITHIC AND BRONZE AGE AEGEAN

Edited by
Christopher Mee and Josette Renard

© Oxbow Books 2007
ISBN 978-1-84217-227-8 1-84217-227-1
Contents

List of Contributors ............................................................................................................. ix
Preface .................................................................................................................................. xi

1 Cooking up the past: entre traditions et innovations dans le Néolithique et l’âge du Bronze égéens
Josette Renard .................................................................................................................. 1

THE SOURCES AND CONSUMPTION OF FOOD

2 Cooking in the Labyrinth: exploring ‘cuisine’ at Bronze Age Knossos
Valasia Isaakidou ............................................................................................................... 5

3 Carcasses and commensality: investigating the social context of meat consumption in Neolithic and Early Bronze Age Greece
Paul Halstead ............................................................................................................... 25

4 Economie vivrière et alimentation carnée en Grèce méridionale du Néolithique moyen à la fin de l’âge du Bronze
Armelle Gardeisen ........................................................................................................ 49

5 La mer dans l’assiette: l’exploitation des faunes aquatiques dans l’alimentation en Égée pré- et protohistorique
Tatiana Theodoropoulou .......................................................................................... 71

6 Traditional foods and culinary novelties in Neolithic and Bronze Age northern Greece: an overview of the archaeobotanical evidence
Soultana-Maria Valamoti .......................................................................................... 89

THE PRESERVATION AND PREPARATION OF FOOD

7 Food preservation in Greece during the Late and Final Neolithic periods
William Cavanagh ....................................................................................................... 109

8 ‘Il n’y a pas de cuisine sans feu’: une approche des techniques culinaires au Néolithique et à l’Âge du Bronze Ancien à travers les structures de combustion en Grèce du nord
Evanthia Papadopoulou and Sandra Prévost-Dermarkar ........................................ 123
9 Les installations culinaires dans un village du Bronze Ancien en Grèce du nord: Archontiko Giannitson
A. Papaefthymiou, A. Pilali and E. Papadopoulou ................................................... 136

10 Beeswax in Neolithic perforated sherds from the northern Aegean: new economic and functional implications
Oreste Decavallas ........................................................................................................ 148

11 Early Bronze Age cooking vessels from Thebes: organic residue analysis and archaeological implications
Maria Roumpou, Kyriaki Psaraki, Vassilis Aravantinos and Carl Heron ............... 158

THE ROLE OF POTTERY

12 Communality and competition: the social life of food and containers at Aceramic and Early Neolithic Knossos, Crete
Peter Tomkins ............................................................................................................ 174

13 The production and consumption of pottery in the Neolithic Peloponnese
Christopher Mee ........................................................................................................ 200

14 Pottery, cuisine and community in the Neolithic of north Greece
Dushka Urem-Kotsou and Kostas Kotsakis .............................................................. 225

15 What are the legs for? Vessels with legs in the Neolithic and Early Bronze Age Aegean
Marina Sophronidou and Zoë Tsirtsoni ................................................................. 247

16 Des enfants nourris au biberon à l’Âge du Bronze?
Maïa Pomadère ......................................................................................................... 270

THE DEAD AND THEIR DIET

17 Stable isotope analysis of human remains from the Early Helladic site of Perachora, Korinth, Greece
Eirini I. Petroutsa, Michael P. Richards and Sotiris K. Manolis .............................. 290

18 Aspects anthropologiques et paléopathologiques de la malnutrition à Argos (HA, HM)
Philippe Chartier...................................................................................................... 297
19  Health and diet during the Middle Bronze Age in the Peloponnese: the site of Kouphovouno
  *Anna Lagia, Eirini Petroutsa and Sotiris Manolis* .......................................................... 313

20  Apport de la paléodontologie à la compréhension des pratiques alimentaires et des modes de vie des populations égéennes protohistoriques
  *Laurence Hapiot* ............................................................................................................ 329

**BROADENING THE HISTORICAL PERSPECTIVE**

21  The consumption of dog-meat in classical Greece
  *James Roy* .................................................................................................................... 342

22  La cuisine des bébés en Grèce classique: analogies culinaires des médecins hippocratiques
  *Lydie Bodiou* ................................................................................................................ 354

**QUESTIONS AND ANSWERS** .......................................................................................... 369
Preface

In the Aegean the archaeological landscape was completely transformed in the Neolithic and Early Bronze Age. Early and Middle Neolithic sites were concentrated on the best agricultural land. This was followed by an expansion into more marginal environments in the Late and Final Neolithic periods, and then a rapid colonization of the hinterland in the Early Bronze Age. These developments had a major impact on social organization, which culminated in the appearance of centralized institutions. But what underpinned and facilitated this process were significant innovations in agricultural practices. In the Early and Middle Neolithic period it is assumed that intensive cultivation of relatively small plots of land was standard. The Late and Final Neolithic periods also see the use of marginal land, possibly by pastoralists. Was the much contested ‘secondary products revolution’ responsible for the major expansion in the Early Bronze Age? Greater use of livestock – for milk, fleeces/hides, manure and traction – and new cultigens might lie behind the new Greece of the Bronze Age.

In order to examine the ways in which the production and consumption of food developed in the Aegean region over the course of the Neolithic and Early Bronze Age, and to see how this was linked to the appearance of more complex forms of social organization, a colloquium was held in the Université Blaise Pascal in Clermont-Ferrand in April 2004. The papers examined sites from Macedonia in the north down to Crete in the south and covered not only the Neolithic and Early Bronze Age but extended into the Middle and Late Bronze Age and Classical period as well. The evidence cited included human remains, animal and fish bones, cultivated and wild plants, fixtures and features such as hearths and ovens, ceramics and literary texts, interpreted through a range of techniques, such as residue analysis and stable isotope analysis. A number of key themes emerged, for example the types of foodstuffs that were produced and consumed with a focus on the changes that took place around the time of the Final Neolithic/Early Bronze Age transition, which is seen as a particularly critical period. Also discussed were the ways in which foodstuffs were stored and cooked, the significance of culinary innovations and especially the social role of consumption.

We are most grateful to the authorities at the Université Blaise Pascal, in particular Sylviane Coyault, directrice de la Maison de la Recherche, also Micheline Decorps, doyen de l’UFR Lettres, Langues et Sciences Humaines, who helped to ensure that the conference ran smoothly. The conference was made possible by generous grants from the British Academy, CNRS, le Ministère français des Affaires Etrangères, the Université Blaise Pascal (le Centre de Recherches sur les Civilisations Antiques et l’Ecole doctorale Lettres, Sciences Humaines et Sociales) the University of Liverpool, the Conseil Régional d’Auvergne, the Conseil Général du Puy-de-Dôme, Clermont-Communauté and the Ville de Clermont-Ferrand. We would also like to thank Keith Branigan and Gilles Touchais, as well as Clare Litt, Sarah Monks and the staff at Oxbow Books for their major contribution to this publication.
Chapter 12

Communality and Competition: The social life of food and containers at Aceramic and Early Neolithic Knossos, Crete

Peter Tomkins

It is generally thought that the first appearance of Neolithic farming villages in the regions bordering the Aegean (c. 7000–6500 BC) marks the end of a ‘communal economy’, where resources were collectively produced and owned, and the beginning of a ‘household economy’, where communities were divided into different, independent productive units or households (Childe 1964, 67; Flannery 1972; Halstead 1999). Such households are viewed as having operated as independent agents, organising their own production, owning their own produce and competitively pursuing their own self-interest (Halstead 1999, 81–91). Under this model households sought to produce a normal agricultural surplus, which not only served as a buffer against the risk of future economic failure, but also could be deployed, through periodic hospitality or commensality at a supra-household level, as a means of creating debts of obligation, resolving conflicts and negotiating status (Halstead 1989; 1999). Only in ideology is the influence of a communal economy thought to linger, as shown by a greater emphasis on the sharing of food in EN and MN communities (Halstead 1995). However, while the size and organisation of Neolithic houses certainly favours the existence of an individual family or household as the occupying group (Renfrew 1972, 365; Halstead 1999, 79–80), this does not automatically mean that such a group always constituted the primary unit of social and economic organisation (see discussion in Tomkins 2004). Modern small-scale, household-based societies testify to a variety of forms of social and economic organisation, sometimes at levels higher than the household (Sahlins 1974, 74–8). Moreover, the evidence cited in support of a ‘household economy’ almost entirely derives from later Neolithic (late MN–FN; c. 5500–3000 BC) sites, which provide a relatively unambiguous picture of household socio-economic independence (Halstead 1995; 1999, 81–90; Tomkins 2004). The temptation to project this model back in order to fill-out the more incomplete picture of the earlier phases of the Neolithic has proved hard to resist. However, in doing so we inevitably lose a sense of what was different about life in these earlier communities during the first millennium of farming in the Aegean. This is important not least because there are strong signs of difference in such key areas as the configuration of domestic and communal space (Halstead 1995; 1999, 80).
In order to build-up a more contingent understanding of how an early farming community might have operated, this paper will explore the consumption of food, ceramic vessels and other non-ceramic containers at Knossos, Crete during the Aceramic and EN periods (7000–5900 BC).\footnote{Changes in the articulation and meaning of food production and consumption are a potentially important source of insight into Neolithic social life and social transformation. However, although we have proved adept at identifying the crops, animals and accompanying productive strategies that formed the basis for earlier Neolithic subsistence (e.g. Halstead 1989; 1996), we still struggle to understand the social context within which food production and consumption operated. An important link between food and its social context is provided by the containers within which food was prepared, served and eaten. Material culture in both its creation and its deployment reproduces social classifications, social values and social relations at a conscious and an unconscious or habitual level (Bourdieu 1977; Miller 1985). Thus, if we can understand something of the materiality of Neolithic food consumption, we might be in a better position to understand the ideas, values, strategies and politics that lie behind it.}

This paper consists of three main parts: the first will focus on archaeological, methodological and theoretical issues associated with studying ceramic consumption at EN sites in the Aegean; in the second a \textit{characterisation} of EN ceramic consumption at Knossos will be built up based solely on the objects themselves; in the third part this characterisation will then be \textit{contextualised} through the introduction of a variety of forms of contextual evidence. An advantage of this separation of \textit{character} and \textit{context} is that it facilitates an exploration of the ways in which the character or nature of EN pottery articulates with its consumption or depositional context. This analysis of food and container consumption will form the basis for an re-examination of social and economic organisation in an earlier Neolithic farming community. Did the beginning of the Neolithic really see a radical and rapid shift from a ‘communal’ economy of collective production and ownership to a ‘household’ economy of domestic production and ownership (e.g. Halstead 1999, 90–1) or did this transition take place only gradually over the course of the earlier Neolithic, culminating in the emergence of the socio-economically independent household only in the latter half of the sixth millennium BC (late MN/LN) (see Tomkins 2004)?

\textbf{THE DILEMMA OF CONTEXT}

Although there is common agreement that early ceramic vessels functioned to serve, display, but not cook food (Gardner 1978; Kotsakis 1983; Vitelli 1993, 213–6; Björk 1995, 113–35; Moore 1995, 47; Yiouni 1995, 620; 1996, 185), few, if any, studies of EN ceramics have explored the relationship between ceramic and food consumption in a systematic, focused and fully contextual manner. To an extent this simply reflects the failure of the language and ideas of consumption to penetrate the discourse of Aegean Neolithic archaeology.\footnote{However, a more immediate obstacle to insight is a general lack of primary, structured deposits of complete or semi-complete vessels that might provide clear insights into the nature and scale of EN ceramic consumption. For example, at EN–MN Franchthi, deposits are often re-worked, relatively few sherd joins and the only complete or semi-complete vessels are from burial contexts (Vitelli 1993, 31, 44). The EN ceramic assemblage from Achilleion consisted almost entirely of sherd material with very few completely restorable vessels (Gimbutas et al. 1989, 83–92; Björk 1995). At Knossos the floors of EN houses are generally clean when excavated,}
complete ceramic vessels are very rare and the majority of the ceramic material is in the form of sherds from secondary or tertiary deposits from external areas (Evans 1994, 7). These and other examples suggest that instances of primary discard, where a vessel is disposed at or near the location where it was used, are rare.

Even when primary contexts do occur at earlier Neolithic sites, their significance is not always recognised (e.g. ‘rubbish pits’; Pyke 1996, 49–50; Gimbutas et al. 1989, 32–6) nor is it always clear how they should be interpreted or ‘read’. In the very best cases one might hope that structured depositions of ceramic vessels and other artefacts might provide an indication of the ‘grammar’ of consumption, but what of the ‘vocabulary’? What did it signify to place a ceramic vessel deliberately in the ground and can we hope ever to understand some of this significance? What also of other contexts where ceramic or non-ceramic vessels may have been used, such as houses, but for which primary evidence is usually lacking?

Broad questions such as these can only be answered when the full range of extant ceramic material, both whole vessels and sherd material, is incorporated into the discussion and this is by no means straightforward. How can material that is so broken and mixed play any role in an investigation of consumption? The solution adopted in this paper is to focus on a broader, materially-grounded view of consumption which pays close attention to the ways in which consumption articulates with production and exchange. This allows ceramic data that are usually interpreted solely in terms of production (e.g. form, finish, frequency, intended function) or exchange (e.g. provenance) to be used also to inform upon consumption. The study of production and exchange, unlike consumption, is far less reliant on primary depositional contexts, and may more easily be studied at the level of the sherd using a variety of macroscopic, microscopic and compositional analyses. Thus, an advantage of this approach to consumption is that it does not rely, at least in the first instance, on there being primary consumption contexts.

PRODUCING CATEGORIES, EXCHANGING VALUE, CONSUMING POWER

As archaeologists we find a certain analytical usefulness in dividing human behaviour into different categories: acts of manufacture are production, acts of use are consumption, acts of giving and receiving are exchange. However, it is perhaps too easily forgotten that this division is an analytical convenience, which, although extremely useful, may also at times obscure the ways in which these three types of activity inter-link and articulate with each other. Acts of production create and recreate order, an order which is not natural or timeless, but social and contingent. They are one of the ways in which social systems of classification are materialised and reproduced (Bourdieu 1977, 97–109). Thus at a basic level a link can be drawn between ceramic production, where material categories are created, and ceramic consumption, where these same categories are deployed. This link is rarely explored in discussions of ceramic consumption, partly because the link is not always straightforward, but partly also because of an overly conservative attitude towards ceramic typology, which in the study of the Aegean Neolithic has mainly served a chronological purpose. Although some general observations regarding the possible function of specific forms have been made (e.g. Vitelli 1993; Björk 1995; Yiouni 1996), there has been a marked reluctance to explore the order inherent across a range (or typology) of forms and how this might relate to how ceramic vessels were perceived, how they may have been put to use, how they relate to other non-
ceramic containers and how their consumption was structured and organised.

Such caution derives from the widely-held belief that any order identified by the modern analyst need not have had any sort of past significance (Hill and Evans 1972). Critiques of this view have argued that this represents an overly pessimistic view of the limits of inference, engendered to a large extent by a failure to situate human agency and social values at the heart of processes of social reproduction (Barrett 1991, 202–4; Miller 1985, 34–50, 169–70): “producers cannot be disestablished as the creators of the order under study and such order cannot be reduced merely to the hypotheses of the analyst” (Miller 1985, 10–11). As ethnographic studies of ceramic production make clear, form is not determined by the techniques used, but by the producer, who selects specific dimensions of variability, which then serve as a focus for differentiation (Miller 1985, 49–50; van der Leeuw 1993; Gosselain 1998, 87–91). These dimensions of variability are measurable from the vessels themselves and frequently correspond to the same dimensions used by archaeologists to construct object typologies, such as rim form, handle type and body profile (Miller 1985, 162). Thus, although caution and detailed contextual evaluation are always required (Barrett 1991, 203–4), there is no inherent reason why the material categories recognised by the archaeologist should not have a direct relationship to ancient material categories that existed in the mind of the producer.

This still leaves a gap to be bridged between categories of production and categories of consumption. Modern ethnographic studies are full of cautionary tales of how ceramic vessels may be classified in different ways depending on their context (Miller 1985, 10–11, 161–83; Kempton 1981, 123, 127, 138; Dietler and Herbich 1994, 466–70). Often this translates into a noticeable gap between the classifications of producers and consumers within the same society. However, before drawing any overly pessimistic conclusions, it is important to recognise the limits of these analogies. Such studies have invariably been of specialised ceramic producers operating within a stratified, socio-economically differentiated society and under the influence of a wider market (e.g. Miller 1985). There can be little doubt that the EN situation was entirely different: communities were compact and small-scale (c. 0.5–1.0 ha., c. 50–300 inhabitants; Halstead 1989, 70) and ceramic production, with its low intensity and very low output, resembles a form of non-specialised underproduction that might be characterised as ‘production for livelihood’ not ‘production for exchange’ (Tomkins 2004; 2001, 81–3, 325–335; Sahlins 1974, 82–6, 102). There is thus every indication that the degree of separation between ceramic producers and consumers was as good as non-existent and that EN material categories of production had an especially close relationship to categories of consumption.

If in their production material categories embody elements of a social order, then so in their consumption do they contribute to the construction of identity by situating the consumer in relation to a series of social values, social categories and social knowledge. Material categories serve as ‘frames’ that direct or ‘cue’ consumers into appropriate behaviour, which in turn acts to re-define the significance of the particular material category involved (see Miller 1985, 180–2, 204–5). Pottery, with its wide range of potential functions is particularly suited to the role of framing action, while its concrete nature makes it ideal for the objectification of social values and concepts. In certain instances, such as ritual action, the consumption of material categories can be explicit and symbolic, involving conscious expressions of desire; in others, it may be more instrumental, where the mundane or habitual nature of the action naturalises it to the point that it is scarcely noticed and the cues are subconsciously given and received (Miller 1995b, 239). Even at this unconscious level material categories continue to act as a
frame for action which, although lacking conscious intention, is embedded within and thus unconsciously articulates systems of social values and social relationships.

Thanks to the concept of ‘symbolic capital’ strategic or symbolic consumption may be understood to extend “to all the goods material and symbolic, without distinction, that present themselves as rare and worthy of being sought after in a particular social formation” (Bourdieu 1977, 178, see 171–83). It is through the accumulation, display and exchange of material and symbolic capital that individuals or groups define their identities and negotiate status or reputation. Such acts, especially in small-scale, kin-based societies, do not exist in isolation, but are fundamentally historical, where acts of consumption and exchange represent “a heritage of commitments and debts of honour, a capital of rights and duties built up in the course of successive generations and providing an additional source of strength which can be called upon when extraordinary situations break in upon the daily routine” (Bourdieu 1977, 178). Indeed, in agricultural societies, where a short ploughing and harvesting period and limited technical resources conspire to demand collective labour, symbolic capital, in the form of prestige and renown attached to a family, may perhaps be the most valuable form of accumulation (Bourdieu 1977, 179).

The broader systems of social practices and social classifications, within which acts of consumption and exchange are embedded, give meaning and render power to symbolic capital (Bourdieu 1977, 182–3; Appadurai 1986, 29–31; Miller 1995a, 31–3; 1995b, 269, 276–9). Through certain mechanisms (e.g. taboos) such systems direct action towards certain material categories and away from others and may even encourage over-investment in categories that have no obvious value when worth is calculated strictly on adaptive potential (Bourdieu 1977, 177). These ‘rules of the game’ thus direct activity, but importantly also allow room for the negotiation of status (Bourdieu 1977, 10–15; Appadurai 1986, 17). There is an obvious link between the negotiation of status – or the construction of value in people – and the ways in which value is constructed in relation to objects; value being not an inherent property of objects, but a human judgement about them (see Appadurai 1986, 3–4). In general, a high value is associated with that which is rare or difficult to access and this difficulty of access is overcome through the act of exchange, in which the value of objects is reciprocally determined. In this way, while social rules may direct the consumption of material culture, exchange allows consumers to manipulate the value of that material culture.

Consumption is thus closely linked to acts of production and exchange. Acts of production create material categories which embody social systems of classification and which serve as frames or cues for acts of consumption. Study of how these material categories are created, especially in small-scale societies such as those of the earlier Neolithic, is likely to inform upon how they were intended to be consumed and how consumption itself was organised. However, consumption is more than just a re-enactment of commonly-held values and ideas, but offers opportunities for strategic, competitive action on the part of consumers seeking to negotiate status and reputation (i.e. power). The accumulation of symbolic capital, the acquisition of valued items through exchange and their subsequent consumption may all be viewed as playing a role in more calculated, strategic acts of consumption.

RE-CREATING NEOLITHIC VESSEL BIOGRAPHIES

A useful way of thinking through the links between production, exchange and consumption is
to adopt the idea of object biographies (see Gosden and Marshall 1999; Tite 1999). An object may be understood to accumulate knowledge at key points in its life (see Appadurai 1986, 41–3): at production an object is likely to reflect, at least to its producer, a fairly standardised set of technical practices as well as a series of social values surrounding its place within a system of material categories. Once an object is exchanged it acquires both value and biography and during its life it may change in value and may acquire an ever more lengthy biography, depending on the number of times it is transacted, the contexts within which it is consumed and the status of the individuals through whose hands it passes. In this way the significance of an object during a specific act of consumption may be derived from persons, circumstances and activities with which it has previously been associated (Kopytoff 1986; Helms 1993, 146–159; Gosden and Marshall 1999).

Although, most of the specific associations attached to a Neolithic ceramic vessel remain forever out of our reach, it is nevertheless possible, at least in theory, to establish certain basic ‘facts’ about its life, such as its production, its provenance and how it was used. The methodology used in the study of the Neolithic pottery from Knossos combines macroscopic observation of fabric, form, finish, frequency and use-wear with microscopic (petrology; SEM) analysis of fabric, forming methods, surface treatment and firing (Tomkins et al. 2004). Previous applications of this methodology on Minoan ceramics have demonstrated not only the basic compatibility of these different forms of analysis (e.g. Wilson and Day 1994), but also how their combination allows a very detailed characterisation of a ceramic assemblage in terms of its mineralogy, paste preparation and its forming, finishing and firing technologies. In order to search for correlations between different recorded attributes (e.g. fabric, form, finish, use-wear etc.), attribute data was recorded and cross-referenced according to fabric. Fabric proved to be the most sensitive indicator of variation and also has the advantage of defining and corresponding to what might be termed ‘production groupings’ that are spatially-defined by the consistent exploitation and processing of specific raw materials using a specific set of techniques.

The chronology used in this paper corresponds directly to that of the Greek mainland (Gallis 1996, 30; Andreou et al. 1996, table 1) and represents a new schema based on a full re-study of the complete Neolithic ceramic sequence at Knossos (Table 12.1; Tomkins forthcoming). This new ten-phase chronology replaces the old five-phase Cretan system (Furness 1953; Evans 1964; Renfrew 1972; Vagnetti and Belli 1978), which confusingly employed the same terminology as used elsewhere in the Aegean (e.g. Aceramic, EN, MN, LN, FN) but applied it to different periods of time: for example the old Cretan EN I–II period covered the same period of time as EN, MN, LN I and LN II on the Greek mainland. The new EN phase at Knossos corresponds only to strata IX and VIII (area AC) excavated in 1959–60 below the Central Court of the later Bronze Age palace (Evans 1964, 144, 146–50; Tomkins forthcoming).

CHARACTERISING EARLY NEOLITHIC CERAMIC CONSUMPTION

Creating and recognising EN material categories

Strong indications of a close correlation between ancient and modern material categories at EN Knossos are:
1. A consistent association between particular form-types and particular finishes: for example during EN plastic cordon decoration is restricted to large-diameter, deep bowls (see below);

2. A consistent association between particular types of form or finish and particular forms of use-alteration: for example only large, round-based deep bowls or jars have traces of burnt concretion on their interior (see below);

3. Detailed comparison of EN vessel types from Knossos with those from sites in neighbouring Aegean regions suggests that, while there are general similarities in form, regional differentiation is principally focused on the same limited ‘dimensions of variability’, namely rims, handles, bases and forms of decoration, as those used to construct modern typologies.

Taken together these points suggest that one might go some way to identifying ancient material categories through the isolation of significant associations between form, finish and use-alteration.

Early Neolithic producers and consumers

This leaves the question of how closely material categories of production might relate to categories of consumption. Combined macroscopic and microscopic (petrology; SEM) studies have allowed the EN ceramic assemblage at Knossos to be broken down into its constituent fabric groups. These groups were first recognised and defined petrographically according to a standardised system of description (e.g. Whitbread 1995). A variety of fabric groups were identified based on detailed study of both non-plastics and the clay matrices that host them. Several fabrics are broadly compatible with a geological provenance in the area local (<5–7 km) to Knossos, others are clearly non-local and were almost certainly produced at other similar and as yet unknown Cretan EN settlements situated beyond Knossos (see Tomkins and Day 2001; Tomkins et al. 2004; Tomkins 2001). Through careful study it proved possible to

<table>
<thead>
<tr>
<th>Greek Phases</th>
<th>Old Cretan Phases</th>
<th>New Cretan Phases</th>
<th>South-West Anatolian Phases</th>
<th>Approx. Dates (BC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aceramic/Initial</td>
<td>Aceramic</td>
<td>Aceramic</td>
<td>Early Neolithic</td>
<td>c.7000 – c.6500/6400</td>
</tr>
<tr>
<td>Early Neolithic</td>
<td>Early Neolithic I</td>
<td>Early Neolithic</td>
<td>Late Neolithic</td>
<td>c.6500/6400 – c.5900</td>
</tr>
<tr>
<td>Middle Neolithic</td>
<td>Early Neolithic I</td>
<td>Middle Neolithic</td>
<td>Early Chalcolithic</td>
<td>c.5900 – c.5300</td>
</tr>
<tr>
<td>Late Neolithic I</td>
<td>Early Neolithic I</td>
<td>Late Neolithic I</td>
<td>Middle Chalcolithic</td>
<td>c.5300 – c.4900/4800</td>
</tr>
<tr>
<td>Late Neolithic II</td>
<td>Early Neolithic II</td>
<td>Late Neolithic II</td>
<td>Middle Chalcolithic</td>
<td>c.4900/4800 – c.4500/4400</td>
</tr>
<tr>
<td>Final Neolithic</td>
<td>Middle Neolithic</td>
<td>Final Neolithic I</td>
<td>Late Chalcolithic I</td>
<td>c.4500/4400 – c.4250</td>
</tr>
<tr>
<td></td>
<td>Late Neolithic</td>
<td>Final Neolithic I</td>
<td>Late Chalcolithic I</td>
<td>c.4250 – c.3900</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Final Neolithic II</td>
<td>Late Chalcolithic II</td>
<td>c.3900 – c.3600</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Final Neolithic III</td>
<td>Late Chalcolithic III</td>
<td>c.3600 – c.3300</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Final Neolithic IV</td>
<td>Late Chalcolithic IV</td>
<td>c.3300 – c.3000</td>
</tr>
</tbody>
</table>

Table 12.1 Greek, Cretan and South-West Anatolian Neolithic chronology (after Tomkins forthcoming, fig. 3).
extend the definition of these petrographic groupings beyond the microscope to include attributes that could be recognised macroscopically (e.g. type, size, orientation of inclusions, etc.). This allowed the entire EN assemblage to be sorted macroscopically into these well-defined petrographic fabric groups. All but the most rare fabric groups were regularly encountered in EN and later contexts and this consistency reflects the consistent selection of specific raw materials and the consistent application of specific techniques of paste preparation. In production terms each fabric represents the lowest index of variation, namely the output of a specific producing group that was effective in passing on technical knowledge to the next generation. Whenever a fabric is present in any sort of quantity, it is clear that each producing group produced a broadly similar range of forms (FIG. 12.1). Although there are very subtle differences in form and finish per fabric, what is most striking is the overall homogeneity in form and finish exhibited between different EN producing groups (Tomkins et al. 2004). This homogeneity is all the more remarkable when one considers that some of these producing groups were large distances apart: for example, the forms produced by a group of EN producers located in the Mirabello Bay (East Crete) are indistinguishable from those that are local to Knossos (North-Central Crete) (Tomkins and Day 2001; Tomkins et al. 2004). It seems likely that one of the forces maintaining this homogeneity was a shared sense of what constituted appropriate material culture and more specifically common ideas regarding the significance and role of these vessel forms in consumption.

EN ceramic consumption at Knossos, as at other EN sites in the Aegean (Vitelli 1989, 26; Yiouni 1996, 181–5), appears to have been very low. A minimum vessel count, based on an estimate of minimum vessels represented per fabric per context, was conducted for all EN contexts from strata IX and VIII in area AC, producing a total of 286 vessels (Tomkins 2001, 250–65). Although sherd densities will have almost certainly varied across the site, a crude minimum estimate of the total number of vessels consumed during EN can be produced by simply multiplying the area of AC (55m²) up to the estimated size of the site during EN (c. 0.25–0.35 ha.; Tomkins 2000, 229; 2001, 529–36). This produces a total estimate for EN of c. 13,000–18,200 vessels consumed. The length of the EN phase at Knossos, estimated at around 600 years (Tomkins forthcoming), allows an annual EN consumption rate to be estimated at c. 20–30 vessels per year. Naturally such calculations cannot be considered accurate and only serve to provide a general indication of scale. Moreover it should be stressed that they reflect the scale of local consumption and not, as has been previously assumed (Vitelli 1989, 21; 1993, 210; Yiouni 1996, 184–5), production. The presence at Knossos of a significant number of non-local ceramics (see below) strongly suggests that an unknown proportion of the total local production output was exchanged beyond Knossos. Thus local production output can only be estimated if one assumes that it was tied in a general way to levels of local consumption, which in the case of EN Knossos would suggest a very low output of perhaps 10–40 vessels per year or as little as a single open firing, in a community of perhaps 25–70 individuals. This suggests a scenario of part-time, low intensity, non-specialised production (Tomkins 2004; 2001, 312–48) with little or no separation between producers and consumers.

**Tableware and non-tableware**

If one considers the range of vessels produced by any of the common EN producing (fabric) groups then it is possible to observe a basic distinction between:
1. Coarse Vessels: larger, thicker-walled vessels with rounded bases and a burnished surface (i.e. tool marks visible).

2. Fine Vessels: smaller, thinner-walled vessels, often with flat bases and usually a polished surface (i.e. tool marks invisible).

This basic distinction suggests the existence of two main categories of vessel. Regarding the possible significance of this distinction, one might allow oneself to be guided by the strong association between round-based vessels and burnishing and between flat-based vessels and polishing. Round-based vessels sit better on uneven ground, while flat-based vessels function best on a flat surface such as a table (Sherratt 1991). This would suggest that this basic distinction in finish served to separate tableware from non-tableware.

There is some evidence, in addition to the aesthetic, to suggest that fine tableware was more highly valued than non-tableware. During production greater time, labour and skill was invested in fine vessels than coarse vessels. For example, amongst the local group of fabrics, coarse vessels are simply smoothed and burnished, while polished vessels undergo additional processes whereby the vessel surface is pared down to create a smooth, thin-walled form, a slip layer is applied and the surface is polished. Interestingly this slip layer often derives from a different clay (non-calcareous) to that used for the fabric (non-calcareous) of the vessel and its use seems to have been a deliberate attempt to ensure a dark, rather than a buff to grey, polished surface (Tomkins et al. 2004; see below). Not only does this difference in treatment suggest that these two basic categories existed in the mind of the producer, but also the greater effort involved in creating a high quality polished surface suggests that polished vessels represented the more valued category of vessel.4

A second window on value is provided by the evidence for mending. A number of sherds (n=10) from EN levels in area AC have had repair holes drilled in them after firing.5 This practice also occurs during MN and in one or two cases joins between drilled sherds make clear that these holes are situated in pairs either side of a break, allowing a cracked vessel to be literally tied together. Since in every EN example of this practice the vessel is fine, it seems reasonable to conclude that fine vessels were consistently more highly valued than burnished vessels. Moreover, since 80% of these drilled sherds are in non-local fabrics, a pattern also repeated during MN, it would seem that more effort was made to curate non-local fine vessels than local fine vessels.

Within any single producing (fabric) group approximately 10 different form types may be consistently distinguished through the selection of simple criteria such as depth (shallow, medium, deep), degree of closure (open/bowl, closed/jar) and rim type (simple, offset) (FIG. 12.1). From a purely functional perspective, this range of types exhibits a marked redundancy of form and it would be possible to replace all 10 with perhaps two types (shallow bowl, deep bowl/jar). This redundancy suggests that differentiation in form is driven by social rather than purely functional needs. It is also worth noting that of these 10 types only three types (i.e. medium-deep bowl, ‘s’ profile jar, collared jar) consistently occur in the non-tableware category, while all occur in the fine tableware category. Clearly the nexus of formal ceramic variation lies among tableware, suggesting that the greatest demand for different vessel forms was in activities associated with the serving and eating of food.

Within the tableware category variation in form appears to be structured around a basic sub-division marked by the presence or absence of an offset or extended rim (FIG. 12.1). Unlike variation in depth and degree of closure, the selection of an offset rim has no appreciable affect
Fig. 12.1 The range of forms typical of a single EN fabric group.
on the actual performance of the vessel and seems to mark an entirely artificial sub-division within the tableware category, the significance of which remains unclear. One might speculate that this axis of differentiation corresponded to different categories of use (e.g. serving versus eating), different occasions, individuals of different age or status or as containers for different items (liquids and solids?), foods or recipes. However, it is as well to remember the ethnographic caveat that variation in form need not always correspond to variation in function (e.g. Miller 1985, 162).

Non-tableware: cooking

Amongst the non-tableware category, a particularly meaningful association between form, finish and use-wear is the occurrence in EN and later contexts of rounded bases with traces of burnt residue on the interior of the vessel. Usually this burnt residue leaves a dark stain in the sherd break that declines in intensity from the interior to the exterior. The exterior of these vessels lacks any obvious traces of burning (e.g. sooting, scorching etc.), although this has not yet been conclusively verified by residue analysis (e.g. Urem-Kotsou and Kotsakis this volume). No complete examples of this form are known, but surviving fragments suggest a deep bowl or hole-mouth jar with one or more strap handles. The consistently large diameter suggests that the food contents were intended to be shared between a number of individuals. These vessels are also linked by their consistently light-coloured burnished surface, which in some fabrics was deliberately achieved through the application of a white or grey-firing, calcareous slip (Tomkins et al. 2004).

The evidence for the internal application of heat to organic contents, testifies to a cooking method using indirect heating involving the addition of pre-heated stones or pot boilers (e.g. Brown 1989, 206–7; Sassaman 1995, 225). There is some evidence to suggest that indirect-heat cooking may also have been practised at other Aceramic and EN sites. At Aceramic Argissa large quantities of heat-treated river pebbles were found and these were interpreted as heating stones for cooking (Weinberg 1970, 568). In EN–MN levels at Franchthi, there is evidence for “sooty deposits… on the interiors of vessels”, although some of these soot marks clearly post-date the breakage of the vessel (Vitelli 1993, 214, my italics). In contrast, at EN Nea Nikomedea possible evidence for direct-heating was found on a small number of vessels (Yiouini 1996, 190). Thus although it has been argued that ceramic vessels were not used at all for cooking until the end of the MN period (Vitelli 1989, 24–5; 1993, 213–5), it is perhaps safer to conclude that ceramic vessels could, perhaps on rare occasions, be used for cooking during the earlier Neolithic and that this use was subject to regional variations. Indirect-heat cooking is usually found in conjunction with the use of non-ceramic containers, such as lined baskets or stone vessels, and in view of its presence amongst the very earliest ceramic vessels from Knossos it seems likely that this reflects the continuation of an Aceramic cooking technique.6

Non-tableware: serving and storage

In addition to an occasional use for cooking, it seems likely that coarse non-tableware served more generally as containers for cooked or uncooked food and perhaps other items. Some EN coarse deep bowls of large diameter and decorated with plastic cordons make good sense as communal food containers, which to judge by their rounded bases would have been positioned on the ground. In support of this, some of these vessels have wear marks around the base of
the interior suggestive of repeated scraping perhaps by smaller bowls. Confirmation of this is provided by wear marks on the exterior of the rims of smaller, polished bowls that belong to the tableware category. This suggests a situation where food was shared out of a communal vessel using a small bowl and was consumed at a table from smaller vessels, perhaps using wooden spoons (see below).

During EN there is no primary dedicated storage jar or pithos (Cullen and Keller 1990; Perlès 1992, 144). In theory any bowl or jar type could have had a secondary\(^7\) life as a storage vessel, with any large upturned bowl serving to cover the contents. However, it should be stressed that the very low quantity of vessels in circulation and their relatively small size in comparison to later Neolithic storage jars argue against bulk storage in ceramic vessels. Thus, one must conclude that at EN Knossos, as at EN Franchthi (Vitelli 1989, 26–7) and EN Nea Nikomedeia (Yiouni 1996, 192), ceramic vessels were too small and too few to have been able to store all the food requirements for a single independent household for a year, let alone any ‘normal’ agricultural surplus resulting from household production.

CONTEXTUALISING EARLY NEOLITHIC CERAMIC CONSUMPTION

The wider container context (Aceramic–EN)

Before turning to the spatial evidence for food and container consumption, it is important to try to understand how ceramic vessels functioned within the broader context of container consumption at Aceramic and EN Knossos. Non-ceramic containers constitute the untold story of early Neolithic consumption, largely because their absence from the archaeological record has meant an absence from discussion and interpretation. At Knossos their importance is most clear for the Aceramic, a period of occupation lasting around 600 years that otherwise would have had no container forms (Evans 1968, 271). However, what is not always appreciated is the major role they continued to play during and probably after EN. The low rate of EN ceramic consumption suggests that individual households would have needed to curate ceramic vessels on a year-on-year basis not just to maintain a complete range of forms, but also to ensure that there were sufficient quantities of each form type to supply all entitled individuals. The evidence for curation and the very low rate of ceramic consumption seem at odds with the risk of breakage associated with active daily consumption (Mills 1989) and instead suggest that ceramic consumption was more passive and restricted. The implication of this is that daily container needs were largely or entirely fulfilled by a range of non-ceramic containers. Direct evidence for the presence of such containers at Knossos is provided by a number of clay jar stoppers (e.g. Evans 1964, pl. 58.3), the diameter of which is far too narrow (1.5–2.5cm) for even the narrowest ceramic jar. These instead must have been sealing a very narrow-necked container in a perishable material, perhaps a gourd. Such narrow-necked vessels would have been ideal for the transportation, storage and serving of liquids, an area of container functionality that is noticeably neglected by EN ceramic vessels at Knossos and Franchthi (Vitelli 1993, 215–6).

It has long been supposed that the earliest ceramic vessels to appear in the various regions of the world were imitations (skeuomorphs) of vessels made from natural materials (e.g. gourds, skins, baskets, stone or wooden bowls) and that the earliest forms of decoration reference these connections (Childe 1981, 86; Rice 1999, 7). It is thus surprising that the
nature of these links has not been systematically investigated in an Aegean context. At Knossos all EN ceramic forms show signs of skeuomorphism that links them to containers manufactured within well-developed traditions of wood or basket-making. For example, a conspicuous feature of EN and later ceramics are ‘wishbone’ handles attached to the rim of shallow vessels which may have served as ladles or dippers (e.g. Furness 1953, fig. 5a; Evans 1964, fig. 25.13–24; Dawkins 1904–5, fig. 3.c). These handles are long, heavy and have such a narrow point of attachment to the rest of the vessel that in every known EN example they are broken off at this point. Such handles are poorly suited to ceramic vessels and are unlikely to arise purely from a ceramic tradition. The most likely original material is wood, where such structural problems would have been avoided because the handle and body of the vessel would have been as one. Other obvious wooden skeuomorphs include pierced or unpierced triangular ‘ears’, also attached to the rim of shallow bowls (e.g. Evans 1964, fig. 39.4), and very rare EN or MN ceramic forms, such as palettes and spoons (Evans 1964, figs. 28.24, 57.15–16). Additional support for wood skeuomorphism is provided by the EN practice of finishing fine, dark polished vessels with a horizontal scribble that clearly simulates the appearance of dark, polished wood-grain (FIG. 12.2). A desire to skeuomorph or at least reference the link with wooden vessels may also help to explain why, in highly calcareous and thus buff or grey-firing fabrics, a non-calcareous slip was deliberately applied to ensure a dark polished surface.

The most striking feature of this evidence for wood skeuomorphism is that it is entirely confined to ceramic vessels in the tableware category. This suggests that some if not all tableware forms had corresponding wooden prototypes. Indeed there are no features of form or finish in the tableware category (e.g. large handles) that would be impossible or even difficult to achieve in wood. Wood would have been a highly suitable material from which to make the open, thin-walled and generally smaller vessels typical of EN-style tableware. It is also naturally water-tight, can be smoothed and polished to accentuate its appearance and, above all else, it would have been considerably more durable than any ceramic equivalent and thus more suited to use on a daily basis.

However, other ceramic forms, mainly those typical of the non-tableware category, would have posed problems in wood. These forms tend to be larger, round-based, globular shapes, sometimes with low collared rims and usually with large strap handles or occasionally tubular loop handles. Large or small globular forms, rounded bases, collared or extended rims and strap or

![Fig. 12.2 Early Neolithic fine tableware with horizontal scribble in simulation of wood grain.](image-url)
loop handles are all features typical of basket-making (e.g. Sentence 2001, 16–17, 23–54, 88–9). Even the EN practice of attaching plastic cordons as decoration could plausibly have origins in basket decoration (e.g. Sentence 2001, 94–119). Most importantly, as was the case with wooden tableware, basket versions of these ceramic forms would have been far more durable than their ceramic equivalents. The raw materials for both wood carving and basket production would have been readily at hand and some indication that wood-working was an important Aceramic and EN craft is provided by a recent study of the obsidian tools from Knossos (J. Conolly pers. comm.).

Taken together these observations strongly suggest that EN ceramic forms mirror an established set of material categories, which were developed first in non-ceramic media during the Aceramic. EN ceramic vessels at Knossos are perfectly adequate containers if used carefully, but would have had a short use-life if subjected to frequent or high-stress use (see also Björk 1995, 80–1, 87–90). Since vessels in wood and basket would represent a harder-wearing and thus better performing set of containers, then the conclusion seems inescapable that these non-ceramic containers were used on a daily basis for food preparation and consumption. Thus in the world of EN containers, ceramic vessels through their scarcity, the newness of their material and perhaps their greater fragility would have occupied a higher register of value, above those of wood and basket. This higher value means that the use of ceramic vessels would have rendered any act of consumption as significant and thus their deployment was both special and strategic.

**Contexts of food and container consumption**

Aceramic habitation at Knossos, consisting of up to four levels of mudbrick and stone architecture, seems to have been confined to a small knoll in the south-eastern corner of the later tell (FIG. 12.3, Trenches X and ZE; Evans 1971, 99–103; fig. 3; pl. VI; 1994, 2–5), while to the north, beyond this area of habitation, there appears to have been an open area with evidence for a variety of activities (stratum X, area AC; Evans 1964, 140–2; fig. 7). This open area lacked any direct or indirect evidence for the presence of houses. The only built feature was a burnt timber post and mudbrick structure, which contained a large amount of burnt grain either embedded in the interior plaster surface or lying in its immediate vicinity, and which thus appeared to have been some sort of bulk storage facility or ‘granary’ (FIG. 12.3; Evans 1968, 269; Helbaek 1968, 1–2; Tomkins 2004, 43). Stratum X itself was a thin (0.20–0.40m), dark deposit with frequent traces of fire in the form of ash patches and fire hollows. In addition, several pits were found, some containing ash, charcoal, carbonised grain and animal bones, others a series of seven child pit-burials. This evidence suggests that Stratum X was a communal activity area, where food was prepared and consumed, where infants were buried and where grain was stored in bulk. The presence of a handful of sherds from the surface of stratum X (AC26, AC25b; Tomkins 2001, 486) may indicate that some of the earliest ceramic vessels to be consumed at Knossos were put to use in this communal area. The presence of fire-pits and hearths in the Aceramic houses in trenches X and ZE suggests that food was prepared and consumed both at the domestic level within individual houses and communally in the open space that lay beyond them.

A similar picture seems to obtain for EN, where successive houses (D and E) in area AC preserve evidence for internal food preparation in the form of shallow, ash-filled pits and small, domed ovens (Evans 1964, 148; figs. 9 and 10). Unfortunately, the edges of the EN
settlement are almost entirely untested and thus the continued existence of a communal, edge-of-site open area cannot be proven. However, it seems likely that such areas did exist, not least because a pattern of small-scale, regular domestic consumption and larger-scale, periodic communal consumption, similar to that of Aceramic Knossos, is a feature of other EN sites in Greece (Halstead 1995, 16–19; Andreou et al. 1996, 559; Gimbutas et al. 1989, 36–60). This distinction between communal and domestic consumption seems to answer well to what we know or suspect about the structure and form of EN container consumption at Knossos. Daily

---

**Fig. 12.3 Aceramic spatial organisation at Knossos (after Evans 1964, fig. 7; 1994, fig. 3).**
household consumption is most likely to have used more durable wooden and basket containers, thus continuing a well-established pattern of use with roots at least as far back as the Aceramic period. It seems likely that individual households hoarded and curated ceramic vessels: although EN house floors at Knossos usually lack complete or semi-complete vessels, the presence of smaller fragments trodden into these surfaces suggests that ceramic vessels were present and used in household contexts. These more valuable containers would have emphasised the importance and formality of special occasions (Halstead 1999, 80; Vitelli 1993, 215–6), some perhaps occurring within the household, but others involving larger groups or even the entire community.

Cooking at the household level seems to have involved the use of shallow fire-pits located within the space of the house. Those ceramic vessels that show evidence of indirect heating are so few in number as to suggest a very restricted usage, perhaps on special occasions or for special foods. However, the continuation of this cooking technique and its particular suitability for non-ceramic vessels suggests that EN households may have continued to practise an ‘Aceramic’ indirect-heat cooking technique using non-ceramic containers. If so, then the consistent and often deliberately-achieved white or grey colour of these ceramic vessels could be a reference to the visual appearance of these non-ceramic cooking pots (e.g. clay-lined or clay-coated baskets).

The evidence for large-scale storage of grain in a communal area beyond the main area of habitation suggests that during the Aceramic period, bulk storage of agricultural produce including any normal surplus took place at a communal level (see Tomkins 2004). This would imply that early farming communities in the Aegean, such as that at Knossos, continued to operate under a communal type of economy, where food production and agricultural surplus was communally owned and controlled. Although bulk domestic storage using large perishable containers cannot be absolutely excluded, bulk storage of agricultural surplus at a communal level would explain the lack of positive evidence for large-scale, long-term storage in individual houses. Under this more communal model for EN society, agricultural produce would have been owned and stored in bulk at a communal level and allotted periodically to individual households, where short-term, small-scale storage could have been achieved in any large ceramic or non-ceramic container.

If ceramic vessels were a rare and valuable commodity during EN then any act that deliberately took a vessel out of circulation should be viewed as especially charged with significance. For example, almost all the complete or near complete EN vessels from Knossos come from Pits A and B (C27; stratum VIII) and the associated overlying deposit (C25a, C26; stratum VIII) (Figs 12.4–12.5; Evans 1964, 149–50; fig. 10). Together these contexts comprise a deposit that post-dates the destruction of EN House D and pre-dates the construction of MN House C. Although the exposure is very limited, it is possible that this deposit comprised some sort of external area. The larger pit (A) contained a fill of ash and earth together with the broken fragments of a bowl and two possibly non-local stone figurines (Evans 1964, 237–8; figs. 39.4; 63.15, 16; Ucko 1968, 321 n.1). Pit B contained an unbroken pot and a large amount of animal bone (Evans 1964, fig. 39.2). The overlying dark deposit (C25a, C26) contained successive hearths and ashy patches and produced four near complete vessels (Evans 1964, fig. 39.1, 3, 5, 6). In addition, at least one more vessel was reconstructed when this deposit was re-studied in 1998. A striking feature of all of these vessels, except the one from pit B, is that they consistently lack part or all of their base and have thus been rendered useless.
This consistency raises the possibility that they had been deliberately ‘killed’ prior to deposition (see Chapman 2000). This seems particularly likely in the case of the shallow bowl from the small, closed deposit of pit A, where one can be certain that the only missing fragment, a large sherd from the base of the vessel, must have been deposited elsewhere (see Evans 1964, pl. 41.2). Interestingly, the two stone figurines from Pit A (Evans 1964, 150; fig. 63.15, 16) also show signs of consistent and thus perhaps deliberate damage since both are missing the head and one of the legs. In this way the deliberate fragmentation of these objects may have served to reinforce and emphasise the fact that they were being permanently taken out of circulation. Although the absolute quantity of complete vessels is low, the deliberate destruction and deposition of these highly valued objects must surely be understood as highly symbolic and perhaps as a deliberate act of conspicuous consumption.

There are of course other conspicuous or ritualised ways of disposing of a ceramic vessel. The abandonment of a complete vessel on the final occupation floor of House E (stratum IX; see Evans 1964, fig. 4 s section) seems, at first, to call into question the idea that EN ceramic vessels were a rare and highly prized commodity. However, once again the presence of a complete vessel is a signal to look more closely at the context. Houses E and D show unambiguous signs of having been destroyed by a major conflagration severe enough to ‘hard-fire’ their mudbrick walls, preserve parts of the clay roof complete with impressions of roofing material and hard-bake and blacken the latest floor, which lacked any form of floor deposit and appeared to have been ‘cleaned’ prior to destruction (Evans 1964, 144–9; 1994, 7). The severity of the fire, the cleaning of the floor and the deposition of a ceramic vessel in House E raise the possibility that the burning of these two houses were deliberate, ritualised acts perhaps associated with purification, closure or embedded social restrictions on household power. If so, these would be the earliest examples of the practice of deliberate house burning that is a noted feature of Neolithic communities in S-E Europe (see Stevanoviæ 1997).
Deposit Overlying Pits A and B (C25a, C26)

Fig. 12.5 Contents of Pits A and B and overlying deposit.
THE POLITICS OF COMMUNAL CONSUMPTION (ACERAMIC–EARLY NEOLITHIC)

It has been suggested that the distinction between private and public food consumption reflects a basic tension between the natural desire of individual households to ‘hoard’ food and the necessity for households to use the sharing of food – or commensality – as a means of maintaining relationships beyond the household that may be called upon at times of social or economic crisis (Halstead 1995). In this ‘household’ model for EN society socio-economic power lies with the household, which is viewed as a largely autonomous unit that controls its own productive labour and thus owns its produce (Halstead 1999). In a recent review of the socio-economic position of the household in the Neolithic Aegean, it has been argued that evidence for the organisation of space, storage, production, exchange and consumption during the earlier Neolithic (Aceramic–MN) favours an alternative model that emphasises instead the dominant socio-economic position of supra-household or communal groupings (see Tomkins 2004). Under this ‘communal’ model, the power of the individual household to manage, store and own its own produce is strictly curtailed and responsibility for the production of livelihood (subsistence, craft) is shared. Land is held and worked in common or distributed to households on an annual basis. Food production is largely or entirely a collective responsibility, produce is pooled, long-term, bulk storage takes place at a communal level and control over the deployment of agricultural surplus lies not in the hands of individual households but with these larger communal groupings. Communal control and long-term stability will have been reinforced by a set of communal values and social restrictions on property and ownership which were repeatedly reproduced and reinforced each time people acted together and pooled their collective resources, such as during the production or consumption of food. In this way, people lived as separate households, but constituted themselves communally, the most significant moments in the year being those seasonal activities of production (craft, food) and consumption (e.g. commensality) that brought households together as a community.

Under the ‘household’ model the deployment of agricultural surplus is the principal way in which households compete for status and reputation (Halstead 1999, 89–91). Under the ‘communal’ model communal control over the deployment of agricultural surplus serves to strengthen the socio-economic position of communal groups by emphasising their role as host and provider and by directing the nexus of household competition away from agricultural surplus. This de-politicisation of agricultural surplus helps to explain why during the earlier Neolithic there is no evidence to suggest that households sought to maximise or intensify their productive output (food, craft) through technological innovation. It is only from LN that such a process of intensification begins and this may be seen as one of many signs pointing towards the emergence of a more socio-economically independent household (see Tomkins 2004). The de-politicisation of agricultural surplus, at least at a household level, may also help to explain why at Knossos during EN (and also MN) considerable effort seems instead to have been expended in the acquisition of non-local goods, such as stone axes or ceramic vessels. For example, in any EN (or MN) context at Knossos approximately 50% of the ceramics are in fabrics that are not of immediately local origin (i.e. >5–7km). Some of these non-local fabrics occur relatively frequently and are likely to have sources within the immediate environs of Knossos and in the wider Herakleion Basin, however others that are rare or unique may be linked stylistically and/or mineralogically to more distant sources, such as the Bay of Mirabello.
and even in some cases neighbouring regions beyond the island (Tomkins and Day 2001; Tomkins et al. 2004). In all cases these vessels represent the same general vessel types as produced locally and in many cases the similarity in form and finish is so great as to render local and non-local vessels indistinguishable. The reasons for such an energetic and acquisitive strategy must be social and an explanation may be sought in the likely higher value of vessels from more distant sources. This is also apparent in the way that efforts at curation focused on non-local vessels (c. 80% of all instances of mending during EN–MN).

The important role played by distance in the negotiation of power is a feature of many societies, past and present, small and large-scale (Helms 1993; Barrett 1998) and the challenge is not so much to identify its presence as to understand its articulation and motivation. It has been suggested that early Neolithic households could have competed in the cultivation of relationships (e.g. marriage alliances) with successful households outside the immediate community (Halstead 1999, 90). Such distant relationships may be understood in terms of symbolic capital, the accumulation of which increased status and reputation, and are likely to have been confirmed by an exchange of gifts, which in some way symbolised the relationship. The high proportion of non-local vessels at EN Knossos would support the idea that ceramic vessels, as a high value container, were a favoured gift in such exchanges. It remains possible that non-ceramic vessels could have circulated as gifts in a similar way during the Aceramic period.

This adds an extra dimension to our understanding of the role of ceramic vessels in EN communal food consumption. At a general level the consumption of ceramic vessels, as opposed to vessels in a less valuable medium, served to emphasise the importance and formality of such occasions. However, hierarchies of value also operated within the category of ceramic vessels with a special value accruing to vessels with non-local origins. If during the earlier Neolithic there was a link between status and access to the resource of distance (social and physical), then the consumption of objects that symbolised this access, especially in a communal context, will have been the principal way in which accrued symbolic capital could be expended. These more valuable versions of sanctioned material categories allowed individuals or groups to manipulate value in objects and thereby people without contravening the ‘rules of the game’ by introducing new commodity forms that could have threatened the stability of the overall system.

This consumption of distance cannot have been a silent process. The marked similarity in form and finish between local and non-local vessels means that value was not subconsciously communicated by the vessel itself, but had to be consciously and orally communicated by the consumer. In this way, objects symbolic of distance, such as non-local ceramic vessels, may have acted as cues for self-aggrandising narratives, such as illustrious vessel biographies or daring stories of acquisition, that translated symbolic capital into status. Within such a context the ultimate sanction available may have been to remove these ‘symbols’ permanently from circulation by depositing them in pits, perhaps having first publicly ‘killed’ the object in question.

CONCLUSIONS

In our quest to understand the internal structure and politics of the egalitarian communities of the earlier Neolithic Aegean, the detailed, integrated study of ceramic production, exchange
and consumption perhaps offers some of the greatest possibilities for insight. Macroscopic study and microscopic analyses of ceramics, if sufficiently detailed and integrated, can give glimpses into the ‘lives’ led by ceramic vessels. This allows a separation of character and context that not only side-steps issues regarding quality of context, but also, in the rare cases of primary discard, allows the articulation between character and context to be fully explored. With a tight grip on the material data and an understanding of the materiality of human existence it is possible, in turn, to give a voice to ceramic vessels, transforming them into credible witnesses to the actions, ideas and values of the people that made, used and discarded them.

It was argued for EN Knossos that a close correlation exists between archaeological and ancient typologies of form and finish. Low levels of production and a lack of specialisation suggest little or no separation between producers and consumers and strong similarities in the form of vessels produced at different settlements suggests strong, shared ideas about the significance and role of ceramic vessels in consumption. An exploration of the order inherent across the full range of vessels made by a single producing group indicates a clear distinction between those vessels that were used for the serving and eating of food on a table (tableware) and those that were not. For tableware the greater variety of form types and the greater skill and effort invested in its production and curation suggest that this was the more valued category of vessel. Amongst non-tableware a variety of functions seem possible: evidence for use in the cooking (indirect heat) and serving of food was presented and use for small-scale, short-term storage was considered possible. However, tableware and non-tableware do not answer well to the demands of daily container consumption. Strong evidence for skeuomorphism, the relatively fragile nature of the vessels and the very low levels of ceramic consumption provide insight into the broader context of container consumption during the Aceramic and EN phases at Knossos. Ceramic tableware vessels had direct equivalents made from wood, non-tableware vessels reference vessels made in basket and light-coloured, indirect-heat, ceramic cooking vessels may copy a non-ceramic container, perhaps a lined basket. These non-ceramic containers were more durable and must represent the daily container categories for both Aceramic and EN. Thus in their earliest phase of use ceramic vessels represented the more valued category and their use was thus restricted and strategic.

When combined with evidence for the spatial context for food and container consumption at Aceramic and EN Knossos, this supports a basic distinction between domestic consumption on a daily basis and communal consumption that may have been special, formalised and restricted to specific occasions. It is likely that the use of ceramic vessels on a particular occasion emphasised its significance and formality and any primary deposition of a EN ceramic vessel should be understood as unusual and should alert us to the significance of the act and the context. For example, it was argued for EN Knossos that on some occasions ceramic vessels were deliberate deposited in houses prior to their deliberate, ritualised destruction by fire, while on others they were deliberately ‘killed’ and buried in order to remove them permanently from circulation, perhaps as an act of conspicuous consumption.

The politics of earlier Neolithic communal consumption were explored drawing on a critique of the current ‘household’ model. It was argued that during Aceramic and EN competition for status amongst different households focused not on the deployment of agricultural surplus, which was communally owned and thus de-politicised, but on the acquisition, display and consumption of distance (social and physical). Distance constituted a
form of symbolic capital that was expended through the consumption of objects or ‘gifts’, such as ceramic vessels, that symbolised access to distance. More specifically, the consumption of such objects provided the cue for self-aggrandising narratives, which perhaps in extreme cases could culminate in the permanent removal of these objects from circulation. Thus at one level formalised occasions of communal food consumption served to reinforce bonds of communal solidarity and create an idealised vision of the community as one, perhaps symbolised by the collective consumption of food. But at another they allowed individuals or groups to expend symbolic capital in return for status within a formalised, restricted and thus very stable social system.

NOTES

1 For example, evidence for large-scale storage (i.e. pits, pithoi) of agricultural surplus within houses first appears during LN–FN (Halstead 1995; Cullen and Keller 1990); house models, which seemingly emphasise the household as a productive unit (Andreou et al. 1996), are a feature of late MN–LN contexts (Tomkins 2004); specialised production of ceramics, in the true sense of the term (i.e. regularised, high output production for exchange; Costin 1991) first appears at Knossos at the beginning of LN (Tomkins 2004); intensification, diversification and specialisation in agriculture also appear to be entirely a phenomenon of the LN–FN period (Halstead 1981, 320–7; Renfrew 1972, 274–80).

2 The data upon which this paper is based were gathered as part of a three-year doctoral research project on the EN–LNII ceramics from Knossos, supervised by Dr. P.M. Day and funded by grants from the Natural Environment Research Council and the GEOPRO TMR Research Network (European Commission contract no. ERBFMRX-CT980165). Subsequent research has been funded by a two-year European Commission Marie Curie Research Fellowship (contract no. HPMF-CT-2001-01385) and a one-year INSTAP fellowship. I would like to acknowledge the generosity of Professor John Evans who freely gave advice, permission to sample and publish and information in the form of original archive materials from all deposits, published and unpublished, from his excavations at Knossos (1957–60; 1969–70). For permission to study and sample Neolithic ceramic material from Knossos I would also like to thank the Council of the British School at Athens, Herakleion Ephoreia and the Conservation Directorate of the Hellenic Ministry of Culture.

3 For example, in the index to a recent treatment of the Early Neolithic in Greece (Perlès 2001), while ‘production’, ‘specialisation’, ‘technology’ and ‘exchange’ abound, ‘consumption’ is conspicuous by its absence.

4 A similar link between labour investment and value has also been suggested for EN Franchthi (Vitelli 1993, 39).

5 Mend holes are also a feature of the earliest EN pottery from Franchthi (Vitelli 1993, 39).

6 It has been argued that the failure to use ceramic vessels as cooking pots at EN Franchthi might signify continuities in both diet and cooking practices between the Mesolithic and Neolithic (Vitelli 1989, 25).

7 In his study of ceramic consumption in an Indian village, Miller noted that, after a period of use, all ceramic forms were taken out of their primary functional context and used for storage (1985, 71).

REFERENCES


