RECONSTRUCTING MINOAN DINING PRACTICE AND SOCIOPOLITICAL ORGANIZATION IN NEOPALATIAL HOUSEHOLDS AND PALACES

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RECONSTRUCTING MINOAN DINING PRACTICE AND SOCIOPOLITICAL ORGANIZATION IN NEOPALATIAL HOUSEHOLDS AND PALACES

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Food is among the most symbolically potent materials with which humans interact because it is simultaneously biologically necessary and socially constructed. Nevertheless, studies of Minoan Crete, as in other areas of the Bronze Age Mediterranean, fail to acknowledge this dual nature of food. Instead, most current scholarship on Minoan food is divided into two distinct camps: studies of subsistence focus on the nutritional qualities of food, and studies of feasting invoke its role in elite social organization.

The result of this dichotomy is that while scholars have been able to list the ingredients in the typical Minoan's diet and have been quick to identify sumptuous banquets at palaces, tombs, and religious sites, little attention is paid to the practices of cooking and eating in Minoan homes. This dissertation addresses this lacuna by analyzing the evidence of cuisine and dining etiquette at four Late Minoan IB domestic sites. Through a functional analysis of ceramic vessels and close examination of architectural layout, I investigate what kinds of foods were cooked, what cooking techniques were used, how diners interacted with the food and with each other, and how household layout reflected commensality behaviors.

Furthermore, this study clarifies the political role of feasting in Neopalatial palaces by comparing the palace evidence to the general system of Minoan commensality gleaned from the case studies. I accomplish this goal by implementing a theoretical model that treats feasting as

one end of a spectrum of food-sharing behaviors encompassing the most mundane to the most elaborate meals. Treating meals comparatively allows a closer understanding of the experience of the diners, who would have judged a meal's value against all those they had eaten previously. Thus, I consider the intentions of the hosts and the messages received by the guests. As a result, my analysis of Minoan cuisine and reevaluation of palatial feasts sheds light on the functions of the palaces themselves, and the sociopolitical systems that they upheld through their banquets.

BIOGRAPHICAL SKETCH

Micaela completed her undergraduate studies at Washington University in St. Louis, where she earned a B.A. summa cum laude with a double major in Archaeology and Classics. As a doctoral student at Cornell University, she studied Bronze Age Crete, ceramics, feasting, and archaeology of everyday life and the domestic sphere. During her studies, she has participated in excavations in Crete, Cyprus, mainland Greece, and Mississippi.

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CHAPTER 1

INTRODUCTION

The goal of this dissertation is to investigate dining practice in the Neopalatial Minoan period. My aim in this endeavor is twofold: first to describe food preparation and consumption habits in elite and non-elite households and second to better understand palace feasts and their role in upholding power structures. I use the reconstruction of everyday eating behaviors gleaned from domestic sites to contextualize palace banquets—thus getting a better sense of how the feasts worked by positioning them within a wider system of cuisine and etiquette.

Food is both biologically necessary for survival and socially necessary—in the context of the shared meal—for the building of social networks. Furthermore, out of the vast number of substances that humans can eat, the subset that "counts" as food is defined socially, varying from group to group. Thus, food is vital to cultural identity. Given its centrality to the human experience, the investigation of food habits forms a crucial part of the study of ancient cultures.

I focus my study of Minoan cuisine to the Late Minoan I period, and most of the data used in this research dates to LM IB (ca. 1600-1500 BCE), the final period before the collapse of the Minoan palaces. I choose this time frame because it corresponds to a rich tradition of lavish feasting in palaces throughout the island. Furthermore, because LM IB sites were often preserved through their sudden destruction at the end of the period, while Protopalatial sites are largely obscured by the rebuilding efforts of MM III, there is a wealth of evidence from LM IB as compared to other periods. I recreate dining practice from this period partly as a way to better understand the social function of the palace banquets. Nevertheless, dining is equally poorly understood in all periods of Minoan history—and, indeed, in most of prehistory—not only

because of poor preservation or excavation practices, but also because of the way archaeologists approach the topic of food.

The Minoan Diet: Diverging from the Mediterranean Triad

When archaeologists study food, they are most often interested in diet. I use the word "diet" here to refer simply to the totality of foods that people in a society ate, especially those that they ate regularly. Studies of Minoan diets are concerned with determining the average calories a typical person ate in a day, the percent of these made up by the various staple foods, the number of people sustained by palace stores, the resultant health of the population, or the self-sufficiency of households based on their available storage vessels (Christakis 2008, 19–33; Gallant 1991; Foxhall and Forbes 1982; Riley 1999). On Crete, archaeologists have a few ways to reconstruct ancient diets. One is the ethnographic study of modern Cretans. Here Allbaugh's (1953) study, being conducted in 1948—prior to the introduction of industrialized agriculture—is most relevant, although the applicability of 1948 data to the Bronze Age is still dubious. The benefit of ethnographic study is that it gives an idea not only of the foods available, but also of the frequency with which they were eaten. Direct evidence of ancient foods, including botanical, faunal, and residue samples can be more secure evidence for what people ate in the past. Unfortunately, these data usually can only indicate presence in the diet rather than prevalence. Linear A and B records from palaces give clues as to the relative availability of some foods, with limited results. The combination of these methods, and comparison with historical data, yields a list of generally agreed-upon "ingredients" (Isaakidou 2007, 5; Warren 2003):

- Cereals: wheat, barley, millet, oats
- Legumes: beans, lentils, peas
- Other plant foods: almond, fig, grape (and wine), olive (and olive oil), pistachio, wild greens, various herbs and spices

- Meat: sheep, goat, pig, cattle, game
- Secondary animal products: milk, cheese, yogurt, honey
- Marine animals: a great variety of fishes, shellfish, cephalopods

Clearly, a mere list, with no indication as to the relative frequencies of the various foods, is not a sufficient representation of the Minoan diet. In particular, most who study diet are interested in staple foods. After all, estimates of population size and food storage are most dependent on the most prominent sources of calories. Identifying staple foods in the Bronze Age Aegean has not been entirely straightforward because of an early reliance on the inaccurate "Mediterranean Triad" model. The triad—namely, cereals, wine, and olive oil—is evident in modern Greek cuisine and is often taken as a starting point in discussions of ancient Greek foods as well. For example, the triad is reflected in Allbaugh's (1953, 104) study, where cereals and oil each make up nearly a third of daily calories and wine is described as "abundant"[1].

Olive oil was probably not a diet staple in the Bronze Age. In fact, as Forbes (1993) demonstrates, even in the historic period, as late as the Venetian occupation of Crete, oil was not a significant part of the diet. Minoans did produce olive oil, but evidence suggests its chief use was in perfumes (Hamilakis 1999, 45–47; For residue evidence of olive oil and its uses, see Evershed et al. 1997; Brogan, Koh, and Hitchcock 2008). Wine has a similarly dubious place in the Minoan diet. The specialized equipment to make this product is simply not prominent enough in the archaeological record to suggest mass production and daily consumption (L. Platon and Kopaka 1993; Hamilakis 1999, 1996; also, see Chapter 2 below). The relative rarity of wine is an

[1] Yet it is interesting to note that although Allbaugh claims wine was served at every meal, his actual data show that fewer than half of the 128 households surveyed consumed wine within the seven-day period of study (1953: Appendix 5, Table A 51). The author attributes underreported alcohol consumption in past studies to the subjects' perception of bias on the part of American interviewers (1953, 106).

important factor in many discussions of Minoan feasting. As such, I return to the sometimes conflicting evidence of Minoan viticulture in Chapter 2.

With two legs of the Mediterranean Triad removed from consideration, only cereals remain. Here the role as a staple food is certain. Christakis (2008, 29), who endeavors to recreate the caloric content of the Minoan diet, estimates that grains made up 44% of calories. This figure is significantly lower than what is proposed by other authors who write about Aegean diet more generally; notably Foxhall and Forbes (1982) and Gallant (1991) estimate a caloric share for cereals between 65% and 75%. Christakis (2008, 29) argues that previous scholars have misjudged the role of fruits and vegetables in the diet, thus lowering his own figure for the estimate. Strangely, however, Christakis does not justify his own extremely low estimate for the role of legumes, at only 3%. Since legumes are stored and processed similarly to cereals, they may have been quite prominent in the diet, especially during the dry season or in urban contexts with less access to wild foods and meats (Garnsey 1999, 15). Meat also plays an uncertain role in the diet, as the Cretan environment dictates that it should be costly to produce. Meat was certainly not a staple food for Minoans, but faunal remains in non-elite houses show that it was not restricted to elite feasts either (Reese et al. 2004). Christakis' (2008, 32) estimate of 10 kg of meat per person per year, making up 2% of calories consumed, would amount to about 190 g of meat per week (2.25 standard servings according to USDA recommendations). While meager compared to most modern Western diets, this allowance of meat is far greater than what many predict for Classical Greece, where some authors have claimed that meat was eaten exclusively as a part of religious festivals (Garnsey 1999, 123; Dalby 2013, 22; Jameson 1988, 87; although, for critiques of this "rule" see Naiden 2013, 232–75; Ekroth 2007). Here, as with wine, determining to what degree meat was considered a luxury is crucial for the study of feasting. In

any case, it is safe to say that meat, olive, and wine were not staples, but cereals and perhaps legumes were. Thus, in place of the Mediterranean Triad, the Classical Greek model of *sîtos* (staple food/grain) and *ópson* (everything else) is more appropriate (Dalby 2013, 22–23). In this model, as James Davidson (1997, 22–26) points out, *opson* foods should not necessarily be considered to be mere relishes; they are a necessary component of the diet, but are much more varied than the *sîtos*, which is present at every meal.

Non-staple foods other than meat are the most difficult to track down in the archaeological evidence. On Crete, the ethnographic data includes a variety of vegetables, fruits, nuts, secondary animal products like cheese, yogurt, and eggs, and flavorings like herbs, spices, and sweeteners (Allbaugh 1953). Tablet inscriptions mention wheat, barley, figs, olives, olive oil, wine, and honey (Palmer 2002, 1989; Killen 2004; Chadwick 1966). These kinds of foods appear in Minoan botanical and residue evidence as well. Dairy products, honey, and the more sparsely used and fragile plant foods are only recovered through the analysis of residues left on ceramic vessels. This new technique is promising given the number and specificity of foods that analysts have claimed to identify from their chemical traces (Evershed 2008). Problems arise, however, when archaeologists use the results to produce "recipes" such as the "Minoan stew" of meat, leafy vegetables, and olive oil from an LM IB pot from Splanzia (Tzedakis and Martlew 1999, 108). While residue analysis can detect substances that once came in contact with a vessel, it cannot show whether multiple substances were all in the same vessel at once or on multiple occasions (H. Barnard et al. 2007, 36). Furthermore, since chemists consult libraries of known foods from the region in order to match the results to an existing sample, residue analysis misses unexpected foods that are not in the reference catalog (H. Barnard et al. 2007). Therefore, residue testing should be used to confirm the uses of vessels rather than to generate an ancient

diet from scratch. Moreover, the usefulness of this technique to help pin down the relative availability of special foods like wine and meat is severely limited by the cost of the procedure.

Cuisine as an alternative way to study ancient food

As I demonstrate above, the study of the Minoan diet is not only complicated by numerous interpretive problems, but also fails to address the foods that contribute the fewest calories. Therefore, to tackle the question of what the Minoans ate, I prefer the term "cuisine" over "diet". Cuisine entails cooking—the transformation of raw ingredients to what can truly be called food (Klarich 2010, 5). Furthermore, cuisine involves formal rules for appropriate ingredients and methods of cooking. It is important to distinguish cuisine from diet for a number of reasons. The first involves the idea that food is socially defined—what one considers to "count" as food varies from culture to culture. This act of definition includes not only the selection of ingredients but also the way that they are prepared. The second reason to make this distinction is that cuisine directly informs practice. Not only do the behaviors involved in methods of preparation tell archeologists about the way people lived their lives, but the forms that foods take (as a result of cooking) constrain how they are eaten. Here the discussion enters the realm of "etiquette", which I use to describe the subset of habitus consisting in the physical actions involved in serving and consuming a meal in a social setting. While casual usage invokes the more arbitrary aspects of "manners", which are difficult to recreate from the archaeological record, many of the more fundamental aspects of etiquette are practical responses to the physical forms of the materials of dining. For the Minoan case, this means that because many foods are prepared by boiling—thus involving a good deal of liquid—meals for a large group must be served in cups or bowls. Thus, as I will demonstrate in later chapters, it is possible to move

beyond diet and into the area of cuisine and etiquette by studying the material remains of food production and consumption.

One topic of recent interest does tackle cuisine and etiquette, namely feasting. Feasting studies stand out as taking the opposite approach to dietary analyses because they focus on unique events where people completely surpass the biological reasons for food consumption, instead catering to the powerful societal forces that work through the sharing of food. Feasts revolve around the ability to impress others with the abundance and quality of the food provided. Consequently, in the Minoan case the focus has been on luxury foods served at palaces, sanctuaries, and cemeteries, with wine being at the center of attention. Beginning with the earliest pottery on the island, there is a clear preference for liquid serving dishes in Minoan ceramics, and iconography, such as the figures holding chalices on the so-called "Campstool Fresco", also points scholars in the direction of wine (Cameron 1964). However, it should be noted that most assertions regarding the contents of vessels, whether real or depicted, are entirely speculative.

Wine is a particularly meaningful food when it comes to feasting, as its production requires significant labor and forethought, and its psychoactive effects mean it was likely to be a symbolically charged substance. In studies of the Bronze Age Aegean, "feast" has become all but synonymous with "wine." There are important zooarchaeological studies of meat consumption in feast contexts (e.g., Isaakidou 2007; Harris and Hamilakis 2008) but when it comes to ceramic evidence, wine takes center stage in the scholarship.

This scholarly trend encapsulates the current treatment of food practices in the Minoan literature. The literature has inadvertently created a dichotomy between diet and feast analogous to the one between food and drink. In the past, most studies of foods have been dietary in nature,

attending to biological needs without much consideration of the social aspects of even everyday eating, while drinks—not food—and the symbolism thereof fall into the camp of feasting. This division of the concept of food leaves out a significant middle ground: all eating is both biological and social. The quotidian meal satiates hunger while simultaneously conforming to strict, culturally-specific rules dictating what to eat and how to eat it. Meanwhile, the banquet, whose function clearly extends far beyond the mere feeding of a group of people, is, nevertheless, feeding those people—indeed, this is what gives the food its power. The symbolic importance of the meal has long been recognized by anthropologists (e.g., Lévi-Strauss 1964; Douglas 1972, 1984; Appadurai 1981) and the biological aspects of the feast have begun to enter discussion in the archaeological realm, including for Bronze Age Crete, via discussions of embodiment and archaeology of the senses (e.g., Hamilakis 2013; Simandiraki 2008). Yet a lacuna persists insofar as few consider what the average Minoan meal looked like, how it was prepared, and what it represented to the diners. Therefore, studies of cuisine are important as a way to understand both the social and biological dimensions of everyday meals and their place within Minoan food culture at large.

Feasts and the palaces

Recent scholarship has embraced the discourse of feasting as a way to explain large deposits of food remains and ceramic vessels, notable elaboration and quantity of serving vessels, large storage facilities, and, ultimately, the function of the Minoan palaces themselves (Girella 2007; Borgna 2004; Hitchcock, Crowley, and Laffineur 2008; Halstead and Barrett 2004; Wright 1995; Hamilakis 1996, 1999). In many cases, however, the mere identification of feasting lacks explanatory power. The literature on commensality suggests that virtually all cultures employ feasting to advance the social and political goals of those in power, so it should

come as no surprise to find that Minoan elites engaged in the practice as well (Dietler 2001; Bray 2003). Beyond simply determining whether banqueting occurred, researchers are also interested in connecting the features of Minoan feasting practice to the types of political structures they supported (e.g., Girella 2007; Hamilakis 1996, 1999, 2002b). This connection is crucial in the case of the Minoan palaces, whose precise political functions have remained elusive over decades of study (Driessen 2002b; Hamilakis 2002b). Feasting is among the most promising avenues to understanding the function of the palaces. This avenue has been blocked, however, by two major impediments. The first is the limitations of the data: *in situ* evidence of food consumption is extremely rare at palaces, and the deliberate deposition of the remains of certain feasts produces an incomplete picture of the practice. I plan to address this issue by examining dining beyond the palaces, in elite and non-elite houses. The second roadblock has to do with the inadequacy and inapplicability of feasting theory itself.

The theoretical literature on feasting originates in ethnographic research, and more specifically, in a few unique case studies. The startlingly lavish feasts of the American Northwest and of certain Southeast Asian groups presented levels of generosity (sometimes leading to bankruptcy) that were difficult to explain via traditional models. Therefore, anthropologists crafted a new way of understanding the generosity of the gift, here specifically the gift of food, as a pseudo-economic transaction converting wealth into social standing (Mauss 1950; Bourdieu 1977; Sahlins 1972). While this basic idea holds true in most instances of sharing food, further theoretical work explaining types of feasts and the way they sustain power structures still often hold up the potlatches and "big man" feasts of small-scale societies as an archetype. This emphasis on a unique style of feasting has been a hindrance to the study of deeply entrenched, institutionalized banqueting practices in more complex societies.

Perhaps the greater hindrance to the study of Minoan feasting, however, is the lack of theoretical models addressing the materials of the feast. There is almost no attempt to define when the archaeological remains of food consumption should alert scholars to feasting as opposed to everyday dining, let alone how material signatures might correlate with different kinds of feasts. I will argue that the way to address the limitations of the theoretical literature is to keep the basic transactional model of gift exchange but to situate feasts within a broader system of cuisine. This context allows assessment of the relative worth of banquet foods as well as a better understanding of the cultural meanings and values attached to certain foods and associated items. It is this theoretical approach which unites my first goal of understanding everyday Minoan dining practices with the narrower goal in recent scholarship of identifying and explaining elite feasting. I hold that a feast is merely a special kind of meal, and to understand the feast one must first understand the meal more generally.

Contents of the dissertation

This dissertation addresses the issues outlined above by attempting to answer three research questions:

1. What foods, materials, and behaviors are involved in typical Minoan meals in household contexts?

2. What foods, materials, and behaviors might have characterized small-scale feasting in households?

3. How do these patterns of eating behaviors explain the social and political functions of palace feasts in the Neopalatial period?

To answer these questions, I analyze the evidence for food preparation and consumption at four LM IB domestic contexts and consider these findings in conversation with evidence from palaces in order to give a background to palace feasting. The dissertation continues as follows:

In Chapter 2, I summarize the scholarship on Minoan feasting, focusing especially on palace feasts, as well as elaborating on Minoan diets. Specifically, I review the interpretative issues surrounding the luxury status of wine and meat. I also discuss some potential models explaining the role of the palace in Minoan social organization, many of which place emphasis on palatial commensality.

In Chapter 3, I explore the theory of feasting as built upon theories of the gift and outline the difficulties involved in applying the theory to archaeological contexts. I go on to offer a modified approach that bridges the gap between the everyday meal and the feast by treating all food consumption as part of a single system. With this new model, I explain how the data I collect on household dining will inform my analysis of Minoan banquets.

Chapter 4 presents my methodology and introduces the case study sites. Specifically, I outline the reasons for selecting the four sites and the major pitfalls I have had to address in my analysis of the data. I also describe my approach to ceramic data in detail, listing the major ceramic categories that I focus on, and my methods for reconstructing behaviors from vessel morphology.

In Chapter 5 I discuss the data from the case studies. This involves a summary of the evidence for cooking and dining for each of the four sites, and an analysis of the patterns that I detect in the pottery and architectural layout of the houses. I finish the chapter by applying my improved theoretical model from Chapter 3 to my findings, in order to envision a nuanced but interconnected system of LM IB commensality.

Lastly, in Chapter 6 I lay out my findings regarding dining on the island of Crete more broadly. I then offer my interpretation of palatial feasting and the function of the palaces by placing them within the framework of eating practices established from the case studies.

CHAPTER 2

BACKGROUND ON FEASTING AND THE MINOAN PALACES

Introduction

In recent decades, feasting has come to the forefront of scholarship on the Bronze Age Aegean as a way to understand the behaviors that went on in the monumental buildings that characterize the period (see publications such as (Hitchcock, Crowley, and Laffineur 2008; Halstead and Barrett 2004; Wright 2004)). Feasting is even invoked in the most recent attempts to understand the Minoan palaces and their role in this society. Yet after over a century of research, the role of the palaces remains unclear. If commensality was a primary function of the palaces (Driessen 2002b), then understanding their role surely depends upon understanding the banquets that took place within them. As I demonstrate below, this subject is complicated by the limitations of the data, since primary deposits linked to single feasting events in palaces are rare. Alternately, it is possible to study categories of feasting materials in isolation, but this method often arrives at incomplete and even contradictory interpretations. Even when materials are considered in context, as at a few palace sites that I discuss below, scholars reach conflicting conclusions. A more holistic approach to the evidence is required in order to address these problems and add nuance to current explanations of Minoan feasting. These interpretations are significant to the understanding the function of the Minoan palaces and, consequently, the sociopolitical organization of palatial Crete more broadly. Accordingly, I conclude this chapter with a brief summary of proposed political models for Neopalatial Crete and their relationship to palace feasting.

Identifying feasts

Minoan archaeologists do not generally give a definition for feasting to justify their identification of the practice. Nevertheless, a few patterns emerge from the literature to suggest the general methodology for recognizing Minoan feasts: the presence of feasting is signaled by 1) large direct deposits of dining materials, 2) built dining spaces, or 3) special foods and materials. The first item, primary deposits, is the most secure way to detect a feast because such deposits often represent the remains of a single event—or at least multiple events taking place over a short period. Fortunately, a few such deposits have been found, and these reveal the typical material signatures of the Minoan banquet.

One very early example of such a deposit is located at Ayia Triada, at the so-called Piazza dei Sacelli, where excavators uncovered a deposit of ceramic vessels, ash, and bones dating to EM I (Todaro 2011). That the deposit represents a single event is clear from the numerous joins with nearby sherds, and the fact that the assemblage seems deliberately buried between two pebble layers (Todaro 2011, 63). The deposit includes: bones, representing at least three cows, two pigs, ten sheep or goats, and one badger; cooking implements; serving dishes like decorated fineware bowls, juglets, and jars; and incense burners and house models (Todaro 2011, 63–65; Wilkens 1996, 246–48). Simona Todaro (2011, 68) suggests that, given its early date, this banquet may represent the foundation of the first settlement at Ayia Triada; most signs of occupation post-date the deposit. Given the role of this ritual in the construction of a habitation site, Todaro (2011, 68–69) explains the house models as votive offerings, perhaps representing the actual houses being built at the site.

Another kind of primary deposit is more difficult to interpret vis-à-vis feasting. Foundation deposits range in size from a single vessel to large assemblages with hundreds of

cups, animal bones, and other vessels. As their name suggests, these features are placed within the foundations of buildings, often under walls or pavements. Not only do foundation deposits help date the construction of a building, but they may also indicate a feasting event. One typical example of a large deposit is the one at Phaistos, where excavator Doro Levi reports finding hundreds of cups, mostly placed upside-down, along with charcoal, ashes, animal bones, and traces of wood in Room 50 of the palace (Levi 1976, 1:405; Girella 2007, 143–44). The deposit was deliberately buried, as evidenced most clearly by the intentionally inverted placement of the cups (a common trait of foundation deposits), and is dated to the end of the Protopalatial period based on stratigraphic and ceramic evidence (Levi 1976, 1:405–6).

Luca Girella suggests that foundation deposits like that at Phaistos are evidence of work feasts, a type of banquet that is shared by the workers participating in a large project. In particular, he posits that the many foundation deposits dating to MM III are the remains of work feasts connected with the construction of the new palaces of the Neopalatial period using corvée labor (Girella 2007, 143; Dietler and Herbich 2001). Indeed, Dietler and Herbich (2001) argue that work feasts, or, more broadly, "collective work events" are a way to utilize the mechanisms of feasting to mobilize voluntary labor, thus achieving better results than might be expected from forced labor. The fact that many large foundation deposits include plain handleless cups rather than more elaborate drinking vessels supports the idea that the associated feasts were meant to promote solidarity among workers rather than to emphasize social distinctions.

However, most foundation deposits do not necessarily represent a feast. Many, such as the nine examples at Palaikastro, six at Phaistos, and six at Ayia Triada, consist of only one or two vessels (MacGillivray, Sackett, and Driessen 1999; La Rosa 2002). These are often pouring vessels or cups.

From the direct deposits, it is possible to recreate a list of materials involved in a typical Minoan banquet. Food could include meat from multiple species, and diners used cups and jugs to ingest some kind of liquid. Furthermore, the sizes of some deposits show that the events could include hundreds of participants. If the remains of banquets were not deliberately buried, archaeologists can reconstruct feasting behaviors by other means. A principal indicator for feasting in the Minoan context is location. Nearly all the feasts discussed in the literature take place in cemeteries, sanctuaries, and palaces. I review these contexts below, after which I turn to the specific artifact classes and foods that some scholars study as a proxy for feasting. Throughout the studies I review, while there is usually agreement on the identification of feasts, there is frequent disagreement and contradiction regarding their interpretation. Furthermore, relying on location or specific artifact types to identify feasts means that many such events may go unnoticed if they exhibit different formal characteristics. For example, houses can hold feasts, but unless these feasts were to resemble banquets at cemeteries, sanctuaries, and palaces, archaeologists may not recognize them as such. For this reason, I expand my own study to include everyday dining as well. However, here I review the material signatures of previously-identified feasts, in order to lay out the data to which I will compare my own findings and to reveal some of the interpretive issues that plague the field at present.

Tombs and Sanctuaries

Cemeteries were a primary locus of Minoan feasting, especially earlier in the Minoan period. Because cemeteries are by nature a site for deliberate deposition, it can be relatively straightforward to reconstruct scenes of feasting from the artifacts found there. Several tomb sites in Central Crete show the typical signs of banqueting seen in later periods (large accumulations of cups, jugs, and animal bones) often associated with enclosed paved areas for

holding gatherings adjacent to the tombs themselves (see, e.g.: Hamilakis 2013; Ayia Kyriaki: Blackman and Branigan 1982; Branigan 1993, 76–80, Ayia Triada: 1993, 77; Lebena: Alexiou and Warren 2004; Moni Odigitria: Michelaki, Branigan, and Campbell-Green 2006). The fact that tombs were a primary location for ritual commensality in the Prepalatial and Protopalatial periods indicates the importance of a funerary or ancestor cult in early Minoan society, and a focus on the importance of family lineage (Hamilakis 2013, 156; Branigan 1993). These kinds of feasts diminish considerably by the Neopalatial period, indicating an ideological shift to go along with the major political changes occurring at the time. Specifically, the palaces functioned in part to draw power away from the ancestral cult of the cemeteries and to exert more direct control over ritual and commensal activities, which now took place within their walls (Hamilakis 2013, 175–159; Girella 2008, 174–75; Borgna 2004, 257). This shift causes problems for the study of Neopalatial commensality because the palaces, which were used and reused for a variety of activities, often do not contain the deliberate deposition of banquet remains.

A banquet site that endured the transition from tombs to palaces is the extraurban sanctuary. These sites, usually on mountaintops or in caves, hosted rituals that varied greatly, but often involve feasting. In fact, some were locales very large meals, such as Kato Syme. At this Neopalatial sanctuary, located on the slope of Mt. Dikte, Lebessi and Muhly (1990, 323–24) report evidence of extensive dining: most notably, ash, animal bones, cooking vessels, and small cups. They emphasize that the bones were not burned, meaning that the meat was eaten and not merely offered to a deity (Lebessi and Muhly 1990, 327). A contrasting picture comes from Skoteino Cave—a Neopalatial cave sanctuary in the Pediada region (Tyree, Kanta, and Robinson 2008; Alexiou 1965, 312). At this cave few animal bones are reported, but excavators did find fragments of perhaps hundreds of tripod cooking pots, many of which were quite small (base

diameters of 11 cm or less) (Tyree, Kanta, and Robinson 2008, 181–82). Tyree, Kanta, and Robinson (2008, 182) suggest that, along with the numerous ceramic vats and tubs, the tripod pots indicate cooking of vegetable-based foods prepared in small batches, perhaps consumed or offered in token amounts rather than as part of a full meal. The cave also contained hundreds of cups and pouring vessels, following the trend seen at nearly all other Minoan feasting sites (Tyree, Kanta, and Robinson 2008, 180).

The extraurban sanctuaries offer an interesting comparison for the feasts that took place in palaces for several reasons. First, feasting evidence is often better preserved at sanctuaries than at palaces, giving a clearer picture of the activities they held. Surveying such evidence across the island reveals an immense variety in the rituals practiced at these locations (Adams 2004). The methods of worship at sanctuaries doubtless varied based on local traditions and the specific rites associated with particular deities. Importantly, the degree of variety involved in sanctuary rituals suggests possible variety in the rituals at palaces, where scantier evidence makes overgeneralization more tempting. After all, the religious ideologies enacted in sanctuaries certainly pervaded feasting ceremonies at palaces and cemeteries as well. In fact, some sanctuaries may have been under the control of the nearby palace, such as Iuktas, which was connected to nearby Knossos (Peatfield 1987; Karetsou 1981). If some sanctuaries were more independent, however, and acted as interregional meeting points, feasting at these places may have been especially meaningful. As I outline below, some interpretations of the palaces see them as heading independent, competing polities. Yet if feasting and other forms of shared material culture served to mediate competition between palaces, it is difficult to imagine where members of competing groups would encounter one another. Extraurban sanctuaries such as Skoteino Cave, where ceramic provenance shows that cookpots were brought from various

geographic regions, may have been crucial points of exchange between palace centers (Tyree, Kanta, and Robinson 2008, 182–84).

Palace feasts: conflicting interpretations and insufficient evidence

Despite the importance of sanctuaries, the most notable acts of commensality in the Neopalatial period were large feasts held at palaces. The best evidence for palatial feasting comes from smaller Neopalatial centers such as Galatas and Petras. *In situ* evidence for Protopalatial feasting is rare because the Neopalatial palaces usually obscure earlier levels. The evidence from the large well-known palaces such as Knossos and Phaistos is sparser because these were excavated before modern excavation techniques and before archaeologists were looking for feasting in the material record. To illustrate the varying degrees of interpretation that result from this inconsistent evidence, below I discuss banqueting at four Neopalatial palaces. These examples are also illustrative of a primary obstacle regarding Minoan palace feasts and their interpretation: there is no agreed-upon way to understand the banquets in terms of the political and social forces they helped support. Thus, in the cases below, the same kinds of evidence leads different scholars to very different conclusions, while others do not offer much interpretation at all. This is a difficulty that I will address by proposing an improved theoretical approach to commensality and its material remains in Chapter 3.

Galatas

Galatas Palace is a relatively small palatial building in the Pediada region of Central Crete. The palace was built and abandoned within the early Neopalatial period (MM IIIB/LM IA). The results of the excavations there are not yet fully published, but the excavator, Giorgos Rethemiotakis (2002, 1999a, 1999b), has written extensively on evidence of feasting at the site. Besides the Central Court, Rethemiotakis identifies three rooms that were potentially used for

commensality: the Column Hall (Room 14), the Pillar Hall (Room 17), and the as yet unnamed Room 22. All three rooms are adjacent to the Central Court, although the Column Hall is not directly accessible from the court (Figure 1). The Column Hall is accessed from the Pillar Hall via a corridor space and had benches along three walls. It is the smallest of the three rooms, perhaps making it suitable for more restricted feasting practices, both in terms of its size and its

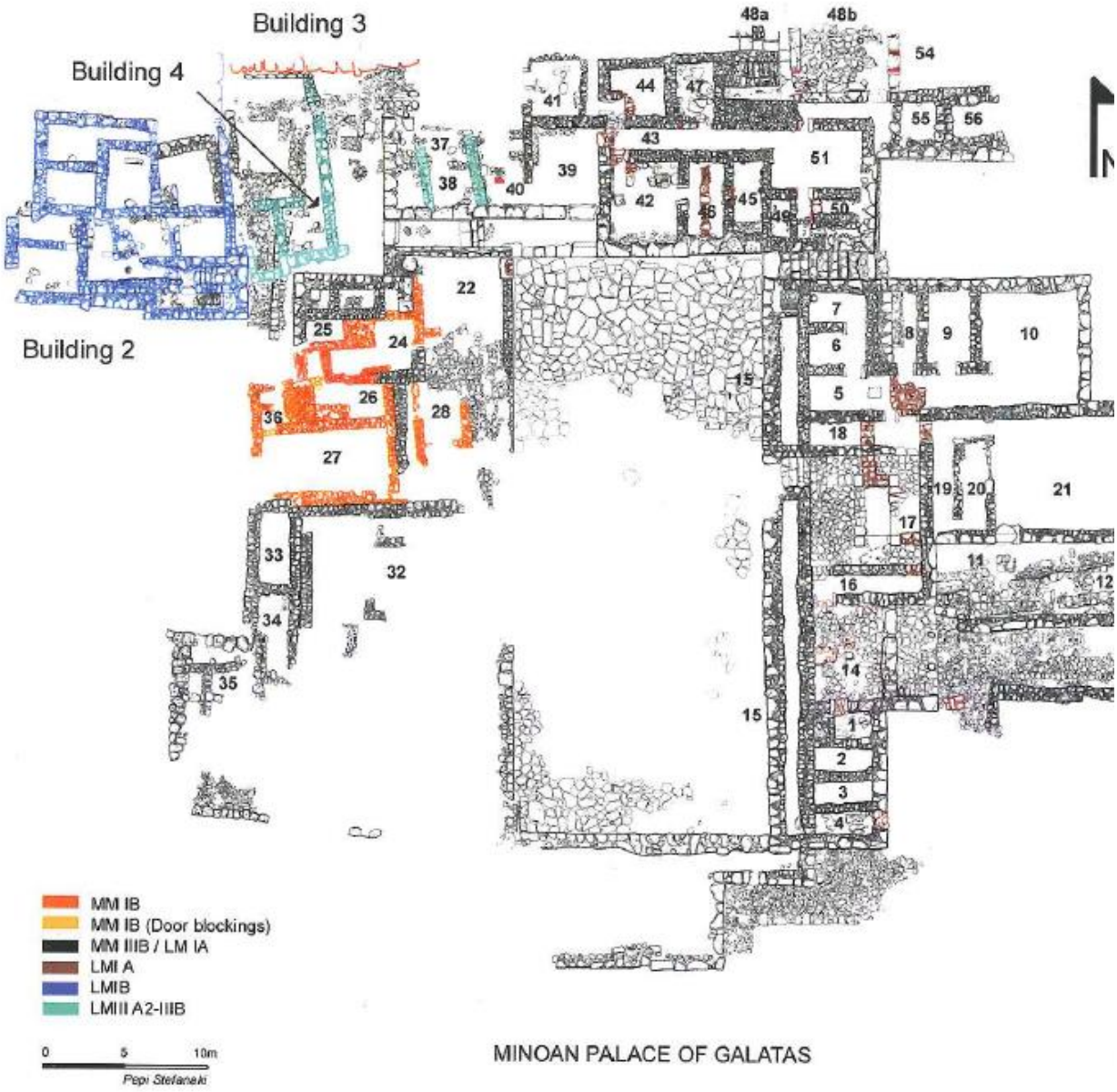


Figure 1: Plan of Galatas Palace (Rethemiotakis 2002, pl. XII)

location (Rethemiotakis 2002, 59, 1999b, 723–25, 1999a, 20). A unique feature in the Galatas palace is that all three of these rooms had hearths. Rethemiotakis (1999b, 724) suggests that the use of hearths as a focal point for commensal behaviors may be a precursor to their use in the later "Mycenaean hall".

As is usually the case at Minoan palaces, there are no primary deliberate deposits at Galatas that represent a single feasting event. The fact that there was feasting at the palace is evidenced by the size of the cooking facilities—Rooms 11 and 12, also called the "Cooking Place"—which surpass the needs of a single household (Rethemiotakis 1999b, 722). Artefactual evidence was recovered from floor/destruction deposits in the Cooking Place and the dining spaces identified above, as well as a rubbish pit in the northeast corner of the palace. Rethemiotakis (2002, 58, 60, 1999b, 722–23, 1999a, 20, Taf. 2) reports "cups of all types" including decorated and undecorated examples; serving vessels such as jugs, jars, trays, and amphorae; and cooking vessels in a variety of shapes that suggest specialized cooking techniques requiring a dedicated kitchen staff. Specifically, Room 22 included "large numbers of cups and jugs, plentiful animal bones and some incense burners"—evidence of ritual meals involving liquid and meat consumption (Rethemiotakis 2002, 59). The animal bones throughout the palace attest to consumption of cattle, pig, sheep, goat, fish, and marine mollusks (Rethemiotakis 2002, 60).

Besides the above evidence, Rethemiotakis (2002, 62, 1999a, 22) writes of industrial-scale grain processing going on in the palace and surrounding buildings, beginning in the Protopalatial period (before the construction of the palace) and lasting through the abandonment of the palace, as evidenced by hundreds of querns, pounders, and grindstones as well as soil analyses. This activity suggests the presence of grain, perhaps for making bread, given the

presence of ovens (Rethemiotakis 1999b, 722, 1999a, 22, fig. 2). Besides forming part of the menu, this food could have provided a reason for the feasts: Might these have been associated with the massive amounts of local labor that came together to process the grain harvest?

Despite the rich evidence at Galatas Palace, Rethemiotakis offers only vague interpretations of the sociopolitical function of the feasts there. He comments that the feasts indicate "laying of table as a means for projecting a certain life-style model and the relevant social ideology of the upper class" (Rethemiotakis 2002, 58), and furthermore that the feasting behaviors at Galatas constitute emulation of the Knossian palatial culture by local elites, given the comparatively late construction of the palace in the early Neopalatial (Rethemiotakis 2002, 67). It is clear that feasting served to establish, maintain, and potentially increase social standing, but *how* specifically was this done at Galatas? Who was giving the feasts, and what kind of social structure did these events support? These questions go unanswered at Galatas for now.

Kato Zakros

With less detailed evidence than at Galatas, Judith Reid (2008) comes to a more precise conclusion about the role of feasting at the LMI palace of Kato Zakros. At this palace, the proposed banquet rooms form a similar architectural pattern to the Pillar Hall and Column Hall, though they are located on the opposite side of the Central Court. In the west wing, the "Hall of Ceremonies" (Room XXVIII) is accessible directly from the Central Court, and it, in turn, leads to the smaller "Banquet Hall" (Room XXIX) (N. Platon 1971, 155–60, 170–74; see also plan on 80-81) (Figure 2). In the Banquet Hall, the excavator Nikolaos Platon (1971, 170) reports finding small undecorated jugs and amphorae—suggesting drinking rituals.

The kitchen area includes one of the largest rooms in the building (measuring 9 by 12 m) and is identified by its hearth, large accumulations of animal bones, and cooking ceramics (N. Platon 1971, 204). Multiple rooms adjacent to the kitchen served to store more utensils and foods (N. Platon 1971, 204–8). As at Galatas, this large kitchen is clearly bigger than what is required to feed a household; therefore, feasting seems an appropriate interpretation. Unlike at Galatas, however, Reid points out that the lack of specialized cooking equipment at Zakros palace

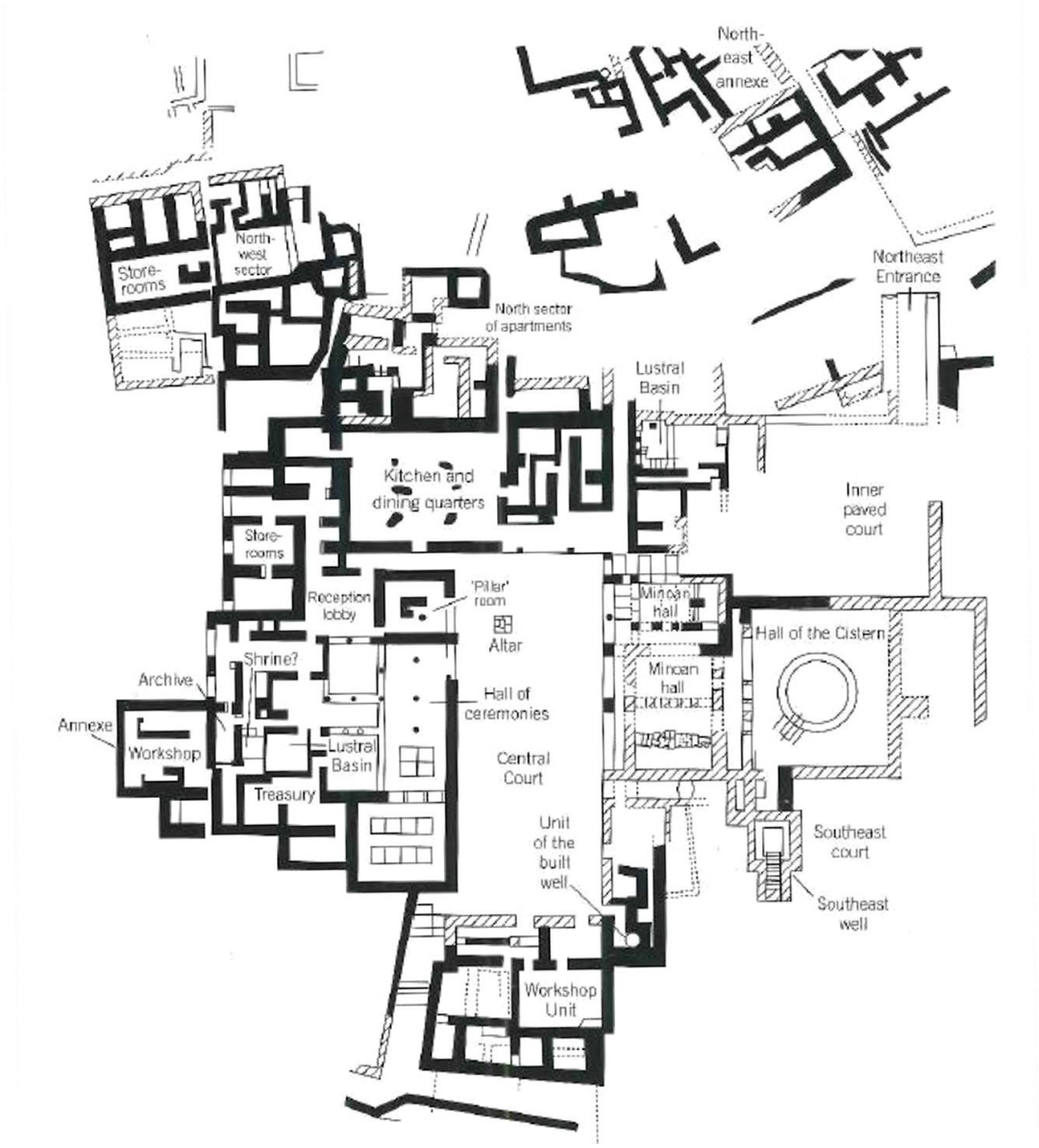


Figure 2: Zakros palace plan (Preziosi and Hitchcock 1999, fig. 66)

suggests the palace was not producing sophisticated foods for its banquets (Reid 2008, 1902; Chryssoulaki and Platon 1987, 82–83). In fact, the limited storage capacity (considerably less than, e.g., Knossos, Malia, and Phaistos) may mean that the palace itself did not provide food for feasts (Christakis 2008, 51–54; Reid 2007, 29; N. Platon 1971, 104–14). If the food being served from the huge kitchen was not initially processed and stored at the palace, it must have come from the surrounding community. Indeed, there is evidence for wine/oil presses, grain processing, and large storage capacities in nearby LM I houses (for presses see: Chrysoulaki and Platon 1987, 82–83; Reid 2008, 190; Hamilakis 1996, 14, 16; Platon 1971, 29 (image on p. 30), p. 66; for grain processing see: Chrysoulaki and Platon 1987, 82–83; Reid 2007, 33. For storage capacities see: Christakis 2008, 25:101–5). The apparently cooperative nature of palace feasts at Zakros leads Reid (2008) to suggest that feasts were intended more to promote community solidarity than to create unequal power relations. This interpretation suits the unique socioeconomic model she proposes for Zakros as a non-hierarchical pastoral polity (Reid 2007). On the other hand, very similar evidence leads scholars to draw completely opposite conclusions at other palaces.

As support for her claim that the Zakros banquets were cooperative in nature, Reid notes the large quantities of handleless conical cups found stored in the palace (Reid 2008, 190; L. Platon 2002, 150). Notably, these conical cups did exhibit painted decoration, unlike other large stockpiles of conical cups from Neopalatial Crete. The fact that Kato Zakros palace elites decided *not* to use the plain cups that are so common in large feasts throughout the island may suggest that, while these feasts emphasized equality among participants, they still made some effort to elevate themselves above the rest of the population. On the other hand, Lefteris Platon (2002, 150) does note that "the motifs' quality of execution is unexpectedly low", although the

supposedly “low” quality is hardly unexpected for an item that is essentially mass-produced. As I discuss below, the interpretation that plain cups were interpreted as “low status” by their users is not as straightforward as it first appears. It should also be noted that other cup shapes were stored in the palace, including plentiful fineware vessels with much more elaborate decoration (N. Platon 1971 see illustrations throughout).

Ayia Triada

Another example of evidence for feasting with yet another interpretation comes from Ayia Triada. The “Royal Villa” at the site is not always considered a true palace, as it is smaller than other palaces and only wraps around two sides of its associated courtyard. However, since it is generally treated as an administrative center of some sort, it is appropriate to consider feasting at Ayia Triada alongside the palaces (see, e.g., La Rosa and Hägg 1997; Schoep 1999).

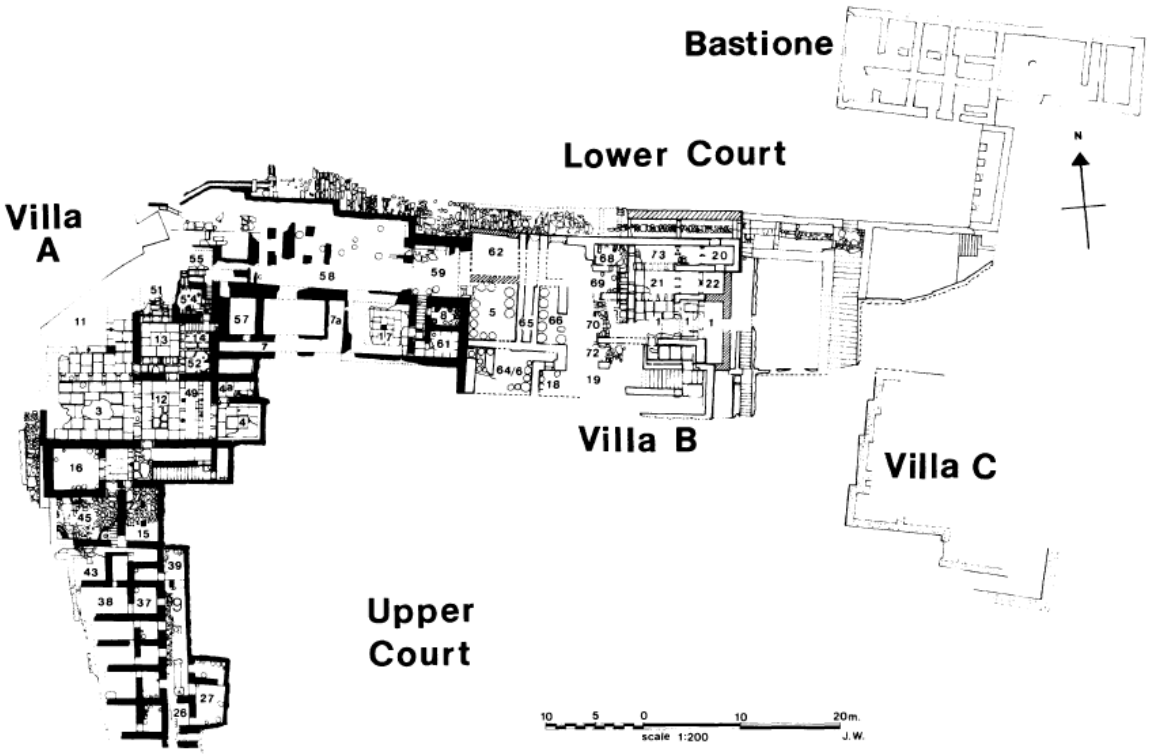


Figure 3: Plan of Villa at Ayia Triada (Watrous 1984, fig. III)

At the Ayia Triada villa, there is evidence of yet another dining suite like those at Galatas and Zakros, although more elaborate. The presumed dining room is Room 4, which measures about 3.8 x 4.5 m and has benches on three of the walls (Halbherr, Stefani, and Banti 1980, 69) (Figure 3). It is approached through two porticoes (Rooms 49 and 12) which connect Room 4 to the much larger Room 3. Once again, the larger room is separated from the more restricted room by an intermediary space, here set apart by columns and pier-and-door partitions. Unlike the other two examples, however, this larger "reception room" is not directly accessible from the court; on the contrary, the dining suite at Ayia Triada is a much more controlled space than those at Galatas and Kato Zakros.

Room 4 could have held small gatherings only—Watrous (1984, 125) estimates a capacity of 17 people. The possible remains of one such gathering were found in the hall comprised of Rooms 12 and 49: 20 conical cups and the bones of a "large animal" (Halbherr, Stefani, and Banti 1980, 79). Unfortunately, the cups are neither described nor illustrated, but their characterization as "usual" and the fact that the excavators do tend to explicitly record painted finewares support the assumption that they were undecorated. Once again, as at Kato Zakros, there is no shortage of finely decorated tablewares at the villa, as well as stone goblets (Girella 2007, 156; Halbherr, Stefani, and Banti 1980, 65, 851, fig. 33). The ceramic storage room (Room 15) associated with the proposed kitchen (Room 45) contained several hundred conical cups and many painted jugs and jars (Halbherr, Stefani, and Banti 1980, 112–18). The kitchen, which is adjacent to storage Room 15 and across a hallway space from Portico 12 of the dining suite, included what Watrous (1984, 125) identifies as built-in mortars for grinding grain.

Girella (2007:156) claims that the banquets at Ayia Triada were diacritical feasts, open to small groups of elites and intended to exclude people of lower status, thereby reinforcing a

hierarchical social order. In support, he cites the fine ceramic and stone vessels used, and the restrictive character of the architecture. The contrast between Girella's and Reid's interpretations of otherwise quite similar feasting assemblages is noteworthy. Especially remarkable is the fact that the Zakros tablewares are perhaps more elaborate than those at Ayia Triada (compare the painted conical cups at Zakros to the plain cups at Ayia Triada), and yet it is the fine quality of the Ayia Triada vessels that leads Girella to his comments. Clearly something is missing from the study of Minoan feasting when similar material remains can suggest vastly different interpretations.

Petras

In addition to these three palatial feasting deposits I briefly mention a fourth, quite different suggestion for the conical cups found at the LM IA palace at Petras. Rupp and Tsipopoulou (1999, 729–30) describe two large stores of undecorated conical cups. One group of ca. 700 cups fell into the monumental staircase while about 1100 (including complete and fragmentary examples) were found fallen into the foundations along the north façade. The latter deposit also includes animal bones and other decorated and undecorated pottery associated with dining: cups, jugs, bowls, and cooking pots (Rupp and Tsipopoulou 1999, 730). Rupp and Tsipopoulou (1999, 734–35) suggest that the cups represent a toasting ritual through which guests to the palace were offered a small amount of wine upon their arrival. At the same time as welcoming guests to the palace, the host would be reinforcing his guests' inferior status via the small size and drab appearance of the cups.

Elite houses

There is also ample evidence of feasting at elite Minoan houses. This generally follows the same patterns that are seen in the palaces. For example, at Phaistos, Girella traces diachronic

changes in feasting assemblages in the palace and surrounding houses. He concludes that elite houses took over the role of the palace as a primary feasting site during MMIIB – MM III A, while the palace underwent a series of destruction events (Girella 2011, 94).

While houses do not generally have access to expansive spaces suitable for large feasts, they are not excluded from the act of stockpiling conical cups. At Palaikastro, excavators uncovered several deposits of small, plain cups, including one group of over 900 in a small house in Block E (Bosanquet et al. 1902, 294). At Petras, Rupp and Tsipopoulou (1999, 730) also report on stockpiles of conical cups in Houses I.1 and II, and posit a similar toasting ceremony to the one they suggest for the palace. This explanation for the conical cups directly contradicts those offered at other palaces, where large stockpiles of cups are the evidence for large banquets. This and the above examples show how incomplete data, along with limited application of theory, leads to divergent understandings of how commensality worked. It is true, as seen at the extraurban sanctuaries, that ritual behaviors could vary widely from site to site. Nevertheless, the material evidence for feasting at the palaces shows repeated patterns that should indicate some degree of homogeneity of practices. Therefore, instead of focusing on individual sites, it is also possible to explore the patterns in specific material classes, although this approach carries its own set of interpretative problems, as I discuss below.

Architecture: the Minoan Hall and the Central Court

The examples of palatial feasting described above reveal a clear pattern in palatial dining spaces. This pattern consists of two rooms—one leading into the other—wherein the second room contains benches along the walls and the two rooms are separated by an intermediary space, perhaps including columns, pillars, and/or pier-and-door partitions. These dining suites were identified as “banquet halls” by Graham in his book on palatial architecture, but more

recent scholars use “Minoan Hall”, especially when there is an adjoining light well (Graham 1969, 125–28, 1961; McEnroe 2010, 88). Graham (1969, 125–27) proposes upstairs banquet halls for Malia, Phaistos, and Knossos Palaces. The dining suites on the ground floors at Zakros, Galatas, and Ayia Triada are of a similar size to his predicted banquet halls (Graham 1969, 127). Besides these palaces, Evans’ reconstruction of the Knossos “throne room” fits the general pattern of Minoan Halls, with benches in the room itself and the anteroom (Rehak and Younger 1998, 109). Besides Kato Zakros, Galatas, and Ayia Triada, another example exists at the Archanes Palace Building at Tourkogeitonia (Sakellarakis and Sapouna-Sakellaraki 1997, 98–101). Koehl (1997) identifies the examples at Ayia Triada and at the villa at Nirou Chani as precursors to the *andreion* structure found in Classical Crete (a local version of the mainland Greek *syssition*).

Among the visible variations are included the placement of the banquet hall within the building, its relative accessibility (i.e., directly accessed from the central court as at Galatas or more restricted as at Ayia Triada), the degree of elaboration of the intermediary space, and the presence of hearths in the rooms, as at Galatas. The size of these suites suggests a degree of restriction in the commensal events taking place within them, especially considering the use of several controlled access points leading into the space. Therefore, one might envision that these spaces held small groups of invited guests. As often the rooms are accessed via the central court, it appears that the existence of the feasts and the identity of the guests was public knowledge. As a result, these rooms fulfill a diacritical function, separating the invited from those not invited in a clearly visible way.

The courts of palaces contrast with the banquet hall in several ways. They allow for very large gatherings, their access tends to be less controlled, and unlike banquet halls, which are seen

in private residences, courts are a feature unique to administrative "palace" buildings. In fact, this latter assertion risks circularity when considering that the court is often used as a way to explicitly distinguish palaces from houses. Jan Driessen (2002b) goes so far as to suggest rebranding palaces as "court compounds". He and Clairy Palyvou both emphasize the centrality of the court (both literally and metaphorically) in the function of the palaces (Driessen 2002b, 8–13; Palyvou 2002).

Both central and west courts share the key attribute of being very large open spaces. Courts are important to feasting because they are the most likely locations for the massive banquets suggested by assemblages of hundreds or thousands of conical cups. This association remains speculative, however, because the courts themselves are generally found fairly bare of finds—there is no *in situ* evidence of feasting in courts. Yet the court represents the opportunity palace officials had, and doubtless employed, to host large groups of people in a controlled space. That is to say, admission to the space may not have been tightly controlled, as evidenced by the often numerous entrances to the court, giving an impression of the hosts' generosity. But the commanding presence of the palace literally surrounding the feast could leave no doubt of who was in charge of the event (Letesson and Vansteenhuyse 2006).

A syntactical analysis of palatial architecture by Letesson and Driessen (2008) reflects this purpose of the central court. The authors show that palaces had strong permeability—many points of access—and, yet, the access was controlled by an "external transitional space" at each entry point (Letesson and Driessen 2008, 211). Letesson and Driessen (2008, 212) claim that palaces were intended to allow many people in for large gatherings, while still exerting complete control over said events. The fact that every palace had at least one external transitional space leading directly to the central court further supports that use for the space.

In sum, both the above architectural spaces could be used by Minoan palace officials to put on different kinds of banquets. In one, a small group is invited to the obvious exclusion of all others, while in the other the host could potentially open the doors to a whole community. It is even possible that both spaces were used at once.

Ceramics: the puzzle of the conical cup, and other "drinking" vessels

Ceramics lie at the heart of most studies of Minoan feasting. In particular, the prevalence of cups, as well as pouring vessels, in fineware assemblages throughout the Bronze Age have led scholars to focus on drinking parties, and wine in particular, as the prototypical Minoan banquet. Overreliance on fineware evidence, to the exclusion of other object classes and of archaeological contexts leads to unnuanced interpretations along the lines of, "cups indicate wine, and wine indicates a feast". A look at some of the ceramic shapes and styles most often associated with banqueting demonstrates why treatment of this artifact class on its own does not sufficiently clarify behaviors.

Many identifications of Neopalatial banqueting rely on the conical cup. This vessel is a useful artifact for archaeologists studying feasting precisely because it appears in such large numbers. Therefore, by its very nature the conical cup signals the presence of feasting: since groups of hundreds of cups are unlikely to be intended for mundane household use, they may be for banquets. In practice, the interpretation is not this straightforward. As Rupp and Tsipopoulou (1999, 734) point out, rather than indicating a large gathering, a stockpile of cups could correspond to a large number of very small commensality events. Furthermore, conical cups are known to have had multiple functions in the Neopalatial period, including use as lamps, and probably in cooking, such that a single example does not necessarily signal dining practices at all (Wiener 2011, 361). On the other hand, a cupboard full of hundreds of cups is unlikely to

represent hundreds of lamps. The fact that the earliest conical cups are associated with funerary feasting in Central Crete suggests that they were linked to banquets from the beginning of their use (Branigan 1970, 151; Wiener 2011, 355).

Owing to their multifunctionality, the mere presence of conical cups cannot be used as evidence for feasting, but their abundance, especially in deliberate deposits, does signal some form of large-scale commensality. This interpretation highlights a problem for the area of Minoan feasting ceramics. Conical cups can clearly be associated with feasting, but what of the other cup shapes? If more elaborate fineware cups were reserved for more restricted feasts, these events would be by nature less visible in the archaeological record. Instead, other cup types are presumed to be used for commensality given their elaborate decoration and fine quality, or because they occur alongside conical cups. This approach calls upon the provision that feasts must be special compared to everyday meals. Presumably, "palatial" finewares are too special to have been used for more mundane food consumption. They were luxuries that signal the user's elite status upon display at public events[2]. Using this argument, a few authors have outlined the history of finewares on Minoan Crete to gain a better understanding of feasting practices—especially in more restrictive banquets.

As early as the Prepalatial period, Day and Wilson (P. M. Day and Wilson 2004, 2002) trace patterns of commensality in ceramic assemblages from Knossos. They note a major change in the vessel shapes related to food and drink consumption in EM IIA, including an increased repertoire of cooking vessels; a change from large, communal cups to smaller individual cups; and a much larger variety of pouring vessels, including elaborate, long spouts that may have emphasized the act of pouring (Day and Wilson 2004, 48–50; for EM I shapes see Betancourt

[2] Whether this is true is another key discussion point. There has not thus far been any effort to describe everyday meals in palatial or elite settings.

2008, 34-36). Additionally, decorative schemes become more elaborate and skeuomorphism in shape and decoration reflects the elevated status of metal vessels (P. M. Day and Wilson 2004, 50–54). Day and Wilson (2004, 59) suggest that this change corresponds to a move away from the more communal, cooperative feasts taking place in Late Neolithic and Early Minoan cemeteries to smaller-scale, one-on-one interactions where there was greater opportunity for emerging elites to form alliances and compete with rivals. Similarly, Hamilakis (2013, 155) suggests that the change in ceramics and burial practices (more focused on separation and organization in the deposition of human remains) signals "collective individuation"—the tension between the individual and the collective in social interactions—suggesting a period of increased populations, increased wealth, and a resultant effort to organize an increasingly stratified society. In both cases, Day, Wilson, and Hamilakis can offer complex interpretations of the ceramic evidence because they are contextualized in cemetery settings. As previously noted, however, clear feasting deposits for the palaces are rare. Therefore, identifying banqueting practices among palatial finewares is not a simple task.

The change noted by Day and Wilson apparently heralded an era of specialized feasting ceramics in the Protopalatial period. The Old Palace period witnessed dramatically increased quality of finewares, presumably owing to the introduction of the potter's wheel, and significantly more elaborate decorative motifs (Betancourt 1985, 68–69). The epitome of Middle Minoan ceramic elaboration is Kamares ware, which occurs in great numbers during MM II at Knossos and Phaistos palaces, as well as the Kamares cave, for which it is named. This very fine, polychrome pottery displays extremely varied, abstract motifs encompassing the whole vessel (Walberg 1987; Betancourt 1985, 95–102). As with all Minoan finewares, Kamares pots show an emphasis on cups and pouring vessels. On occasion, cups and bridge-spouted jars were even

painted with matching decoration to form distinct drinking sets (MacGillivray 1987, 274; Borgna 2004, 258).

Kamares ware has entered discussions of Protopalatial feasting, especially regarding its political implications. As I discuss below, Cherry (1986, 37–38) suggests the popularity of Kamares at Knossos and Phaistos is evidence of competitive emulation between peer polities. This point is strengthened by Day's and Wilson's (1998) pivotal study of Kamares ware provenance, which demonstrates, using petrography, that both palaces acquired Kamares vessels from the Mesara plain. Therefore, Kamares could not have been made in separate palatial workshops, as was previously thought (MacGillivray 1987; Cherry 1986, 37–38).

Girella writes about another turning point in Minoan palatial feasting ceramics, during the transition to the Neopalatial period in MM III. Drawing primarily on ceramics from Knossos and the Mesara region, he notes that MM III sees the takeover of the conical cup, which shows up in the hundreds in Neopalatial assemblages throughout Crete (Girella 2008, 169; Girella 2007, 139; Borgna 2004, 259-60). In addition to this new development, Girella notes a decrease in variability and quality of fine decorated vessels, particularly in the elaborate drinking sets thought to be a marker of palace elites. Instead, dark-on-light lustrous ware comes to the forefront, with a curtailed and more standardized set of shapes and decorative motifs (Girella 2007, 169, 2008, 139–40). Girella clearly identifies two kinds of feasting behaviors in the new Neopalatial ceramic assemblages, following interpretative patterns like those seen above. The conical cups represent banquets open to large numbers of people where the simple cups stress solidarity among participants and deemphasize individuals and one-on-one relationships (Girella 2008, 156–57, 2007, 169–72). The finewares serve to mark elite membership and participation in a newly-created palatial ideology.

Considering the ceramics on their own, Girella's interpretation makes sense. A similar pattern appears in the architecture of the Neopalatial palaces, where the Minoan Hall might correspond to smaller elite diacritical feasts, while the Central Court could hold larger and more inclusive affairs. Yet the ceramics do not necessarily fit this picture when seen in context. For example, at Kato Zakros, Platon (1971, 170) reports finding plain serving vessels in the Banquet Hall. However, according to Girella's model, the diacritical feasts held in rooms like the Banquet Hall should use finer tablewares, and the undecorated vessels would be used in the court feasts. Conversely, the stores of hundreds of conical cups which are regularly associated with large, inclusive banquets are found at elite houses as well as at palaces. The houses, however, do not have the space to host hundreds of guests. Are the plain pots in the Zakros dining room merely a reflection of Reid's proposed communal social organization? Were elites using their stockpiles of conical cups for different purposes than the palaces? If analyses of Minoan feasting are based on ceramics alone, these questions remain unanswerable. This barrier is especially troubling in the context of central court feasts, where there is no *in situ* evidence for the events to begin with. Furthermore, the fact that most primary feasting deposits are of the hundreds-of-conical-cups variety means that the role of finer vessels in banqueting is much less certain. The above interpretations are based solely on the physical qualities of the vessels themselves. This kind of data sheds light on what sorts of foods could be served (primarily liquids), and whether vessels were used individually or shared, but it does not indicate how many people attended banquets, where they were held, and how much food was available.

By relying too heavily on ceramic data, archaeologists may not have the full picture of the vessels used. One way to organize a more impressive feast is to use more impressive vessels. In this case, we may not be looking for ceramic vessels at all, but rather stone and metal wares.

Indeed, many of the more elaborate ceramic styles appear to be skeuomorphs. Day and Wilson note the predominance of skeuomorphism in EM ceramics such as Vasilike ware, and MacGillivray suggests that Kamares ware imitated certain metal working techniques so well that the potters themselves may have been metallurgists (P. M. Day and Wilson 2004, 53; MacGillivray 1987, 278). If these ceramic vessels are in fact imitations, metal and stone vessels may have had a role at the most elaborate feasts. Unfortunately, as with any luxury item, the rarity of metal and stone vessels as compared to ceramics makes it more difficult to comment on their use.

Finally, the discussion of luxury highlights the puzzling nature of the conical cup. As outlined above, a standard explanation of this shape is that its abundance indicates involvement in some sort of commensality ritual, whether in large banquets or in frequent, but small, toasting ceremonies. It is striking, however, that while most of the other shapes associated with feasting receive attention because of their fine decoration, the conical cup is notably drab. Multiple scholars agree that the plain cup signals the lowered status of the guest receiving it (Rupp and Tsipopoulou 1999, 735; Girella 2007, 157; Wiener 2011, 363–64). The question remains as to why a household which is only hosting a few guests at a time, in the case of the toasting rituals, should need to keep hundreds of cups in their supplies. The sheer numbers of cups, unless one is to imagine truly massive gatherings, suggest that the cups were not reused. This disposability is another kind of luxury which the plain exterior of the cup masks. How would the guest interpret this act? On the one hand, he is given a plain small cup, possibly contrasting with the much nicer cup used by the host, but on the other hand he is the first and last person to ever use this cup. There must have been a point in the accumulation of cups at which it becomes more expensive to

use plain but disposable cups as opposed to reusing fewer, but finer vessels. Therefore, there are three possible explanations for the simplicity of conical cups:

1. Hosts wish to emphasize the lowered status of guests
2. Hosts wish to reduce the cost of very large gatherings
3. Hosts wish to reduce the cost of disposing of cups after a single use

It is likely that more than one explanation applied simultaneously. Certainly, the exterior of the cup must have signaled something to the guest, but this message was probably more complex than it originally appears.

Despite the potential downfalls of ceramic evidence, it has revealed some important patterns in feasting behavior. For example, studying the variability present in tableware gives us an idea of the variability and complexity involved in the banquets themselves. Additionally, the tension revealed in the literature between large, open, but materially modest feasts and smaller, restricted but opulent events is one that should be pursued further. All this being said, however, ceramics only form one small piece of the puzzle. As is clear from the examples above, it is not possible to judge from ceramics alone what the experience of a diner would have been like. A multitude of factors, including the setting, the scale of the event, performative actions of the participants, and, crucially, the food itself, communicate to all involved what kind of feast this is and what kinds of social expectations it is setting up.

The foods at the feast: assessing past availability from limited evidence

As I described in Chapter 1, various lines of evidence have led archaeologists to compile a list of the ingredients present in the Minoan diet. Furthermore, it is possible to designate some of these foods, namely grains and legumes, as staples, which provide most of the calories. In the area of feasting, however, attention turns to the foods that are less frequently consumed. Since feasts work by converting accumulated wealth into social standing (see discussion in Chapter 3),

scholars are often interested in assessing the value of the foods and drinks served at the banquet. In the Minoan case, wine and meat are at the center of such assessments. Yet it is exceedingly complicated to deduce the availability—and hence, the relative value—of a single food from the evidence of its use. Below I outline the evidence for wine and meat and consider to what degree it is possible to label these as luxuries. In the end, however, I prefer a more holistic and comparative approach to dining, as it eliminates the need to make such determinations for individual foods.

Wine

The usual assumption among scholars is that Minoan cups and jugs were used for drinking wine. Indeed, this assumption forms the crux of many of the most significant discussions of Minoan commensality, though few articulate the arguments for supposing that wine was in the cups. On the one hand, the assumption of alcohol is appropriate, given that alcohol forms an integral part of both informal and formal commensality practices for many cultures (see, e.g. Dietler 1990; Sherratt 1995). Furthermore, the emphasis throughout the ceramic record on pouring vessels and cups certainly suggests the centrality of the serving of liquids. Wine seems the most obvious choice for Crete because it has been a part of the diet throughout recorded history.

Hamilakis (1996, 1999) claims that wine was a restricted substance. He contests that assumptions about the availability of wine in ancient times are based on an unjustified application of the modern Mediterranean Triad on the past. Instead, he argues that wine was a luxury good used in competitive feasting practices. He connects this role of wine with his vision of an unstable island controlled by competing factions during the Neopalatial period (Hamilakis

1999, 49, 2002b). As a result, he correlates the rise and fall of factionalism with the surge in evidence for wine production in LM I, and the dramatic drop in LM II (Hamilakis 1999, 48–49).

The actual evidence for the scale of wine production on Crete is far from clear, however, and multiple interpretations are possible. In this case, botanical evidence is of little use. Paleobotanists can identify grape seeds at Minoan sites, and distinguish wild from cultivated varieties, but it is impossible to know if grapes were pressed for wine or eaten fresh or dried (Hansen 2002, 55–57). The same is true for phytolith analysis, which can also be used to identify the presence of grapes (Hansen 2002, 59). Residue analyses can identify wine (McGovern 2003) but, until lower cost procedures allow for dramatically larger sample sizes, this type of analysis will not be able to shed light on the scale of production.

Since direct evidence of wine is not indicative of its availability during the Bronze Age, archaeologists have turned to written sources and artifacts associated with wine production itself. Wine production is indicated by the presence of a large vat with a hole or spout at the bottom (Hamilakis 1996, 5; Warren 1972, 138–39). This vessel is elevated while in use, and a receptacle is placed under the spout to collect the wine. The same sort of spouted tub may also be used in the process of making olive oil, wherein the spout would drain off the water that sinks below the oil. In this case, it would not be necessary to preserve the liquid draining from the spout, and Hamilakis (1996, 14) suggests this as a way to distinguish oil presses from wine presses. A wine press would be paired with a collecting vessel, while an oil press would be used in a room with built-in drains to evacuate the waste water. Practically speaking, however, it is likely that the same spouted tub could have been used for both processes. Furthermore, as Platon and Kopaka (1993, 75) point out, drains are generally useful for keeping any workspace clean, and in the

absence of drains, collecting water in a jar for disposal outside is a viable alternative for oil processing. Thus, even the evidence for wine production is difficult to interpret.

Platon and Kopaka do suggest that wine is a safe assumption with the presence of a spouted tub. They claim that for oil separation, all one needs is a vessel with an easily stoppable hole at the bottom. Therefore the tubs with spouts at the base are likely used for wine alone or wine and oil (L. Platon and Kopaka 1993, 81–82).

As Hamilakis points out, the distribution of presumed wine presses does indeed correspond to elite dwellings, according to Platon and Kopaka's 1993 survey of the evidence. Notably, only three of their 41 examples are from palaces; two of these are from ambiguous contexts and one is from a post-palatial stratum (L. Platon and Kopaka 1993, 72). This evidence does support Hamilakis' factions theory, as it appears that it was elite houses rather than a central palatial authority who were in charge of wine production. However, it is unclear whether the apparent lack of wine-making installations in non-elite dwellings is reflective of reality or merely an artifact of the availability of data. There are simply much better-documented excavation data from elite residences than non-elite ones. Reports of wine/oil presses at two small houses at Gournia—houses Dd and Ac—suggest that wine production was not completely excluded from non-elite houses (L. Platon and Kopaka 1993, 46–48; Boyd Hawes et al. 1908, 22, 27–28). This evidence does not contradict Hamilakis' model. Factions may have used the special status of wine for their own benefit in competitive feasting, but without a strong central authority, it is unreasonable to expect the *complete* control of the industry. However, evidence for wine-making in non-elite dwellings calls into question the notion that access to wine was limited.

In any case, the best argument for the rarity of wine is the size of wine presses. There is no evidence of the industrial-scale production that would be required to provision Minoans with

abundant supplies of the drink (L. Platon and Kopaka 1993, 90). It is unlikely that the average household could provide for significant daily wine drinking in small batches, but they could probably produce sufficient amounts for special occasions and important rituals. Therefore, the archaeological evidence suggests that wine was made in the home but that it was not as abundant as indicated by the Mediterranean Triad model.

Yet another line of evidence does indicate that while wine was not made in the palaces, palaces certainly had access to the substance. Written evidence gives several clues as to the use of wine in palace centers. To support his argument that wine was not a part of the everyday Minoan diet, Hamilakis cites Palmer's interpretation of Linear B tablets with the logogram for wine (Hamilakis 1996, 20–21; Palmer 1994). He claims that the lack of wine on Linear B lists of rations for palace workers, taken together with its presence on records of distributions to sanctuaries, shows its status as a special food rather than a staple. His point is undermined, however, by the fact that these are Linear B tablets, dating to the post-palatial period, when Hamilakis' own hypothesis states that wine production had diminished significantly. In contrast, Palmer's (2002) analysis of the Linear A records leads her to conclude that wine did not receive special monitoring as a highly valued commodity, but was instead treated as a staple in Neopalatial palace records.

Meat

A second category of food that has attracted the attention of those interested in Minoan feasting is meat. After cups and jugs, animal bones are the second most common artifact class found in the banquet deposits discussed above. Assuming that access to meat was limited to some degree during Minoan times as it was during later periods in Greek history (i.e., that it was not a staple food), it is unsurprising that meat would play an important role in formal

commensality (Isaakidou 2007, 14; Garnsey 1999, 122–27). Meat represents the host's ability to raise livestock, which may be especially costly when resources are scarce, or his skill in hunting. At the sites with published faunal evidence, sheep and goat are the most commonly identified species, followed by pig, then cattle, and lastly wild animals including deer, rabbit, badger, and wild goat. Fish and shellfish are rarely the focus of feasting studies (although, see Rutter 2004, 78 for limpets at Kommos).

As with wine, the degree of the availability of meat is open to interpretation. While it was probably not a staple food, faunal analysis does show that non-elites ate meat outside of the palaces (e.g., Reese et al. 2004; Hamilakis and Harris 2011). Hence, meat occupies the nebulous region between staples of cereals and legumes and (possible) luxuries like wine and rare spices. Since much of the scholarship on Minoan feasting relies on ceramic evidence, or on sites where faunal evidence went unreported, meat is less prominent in the literature than wine. Where it is discussed, there is disagreement among scholars as to the role of meat in the feast, as I investigate below. Hamilakis and Harris approach large-scale meat consumption in LM I as evidence for community-building activity, while Isaakidou sees changes in meat processing as indicative of elite efforts to emphasize their elevated status.

A few in-depth faunal analyses of Minoan sites do exist. Hamilakis and Harris' (2011) social zooarchaeological analysis of an LM I deposit from Nopigeia-Drapanias—located outside the Bronze Age settlement of Nopigeia in western Crete—found evidence of repeated meat-focused feasting events. The deposit was in a deliberately dug ditch and was quickly buried, as shown by the wear on the bones; but soil micromorphology shows that it was buried in multiple distinct episodes (Hamilakis and Harris 2011, 201, 212–13). The bones represent at least 23 sheep and/or goats, 10 pigs, 7 cattle, and 3 agrimi (Hamilakis and Harris 2011, 203–4). Most of

the animals fall between two and four years of age, and only one was identified as juvenile. The authors assert that this specific range of ages indicates animals specifically raised for meat—perhaps for these particular feasts (Hamilakis and Harris 2011, 204, 210). Hamilakis and Harris (2011, 211) also note that the meat was boiled in pots rather than roasted, as evinced by the presence of tripod cooking pots and the relative lack of burning on the bones. Additionally, some localized burning on certain cattle bones shows that they were warmed in a fire to extract the marrow (Hamilakis and Harris 2011, 210). The authors identify the meals that contributed to this deposit as marked events because of the return to the same location for the meals, and the deliberate deposition of their remnants. Yet they note that the feasts probably did not serve the purposes of marking different statuses because of the plain conical cups used and the fact that the meat was boiled and not roasted (Harris and Hamilakis 2008, 164).

Conversely, Valasia Isaakidou (2007, 2005) conducted a diachronic study of faunal remains from Knossos from the Neolithic through the palatial periods. She uncovers a change in the palatial period, when the average age of the sheep, goat, and cattle increases and most are male. She suggests that this change signaled a strategy more focused either on rearing of large animals for meat or on secondary products (perhaps exploited by palace workshops) (Isaakidou 2007, 16). She also claims that the increase in butcher marks for dismembering and filleting indicate a turn to stewing, rather than the roasting that was common in earlier periods (Isaakidou 2007, 16–19). Along with evidence that hunted deer were brought into the site for consumption, this change in cooking practices leads Isaakidou (2007, 19) to comment that the faunal remains at palatial Knossos imply the use of *haute cuisine*. "*Haute cuisine*" here refers to a separate system of food preparation that distinguishes elites from non-elites (Goody 1982). Hamilakis and Harris (2011, 213) come to an opposite conclusion from the evidence of stewed meat at

Nopigeia, stating that "it was not the creation of distinction that was the desired effect of the feast, but rather one of homogeneity and unity". From an outside perspective, roasted meat may seem easier to prepare than boiled meat because fewer implements are required. On the other hand, there is certainly precedent for the elevated status of roasting compared to stewing, as seen in Classical Antiquity, for example (roasted meats are the preferred food of gods and heroes). Boiling allows access to more calories in a single animal—as illustrated by the consumption of marrow at Nopigeia—and scarce meat can be "stretched" to feed more people by supplementing with lower quality meats or vegetable foods (Ekroth 2007, 266–67). The example of meat consumption thus demonstrates why it is impossible to detect the meanings of foods or food-related artifacts from narrow study of a single artifact class. To judge the perceived value of a certain cooking method is only possible when viewed in the context of the whole cuisine.

Feasting and sociopolitical organization

Because of the central role of feasting in political life, as emphasized in recent scholarship by Dietler, Hayden, and others, commensality is important to discussions of Minoan sociopolitical organization. The centrality of feasting is particularly visible in the multiple models proposed in the past two decades that challenge the traditional interpretations of Minoan political organization. Here I will introduce some of these models in order to return to their implications on Minoan feasting later in my discussion.

As many scholars have pointed out, Evans' conception of the palace at Knossos was often more influenced by his own political interests than empirical evidence (Papadopoulos 2005; Schoep 2010; Hamilakis 2002a, 2–3; Farnoux 1994). Evans sought to find on Crete the first sophisticated European "civilization" and to present it as the first step in an evolutionary lineage ending in his own British Empire. Hence the monarchic, imperial model he imposed on

Knossos was likely more similar to Edwardian Britain than it was to the realities of Neopalatial Crete. While later scholars critiqued the flaws in Evans' data, the cultural-evolutionary scheme that he set up in Minoan scholarship would continue for much of the twentieth century (Papadopoulos 2005).

In the past few decades, the "traditional" interpretation of the palaces and of Knossos in particular has come under attack from several fronts. The prevailing model of Knossian rule over the island had relied on the island-wide adoption of Knossian architectural and ceramic styles, as well as the suggestion of widespread peace—a "*Pax Knossiana"*—between the various palace centers. However, in the 1980s doubts arose as to the necessity to interpret these data as evidence for a unified Crete.

Renfrew and Cherry's 1986 volume on peer-polity interactions suggests a new model. The shared stylistic vocabulary among Minoan palace centers may indicate competitive emulation or other forms of cultural transmission between peer-polities—similarly sized, independent political units (Renfrew 1986). Cherry suggests that important ritual traditions are one of the concepts that Cretan polities emulated from their neighbors. This emulation was effective because palace elites express their power through shared religious practices, which could include feasting (Cherry 1986, 31).

While much of the conversation on the Neopalatial political organization has centered around the relationship between palace centers, other important recent work focuses on power dynamics within polities. This discussion stems from attempts to clarify the roles of the palaces themselves. Evans originally conceived the palace, or "palace-temple," as the seat and residence of a priest-king who controlled the economic, political, and ideological realms of Minoan life. A re-examination of the evidence calls into question the interpretation of palaces as monopolizing

economic activity through a system of collection and redistribution of agricultural products. Actual attempts to calculate the amounts of available storage offer unclear results. For example, Christakis (2004) contends that at LMI Knossos, there was not nearly enough storage to account for a redistributive system. If palace stores were not sufficient to support redistribution, a more likely explanation for these accumulations of food is for feasting (Strasser 1997, 92). Furthermore, the palaces' supposedly complete control over other areas of Minoan life is also questionable. As Day and Wilson (1998) show in their study of Kamares ware, it can no longer be assumed that production of "palatial" ceramic styles is monopolized by palaces either.

Another critique of the standard model of the Minoan palace emphasizes the absence of direct evidence that it was, in fact, the residence of a king. Jan Driessen (2002b) lists many reasons—including a lack of royal burials, iconography of kingship, and architecture designed to suit a human ruler—to doubt the existence of a monarchic system in palatial Crete (see also Davis 1995). Instead, several authors have proposed various heterarchical models (for heterarchic and factional political models in archaeology, see Brumfiel and Fox 1993; Ehrenreich, Crumley, and Levy 1995).

First, Davis and Koehl, who both survey the lack of iconographic evidence for Minoan monarchs, take a subdued approach to the issue. Davis (1995, 18) concedes that while there is no iconography of rulership on Neopalatial Crete, she "find[s] it difficult to conceive a major civilization in the Mediterranean Bronze Age without a male ruler or rulers." Koehl (1995) paints the Minoan king as "*primus inter pares*", noting the fact that Knossian elites dined at the palace as evidence that the king and upper classes were on roughly equal grounds. My own study challenges Koehl's hierarchic view of the elite feasts in palace banquet halls (see Chapter 6), but Koehl's model for kingship remains valid.

Taking a far less conservative stance, Hamilakis does away with the king entirely and proposes a system of competing factions. He argues that power within Minoan polities was split among fluctuating, fragile groups locked in constant competition with each other (Hamilakis 2002b). Therefore, he interprets the elaborate material culture of the Neopalatial period as a sort of competitive emulation and overt display of power (Hamilakis 2002b, 186–88). Hamilakis is also one of the few Minoan archaeologists to engage substantially with feasting theory to explain his proposed model. He proposes that factions used feasts to enhance their standing in the community and attract supporters, specifically stressing the role of wine and oil in this sphere (Hamilakis 1996). Under this model, the palaces are the seats of the most powerful factions, which compete with other palaces in small regional clusters (Hamilakis 2002b, 188–90). Driessen's (2010) analysis of Houses (kin-based groups linked to buildings, tombs, and heirloom objects) as political actors gives material evidence to support the division of Minoan society into heterarchically distinct groups. The presence of these large, kin-based social units is evident in the remarkable size of many urban dwellings and so-called "villas." As Driessen (2010) explains, Houses differ from factions because they are intergenerational and tied to a specific place, whereas factions are short-lived and generally form around a single charismatic leader.

Another proposed heterarchical model offers more stability to the system, thus addressing concerns that a massive undertaking such as the building of a palace requires a centralized authority (Betancourt 2002; N. Marinatos 2010, 13–14). Ilse Schoep proposes a system of power-sharing among different groups that each control different spheres of Minoan culture. She specifically questions the palace-temple model proposed by Evans, wherein a priest-king residing in the court building wields political and religious power (Schoep 2010, 2004, 2002a, 2006). Drawing on evidence primarily from Middle Minoan Malia, Schoep argues for separation

of religious and political power. She suggests that the palace-temples were, in fact, *only* temples, while political rulers occupied other elite residences surrounding the "palace." She points out other potential examples of this division at other Cretan centers as well (Schoep 2010, 233–35). This model allows for a strong authority residing at the palaces, with some control over agricultural and craft production (in order to supply rituals) while explaining the lack of evidence for monarchy. As pertains to commensality, this hypothesis implies that religious ritual (i.e., feasts) were the primary purpose of palatial authorities; once again we encounter the view that palaces are for feasts.

These theories raise serious problems that require further research. First, care should be taken to avoid assumptions of diachronic homogeneity. Most authors draw primarily on Neopalatial evidence, although Hamilakis (2002b, 198) posits that factionalism may have begun in the Protopalatial. Unfortunately, since many New Palaces were built over the Old Palaces, most of the material evidence comes from the later period. Additionally, the potential for change within the Neopalatial should not be ignored (Schoep 2002b, 22–23; MacDonald 2002; Driessen and Macdonald 1997).

A second point of caution concerns geographic bias. Much of the evidence for feasting and other palatial material culture comes from Central Crete, but when scholars take an island-wide approach they reveal significant regional variation. This point applies to models of political organization as well as to feasting patterns (Adams 2006; Hamilakis 2002b, 199).

Conclusions: where to go from here?

Currently a number of competing political models exist for palatial Crete without a clear solution. A closer look at feasting in the palaces can address this issue by clarifying a primary mechanism for negotiating power relations, asserting the status of emerging elites, and enforcing

and perpetuating political ideologies. Indeed, many of the proposed political models relate to commensality in some way. Hamilakis' work relies heavily on concepts of feasting and conspicuous consumption. Others, such as Driessen and Schoep, who interpret the palace as primarily a ritual center and divide other aspects of administration among powerful houses, are essentially saying that the palaces were built *for* feasts.

Unfortunately, most work on Minoan feasting to date does not address the implications for political and social organization. Few authors move past the mere assertion that feasting occurred and that elites used it to promote their interests. This is not enough. It should be expected that impressive displays of commensality played a central role in any society as complex as Minoan Crete and that it was one of the primary ways that elites became and remained elites (Bray 2003, 9). Asking who these elites were and what their relationship was with the rest of the population will do more to advance understanding of Minoan feasting and political organization than the mere identification of new feasting contexts.

This shortcoming in extant scholarship has two causes. The first stems from a general lack of direct evidence for isolated events. With biased datasets and poor preservation, it will not do to focus on one artifact class to the exclusion of others. A further issue concerns geographic bias. Most feasting studies address only one site or one region and treat a single case of feasting in isolation. On the one hand, this isolation is necessary, as it is important to avoid excessive generalization across the island and to allow for regional variation. On the other hand, the absence of a more holistic view of feasting means that important broader patterns may go unnoticed. As I will argue in the rest of this dissertation, a major lacuna in both the Minoan scholarship and the broader literature on feasting is a wider consideration of commensality, at all scales, since banquets do not occur in a vacuum.

However, the under-theorization of Minoan feasting is not simply caused by the inattention of Cretan archaeologists. My next chapter demonstrates that current feasting theory is imperfectly suited to the field of archaeology in general. It is obviously not possible to simply input an artifact assemblage into an equation to generate a feast classification or "mode of commensality," yet the *nuance* that goes into reconstructing commensal behaviors from solely their material remains is far from clear. This chapter has shown that in aggregate, such material remains are plentiful on Crete, and much is known about the components of commensality. Minoans feasted with cups: sometimes in smaller groups using ornate vessels, or sometimes in much larger groups using small plain vessels. They feasted in cemeteries, in sanctuaries, at palaces, and in houses. The popularity of each of these arenas fluctuated over the years, but Minoans consistently invested significant effort to constructing spaces where commensality could occur. Lastly, archaeologists know more or less what foods and drinks were available for these feasts. From these materials, it is possible to reconstruct behaviors. In order to extract values and meanings from these materials, however, it is first necessary to construct an adequate theoretical framework for their interpretation.

CHAPTER 3

THEORIES OF COMMENSALITY

Introduction

The previous chapter demonstrated that there is no shortage of evidence for feasting on Minoan Crete. Archaeologists are relatively quick to label as feast any direct or indirect evidence for food consumption at palaces, tombs, and sanctuaries, as well as at elite residences. At a structure such as a palace or sanctuary whose primary purpose seems to be ritual in nature, this is a fairly easy identification to justify. As current discussions increasingly focus on feasting in elite houses, however, it is now necessary to examine the definition of feasting beyond this locational distinction. When does an assemblage of food-related artifacts constitute the remains of a feast rather than of quotidian dining? *Is* there a difference between the two? The literature reviewed in the previous chapter suggests that most archaeologists take a "you know it when you see it" approach. For example, on Crete, purported evidence of feasting in houses includes surprisingly large stores of cups—those considered too numerous to supply the household alone—and vessels decorated in a "palatial" style. Clearly there is a notion that feasts are larger or involve more elaborate accoutrements than other meals, though the precise distinction is not often expressed. However, since, as I discuss below, this distinction is so difficult to pin down, I instead propose abandoning it and adopting a spectrum model for commensality, where feasts are simply the extreme end of a continuum that includes all forms of dining.

In this chapter, I investigate definitions of feasts, partly because the theory explaining how feasts work to mediate human relationships is embedded in the very definition of feasting, and partly because the difficulties of defining the term reveal deeper issues at the heart of the study of commensality. The theoretical writings on feasts rarely discuss the material correlates of

feasting, so that they provide limited usefulness to archaeologists. More troubling is the fact that there may not be a reliable means to draw a hard boundary between feasts and non-feast meals. This issue opens the door for a more nuanced study of everyday food consumption and small-scale gatherings, as these practices inform a more holistic picture of commensality at all levels of society. As I demonstrate in this chapter, this move from feasting to foodways more generally makes it possible to judge the relative social value of different kinds of consumption episodes based on their material remains. This kind of assessment proves crucial if feasting is to be used as evidence for political organization, as has often been the case in Minoan archaeology. Accordingly, I propose here an altered feasting model that incorporates different kinds of meals—both small and large, simple and complex—into a common system of commensal behaviors. This schema provides a conceptual foundation for my own analysis of Cretan domestic commensality in chapter 5.

Defining the feast

Dietler, Hayden, Jiménez, and Montón-Subías all offer a sense of the consensus, among anthropologists and archaeologists, on the definition of feasting. In the introduction to the edited volume *Feasts: Archaeological and Ethnographic Perspectives on Food, Politics, and Power*, Dietler and Hayden (2001, 3) note that the various definitions provided by the authors in the volume share

> the idea that feasts are events essentially constituted by the communal consumption of food and/or drink. Most authors are also explicit in differentiating such food-consumption events from both everyday domestic meals and from the simple exchange of food without communal consumption.

Similarly, Jiménez and Montón-Subías (2011, 130) write that "for most scholars the concept of *feasting* denotes social gatherings involving the ritual communal consumption of food and drink on special occasions and/or for special purposes." Clearly, the dual ideas of shared consumption

and distinction from everyday meals is key to most authors. Closer inspection of the work attached to these definitions reveals that the idea of shared commensality can be further broken down as a special kind of gift exchange (Hayden 2014, 39). At a feast, there are hosts, who provide the meal, and guests, who receive it. As I demonstrate below, framing the feast as a gift is crucial to understanding how commensality functions within societies. Therefore, I prefer to express the generally-accepted definition of the feast with the following three aspects: a) feasts are events that entail sharing between two or more individuals; b) they involve the consumption of food and/or drink; and c) they are distinct from everyday meals. A closer look at each of these aspects of feasts serves to highlight key points of contention as well as some underdeveloped areas within the study of feasting.

Feasts are gifts

The first aspect of the definition of feasting forms the theoretical foundation for our understanding of commensality. The sharing of food is (almost always) a form of gift-exchange. Most current theories of feasting draw upon Marcel Mauss' ideas on the gift economy. Mauss (1990: 3-4) defines the gift as a broad category that includes feasts as well as non-food exchanges, arguing that when people give gifts to others they create an obligation for the recipient to return the favor. This sense of indebtedness on the part of the recipient creates a power imbalance between the two parties. The giver gains status—thereby converting the value of the gift into "symbolic capital"[3]—while the recipient finds himself in debt and therefore at a lower status than the giver. Mauss describes gift exchange systems as operating in economic terms with one key difference from an economy of currencies and commodities: gift-exchange is

[3] The term "symbolic capital"—coined by Bourdieu (1977: 171-183; 1990: 112-121)—is widely used in economic explanations of feasting to describe the gains made by the giver in gift exchange situations, otherwise called "honor," "prestige," "merit," etc. (see also: Dietler 2001: 73; Junker 2001: 275-76; Perodie 2001: 187).

"a system of total services" because it involves all societal institutions (1990: 5-7). As he remarks, "these phenomena are at the same time juridical, economic, religious, and even aesthetic and morphological, etc." (Mauss 1990: 101). In short, the gift economy encompasses a much broader part of the human experience than the traditional notion of "economy".

In its simplest form a gift is a contract between two people. Gifts cannot be completely dissociated from the giver. The recipient keeps a part of the giver with him as long as he possesses the gift, and the gift can serve as a tangible expression of the relationship between the two individuals (Mauss 1990: 15-16). A refusal to reciprocate the gesture of giving is a grievous offense because it can be seen as keeping a part of the giver without returning anything to replace the missing piece. Pierre Bourdieu further develops the concept of the gift by adding two key stipulations to Mauss' formulation: that reciprocation is deferred, and that the obligation to reciprocate is misrecognized by the parties involved. Bourdieu (1977: 171) explains that it is necessary for societies to keep up a "sincere fiction" of generosity and disinterest in order to produce and reproduce, through the mechanisms of gift exchange, the relationships that are required for the functioning of the society. This fiction is preserved by delaying the reciprocity involved in gift-giving. As Sahlins (1972, 215) puts it, the immediate reciprocation of a gift of food would "impugn the motives of the giver and of the recipient." Waiting before returning the favor of the gift creates a period during which the receiver is in the debt of the giver—cementing the bond between them (Bourdieu 1977: 6). This delay is crucial, not only because it allows for this bond to take place, but also because an immediate reciprocation would expose the true, self-interested nature of the mechanism of gift exchange to the participants (Bourdieu 1977: 5-6). What is important to remember from Mauss' and Bourdieu's discussions of gift-giving is that gifts simultaneously distance individuals by creating a power imbalance and bring individuals

together by creating a relationship. Scholars of feasting must consider these two contradictory effects concurrently, as the tension between the two is at the heart of the phenomenon of gift exchange.

Food-sharing is not always a type of gift-giving. One important caveat that should be mentioned is that gifts are not commodities. Using Bourdieu's more nuanced discussion of the gift, commodities cannot create bonds between people because they are reciprocated immediately (i.e., through payment) without the necessary delay of gifts. Thus there is no period during which one party is obliged to the other (Bourdieu 1977, 5–6, 13). Mauss (1950, 61) presents the distinction between gifts, which are perceived as freely given, and goods and services which are not free, as a peculiar condition of recent human history rather than an immutable truth of human behavior. More importantly, however, feasts involve two or more people eating a meal *together*, but when food is sold, the seller usually does not participate in the consumption of the meal.

Secondly, to be able to physically represent its previous owner, the gift must be seen as belonging to the giver before it is transferred. To this end, some scholars, such as Brian Hayden (Hayden 1996, 142), contend that in egalitarian societies where private ownership of food resources is not practiced, communal meals do not create the kinds of power imbalances entailed in Mauss' model. Counter to this argument, however, Polly Wiessner demonstrates that egalitarian societies adopt strict practices to prevent the sharing of food—especially meat—from acquiring the character of gift-exchange. The 27 societies in Wiessner's (1996, 176) study exhibit behaviors that serve to keep hunters from being seen as owners of the meat they procure, or to reverse the transfer of food by framing the act of sharing hunted meat as the repayment of a debt rather than a gift, which incurs debt. These egalitarian societies may be seen as the

exception to prove the rule (at least among the societies discussed by feasting scholars), as they must act deliberately and exactingly to prevent the imbalances normally caused by food sharing (Wiessner 1996, 171).

Finally, meals wherein the recipient of food acquires no obligation to reciprocate the transaction are not gift exchange. This condition generally applies only where children are involved. Parents who feed their (young) children expect nothing in return for the food they provide (Eibl-Eibesfeldt 1996, 35; Bourdieu 1977, 7). As Irenäus Eibl-Eibesfeldt (1996, 37) shows, this kind of "no-strings-attached" provisioning, which he calls "nurturant dominance" is usually not tolerated by adults in any situation except in some cases of extreme poverty. Once again, the fact that most people actively seek to avoid nurturant dominance shows how entrenched such systems of gift-exchange are in all cultures.

Gifts of food

While the above examples demonstrate the widespread applicability of Mauss' observations on the effects of gift-giving, feasts represent a special category of gift exchange because the gifts in question are food and drink. Food and drink are unique gifts firstly because they are biologically necessary. This makes food an especially attractive and valuable gift (Sahlins 1972, 215–18; Sánchez Romero 2011, 8). Furthermore, because food is often perishable, its accumulation may require a substantial amount of labor and/or technological innovation. Food is destroyed by ingestion, which means it is a gift that cannot be returned or passed on to another recipient (Dietler 2001, 73). Moreover, using Mauss' approach, an especially strong bond between giver and recipient is expected if the gift—which can be considered an extension of the giver's person—is actually consumed by the recipient, thus becoming a part of her body (Dietler 2001, 74).

Humans' constant need for food makes it, as Appadurai (1981, 494) suggests, "a peculiarly powerful semiotic device". We interact with food continually through our daily lives and its acquisition, preparation, and consumption takes up a large proportion of our time and energy. Therefore, Appadurai argues that food and drink are able to take on immensely complex and varied social meanings in our interaction with them. In his article "Gastro-Politics in Hindu South Asia," Appadurai (1981) demonstrates that people use food to structure their daily lives and relationships as well as to communicate messages and interact with others. Mary Douglas' (1984, 1972) detailed investigation of the semiotics of everyday meals in her own home as well as in other societies shows that *all* food consumption, whether on weekdays or special days, is inextricably bound in a highly complex system of conditional categories of acceptable foods, materials, techniques, and etiquette. In fact, the symbolic richness of food makes it an especially potent and efficient object for gift-exchange behaviors, but this symbolic aspect forms a portion of feasting theory that is often neglected in archaeological work, including in Minoan Crete. There is a strong tendency in archaeology to recognize the ritual importance of presumably rare and valuable foods (i.e., wine) without considering the significance that all foods have in all meals.

Feasts are special

Besides the requirement of sharing food, most agree that feasts are not everyday events. This distinction can be specified in multiple ways, but in general it is possible to distinguish between definitions that draw on an intrinsic separation of the ritual from the everyday, and those that describe this separation through its material correlates. Dietler's definition falls into the former group. He claims that, "as with other types of ritual, feasts provide an arena for both the highly condensed symbolic representation and active manipulation of social relations" (Dietler

2001, 67). If seen as more symbolically charged than everyday meals, feasts can represent social structures more obviously and clearly than other commensal eating practices. Yet Dietler (2001, 70) himself recognizes the difficulty in this definition. As he notes, everyday meals can also be seen as ritualized events. Finally, he settles on an ultimate dissimilarity: feasts are more "consciously public" than other meals (Dietler 2001, 70). The visibility of feasts is certainly important to their function. In gift exchange, visibility allows others to see the value of the gifts involved, allowing for a more accurate calculation of the debt incurred by the recipients and the prestige earned by the giver. Moreover, a public display allows the host's wealth (and power) to be seen by a much larger audience, making a greater impact. However, "ritual" and "public" are not interchangeable distinctions, and the oft-made differentiation between everyday and ritual behaviors also deserves closer scrutiny. Archaeologists writing on ritual have pointed out that distinguishing between these two categories is far from simple, and emic correlates to the modern Western concepts of "ritual" and "mundane" vary widely from culture to culture (Bell 2009; Kyriakidis 2007b, 2007a; Bradley 2003). Moreover, such a dichotomy suggests a lack of symbolic meaning in daily activities, which is clearly not the case (Delgado and Ferrer 2011, 185). In contrast, as Douglas (1972, 69) remarks, "each meal carries something of the meaning of the other meals," because the nested, repetitive nature of this semiotic system conveys the same meanings in *every* instantiation. This means that the same messages and meanings that are seen in banquets are also being manipulated at the family dinner table every night. Clearly, the structures associated with food and dining are primarily created and reinforced as they are enacted in everyday meals and not merely on special occasions.

Even if the ritual/mundane binary were to be accepted as legitimate, confining feasts to the sphere of ritual would ignore the social structures built around the most mundane modes of

food-giving. These structures can extend far beyond the small household scale. For example, Susan Pollock's (2003, 21) study of food and drink consumption in early Mesopotamian urban centers identifies two kinds of food-sharing events: feasts conforming to Dietler's definition, which in this context serve primarily diacritical functions, and the disbursement of rations to laborers. Using tablets and ceramics as evidence, Pollock (2003, 27–32) shows that the rations of primarily staple foods given to workers would create relationships of dependence on employers, not only because the workers were being provided sustenance by the state, but also because the provision of rations would have disrupted their usual family-based forms of food-sharing. The providers in this situation were giving food, which created an unbalanced relationship between them and the recipients. Because, given their limited means and the specifics of the social context, recipients were unable to reciprocate and pay off the debt incurred, this imbalance would have remained and grown stronger with each repeated instance. Clearly, individuals and states can employ the tools of gift exchange and food-sharing outside of special, "ritual" events.

Other scholars prefer more material-based approaches to distinguishing everyday food consumption from the ill-defined "special occasion". Hayden (2014, 8) proposes to define feasts as "any sharing between two or more people of a meal featuring some special foods or unusual quantities of foods (i.e., foods or quantities not generally served at daily meals) hosted for a special purpose or occasion". Kirch (2001, 169) adds further that feasts include more participants than ordinary meals, that they take place in dedicated locations, and that they involve special disposal of the material remains. Others, including Junker (2001, 272), and Jones (2007, 149) claim that feasts should involve individuals outside a single household.

The obvious advantage of such definitions is that they are applicable in archaeological contexts, where determining whether an event counts as a ritual (or more of a ritual than other

meals) is less than straightforward. Both modes of distinction suffer from a similar problem, however, as both deny the symbolic importance of everyday foods and mealtimes. Dietler does this by claiming that feasts and non-feast meals fall on two sides of a ritual/mundane binary. Others bring this binary to the individual materials involved. Most crucially, Hayden (2014, 8) stipulates that feasts must include "special foods or unusual quantities of food", presumably because these foods demonstrate the host's wealth and power more obviously than everyday fare. Yet, economic cost is not the only factor influencing value in human societies. Staple foods hold a great deal of symbolic meaning and can be closely linked to group identities. In Phoenician societies, for example, wheat and barley held great significance and made up one half to three quarters of the diet (Delgado and Ferrer 2011, 187). As Delgado and Ferrer (2011) demonstrate, these grains played a central role in communal religious rituals, which reinforced Phoenician identity in western colonies and were manipulated to provide direct benefits to elites and religious technocrats. In this instance, the mundaneness of the food in question is precisely what gives it such great ideological power. Priests who provide grain for religious rites benefit through the reciprocal obligation of participants to give offerings to the temple (and its attendants). Simultaneously, the priests emphasize ties to Phoenician culture and its religion, thus ensuring continued participation in future feasts. There is benefit to the participants as well, who gain an enhanced sense of community identity and create or strengthen social networks (Delgado and Ferrer 2011, 191–92). It is important to remember that, as Mauss (1950, 94–95) writes, "there are no disinterested gifts". Any provisioning of food, whether ordinary or expensive, creates an obligation between the parties involved. Further, the added conditions regarding event location and number of participants clearly are not required for an instance of food sharing to increase the relative status of the host. While the added costs of building and maintaining feasting facilities

and provisioning food for larger crowds could certainly convert to greater symbolic capital for the host, these should be seen on a continuum of increasing value rather than a dichotomy between feast and non-feast.

Another caveat often added to the definition of feasting is the distinction between competitive and non-competitive commensality. Laura Junker articulates this division most clearly when she addresses disagreement among scholars of Prehispanic Philippine culture regarding the local traditions of commensality. Junker (2001, 280) maintains that there are two types of feasts: Those that require commensurate reciprocity are not considered competitive, but they do serve to increase symbolic capital (which she calls "merit"), while overtly competitive feasts require reciprocity of greater magnitude than what was originally given—enacting a cycle of ever-increasing extravagance. This distinction is visible, though not always explicitly stated, in much of the theoretical writing on commensality. Many authors specifically write that their focus is competitive feasting, presumably avoiding the non-competitive type. Non-competitive feasting, on the other hand, is generally given the function of promoting community solidarity—a role that is all but ignored in feasting literature. Dietler (2001, 69) acknowledges the importance of feasts in creating all kinds of relationships, that is, not only political alliances but also bonds of friendship and kinship. Perodie (2001, 192–94) claims that solidarity is a main goal of what he calls "no-return feasts," commensal events wherein a chief or other leader supplies food to a community without expecting reciprocity (similar to Dietler's patron-role feasts, see below). These meals promote peace within the community while also currying favor for the host. Hayden (1996, 128, 2014, 46) claims solidarity as one of the only functions available in societies that actively discourage competitive feasting, i.e., egalitarian hunter-gatherer groups. In fact, he stresses the importance of feasting in these groups as a way of reducing risk, not only by

redistributing foods to those with less, but also by forming and maintaining crucial alliances (Hayden 2009, 599–600). Evidently, several authors acknowledge that feasts can serve non-selfish functions for individuals and societies; however, almost all the work devoted to feasting specifically addresses its use in manipulating others for personal gain. Omitting the cooperative, solidarity-building aspects of commensality from the discussion of feasting is problematic because it forms such a crucial component of the practices.

Current scholarship explains in great detail how groups and individuals can manipulate the material culture of a feast to promote their own agenda, whether that involves asserting one's power for the first time, solidifying relationships with powerful friends, or reminding one's subjects who's in charge. However, despite frequent concessions to the importance of solidarity, feasting theorists have not attempted to explain how communities use shared food to strengthen bonds between members, to create a feeling of responsibility for the welfare of the community, or to smooth over tensions between neighbors, to name a few examples. What would go into such feasts, and what would they tell us about the community or the individual organizers and participants? These questions unfortunately go beyond the scope of this project, but it is important to remember solidarity as a key function of commensality when investigating the role of feasting in any society.

The focus on competitive feasts, as well as the insistence on separating feasts as much as possible from everyday meals, both relate to a strong bias toward elite commensality. In much of the literature on feasting, non-elites are present only as guests, and the events they attend are explicitly planned to emphasize their lower status. Dietler (2001, 89) warns not to confuse the specialized foods, settings, and implements of feasting with mere indications of elite status. Yet

Dietler's own categorization of "modes of commensality" entail the same distinctions that create this bias. The focus is on competition and elite strategies of power acquisition and maintenance.

The above bias creates the further problem of drastically limiting the dataset of feasting material evidence. If we only accept clearly distinct material culture as evidence for feasting, we lose the information that smaller meals, staple foods, and household routines add to the overall picture of feasting in a given society. The task of deciphering the meanings of meals is clearly aided by expanded datasets but the current theoretical trends restrict them to the most extreme examples of feasting.

Is it enough to just identify feasts?

Clearly, the process of deciding whether a meal counts as a feast is a complicated question. At this point, it is worth considering whether the mere definition and identification of feasts is a meaningful endeavor to begin with. The anthropological literature on feasting is vast, and as the subject has grown in popularity over the past thirty years, anthropologists and archaeologists have identified examples of feasting in virtually all the cultures they have set out to study. Clearly, commensality is a pervasive and deep-seated aspect of human behavior. Humans will always tend to share food and establish social institutions that codify the etiquette of food sharing. When food is shared, it will always set in motion the interpersonal and, eventually, political consequences of gift-giving. Furthermore, if, as Dietler claims, feasts are one of the primary arenas in which the business of politics is conducted, then it is to be expected that humans will tend to feast and that major social structures will tend to be built upon feasting practices. Therefore, following the logic and trends established by the literature discussed above, it is safe to assume from the outset that most cultures practice feasting. The mere discovery of evidence for feasting in an archaeological site, for example, does not tell something new about

the culture, nor does the frequently-added argument, "elites used feasts to enforce their power." By now it can be expected that feasts are usually involved in the creation and maintenance of power structures.

Beyond this line of inquiry, the simple cataloging of banqueting practices is of course a necessary part of the study of a culture. However, this is the extent to which identifying feasts and feasting patterns, as has been done repeatedly in Minoan archaeology, adds to our knowledge of the society. I do not wish to downplay the value of pursuing rich descriptions of banqueting patterns for their own sake. Indeed, one of my aims in this dissertation is to expand the existing picture of Minoan commensality. However, by stopping at the identification of feasts as playing a role in elite social strategies, the field limits itself severely.

If the ways that people use the formal aspects of banquets to create and maintain certain social structures were better understood, then the material remains of feasts could expose less tangible aspects of the society in question. In particular, I propose that feasting behavior can reveal the power structures and social organization of a group—a matter of particular interest in Minoan Crete. As can be seen in the evidence presented in the previous chapter, this approach is not a new one. Several authors draw on feasting evidence to support an interpretation of the political organization at a site. Without adhering to a common theoretical model, however, archaeologists draw very different conclusions, sometimes based on similar feasting evidence. The differing views of the politics of palatial dining halls in the previous chapter demonstrate this discrepancy.

The existing literature does offer some clues as to the relationship between feasts and political strategies. Most notably, Dietler identifies three potential aims of the host in his three "modes of commensality". In "empowering feasts", political actors employ commensality to

increase their symbolic capital (Dietler 2001, 76). Specifically, empowering feasts are intended to raise the host's social standing, and can thus be seen as more competitive than other feast types, although Dietler (2001, 79) stresses that this competition may be highly veiled. Within the category of empowering feasts Dietler and Herbich (2001) place work feasts, or "collective work events". In these cases, the mechanism of empowering feasts is specifically put to use to gain support from a voluntary workforce for the completion of a specific task. Dietler and Herbich (2001, 257) suggest work feasts as a viable alternative to slave and corvée labor, which is often assumed from the presence of monumental architecture and other features requiring a large labor force.

Dietler's second category of commensality is the "patron-role feast." These events are more closely linked to the concept of redistribution, as they do not involve expected reciprocity in the way that we see in empowering feasts (Dietler 2001, 82–83). Yet the forces of gift exchange and obligation are still at work, creating and maintaining an imbalance in status between host and guests. Dietler (2001, 82–83) attributes to this category the lavish feasts often thrown by chiefs and other political leaders who use commensality to "reiterate and legitimize institutionalized relationships of asymmetrical social power." Hence, patron-role feasts, which aim to preserve existing hierarchies, differ from empowering feasts, which aim at social mobility.

The last "mode of commensality" is the "diacritical feast." These are feasts intended to enforce the separation between two social groups. They are exclusive events to which only members of the group are invited. Often, lavish foods and costly serving vessels, which only the "in-group" can access, further distinguish them from other groups (Dietler 2001, 85–87).

Except in the case of diacritical feasts, where Dietler specifies that participants use distinct cuisines, spaces, serving equipment, and/or etiquette to mark their membership in a select group, the modes of commensality model is not extremely useful to archaeologists dealing with banquet remains. How can archaeologists know if a feast was of the empowering type or the patron-role type?

Dietler's modes of commensality, though they do not describe the entire range of possibilities, are a good starting point for my own model because they narrow down the kinds of social and political goals a host might have. Since these goals are achieved through material means, it should be possible to theorize material signatures or tendencies associated with different kinds of commensality, despite the absence of material correlates in Dietler's definitions.

Brian Hayden addresses the material aspects of commensality in much more detail than Dietler. Hayden's (2014, 5) approach differs from Dietler's in that he is less interested in culturally-specific motivations for feasting but instead seeks the ultimate biological cause of feasting behavior through what he calls "paleo-political ecology". Traditionally, ecological theorists are primarily concerned with environmental and biological explanations for human behavior. Accordingly, Rappaport (1968) argues that the pig feasts of the Tsembaga serve to redistribute caloric resources among the population. Contrastingly, Hayden (2014, 53) points out that large feasts are less likely to occur in times of scarcity, meaning that their adaptive function of feeding the population does not work. Under classical ecological models, feasting—at least as it involves costly and/or excessive amounts of food—remains largely unexplainable. Given rational actors, the sharing of especially expensive or abundant food would seem to serve no biological purpose and would in fact work counter to the survival and reproduction of

individuals. Counter to these arguments, Hayden's (2001, 24) primary assumption is that "behaviors that are (1) widespread, (2) persistent over time, and (3) expensive in terms of time, resources, and/or energy should have definite adaptive value". In other words, Hayden rejects purely cultural explanations of the benefits of feasting (that they develop prestige, that they reinforce solidarity, etc.) and assumes there must be an ultimate evolutionary cause of feasting among all humans, regardless of emic justifications. Studies of non-human primates demonstrate the possibility of a genetically-coded propensity to share food (especially costly food) among humans (Villeneuve 2014; Hohmann and Fruth 1996; McGrew 1996, 42–43).

The tendency of some individuals to spend exorbitant amounts on food to share with others may be better explained through these individuals' political motivations. Hayden (2014, 17) posits that all human populations contain some proportion of people who are extremely motivated by self-interest, called aggrandizers. Aggrandizers, perhaps driven by a human pre-disposition towards commensality, exploit the inherent inequality of the gift economy to accumulate wealth and power for themselves and their offspring. The foods offered at feasts are intended to attract participants and to display the host's ability to amass surplus (Hayden 2014, 12–13). Since feasts can be used by hosts to increase their own wealth (through tributes from participants or other forms of reciprocity) as well as to gain access to sexual partners (thanks to displays of success) they demonstrably convey biological advantages to the hosts (Hayden 2001, 33).

Hayden's economic approach carries obvious problems in that it relies on the fallacy of the rational actor. That is to say, the calculus that Hayden presents of manipulating expenditures to maximize symbolic capital may not be a realistic depiction of human behavior. Furthermore, Hayden's focus on the self-serving motivations of aggrandizers places the agency behind

feasting firmly in the hands of elite hosts. Since Hayden considers commensal politics as the driver of social change, this assignation of agency essentially gives elite aggrandizers credit for all developments in social complexity and food technology. While Hayden occasionally notes that the inherent selfishness of feasting would be concealed by the host's supposed generosity, these "big man" models generally eschew the concept of "sincere fictions" (see above; Bourdieu 1977, 171). This is not to say that feast givers are never aware of hidden selfish motivations involved in their actions—indeed, Bourdieu perhaps overstates this aspect of the gift-exchange model. Nonetheless, portraying aggrandizers as clever manipulators gives the impression that the naïve masses are consistently duped by their lavish offers of free food. This view is highly problematic because it ignores the importance of the framework of societal norms and pressures within which hosts must operate. Both guest and host buy into these structures and work within societal conventions, and understanding underlying structures is crucial to the investigations of feasting practices.

Despite the evident issues with Hayden's theory, he does highlight some important points in relating feasts to political models. The general principle of feast givers as self-aggrandizers presents the direct correlation between the resources devoted to a feast and the symbolic capital transferred to the host as a result. To be sure, there is no simple equation to calculate the host's status gain, but the relationship between these two variables will prove important in constructing my own model.

Towards a solution: some helpful patterns

An overly simplistic one-to-one matching of types of feasts to types of societies would be misguided, given the complexity and variety found in the totality of commensality behaviors of

any one culture. However, a review of the literature on theory and case studies reveals some useful trends.

First is an observation that recurs frequently: the most elaborate feasts occur in highly competitive, politically unstable environments (Hayden 2014, 252, 313; Junker 2001, 297–98; Kirch 2001; Garrido-Pena et al. 2011, 125). This tendency is explained well by Hayden's ecological feasting model. Because feasting is costly and very elaborate feasting is very costly, a host in a stable position of power probably would not throw a feast of greater value than necessary to reaffirm his social standing. Granted, humans do not always act rationally; yet constantly bankrupting oneself to throw large feasts, without a commensurate gain in social capital, would be an untenable system. The result of this correlation is that leaders in a stable system do not need to give very elaborate banquets to reaffirm their positions so they do not. In an unstable system, on the other hand, elaborate feasting practices are a common form of competition between rival groups. In Hayden's (2014, 312–13) view, this kind of commensality is typical of the emergent social complexity of transegalitarian hunter-gatherer groups and chiefdoms, but also occurs in early states with established social stratification. This latter occurrence is consistent with interpretations of competitive feasting between Minoan peer polities, familial Houses, or political factions (Cherry 1986; Driessen 2010; Hamilakis 2002b).

Another pattern evident in the literature is the importance of scale as a separate measure from degree of elaboration (Potter 2000). For feasts primarily intended to raise tribute or recruit a workforce, a host may prioritize serving more guests over serving them more impressive foods. This metric is especially relevant in the Minoan context with the conical cup, which appears in great numbers but is usually the plainest of the available cup shapes.

From the above observations, I posit the following correlations between feasting practices and political organizations at two extremes:

1. Single authority in a stable, hierarchic structure: Less elaborate but very large feasts at civic and religious centers
2. Unstable power structure with competing factions: Very elaborate feasts, perhaps smaller than those of Type 1, taking place in association with private elite dwellings

These two models clearly correspond to the traditional interpretation of the Minoan palace as the seat of a king and to the more recent model of an unstable, competitive Neopalatial period. In reality, a state's feasting repertoire would be nuanced and complex. There would doubtless be various types of feasting occurring in different settings, and each one could simultaneously serve a variety of purposes. For example, a monarch might host diacritical feasts in order to recruit allies. Similarly, private feasts among elite kin groups might occur outside the palace as a form of competition among corporate groups, which may still exist under a hierarchic structure (Hayden 2014, 312–15). However, competition among groups all under the control of a centralized authority would probably be less intense than it would be among groups at the top of a power structure.

Using a factional model, especially if, as Hamilakis suggests, the most powerful faction took control of the palace, we would expect to see grandiose competitive banquets at a number of locations including the palace. For this to truly be an unstable situation, non-palace feasts must have rivaled palace feasts in cost and sophistication. These events would have had dual purposes—to compete against rivals in a game of one-upmanship and to win support from the populace (Hamilakis 2002b). The result would be similarly elaborate and large feasts in the palace, elite houses, and other feasting sites like sanctuaries and cemeteries. These events would make up the largest and most elaborate examples of commensality in the Minoan feasting repertoire, although the palace feasts might be just a bit larger and more impressive.

If, on the other hand, the traditional, hierarchic model of Minoan palaces is closer to the truth, feasting would be less elaborate overall. In this case, the most sophisticated banquets might be small diacritical feasts, where the distancing element of feasting is emphasized through the high cost or rarity of the foods and materials involved. The largest feasts would be hosted by the palaces, or perhaps at state-controlled sanctuaries, where the ability to feed vast numbers might be prioritized over the material complexity of the event. There would be feasting among elites as well, perhaps taking a variety of forms, and these may even exceed the palace feasts in sophistication, but probably not in size. What one would not expect under such a system is the large, costly empowering-type feasts described, for example, in Mauss' study of the potlatch.

Breaking free of the problem of definition

Clearly, applying these theoretical models to the data requires a way to distinguish more elaborate feasts from simpler ones. This quality—the "elaboration" of a feast—relates to the cost to the host and to the impressiveness in the eyes of the guests. Crucially, it is involved in the third defining aspect of feasting, which stipulates that feasts are different from other meals. This

Everyday	**Special occasions**
Daily	Rare
Close relationships	Extended family, acquaintances, strangers
In the home	In a dedicated banquet space
Staple foods	Rare or exotic food and drink
Plain, coarse vessels	Decorated, fine vessels
Basic vessel shapes and tools	Specialized and rare shapes and tools

Figure 4: A spectrum of commensal behaviors

portion of the definition is certainly the most difficult to specify, as seen in the diverse

interpretations offered by various authors. To solve the problem of definition, I propose to do away with the need to distinguish feasts from non-feasts altogether, by instead placing them on a spectrum from everyday meals to special occasions. Placement on this scale can be determined using material and non-material evidence, as indicated in **Figure 4**.

A simple scale of complexity does not allow for distinguishing feasts of different sizes. To this end, I propose a model that treats elaboration and size as two independent axes. These define a plane whereon individual meals or meal types can be placed, as illustrated in Figure 5.

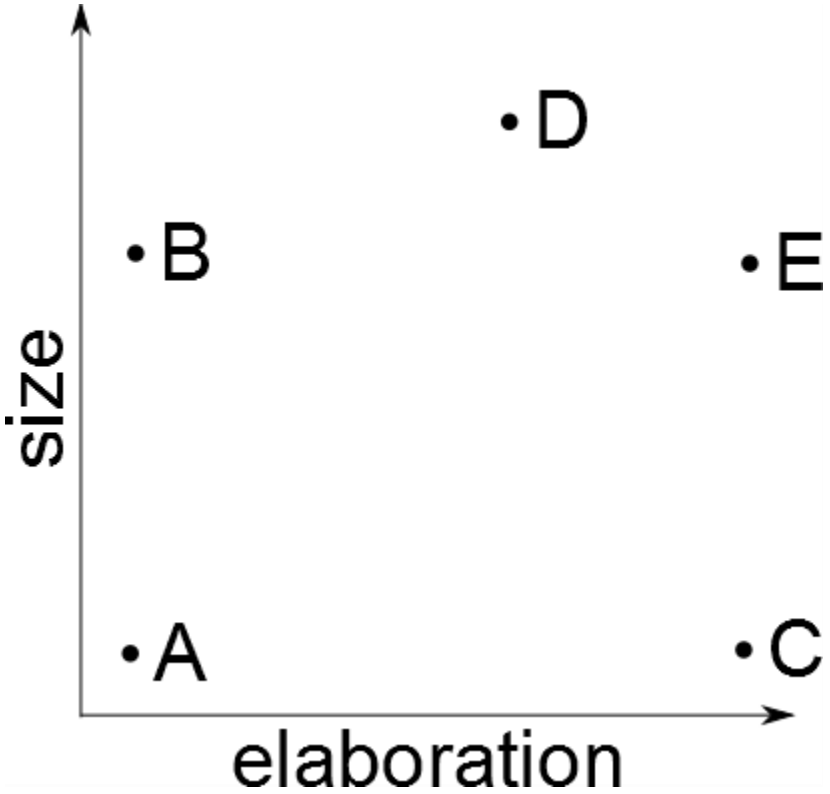


Figure 5: Meals arranged by size (number of guests) and degree of elaboration

In this figure, the labeled points represent individual commensality events. Point A, being a very small and simple meal, probably located in a house and serving mostly staple foods on plain pottery, is an everyday household meal. Point B is equal to A in the plainness of food and

accoutrements, but its large size distinguishes it. This is where we would place daily rations served to workers, such as Pollock (2003) infers from Mesopotamian ceramics. Points C, D, and E correspond roughly to Dietler's modes of commensality, applying the patterns identified above. Point C is a small elaborate feast—probably a diacritical feast. D and E are both larger feasts, but one is considerably more elaborate than the other. Therefore, E is closer to Dietler's empowering feast. This is on the furthest end of the scale of sophistication, indicating its highly competitive nature. For point D, the host prioritizes size over complexity. This event is still much more impressive than a daily meal, but does not approach the competitively ostentatious point E feast. This point instead corresponds best to a patron-role feast, and may signal a host wishing to reinforce an already stable hierarchy of status.

Placing meals on a spectrum from everyday to special occasions offers a number of advantages. First, it facilitates comparison between different occasions, groups, regions, and time periods. More importantly, this model eliminates the need to draw a line between feast and non-feast, thereby circumventing the theoretical disagreements outlined above. Rather than singling out feasts as a special category, this model allows investigation of the entire range of commensal practices. Whereas previously, adherence to strict definitions for feasting has created a bias towards the most extravagant events hosted by elites, this spectrum approach encourages the consideration of feasts that fall between the two extremes. Smaller, less formal, and relatively frequent occasions of food shared between friends, extended families, etc. are crucial in maintaining and negotiating community solidarity and relationships between members of different households. However, unless these feasts are particularly lavish, they are generally ignored by current research. Filling in the middle of the spectrum will help to paint a more

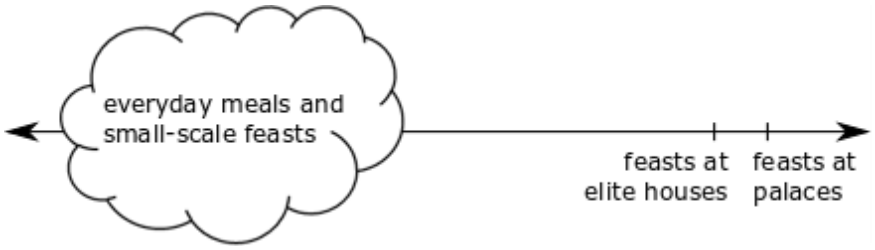
complete picture of feasting behaviors and contextualize the more visible feasts that are already being studied.

There is always a danger, when reducing complex human behaviors to mathematical models, of oversimplifying or losing important nuances because of an overly rigid model. I should make clear that I do not propose to match observations to idealized archetypes by, for example, marking off regions of the plane that correspond to feast types. Nor do I wish to assign exact positions according to a calculation of worth. There are no units on the axes because the model is intended as a sketch to facilitate comparison between sites and contexts rather than a method of absolute classification. Most importantly, what I am proposing is a tool to help characterize an entire repertoire of commensality; the results should be viewed holistically, on a cross-societal level. The model aims not so much to explain individual feasts as it is to explain a whole society's catalog of commensality, which in turn relates to its social organization.

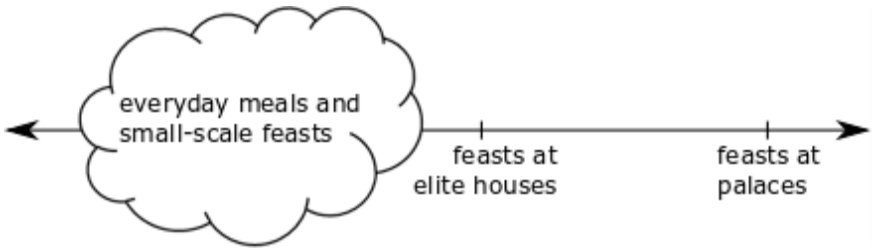
Why houses?

Although up to now my focus has been specifically on elite and palatial feasting, the ensuing case study analysis will deal with domestic assemblages. The reason for this choice is that the quotidian meals of Minoan Crete are not well understood at this point. Not only does this lack create a lacuna in our understanding of Minoan lifeways, but it also impedes further analysis of Minoan feasting. My model relies on considering all types of food consumption together. The reason is easily illustrated along the x axis of the feasting plane, the degree of elaboration. To be sure, existing evidence for Minoan feasting could be placed along this spectrum, producing something like this:

This simple illustration depicts the relationship between a hypothetical palace feast and elite house feast, in terms of complexity. To depict the whole range of Minoan commensality from everyday meals to the most elaborate feasts, however, would necessitate a model such as:



wherein the cloud represents the commensal behaviors that cannot yet be placed on the spectrum, other than to assume that they fall to the left of the elite house feast. The difficulty is that since there is no absolute scale of complexity, the above example could just as accurately be represented thus:



In the first example, feasts at elite houses and palaces are relatively similar in sophistication, and both are near the top of the entire repertoire of commensality. This arrangement might suggest a high degree of competition in feasting, where non-palatial elites are more or less on par with their palatial hosts, such as we would expect in an unstable heterarchical system. In the second example, elite feasts are much less elaborate, and thus less competitive than palace feasts. This hypothetical diagram corresponds to a highly hierarchic system wherein non-palace elites hold considerably less power than palace administrators and have little hope of social mobility; in fact, their abilities to host feasts may be deliberately suppressed by the palace administration. To

"calibrate" the spectrum, it is necessary to characterize in detail the events that fall inside the cloud of everyday meals and small-scale feasts. It is not possible, of course, to assign numerical values to these points of qualitative data without resorting to a completely arbitrary scale. It is nevertheless both possible and useful to compare the relative degree of sophistication of different types of commensality in order to say either:

"Feast B is more similar to C than to A,"

OR

"Feast B is more similar to A than to C."

The spectrum model is not merely a way to compare qualitative data; it is also grounded in the realities of human behavior and thought. Since the mechanism of gift exchange is predicated on a conversion from material to symbolic value, banquet participants as well as anthropologists must, on some level, judge the worth of the event. Without actually adding up monetary values, this worth can only be described in a relative way. Participants at a meal, big or small, will undoubtedly compare it to other meals. It will be noticed, for example, if an annual banquet is more grandiose than it was in previous years, or if the host seems unable to meet expectations this year. It will also be noticed if the food served is no better than what guests eat every day at home, or, in contrast, if the food is so novel that some guests need instruction on how to eat it. Since the value of an event can only be relative and contextually defined, it follows that we must reconstruct the context (the cultural repertoire of food preparation and consumption

practices) in order to understand how particular feasts work to produce symbolic capital (Klarich 2010, 5). This approach helps remedy the limits of the material record.

There is another way for food to function within a social hierarchy wherein elite feasts explicitly *do not* draw upon the same conventions as non-elite meals. In the separation between high and low cuisine proposed by Jack Goody (1982), some cultures develop a separate set of foods and etiquette for the upper classes. This high cuisine demonstrates the wealth of those who eat it by using more expensive, often imported ingredients, more labor-intensive preparation, and a level of complexity and variety in recipes that requires highly skilled cooking staff. This kind of cuisine is in a sense an extreme form of the diacritical feast, wherein special foods and etiquettes denote membership in a group or social rank. Especially given the embodied nature of food and its close ties to identity, using an entirely different cuisine implies a fundamental dissimilarity between elites and non-elites. Valasia Isaakidou (2007) proposes adopting an *haute cuisine* model for Minoan Crete in the palatial period. Isaakidou does demonstrate increased complexity of ingredients and cooking techniques from the Neolithic and Early Minoan periods to the Late Minoan at Knossos, using tablets, ceramics, and faunal and botanical evidence. However, since her analysis does not include non-palatial LM contexts, it is difficult to say whether this increasing complexity truly qualifies as high cuisine. Instead, my model would make such a distinction clear, as it would result in separate clusters of commensality events on the extreme ends of the spectrum of complexity.

Going forward

In summary, my aims in this chapter have been to demonstrate the importance of a more holistic view of commensality. The model I propose, which compares multiple levels of communal eating, serves to counteract the problems caused by the narrowness of definitions of

feasting in existing scholarship. To apply the model to the Minoan world, I now seek to populate the largely unexplored cloud of daily meals and small-scale feasts in Minoan houses. By going beyond listing the ingredients, nutrients, and calories available to the Minoans and attempting to characterized the practices of eating every day and the capacities for smaller feasts in domestic settings, this work will enrich our understanding of Minoan commensality in general. Furthermore, the study of small-scale commensality is necessary in order to decipher the social meanings of palatial feasts and their political implications.

CHAPTER 4

METHODS

In order to evaluate the spectrum of Minoan commensality, as proposed in the previous chapter, it is necessary to characterize meals in terms of their material culture. Rather than attempt to pinpoint individual meals, which are only visible under special conditions of deposition, I will instead investigate the range of possibilities for dining at four LM IB habitation sites: at Ayia Varvara, Chalinomouri, the Mochlos Artisans' Quarter, and Palaikastro. This investigation is accomplished by considering the affordances and limitations of the objects used in food preparation and consumption, as well as those of the architectural spaces where they are found. Below I discuss my methods for selecting and analyzing these case studies.

Site Selection

The case studies include a farmhouse at Chalinomouri, a sub-urban house at Ayia Varvara, two neighboring houses/workshop buildings at the Mochlos Artisans' Quarter, and House N, a two-story elite dwelling at Palaikastro. The criteria for site selection is as follows:

1. Occupation dating to the LMI period
2. Detailed publication of data, including findspots
3. Single preserved floor deposit with minimal reoccupation
4. A combination of elite and non-elite houses.

The choice of these four case studies was largely restricted by the second and third conditions, for while there are numerous excavated LM I houses on record, many were uncovered quickly with minimal study or publication. Other sites, especially in built-up areas, suffer from repeated reoccupation, which confuses the data considerably. Furthermore, among the houses with well-reported data there were very few non-elite examples. The three non-elite sites I have chosen are essentially the only sites that meet my first three criteria; fortunately, they

also happen to encompass a range of sizes and social contexts. Unfortunately, I was not able to include an urban non-elite residence. This variable plays a major role in layout, as attached houses in city blocks are more likely to have second stories, as seen most clearly at Gournia. It is difficult to compare the space allocation patterns I identify with the Gournia houses because the main living rooms in these small dwellings seem to have been upstairs, and the upper stories are not preserved (McEnroe 2010, 105, 1982, 11–12). I address the potential differences for non-elite dining in urban settings in Chapter 6. For an elite example, there are more options available. I have selected Palaikastro House N because it is comparatively well-preserved and unobscured by reoccupation. The resultant four cases vary in proximity to the nearest urban center, in size, and in the presumed social status and occupations of the inhabitants.

Figure 6: Map of Crete showing the case study sites. (Blank map: ©2018 Google, ORION-ME)

As the above map makes clear, all four sites are located in the northeast portion of the island (see Figure 6). This clustering results from the availability of excavation data. There are simply more excavated sites on the eastern half of Crete than in the west. The proximity of the case studies to one another also enables comparison among the sites. With only four points of comparison, it is more reasonable to attempt to trace the dining practices of a single region than

of the whole island. Still, in the interest of completeness I do consider other domestic assemblages (including from western Crete) in my analysis and note any potential outliers. In Chapter 6, I assess the degree to which the patterns I identify within this region are representative of behaviors throughout the island more broadly.

Another point of apparent imbalance in my data selection is the inclusion of only one elite dwelling. I focus primarily on non-elite domestic contexts because these are the sites that have been most overlooked by the field. This lacuna is attested by the fact that so many non-elite houses were unusable as case studies as a result of poor preservation or the paucity of their documentation. Certainly, there are numerous publications that already address elite houses and their involvement in feasting (Girella 2011; Rupp and Tsipopoulou 1999; Brogan, Koh, and Hitchcock 2008). However, I felt it necessary to include House N because while some have examined signs of feasting in elite homes or "villas", none consider quotidian meals in the same structures, or even define the formal aspects of the presumed banquets. As such, a single case study focusing on House N—and subsequent comparison to similar contexts—adds a great deal to the overall picture of Minoan commensality.

The case study approach is not the only way to examine Minoan foodways and dining etiquette. As I discuss in Chapter 2, studies of individual artifact classes, for example, already exist, albeit with slightly different goals. However, my comparison of these studies demonstrates that without considering these artifact types together and in their spatial context, archaeologists come to incomplete and even contradictory conclusions. For a detailed, contextualized approach, limiting analysis to a few cases is the most reasonable way to proceed. It is then possible to compare the behavioral patterns visible in the case studies to a wider array of evidence, as I do in Chapter 6.

The sites

The Chalinomouri farmhouse

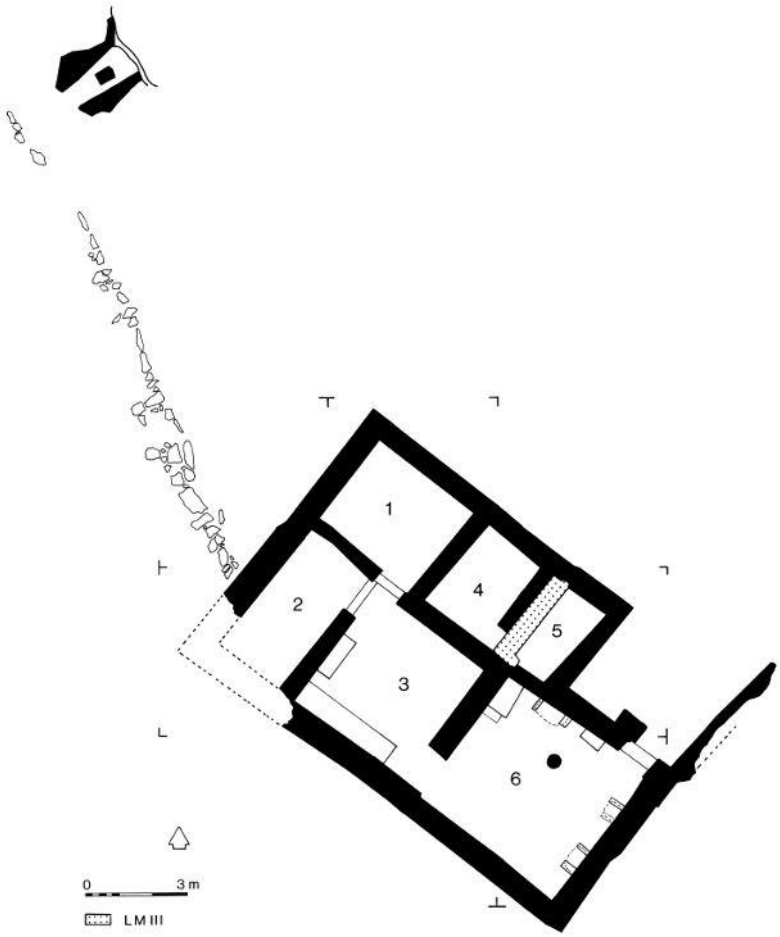


Figure 7: The Chalinomouri farmhouse (after Soles 2003, fig. 56)

The Chalinomouri farmhouse is located on the northern coast of Crete, approximately 4.5 km east of Mochlos. Jeff Soles and his team excavated it in 1990-1994 as part of the same project responsible for excavating the Mochlos Artisans' Quarter. The inhabitants were most likely a farming family who also worked in small-scale craft production when the demands of crops and livestock allowed it. Although it is possible that the Chalinomouri farmers commuted to the house, Soles (2003, 103) convincingly argues that the evidence of long-term storage and

year-round demands of agriculture in the region probably mean that the family lived at the house permanently. In any case, the ample evidence of food consumption makes the house suitable for my study, regardless of whether it was inhabited year-round. The life of the farmhouse spanned the entire LM IB period (Soles 2003, 105).

The Chalinomouri house has a simple floor plan (see Figure 7). The house is entered via a small porch on the eastern corner into Room 6. Along with the adjacent Room 3, these two largest rooms with built-in stone benches are the main activity areas of the building. Beyond Room 3, Room 2 is a storage room with large jars dug into the ground. On the northern corner, Room 1 was accessed from Room 3. Rooms 4 and 5, along the northeastern side of the house, were entered from the roof. There is a LM III reoccupation level overlying part of the building, such that the Neopalatial occupation levels in Rooms 4 and 5 are poorly preserved compared to the rest of the house; in fact, no Neopalatial floor was found in Room 4 (Soles 2003, 118–20). Except for this disturbance, the remains throughout the rest of the building belong to a single floor deposit, corresponding to the building's abandonment and destruction at the end of the LM IB period (Soles 2003, 105).

The Ayia Varvara farmhouse

In 1965, Olivier Pelon excavated a small house about 500 m northeast of the Malia palace. The house belongs to a small coastal settlement that appears to include a mix of houses and tombs from varying periods. The 1966 excavation report describes in detail the architecture of the house and the cataloged finds, which are very few. The house was in use during the LM I period and abandoned and destroyed by fire at the end of LM IB (Pelon 1966, 555). The house

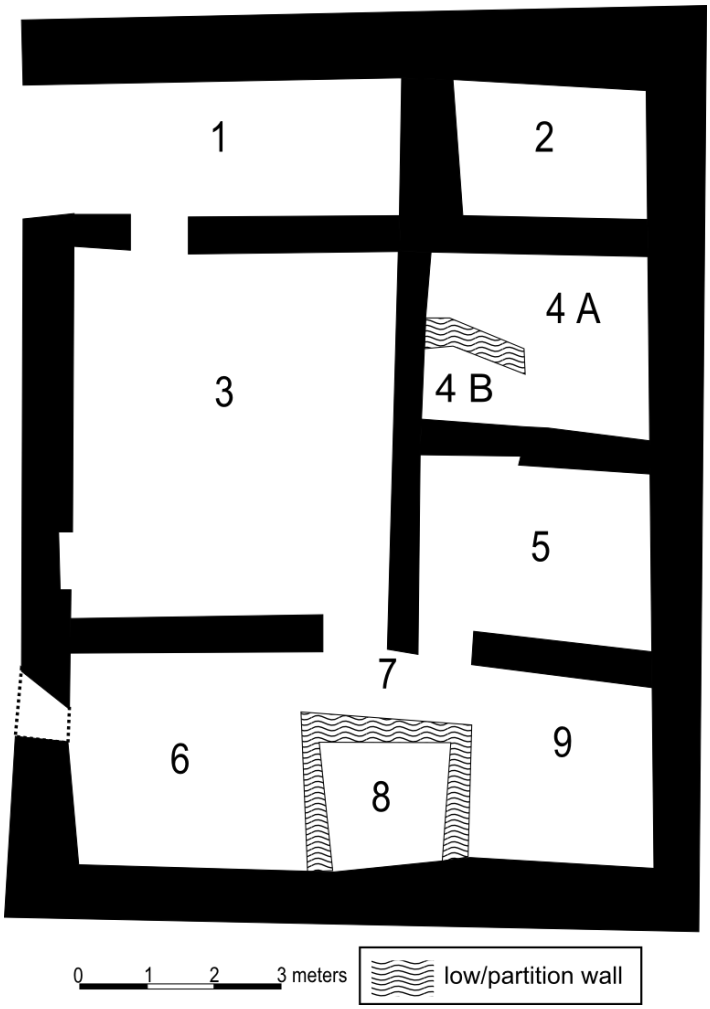


Figure 8: The house at Ayia Varvara (after Pelon 1966, fig 4)

(Figure 8) contains one main room—Room 3—entered via the small entry courtyard—Room 1. The smaller rooms 2, 4, 5, 6, and 9 surround the main room. Rooms 2 and 4 are accessed from the roof. Room 7 is a hallway and 8 is probably a light-well.

The Mochlos Artisans' Quarter

Soles, et al. give the name "Artisans' Quarter" to a group of buildings situated across from the island of Mochlos. Labeled A and B, these two structures stand side-by-side on the coast, with a lane about 2 m wide between them (see Figure 9). At least four buildings originally formed part of this complex; only two could be excavated nearly completely (Soles 2003, 8).

The two buildings were built in early LM IB and inhabited for the duration of the period. They were abandoned and destroyed by fire at the very end of LM IB, or possibly in early LM II (Soles 2003, 10). The excavators uncovered a single habitation level throughout the buildings, except in Room 4 of Building B, where the floor from and earlier building phase was preserved (Soles 2003, 10, 44). The contents upon abandonment were well preserved. In general, the excavators were able to distinguish between the (mostly intact) ceramic vessels left on the floor

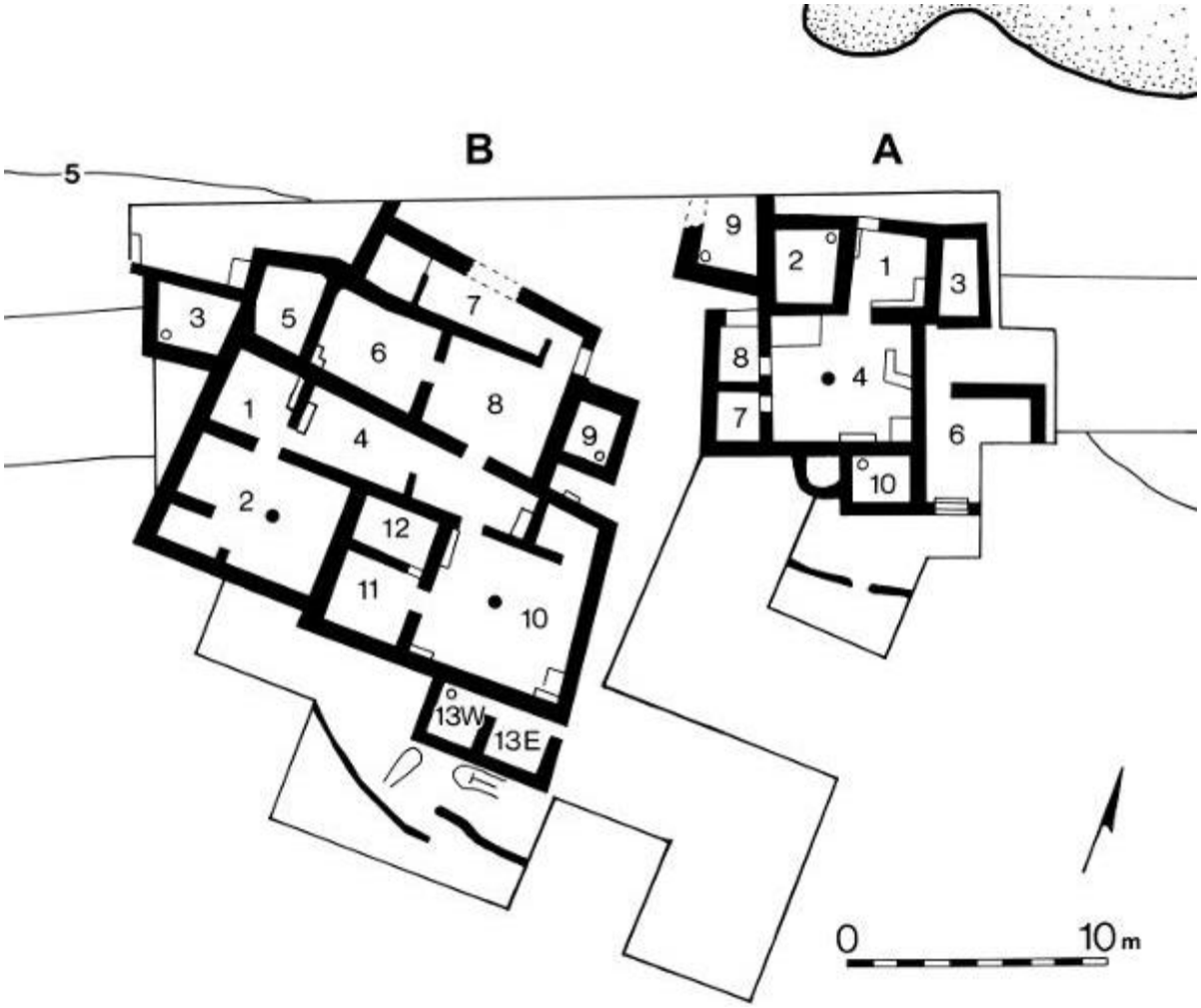


Figure 9: Mochlos Artisans' Quarter, Buildings A and B (Soles 2003, fig. 4)

at the time of the final destruction, and the smaller, scrappy sherds and other residue resulting from years of occupation (Soles 2003, 9).

The name of these structures refers to the abundant evidence for craft production found within. The buildings served as workshops for the production of ceramic vessels, textiles, stone vases, and metal objects (Soles 2003, 93–95). This interpretation is amply supported by finds of raw materials, unfinished and finished products, and tools (Soles 2003, 93–95). Because of their industrial character, it may seem questionable to study these buildings as a domestic context. The buildings' function may indeed have affected their architectural layout, and Miriam Clinton's (Clinton 2013, 173–86) analysis of circulation patterns in Building A lead her to describe many of the rooms as public or semi-public. Yet, Clinton herself acknowledges that the finds, including, definite signs of food preparation and consumption, and most notably the bones and teeth of subadults and infants found in burials in Building A, certainly suggest habitation by family units (Soles 2003, 98; Soles and Walker 2003). Soles (2003, 98) points out that the building phases of both buildings A and B indicate that the structures were built to house a single nuclear family and were expanded by subsequent generations to accommodate an extended family. While the unique character of the Artisans' Quarter may mean that it is not representative of Minoan houses, the patterns of cooking and eating that I find in these buildings do, in fact, have parallels in other domestic structures in the region, as I discuss in Chapter 6.

Building A is the smaller of the two. It is entered on the north side through Room 1, which leads directly to Room 4, the large central workshop. Smaller rooms surround the central space: Rooms 7 and 8 are accessed from Room 4, while 2, 3, 6, 9, and 10 are entered from the exterior. Room 6 could not be excavated completely because of intruding modern construction (Soles 2003, 33). Its contents and plaster floor and walls led Soles to interpret it as a shrine.

Building B is also entered from the north. The northern half is made up of several interconnected rooms (1, 4, 6, 7, and 8) which eventually lead to two larger spaces similar in size and function to A.4: Rooms 2 and 10. Rooms 11 and 12 are small rooms connecting to Room 10, and Rooms 3, 5, 9, and 13 are entered from the exterior.

House N at Palaikastro

L. Hugh Sackett and Mervyn Popham excavated Block N at Palaikastro in 1962 and 1963. The campaign continued work conducted at the site from 1901 to 1906 by Dawkins, Bosanquet, and others, who had uncovered twelve blocks of this large Late Minoan town full of sprawling mansions, located on the eastern coast of Crete (Bosanquet 1901; Bosanquet et al. 1902; Dawkins and Currelly 1903; Dawkins, Hawes, and Bosanquet 1904; Dawkins 1905;

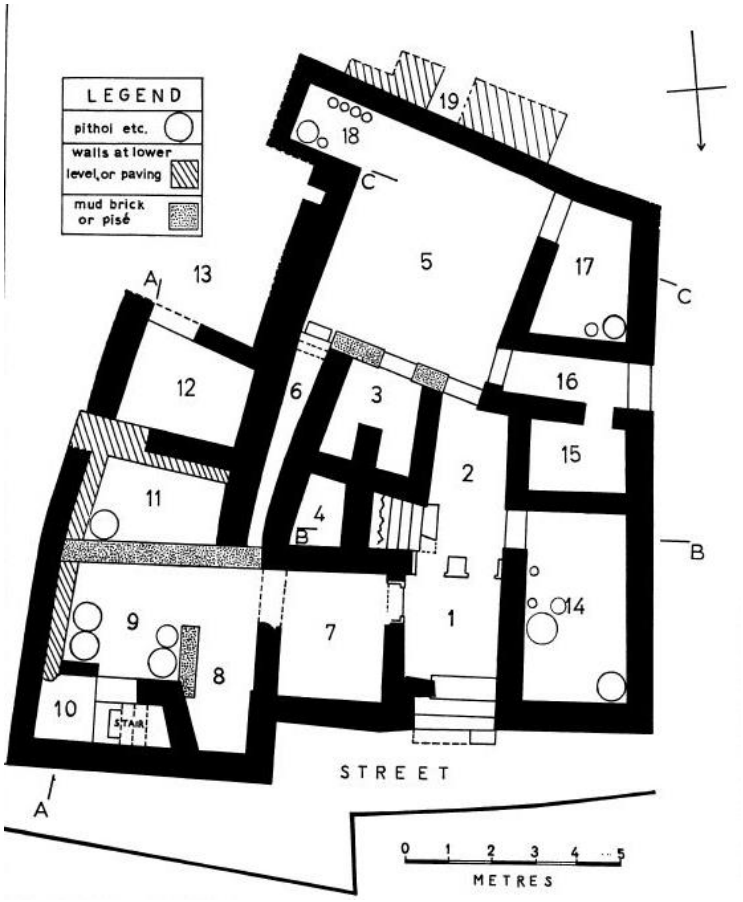


Figure 10: Palaikastro Block N (Sackett et al. 1965, fig. 1)

Bosanquet and Dawkins 1923). The excavations on the site continued after Sackett's and Popham's campaigns, with MacGillivray's work in Block M, located north of Block N (see, e.g. MacGillivray, Sackett, and Driessen 1998; MacGillivray et al. 1992), and later by Knappett, Cunningham, and others (Knappett and Cunningham 2012). While the later work is more complete, given the modern excavation methods used, later reoccupations have confused the architecture uncovered in Block M so that no clearly-defined LM I domestic building is identifiable and sufficiently preserved for this study. Furthermore, Bosanquet's early work at the site, while extensive, lacks the contextualized catalog of finds necessary for this study. The Block N excavation is by no means ideal—the excavators do not report faunal data, did not perform flotation, and the missing upper story makes the finds notably incomplete. Yet it is a rare example of a fully-published LM I house, almost entirely undisturbed by later reoccupation, for which ceramic finds are reported with their findspots.

House N dates to the LM IB period. Several soundings revealed earlier levels below the LMIB floor, the earliest sherds dating to EM III; the shallow depth of these early levels suggests that the previous building(s) were flattened before the construction of the LM IB house (Sackett et al. 1965, 259, 263). The house, excepting a few sparse LM III deposits, dates to a single period and was destroyed, presumably, in the same conflagration that destroyed the whole city of Palaikastro at the end of the LM IB period (Sackett et al. 1965, 251, 261, 266–67). The house consists of 17 rooms and two exterior areas (for floor plan, see Figure 10). Room 12 is not included in the analysis because no LM I floor was found (Sackett et al. 1965, 263). Area 13 was not excavated (Sackett et al. 1965, 263). Area 19 is located behind the house, separated from Room 5 by the southernmost wall. This area was obscured by LM III reoccupation deposits

(Sackett et al. 1965, 266–67). Room 1 is also excluded from the analysis because it was excavated by Bosanquet's team in 1905 and no finds were recorded (Sackett et al. 1965, 255).

Ceramics

Their abundance and durability make ceramic vessels the primary focus of my analysis. In particular, I pursue a functional analysis, in order to identify the behaviors associated with vessels. This kind of analysis involves considering the fabric, shape, and size of the vessels. Below I outline my general methodology for describing each of these three attributes.

Fabric

While vessels at each site come in a variety of fabrics, these can be generally sorted into fine and coarse fabrics (also called wares). Within the category of coarse fabrics, Minoan excavators often identify cooking wares as a separate subgroup, since these fabrics are particularly associated with tripod cooking pots (Including the two Mochlos case studies: K. A. Barnard et al. 2003). Fine wares have no temper, thinner walls, and are the most likely to have painted decoration. Coarse wares are made of sturdy, heavily-included fabrics that are primarily reserved for the largest vessels, including storage jars and basins, and objects like drains and potter's wheels. Cretan cooking wares are especially coarse, and are often redder than other coarse wares, even if the fabrics are otherwise microscopically indistinguishable from each other (K. A. Barnard 2003a, 5). The inclusions in Minoan coarse wares and cooking wares include granodiorite, phyllite, quartz, schist, limestone, biotite, and organic matter like chaff (K. A. Barnard 2003a; Haggis and Mook 1993). The color difference between cooking fabric and similar coarse fabrics may be caused by different firing conditions. Whether distinct fabrics and firing techniques were selected to improve heat transfer, resistance to thermal shock, or some other functional characteristic, remains relatively unstudied (Rice 1987, 229–30; although, see

Haggis and Mook 1993, 278–79; Müller, Kilikoglou, and Day 2015). Until such a connection is clarified, fabric alone is not sufficient evidence to assume a cooking function for a vessel.

Fabric does affect the functional capabilities of a pot—coarse fabrics were likely favored for large storage vessels because of their durability, while fine wares may be preferred for serving vessels, especially decorated ones, intended to be seen at meals (Rice 1987, 106, 228–29). Nevertheless, I rely primarily on shape and size as indicators of function, as they more clearly dictate the extremes of a vessel's functional capabilities.

Shape

A vessel's shape serves as an indication of the type of food or other substance it was intended to contain, and the way its contents were meant to be manipulated (Braun 1983, 108–9). This information is accessed by considering both the shape of the vessel's profile, the size and shape of its opening(s), and any appendages like spouts and handles. The excavators of the chosen case studies each use their own ceramic typologies, often focusing more on variations in decorated finewares than on the coarser utilitarian vessels. For my own purposes, I rely on broad categories that group shapes with similar functional capabilities, as follows:

Open vessels:

Tripod cooking pots (TCPs): These are medium to large, cylindrical to globular vessels, generally made of so-called cooking fabric. These pots are distinguished by their tripod feet, and also sometimes have handles, lugs, and/or small spouts. Their shape and feet make them perfectly suited to cooking over a fire or coals.

Cooking dishes and trays: These are wide and shallow vessels. The cooking dish is a distinct shape with an extremely thin, rounded base and no discernible boundary between the base and the walls. The fragility of this shape means that very few intact examples survive. They

can have a slight spout. Trays have flat bases and short, vertical to flaring walls. These shapes can have handles, spouts, and tripod legs (in the case of trays). They occur in various fabrics, but the open shallow shape is probably useful for dry cooking or serving.

Basins: Along with basins I include tubs and vats. This general category encompasses open vessels that are larger than cups and bowls and deeper than trays and dishes. They come in varied fabrics, and their shape allows for many functions. While the size and easy access to the contents is certainly appropriate for any number of food processing activities, basins could just as easily serve many non-food functions, such as washing.

Cups and bowls: There is no functional reason to distinguish cups from bowls, as both categories can serve essentially all the same purposes. However, at some sites, "bowl" refers to a rather varied class of open vessels that are larger than the more standardized cup shapes. This category includes all small open vessels. These shapes are frequently in fine fabrics and are often painted. Some have handles, and some bowls have feet. The size of these vessels makes them suitable for holding individual portions of liquid or solid foods.

Closed vessels:

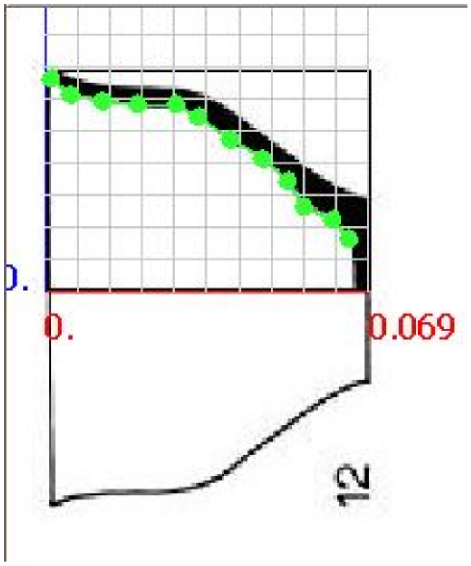
Jugs: These include vessels with restricted neck openings and prominent spouts. Most have handles. The restricted neck and spout clearly suggest a use four pouring liquid, though evidence from Ayia Varvara reminds us that jugs and amphorae can serve just as well to store dry foods like grains (Pelon 1966, 564). Stirrup jars, with their extremely restricted openings, are functionally similar to jugs.

Alabastra: These vessels are rare in my case studies. Their restricted necks make them suitable only for liquid storage and pouring, while the small size suggests their use with more precious liquids, or any liquids used in small amounts.

Jars: This is a very broad category for closed vessels of many sizes and shapes. Most jars could easily contain liquid or solid foods or non-food items, for storage or serving. Some, like the bridge-spouted jar, have spouts and are frequently painted, suggesting visibility and a function as serving vessels. Unlike jugs, however, most jars have wider mouths that allow the contents to be stirred or scooped, making them suitable for food preparation as well. Two exceptions are the amphora, which does have a narrowed neck, and the pithos, whose large size makes it inconvenient for anything but long-term storage.

Other vessels:

The case studies also include other less frequently encountered vessels and vessels not directly informative for my analysis of food preparation and consumption. These shapes include



height (m)	interior radius (m)
9.14E-04	0.04523841
0.005026	0.042039733
0.011881	0.040668875
0.019649	0.039754968
0.027874	0.039754968
0.032901	0.0374702
0.039298	0.03244371
0.046152	0.028331125
0.051636	0.02376159
0.055291	0.018278146
0.061689	0.015536424
0.064887	0.010966888

Figure 11: Method for calculating vessel volume from profile drawings: Using at least one linear measurement (in this case, height) and a scale profile illustration, it is possible to measure the interior radius at various points along the vessel wall, following the contours of the profile. The table shows the height and radius measurement for each green point on this cup, NP 129 from Palaikastro House N. Left image produced using Plot Digitizer (Huwaldt and Steinhorst 2014).

pyxides, scoops and scuttles, “fire boxes”, miniature vessels, and some unusual/unique vessel shapes (on the function of fire boxes, see Georgiou 1980).

Size

A final important metric in my analysis is vessel size. In this category I have attempted to resolve a number of inconsistencies in the way excavations record and report their data. Ideally, my analysis requires a single measurement and a scale profile drawing of each pot. From this information, I generate multiple linear measurements using the image processing and analysis software, Fiji (Schindelin et al. 2012) and Plot Digitizer (Huwaldt and Steinhorst 2014). Then I estimate volume by measuring internal radii at multiple heights along the vessel wall and modeling vessel volume as a stack of truncated cones (see Figure 11 and Figure 12). I calculate and add these volumes using Microsoft Excel.

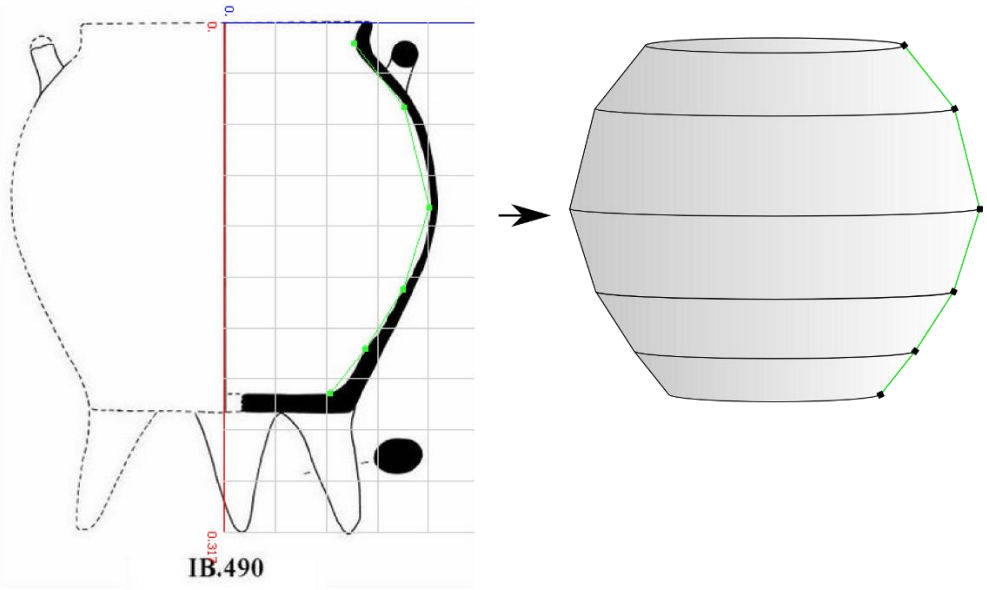


Figure 12: A simplified example showing the vessel volume modeled as a stack of truncated cones, based on radius measurements from a profile illustration.

Barnard *et al.*’s report of the Mochlos pottery does include some volume measurements for conical cups (K. A. Barnard et al. 2003). Comparing my volume estimates to those published

for these 22 cups returns a mean percentage error of only 3.8%. I should note here that, to avoid spills, vessels are rarely filled to their max capacity. Therefore, the functional volumes for all vessels are somewhat reduced from what I report. When vessels have necks, I measure volume up to the narrowest point in the neck. Where there is a spout I measure to the bottom of the spout.

Where there is no scale profile illustration, I report as much size data as possible. Often within a single shape category, a simple height is sufficient to judge the size of a vessel. I do take some estimated measurements from photographs, but I always mark these because they are necessarily less reliable. The loss of the third (depth) dimension in a photograph distorts the image and makes it appear narrower than it is. Nevertheless, where no illustration is available, the information gleaned from a photograph is not completely useless. This situation arises 16 times in my data analysis.

Other relevant data

I take into account all the evidence generated by excavators, although ceramic data is generally most abundant and useful. Detailed accounts of faunal and botanical evidence from the Mochlos sites certainly contribute to the picture of the overall diet in these houses. In general, they conform to the "ingredient" list expected for Minoan Crete. Such data were not collected at Ayia Varvara or Palaikastro House N. Since I am more concerned with the practices of cooking and dining than with the specifics of diet and nutrition, this imbalance in direct evidence for food is not a significant setback.

Some stone objects are directly related to food production and consumption such as saddle querns and stone vessels. Other objects unrelated to food serve to reveal the other uses of spaces in the house, such as craft production and storage. This kind of evidence is important

because one of the crucial aspects of my analysis involves the contextualization of behaviors within their architectural setting. Accordingly, architecture, entailing aspects such as room size and accessibility, is the final piece of evidence that holds the analysis together.

Limitations of the data

Finally, it is necessary to remember what is missing from these datasets, especially as they relate to food. Many of the limitations I encounter relate to the completeness of the excavations and their publication. From Ayia Varvara and Palaikastro, the ceramic catalog is evidently incomplete. A comparison to the publication of the Mochlos sites gives a good idea as to how much information might be missing from these older excavations. The statistical analysis of sherds from the Mochlos sites is particularly useful in this regard because it shows how much data is lost by selecting only complete or partially complete vessels (K. A. Barnard 2003b). Practically speaking, the incompleteness of ceramic data means that I do not take vessel counts at face value. I always assume that these counts are lesser than the amount the house's occupants actually used, and the absence of a given shape from an assemblage does not imply its actual absence from the original site.

More difficult to address is the kind of evidence that does not survive the millennia underground. This is obviously true of the foods themselves, although some food remains are reported at Chalinomouri, the Artisans' Quarter, and Ayia Varvara. There are surely non-food objects relevant to commensality that are similarly perishable. These might include vessels made of organic materials like baskets and gourds, leather or cloth sacks, wooden spits for roasting, or wooden furniture for dining (see, e.g., the Camp-stool Fresco of Knossos: Cameron 1964). Fortunately, the affordances and limitations of the preserved objects can provide clues as to what is missing. For example, at the Ayia Varvara house, residents appear to have cooked food over

pots embedded in a stone platform (Pelon 1966, 566). Burning on the interior of the pots shows that they contained some form of small fires, but their diameters are too large to place a tripod cooking pot over top of them. Consequently, it is possible to surmise the existence of other perishable implements, such as spits, for holding food over the flames. Similarly, the low storage volumes found in most Minoan houses, including the ones in my case studies, suggest that residents relied on food disbursed from a central storage location and/or that we are simply unable to account for storage in perishable containers (Christakis 2008).

Summary of the analysis

By cataloging the evidence outlined above using Microsoft Excel, I can easily sort by ceramic shape, size, findspot, etc., to detect patterns. In particular, I examine the following connections:

Room function

Separating the finds and features by room allows me to understand room function. Here the objects not related to food may add to the interpretation. For the most part, however, I am interested in identifying rooms devoted to cooking and/or eating. I specifically investigate whether they are also used for other activities, their size, their location in the house, and their accessibility to other spaces in the house. Cooking is indicated by accumulations of cooking pots, faunal remains, ash, and/or botanical evidence. Dining may be indicated by the presence of serving vessels or benches, but in general I assess each room's capacity for dining based on its size.

Cuisine

Through formal analysis of the cooking pots, it is possible to deduce what kinds of cooking techniques were available. For example, the closed shape of tripod cooking pots is well-

suited to boiling, while the open, flat cooking dishes would not be able to accomplish this function. Direct evidence of food (faunal and botanical data) then allow me to supplement these techniques with ingredients. An important factor in this portion of the analysis is standardization: forms and techniques that recur at all sites are more central to the cuisine than ones that differ from house to house.

Dining etiquette

As with cooking techniques, dining behaviors are partly dependent on the affordances of associated vessels. Additionally, the placement of dining space within the house and the size and elaboration of dining rooms influence the experience of guests at a meal. The most important parameters to my analysis of etiquette include the use of communal or individual serving vessels. The vessels, as well as the room size, dictate how many guests could have attended meals and how they interacted physically in the process of eating the meal.

Comparative analysis

The model for commensality laid out in Chapter 3 involves comparing meals based on size and degree of elaboration. The above evidence reveals the least and most elaborate meals possible at each site, and I plot these together on a single graph to enable comparison. All together, these points begin to describe a system of commensality which I apply more broadly in Chapter 6.

CHAPTER 5

THE CASE STUDIES

Introduction

In this chapter I present the data gathered from the case studies and discuss initial conclusions about dining at these four sites. Here I outline the direct evidence of food and build a general picture of food consumption and feasting, based mainly on ceramic finds and the spatial layout of the buildings. My analysis reveals a unified cuisine based around common methods of cooking at all four sites. Additionally, the sites exhibit distinct patterns in the placement of cooking and dining spaces and use of serving vessels, which correspond to the status of the residents.

The Chalinomouri farmhouse

Evidence of food and feasting

The Chalinomouri excavation team recorded faunal and floral evidence as well as ceramics and other small finds. Animal species found in the house include sheep/goat, pig, deer, hare, fish (primarily sea bream and other *Sparidae*) and numerous shellfish (Reese et al. 2004, 120) (see **Table 3** in the Appendix for MNI by species). Plant species include grape, fig, olive, almond, clover, asphodel, fenugreek, *Silene*, *Rosaceae*, chaff, and various unidentified plant parts (Soles 2003, 128; Reese et al. 2004, 128). The cataloged ceramic finds are listed in **Table 4**-13 in the Appendix. Soles' team cataloged identifiable fragments as well as complete examples, with the result that the ceramic catalog for Chalinomouri and the Artisans' Quarter is much more complete than those of the other two case study sites. All the relevant finds are listed by room in **Table 14**.

Food and eating in the house

Food preparation

The Chalinomouri farmhouse contains a few main rooms clearly used for a variety of activities, including food preparation. Rooms 3 and 6 both contain evidence of cooking—charcoal accumulations with associated cooking ceramics and faunal remains—as well as signs of other household industries. The hearth in the southern corner of Room 6 is surrounded by one cooking dish, one tripod cooking pot, one lid, one unidentified jar, and over 50 mammal bone fragments. Also in Room 6 is another very burnt tripod cooking pot, found near the center of the room (Soles 2003, 109). Besides everyday cooking, food preparation in this room may have included oil or wine production, as remains of a basin, possibly set up on a stone platform in the northern corner of the room, and an associated clay drain may have formed part of an oil or wine press (Soles 2003, 109). Accordingly, the botanical remains from the house do include evidence for both grape and olive (Reese et al. 2004, 128–29).

In Room 3, the hearth located near the southwestern bench is associated with two cooking dishes, while the northeastern hearth is associated with an accumulation of ovicaprine bones. Also in this room is a large basin in the east corner (Soles 2003, 111).

Some food preparation surely also took place in the northwest yard, using the oven found there. Two cooking trays were found in the yard, and one tripod pot, one cooking dish, and ten mammal bones were in the oven itself (Soles 2003, 122).

Food consumption

As with food preparation, the two main rooms of the farmhouse are also the best-suited to food consumption in groups. Both rooms have stone benches built along the walls to accommodate a seated group: four to six adults could sit on the Room 6 benches, while the

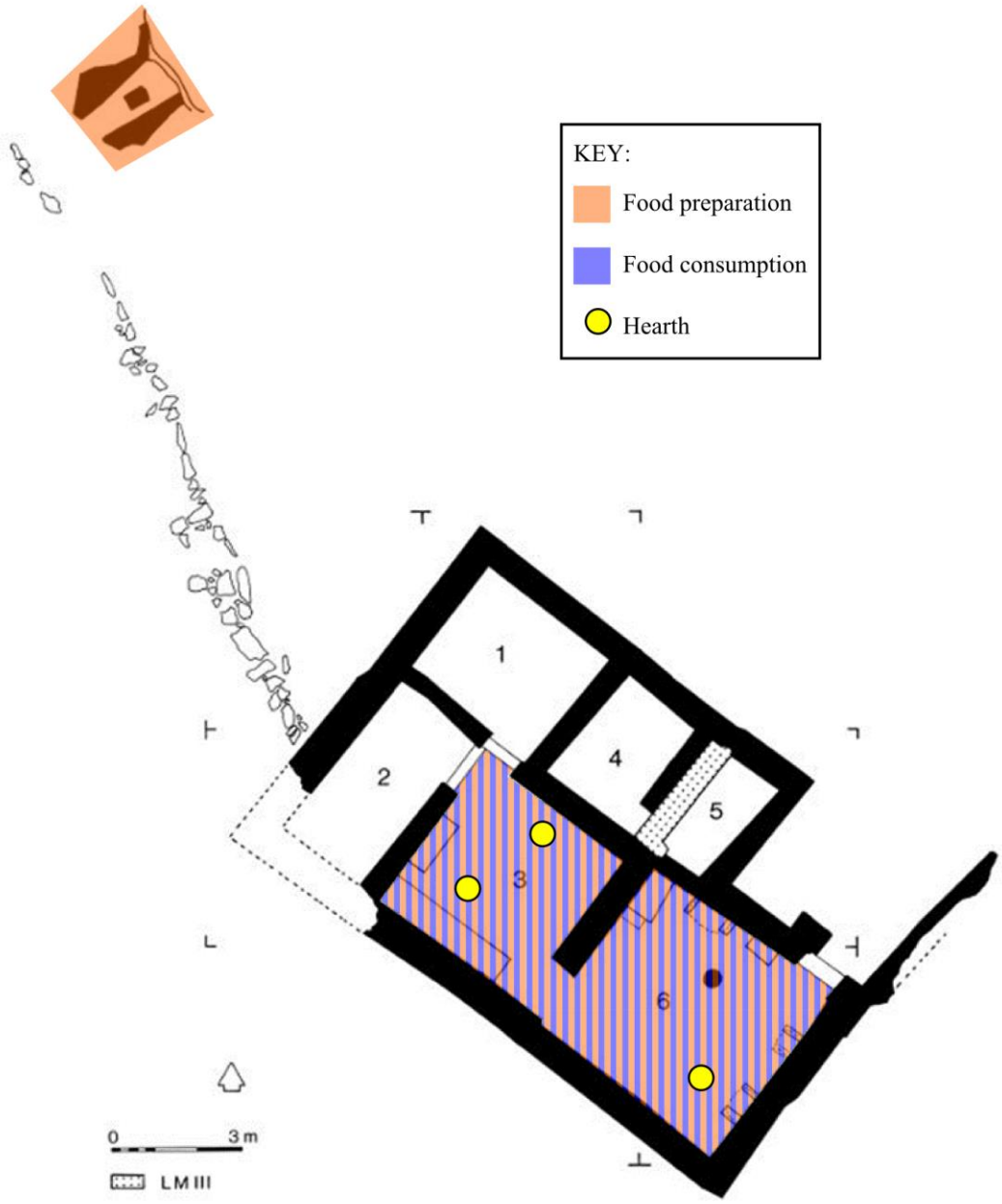


Figure 13: Cooking and dining spaces at Chalinomouri (after Soles 2003, fig. 56)

Room 3 benches might accommodate up to eight (assuming an estimate of 0.5 m bench length per person; Soles 2003, 107–11). These are also the two largest rooms in the house; Room 6 measures approximately 4.5 m by 5 m, and Room 3 measures roughly 4 m by 4 m (Soles 2003,

108, 111). Vessels related to serving food include one cup and four jugs in Room 6, while none were found in Room 3 (Soles 2003, 110, 112).

Another possible site of food consumption in the house is the northwest yard, where food was cooked, and there was plentiful space for a group of people; however, few artifacts were found in this area to confirm this interpretation.

The Ayia Varvara house

Evidence

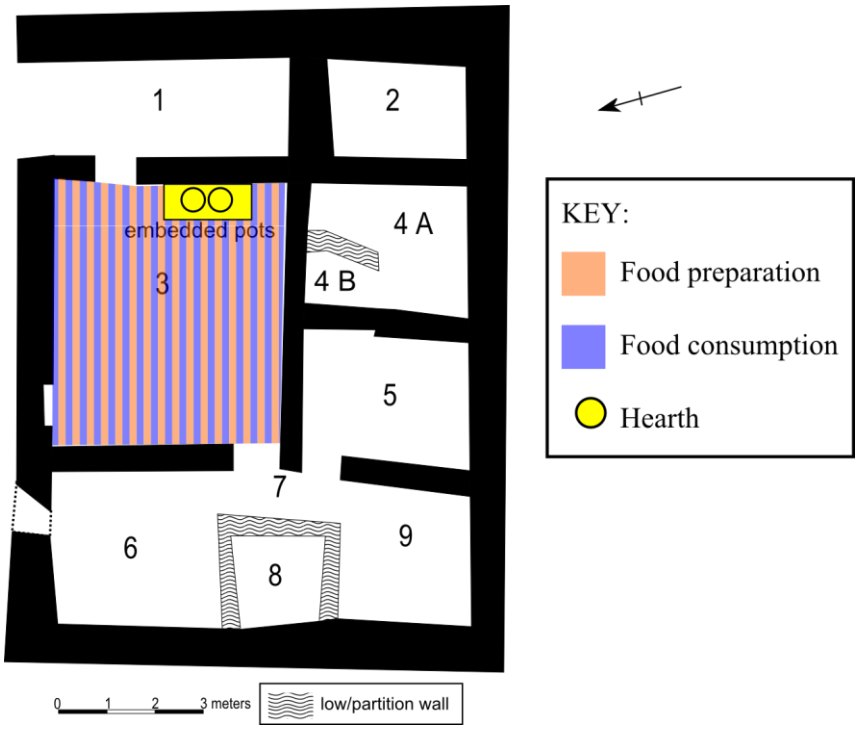


Figure 14: Cooking and dining at Ayia Varvara (after Pelon 1966, fig. 4)

There was no in-depth faunal or botanical analysis conducted at Ayia Varvara. However, Pelon (1966, 562, 583–84) identifies some organic finds, specifically carbonized wheat and vetch in Room 5 and several species of marine gastropods in Room 6 (*Cerithium vulgatum*, *Murex trunculus*, *Euthria cornea L.*, *Cypraea tigris L*). Only 13 ceramic vessels were cataloged from the Ayia Varvara house (listed in Table 15 in the Appendix). Ten of these were found in

Room 5, the house's store-room. Pelon catalogs only complete or nearly complete vessels, with the exception of a single pithos sherd included in the catalog. However, the excavation report does note other vessels, such as two cooking pots embedded in a stone platform in Room 3, and a total of at least 20 vessels found *in situ* in the storeroom (Pelon 1966, 562).

Food and eating in the house

Food preparation

Room 3, the largest room in the house, has the best evidence for cooking. The tripod cooking pot recorded from Room 3 with exterior burning certainly suggests that the room was used for cooking. Pelon (Pelon 1966, 560) also found two other cookpots in Room 3, embedded in a rectangular stone platform against the eastern wall. Their measurements are not given, but since they are drawn in the detailed floor plan, it is possible to estimate diameters of about 0.3 m

Figure 15: Stone platform with embedded cooking pots (Pelon 1966, fig. 9)

(Pelon 1966, fig. 4). The two embedded pots were heavily burned on the inside only, which may suggest that they were used for cooking. They could not be used to heat food over a fire, but they may have been used to hold hot coals in heating whatever was placed above them. For example, the shape is conducive to cooking skewered meats and vegetables over the top or to baking or

roasting foods inside among hot coals. The wide diameter of the embedded pots probably precluded the placement of a tripod pot over these openings.

Food consumption

Once, again, Room 3 seems the most likely candidate for eating food as well as cooking. Certainly, this room could have accommodated a group of diners, measuring 4.8 by 4.7 meters—large enough to fit guests from outside the house. This also seems to have been a main activity room in the house, especially given its easy accessibility, being approached from the small entrance courtyard (Room 1) and leading to Rooms 5-9 at the back of the house.

Rooms 6 and 9 also may have served as locations for food consumption. There were few finds reported—a weight and some shells—in Room 6. The shells may suggest food processing or consumption in this space (Pelon 1966, 564). Most of the other rooms in the house can be excluded as possible locations for shared meals. Rooms 2 and 4, being entered from the roof, are relatively inaccessible (Pelon 1966, 560–61). Room 5 was evidently the store-room and was completely filled with pots, leaving little room for diners (Pelon 1966, 562). Room 7 is a hallway and Room 8 appears to have been a light-well and/or impluvium (Pelon 1966, 564).

The Mochlos Artisans' Quarter

Evidence

The faunal remains from the Artisans' Quarter are listed by species in **Table 16** of the Appendix. The most common species represented are sheep/goat, pig, fish (primarily breams and picarel), and marine invertebrates (Reese et al. 2004, 118–20). There are many more fish bones among the faunal remains at the Artisans' Quarter than at Chalinomouri, both in terms of MNI and variety of species. The most notable specimens are the two barracuda, which, unlike the others, could not have been caught from the shore (Reese et al. 2004, 121). The botanical

evidence at the Artisans' Quarter includes olive, grape, wheat, barley, pistachio, fig, almond, lentil, broad bean, pea, legume (unidentified), *Cruciferae* (cabbage family), *Euphorbiaceae*, *Caryophillaceae*, *Portulaca* (purslane), and *Glaucium* (poppy) (Reese et al. 2004, 126–28; Soles 2003, 95). Like at Chalinomouri, the ceramic catalog from the Artisans' Quarter includes fragmentary as well as complete examples of identifiable pots. These are listed in Tables 17-31 of the Appendix (K. A. Barnard et al. 2003). Other relevant finds include querns and stone basins (Table 32 of the Appendix) and hearths (Carter 2004b). All food-related finds are listed by room in **Table 33** of the Appendix**.**

Interpretation of the ceramic finds in the Artisans' Quarter is complicated by the use of the buildings as pottery workshops. Evidence for ceramic production includes six potter's wheels in Building B, two kilns behind Building B, and a "potter's pit" attached to Building A, which Soles suggests had once held a wheel (the pivot is preserved) (Soles 2003, 37). The potter's pit had fallen out of use and was filled with refuse at the time of abandonment. This finding, and the ample evidence for pottery production in Building B suggest that at the time of abandonment, this activity had shifted to Building B (Soles 2003, 94–95).

The presence of pottery production the Artisans' Quarter complicates a functional ceramic analysis because it is unclear whether vessels were used in the buildings or were intended for distribution elsewhere. Some of the vessels were surely used by the residents, as attested by the burn marks on tripod cooking pots, trays, "cooking" bowls, scuttles, lamps, a vat, a lid, and a pedestal stand. As for the other vessels, it is difficult to know what role they played. A small group of vessels, including a hole-mouthed jar, a piriform jar, a stirrup jar, an amphora, four conical cups, and an ogival cup, was placed alongside Kiln B, suggesting that these pots had recently emerged from the kiln at the time of the building's abandonment (Soles 2003, 81). This

finding gives an idea of the variety of vessel shapes being produced by the artisans. However, the fact that the building was abandoned is significant—if the artisans were forced to leave because of economic hardship, the level of production at the site may have been in decline. It should further be noted that there is little evidence for the large-scale storage of an organized inventory; the pots are, for the most part, distributed widely throughout the two buildings. One exception is the cups in Room 2 of Building A. Of the 75 cups in this room, many were clustered together, probably fallen from shelving (Soles 2003, 24–25).

Because of the problem of intended use, it is crucial not to place too much importance on the numbers of vessels found in the Artisans' Quarter, as they may not be representative of the

Figure 16: Cooking and dining at the Artisans' Quarter (after Soles 2003, fig. 4)

objects in use by the artisans. Instead, as at all sites, the finds must be considered in their spatial context and with surrounding materials.

Food and eating in the buildings

Food preparation

Building A

Few rooms in Building A show material evidence suggesting they were used for food preparation. There are concentrations of faunal remains in the floor deposits of Rooms 2 and 9. Room 2 contained 450 mammal and reptile bones, primarily ovicaprine, including burned and butchered examples (Soles 2003, 28–29). Room 9 contained 40 ovicaprine bones (Soles 2003, 30).

Room 2 is clearly a place where food was prepared: besides the massive amount of animal bones, there are 4 tripod cooking pots and 15 cooking dishes (more cookware than in any other room in Building A), a stone basin, and a greater variety of botanical remains than any other part of the house (including barley, olive, grape, fig, lentil, broad bean, pea, and other legumes) (Soles 2003, 29). This room also contains two hearths and an especially thick floor deposit, suggesting heavy use (Soles 2003, 24), and three of the cooking vessels have burn marks on them.

Other possible candidates include Room 9, given its large concentration of bones, but the room is poorly preserved because of erosion. There is evidence for a hearth in Room 10, but no other indications of cooking. Room 4 contains a tripod cooking pot, but no hearth (Soles 2003, 14).

Building B

In Building B, several rooms show evidence of cooking. Rooms 3 and 9 both contain the combination of charcoal and bone concentrations. Room 3 contains 101 bone fragments and remains of olive, almond, and legumes (Soles 2003, 72). Room 9 includes 169 bones, remains of olive, almond, legume, grape, and fig (Soles 2003, 77). There are stone basins in both rooms. Room 13 is another likely candidate, particularly the western portion. Though there are only seven bones from this room, there is evidence of a hearth, two tripod pots—one with signs of burning, five cooking dishes, and a stone basin (Soles 2003, 78–80). Room 2 has a possible hearth, three tripod pots, two cooking dishes, two cooking vessels with signs of burning on them, a saddle quern, and remains of fig, olive, grape, and almond (Soles 2003, 65–66). There are no faunal remains in this room, but this is unsurprising because, in contrast to the other very small rooms where the cooking evidence was found, Room 2 is larger and looks to have been used regularly as a workshop. Perhaps this space was regularly swept clean, unlike the other small cooking spaces. There is also a possible hearth in Room 10, as well as one tripod cooking dishes, two cooking dishes, and remains of olive, grape, fig, almond, and legume (Soles 2003, 57–59).

Food consumption

Building A

In Building A, a combination of ceramic and architectural data indicate the most likely locations for food consumption. Room 2 has the most cups, as well as two trays and three jugs, all of which could be used for serving and eating food. The room certainly served as a site for food preparation, but the room is small (measuring 2.26 by 2.92 m) and was entered through the roof—making it an inconvenient space for shared meals (Soles 2003, 23–24). Rooms 1 and 4 are the most conducive to such gatherings (Soles 2003, 19). Room 1 measures 3.0 by 3.14 m and

includes stone benches along three walls. It was open to the outside at the northwest corner, making it immediately accessible to visitors entering from the northern side. Vessels in Room 1 possibly used for food serving and eating include two cups, two "cooking" trays, and seven jugs.

Room 4 is the largest in the building (Soles 2003, 12-19). It measures 5.02 by 5.71 m and contains built stone benches and platforms that could have provided seating as well as surfaces for industrial activities. Ceramic serving/eating vessels from Room 4 include seven cups, one bowl, and three jugs. Evidence suggests that another key function of this room was to serve as the primary workshop space in Building A. Activities carried out in Room 4 may have included stone vase making, bronze working, and textile work, as evidenced by an unfinished stone vase and unworked stones, stone and bronze working tools, copper and bronze scrap, and loomweights.

Building B

The sprawling Building B contains many rooms that may have been used for food consumption. Rooms 3, 9, and 13 all contain high numbers of serving vessels, but once again, are too small to accommodate groups: Room 3 measures 2.60 by 3.65 m, Room 9 measures 2.10 by 2.30-2.50 m, and Room 13 measures approximately 2 by 4 m, but is divided in half by a partition wall. Also, these three rooms are all accessed either from the roof (Rooms 3 and 9) or from the outside, disconnected from the rest of the building (Room 13).

The two largest rooms, Rooms 2 and 10 (Room 2: 4.56 by 6.42 m; Room 10: 5.13 by 5.60 m), could easily contain large groups for shared meals. Room 2, as a possible location for food preparation, resembles the large, multi-purpose rooms typical of Minoan houses. Here there are signs of a hearth and several cooking vessels as well as evidence for stone vase and textile production (Soles 2003, 64–67). Also found in Room 2 were five cups and one bowl.

Room 10 also had evidence for a hearth and ceramic and stone vase production (Soles 2003, 55–59). The room includes three stone benches on the south and west walls, as well as three cups, one bowl, one bridge-spouted jar, and one side-spouted jar.

Both the large rooms are far removed from the exterior of the house, such that visitors would have to pass through several other interior spaces to access them. Room 8, on the other hand, is situated just inside the entrance. Measuring 3.50-4.22 by 4.80 m, it is a bit smaller than Rooms 2 and 10, but it contains the largest number of serving vessels outside of the tiny "kitchen" rooms. In Room 8 there are 12 cups, 1 bowl, 1 jug, 1 bridge-spouted jar, and 1 "cooking" tray (Soles 2003, 48–50). The adjacent entry Room 7 held two cups, two jugs, one side-spouted jar, one stirrup jar, and one "cooking" tray, though the space, being less than 2 m wide, is inconvenient to hold groups of people (Soles 2003, 45–48). Five cups were found in Room 6, the 4.26 by 3.26 m space accessible from Room 8 (Soles 2003, 50–52).

Adjacent to Room 2, Room 1 is much smaller, measuring 2.80 by 3.15 m, and contains six bowls, 1 tray, and 1 jug (Soles 2003, 62–63). Because of the apparently plastered floor and the large number of small open vessels (as well as three pedestalled stands), Soles et al. interpret the room as a small domestic shrine where inhabitants left offerings, rather than a location for food preparation or consumption.

Palaikastro House N

Evidence

Only two references from the site report give some indications for specific foods consumed in the house. One pithos in Room 7 was found with carbonized grains inside it, though the type of grain is not specified (Sackett et al. 1965, 258). Another pithos (NP 88) from Room 11 was very blackened inside. Sackett et al. speculate that the intense blackening was caused by

oil burning inside the pithos during the house's destruction (Sackett et al. 1965, 263). The ceramic finds from the site are listed in Tables 35-44 of the Appendix. Table 45 of the Appendix shows the food-related finds by room.

Sackett and Popham do not explain their methodology, so it is difficult to say how representative their ceramic catalog is of the total ceramic assemblage from the LM IB habitation levels. They seem to have concentrated on recording complete, near-complete, and reconstructable vessels, while more fragmentary vessels are occasionally mentioned in the

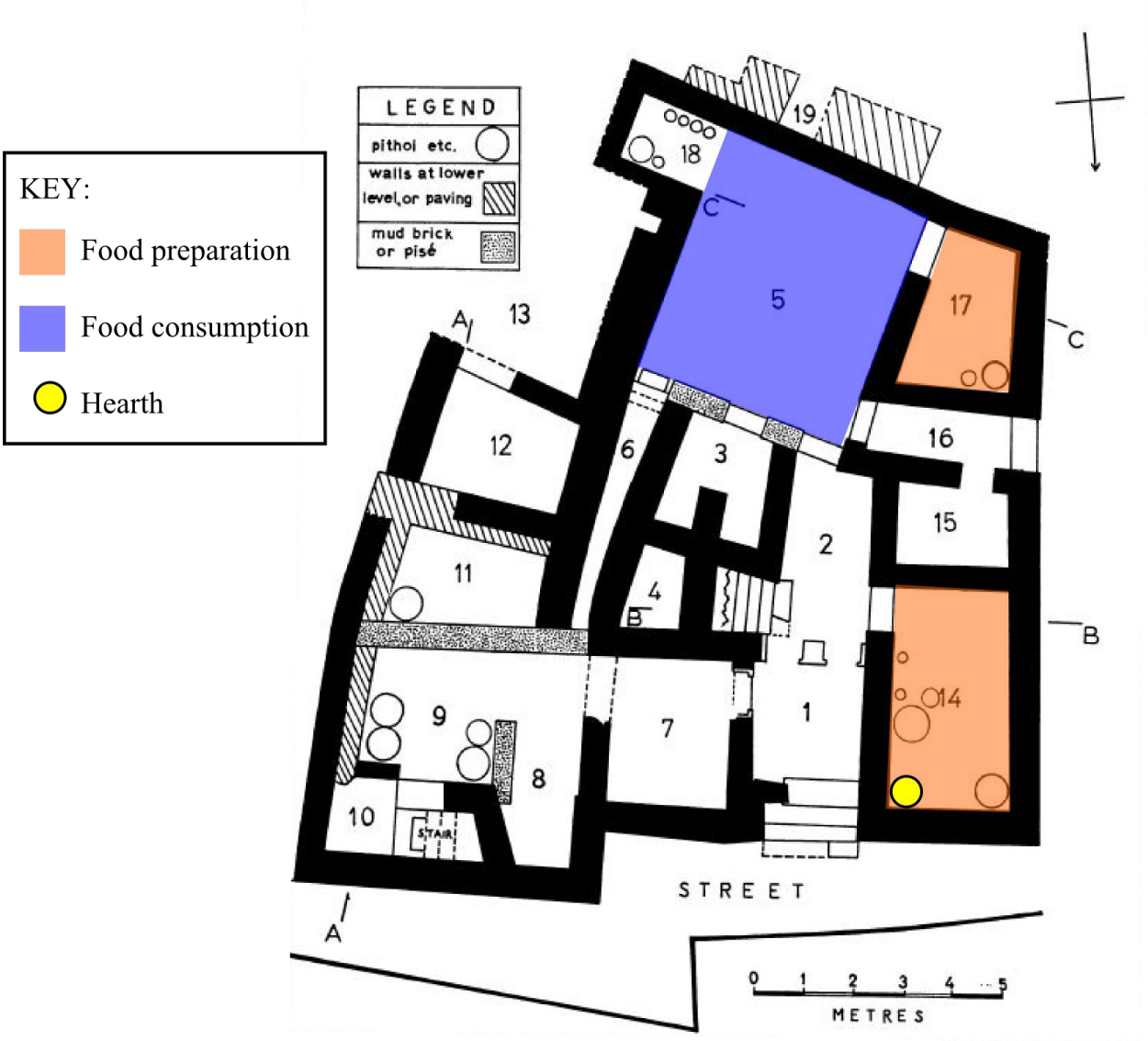


Figure 17: Cooking and dining at House N (after Sackett et al. 1965, fig. 1)

textual descriptions of rooms when they help explain the function of the room (Sackett et al. 1965, 250–67). Also explained in the textual descriptions is whether certain vessels were found in floor deposits or in destruction layers, having fallen from the upper story. This distinction is not made in the catalog (Sackett and Popham 1970, 235–37).

Food and eating in the house

Food preparation

The low number of reported cooking pots at Block N, as well as the lack of faunal and botanical evidence, make it difficult to identify cooking areas in the building. TCP's are recorded in five rooms: the room above 3, Room 5, Room 14, Room 17, and Room 18. Of these, Room 14, with its hearth area, is most certain to have been used for food preparation. Another possible sign of cooking activities in Room 14 is a pithos base with a hole pierced through the middle of its floor, set up on a stone platform in the northwest corner of the room. Sackett et al. suggest that this installation may have been used as a wine press (1965, 264). Other cataloged vessels in Room 14 include three large tubs along with one tripod cooking pot.

Fragments of at least four TCPs fell into Room 3, suggesting the potential for a cooking space above this room, especially since this is the largest grouping of this vessel shape recorded in the house (Sackett et al. 1965, 268).

Room 17 contains three TCPs but no other overtly cooking-related finds. This may have served as a cooking area functioning in combination with the activities in the adjoining, larger, Room 5. In Room 5, the excavators note a single tripod cooking pot, and little else. There may have been food preparation in Room 5, but it seems unlikely. This grand room may have been used to host large groups, whose food was prepared in Room 14 or 17, but it was clearly kept fairly empty.

Another single TCP is noted in Room 18, which is found alongside over 350 cups. This tiny room (measuring 1.6 by 1.4 m) was clearly a storeroom for holding materials used in Room 5 and unlikely to have been used as a site for food preparation itself.

Food consumption

The immense numbers of cups stored in the Palaikastro Block N house indicate that the inhabitants were prepared to serve very large quantities of food and/or drink. The widespread nature of the cups in the house makes the mere presence of serving vessels a poor indication of the locations of food sharing. Room 18, containing over 350 cups (the largest concentration by far), certainly cannot have been more than a mere closet.

The largest room on the ground floor is Room 5 which, at 5.0 by 4.5 m, is certainly large enough for a group to share food. Two cups and one jug were found in this rather empty room. The adjoining smaller rooms 3, 17, and 18 would have held at least 433 (likely more) small cups, perhaps to be used in Room 5. Room 5 is accessed directly from the inner hall (Room 2) and may also have been approached from a side door through Room 16, although Sackett et al. suspect that this access had been blocked (1965, 265).

Room 17, which contains 66 cups (stored inside larger vessels) as well as a large jug and an alabastron, is large enough for a only a small group to share a meal measuring 2.8 m long and 1.25 to 2.3 m wide (Sackett et al. 1965, 266). Given its probable use as a kitchen, it is more likely that the ceramic vessels in Room 17 were kept there for food preparation and serving in Room 5.

Room 14, another potential cooking location, measuring 4 by 3 m, is certainly large enough for a group to eat together. Many serving vessels were found in Rooms 8-10 or fell into them from above. These rooms were used for storage (see below), but they may have held items

to be used in reception rooms above. The painted floor and wall plaster fallen from the upper story throughout the house certainly indicates the presence of fine rooms above, which were likely to have housed diners as well.

Preliminary Analysis

Ceramics

Ceramics for food preparation

The tripod cooking pot (TCP) is found at all four sites and can safely be said to play a primary role in the Minoan kitchen. Burn marks on tripod pots tend to occur on the exterior bottom, suggesting they were used over direct heat (K. A. Barnard et al. 2003, 81). Morrison et al.'s experiments cooking with replica Minoan vessels confirm that the TCP can be used in this way (Morrison et al. 2015). TCPs occur in varied sizes at the four case study sites, and their diverse sizes likely impacted their functionality. Some smaller pots (e.g., NP113 from Palaikastro—1.3 liters, 0.11 m deep, 0.15 m wide; IB.505 from Building A—2.0 liters, 0.13 m

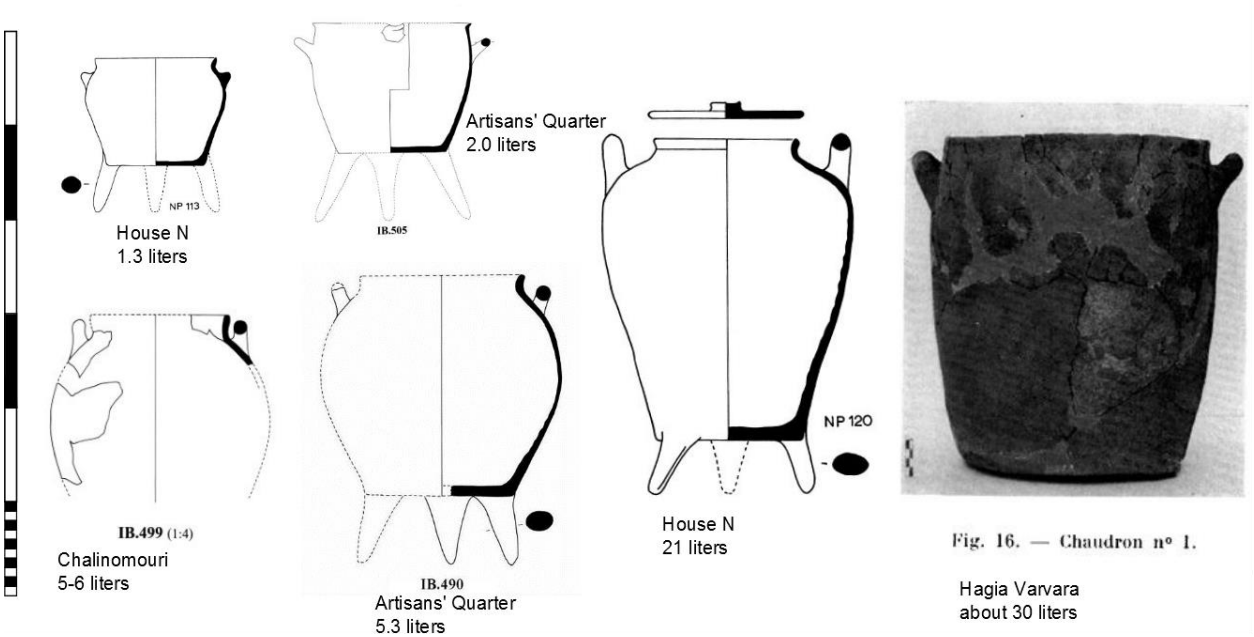


Figure 18: Selected tripod cooking pots from the case studies (figures from: Sackett and Popham 1970; Pelon 1966; Barnard and Brogan 2003)

deep, 0.17 m wide) have a lower height-to-diameter ratio, and as such they were probably fairly versatile for cooking (see Figure 18). These small examples would have allowed for dryer cooking methods requiring frequent manipulation of the ingredients. Larger TCPs tend to be deeper relative to their diameter. This suggests that the pots were designed to hold large quantities of liquid for boiling methods. It would not be impossible, however, to use such a pot in another way. Even the largest TCP (HV 65/11 from Ayia Varvara—32 liters, 0.38 m deep, 0.39 m wide) is small enough that the contents could be accessed with relative ease.

Some TCPs are more restricted than others. Betancourt (Betancourt 1980) identifies two types in his work on the Kommos excavation, which is widely referenced: the earlier Type B has essentially straight sides and almost no restriction, while the later Type A has an S-shaped profile and a more restricted opening. Both types occur at the case study sites. The single TCP at Ayia Varvara is Type B, as are two Chalinomouri examples and one pot from the Artisans' Quarter (IB.505 and "Chaudron nº 1" in Figure 18). The other reconstructable TCPs have the more restricted opening of the Type A pot. While the two types may have some functional differences (i.e., the more restricted Type A is better suited to boiling while the less restricted Type B allows more evaporation), in practical terms a cook would probably be able to use either type for multiple tasks. In general, it seems that the tripod cooking pot was a multipurpose cooking vessel for primarily wet cooking methods. If there was indeed a shift from the Type B to Type A pot, as Betancourt finds at Kommos, it was not necessarily functionally driven. Moreover, the presence of hybrid "Type AB" tripod pots at Petras indicates that the two forms are not as distinct as might be supposed from the Kommos evidence (Alberti 2012, 236).

The other ceramic vessels commonly invoked as forming part of the Minoan kitchen assemblage are cooking dishes and trays. This name is often assigned based on the red coarse

fabric of the vessels rather than clear signs of use over a fire. Nonetheless, at the Mochlos Artisans' Quarter, three cooking trays showed burn marks on the underside. At Mochlos, Barnard et al. (2003, 86) suggest that the dishes were used for cooking while the trays were more likely used for preparing and serving food, given the much lower frequency of burn marks on trays.

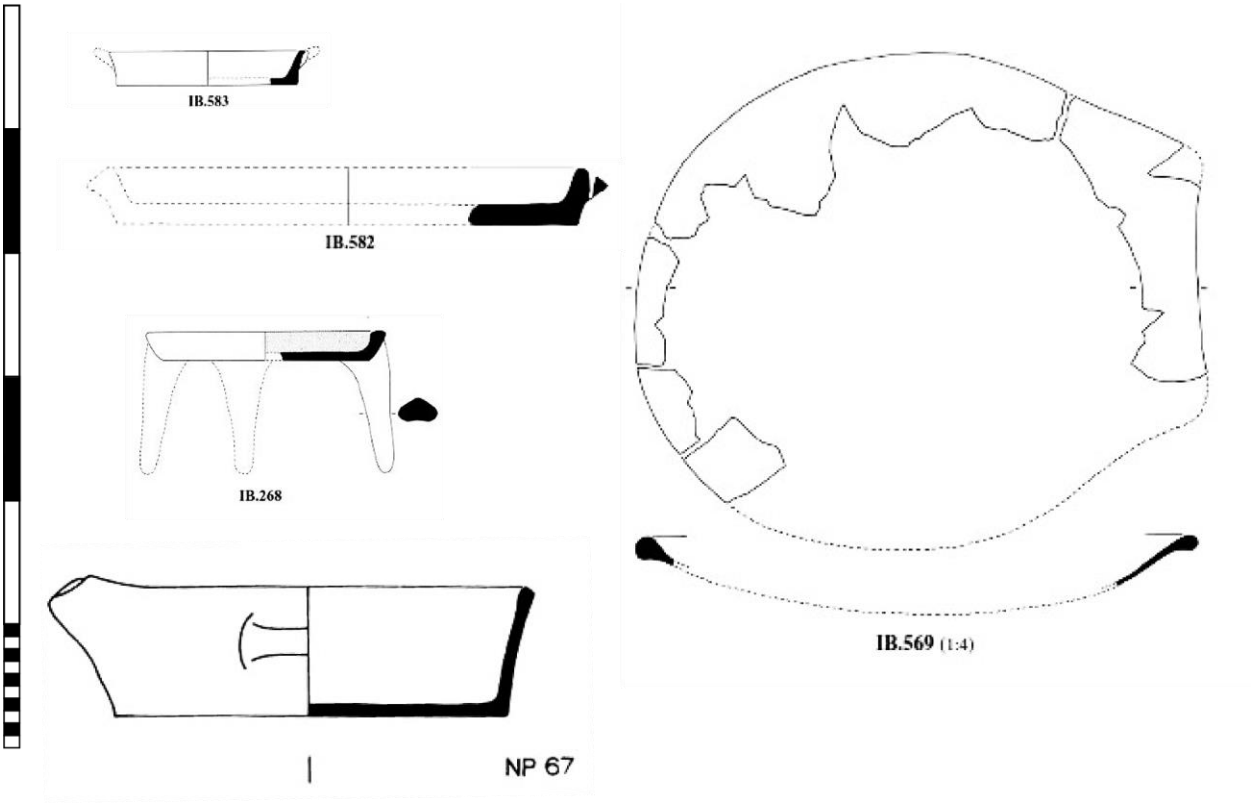


Figure 19: Trays and cooking dish from the Artisans' Quarter; basin from Palaikastro (figures from: Sackett and Popham 1970; Pelon 1966; Barnard and Brogan 2003)

Cooking dishes and trays would have increased the variety of cooking techniques available to their users. Neither trays nor dishes can hold much liquid, but the width of the area in contact with the heat and the shallow open shape is ideal for drier cooking methods, such as toasting or frying, and for the rapid boiling off of excess liquid (Morrison et al. 2015). Furthermore, Betancourt (Betancourt 1980) points out that an inverted cooking dish placed over another could form a closed clay baking oven.

Cooking dishes are extremely thin: at the Mochlos sites sherds from dishes are often less than 2 mm thick (K. A. Barnard et al. 2003, 82). This was perhaps a desirable quality, as the thin base would transfer heat very well. Unfortunately, this thinness makes the vessel very fragile. The result is that most cooking dishes are found only as rim fragments. A single reconstructable (though still incomplete) example from Room 2 of Artisans' Quarter Building A shows the shape of the vessel (IB.569, see Figure 19). Its rim forms an uneven oval that flattens out into a wide spout at one end.

At Palaikastro and Ayia Varvara, no cooking dishes or trays are reported at all. There are two possible reasons for their absence from the catalogs. One is simply that it is unlikely that the excavators would have found complete or nearly complete examples because of the fragility of the shape. It is also possible that this very fragility made the shape unpopular in some households. Barnard et al. (2003, 83) claim that, based on the large number of cooking dish fragments from the Mochlos sites, these vessels may have only lasted through a few uses, rendering them practically disposable. If this is the case, a household would have required a large supply in order to use this shape regularly. Because of the higher cost associated with regular use of cooking dishes as opposed to more durable tripod pots, foods made in cooking dishes may have been reserved for special meals. Some other sites with reported cooking dishes include Kommos (Betancourt 1980; J. W. Shaw et al. 1990; Watrous and Betancourt 1992), Karphi (L. P. Day 2011; Seiradaki 1960), Kastri (Sackett et al. 1965), and Petras (Alberti 2012).

As for cooking trays, this categorization is less useful from a perspective of functionality. At Mochlos, trays ("cooking" or otherwise) are recorded in a variety of fabrics, shapes, and sizes. All trays have flat bottoms, occasionally with tripod legs, and slightly flaring walls. Barnard et al. distinguish cooking trays, which sometimes are made of cooking fabric, from trays

and tripod trays, which are smaller, smooth on the bottom, and made of finer fabrics. These wide, open, shallow vessels could, and probably did, serve multiple purposes. The shallower basin at Palaikastro House N (NP67: 0.11 m height, 0.40 m rim diameter) could have met similar needs (see Figure 19), as could the bowls of assorted shapes and sizes from all four sites.

A shape frequently invoked as evidence for certain food preparation activities is the basin (also referred to as a tub or vat). Large, open, coarse vessels occur at all four case study sites in varied shapes and sizes, and sometimes in particular contexts that perhaps suggest a specialized use. In Room 6 at the Chalinomouri farmhouse, Soles (Soles 2003, 105) interprets a large basin fallen from a stone platform with a nearby clay drain as a wine or oil press. Sackett et al. perhaps have a better case for their interpretation of the recycled pithos base in Room 14 of House N at Palaikastro. The walls having been separated from the bottom, the vessel would not have held liquid, but it might have served as a sort of stand, with a drain provided by the hole bored into the vessel floor. The pithos was set up on a low stone platform (Sackett et al. 1965, 264). Unfortunately, however, without direct evidence from botanical remains or chemical residues, it is impossible to determine whether basins are signs of wine or oil manufacturing.

The fact remains that the basin is an extremely versatile shape that was doubtless used for any number of activities, just as one would expect of any bucket or tub in a modern house. A basin's placement on a platform may be an indication that it is being used as a press or it may simply have been placed there for convenience in performing some other task. Thus, basins are not particularly telling in my analysis of food production practices.

Ceramics for consuming food

Decoration and visibility

Nearly all of the ceramic shapes could have been involved in serving and consuming food. Of particular note, however, are decorated vessels, which presumably were intended to be seen. The decorated finewares at the four case study sites include cups, bowls, jugs, and jars, as well as some rarer specialized shapes such as alabastra, pyxides, rhyta, strainer vases, pedestal stands, and a single "ring vase" from the Artisans' Quarter. The most common form of decoration, found at all sites in this study, is dark painted horizontal bands over a plain buff slipped background. Especially on jugs and jars, this style often includes a zone around the shoulders featuring some repeated motif—frequently running spirals, but also including foliate bands, dots, wavy bands, reeds, and others. This kind of decoration conforms to what Betancourt calls the Standard Tradition (1985, 137–40), which makes up the majority of painted LM IB ceramics across the island in both domestic and palatial contexts (for examples see Figure 21, Figure 23, and Figure 24). Additionally, a few vessels were decorated with paint blobs or drips—blobs or splatters most commonly appear on pithoi, storage jars, and jugs, while dripping rim bands are seen on cups (see Figure 24)—and burnished dark monochrome slip was common among smaller fineware vessels. Clearly, among the four case study sites, painted finewares in dark-on-light motifs were common serving vessels, and probably used at everyday meals as well as on special occasions.

Other vases exhibit rarer forms of decoration which Betancourt (1985, 140–46) calls the Special Palatial Tradition. Betancourt claims Knossian origins for the style; however, at the case study sites, this claim is not backed up by petrography or other means of assessing provenience. Two subsets of the Special Palatial Tradition, the Marine Style and the Floral Style, are

represented at three of the four case studies (see Figure 20). No examples are recorded at Chalinomouri.

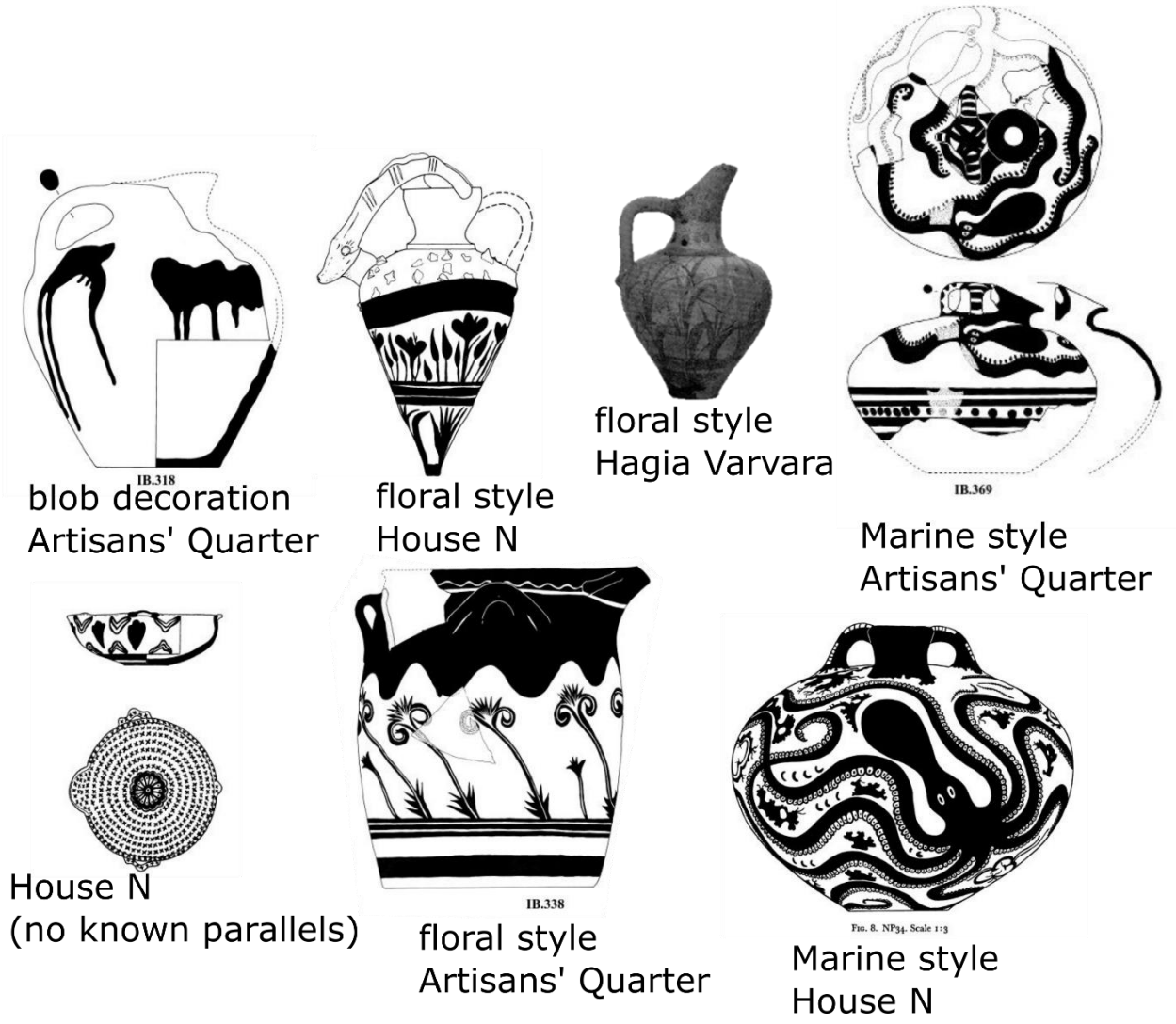


Figure 20: Painted decoration from the Artisans' Quarter, Ayia Varvara, and House N, including examples of the "Special Palatial Tradition" (figures from: Sackett and Popham 1970; Pelon 1966; Barnard and Brogan 2003)

The most valuable vessels at these case study sites may not have been ceramic, but rather stone and bronze. Many stone vessels are recorded from the Artisans' Quarter, where they were evidently produced, as shown by the unfinished vessels and raw materials found there (J. S. Soles 2003, 93; see J. S. Soles et al. 2004, 36–37 for list of unfinished vessels). Finished stone vessels from the Artisans' Quarter include 3 cups, 11 bowls, 2 cup/bowl, 3 jars, 3 lamps, 6 lids, 1

alabastron, and 1 chalice (Soles et al. 2004, 37–39). At Chalinomouri, a worked serpentinite outcropping in the floor of Room 3 indicates very small scale mining activities going on in the house (J. S. Soles 2003, 111–112, 130). The only in situ stone vessel in the house was a stone lid from Room 2 (Soles 2003, 113; Soles et al. 2004, 38) At Palaikastro, House N, Sackett et al (Sackett et al. 1965, 305–7) found three stone cups, five bowls, two lamps, and two tables, as well as one bronze bowl and two unidentified large bronze vessels. Pelon does not report any stone vessels in the catalog from the Ayia Varvara house.

Jugs and jars: Communal serving vessels

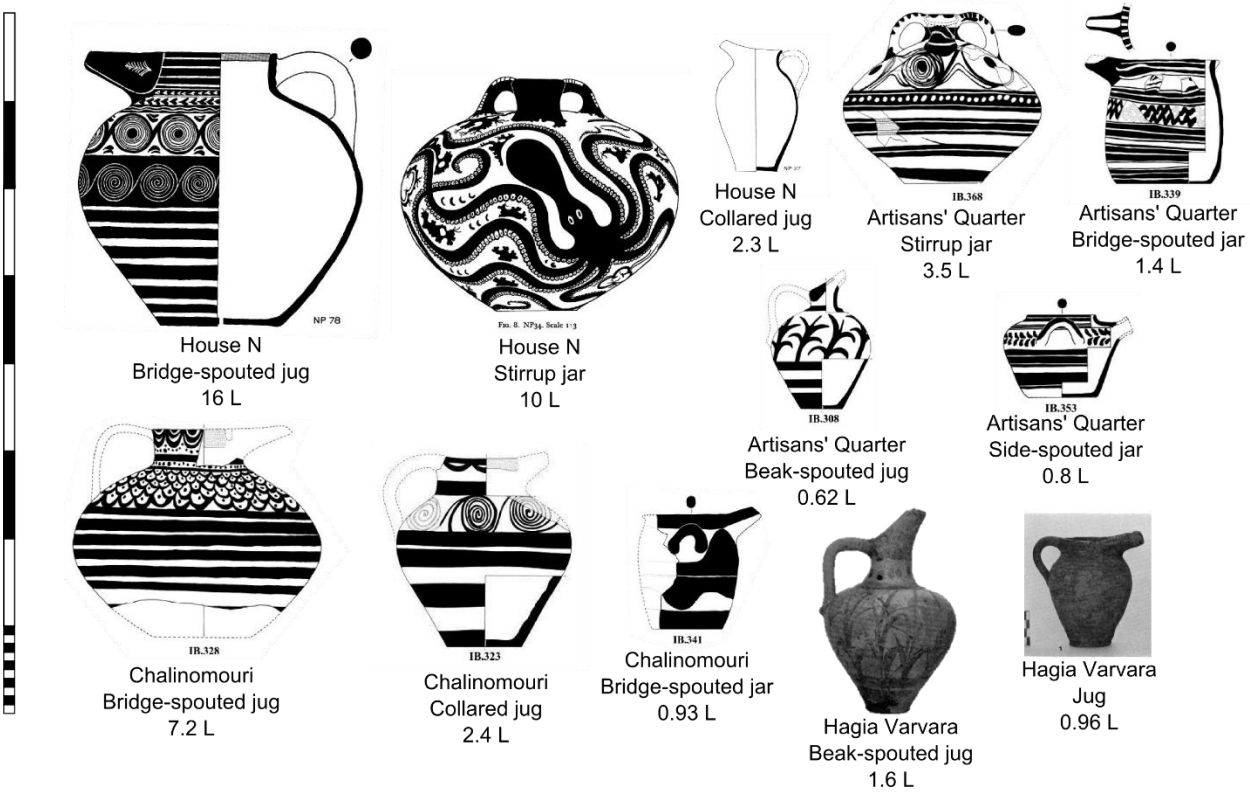


Figure 21: Selected jars and jugs from the case studies (figures from: Sackett and Popham 1970; Pelon 1966; Barnard and Brogan 2003)

Most of the jugs from these four sites are between 0.12 and 0.31 m tall and were likely used to serve food for multiple people. Jugs were found at all four case study sites. Decoration is

more common on larger jugs, except for the largest low beak-spouted jugs, which may have been used for storage, as seen at Ayia Varvara (HV 65/4).

Table 1: Volumes of jugs from the case studies

Cat. no.	Building	Jug Shape	Estimated volume (L)	Volume in 0.1-L conical cups	Volume in 0.25-L cups
HV 65/8	HV	trefoil-mouthed	0.26	3	1
IB.307	A	beak-spouted	0.44	4	2
IB.308	A	beak-spouted	0.62	6	2
IB.337	B	jug	0.86	9	3
IB.319	A	collared or trefoil-mouthed	0.87	9	3
HV 65/2	HV	collared	0.96	10	4
IB.309	A	beak-spouted	1	10	4
NP62	N	trefoil-mouthed	1.1	11	4
IB.329	A	trefoil-mouthed	1.2	12	5
IB.331	A	trefoil-mouthed	1.2	12	5
NP106	N	jug	1.3	13	5
IB.336	A	jug	1.4	14	6
IB.325	B	collared or trefoil-mouthed	1.6	16	6
HV 65/9	HV	beak-spouted	1.6	16	6
IB.321	Ch	collared or beak-spouted	1.8	18	7
IB.310	A	beak-spouted	1.9	19	8
NP60	N	beak-spouted	1.9	19	8
IB.317	A	collared	2	20	8
NP27	N	collared	2.3	23	9
IB.323	Ch	collared	2.4	24	10
IB.324	B	collared	5.5	55	22
IB.318	B	collared or low beak-spouted	6	60	24
IB.328	Ch	bridge-spouted jug	7.2	72	29
NP78	N	bridge-spouted jug	16	160	64
NP28	N	low beak-spouted	19	190	76
HV 65/4	HV	low beak-spouted	29	290	116

One way to illustrate how much food or drink the jugs could hold is to compare their volume to that of the small cups which, because of their numbers and degree of standardization, appear to have functioned as "standard" individual serving vessels in some contexts. For this illustration, I estimate 0.1 L per conical cup and 0.25 L per ogival/other cup, based on the sizes of cups from all four case study sites. The reconstructable jugs from each of the sites and their volumes in cup-measures are listed in Table 1 above. It should be noted that the largest jug was used for grain storage, and the same may perhaps be true of the low-beak spouted jug from Palaikastro House N. All in all, the above table shows that jugs to serve multiple people were present at all the sites. Some of the jugs, however, were much smaller. These were either intended to serve only one or two people (necessitating multiple such jugs to serve a larger group) or were used to hold substances of which each diner would take very little.

Some vessel shapes traditionally categorized as jars have similar functional attributes to jugs (see examples in Figure 21). Bridge-spouted and side-spouted jars tend to be painted and fall within the size range of jugs. These have less restricted openings, as well as a prominent spout, so their contents are easily accessible (similarly to collared and bridge-spouted jugs). Stirrup jars are also elaborately decorated and jug-sized—at the Artisans' Quarter and Palaikastro House N they are among the most ornately decorated ceramic vessels on the site. These jars have very restricted openings, meaning that they are not suitable for holding foods or drinks that must be stirred, scooped, or otherwise handled, but must have been used for entirely liquid contents. The volumes of these jug-like jars, in terms of cups, are laid out in Table 2.

Table 2: Volumes of spouted jars from the case studies

Cat. No.	Building	Jar Shape	Estimated Volume (L)	Volume in 0.1-L conical cups	Volume in 0.25-L cups
IB.353	B	side-spouted jar	0.8	8	3
IB.341	Ch	bridge-spouted jar	0.93	9	4
IB.339	B	bridge-spouted jar	1.4	14	6
IB.342	B	bridge-spouted jar	2.2	22	9
IB.368	A	stirrup jar	3.5	35	14
IB.369	B	stirrup jar	3.7	37	15
IB.371	Ch	stirrup jar	4.1	41	16
NP26	N	bridge-spouted jar	5.0	50	20
NP34	N	stirrup jar	10	100	40
IB.338	A	bridge-spouted jar	21	210	84

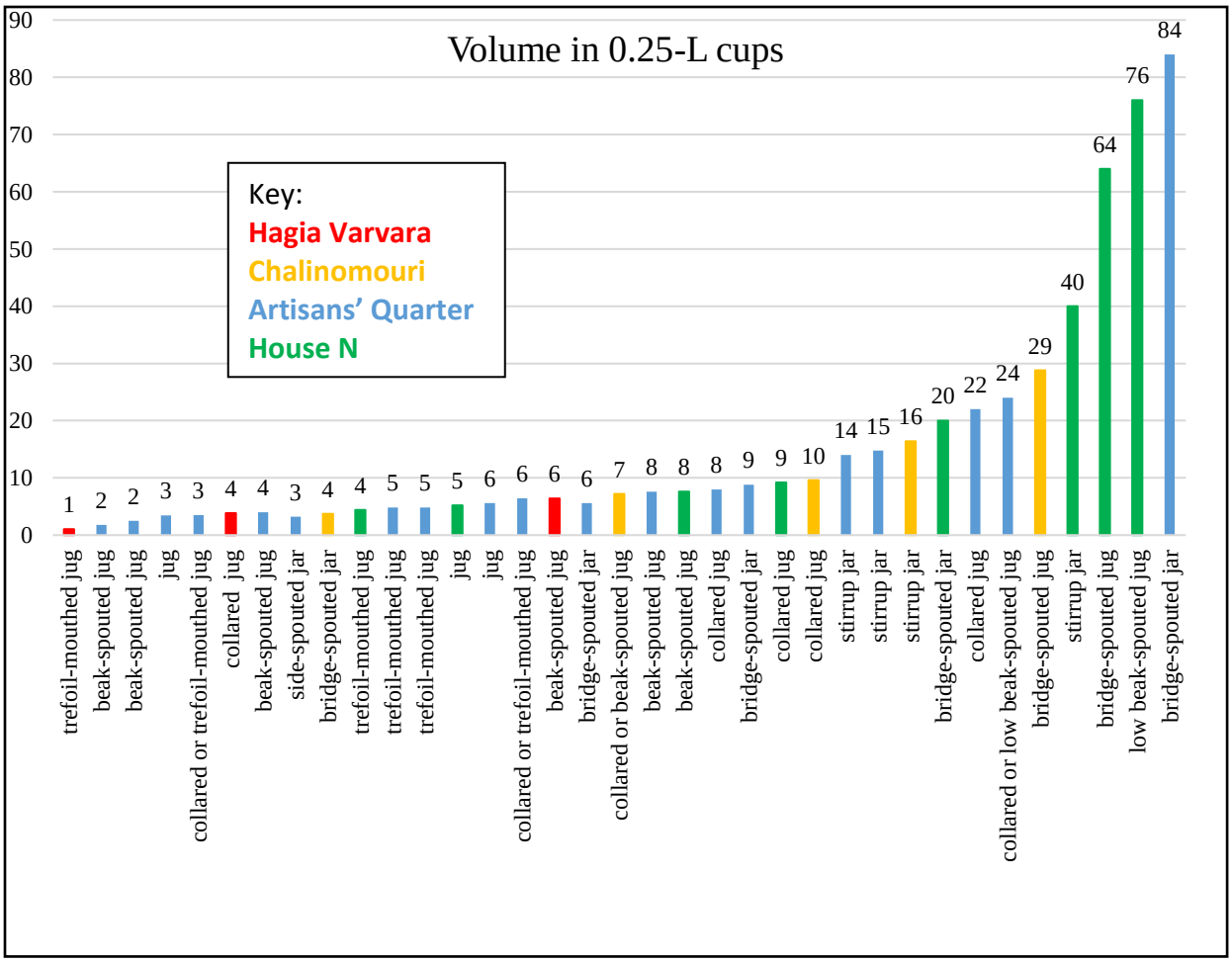


Figure 22: Volume of jugs and spouted jars

Clearly, the jug-like jars tend to be larger than the jugs, though their sizes fit within the range of the jugs' volumes. For this shape, there is no example reported from the Ayia Varvara house. All the jars in the above table are decorated with dark paint on a light ground.

A comparison of the jug and jar sizes at the four sites does reveal distinctions based on status. The graph in Figure 22 illustrates the volume measurements (in terms of 0.25 L cups) of all the jugs and spouted jars at the case study sites, discounting the outlier storage jar from Ayia Varvara. Evidently, the Artisans' Quarter contained the most complete examples, as expected for a site where the vessels were being manufactured (as well as being the largest site of the four). House N contained not only more jugs and jars than Chalinomouri and Ayia Varvara, but the vessels were larger as well. The average volume of the House N jugs and jars is approximately 28 cupfuls, while the averages for Chalinomouri and Ayia Varvara are 13 cupfuls and 4 cupfuls, respectively. Clearly, the residents of House N were much better equipped to host large gatherings, as is also illustrated by the abundance of cups at the house.

Bowls

The only site with bowls in considerable numbers is the Artisans' Quarter, where Barnard et al. (2003, 50–55) list 32 cataloged examples. One bowl is cataloged from Chalinomouri, and two from Palaikastro House N (Sackett and Popham 1970, 224, 236). The bowl is a difficult vessel to categorize because it occupies a rather undefined conceptual space between the basin and the cup. Furthermore, as with basins, the general open shape of bowls lends them to a myriad of potential uses, such that they cannot inform the picture of food preparation and consumption very deeply. One repeated shape among the bowls has flaring, straight sides with horizontal handles on either side (see Figure 23). All 22 of these "horizontal-handled bowls" at the Artisans' Quarter feature dark-on-light decoration. The Type A variety is essentially a larger

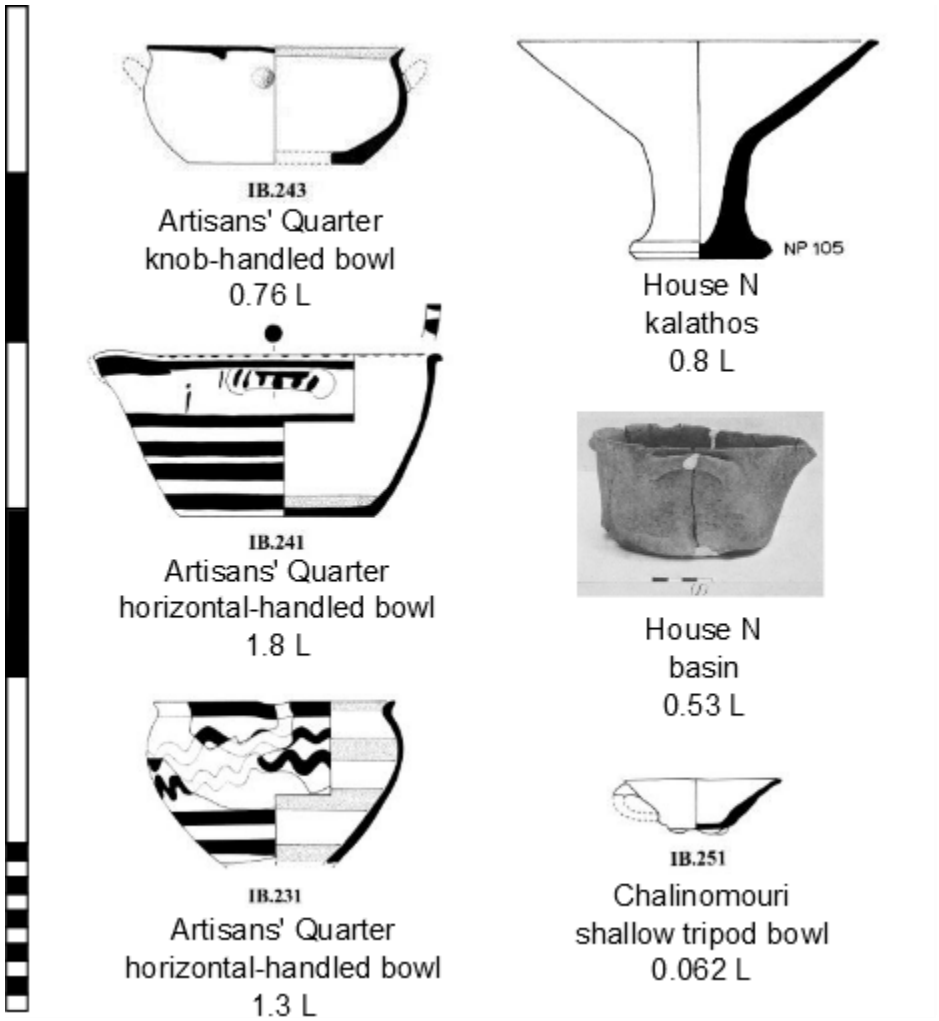


Figure 23: Selected bowls from the Artisans' Quarter, House N, and Chalinomouri (figures from: Sackett and Popham 1970; Pelon 1966; Barnard and Brogan 2003)

version of the rounded cup, with similar shape, fabric, and decoration, while the slightly coarser Type B variety, which sometimes includes a spout, shares formal attributes with the bridge-spouted jar (K. A. Barnard et al. 2003, 50–51). One basin at Palaikastro House N (NP66) could also be considered to be a Type B horizontal-handled bowl (Sackett and Popham 1970, 236, pl. 64f). Most of these bowls are incomplete, but my volume estimates for one Artisans' Quarter Type A bowl, one Artisans' Quarter Type B bowl, and the Palaikastro basin are 1.3 L, 1.8 L, and 0.53 L, respectively.

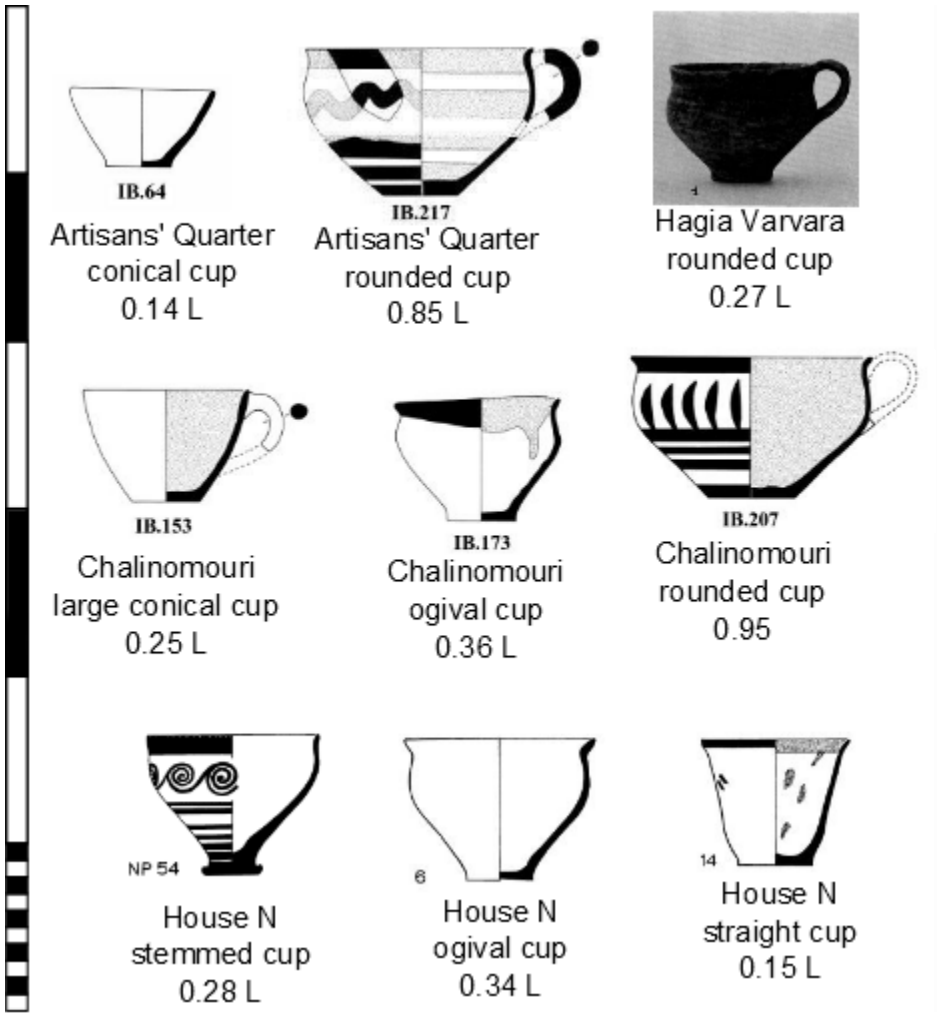


Figure 24: Selected cups from the case studies (figures from: Sackett and Popham 1970; Pelon 1966; Barnard and Brogan 2003)

Cups

Cups are the primary individual serving vessels found at these sites. With this shape in particular, there is a sizeable discrepancy among the sites. This concerns the distribution of small plain cups, especially conical and ogival cups. The Artisans' Quarter Building A and Palaiakastro House N both take part in the common LM trend of keeping cupboards and other storage spaces filled with stacks of small plain cups. Such cups are of very standardized size and shape, and fairly small. At the Artisans' Quarter, 75 conical cups are cataloged from Building A, Room 2, and 144 from the site in total. Over half of these were conical cups, which held on

average 0.10 L. The cups were most likely made in the Artisans' Quarter, perhaps all by the same potter, which explains their high level of standardization (coefficients of variation for the conical cups in room A.2: for height: 0.07, for rim diameter: 0.06).

At Palaikastro House N Sackett and Popham (1970, n. 21) report finding 376 cups in Room 18 and 64 cups in Room 17. Here the handleless ogival cup is far more popular than the conical cup. The Palaikastro conical cups are comparable in volume to those at the Artisans' Quarter, while the ogival cups were over three times larger (mean = 0.35 L). These averages are unfortunately drawn from very low counts, as few cups were illustrated.

No such accumulations of small plain cups were found at Chalinomouri or Ayia Varvara. At the Chalinomouri house, Barnard et al. catalog 5 cups (one large conical cup with handle, three ogival cups, and one rounded cup). At the Ayia Varvara house, Pelon (Pelon 1966, 574) reports only two cups. These are shaped like ogival cups (s-shaped profiles) with handles, and hold 0.25 and 0.27 L. Though it is possible that fragments of plain conical cups were ignored in Pelon's report, it is certainly unlikely that a significant stockpile would go unnoticed and unreported.

Besides the plain cups, other shapes do occur at all four sites. As mentioned above, Pelon reports two ogival cups at Ayia Varvara. At Chalinomouri, Barnard et al. (2003, 42, 207) catalog a large conical cup with a handle and a rounded cup. The more elaborate cups at the Artisans' Quarter include rounded, straight-sided, bell, semiglobular, and stemmed examples (K. A. Barnard et al. 2003, 45–50). At Palaikastro House N, Sackett and Popham (1970, 217, 221) report finding rounded cups, stemmed cups, straight-sided cups, and one very fine cup of an unusual shallow shape labelled simply "decorated cup". These other shapes were much more likely to be decorated than the plain cups, and they tend to be larger.

Storage vessels

A last category of food-related ceramics is that of storage vessels. These include pithoi, amphorae, and larger jars. The precise shapes and sizes of storage vessels are not particularly illuminating in reconstructing food behaviors. The contents of storage containers cannot be assumed from their shape. This is clearly demonstrated at Ayia Varvara, where Pelon notes that a large jug and an amphora were found with charred grains inside, despite the fact that archaeologists usually associate these shapes with liquids. The versatility of storage containers must surely be true of the largest vessels. Pithoi must have been relatively costly to acquire and were sometimes even partly buried in the floor, as in Chalinomouri Room 2. As needs changed from year to year, residents likely found new uses for large storage jars sooner than acquiring new vessel shapes.

Rooms

There are two basic types of interior spaces involved with cooking and eating at the four sites: large rooms with evidence of cooking, eating, and often both, and small cooking spaces. The rooms in the former category tend to be the largest room or rooms in the house and often show evidence of multiple activities. Chalinomouri Rooms 3 and 6, Ayia Varvara Room 3, and the Artisans' Quarter Room B.2 seem to fit this category.

Another type of room associated with food is the small kitchen. These are particularly notable in the Artisans' Quarter, where at least five rooms, none covering more than 10 m^2, fit within this group. At House N, the slightly larger Room 14 is also included in this group. These rooms contain ample evidence of cooking, such as cookpots, hearths, and animal bones, and tend to have a high concentration of ceramic finds relative to other parts of the house.

As regards the distribution of space used for cooking and eating, the sites in the four case studies follow two distinct patterns. The Chalinomouri and Ayia Varvara houses both have large combined cooking and eating spaces and no small kitchen rooms. Admittedly, the evidence for this layout is better at Chalinomouri than at Ayia Varvara. At Chalinomouri, there is ample faunal, botanical, and ceramic evidence to suggest food preparation occurred in Rooms 3 and 6, as well as the charcoal deposits of three hearths. At the Ayia Varvara house, the best evidence for cooking in Room 3 is the single TCP and the interpretation of the stone platform with embedded cookpots as a cooking installation. At both of these houses, it appears that food preparation (as well as other productive activities) took place in the largest rooms. This layout suggests that if the inhabitants were to host a communal eating event, the cooking would go on in front of the guests. Certainly, on a daily basis, the members of these two households would have witnessed the preparation involved in their meals even if they themselves did not take part in this task. The openness of the cooking space is reflected by the accessibility of these rooms. All three of these spaces are either entered directly from the exterior of the house, or through a vestibule space. Both the houses do have smaller, less accessible rooms (1, 2, 4, and 5 at Chalinomouri; 2, 4, 5, 6, and 9 at Ayia Varvara), but the residents did not choose to relegate cooking activities to one of these spaces. At the Artisans' Quarter, there is one room possibly following this pattern: Room 2 in Building B contains a possible hearth and several cooking vessels, although other rooms in the building have better evidence for food preparation.

For the most part, however, the layout of the buildings in the Artisans' Quarter and of House N at Palaikastro suggest a very different allocation of space. At Palaikastro House N, some of the cooking and dining spaces are doubtless lost as they were on the second floor. For example, the room or rooms above Rooms 8-10, from which fell various stone and finely

decorated ceramic vessels, may have been used for hosting guests, and the four TCPs fallen into Room 3 probably came from an upstairs cooking space (Sackett and Popham 1970, 260–61; Sackett et al. 1965, 46). Downstairs, however, there is clear evidence of separate cooking and eating space. Room 5 was largely free of finds, but it must have been supplied by the contents of the adjoining rooms 3, 17, and 18, consisting primarily of small cups, but also tripod cooking pots, pithoi, amphorae, amphoroid jars, a jug, and an alabastron (Sackett et al. 1965, 257, 266). The three TCPs and single saddle quern in Room 17 suggest a kitchen attached to the Room 5 dining room (Sackett et al. 1965, 266, 314). The food served in Room 5 also may have been prepared in Room 14. Here was the only hearth found in the house, as well as several ceramic vessels, including one TCP and four basins (Sackett et al. 1965, 263–64).

The separation of cooking and eating spaces at Palaikastro House N is perhaps merely a product of the fact that this elite dwelling, with at least twice the floor space as any other in this study, would logically allow for a more spread-out distribution of rooms and activity spaces. Furthermore, the locations of both Room 14 and Room 17 seem to be chosen for convenience and accessibility. The door to Room 14 is in the inner hall (Room 2) where it is afforded easy access to the upstairs via the main staircase, to Room 5 at the other end of the hall, and to the storeroom 7 off the entrance hall. The smells of simmering dishes and cooking fires would have greeted guests immediately upon entering the front door. Room 17 is obviously directly accessible to the presumed dining space in Room 5. Therefore, at Palaikastro House N, although food preparation did not go on in the same space as large meals, it cannot be said to have been hidden completely.

The separation of cooking spaces is significantly more marked at the Artisans' Quarters. Here most of the rooms with evidence of food preparation are not only small but are also

disconnected from the other rooms of the house. Apart from B.13, which is accessed through a door to the exterior, the other small kitchen rooms (A.2, A.10, B.3, and B.9) all must have been entered from the roof via a ladder. Some of the larger of these may have been able to accommodate the residents of the house for daily meals, especially if the rooms each corresponded to a subgroup of the total occupancy of the building (i.e., individual nuclear families). However, if the artisans were all to share a meal together, or if they were to host guests from outside the house, they probably gathered in the larger rooms. In Building A, this was surely Room 4, the main workshop. Room 6 was also quite large, but nearly devoid of finds. The plastered floor and walls (the only such room in the building) and the unusual ceramic finds (miniature vessels and a clay foot) lead the excavators to interpret the room as a household shrine, suggesting that any food consumption in the room took the form of small, symbolic offerings (Soles 2003, 33–34). In Building B, several rooms are large enough to hold groups but Rooms 2 and 10 stand out as the largest. While cooking may have taken place in Room 2, there is less evidence for food preparation in Room 10. Both rooms also evidently served as workshops.

The multifunctionality of the large rooms in the Artisans' Quarter shows that the cooking was not separated from them in an effort to keep a dining area clean of other activities, but rather in a deliberate attempt to isolate cooking activities from the rest of the house. This layout contrasts markedly from the Chalinomouri and Ayia Varvara houses, where food preparation went on in a communal space such that all the residents would see the cooking even if they did not do it themselves. The sectioning-off of kitchens at the Artisans' Quarters probably meant that some residents could avoid even seeing the preparation of their food, let alone participating in it.

This arrangement does not obviously present many conveniences. If food was ever consumed in other rooms of the house, it would have to be carried up a ladder and into the house. The kitchen rooms would have been dark (the four lamps in Room A.2 attest to this) and probably hot, smoky, and cramped. One benefit might be that cooks were kept out of the way of the artisans and their work. Additionally, the smoke was kept out of the workshops. However, this phenomenon is not restricted to workshop buildings. In fact, Brogan and Barnard note similar small kitchen rooms in other houses on the island of Mochlos. They suggest that the distribution of space may reflect a gendered division of labor, the employment of servants/slaves to do the cooking, or concerns over cleanliness (Brogan and Barnard 2011, 197). In any case, this clearly demonstrates a very different attitude towards cooking on the part of the residents of Mochlos as compared to the farmers at nearby Chalinomouri, and possibly an effort by the artisans to align themselves with the ideology of their neighbors on the island of Mochlos.

Synthesis: combining lines of evidence to reconstruct eating behaviors

The direct evidence for food at the case studies more or less aligns with what is typical in the Mediterranean diet: cereals, legumes, fish, grape, olive, and other fruits, nuts, and herbs, with meat and wine available, at least occasionally. To understand how foods were prepared, served, and eaten, however, I return to the ceramic evidence. A notable pattern throughout these assemblages is the frequency of jugs and spouted jars, especially among decorated finewares. Most serving vessels clearly served primarily liquid contents.

This trend in serving vessels goes beyond merely functional considerations. These jugs and spouted jars are the most elaborately decorated shapes in their houses (apart from some highly specialized vessels, like rhyta and strainer vases). They fall into fairly standardized types (i.e., beak-spouted jugs, collared jugs, bridge-spouted jars, stirrup jars, etc.). This is not the case

for the sorts of vessels suitable for serving dry foods. Basins and trays are the most likely vessels for this task, yet these are seldom painted and their particular forms vary widely within and between sites—as if they were made merely to suit a functional need and not to copy a popular prototype.

The abundance of cups in some Minoan houses is surely linked to this preference for liquids. Cups are ideal individual serving vessels for liquid foods and drinks. On the other hand, cups do not suit larger solid foods very well because the compact shape of the vessel restricts the size of the food to fit in it. Therefore, where there are cups one must expect fluid food or drink to serve in them.

The general assumption to date is that Minoan cups and jugs were made to serve wine (Wright 1995). There is certainly archaeobotanical evidence for grape; in these four case studies, both sites where seeds were collected contained grape seeds. While I do not doubt the importance of wine in Minoan commensality and cuisine, the fact remains that people must *eat* as well as drink. Based on the ceramic evidence for cooking practices from the four case studies, the Minoan diet seems to have involved a great deal of boiling. The preponderance of tripod cooking pots suggests a kitchen assemblage focused on the preparation of liquid and semi-liquid foods, i.e., soups, stews, and porridges. Boiling and simmering suit a diet primarily based on grains and legumes, which is both expected for the Mediterranean region and borne out by the evidence at the case study sites. Beans, lentils, and other legumes are dried for storage and require soaking and boiling to become digestible. Cereals could, of course, be finely ground for baking (using cooking dishes or an oven such as at Chalinomouri), and the saddle querns at Palaikastro and the Artisans' Quarter attest to this sort of grain processing. Nonetheless, boiling over direct heat could offer a less labor-intensive way to access the nutrients in wheat and barley,

and cereals (or legumes) ground into meal may still be intended for boiling, as in modern oatmeal. Moreover, the available dry cooking methods found at the four sites are much more variable. The Chalinomouri farmers had an oven converted from a pottery kiln, while the Ayia Varvara residents used their unique stone and pot structure. Cooking dishes offer one possibility for dry cooking, but they were impractical for frequent use and they may not have been used at all by some households. Tripod cooking pots, on the other hand, are a standard found in every Minoan kitchen, suggestive of a unifying cooking style that played a central role in the Minoan diet and food culture.

Having proposed a Neopalatial diet heavy in soups, stews, and gruels, it is also necessary to look for the vessels from which these foods were eaten. Unlike drier cooking methods, boiling tends to produce liquid foods that require a container. One option is that foods were eaten from a communal pot, in which case a meal may have been shared out of the cookpot itself or out of a basin, tray, or wide-mouthed jug or jar. Such an arrangement may have taken place in houses such as the one at Chalinomouri. Here is a remarkably thorough account of the ceramics available in the house, yet there is a notable lack of smaller serving vessels. In this home, where cooking and eating occurred in the same communal space, it makes sense that everyday meals were eaten out of more or less communal dishes, whether the cooking pot itself, or one of the larger open vessels. Meals at the Ayia Varvara house may have been similarly conducted, but the poorly preserved ceramic remains prevent me from drawing any definite conclusions from the apparent dearth of cups and bowls.

At House N and the Artisans' Quarter, on the other hand, the more separate cooking and eating arrangements seem to have been accompanied by separate, smaller serving vessels. This pattern is more pronounced at Palaikastro House N, where the stores of small cups prove that it

was at least possible to feed large groups with individual serving vessels. The use of cups or bowls allows for more people to share a meal more easily as compared to communal serving dishes, which become increasingly inconvenient as the group around them grows larger.

At the Artisans' Quarter, the evidence points to a cooking and dining strategy somewhere between these two extremes. On the one hand, individual serving vessels are much more plentiful at this site than at Chalinomouri. The store of plain cups is much smaller than that of Palaikastro House N, and there remains the question of whether the vessels were used in the house. I would suggest that regardless of whether the cups from room A.2 were intended for household use or distribution, the artisans had the means to produce as many cups for their own use as they desired. While this may not be true for the more complex and labor-intensive pots in the Artisans' Quarter, it is a safe assumption to make for the simple, undecorated conical cups. Thus, while the Artisans' Quarter buildings do not include rooms intentionally set aside for commensality, as is likely the case at Palaikastro, the artisans do appear to have possessed the necessary vessels and space to host feasts such as those held at Palaikastro, albeit on a smaller scale.

Spectra of commensality at the four sites

Applying the findings from the four case study sites to the spectrum model of shared food consumption reveals three different potential ranges of commensality. In Figure 25, I plot potential meals for each case study site on a graph and discuss each site individually. I treat Chalinomouri and Ayia Varvara together because the evidence from the latter site is insufficient to distinguish between the two. To reiterate, the positions assigned to various meals are not based on quantitative measurements; the graph is simply an impressionistic representation comparing the affordances of the sites.

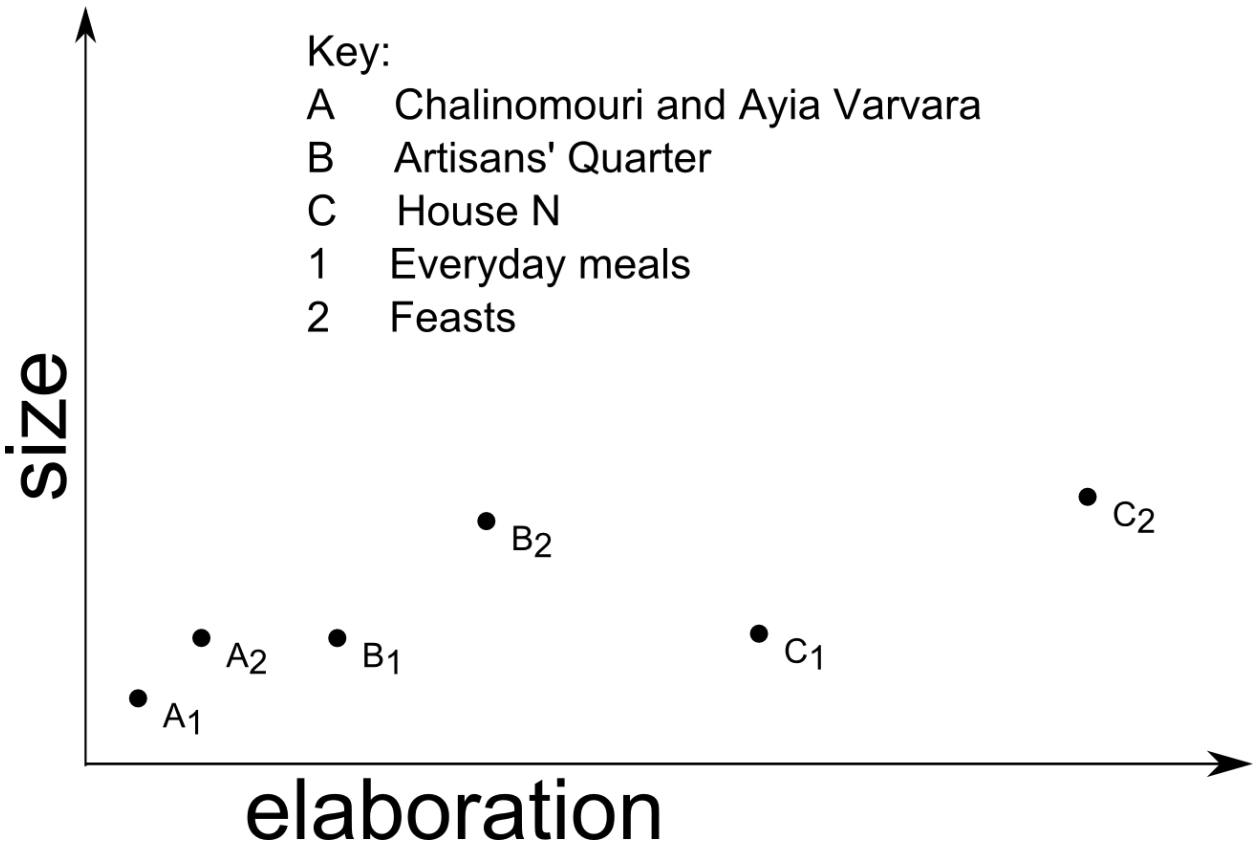


Figure 25: Chart showing the relative size and degree of elaboration of everyday meals and potential feasts at the case studies

A) Chalinomouri and Ayia Varvara

Location	main activity rooms (or exterior)
Food	mostly cereals and legumes with seasonally available accompaniments
Cooking methods	boiling, with some roasting/baking; grinding
Serving vessels	painted ceramic jugs, jars, and cups; few individual-sized cups

The difference between everyday meals and feasts is the least pronounced of all the contexts here. Presumably residents sometimes shared meals with individuals from outside the household, but the dearth of individual serving vessels precludes large gatherings. Additionally, these households could probably vary meals with more rare ingredients, as evidenced by the faunal and botanical remains at Chalinomouri. They do not, however, possess serving vessels clearly intended for special occasions, so any variations in complexity are probably reliant on the foods served and non-material variables.

B) The Mochlos Artisans' Quarter

Location	main workshop rooms (or exterior)
Food	mostly cereals and legumes with seasonally available accompaniments, including rarer fishes
Cooking methods	boiling, with some roasting/baking; grinding
Serving vessels	painted ceramic jugs, jars, and cups; plain cups; stone vessels?
Other evidence	possible shrine and offering vessels

The difference between everyday meals and feasts may have been a bit more pronounced at the Artisans' Quarter. The artisans had access to a greater variety of foods to add to special meals, and they have far more individual-sized serving vessels (assuming that the conical cups were intended for use within the complex). Furthermore, the possible shrine in Building A, with its specialized offering vessels, would have added an opportunity for more complex ritual meals. While it is uncertain whether they were used or merely manufactured on site, the residents did possess some stone vessels. Without a designated dining space, the Artisans' Quarter cannot achieve the same level of elaboration in commensality as the elite houses like Palaikastro House N. I have chosen to place both B points to the right of the A points to illustrate the increased complexity involved in segregating cooking as a special activity to take place in a separate area from dining and from other work. It is also possible that the artisans used more individual vessels and generally finer vessels for their everyday meals, but this cannot be known with certainty.

C) Palaikastro House N

Location	dining room(s)
Food	unknown, probably similar to other houses
Cooking methods	boiling, with some roasting/baking; grinding
Serving vessels	painted ceramic jugs, jars, and cups; many plain cups; stone vessels
Other evidence	rhyta, possible shrine (upstairs)

The designated dining space and separate kitchen of House N indicate an increased level of attention to meals as distinct from other everyday activities, which means that both everyday

meals and feasts at this house are further right on the graph than the other case studies. The rooms on the top story may have added more options for dining spaces. The presumed kitchen above Room 3 supports this interpretation. It is possible that the upstairs reception spaces were finer and more impressive to guests than Room 5, which is among the least elaborate halls at the site of Palaikastro. The hundreds of cups in the House N storerooms do suggest that the residents could host feasts much larger than those of the other houses. Yet Room 5 in House N is no larger than the main rooms in the other buildings, so the hundreds of cups could not have been used all at once in the house. This brings up the question of whether the cups were intended for feasts held outside the house, a possibility that I consider further in the following chapter. As at the Artisans' Quarter, the presence of ritual vessels, here in the form of two plastic zoomorphic rhyta, indicates a level of elaboration in religious events that is not visible at Chalinomouri or Ayia Varvara. Since feasting occasions are often connected to religious ritual, these finds further emphasize a more elaborate kind of commensality at Palaikastro House N.

In summary, with these four case studies I have been able to identify a unifying Minoan cuisine and a few distinct trends in cooking and dining behaviors. While all four sites share a diet centered on boiled foods, the location of food production and consumption is highly variable among the houses I study. In my analysis and discussion, I have demonstrated the wealth of information that can be recovered from published data by investigating it with an eye towards the practices of everyday dining and the possibilities of feasting. For now, however, the above observations remain isolated to a mere five houses on a sizeable island. In order to reach more definite conclusions about LMIB culture as a whole, it is necessary to consider these case studies in their context, alongside other archaeological data from the period.

CHAPTER 6

DISCUSSION AND CONCLUSIONS

My analysis of the case studies in the previous chapter has allowed for the level of detail necessary for rich descriptions of ancient cooking and dining practices. In this chapter, I explore what these descriptions reveal about Minoan society, going beyond the practicalities of cuisine and dining and beyond the four domestic sites to shed light on the role of commensality in the social lives of Minoans across the island. To transition from a narrow interpretation of four cases to a broader statement about LM I cuisine, it is necessary to return the cases to their context. In this chapter, I review parallels for the major elements of cuisine and dining that I identify in order to judge the pertinence of the case studies as representative of the whole and to give a fuller general picture of dining in Minoan homes. I then go on to add the palaces to the picture I have developed of Neopalatial food and feasting. As I have already discussed the ceramics in the previous chapter, I focus on architectural layout here. This focus reveals patterns of dining practice that correspond to different performances of commensality—some stressing the wealth of the host and inclusion of the guests into a privileged group, and others emphasizing a sense of community among all involved. These patterns further correspond to social status; both the status of the household as a whole and the relative status of members within the household correlate with different styles dining. Finally, I offer interpretations of the social organization of Minoan polities and the political role of palaces based on the relationships among the feasting contexts I identify.

Recontextualizing the case studies

Domestic architecture

The lack of complete examples of Minoan houses, especially of non-elite houses, complicates the matter of judging how well the architecture of the case studies represents the norm. Certainly, one can say that the architectural layout of Palaikastro House N is unremarkable among the admittedly quite varied dataset of Minoan elite dwellings. McEnroe (1982, 18) classes it as a Type 2b house—the least elaborate of the elite house types. This classification refers to the fact that House N lacks many of the more elaborate architectural details of the time, such as pillars, pier-and-door partitions, or a Minoan Hall. This latter feature is significant in the study of dining as the prototypical elite reception room of the Neopalatial period. Conceivably, there could have been a Minoan Hall on the second story at House N, but Room 5 could serve the same basic functions of a Minoan Hall nevertheless. McEnroe (1982, 3, 5) does note that nearly all Minoan elite houses have at least one large "Hall" like Room 5. An important caveat regarding House N is that years of investigations by multiple archaeologists have not uncovered a palace at Palaikastro. Yet House N's layout and artifact assemblage are not significantly different from those at other Neopalatial towns. Nevertheless, architectural anomalies at other, larger Palaikastro houses provide an interesting test case for interpretations of elite-palace relations, as I discuss below.

The few known examples of rural, single-story, non-elite houses show similar layouts to Ayia Varvara and Chalinomouri. For example, the houses at Stou Kouse, on the Mesara plain, and at Choiromandres near Zakros, share the basic floor plan of one or two large rooms or courts (in both cases measuring about 6 by 6 meters) at the entrance surrounded on two sides by smaller rooms, some accessed from the roof (S. Marinatos 1924; Chryssoulaki et al. 1990, 48–57). In

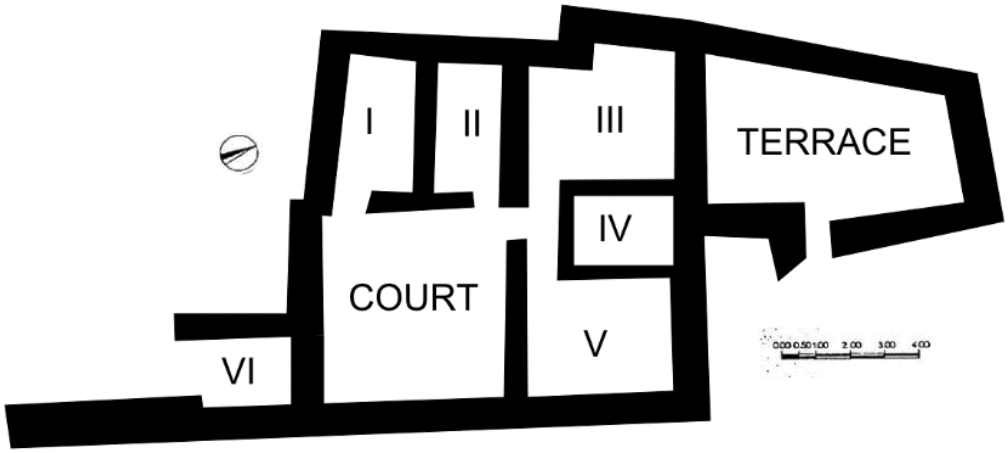


Figure 26: Guard house at Choiromandres (after Chryssoulaki et al. 1990, fig. 4)

fact, the rural guard house Choiromandres, located on a primary road in the Zakros region, bears a remarkable resemblance to Ayia Varvara in the details of its layout (Figure 26, Figure 27). The Artisans' Quarter buildings appear to have been built on similar principles, at least initially. Building A has one central large room (Room 4) accessed through the vestibule Room 1 (Figure 29). Building B, which originally included only the four northern rooms (Figure 28) was expanded following the same model. In this case, the large size of the building necessitated the addition of further main rooms with their surrounding small rooms.

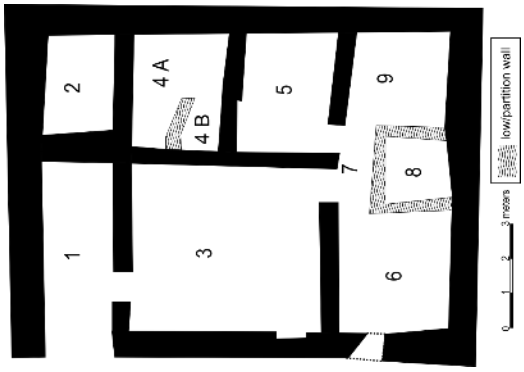


Figure 27: House at Ayia Varvara (after Pelon 1966, fig. 4)

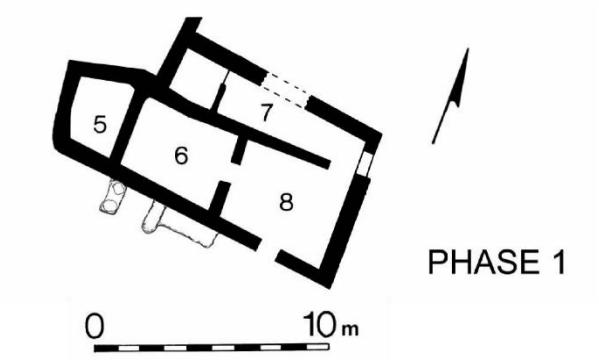


Figure 28: First construction phase of Artisans' Quarter Building B (after Soles 2003, fig. 24)

All the non-elite houses in my study are in rural or suburban settings, as I was not able to include an urban non-elite residence. As a result, I cannot discuss how shared cooking facilities might impact dining in urban contexts. Brogan and Barnard (2011, 186) suggest approaching the question of kitchens at the site level, anticipating communal cooking spaces, in an effort to solve the mystery of the largely absent Minoan kitchen. The notion of communal kitchens—which remain purely speculative at this point—introduces another facet to the analysis of Minoan cooking and dining practices to keep in mind, especially in regards to cooking in towns and at the palaces.

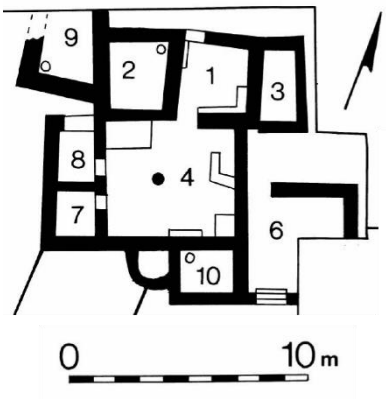


Figure 29: Artisans' Quarter Building A (after Soles 2003, fig. 4)

It is a bit easier to find parallels with the individual architectural patterns identified among the case studies. While clear examples of kitchens are generally rare, there is evidence that the small enclosed kitchens of the Artisans' Quarter were common on the island of Mochlos, where Brogan and Barnard (2011, 188) identify six more LM IA/B examples, and one dating back to MM III (for more on Mochlos kitchens, see Morrison 2017). Is this simply a regional peculiarity or a more widespread pattern? The difficulty with finding Minoan kitchens of the type at House N probably stems from the fact that hearths are usually not built up with stone or other permanent materials. The ephemeral patches of ash and charcoal that make up the simple floor hearths at the case study sites could have been easily swept away by the residents themselves or lost in a destruction layer. There are reports of a very few Neopalatial "kitchens" with built stone hearths. One example similar to Room 14 at Palaikastro House N is at the House of the Rhyta at Pseira. Room 6 of house AF includes a built hearth, mortar, and permanent quern installation, but no dining space. Instead, Betancourt (2001, 147) posits that the kitchen served a dining room located upstairs from the kitchen. Other parallels off of Crete come from Akrotiri, Thera, where Birtacha et al. (2004) report on two very small kitchen rooms at the bottoms of Pillar Shafts 1B and 65N. While the food preparation that took place in the Akrotiri kitchens was clearly different from the Minoan cuisine—as indicated by the presence of only one TCP amid the numerous ceramic vessels—the ashy black soil throughout the rooms and the high concentration of animal and plant remains in these small enclosed spaces bear a remarkable resemblance to the kitchens at the Artisans' Quarter and on the island of Mochlos.

Other hearths signal the presence of main rooms where cooking went on alongside other activities. These appear at three houses at Kommos, House I at Khania Kastelli, and House Zβ at Malia (M. C. Shaw 1996, 357, 366; Hallager and Tzedakis 1985, 12; Deshayes 1959, 12). In

Figure 30: House I at Khania Kastelli (McEnroe 2010, fig. 9.12; after Hallager 1990, fig. 1)

these instances, a stone hearth was found in the center of one of the largest rooms in the house, where there was evidence of cooking as well as other forms of production. For example, House I at Khania Kastelli (Figure 30) featured a row of loomweights found *in situ* on the floor of Room M, which also contained a central hearth, cooking pottery, conical cups, and a quern and grindstone (Hallager and Tzedakis 1984, 5, 1985, 12). Similarly, Maria Shaw (1996, 366) describes Room N17, the largest room in the North House at Kommos, as a "hub of household activity". These central hearth rooms are evidently similar in function to the main rooms at Ayia Varvara and Chalinomouri.

The evidence for built hearths in elite houses shows that the divide between cooking in a separate kitchen and cooking in a shared space did not necessarily fall along a class boundary. Instead, it seems that some houses were equipped for both these styles of commensality. Specifically, House I at Khania Kastelli and House Zβ at Malia (Figure 31) both have a Minoan Hall as well as a main room with central built hearth. House I, with its Minoan Hall, complete

with light well and pier-and-door partitions, exhibits the sophisticated "palatializing" architecture popular in elite dwellings of the Neopalatial period, in fact far surpassing Palaikastro House N in the complexity of its architectural style.

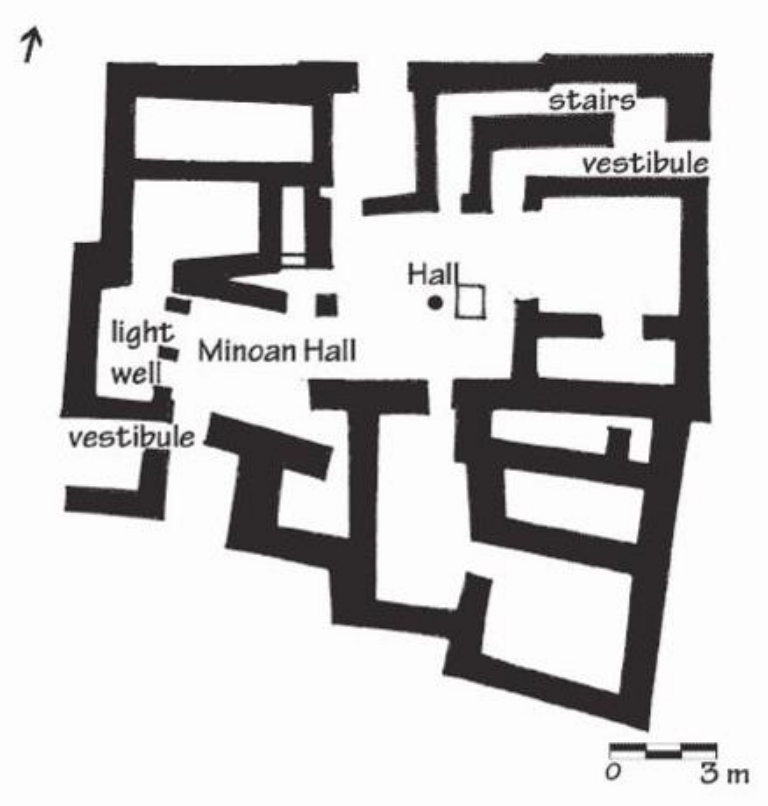


Figure 31: House Zb at Malia (McEnroe 2010, fig. 9.15; after Deshayes 1959, pl. 3)

The impermanence of the floor hearths in the main rooms of the Chalinomouri house may initially suggest that their placement was merely a matter of convenience or chance. It would be incorrect, however, to assume that the location of cooking activities within any house was not an active choice influenced by the culturally-specific rules and taboos associated with food. Furthermore, as Morrison (2017, 98) notes, it takes multiple uses for a floor hearth to accumulate enough ash and burnt soil to be visible to archaeologists. Therefore, the simple floor hearths from the case studies are perhaps not as impermanent as they may initially seem. The permanent stone and brick hearths at Khania and Malia further clarify the selection of cooking location. The

residents at these houses clearly wished to be able to cook in a prominent place, visible to others. At Malia House Zβ, the Minoan Hall was actually added in a later construction phase, suggesting that the residents were consciously choosing to engage in a new form of commensality (McEnroe 2010, 100).

In summary, kitchens are difficult to track down in Minoan homes because of the relative dearth of permanent hearths. Where there are identifiable hearths, there is clear evidence throughout the island for both the patterns in food preparation that I note in the case studies. These include smaller rooms set aside for cooking as perhaps their sole function, and "main rooms" where cooking was carried out among other common household activities in what is often the largest room in the house. Furthermore, this brief survey suggests that the main room model is not confined to non-elite households, as the case studies suggest. The particularly confined ground-floor kitchens of Mochlos may be a regional anomaly on Crete, and their similarity to the two Akrotiri examples raises questions about cultural exchange between the two sites (for Mochlos' contact with the cycladic islands, see Carter 2004a). It is equally possible, however, that the small, doorless kitchens appear at both Akrotiri and Mochlos as a symptom of the more cramped urban setting for the houses. Here again there is a potential distinction between urban and rural practice that requires further study. A final point regarding cooking installations is that most Minoan houses, even elite houses, do *not* have the elaborately built hearths which we would expect if cooking in front of the guests were the norm in elite feasting. Built hearths are not found in the "palatializing" Minoan Hall, but in simpler rooms alongside other industrial artifacts and features. Hence the difference between the main room model of commensality and the separate dining room feasts may not be one of social class but of level of formality. The Minoan Hall and other reception rooms were specially designated feasting spaces,

whereas the main room served multiple functions and probably saw more everyday use. For this reason, I am hesitant to claim the separate kitchens of the Artisans' Quarter as evidence for a type of commensality that was much more elaborate than that of Chalinomouri or Ayia Varvara. The artisans did not possess separate, designated dining spaces, and they ate and worked in the same area. Thus, the situation at the Artisans' Quarter resembles the "main room" style of commensality, even though local custom confines the food preparation to separate kitchens.

The reliance on impermanent floor hearths in Minoan houses suggests that the lack of built-in cooking equipment was, in fact, a feature of the cuisine. This way of cooking is eminently *portable*. If the only things required for cooking are a tripod cooking pot and the foods themselves, cooks could easily position their activities wherever would be convenient in the house. The built hearths suggest a preference for cooking in main activity rooms when possible, but the ability to move the kitchen is nonetheless significant. As Morrison (2017, 107) notes in the case of Mochlos kitchens, most houses had more than one identifiable cooking space. Further complicating matters, cooking could have taken place on rooftops, which would be difficult to see in the archaeological record. Hallager (1990) suggests, based on domestic architecture and a clay house model from Archanes, that terraces and rooftops were important loci of activity in Minoan houses. The use of the roofs at single-story houses like Ayia Varvara, Chalinomouri, and the Artisans' Quarter is confirmed by the doorless rooms that must have been accessed by ladder (Clinton 2013, 185). The portability of the kitchen also accords with the finds of TCPs at extraurban feasting sites like cemeteries and sanctuaries.

Observing these rare examples of built hearths, however, emphasizes the key distinction of the cooking and dining patterns I identified among the case studies. Namely, these different ways of allocating space are ultimately indicative of differing performances of commensality.

Among the case studies, I identify two contrasting aspects of the commensal performance. At House N, the food is theatrically revealed to the diners as it is carried in from the kitchen. On the other hand, at the two farmhouses the preparation of the meal was done in front of the diners, and thus, the cooking itself formed a part of the performance. The stew-based diet I interpret from Minoan ceramics is equally suitable for such a display. The cooking process involved the preparation of the various ingredients, their addition to the stew pot at the right moment, and the long boiling time, which would fill the house with aromas and build up the anticipation of the diners. The fact that this style of commensal performance also existed in at least some elite houses suggests that the practice of hiding food preparation in the kitchen was an introduction by elites seeking to differentiate themselves in certain contexts.

One of the ways dining styles could communicate status to guests has to do with social dynamics within the households. Brogan and Barnard (2011, 198) speculate that the very small enclosed kitchens of Mochlos might suggest that cooking was done by servants or slaves whose lowered status meant they were physically separated from other household members. Similarly, the isolation of these kitchens might speak to the status of women—whether they were slaves or family members. In either case, the larger, multipurpose cooking spaces of Chalinomouri and Ayia Varvara suggest a dramatically different working environment for those doing the cooking. In these houses, the shared and fairly public spaces might have created a more inclusive social dynamic between genders and classes. Conversely, elite houses where kitchens are separate from dining halls are built to emphasize the social distance between the diners at a meal and the cooks. Indeed, part of the effect of having the food brought in from the kitchen was to show that the host had others to do the cooking and serving for him.

Following this interpretation, the examples of elite houses that employ both kinds of kitchens are particularly revelatory. The layout of such houses affords the residents two styles of commensality to choose from as well as two corresponding social hierarchies. Everyday meals may have been taken in the "main room" where household members dined together—or at least shared the same dining space throughout the day—and women and/or slaves could have carried out cooking and other tasks in full view of the rest of the household. The feasts served to elites from other houses in the Hall were likely far more restricted. They may have included only men, or at least only members of the upper class. This fact was emphasized not only by the diners' privileged access to special foods, dining spaces, and serving vessels, but also by the explicit segregation of the cooks from the diners. While there is no reason to believe that the residents at Chalinomouri or Ayia Varvara enjoyed an egalitarian household dynamic, women and slaves living and working in these houses would have had different experiences as compared to their counterparts in house like the Artisans' Quarter or Palaikastro House N, where their lowered status was built into the very architecture. Furthermore, if the segregation of the cooks was associated with elite status, it is possible that the separation of kitchens in the Artisans' Quarter and on the island of Mochlos was in part an attempt to emulate elite dining and its associated social hierarchies within the household. To explore further the connection between dining styles and social status, I now turn to the palace feasts.

The palaces

Having characterized cooking and eating in Minoan houses, it is possible to interpret the palatial feasting materials against this background. Integrating the palaces into the same food system as the households is truer to the actual experiences of diners and allows me to consider

the palace feasts from the perspective of the guests. To this end, I begin by comparing the evidence for commensality at palaces with the patterns discussed above.

Ceramics

The "Standard tradition" of decoration which is most common in my case studies is also common at palaces. Palaces are known for the "Special Palatial Tradition" including the Marine Style and the Floral Style, and while these are certainly better represented at palaces, there are also examples at the houses in this study (see Chapter 5). Furthermore, elaborate stone vessels like those at Palaikastro House N are also commonly found at palaces. Cookware at palaces is less commonly reported, but appears to include the same basic shapes as those found in houses (e.g., N. Platon 1971, 209; Rethemiotakis and Christakis 2011, fig. 16). In summary, while palaces certainly have more access to elaborate ceramic and stone vessels than most houses, there are no shapes or decorative motifs which are confined only to palaces or only to houses. Therefore, the main feature distinguishing palace feasts from those held at elite house feasts lies in the monumental setting of the meal rather than the materials used for serving.

Layout

As previously noted, palaces tend to have dedicated kitchen areas, often located to the north of the central court (see Chapter 2). The function of these rooms is indicated by cookware, faunal remains, and the ash and charcoal deposits of floor hearths (for examples, see Rethemiotakis 1999:722; Platon 1971:204–208; Halbherr, Stefani, and Banti 1980:106–107). The kitchens certainly suggest that food was not prepared in the dining spaces, and the general lack of built hearths in reception rooms and courts supports this conclusion. One striking outlier here is the Galatas palace, where three rooms include central hearths (Rethemiotakis 1999b). While the inhabitants of Mochlos seemed intent on separating cooking from other activities, the

Galatas palace shows a preference for a more public hearth ritual, which may have involved cooking. In any case, while evidence shows that both styles of food preparation are found throughout the island, the separate kitchen is clearly preferred in palace feasting contexts. Given the general portability of the Minoan kitchen, the distinct food preparation rooms at the palaces are a unique feature of palatial architecture that further demonstrate to what extent these buildings were built explicitly for commensal activities.

The dining rooms identified at many palaces, as I discussed in Chapter 2, are undoubtedly related to reception rooms in elite houses. Both houses and palaces have dining rooms of similar sizes which, in the case of the Minoan Hall, feature columns and/or pier-and-door partitions and a forehall to further distinguish the space. Given their shared form, it is likely that the rooms held similar feasts both in the palace and in houses. Elites from inside and outside the palace walls appear to have participated in a shared banqueting system.

The other obvious dining space in the Minoan palace is the courtyard. These spaces allowed for very large feasts that were unlike any of the dining patterns identified among the case studies. As I discussed in Chapter 2, while there is no direct evidence (i.e., floor deposits) to prove that feasting went on in palace courts, the size of the kitchens, storerooms, and ceramic assemblages do indicate large-scale feasting, and the courts are the most logical locations for such events.

On the one hand, the central courts of palaces mimic the open, accessible, and communal nature of the main rooms in the Ayia Varvara and Chalinomouri houses, although there is no evidence of cooking in the courts themselves (nor is there evidence of eating; the possibility of cooking in the courtyard cannot be ruled out). Not only are palace courtyards likely to have been multifunctional, heavily used spaces, they were also the most accessible and connected spaces in

the palace (Letesson and Driessen 2008). On the other hand, the size and built surroundings of the central court make it fundamentally different from the main rooms of houses when it comes to the performance of the feast. Within the crowd of guests in the court it must have been difficult to see most of the other diners, making each guest feel like a fairly anonymous member of a large group rather than an individual surrounded by family and neighbors. The galleries and windows that often overlooked the central court add another dimension to the act of feasting, as they would enable the hosts to act in full view of the guests, as well as reinforce the social distance between them. This action turns the community of diners into another kind of group—an audience at a participatory performance. As with the domestic contexts, the performative aspects of commensality are the primary factors differentiating between types of palace feasts.

The full spectrum of commensality

Having considered the evidence from other houses and palaces, it is now possible to add to the graph of commensality from Chapter 5, as I do in Figure 32. I have moved C_2 further right to better represent the range of commensality in the larger, more sophisticated Type 1 houses.

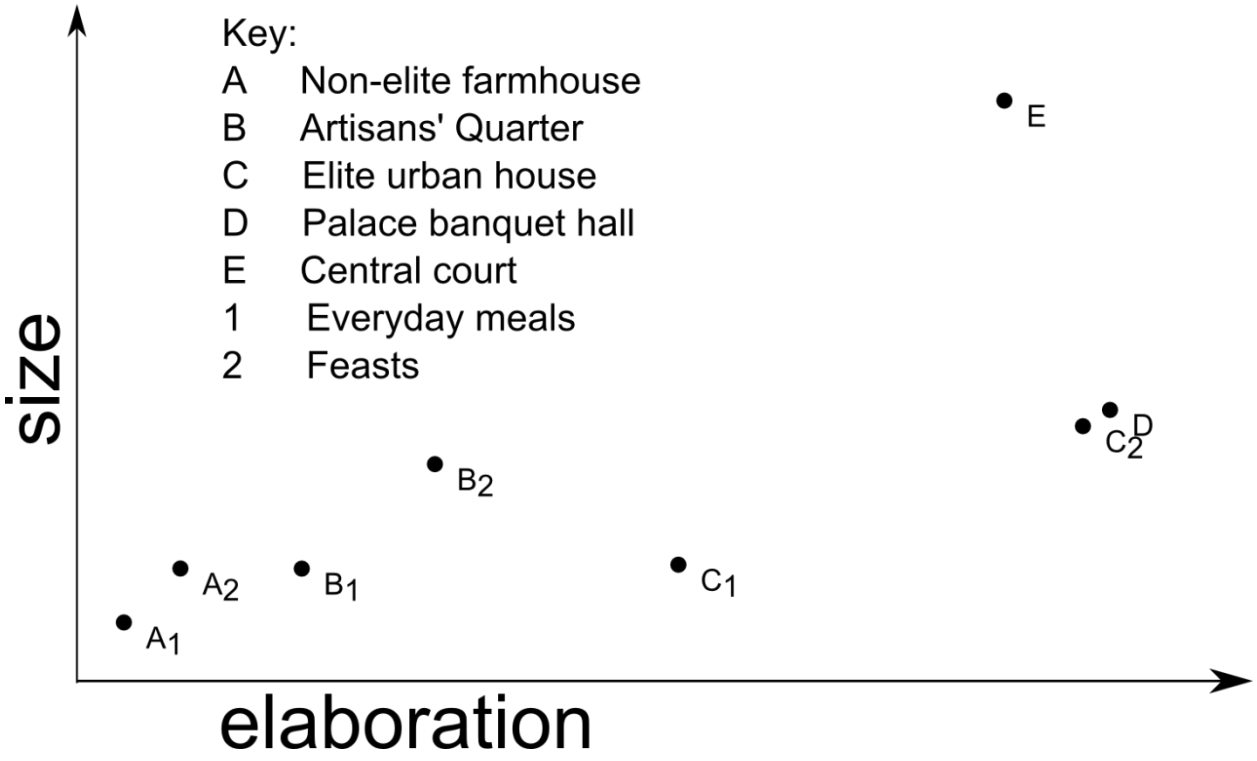


Figure 32: Comparison of types of commensality, including houses and palaces

The newly-added Point D corresponds to the palace dining rooms. The form and function of these rooms are nearly identical to the reception halls at many elite houses (especially McEnroe's Type 1 houses). These are clearly diacritical feasts in the context of the palace, as they distinguish a select group of guests out of the many who would fit in the central court. However, the similarity between the dining halls and associated materials at palaces and elite houses suggests that these separate small feasts at palaces were not necessarily emphasizing the authority of the palace *over* local elites. Here is arguably the best evidence for a heterarchical model of social organization amongst the ruling class. The dining halls appear to form part of a

system of diacritical feasting among the elite class, with families hosting each other at houses and at the palace to reaffirm alliances and membership in this select group. It is not clear, however, whether these banquets—which must have been relatively small, judging based on the capacity of benches in some dining halls and the sizes of the rooms themselves—could have been extravagant enough to support a model of competitive political factions. Surely such feasts, intended to win popular support and outspend rival groups, should be larger and more publicly visible than whatever could have occurred in the closed-off banquet halls.

There is another context that is perfectly suited to public displays: the central court (point E). This is high above the other points because the courts can hold much larger feasts than all the other dining locations discussed. The central court feasts would involve a completely different etiquette than banquets in the smaller dining halls. While the position of point E as far higher on the axis of size is all but certain, it is difficult to know its place in terms of elaboration. Without *in situ* remains of central court feasts, it is unclear which artifacts were used in the central court and which were reserved only for the smaller banquets in dining halls. Certainly, the monumental setting of the central court feast places it far to the right of most forms of household commensality, but its position relative to point D feasts is neither knowable nor necessary to the analysis. Whether or not point E falls further to the right of the dining hall feasts on the chart, the numbers involved in court banquets set these events apart completely from the other domestic contexts. Here is a kind of feast that could only be achieved in the palace, because of the specific monumental architecture involved. The surroundings of the central court, which allow the host to simultaneously emphasize the guests' corporate identity, the host's vastly superior status, and the highly performative rituals involved in the event, cannot be replicated anywhere else on Crete.

A note on cuisine

The stew-based diet I propose for Minoan cuisine shapes the possibilities for feasting in two key ways. First, a primarily liquid food base would require individual serving vessels to distribute it among a group. As previously noted, this role must have gone to the cups. At palaces, numerous conical cups must have been employed to serve diners in Central Court feasts. A problem, however, arises when we examine the sizes of these cups, which often hold only about 100 mL. It is difficult to accept that 100mL of stew, soup, or porridge could constitute a meal (let alone a feast), even if accompanied by bread. Instead, the small cups could have allowed guests to sample from a variety of dishes, in a meal format reminiscent of meze or tapas. This kind of display would be highly impressive because of a second quality of the stew-based diet: its capacity for creativity and variety. Residue studies on cookwares highlight the sheer numbers of ingredients involved in Minoan cooking. That many of these ingredients were flavorings (such as honey, herbs, and spices) further emphasizes the creativity involved in this kind of cooking (see, e.g., Tzedakis and Martlew 1999).

Furthermore, the meze format allows for the differentiation between elites and commoners that my proposed cuisine would otherwise seem to lack. The wealthy could display their wealth via the number, variety, and complexity of the boiled dishes that they offer. The stew, especially if deployed within a meze structure, is ideal to showcase the variety of ingredients used. The acquisition of multiple meat sources, including domesticated animals, game, and marine animals would show off a host's access to a large labor force. Each of these meats might have been featured in a separate dish. The stewing process is well suited to bringing out the aromatic qualities of the plant-based ingredients, especially if long cooking times filled the area with these aromas (Fox 2008, 138). Here the wild herbs available on Crete would play

an important role. The remarkable variety of herbs found on Cretan mountainsides have figured into the cuisine on the island throughout history (Warren 2003, 2008, 17). Linear B records from Knossos mention coriander, cumin, sesame, fennel, mint, and parsley (Andreadaki-Vlasaki 2008, 117). The importance of herb gathering is most visible in the material record via images of saffron-picking on Minoan and Theran frescoes (J. Day 2011; Evans 1921, 1:265–66). If herbs were available in specific locations at specific times of the year, the use of herbs in stew could potentially signify a host's access to a vast landscape and a labor force to collect the plants. The desire to express power within a landscape is echoed in Minoan ceramic and wall paintings that often feature extremely varied floral, marine, and geological motifs (Schiering 1992; Chapin 2004; Hitchcock 2007, 96–97). Clearly, the meal format that includes multiple boiled dishes could be manipulated to demonstrate a host's wealth and power. Stew need not have been the simple, utilitarian meal it is today, although it must have taken a much plainer form in the everyday meals of most Minoans.

This above model for cuisine helps explain the multitude of conical cups in the Neopalatial period as necessary for a feasting tradition involving multiple cups per diner, without needing to speculate on the availability of wine. Nevertheless, while this meal format does offer definite possibilities for differentiation, it does not constitute an example of high cuisine. As I have shown, the tools (and thus, the techniques) of cooking are similar at all levels of Minoan society; however, elites must have had access to the labor force necessary to make greater quantities of and more kinds of food than non-elites. For this reason, on the chart of Minoan commensality I propose fairly even distribution along the axis of complexity. This distribution is enabled by the formal aspects of the cuisine itself.

Commensality and social organization: identifying competition and cooperation

Now with a more complete picture of Minoan dining, from the smallest houses to the palace courts, I attempt to characterize the palace's role within this political system. First, as I discuss above, the diacritical feasts in palaces banquet halls and elite homes suggest a non-hierarchical structure. For evidence of such systems, it is necessary to examine commensality at the site level. Luca Girella (2011) does just this at Phaistos, where he traces an increase in feasting evidence at the elite houses surrounding the palace while it was being remodeled (and thus, unavailable as a banquet venue) during MM III. This evidence also coincides with the introduction of what the author sees as a newer, more simplified style of tableware whose popularity lasted through LM I (Girella 2011, 2008). These changes certainly support the integration of the Neopalatial palace at Phaistos into an existing network of elite diacritical feasting. This diachronic view promotes the placement of palace elites on an equal social standing with their extra-palatial counterparts. This is not to say that *all* elite households were actually on completely equal standing with the palace. The fact that McEnroe (1982) is able to rank elite houses into two clearly distinct tiers of elaboration certainly shows that there were wealth disparities among the elites. Yet my analysis of commensality at Palaikastro House N shows that these residents, though perhaps of lesser means than some of their neighbors, were certainly able to participate in the elite dining system. House N possesses the cooking equipment to make the appropriate foods, the dishes and architectural layout to serve guests according to the appropriate etiquette, the luxury objects to signal membership in an exclusive social rank, and the ritual equipment for the religious functions that likely accompanied these gatherings of elites. Except for the cooking tools, the above items are largely absent from non-elite houses. Therefore, while Minoan elite cuisine does not appear to conform with Goody's (1982) model of

haute cuisine, the etiquette and foods involved in Minoan Hall feasts certainly fit Dietler's (2001, 86) more inclusive definition of the diacritical feast, which involves specialized materials and behaviors to form a separate style of dining. It follows that elite feasting served a dual purpose: to emphasize a clear distinction between elites and non-elites while promoting an ethos of equality within the upper class. Certainly, as Bourdieu (1977, 171) points out, much of gift exchange involves deception in the form of "sincere fictions" (see Chapter 2); surely some elite individuals held more power than others, and the evidence from sites like the Artisans' Quarter complicate the picture of a starkly divided society. Nevertheless, the feasting practices among elites reveal a desire to emphasize a two-tiered system of social organization.

Court feasts contrast with the heterarchical nature of the diacritical feasts, as the former definitely emphasize the palace's authority within the community. How can these seemingly disparate forms be reconciled? One thing to consider is the identity of the hosts at palace feasts. Here I suggest returning to the hundreds of cups in elite houses. Since most houses do not possess dining rooms large enough to use this many cups (even allowing for a few cups per guest), it is possible that elites are contributing cups and potentially other foods and materials to the palace court feasts. Given that the diacritical banquets at the palaces and in houses reinforce solidarity and some degree of equality among the elite class, it stands to reason that elite families living around the palace would take part in hosting the larger palace banquets. This model fits with Reid's (2008) suggestion that residents of the town of Zakros contributed to the grinding of grain in the palace and in the surrounding houses. If indeed elite households were involved in the hosting of palace feasts, it may be more appropriate to view the palaces as a communal space shared by the local ruling class rather than as the residence of a single ruler, thus supporting interpretations of the palace put forth by Driessen (2002a).

At Palaikastro, where there appears not to have been a palace, the architecture of elite houses reflects the fact that elite families took on the role of hosting large communal feasts. These feasts must have taken place in the courtyards and halls of the unusually large elite mansions lining the main street (Driessen 2002a, 15). The arrangement of the town at Palaikastro leads Driessen and others (Driessen 2010; Cunningham 2007; Driessen and MacGillivray 1989, 107) to posit a social organization involving elite families or clans as the major political actors. Perhaps such a structure was present in other Minoan towns as well.

If town elites worked together to put on court feasts, these events might be seen as emphasizing the authority of the palace as well as legitimizing the superior position of the ruling elites over the lower classes. To better understand the strategies at play in palace court feasts, I next compare them with the domestic commensality contexts to which the guests were accustomed. Unfortunately, the dearth of evidence for commensality at urban Type 3 houses—because of the problem of the missing upper floors—complicates any interpretation of the experiences of urban non-elites at palace feasts. Comparing dining practices at rural and suburban dwellings like Chalinomouri and Ayia Varvara with the palace feasts highlights the impression a palace feast might have on a visitor from the countryside. In a palace court, perhaps attending periodic religious festivals, rural dwellers would encounter an entirely new form of commensality that they could not replicate in their homes. Rather than being involved in the creation of the meal before it was served, they might witness the dishes emerging from the kitchens ready to eat, held in decorated jars and jugs. They would eat from cups, which was evidently less common in their own houses, and, given the small size of said cups, they would be able to sample multiple varied dishes, perhaps including rare ingredients. In addition, they would see more people together than they would usually encounter in their communities, and they

would see their generous host at the center of attention, as highlighted by their architectural surroundings. These kinds of banquets would emphasize membership in a community, and garner support for the palace elites, who must have relied on these farmers to supply the food for the banquets to begin with. As Dietler and Herbich (2001) note, one of the strengths of commensality (especially when combined with religion) is that it facilitates movement of labor and goods without the need for force. Hence, palace court feasts would be necessary in winning support from the hinterland which, in turn, is necessary to put on more feasts. Certainly, palaces required access to farmland to keep their storerooms full. Without evidence for attempts to stake claims using warfare and offensive walls, wooing the favor of rural residents must have been crucial for palaces to maintain access to agricultural resources. This approach would have functioned within towns as well, since urban dwellers doubtless contributed to the palace's labor requirements. As such, palace court feasts may have functioned in some ways as work feasts. As the discrepancy in complexity and size between commoner's meals and palace court feasts shows, non-elite guests would by no means be able to repay their host's generosity. Instead, this debt must have been remedied through contributions of food to the palace storerooms and labor to the workshops. Items produced in small-scale household industries, such as the textile production at Ayia Varvara and the stone vessel manufacture at Chalinomouri may also have been brought to the palaces at the time of the feast.

A question that remains to be settled regards the relationships *among* Minoan palace centers and their feasts. Admittedly, my dataset, which is designed to elucidate the spectrum of domestic commensality, is not ideal for this line of inquiry. Yet there is room for speculation, based on the analysis above, regarding the nature of banqueting on an island-wide scale.

As outlined in Chapter 2, there are two competing views of the relationships among the Minoan palaces. The traditional view, initially assumed by Evans and more recently supported by Hood (1984), Betancourt (2002), and Nanno Marinatos (2010, 13–14) is that the palace of Knossos ruled much of the island during the Neopalatial period. The opposing opinion holds that Crete was made up of independent polities, and that the homogeneity of material culture during the Neopalatial period is in fact an example of competitive emulation (Cherry 1986; Hamilakis 2002b).

One way to address this issue is to consider how feasting could support each of these models. To begin with, there is a clear precedent for identifying feasts among competing groups, as demonstrated by the potlatches on which Mauss (1950) himself models his theories of gift exchange. Hamilakis (2002b) favors this interpretation of palace feasts as well. Building on my analysis above, court feasts could clearly function to enable the competition over agricultural resources between palace centers, which must have been crucial to independent polities on Crete. The shared, island-wide etiquette of palace feasts and other elite feasts would have facilitated more direct interactions between neighboring palace officials. On the other hand, it is difficult to demonstrate that Minoan court feasts were necessarily of the same caliber as the potlatch-style feasts that pervade the theoretical literature. Competition via feasting, on the scale of the potlatch, involves opposing groups throwing banquets so immense that they nearly bankrupt themselves. In this way, through the one-upmanship of competitive commensality, they attempt to actually bankrupt their neighbors. It is unlikely that this phenomenon transpired at the Minoan palaces. Many do agree that the palaces were essentially built and maintained for the purpose of holding feasts (Letesson and Driessen 2008; Driessen 2002b; Schoep 2002b; Hamilakis 2002b). Furthermore, the heterarchical structure within Minoan polities, as proposed above, aligns with

Hamilakis' suggestion that these entities were run by loosely-organized political factions. Nevertheless, the palaces endured multiple generations, so there must have been some degree of stability in their power structure—a stability which the hyper-competitive potlatch-style feasts could not support (Mauss 1950, 42–55). For this reason, Betancourt (2002) suggests a king or similar authority as the only option for the control of the palaces. The evidence from the diacritical banquets, on the other hand, does not point to a single ruler, but a relatively stable network of elite families. Therefore, Driessen's model of noble Houses is better supported by the commensality evidence. Driessen (2010, 43) remarks that the "main characteristic and aim for *Houses* or estates is evidently the objectification of perpetuity," which is accomplished by the multigenerational structure of the Houses, their ties to long-lived residences, and their preservation of heirlooms. This "objectification of perpetuity" is visible in the long-lasting and monumental scale of the palaces as feasting arenas, and in the banquet halls of the surrounding residences. Driessen notes that competition among Houses increased in the Neopalatial period, as shown by the increased elaboration of material culture, but this competition need not have risen to the level of political factions.

On the other hand, large court feasts could certainly serve a more "imperial", Knossocentric regime. Some of the tribute collected at these banquets might be passed along to a central administration. If the architecture and etiquette of palace feasting, newly adopted at the outset of the Neopalatial, were strongly associated with Knossos itself (although this association is by no means definite), then the generosity exhibited at palace feasts might be interpreted by the populace as representing the generosity of a Knossos-based leader. A clear difference between these banquets and the potlatch-style feast described above is the consideration that under a stable, island-wide regime there would be no need for palaces to impoverish themselves

in their hosting. Much of the anthropological research on commensality reveals an inverse relationship between the complexity of feasts and the political stability of their hosts. Hamilakis (1999) relies on this relationship when he claims that a peak in wine production in the Neopalatial period corresponds to decreased stability (i.e., competing political factions). It is notable, however, that Girella observes a divergent pattern in the ceramics of feasting: the highly elaborate polychrome vessels of the Protopalatial are replaced by much simpler dining sets in MM III, but complexity rises again with the introduction of the Marine Style and Floral Style in the period of my case studies. Rather than interpreting this shift as corresponding to increasingly competitive feasting, Girella (2007, 162–63) does link the change to political insecurity but claims there was a decrease in large-scale feasting. Contrastingly, Betancourt (2004) understands these new ceramic styles as evidence of expanding Knossian influence. In any case, it is clear from these competing interpretations that more research into palatial feasting is needed before it is possible to clarify the role of these events vis-à-vis island-wide political structures. Moreover, relationships among palace centers need not have been homogenous across the whole island. What *can* be said is the following: Regardless of the independence or dependence of a given palace center (a matter that likely varied from place to place), control of the hinterland is a sufficient explanation for the large-scale banquets. At the edges of their territory, palaces may have been competing against each other for the loyalty of rural residents, but this competition need not have been the primary function of the feasts. More direct interaction between the leaders of independent polities is also a possible explanation for the banquets, but a more important (and geographically convenient) arena for these exchanges may have been extraurban sanctuaries between palace centers.

Final summary

I have discussed two contexts for commensality in LM IB Crete: houses and palaces. Other important contexts certainly exist, including the forecourts of tombs, urban shrines, and extraurban sanctuaries, but those that I have examined in this study already describe a single, unified system of dining practices.

1. Non-elite, rural residences

Food was both cooked and consumed in the central room of the house, along with other household activities. Since other rooms were available for cooking, the choice to place food preparation in the main room must reflect a desire for the practice to be visible to household members and, notably, does not suggest an attempt to segregate women (assuming female cooks) from the rest of the house. The spacious main room would have been a convenient place to tend to a long-boiling stew while simultaneously carrying out other tasks, such as textile production and childcare. The simmering cookpot was at the center of the household and may have been imbued with symbolic importance. The importance of the stew was signaled by the decorated cups and jugs it was served in. Even the humblest houses have some examples of elaborately painted finewares.

These households had limited abilities to differentiate between everyday meals and special occasion meals. They were capable of hosting some neighbors, but they were not equipped with sufficient serving vessels for large groups. Their feasts, therefore, must have involved minimal competitive forces. Instead, the focus of feasting was to build ties within the community, as was necessary in the risky context of agricultural work. They were not, however, investing heavily in competition for political power over their neighbors. Larger feasts would have been possible in

these communities only through cooperation among families, as households would have had to pool their resources.

2. Elite houses

Elites had increased abilities to put on feasts that were much different from everyday meals. In fact, they implement a specialized architectural vocabulary for hosting guests, epitomized by the Minoan Hall. Feasts held in these halls distinguished the elites from commoners who ate where they cooked and worked. The host's and guests' membership in the upper ranks of society was emphasized by the materials of the feast and by the physical distance between the banqueters and those preparing the food. This separation relegated the cooks to more isolated spaces, sometimes including relatively small and inconvenient kitchens.

The fine ceramics once again highlighted the central focus of the meal: stews and soups served from spouted vessels and eaten from cups. The dishes were lent even more grandeur by the addition of stone and metal vessels, which may have been reserved for the host or for guests of honor. The architectural surroundings also served the diacritical aspects of the feast. Entry into the dining room—whether a prototypical Minoan Hall or a less specialized Hall, such as at Palaikastro House N—involved passage through a number of transitional spaces. Each threshold crossed marked the guest's privileged access into the banquet room. Finally, the special occasion was further marked by special feasting etiquette, as the food made a dramatic entrance from the separate kitchen.

3. The palaces

Palaces were essentially feasting compounds; commensality was clearly one of their main functions. One type of commensality in these spaces was nearly identical to the diacritical feasts in elite houses. Using similar architecture, foods, serving vessels, and etiquette, palatial hosts

signaled their own membership within the elite ranks on a fairly equal level. Equality was not, however, the focus of larger central court gatherings. Here hosts used the hundreds of stored plain cups, which emphasized the number and relative anonymity of the guests. Meanwhile, the status of the host was marked and elevated by the architectural surroundings of the central court.

Conclusions

While the above seems to describe starkly different modes of commensality, the picture of Minoan food consumption is, in fact, more unifying than dividing. First, the fact that all sectors of society share a common cuisine is significant to understanding the social hierarchy. The cuisine involved grains and legumes as staple foods, with vegetables, herbs, fruits, nuts, meat, fish, shellfish, wine, and secondary animal products serving to add variety, flavor, and prestige when available. The preferred method of cooking was boiling in tripod cooking pots over simple hearths to produce liquid or semi-liquid foods like soups, porridges, and stews. Other cooking methods were present but not standardized, adding variety in a fashion similar to the non-staple foods. The cups that have long been associated with wine must have also been employed to serve these soups and stews.

Whereas there are clear attempts by elites to stress their position among the upper strata, they do not go so far as to adopt a new kind of cuisine. Non-elites would have been familiar with the techniques used in stews they ate at palace feasts: in fact, many may have been part of the labor force working to prepare the meal. Furthermore, the symbolic importance of the stewpot—as shown by its centrality in non-elite homes—is surely at play in all forms of Minoan feasting. Staple foods are at the center of cultural identity as well as being seen as necessary for daily consumption (Delgado and Ferrer 2011; Smith 2006). The fact that elites incorporated the stew,

which was evidently the staple in Minoan cuisine, into their banquets shows that even diacritical feasts were in some sense reinforcing a more communal identity.

A second facet of Minoan commensality that unites rather than divides is seen in a final version of the chart above (see Figure 33). If, instead of placing discrete points on the plane an analysis considers the totality of commensality practiced in different contexts, a blurring of

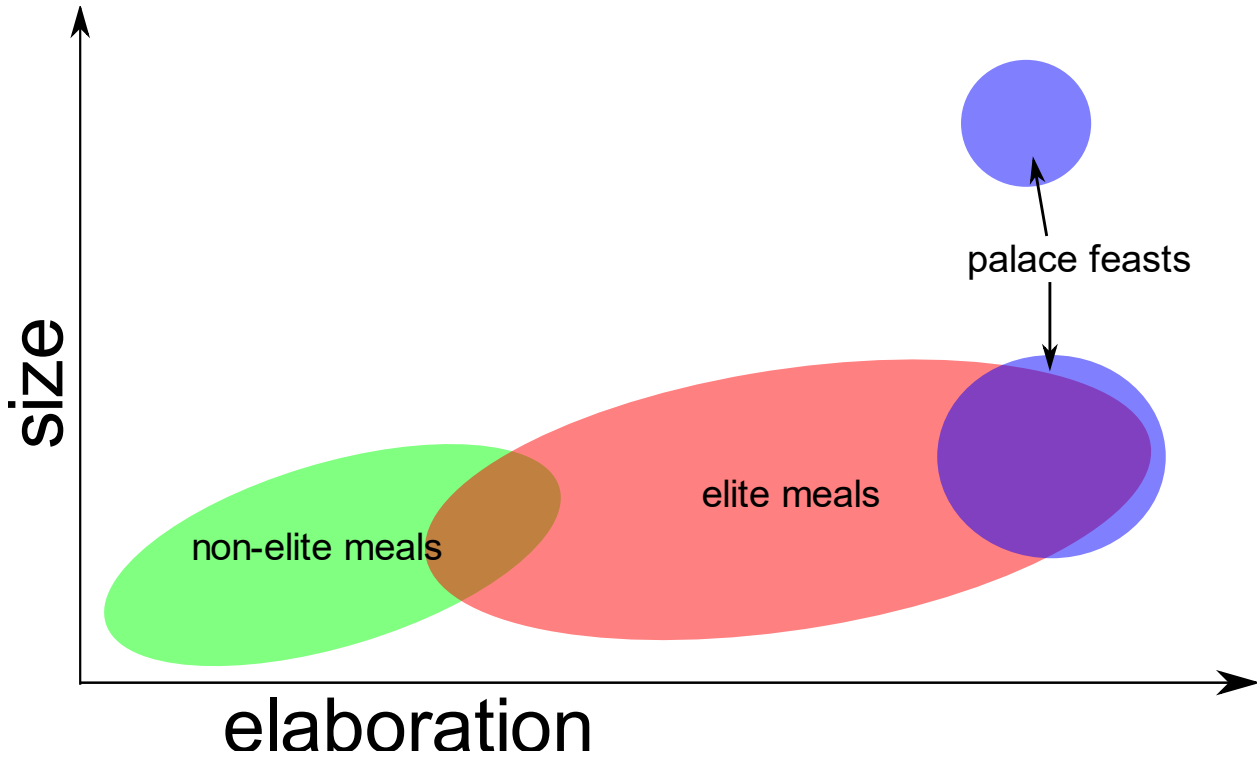


Figure 33: Comparison of commensality contexts

boundaries emerges. Elite houses overlap with non-elite houses in their use of central hearths in main activity rooms, similar cuisines, and similar serving vessels. Palace feasting contexts obviously overlap with elite houses as their diacritical feasts are materially similar. The result is a steady continuum of small-scale commensality with a single outlier: the large banquets at palace courts. Thus, my model of commensality reveals that despite some efforts by elites to set themselves apart via feasting, most Minoan commensality emphasizes social cohesion through a shared cuisine and meal etiquette. This sense of unity corresponds to a heterarchical power

structure. Ruling elites may have been divided into familial groups whose networks were negotiated via diacritical feasting, but they were not members of warring factions. Instead, the evidence suggests that elites contributed together to putting on palace feasts, in a display of the joint power of the ruling class over the non-elite guests.

While my study lays out a general picture of Minoan commensality and clarifies aspects of social organization within LM IB polities, domestic contexts do not suffice to understand the relationship among the palaces. I maintain that the large scale of palace feasts is more indicative of the relationships between the palaces and their individual areas of control than of relationships among administrative centers. It is possible, however, that palace court feasts served to express hostilities among competing peer polities. Yet it is not clear that some degree of centralization under one or more palace centers during this late point in the Neopalatial period should be ruled out based on this evidence alone. The reason for this remaining uncertainty is that there is no reason to suppose that the inter-palace political structure was homogenous across the whole island. Accordingly, one likely direction for further study in this area is the continued examination of individual geographic regions. The regional anomalies in commensality, such as the central hearths of the Galatas palace, indicate retention of local customs in the face of widespread adoption of an island-wide style of commensality. Also, some authors have begun to track shifting relationships among small groups of nearby palaces, such as the so-called "Mesara triangle" of Phaistos, Ayia Triada, and Kommos. These relationships do suggest competition among polities within regions of the island (e.g., J. W. Shaw 2002). Connected to this regional scale are the extraurban sanctuaries. Ceramic evidence from Skoteino Cave, for example, shows that shrines were locations where people from various polities might encounter each other for religious feasts (Tyree, Kanta, and Robinson 2008). If there was competitive feasting going on

among palaces, extraurban shrines would be an ideal venue, and more work should be done to investigate commensality at these sites to situate it within the broader picture of Minoan food consumption.

Further work is also needed to finish clarifying non-palatial commensality practices, particularly in terms of their social functions. My case studies reveal the relative dearth of detailed analysis of non-elite domestic sites. Filling in this gap, where the data is not necessarily missing, but certainly under-studied, is crucial to the study of Minoan everyday life. These efforts must include both rural and urban contexts.

Lastly, in the area of food consumption, my dissertation shows how much more the data can reveal when attention is paid to the forgotten middle ground between diet and feasting—the practice of making and eating a meal. Certainly, the work carried out in paleobotany, zooarchaeology, and chemical analysis should continue to reach beyond simple identification and into the reconstruction of behaviors. More of a change is required, however, on the side of feasting research. Most importantly, it is necessary to put food back into feasting. Wine will never tell the whole story of Minoan commensality, and the automatic association between cups, jugs, and alcohol limits the potential of this fascinating area of study. Instead, as this dissertation has demonstrated, tracking food consumption in a variety of contexts, whether in everyday meals or on special occasions, provides the necessary background to understanding how commensality created and strengthened social and political networks in Minoan society.

APPENDIX

Table 3: Faunal remains from Chalinomouri

Species	MNI
Sheep/goat	15
Pig	10
Deer	?
Hare	?
Mouse/shrew	?
Limpet	75
Monodonta turbinate (sea snail)	32
Murex	5
Trumpet shell	4 or 5
Thais haemastoma (sea snail)	1
Cerithium vulgatum (sea snail)	1
Columbella rustica (sea snail)	1
Theodoxus (sea snail)	1
?Semicassis (sea snail)	1
Paracentrotus lividus (sea urchin)	2
Crab	2
Common sea bream	?
other Sparidae	?

Table 4: Tripod Cooking Pots at Chalinomouri *italics indicate estimated values

cat. no.	room	height (m)	height without legs (m)	rim diameter (m)	max diameter (m)	estimated volume (L)	burning
IB.499	6	0.35	0.2	0.15	0.23	5.8	lower body
IB.500	6	0.50	0.35	0.24	0.38	24	
IB.502	oven						
IB.504	1			0.24			exterior and interior
IB.503	4			0.18			

Table 5: Cooking Dishes from Chalinomouri

cat. no.	room	rim diameter (m)
IB.578	4	
IB.533	3	
IB.516	6	
IB.534	oven	
IB.562	1	
IB.547	3	est. 0.35-0.55
IB.564	3	
IB.546	4	est. 0.35-0.55

Table 6: Cooking Trays from Chalinomouri *italics indicate estimated values

cat. no.	room	height (m)	rim diameter (m)	base diameter (m)	estimated volume (L)
IB.601	entrance		0.175	0.165	0.50 (estimate assumes a height of 0.05 m)
IB.590	yard	0.05	0.505	0.485	6.0
IB.591	yard	0.052			

Table 7: Basins from Chalinomouri *italics indicate estimated values

cat. no.	room	height (m)	rim diameter (m)	base diameter (m)	estimated volume (L)
IB.275	3	0.40-0.50	0.51		42 (estimate assumes a height of 0.40 m)
IB.279	6	0.30-0.40		0.276	

Table 8: Cups and bowls from Chalinomouri *italics indicate estimated values

cat. no.	room	shape	height (m)	rim diameter (m)	estimated volume (L)	surface decoration
IB.153	5	large conical cup	0.07	0.10	0.25	dark monochrome slip-interior
IB.169	2	ogival cup	0.066	0.095	0.25	dark monochrome slip
IB.192	5	ogival cup	0.065	0.125	0.43	dark monochrome slip-interior
IB.173	2 subfloor	ogival cup	0.078	0.106	0.36	painted rim band
IB.207	6	rounded cup	0.091	0.15	0.94	painted bands and foliate frieze
IB.251	1	shallow tripod bowl	0.032	0.10	0.065	undecorated

Table 9: Jugs from Chalinomouri *italics indicate estimated values

cat. no.	room	shape	height (m)	max diameter (m)	estimated volume (L)
IB.328	6	bridge-spouted jug	0.24	0.287	7.2
IB.323	5	collared jug	0.215	0.19	2.4
IB.311	6	low beak-spouted jug			
IB.314	6	low beak-spouted jug			
IB.315	6	low beak-spouted jug			
IB.321	2	jug	0.176	0.167	1.8

Table 10: Jars from Chalinomouri *italics indicate estimated values

cat. no.	room	shape	height (m)	rim diameter (m)	max diameter (m)	estimated volume (L)
IB.341	2	bridge-spouted jar	0.132	0.112	0.13	0.93
IB.352	3	side-spouted jar		0.09		
IB.349	2 subfloor	miniature side-spouted jar	0.055	0.05	0.084	0.13
IB.371	2	stirrup jar	0.20		0.23	4.1
IB.376	6	stirrup jar				
IB.397	2 subfloor	hole-mouthed jar	0.448	0.161	0.375	25
IB.398	1	hole-mouthed jar		0.168	0.39	
IB.400	3	hole-mouthed jar	0.145	0.098	0.173	1.7
IB.403	3	hole-mouthed jar		0.14		
IB.405	2	hole-mouthed jar		0.18		
IB.408	6	hole-mouthed jar		0.169		
IB.414	2 subfloor	piriform jar	0.366	0.185	0.307	13
IB.415	2 subfloor	piriform jar	0.429	0.22	0.318	17
IB.416	2 subfloor	piriform jar	0.45	0.22	0.385	26
IB.419	5	piriform jar				
IB.421	2, 4, and 5	piriform jar		0.22		
IB.422	6	piriform jar		0.18		
IB.431	6	jar				

Table 11: Amphorae from Chalinomouri *italics indicate estimated values

cat. no.	room	height (m)	rim diameter (m)	max diameter (m)	base diameter (m)	estimated volume (L)
IB.382	1					
IB.384	3		0.14			
IB.385	6					
IB.380	2 subfloor	0.50	0.098-0.152	0.33	0.147	21

Table 12: Pithoi from Chalinomouri *italics indicate estimated values

cat. no.	room	height (m)	rim diameter (m)	max diameter (m)	estimated volume (L)
IB.452	6				
IB.442	2		0.274		
IB.435	2 subfloor	0.741	0.265	0.55	101
IB.445	2 subfloor	0.799	0.324	0.54	96
IB.446	2 subfloor	0.674	0.24	0.53	86
IB.448	1		0.51	0.71	

Table 13: Other vessels from Chalinomouri *italics indicate estimated values

cat. no.	room	shape	height (m)	rim diameter (m)	max diameter (m)	base diameter (m)	estimated volume(L)
IB.363	6	pyxis	0.135	0.075	11.8	0.114	1
IB.366	2	pyxis	0.037	0.056	0.072	0.036	0.072
IB.460	2	lid	0.017			0.07	
IB.466	2	lid	0.024 (includes handle)	0.11		0.039	
IB.477	6	lid	0.033				
IB.481	6	lid	0.04	0.22			
IB.488	2	jar base reused as lid				0.16	
IB.489	2	jug/jar base reused as lid				0.096	
IB.603	1	stand				0.073	
IB.379	3	probable rhyton					
IB.614	oven	scuttle					
IB.349	2	miniature jar	0.055	0.05	0.084	0.04	0.13

Table 14: Food-related finds from Chalinomouri farmhouse

room	TCPs	Cooking dishes	Cooking trays	Basins	Cups	Bowls	Jugs	Jars	Amphorae	Pithoi	Pyxides	Mammal bones	Identified botanical remains	hearths
Entrance			1									88		
1	1	1				1		1	1	1		21	grape, fig, *Silene*, chaff	
2					1		1	4		1		10	legume, *Rosaceae*	
2 subfloor					1			5	1	3	1	3	fig, chaff	
3		3		1				3	1			34		2
4	1	2										102		
5					2		1	1				22		
6	2	1		1	1		4	4	1	1	1	81	olive, almond, fenugreek	1
NW Yard			2											
oven	1	1										10	clover, asphodel	
N Terrace												39		
total	5	8	3	2	5	1	6	18	4	6	2			

Table 15: Ceramic finds from Ayia Varvara house

cat. no.	room	shape	height (m)	maximum diameter (m)	estimated volume (L)	surface decoration
HV 65/11	3	TCP	0.38	0.39	32	some burning on exterior
HV 65/1	5	cup	0.073	0.096	0.27	exterior dark slip with faded white wavy band
HV 65/6	5	cup	0.075	0.088	0.25	dark slip
HV 65/4	5	jug	0.56	0.37	29	bulging knobs
HV 65/8	5	jug	0.115	0.088	0.26	light slip
HV 65/2	5	jug	0.134	0.138	0.96	dark slip
HV 65/9	5	jug	0.233	0.166	1.6	dark on light painted decoration: horizontal bands, reeds, dots
HV 65/10	4	basin	0.345	0.49	38	impressed cord pattern, beehive interior
HV 65/12	3	amphora	0.282	0.23	5.2	light slip
HV 65/5	5	amphora	0.4	0.31	15	light slip, protuberances
HV 65/7	5	amphora	0.25	0.19	3.3	dark on light painted decoration: spirals, foliate, horizontal bands
HV 65/3	5	pithos	0.86	0.52	116	raised corded bands, raised medallions
HV 65/13	5	pithos				raised cord bands

Table 16: Faunal remains from the Artisans' Quarter

Species	MNI
Sheep/goat	29
Pig	14
Cow	?
Dog	2
Hare	2
Mustelid	1
Common sea bream	1
Other Sparidae	16+
Picarel	17+
Damsel fish	6+
Barracuda	2
Parrot fish	2
Scorpion fish	1
Comber	1
Blenny	1
Birds	2+
Rodent	29
Shrew	6
Lizard/snake	2
Tortoise	1
Limpet	426
Monodonta	240
Cerithium	129
Murex	123
Fresh water invertebrates	14

Table 17: Tripod Cooking Pots at Mochlos Artisans' Quarter *italics indicate estimated values

cat. no.	room	preservation	whole profile?	height (m)	est. height without legs	rim diameter (m)	max diameter (m)	base diameter (m)	est. volume (L)	burn marks
IB.490	A.4	25%	yes	0.317	0.24	0.18	0.214	0.16	5.3	
IB.491	B.5	nearly complete	no		0.23	0.212		0.174	7.4	base, inside and out, and lower body
IB.492	A-B road	rim sherd	no			0.21				extensive, inside and out
IB.493	B.NT	nearly complete	yes	0.346	0.24	0.21		0.18	7.5	
IB.494	B.13W	25%	no		0.23			0.165	9.7	lower body, inside and out
IB.495	A.2	two non-joining rim sherds	no			0.16				rim and spout
IB.496	A.2	rim sherd	no			0.19				
IB.497	B.2	25%	no	0.21		0.17		0.16		legs and base
IB.498	B.2	25%	no	0.22		0.17		0.16		leg, base, and lower body
IB.501	A.2	rim sherd with spout	no							
IB.505	A.2	25%	no	0.18-0.22	0.133	0.17		0.142	2.0	
IB.506	B.10	base and leg sherd	no							
IB.507	B.13W	base and leg sherd	no							
IB.508	B.6	base and leg sherd	no					0.18		
IB.509	B.7E	base sherd	no					0.18		
IB.510	B.2	base and leg sherd	no							

Table 18: Cooking Dishes from Mochlos Artisans' Quarter

cat. no.	room	type	sherd type	median estimated rim diameter (m)
IB.511	A-B road	A	rim sherd	0.45
IB.517	A-B road	A		
IB.518	A.2	A	rim sherd	
IB.519	A.2	A	rim sherd	0.55
IB.520	B.10	A	rim sherd	
IB.521	B.2	A	rim sherd	
IB.522	A.2	A	rim sherd	0.50
IB.523	A.RY	A	rim sherd	
IB.524	A.RY	A	rim sherd	
IB.525	B.1	A	rim sherd	0.52
IB.526	A.10	A	rim sherd	
IB.527	B.RY	A	rim sherd	0.46
IB.529	B.13W	A	rim sherd	0.40
IB.530	B.6	A	rim sherd	
IB.531	B.8	A	rim sherd	0.65
IB.532	A.2	A	rim sherd	0.39
IB.535	A.2	A	spout sherd	
IB.536	B.13W	A	spout sherd	
IB.537	B.5 pit	A	spout sherd	
IB.539	B.13	B	rim sherd	
IB.540	B.13	B	rim sherd	0.35
IB.541	A-B road	B	rim sherd	
IB.542	B.RY	B	rim sherd	0.46
IB.544	A.1	B	rim sherd	
IB.545	B.2	B	rim sherd	0.55
IB.548	A.2	B	rim sherd	0.53
IB.549	A.2	B	one piece, mended from 4 fragments, preserving part of rim	0.53
IB.550	A.2	B	rim sherd	0.55
IB.551	A.2	B	rim sherd	0.48
IB.552	A.2	B	rim sherd	0.57
IB.553	A.2	B	rim sherd	0.45
IB.554	A.2	B	rim sherd	0.51
IB.555	A.2	B	rim sherd	
IB.556	A.2	B	rim sherd	0.50
IB.558	B.13 surface	B	rim sherd	0.70
IB.559	B.13E	B	rim sherd	
IB.560	B.2	B	rim sherd	0.50
IB.561	B.9	B	rim sherd	0.61
IB.563	B.3	B	rim sherd	
IB.565	B.4W	B	rim sherd	
IB.566	B.4W	B	rim sherd	0.58
IB.567	B.4W	B	rim sherd	
IB.568	B.5	B	rim sherd	0.48
IB.569	B.5 pit	B	5 fragments, preserving 67% of spout and rim	0.427
IB.572	A.RY	B	rim sherd	0.50
IB.574	B.alcove	B	spout sherd	
IB.575	A.2	B	spout sherd	
IB.576	B.9	B	spout sherd	

cat. no.	room	type	sherd type	median estimated rim diameter (m)
IB.577	A.3	??	rim sherd	
IB.579	A-B road	??	rim sherd	
IB.580	B.10	??	rim sherd	

Table 19: Cooking Trays from Mochlos Artisans' Quarter

cat. no.	room	height (m)	est.rim diameter (m)	est. base diameter (m)	est. volume (L)	burn marks
IB.581	A.2	0.034	0.40-0.48	0.039-0.047	3.2	traces on underside and exterior wall
IB.582	A.2	0.040	0.37-0.39	0.35-0.37	2.9	traces on underside
IB.583	B.9	0.034	0.16		1	
IB.584	B.13	0.026	0.33-0.38	0.31-0.36	1.3	
IB.587	A.6	0.025				
IB.588	A.1	0.032				
IB.589	A.1	0.038				
IB.592	B.11	0.029	0.38-0.43	0.36-0.41	2.1	
IB.593	A.9	0.029				
IB.594	B.RY	0.034				
IB.595	B.RY	0.034				
IB.598	B.8	0.024				underside and exterior wall
IB.599	B.7E	0.034				
IB.600	A.RY	0.020				
IB.602	B.13W	0.041	0.35-0.39	0.33-0.37	2.8	

Table 20: Basins from Mochlos Artisans' Quarter *italics indicate estimated values

cat. no.	room	% extant	height (m)	rim diameter (m)	base diameter (m)	vol. (L)
IB.269	A.1	base sherd			0.26	
IB.271	A.2	six non-joining rim sherds with handle		0.33		
IB.274	A.2	67%	0.275	0.34	0.31	27
IB.286	A.4	rim sherd		0.61		
IB.287	A.7	body sherd				
IB.273	B.1	rim sherd		0.421		
IB.282	B.10	33%, not a whole profile		0.56		
IB.272	B.11	rim sherd		0.25		
IB.281	B.13W	rim sherd		0.22		
IB.285	B.13W	rim sherd		0.4		
IB.284	B.13W	rim sherd		0.5		
IB.276	B.4W	25%, not a whole profile		0.34		
IB.270	B.8	nearly complete	0.41	0.545	0.335	55
IB.278	B.8	base sherd				
IB.283	B.9	<25%, not a whole profile	0.33	0.435		36

Table 21: Cups from Mochlos Artisans' Quarter; by type, from the ceramic catalog

shape	A	B	A-B road	total	surface decoration	mean estimated volume
conical cups	71	76	4	151	plain	0.11 L
ogival cups	16	22	0	38	dark monochrome slip	0.29 L
rounded cups	14	9	0	23	painted bands; some painted "blob" pattern or monochrome slip	0.68 L
other cups	2	5	0	7		
total	103	112	4	219		

Table 22: Cups from Mochlos Artisans' Quarter, counts by room (estimated totals from sherds, see Barnard 2003)

room	conical	ogival	rounded	other cup	total
A.1	116	29	4	14	163
A.2	182	57	16	2	257
A.3	33	9	1	3	46
A.4	44	9	2	2	57
A.6	13	3	0	3	19
A.7	5	0	0	0	5
A.8	5	3	0	0	8
A.9	31	8	1	0	40
A.10	16	8	0	1	25
B.1	26	14	3	4	47
B.2	20	8	4	8	40
B.3	68	25	3	2	98
B.4E	7	2	1	3	13
B.4W, 1st phase	9	5	0	4	18
B.4W, 2nd phase	13	5	0	5	23
B.5	6	1	0	0	7
B.6	15	5	1	1	22
B.7E	15	5	0	3	23
B.8	25	9	2	7	43
B.9	70	26	6	5	107
B.10	16	5	3	12	36
B.11	5	0	1	3	9
B.12	4	0	0	0	4
B.13W	39	16	0	2	57
Total	783	252	48	84	1167

Table 23: Bowls from Mochlos Artisans' Quarter *italics indicate estimated values

cat. no.	room	shape	height (m)	rim diameter (m)	est vol (L)
IB.247	A.2	"cooking" bowl		0.17	
IB.249	B.9	"cooking" bowl		0.17	
IB.246	A.2	"cooking" bowl		0.175	
IB.248	B.8	"cooking" bowl	0.093	0.18	1.1
IB.252	B.3	shallow tripod bowl	0.034	0.098	0.048
IB.256	B.4W	shallow tripod bowl	0.026	0.1	0.037
IB.253	A.7	shallow tripod bowl	0.041	0.104	0.057
IB.254	B.5 pit	shallow tripod bowl	0.042	0.105	0.071
IB.250	B.3	shallow tripod bowl	0.037	0.107	0.099
IB.255	B.1	shallow tripod bowl	0.028	0.13	0.092
IB.257	A.RY	tripod bowl			
IB.258	B.1	tripod bowl			
IB.259	B.1	tripod bowl			
IB.260	B.1	tripod bowl			
IB.261	B.1	tripod bowl			
IB.262	B.1	tripod bowl			
IB.264	B.3	miniature bowl	0.016	0.0455	0.012
IB.263	A.4	shallow bowl	0.032		.03
IB.234	B.13	horizontal-handled bowl		0.12	
IB.233	A.2	horizontal-handled bowl		0.14	
IB.231	A.2	horizontal-handled bowl	0.1	0.16	1.3
IB.232	A.2	horizontal-handled bowl		0.16	
IB.237	A.10	horizontal-handled bowl		0.17	
IB.235	B.9	horizontal-handled bowl		0.18	
IB.241	B.2	horizontal-handled bowl	0.102	0.195	1.8
IB.240	B.5 pit	probably horizontal-handled bowl		0.135	
IB.238	A.2	probably horizontal-handled bowl		0.15	
IB.239	B.3	probably horizontal-handled bowl		0.15	
IB.236	B.RY	probably horizontal-handled bowl		0.17	
IB.245	B.10	knob-handled bowl		0.12	
IB.244	A.2	knob-handled bowl		0.125	
IB.242	A.2	knob-handled bowl	0.095	0.139	0.80
IB.243	A.2	knob-handled bowl	0.069	0.152	0.76

Table 24: Bowls from Mochlos Artisans' Quarter *italics indicate estimated values

cat. no.	room	height (m)	rim diameter (m)	estimated volume (L)
IB.265	B.3	0.122	0.178	0.36
IB.267	B.3	0.035	est. 0.18-0.21	0.30
IB.268	B.3	0.114	est. 0.19-0.21	0.32
IB.266	B.1		est. 0.16-0.24	

Table 25: Jugs from Mochlos Artisans' Quarter *italics indicate estimated values

cat. no.	room	shape	height (m)	rim diameter (m)	max diameter (m)	est. volume (L)
IB.307	A.4	beak-spouted jug			0.104	0.44
IB.308	A.4 and A.7	beak-spouted jug			0.115	0.62
IB.309	A.1	beak-spouted jug			0.154	1.0
IB.310	A.1	beak-spouted jug	0.24		0.16	1.9
IB.313	B.5 pit	beak-spouted jug				
IB.317	A.1	collared jug	0.217	0.105	0.164	2.0
IB.320	A.2	collared jug		0.069		
IB.322	B.3	collared jug		0.08		
IB.324	B.7E	collared jug		0.065	0.142	5.5
IB.326	A.10	collared jug	0.229	0.11		
IB.329	A.1	trefoil-mouthed jug	0.165		0.15	1.2
IB.331	A.4	trefoil-mouthed jug	0.187		0.153	1.2
IB.332	B.3	trefoil-mouthed jug				
IB.334	A.2	trefoil-mouthed jug				
IB.335	B.9	trefoil-mouthed jug				
IB.330	B.1	miniature trefoil-mouthed jug	0.068		0.048	0.046
IB.333	B.8	miniature trefoil-mouthed jug	0.059		0.047	0.03
IB.316	A.1	low beak-spouted jug				
IB.327	A.1 and A.2	bridge-spouted jug			0.24	
IB.312	B.11	jug		0.04		
IB.318	B.9	jug	0.264		0.24	6.0
IB.319	A.2	jug	0.165		0.13	0.87
IB.325	B.13W	jug	0.18		0.15	1.6
IB.336	A.1	jug		0.052	0.144	1.4
IB.337	B.7E	jug	0.195		0.131	0.86

Table 26: Jars from Mochlos Artisans' Quarter *italics indicate estimated values

cat. no.	room	shape	height (m)	rim diameter (m)	max diameter (m)	base diameter (m)	vol. (L)
IB.338	A.7	bridge-spouted jar	0.392	0.269	0.32	0.264	21
IB.339	B.5 pit	bridge-spouted jar	0.143	0.104	0.135	0.103	1.4
IB.340	B.NT	bridge-spouted jar		0.31			
IB.342	B.4W	bridge-spouted jar	0.17	0.12	0.16	0.11	2.2
IB.343	B.8	bridge-spouted jar		0.147			
IB.344	B.11	bridge-spouted jar					
IB.345	B.10	bridge-spouted jar		0.10			
IB.346	B.11	bridge-spouted jar					
IB.347	B.13W	bridge-spouted jar		0.09			
IB.350	A.7	side-spouted jar		0.07			
IB.351	A.2	side-spouted jar					
IB.353	B.7E	side-spouted jar	0.095	0.08		0.08	0.8
IB.354	B.10	side-spouted jar		0.08			
IB.348	A.2	miniature side-spouted jar	0.067	0.042	0.079	0.035	0.16
IB.368	A.2	stirrup jar	0.197		0.232	0.094	3.5
IB.369	B.11	stirrup jar	0.18		0.235		3.7
IB.370	B.3	stirrup jar					
IB.372	B.3	stirrup jar				0.11-0.12	
IB.373	B.3	stirrup jar					
IB.374	B.4W	stirrup jar					
IB.375	B.7W	stirrup jar					
IB.377	B.RY	stirrup jar				0.120-0.122	
IB.390	A.1	hole-mouthed jar	0.262	0.123	0.261	0.145	7.7
IB.391	A.1	hole-mouthed jar		0.189	0.445		
IB.392	B.8	hole-mouthed jar	0.24	0.10	0.24	0.14	5.8
IB.393	B.8	hole-mouthed jar	0.37	0.175	0.299	0.16	15
IB.394	A.2	hole-mouthed jar	0.181	0.099	0.181	0.091	2.4
IB.395	A.1	hole-mouthed jar	0.315	0.159	0.325	0.16	14
IB.396	B.7E	hole-mouthed jar	0.301	0.153	0.312	0.157	12
IB.399	B.7E	hole-mouthed jar		0.14			
IB.401	A.2	hole-mouthed jar		0.20			
IB.402	A.1	hole-mouthed jar	0.242	0.20		0.20	
IB.404	B.4W	hole-mouthed jar		0.08			
IB.406	B.11	hole-mouthed jar		0.24			
IB.407	B.10	hole-mouthed jar		0.24			
IB.409	B.RY	hole-mouthed jar		0.174			
IB.410	B.2	hole-mouthed jar		0.22			
IB.411	A.1	piriform jar		0.188	0.27		
IB.412	B.2	piriform jar	0.495	0.163	0.37	0.158	26
IB.413	A.1	piriform jar	0.299	0.141	0.249	0.126	7.5
IB.417	A.1	piriform jar	0.409	0.167	0.38	0.138	25
IB.418	B.4E	piriform jar	0.409	0.2	0.301		16
IB.420	B.RY	piriform jar	0.35	0.149			

cat. no.	room	shape	height (m)	rim diameter (m)	max diameter (m)	base diameter (m)	vol. (L)
IB.423	B.6	piriform jar					
IB.424	A.4	amphoroid jar	0.473	0.32	0.38	0.229	34
IB.425	A.4	amphoroid jar		0.349	0.42	0.281	40
IB.426	A.2	amphoroid jar		0.31			
IB.427	B.8	possible jar				0.148	
IB.428	A.6	miniature jar	0.034	0.026		0.018	
IB.429	B.13W	miniature jar or ogival cup	0.057	0.08	0.04	0.034	0.13
IB.430	B.4W	jar		0.22			
IB.432	B.10	jar					
IB.432A	A.3	jar		0.14			
IB.432B	B.8	jar				0.25	

Table 27: Pithoi from Mochlos Artisans' Quarter *italics indicate estimated values

cat. no.	room	height (m)	rim diameter (m)	max diameter (m)	base diameter (m)	estimated vol. (L)
IB.433	A.1	0.89	0.4	0.61	0.301	131
IB.434	A.1	1.09	0.45	0.75	0.462	257
IB.436	A.8		0.32	0.68		
IB.437	A.4		0.455	0.635		
IB.438	A.4		0.48			
IB.439	A.4		0.33	0.515		
IB.440	B.4W		0.25			
IB.441	B.2		0.39			
IB.443	B.3		0.57	0.70		
IB.444	B.2			0.46		
IB.447	B.8		0.31	0.475		
IB.449	B.4E		0.35	0.62		
IB.450	B.alcove					
IB.451	A.10					
IB.453	B.10					
IB.454	B.10					

Table 28: Amphorae from Mochlos Artisans' Quarter *italics indicate estimated values

cat. no.	room	height (m)	min rim diameter (m)	max diameter (m)	base diameter (m)	est. volume (L)
IB.389	A.3		0.045			
IB.383	B.3					
IB.381	B.9	0.15	0.032	0.11	0.042	0.56
IB.387	B.10	0.48	0.083	0.31		
IB.386	B.11					16
IB.388	B.RY		0.07			

Table 29: Alabastra from Mochlos Artisans' Quarter *italics indicate estimated values

cat. no.	room	shape	height (m)	rim diameter (m)	maximum diameter (m)	estimate volume (L)
IB.295	A.7	tall alabastron				
IB.296	A.2	tall alabastron	0.13	0.049	0.105	0.46
IB.297	A.1	tall alabastron	0.143	0.046	0.124	0.92
IB.298	A.1	tall alabastron	0.147	0.056	0.127	0.83
IB.299	B.13W	tall alabastron	0.086		0.082	0.14
IB.300	A.2	tall alabastron		0.035		
IB.301	B.5 pit	probable alabastron	0.17		0.2	3.0
IB.302	B.10	tall alabastron				
IB.303	A.4	tall alabastron	0.24	0.09	0.21	4.1
IB.304	A.4 pit	squat alabastron	0.083	0.054	0.101	0.23
IB.305	B.10	squat alabastron	0.1	0.11	0.19	1.5
IB.306	B.8	miniature alabastron	0.044	0.036	0.053	0.03

Table 30: Pyxides from Mochlos Artisans' Quarter *italics indicate estimated values

cat. no.	room	shape	height (m)	rim diameter (m)	max diameter (m)	estimated volume (L)
IB.361	A.7	cylindrical pyxis	0.16	0.10	0.17	2.2
IB.362	A.2	cylindrical pyxis				
IB.364	B.6	cylindrical pyxis	0.18	0.095		
IB.365	A.6	small pyxis			0.099	
IB.367	A.6	small pyxis	0.04	0.024	0.048	0.024

Table 31: Other vessels from Mochlos Artisans' Quarter *italics indicate estimated values

cat. no.	room	shape	height (m)	rim diameter (m)	max diameter (m)	base diameter (m)
IB.457	A.7	lid	0.021	0.085		0.032
IB.458	B.2	lid	0.023	0.061		0.026
IB.455	B.3	lid	0.018	0.076		0.035
IB.461	B.3	lid	0.018			
IB.456	B.9	lid	0.024	0.084		0.038
IB.459	B.11, 12	lid	0.013	0.056		0.025
IB.462	B.13W	lid	0.022	0.099		
IB.463	B.13W	lid				0.034
IB.464	A.1	lid	0.022	0.085		0.03
IB.465	A.7	lid	0.024	0.108		0.044
IB.467	A.9	lid	0.019	0.082		0.039
IB.468	A.RY	lid	0.015	0.113		0.04
IB.469	B.13W	lid	0.021	0.125		
IB.470	B.1	lid		0.06		
IB.471	A.5	lid	0.014	0.061		
IB.473	B.10	lid	0.011	0.05		
IB.472	B.4E	lid	0.011	0.08		
IB.479	A.2	lid				0.31
IB.478	A.9	lid	0.025			

cat. no.	room	shape	height (m)	rim diameter (m)	max diameter (m)	base diameter (m)
IB.474	B.8	lid	0.062 (without handle)	0.333		0.297
IB.483	B.9	lid	0.03	0.23		
IB.476	B.13W and 4W	lid	0.038	0.24		
IB.475	B.RY	lid	0.036	0.26		
IB.480	Kiln A	lid	0.031	0.19		
IB.482	Kiln B	lid	0.031	0.375		0.355
IB.484	A.1	lid	0.064	0.31		
IB.486	A.7	lid		0.3		
IB.487	B.2	lid	0.15	0.3		
IB.485	Kiln A	lid		0.4		
IB.294	B.8	scoop				0.035
IB.609	A.1	scuttle	0.049			0.06
IB.611	A.1	scuttle	0.028			0.036
IB.615	A.1	scuttle	0.036 by 0.048			
IB.610	A.2	scuttle	0.035			0.046
IB.612	A.2	scuttle	0.046			
IB.613	B.2	scuttle				0.038
IB.616	A.10	firebox				
IB.617	A.RY	firebox	0.053 by 0.056			
IB.355	A.2	strainer		0.08		
IB.356	A.1	strainer		0.08		
IB.357	A.1	strainer	0.143	0.083	0.121	0.08
IB.358	A.2	strainer		0.08		
IB.359	A.5	strainer				0.13
IB. 360	A.RY	strainer	0.053			0.195
IB.604	B.1	stand	0.107	0.094		0.061
IB.605	B.1	stand	0.114	0.1		0.062
IB.606	B.1	stand				0.085
IB.607	B.4E	stand				0.054
IB.608	B.4E	stand	0.098	0.13		0.065
IB.378	B.13W	ring vase	0.044		0.16	
IB.330	B.1	miniature jug	0.068		0.048	0.029
IB.333	B.8	miniature jug	0.059		0.047	0.032
IB.348	A.2	miniature jar	0.067	0.042	0.079	0.035
IB.428	A.6	miniature jar	0.034	0.026		0.018
IB.429	B.13W	miniature jar or ogival cup	0.057	0.08	0.04	0.034
IB.264	B.3	miniature bowl	0.0455	0.031	0.012	

Table 32: Stone querns and basins from Mochlos Artisans' Quarter

cat. no.	room	shape
IC.401	B.5 pit	saddle quern
IC.403	B.2	saddle quern
IC.404	A.4	saddle quern
IC.421	A.2	basin
IC.422	B.6	basin
IC.423	B.3	basin
IC.424	B.9	basin
IC.425	A.9	basin
IC.426	A.10	basin
IC.426A	B.13W	basin

Table 33: Food-related Finds in Mochlos Artisans' Quarters, Building A

Room	TCPs	Cooking dishes	Cooking trays	Basins	Vats	Cups	Bowls	Trays	Jugs	Jars	Amphorae	Pithoi	Alabastra	Pyxides	Saddle querns	Stone basins	Mammal bones	Identified botanical remains	Hearths
1		1	2	1	1	4			7	7		2	2					fig, olive	
2	4	15	2	1	1	76	9		3	6			2	1		1	450	barley, olive, grape, fig, lentil, broad bean, pea, other legumes	2
3		1				1				1	1								
4	1			1		7	1		3	2		3	1		1		9 (11 in pit)	fig, olive, almond, legume, *Portulaca*, *Glaucium*	
5																		wheat, olive, fig	
6			1							1				2				olive	
7				1	1	1	1			2			1	1				olive	
8												1					2	fig	
9			1			2										1	40		
10		1				3	1		1			1				1			charcoal
Rear Yard		3	1			5	1												
total	5	21	7	4	3	99	13	0	14	19	1	7	6	4	1	3			

Table 34: Food-related Finds in Mochlos Artisans' Quarter, Building B

Room	TCPs	Cooking dishes	Cooking trays	Basins	Vats	Cups	Bowls	Trays	Jugs	Jars	Amphorae	Pithoi	Alabastra	Pyxides	Saddle querns	Stone basins	Mammal bone	Identified botanical remains	Hearths
1		1		1			6	1	1								1	olive, grape, pistachio	
2	3	3		1		5	1			2		2			1			fig, olive, grape, almond	charcoal
3		1				14	4	3	2	3	1	1				1	101	olive, almond, legume, *Cruciferae*	charcoal
4		4		1	1	2	1			5		2					4		
5	1	1				1											40 (130 in dump)		
6	1	1				5				1				1		1	6	olive, fig, Euphorbiaceae	
7	1		1			2			2	4								olive	
8		1	1	2		12	1		1	5		1	1				2	olive, fig	
9		2	1	1		18	2		2		1					1	169	olive, almond, legume, grape, fig, lentil	charcoal
10	1	2		1	1	3	1			4	1	2	2				6	olive, grape, fig, almond, legume, *Glaucium*	1
11			1	1		1			1	4	1						3	olive, grape, almond	
12						2													
13	2	5	2	3		22	1		1	2			1			1	7	grape, olive, *Euphorbiaceae*	1
alcove		1				3						1							
NT	1									1							55	legume, olive, *Caryophillaceae*	
RY		1	2			10	1			3	1						2	olive, grape	
total	10	23	8	11	2	100	18	4	10	34	5	9	4	1	1	4			

Table 35: Tripod cooking pots from Palaikastro House N

cat. no.	room	height (m)	height excluding legs (m)	estimated maximum diameter (m)	estimated volume (L)
NP111	17	0.352	0.270	0.260	8.5
NP112	17	pres. 0.118			
NP113	17	0.164	0.114	0.150	1.3
NP120	18	0.480	0.407	0.340	20.7

Table 36: Basins and tubs from Palaikastro House N *italics indicate values estimated from photographs

cat. no.	room	shape	height (m)	estimated rim diameter (m)	estimated volume (L)
NP66	9	basin	0.080	0.13	0.53
NP67	9	basin	0.114	0.40	9.6
NP89	11	conical basin	0.114	0.19	1.2
NP97	14	spouted tub	0.228	0.41	15
NP98	14	spouted tub	0.260	0.53	34
NP99	14	tub	0.415	0.45	43

Table 37: Counts and sizes of cups from Palaikastro House N, by type

shape	count	mean height (m)	surface decoration	mean estimated volume (L)	count for mean volume
conical cups	32	0.0445	plain	0.086	5
ogival cups	31	0.078	plain, monochrome, or banded	0.353	6
rounded cups	3	0.067	plain or monochrome	0.215	2
stemmed cups	3	0.085	banded with spiral frieze	0.265	2
straight cups	2	0.074	monochrome or rim bands	0.20	2
straight-sided cup	1	0.057			
decorated cups	1	0.043	dark-on-light decoration	0.26	1

Table 38: Bowls and kalathoi from Palaikastro House N *italics indicate estimated values

cat. no.	room	shape	height (m)	rim diameter (m)	estimated volume (L)
NP72	9	bowl		0.115	
NP105	15	kalathos	0.129	0.21	0.80

Table 39: Jugs from Palaikastro House N *italics indicate values estimated from photographs

cat. no.	room	shape	height (m)	estimated max diameter (m)	estimated volume (L)	surface decoration
NP78	10	bridge-spouted jug	0.310	0.32	16	horizontal bands and motif frieze
NP101	14	jug	0.270			
NP106	16	jug	pres. 0.180	0.13	1.3	? worn paint
NP27	5	jug	0.249	0.16	2.3	plain
NP28	5	jug	0.465	0.32	19	plain
NP60	9	jug	pres. 0.235	0.18	1.9	horizontal bands and motif frieze
NP62	9	jug	0.195	0.13	1.1	? worn paint

Table 40: Jars from Palaikastro House N *italics indicate values estimated from photographs

cat. no.	room	shape	height (m)	est. max diameter (m)	est. volume (L)	surface decoration
NP34	7	stirrup jar	0.265	0.316	10	marine style: octopus
NP26	5	bridge-spouted jar	0.250	0.225	5.0	horizontal bands and motif frieze
NP58	9	cylindrical jar	0.176	0.170	2.1	horizontal bands
NP59	9	cylindrical jar	0.175	0.170	2.3	horizontal bands
NP83	10	pithoid jar	0.324	0.21	7.5	drip
NP100	14	amphoroid jar	0.264	0.22	5.6	plain
NP109	17	amphoroid jar	0.398			
NP119	18	amphoroid jar	0.390			
NP46	8	amphoroid jar	0.407			
NP47	8	amphoroid jar	0.303	0.24	6.6	raised bands
NP63	9	amphoroid jar	0.254	0.22	5.4	plain
NP65	9	amphoroid jar	0.520	0.40	37	horizontal bands and motif frieze
NP85	10	amphoroid jar	0.390	0.30	15	
NP86	10	amphoroid jar	0.375			
NP68	9	MM spouted jar	0.630	0.450	56	light on dark; horizontal bands and motif frieze
NP69	9	piriform jar	0.480	0.370	23	horizontal bands and motif frieze

Table 41: Amphorae from Palaikastro House N

cat. no.	room	height (m)	estimated maximum diameter (m)	estimated volume (L)	surface decoration
NP117	18	pres. 0.40	0.320	17	horizontal bands and motif friezes
NP118	18	0.38	0.24	7.6	plain
NP140	outside room 15	0.41	0.28	13	drip/splatter
NP141	outside room 15	0.20			
NP8	3	0.43			

Table 42: Pithoi from Palaikastro House N

cat. no.	room	height (m)	estimated maximum diameter (m)	estimated volume (L)	surface decoration
NP121	18	est. 0.85	0.51	103	raised bands
NP70	9	0.87	0.54	101	raised bands
NP88	11	0.83	0.60	183	plain
NP64	9	0.56	0.37	30.0	plain

Table 43: Alabastra and pyxides from Palaikastro House N

cat. no.	room	shape	height (m)	estimated maximum diameter (m)	estimated volume (L)
NP108	17	alabastron	0.098	0.084	0.20
NP43	8	pyxis	0.099	0.13	0.73
NP61	9	pyxis	0.114	0.13	0.78

Table 44: Other shapes from Palaikastro House N *italics indicate estimated values

cat. no.	room	shape	height (m)	diameter (m)	estimated volume (L)
NP48	8	firebox	pres. 0.070		
NP76	9	firebox	0.027		
NP82	10	firebox	0.024	0.068	
NP45	8	lid		0.109	
NP36	7	pithos lid		0.220	
NP37	7	pithos lid		0.280	
NP84	10	pithos lid		0.220	
NP35	7	rhyton	0.250	0.12	
NP80	10	rhyton	0.090	width: *0.14*	
NP44	8	strainer	0.135	0.14	0.73
NP56	9	strainer	0.190	0.28	4.0
NP57	9	strainer	0.119	0.11	0.32
NP1	2	miniature cup	0.013	0.029	0.00055
NP42	7	miniature cup	0.020		
NP102	14	miniature tripod	0.049	0.040	0.019
NP81	10	miniature tripod	0.031	0.031	0.0065

Table 45: Food-related Finds at Palaikastro Block N

room	Tripod cooking pots	Basins/Tubs	Cups	Bowls	Jugs	Jars	Amphorae	Pithoi	Alabastra/Pyxides	Other	Hearths
2			6							1	
3			16				3				
above 3	4										
above 4			9								
5	1		2		1						
above 5			3		1	1					
above 6			1								
7			4					2		3	
above 7						1				1	
8			4			2			1	3	
9		1	4			3		5	1		
above 9		1	2	1	2	3				3	
10			2		1	4				3	
above 10										1	
11		1	6								
above 11								1			
14	1	4[4]	3		1	1	1			1	1
above 15			3	1	1						
16					1						
17	3		67+		1	2		1	1		
18	1		350+			1	2	1			
total	10	7	482+	2	9	18	6	10	3	16	1

[4] One of the basins/tubs in Room 14 is a modified pithos base.

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