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Protopalatial Knossos: The development of a major urban community

Abstract: The Protopalatial period at Knossos is seen as a time of momentous political change associated with the development of the palace on the Kephala hill. Such architectural and social changes, however, are only indirectly reflected in the survey material that this paper presents. The diagnostic pottery of the Middle Minoan period consists mostly of fine light-on-dark “Kamare Ware” (although painted decoration needed for close dating rarely survives in surface material) and to a lesser extent the mass-produced MM II–IIIa “crude ware,” which can be distinguished from Neopalatial ceramics only in the case of particular shapes. Coarse wares are less specifically diagnostic for this period. The distribution of fine wares in particular documents the expansion of the urban centre to more than 60 ha by the end of the Protopalatial period. This expansion is consistent with the wider territorial expansion of Knossos during this time, which was necessary to support the growing population of the increasingly differentiated urban community. This paper also examines the relationship of the survey data to the published Middle Minoan burial landscape of the Knossos Valley, but it is often difficult to distinguish cemetery areas from the background scatter of settlement debris. For the settlement, the survey material defines the boundaries of the urban core in the Protopalatial period in a more consistent way than the uneven distribution of excavations of Middle Minoan houses, clustered close to the palace, had allowed previously. This paper concludes that a combination of survey and excavation data largely provides an accurate picture of the extent of Protopalatial Knossos, although the emphasis in the survey data on closely datable fine wares and recovery biases mean that the picture is still incomplete.

Keywords: Knossos, Crete, Aegean, Greece, Protopalatial, Middle Minoan, urbanism, surface survey.

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The Protopalatial period at Knossos is traditionally defined by the building of the first palace on the Kephala hill around the start of the second millennium BC and its partial destruction, probably by an earthquake, about 300 years later. There is much that scholars continue to debate: whether the term palace is appropriate and whether it emerged suddenly or gradually (Driessen *et al.* 2002; Schoep *et al.* 2012); and what happened at the end of the period – did Knossos undergo the same sort of changes at the same time as other sites on Crete (Macdonald and Knappett 2013)? In this paper I do not want to suggest that the Knossos Urban Landscape Project (KULP) can resolve these questions but rather show that survey archaeology allows us to approach this formative period from a different angle: the survey results do not provide new information about the architectural phasing of the palace, but do set it within the settlement patterns of the local area. Given the rough dating of survey material the focus shifts from detailed chronology to broader periods. In some cases this paper will deal with Middle Minoan (MM) pottery in general, a broader span than the Protopalatial period.

Evans and Mackenzie made extensive use of pottery as they tried to make sense of the complex architectural development of the palace, and it is their pottery chronology that is

still in use (Mackenzie 1903; 1906; Evans 1921-35). There continues to be much debate over the relation between their pottery phases and the architectural phases of the palace, with a major reorganisation occurring in MM III. The Protopalatial period is generally identified with MM IB to MM IIIA pottery (MacGillivray 1998; 2007).

The palace's functions as a gathering place and storage facility were established early on but during the Protopalatial period a significant road network was established around Knossos, in some cases probably formalising existing paths with impressive paving, but also leading to a reorganisation of space (Warren 1994). This emphasised the focal nature of the palace by funnelling people towards it for gatherings among other things. The palace acted as a hub of activity, with a road network linking Knossos to trade and supply routes stretching across the north and down to the south coast of Crete. It was this which allowed the population of Knossos to grow; the KULP survey material can help trace the growth of this settlement.

The Middle Minoan settlement of Knossos has been excavated for over 100 years. At the same time as Evans was uncovering the palace, David Hogarth was digging test pits around the valley in the hope of finding the cemeteries (Hogarth 1899/1900). What he found instead was various signs of occupation: the cemeteries have remained somewhat elusive as I will discuss below. He spent some time excavating a couple of houses on the east slope of Lower Gypsades which have come to be called 'Hogarth's Houses'. These were among the first pieces of evidence for the town which surrounded the palace. He actually hit the earliest levels first, finding a chamber which he initially thought was a tomb, but later called a cistern with so-called 'Kamares' pottery in it. This black slipped pottery had first been identified by Flinders Petrie in Egypt and then identified by John Myres (1895) with pottery from the Kamares Cave on Crete, but it was excavations at Knossos that established it as a useful chronological marker. As Hogarth and Welch (1900-01, 78) noted: "It occurred in our digging at Knossos at all points at which the early town was probed to the rock". This is still an important observation because subsequent excavations around Knossos have shown that Protopalatial structures were frequently reused in the Late Minoan periods, leaving a picture similar to Hogarth's Houses, of Neopalatial and later occupation with Middle Minoan deposits beneath.

MacGillivray (1998) provides the fullest description of the ceramics of the Protopalatial period from Knossos. Fine wares are generally well-fired, often colourfully decorated and show the use of the fast wheel coming in for manufacture. We, however, are dealing with survey sherds so unless the part of the vessel is particularly diagnostic or sufficient decoration survives, it is usually only possible to give broad dates. Among the buff fine wares of Knossos, Kamares is distinctive because of its high firing temperature, sometimes resulting in a pinkish core, and it often retains the black slip. This type of pottery is made throughout the whole Middle Minoan period, however, a wider span than the Protopalatial period. Although it has been criticised for being too broad a term, it is a useful chronological marker for survey, just as it was for Hogarth.

The other group of material which is typical of the Protopalatial period is what MacGillivray (1998, 82) appropriately terms 'crude ware'. It is really the start of the tradition of mass production of pottery which continues into the Neopalatial period but it is possible to recognise certain shapes, particularly with a thick all-over slip which gradually falls out of use. A small rescue excavation west of the palace, Trial KV, is regarded as a typical Middle Minoan IIB deposit (Popham 1974). Similar material to the Trial KV deposit is found with MM IIIA black slipped Kamares pottery in the large dump

deposits in the palace such as the Kouloures, which were likely to have been filled after an earthquake destruction (MacGillivray 2007, 144-145). These deposits provide a stratigraphic cut-off point for the Protopalatial period, although the changes in pottery production are more gradual and so survey material cannot be treated in the same way as the usually better preserved and often stratified excavated material.

Figure 1 shows the dating groups used in this paper. They are a rough approximation to what is recognised as Protopalatial, with broad MM I-II and MM II-III categories. 'MM other' includes the coarse wares which are not more closely datable, and some fine wares which could be early Neopalatial. As Figure 1 shows, these include amalgamations of finer dates in some cases where a particular sherd had a diagnostic feature of shape or decoration, but it is rarely possible to date material to a single ceramic period. For instance, only a couple of MM IIIA sherds were identified so this material cannot inform recent discussions about MM IIIA early and late and the end of the Protopalatial period. These debates will continue to rely on excavated deposits (Macdonald and Knappett 2013; Rethemiotakis and Warren 2014).

Figure 2 shows the fabrics used in the analysis. Most of the period-specific identifications are the finewares – fabric A on the left, the 'fine buff' fabric that is familiar from both earlier and later periods (Momigliano 1991, 245; MacGillivray 1998, 55; Macdonald and Knappett 2007, 33). The other fabrics used for Middle Minoan pottery are identified macroscopically, based on inclusions, with 1 the most densely packed and 4 the least. Two of the more characteristic MM fabrics are what we have called B with angular black inclusions which can be identified with MacGillivray's (1998, 85-6) 'Tempered Buff' and Macdonald and Knappett's (2007, 37) 'Semi-Coarse/Coarse Buff'. This fabric continues into the Iron Age but can be recognised as Middle Minoan as a result of features of shape or decoration. Another frequent MM fabric is a sandy fabric we have called K, sometimes used for lamps, also known as 'Soft Sandy Orange' (Macdonald and Knappett 2007, 38).

Figure 3 shows the preliminary identifications for Middle Minoan done by Todd Whitelaw and known excavated deposits of Middle Minoan material identified by Hood and Smyth (1981) (see Whitelaw, Bredaki and Vasilakis, this volume). Figure 4 shows the survey units I've restudied, targeting the main concentration identified in this way, with areas around the edges included either because they looked promising in the preliminary dating or because of known deposits. Areas with low numbers of diagnostic sherds were not re-examined in detail. My aim has been to reanalyse the urban core and, where possible, the surrounding cemetery deposits (also plotted).

Figure 5 shows the distribution of MM I-II pottery, giving an idea the extent of the Protopalatial settlement in its early phase, with apparent occupation on Lower Gypsades to the south of the palace and the Acropolis to the west. Some of this material might be from cemeteries (see below) but the basic distribution around the palace covers up to 80 ha., seeming to indicate a sizeable population. This, as can be seen in Figure 6, is essentially the same overall size as the late Prepalatial distribution (Legarra Herrero, this volume) indicating that the main period of expansion was at the very start of this period, if not before. The Protopalatial distribution is more intense than the earlier EM III-MM IA but the area is not particularly different – possibly there is increasingly intense occupation over time. But as Figure 7 shows, for this dataset the MM II-III distribution doesn't exceed the MM I-II distribution so it is difficult to detect a marked expansion in this period.

It is possible to use different variables to try to see if there is any differentiation within

the main distribution but the shapes tend to map out broadly together (Figure 8). It is not clear how recovery bias affects these patterns. One of the issues discussed by Whitelaw (2013) is the relationship between surface visibility and sherd size which would affect the recovery of the finewares, but this is probably offset by their being easier to date. Figure 9 shows a comparison between MM I-II and MM II-III drinking vessels, but the later distribution is essentially the same as the earlier one. Here there could be a problem of identification: MM I-II Kamares is easier to distinguish from later material than crude ware, which blends into Neopalatial pottery unless a diagnostic feature is present. Figure 10 shows the distribution of the main MM fabrics rather than shape. As with shape the distributions overlap. Figure 11 shows the distribution of MM I-II finewares versus MM II-III finewares. If anything the MM I-II distribution is a bit wider than the later MM II-III. These different variables give a similar picture of site size and stability over time, but the question is whether all of this is occupation or whether we are picking up the nearest cemeteries.

Unfortunately few Middle Minoan burials have been excavated and fewer published (Preston 2013b). The most recently published is on the Acropolis (Monastiriako Kephali) to the west, which starts in MM IA and continues into LM IA (Preston 2013a). For this reason all prehistoric tombs are included in Figure 12, because some tombs were cleared and reused. The sherd distribution, particularly to the east of the Kairatos river, is affected by visibility: few sherds were recovered on the unploughed and overgrown upper slopes of the Ailias ridge. The southern tombs on Lower Gypsades have preliminary publications (Hood 2010), and the one to the north at Makryteichos is a likely group of EM III-MM IA tombs based on Mackenzie's unpublished daybooks (Whitelaw, pers. comm.). Better known is the Mavrospelio cemetery to the east excavated by Evans and John Forsdyke in the 1920s (Forsdyke 1926-27; Alberti 2013). Most of these are used into the Neopalatial period and later. There is only one clear Protopalatial deposit in a pit within tomb 17. Since this is not a particularly distinctive ceramic assemblage compared with occupation deposits, it does not provide any useful markers of tombs to look out for in the survey material.

Not all burials are in stone cut chambers like the Mavrospelio tombs: there are also pithos burials nearby on the Ailias slope and elsewhere. Figure 13 plots the prehistoric pithos distribution, showing a concentration on the Acropolis near the Monastiriako Kephali tomb. Burials in painted pithoi were found in the upper levels of this excavation, above the collapsed earlier tomb (Preston 2013a, 11), and the painted pithos fragments shown in Figure 13 may indicate further burials. Another possible indicator of tombs is potentially the fine black slipped pottery. There is a noticeable concentration on the edge of the distribution on the Acropolis which hints at mortuary material, particularly in conjunction with the known location of tombs. Its appearance in other outlying spots could also be indicative of tombs. But as with the earlier periods, Gypsades seems to be different, with the appearance of dense occupation. But if there is a penumbra of tombs to the west this allows us to suggest an approximately 60-75 ha. settlement in MM I-II which maintains its size until the Neopalatial period.

To conclude, I hope I have shown that the evidence for the size of Knossos in the Protopalatial period comes out through a variety of variables in the survey data, which also help to consolidate the picture of the mortuary landscape which has emerged from recent publications. The boundary between settlement and cemetery is more difficult to establish. Although I cannot contribute to debates about the phasing of deposits around the palace, the survey data help to define the city and place Protopalatial Knossos in its

broader landscape, something which the current Gypsades Project near Hogarth's Houses will also achieve (Bennet 2016: 10-11). This mix of survey, excavation, reanalysis of deposits and publication of old excavations will continue to shed more light on this formative period in the history of Knossos.

Acknowledgments

The Department of Greece and Rome, British Museum enabled my participation at the conference and the Knossos Urban Landscape Project study seasons. With thanks to Todd Whitelaw for reading a draft of this paper and his advice and encouragement during the field and study seasons of the Knossos Urban Landscape Project. Errors remain mine.

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Figure captions

Figure 1. Total number of MM sherds identified by shape and date. Date groupings as used in subsequent figures.

Figure 2. Total number of MM sherds identified, by fabric. Letters indicate fabrics (A is fineware). 1-4 indicates coarseness (1=densest quantity of inclusions).

Figure 3. MM sherds identified in preliminary dating and MM deposits identified by Hood and Smyth (1981).

Figure 4. Collection units restudied by author (green). MM sherds identified in reanalysis (dark blue) and preliminary analysis (light blue). MM tombs marked with black crosses.

Figure 5. MM I-II pottery. The area of densest distribution around the palace (marked in red) covers around 80 ha.

Figure 6. MM I-II distribution (blue) compared with EM III-MM I distribution (red).

Figure 7. MM I-II distribution (blue) compared with MM II-III distribution (red).

Figure 8. Distribution of MM shapes (blue: cup/bowl; red: jar/jug; green: other).

Figure 9. Comparison of distribution of cups/bowls dating to MM I-II (blue) versus MM II-III (red).

Figure 10. Distribution of major MM fabrics (A: blue; B: red; K: green).

Figure 11. Distribution of fabric A: MM I-II (blue) versus MM II-III (red).

Figure 12. Known tombs (definite MM in black) plotted against pottery distribution: MM I-II (blue) and MM II-III (red).

Figure 13. Distribution of prehistoric pithos fragments (preliminary dating: light blue; reanalysis: dark blue; painted pithos marked in black) against known tombs.

Figure 14. Distribution of MM I-II pottery (blue) plotted against black slipped MM I-II pottery (red).