

# THE ARCHITECT AND THE SCRIBE. POLITICAL IMPLICATIONS OF ARCHITECTURAL AND ADMINISTRATIVE CHANGES ON MM II-LM IIIA CRETE \*

Whenever a society expands, the wielding of power becomes more than one individual can cope with and the one in charge, the ruler, will be forced to share functions or to delegate power. Hence, a hierarchy develops<sup>1</sup>: a structure in which those at the top do little but decide much and those at the bottom do much but have little to decide. Such a hierarchical relationship is governed by regulations and by the principles of accountability. In the case of Minoan Crete, it is the palaces that are thought to embody the home of the ruler, the tip of a hierarchical pyramid. The three main palaces (Knossos, Phaistos, Malia) have a 500-year long history, and as has been noted by M. Wiener, it seems unlikely that the same relationship existed among these different palaces over such a long period<sup>2</sup>. Likewise, different relationships probably existed between the ruler and the ruled in the different palatial societies in this same period, and different political structures probably existed within each of these palatial societies. Although there is little evidence for a particular type of "interchange" between the palatial settlements, namely warfare, we do have massive fire destruction levels both at the end of MM II and LM I, precisely the turning points that inaugurate new patterns of settlement and society on the island<sup>3</sup>. Moreover, other changes can be pinpointed in this period, e.g., between MM II and LM IA or within the LM I period, early in LM IIIA2 or at the end of LM IIIB. This paper discusses only the changes apparent in architecture and administration in general from MM II to LM I to LM IIIA<sup>4</sup>. We will argue that these changes can be explained by evolutions in politics and government participation. But, in contrast to the LM I changes which were mostly put in motion by the Santorini eruption, we believe that the major changes — MM II to LM I and LM I to LM IIIA — were brought about by military encounters. We do not consider ourselves qualified to judge the different opinions on the potential types of state organisation that existed on Crete during these three phases<sup>5</sup> which is

\* Our thanks are due to P. Rehak for some constructive comments. The following abbreviations have been used:

MAMAT = J.W. SHAW, *Minoan Architecture: Materials and Techniques*, ASAtene 49 (1971);

ProcCretCongChania = Πεπραγμένα του ΣΤ Διεθνούς Κρητολογικού Συνεδρίου, Χανιά 1986 (1990).

1 There is as yet little evidence for alternatives to hierarchical structures. For some possible ideas, cf. P.G. HERBST, *Alternatives to Hierarchies* (1976).

2 M. WIENER, "The Isles of Crete ?", in D.A. HARDY et al. ed., *Thera and the Aegean World*, III.1. *Archaeology* (1990), 153.

3 J.F. CHERRY, "Politics and Palaces: Some Problems in Minoan State Formation", in C. RENFREW & J.F. CHERRY, *Peer Polity Interaction and Socio-Political Change, New Directions in Archaeology*, (1986), 27 for the observation.

4 The changes taking place within the LM I period are here only passingly mentioned since they form the core of a separate study (J. DRIESSEN & C.F. MACDONALD, *The Twilight of Palatial Crete* [in preparation]).

5 For a discussion on the types of states and the futility of classification, see J.F. CHERRY, "Generalisation and the Archaeology of the State", in D. GREEN, C. HASELGROVE & M. SPRIGGS eds., *Social Organisation and Settlement* (BAR Int. 47, 1978), 411-418; IDEM, "Evolution, Revolution and the Origins of Complex Society in Minoan Crete", in L. NIXON & O. KRZYSZKOWSKA eds., *Minoan Society*, 33-

why this paper only tries to define the material changes. We hope that others will translate these into a theoretical political framework.

In a paper called "The Archaeology of Government", published in 1974, Bruce Trigger<sup>6</sup> distinguished among demographic, cultural, societal, geographical and iconographical data that could help archaeologists make inferences about ancient political systems. For the Aegean, relatively little work has been done in analysing this potential, although for MM II Malia it would allow to make certain observations: for instance, the fine daggers and swords, the wasp-pendant and perhaps even the leopard-sceptre could, in such a context, be interpreted as symbols of status and authority. One might infer that the élites made specific demands on craftsmen which would further stress their own political authority<sup>7</sup>. Likewise, the distribution of artefacts such as specific pottery types (e.g. the Chamaizi pots), carpenter hoards etc., has been used to make geopolitical observations: thus, there is a possibility that the territory of Malia in MM II may have extended down to the south coast and from Gouves to Chamaizi, with a serious reduction in the size of this territory in LM I<sup>8</sup>. Whether this implies that the MM administration of Malia coped better with a larger territory than its Neopalatial successor or that, because it could not cope with such a territory, the Neopalatial geopolitical structure was different, is of course a matter of speculation.

It has been argued that a proper political system, a "state", can only exist if full-time specialists are used to serve the needs of the élite and the state apparatus this élite controls<sup>9</sup>. Among these specialist classes, the four that are best represented archaeologically are artisans, bureaucrats, soldiers, and retainers and it is the presence of all four that leads to the creation of an élite culture (a "Great Tradition"). For the purpose of this paper, it is accepted that the palace, because of the craft specialisation it reflects, stands for some type of prehistoric form of state and that a palace equals an administration, i.e. a body that copes basically with planning, organising and supervising. For Crete, we are fortunate that the archaeological record, especially where it concerns architecture, is particularly informative for such co-operative activity, in the form of public works. These projects necessarily involved architects<sup>10</sup>.

Another domain in which craft specialisation is evident is in the written administration. However, "scribes" as such apparently did not exist in the Aegean (or at least we have no proof that they existed): what we call a "scribe" was, in fact, a literate official, an administrator who occasionally used the stylus in his daily activities which thus may imply a high degree of craft literacy. As is clear from many anthropological studies, writing or record-keeping is not a necessary prerequisite of administration, although writing greatly facilitates and gives it a more permanent character and a reference system.

45; IDEM, "The Emergence of the State in the Prehistoric Aegean", *Proc. of the Cambridge Philological Society* 210 (1984), 18-48; IDEM (*supra* n. 3).

6 B. TRIGGER, "The Archaeology of Government", *World Archaeology* 6 (1974), 95-105.

7 Compare with P. PEREGRINE, "Some Political Aspects of Craft Specialization", *World Archaeology* 23 (1991), 1-11; see also J.-C. Poursat's contribution to this volume.

8 J.-C. POURSAT, "Town and Palace at Malia in the Protopalatial Period", in *Function Palaces*, 75; G. CADOGAN, "Lasithi in the Old Palace Period", *BICS* 37 (1990), 172-174; cf. C. MORRIS & A. PEATFIELD, "Minoan Sheep Bells: Form and Function", *ProcCretCongChania*, 29-37, on the geographical distribution in EM-MM I/II of "sheep bell" figurines which partly could also reflect a territory. Ideally, an as large as possible number of artefacts should be used for such an exercise, but see CHERRY (*supra* n. 3), 24, arguing for caution.

9 Indeed, building programmes of a labour-intensive nature do not necessarily relate to the presence of a state but the presence of full-time specialists implies that a system feeds these specialists in return for specific services.

10 CHERRY (*supra* n. 5, 1978), 427, approached the matter from another angle, investigating how Aegean states extracted and processed matter, energy and information.

This paper examines the degree to which the state invested in these two typical sumptuary goods in various periods in order to detect changes in the political structure in Minoan history <sup>11</sup>.

### Architecture: monumentality and public works

Certain anthropologists have argued that architecture to some degree reflects social relationships, including political organisations, and that there is some correlation between scale, quality and variation in the architecture and cultural complexity. Recent studies have also advocated the classification of architecture, not according to function, as it is usually done, but according to cost of production and maintenance (*i.e.* expenditure in materials, time and labour) and in terms of productive and non-productive architecture <sup>12</sup>. The premise is that the scale and cost of architecture reflects an access to, and control of, labour and that differences in architectural energy thus reflect differences in scale in matters of social differentiation and inequality <sup>13</sup>. Armed with this conception, we may consider **monumentality and public buildings** in Minoan Crete from MM II to LM IIIA times.

Monumental architecture is characterised by the fact that its size and quality of construction exceed the requirements of its function: indeed it discredits the "least effort principle" and is thus a typical example of conspicuous consumption, usually thought to embody power <sup>14</sup>. Monumentality on Crete is primarily achieved by the use of ashlar blocks and orthostats from early in the **Middle Minoan** period onwards <sup>15</sup>. Orthostat work is found at the Phaistos palace and at Malia in Chrysolakkos and around the agora <sup>16</sup>. Malia, moreover, has yielded evidence for the use of ashlar in other important buildings such as Quartier Mu and the Hypostyle Crypt, but only sporadically in the shrines. The re-use of both orthostats and ashlar blocks in the Neopalatial palaces of Knossos and Malia suggests that the MM predecessors of these buildings were similarly outfitted <sup>17</sup>. For the rest of the island in MM II, orthostates are absent and ashlar very limited. In fact, this kind of monumentality is absent in

11 It will be stressed in this paper that considerable differences exist between the regions in the different periods; moreover, we do not exclude that on the Cyclades (cf. Kea where the fortifications as well as the spring chamber seem to date to MM III [J.L. CASKEY, "Investigations in Keos", *Hesperia* 40, 1971, 363-367]) a rather different situation existed.

12 For this examination, we have borrowed heavily from the methodology followed in E.M. ABRAMS, "Architecture and Energy. An Evolutionary Perspective", in M.B. SCHIFFER ed., *Archaeological Method and Theory* I (1989), 47-87. It must be kept in mind that social differentiation and social inequality are two different features, the first related foremost to ranked (or kinship) societies, the second to stratified societies; variability in intra-site and inter-site architecture, it has been argued, reflects more an increase in social differentiation than in social inequality.

13 In addition, it should be noted that, in contrast to some public buildings in contemporary civilisations, the construction of Minoan monuments appears not to have spanned a long period of time *i.e.* they are not the result of a building programme that took several generations. Although equally important, we do not consider here the expenses involved in the training of the workmen, the procuring of raw materials, their transportation and the actual assembly of the building, since these costs are reflected to a certain degree in the finished product.

14 Compare with G. BLOMEYER, "Architecture as a Political Sign System", *International Architect* 1:1 (1979), 54: "architecture is never materialised ideology, but at the most an ideological fetish" with examples from Nazi Germany.

15 See especially J.W. SHAW, "The Development of Minoan Orthostates", *AJA* 87 (1983), 213-216.

16 The agora blocks, however, resemble dadoes more than real orthostats.

17 MAMAT, 91, 92; the orthostate west facade at Knossos is said to be MM III (MAMAT, 88, n. 8; SHAW [*supra* n. 15], 214).

the houses of the city or country folk of the period <sup>18</sup> and its use seems limited to specific official buildings (*e.g.* the large building beneath the Zeus Thenatas shrine at Amnisos). This scarcity can be contrasted with the abundance of ashlar in the Neopalatial period: the proliferation of monumentality is perhaps the most surprising feature that sets Minoan culture apart from contemporary civilisations. Orthostats have been identified mainly in the palace at Knossos and in the central building at Kommos, but roughly isodomic ashlar courses set on some kind of socle are now found throughout the island: in some settlements, only a single façade or a weather-exposed inner wall was thus treated, but elsewhere entire houses are built in ashlar and the energy that was put into the architectural finishing of many a domestic building is indeed remarkable. In some cases, it is evident that it was not the most important building of the settlement that was thus fitted <sup>19</sup>. In addition to palaces and private dwellings, there is also evidence for a few other buildings that are similarly treated, which are discussed below. The quantity of ashlar blocks used in Neopalatial buildings presupposes massive quarrying operations, but differences may be observed throughout the island <sup>20</sup>. Thus, at Gournia and Myrtos-Pyrgos, only the central buildings appear to have been equipped with ashlar masonry but elsewhere, *e.g.* at Tylissos and Palaikastro, its use is much more widespread. At sites such as Malia and Pseira, the presence of ashlar is limited, despite the presence of good *ammouda* quarries in the case of Malia. It seems clear that this proliferation of ashlar masonry must be, in one way or another, translated in terms of social and political relationships. If the embellishment of the residential buildings differs from one site to another, it is possible that the hierarchical structures within the settlements may have differed from one region to the next.

The next period, LM IIIA, again witnesses changes. All the quarries used in the earlier periods appear to have been abandoned and only older ashlar blocks are reused, as seems obvious from the remains at Knossos, Tylissos and Kommos, and from funerary architecture at several sites. Elsewhere, ashlar is altogether absent. Monumentality is still achieved by stressing size (*e.g.* Kommos, H. Triada), but there is also a move toward creating larger internal rooms <sup>21</sup>. In any case, private residential architecture in general keeps a low profile but funerary architecture receives a major impetus, especially with the construction of LM tholoi (Kefala, Archanes, Achladia, Armenoi, etc.) and chamber tombs <sup>22</sup>.

A second architectural approach takes into account public works, a definition we give to structures that had a use that exceeds the needs of the individual household <sup>23</sup>. Such projects imply a central authority involved in the planning, organising and supervising of the construction and maintenance of these structures. It is evident — and illustrated by the different archival records on Crete — that the state must have had resources (goods, services) at its disposal. Most resources are perishable or are expended in the process of being used, so

18 Ashlar outside the palaces dating to MM has been found *e.g.* at Knossos (a wall in the Little Palace is said to be older: *PM* II, 515) and at Palaikastro (R.C. BOSANQUET *et alii*, "Excavations at Palaikastro", *BSA* 9 [1902-1903], 287; *MAMAT*, 92-105).

19 This seems to be the case at Palaikastro, Malia and Pseira.

20 For quarries, see J. SOLES, "A Bronze Age Quarry in Eastern Crete", *JFA* 10 (1983), 42-43 and J.A. MACGILLIVRAY, L.H. SACKETT *et al.*, "An Archaeological Survey of the Roussolakkos Area at Palaikastro", *BSA* 79 (1984), 143-149 (*Ta Skaria*).

21 This may, however, simply be the result of the fact that little evidence exists for upper floors where in Minoan times the larger rooms may have been situated.

22 See *e.g.* J. WRIGHT, "Death and Power at Mycenae: Changing Symbols in Mortuary Practice", in *Thanatos*, 174, for the energy involved in the digging and construction of tombs.

23 The only discussion we know of is in the recent manual by O.T.P.K. DICKINSON, *The Aegean Bronze Age* (1994), 158-164, which appeared after this manuscript was finished.



they must constantly be supplied afresh. More durable resources and facilities (such as official buildings, fortifications, large storage facilities, communal shrines, gathering places, roads, necropoleis and hydraulic works) require expenditures for their construction and maintenance, which implies that the state apparatus knew how to organize its income <sup>24</sup>. By examining the attention given by the state to such works, inferences can perhaps be made about the power of the palace.

Middle Minoan Crete seems to have known quite a substantial number of constructions side by side with the palace that appear to have had an **official or semi-official character**: at Malia, Quartier Mu and the Hypostyle Crypt obviously represent some kind of official structures and a construction similar to the Crypt apparently existed at Phaistos. At Monastiraki, both the complex excavated by A. Kanta and the building partly cleared in World War II and recently re-examined, likewise suggest official or semi-official buildings and both structures have yielded collections of sealings. Since little survives elsewhere, it may be assumed that fewer central buildings existed throughout the island but that large centres counted several buildings with official functions <sup>25</sup>.

In LM I, on the other hand, each settlement seems to have possessed a central building which has either the shape of a canonical palace or is a blown-up version of a rich town house. Normal sites do not seem to count other official structures, although there are some exceptions: the Caravanserai at Knossos <sup>26</sup>, which must be some kind of official utilitarian building, and a free-standing stoa at H. Triada, which also looks like a public structure, albeit very much linked to the Villa Reale <sup>27</sup>. Neither structure seem to have had anything to do with administration, however <sup>28</sup>.

24 See G.L. Cowgill's remarks in N. YOFFEE & G.L. COWGILL, *The Collapse of Ancient States and Civilizations* (1988), 259; such an organisation can naturally also exist outside the palaces but in this paper it is assumed that this authority is embodied by the central building in each settlement.

25 At Zakros, there was a large protopalatial building east of the later palace and with a different orientation but apparently also connected to an even larger court. Other buildings, such as the "Pottery Stores" and the "Building with the Shrine Stores" also date to the First Palace Period and seem to have had a utilitarian function (cf. *AR for 1971-72*, 25-26; *AR for 1975-76*, 31). Little is known about Middle Minoan Palaikastro, but the paved street system existed already since the major structures beneath Blocks Pi and X are already aligned to them (see J.A. MACGILLIVRAY & J. DRIESSEN, "Minoan Settlement at Palaikastro", in P. DARCQUE & R. TREUIL eds., *L'habitat égéen préhistorique. Actes de la Table Ronde internationale de l'Ecole française d'Athènes [Athènes, 23-25 juin 1987]*, BCH Suppl. XIX [1990], 399-401; for Blocks Pi and X, see also *BSA* 9 [1904-05], 274, 287, Plates X-XII). The same goes for Myrtos-Pyrgos where the later country house has swept away most earlier remains (cf. G. CADOGAN, "Pyrgos, Crete, 1970-7", *AR for 1977-1978*, 74: from it come a crucible, some hieroglyphic seals and ritual vases, but, in terms of architecture, only the upper cistern seems to date to the Pyrgos III period).

26 If it is not a LM II construction, as the frescoes may suggest (although J.D.S. PENDELBURY, *A Handbook to the Palace of Minos at Knossos* [1969], 68 prefers a MM III-LM I date); the North-West Treasury (*BSA* 9 [1903], 112-130; *PM* IV, 50) is a protopalatial building that stayed in use later, just like the Arsenal which must also represent an older MM structure re-used in LM II-III times (cf. the MM IIIA building close to it dug by Hood [*AR for 1961-62*, 26]); the function of the Hypogeum, said to be of EM III or MM I date, is debated. The Northeast building looks very much like the basement of a normal dwelling and the Unexplored Mansion as well as Building B at Tyliassos have nothing that could allow the classification as a public building. Next to the Royal Road, Warren excavated several structures of which the function is not clear: of one (LM I in date) only steps were preserved (*AR for 1971-72*, 21, no 5), the other is probably a grandstand but contained a LM IB cup in its construction so it could be slightly later (*AR for 1972-73*, 27-28).

27 See J. SHAW, "A 'Palatial' Stoa at Kommos", in *Function Palaces*, 109.

28 Some other public works, such as the dams at Pseira, are said to be LM I but involve little labour and can be compared with terrace walls: one of them is 15.50 m long, up to 3.10 m wide and 3.62 m high (*AR for 1990-1991*, 75-76).

The evidence for LM III is still scrappy, but if the remains at H. Triada and Tyliossos are representative, it may be that larger settlements again saw the construction of several semi-official structures side by side <sup>29</sup>.

If we look at **market or gathering places**, it seems that MM Crete is the period *par excellence* for the creation of spaces for such communal activities. All the palatial central courts already existed and additional spaces were provided by the construction of ample west courts and the so-called theatral areas (Phaistos, Malia, Knossos) <sup>30</sup>, often paved and crossed by raised walks. Middle Minoan Malia also saw the construction of one of the largest enclosed courts, called the "agora" — and it may well have been a market. A court crossed by raised walks was partly cleared west of Quartier Mu and another has been found west of the west court at Knossos <sup>31</sup>. The court at Gournia must also be part of the MM town and the same is true for Pseira. At Zakro, the earlier courts appear to have been larger than in the Neopalatial town. It is known that by LM I, the access to the central courts of the palaces had become much more restricted and other courts had gone out of use or had lost their original importance <sup>32</sup>. The absence of a gathering space in a town like Palaikastro may be revealing in this regard <sup>33</sup>, although at Archanes a court crossed by raised walks may date to the Neopalatial period.

In LM III, there is some evidence at Plati and Malia which suggests that public gathering spaces had again become more important and the stone platforms near the Stratigraphical Museum at Knossos were also constructed in an earlier habitation zone, given up after a LM II fire destruction.

The MM II state or palace also constructed a series of **communal storage facilities** including the *kouloures*, all of which appear to be of MM date. They have been identified at Knossos, Phaistos and Myrtos-Pyrgos <sup>34</sup>. Moreover, at Malia, ample additional storage facilities were also provided by Quartier Mu and the so-called "Magasins Desenne", south-west of the palace <sup>35</sup>, and a similar picture may also be true for a site such as Monastiraki. Similar MM II/III storage facilities may be represented at Knossos near the Royal Road <sup>36</sup>. In LM I, such structures appear to be absent, although a change may occur at the end of the period when additional storage space is constructed at several sites: the "bastione" at H. Triada, the magazines at Nirou Khani and the silos at Malia. The Neopalatial palaces gave less attention to the construction of magazines, whereas many private dwellings now include much storage space <sup>37</sup>. The differences between buildings within a single settlement or between different regions seem to repeat the evolution observed for ashlar construction.

29 SHAW (*supra* n. 27), 109, dates the stoa to LM III (*contra* Hayden).

30 PM III, 247-251: its construction involved the paving over of a kouloura, connected to some sort of stone conduit (see also BSA 8 [1902-1903], 106-107).

31 See P.M. WARREN, "The Minoan Roads of Knossos", in *Knossos. A Labyrinth of History. Papers in Honour of Sinclair Hood* (1994), 189-210.

32 J. MOODY, "The Minoan Palace as a Prestige Artefact", in *Function Palaces*, 239. The new central court at Kommos — if no open access existed from the sea-side — was of even more restricted access.

33 The only candidates are the large courtyard of Block B and the hole of Block M (Area VI of the new excavations) which was abandoned early in LM IA.

34 CADOGAN (*supra* n. 25), 74 (the lower one had a capacity of 23 tonnes).

35 The silos at Malia were constructed on top of Protopalatial remains and must date to (quite late, Driessen believes) Neopalatial times.

36 The Arsenal excavations (S. Hood): they remained in use till LM IB. This may also be the case for the MM II building examined by Platon (cf. S. HOOD & D. SMYTH, *An Archaeological Survey of the Knossos Area* [1981], 51, no 214).

37 MOODY (*supra* n. 32), 237.

In LM IIIA, H. Triada witnessed the construction or reconstruction of the "mercato" and the "bastione" and Kommos saw the building of the presumed ship-sheds: both locations clearly illustrate the new interests of a public authority with regard to storage.

It is also likely that **peak sanctuaries and communal shrines** also represent some kind of public work although they have rarely been seen as such. The appearance of the peak sanctuaries has been directly linked by scholars such as Cherry to the emergence of the palaces: the peak cults would reflect a deliberate attempt by certain élites to consolidate their power by the communal performance of ritual activities<sup>38</sup>. This is certainly the case when one looks at the other evidence for community cults<sup>39</sup>. At Malia, for instance, there may have been a large cult room next to the main entrance of Quartier Mu, and there can be no doubt that the "Sanctuaire aux Cornes" and the Shrine beneath the Stratigraphical Museum were real urban shrines, served by paved roads and gathering places. At Tylissos, Hazzidakis found a large MM building beneath the Greek altar and this may have had a cult function since it was associated with clay figurines and so-called sheepbells or sacred robes<sup>40</sup>. Likewise, the temple at Anemospilia may be counted among the examples of the cult buildings of the First Palace Period<sup>41</sup>. One may also wonder about the impressive ashlar structure at Amnisos, which was also built in Middle Minoan times: it was "re-used" for cult purposes in later times and its terrace-like construction — not unlike that on Iuktas — could suggest that it had a similar function in the Protopalatial period. Regional variation is obvious, however.

The situation is entirely different in LM I: although the major peak sanctuaries are monumentalised (Iuktas, Petsofas), along with Kato Symi<sup>42</sup>, relatively few peak sanctuaries survive into the early Late Bronze Age. Moreover, although it has been argued that Minoan town shrines also existed in LM I<sup>43</sup>, the evidence is not entirely clear: Gournia, Pseira, the Malia palace and Building V at Palaikastro can all conclusively be shown to be LM IB constructions, a period for which one can claim other prevailing conditions. The only true urban shrine that may have already existed in LM IA is probably the Temple Tomb at Knossos<sup>44</sup>. What is evident, however, is that many domestic buildings now include rooms for cult practices or special rites (*e.g.* lustral basins, domestic shrines). Again, intra-site and inter-site differences exist.

In LM III, free-standing shrines are once more constructed, with examples at Gazi, Malia, H. Triada, Gournia, Knossos and elsewhere. All these seem to be typologically close to one another.

38 CHERRY (*supra* n. 3), 30. Although peak sanctuaries had already emerged in the Early Minoan period (cf. Watrous' contribution to this volume), it was only in MM I/II that the finds change character and that the palace may have become involved in the rites.

39 I. SCHOEP, "Script, Politics and Ritual", *Aegean Archaeology* (in press) and see K. NOWICKI, "Report on Investigations in Greece. VII. Studies in 1990", *Archeologia* 42 (1991), 143-145.

40 J. HAZZIDAKIS, *Les villas minoennes de Tylissos* (*ÉtCrét* 3, 1934), 60, 104-105.

41 Close to H. Triada, a MM sanctuary was also found (*AR for 1962-63*, 30); if the objects found in Block Pi at Palaikastro are indicative for a shrine, here too its construction would date to MM (*BSA* 9 [1904-1905], 287).

42 See most recently A. LEBESSI & P. MUHLY, "Aspects of Minoan Cult. Sacred Enclosures", *AA* 1990, 315-336, and A. KANTA, "Cult, Continuity and the Evidence of Pottery at the Sanctuary of Syme Viannou, Crete", in D. MUSTI ed., *La transizione dal miceneo all' alto arcaismo* (1991), 479-505.

43 S. HOOD, "Minoan Town Shrines?", in F.H. KINZL ed., *Greece and the Eastern Mediterranean in Ancient History and Prehistory. Studies presented to Fritz Schachermeyr* (1977), 158-172, discusses a series of shrines which should be dated to EM II (Fournou Korifi), MM II (Koumasa, Malia, Palaikastro, Rousses), LM IB (Gournia [LM IB or later], Pseira), LM III (H. Triada, Kannia).

44 *PM* IV, 964-1018.



The absence of **defensive systems** in LM I Crete has gained the Minoans their peace-loving cognomen. There are indications that this was, however, not the case in EM and MM times, as shown by a study by Alexiou<sup>45</sup>. Moreover, the recent discovery of the small MM I fortress at H. Fotia<sup>46</sup> may perhaps also be seen in this context and at Myrtos-Pyrgos there is also evidence for defensive works in the form of a tower and impressive terrace walls<sup>47</sup>. Bastions may perhaps also be identified at Phaistos and Knossos<sup>48</sup>. West of the palace, however, Evans had already revealed what he called a MM I enceinte which remained in use when the MM II paved courts and paved streets were made<sup>49</sup> and, against Mt. Elias, east of the Kairatos, monumental MM structures were similarly interpreted, although these may have been road terraces instead of defenses<sup>50</sup>.

Possible fortification walls only reappear on Crete in the course of the LM IB period, when at Gournia, H. Triada, Petras, Vathypetro and perhaps elsewhere attempts are made to construct screen walls which may have been primarily protective. Again, this change seems to be related to specific post-Santorini eruption conditions.

In LM III, Samonas Apokoronou and Chondros Viannou seem to have been fortified<sup>51</sup> but no true Mycenaean type of cyclopean walls of LM IIIA date have as yet been identified. From LM IIIB onwards, of course, other types of fortifications occur in upland areas and in LM IIIC most sites were especially chosen for their defensive qualities<sup>52</sup>.

There can be no doubt that the major **water supply and drainage works** in the palace and town of Knossos were executed in the First Palace period<sup>53</sup>. Some of these were repaired and cleaned out afterwards, while others were abandoned. But only very few of an urban character were actually constructed in Neopalatial times<sup>54</sup>. Something similar may have happened elsewhere<sup>55</sup>. Sakellarakis has also suggested that the fine ashlar water reservoir with connecting drain at Archanes, excavated by Evans, actually dates to the Old Palace period, and was repaired afterwards<sup>56</sup>. And two large MM cisterns at Myrtos-Pyrgos went out of use before LM I<sup>57</sup>.

In LM I, there is little evidence for communal water supply, except at Knossos, where both a well-building and the fine public Caravanserai connected with water were

45 S. ALEXIOU, "Τείχη καὶ ἀκρόπολεις στὴ μινωικὴ Κρήτη", *Κρητολογία* 8 (1979), 41-56.

46 Especially M. TSIPOPOULOU, "Ἀγία Φωτιά Σητείας: τὸ Νέο Εὐρημα", in *Problems*, 31-47. The building at Chamaizi may be another example of this kind of fortified settlement.

47 CADOGAN (*supra* n. 25), 75, fig. 11.

48 They belong to the first and second phase of the First Palace (*AR for 1957*, 18). The so-called fortification wall south of the South House is not a fortification wall but the cover wall for a massive MM drainage channel (examined by A. Karetsou and C.F. Macdonald in 1993, whom we thank for the permission to mention this).

49 *PM* IV, 54: apparently there were traces of an earlier MM I court.

50 HOOD and SMYTH (*supra* n. 36), 53, no 241.

51 *AR for 1985-86*, 95.

52 See especially NOWICKI (*supra* n. 39), 137-142.

53 See C. MACDONALD & J. DRIESSEN, "The Drainage System of the Domestic Quarter in the Palace at Knossos", *BSA* 83 (1988), 249-250; R.W. HUTCHINSON, "Prehistoric Town Planning in Crete", *Town Planning Review* 21 (1950), 211-215 also deals primarily with MM drainage systems.

54 The built town drain found close to the House of the Frescoes was MM and stayed in use till MM III (*AR for 1958*, 19).

55 Middle Minoan drains, whether in stone or terracotta, have also been found elsewhere (*MAMAT*, 198-201). At Palaikastro, a fine MM drain was excavated partly in 1991.

56 I. & E. SAKELLARAKIS, *Archanes* (1991), 48.

57 *AR for 1971-72*, 24; CADOGAN (*supra* n. 25), 74. At Vasiliki, there was also a MM semi-circular construction with a stepped approach (*AR for 1979-1980*, 53).



constructed<sup>58</sup>. At Gournia and Palaikastro, water provisioning seems to have been a private matter with some houses equipped with wells. Some of the finest private drainage and water systems, such as those in the palace of Zakro, are, of course, Neopalatial<sup>59</sup>, but again intra-site and inter-site differences can be noted. It is generally assumed that large towns such as at Chania, Zakro and Palaikastro had drainage systems that served the community and these drains might indicate the existence of a central authority. A stack of drainage channels stored in a basement of the Gournia palace is said to have been meant to be used for repairing the town's system<sup>60</sup>. Whether this interpretation is correct is another matter: both at Gournia and Palaikastro — and undoubtedly elsewhere — the streets acted as drains and some people modified the streets alongside their own houses by inserting slabs to embellish parts of the street. As yet, there is little evidence on Crete for communal drainage systems like those that existed in the Cyclades (H. Irini, Akrotiri). In LM III, both Amnisos and Tylissos witness the construction of water reservoirs and at the latter site, as at H. Triada and Palaikastro<sup>61</sup>, this happened in connection with the construction of very good stone-cut drainage channels<sup>62</sup>.

It is clear that most streets in urban settlements date to MM times<sup>63</sup>: this can be shown by the fact that later ruins follow earlier alignments, by tests beneath the pavings, and by the fact that some Neopalatial houses were actually constructed on top of the earlier streets. This is the case at Gournia<sup>64</sup>, Malia<sup>65</sup> and Palaikastro<sup>66</sup>, where the street system probably dates to MM but was subsequently repaired. Likewise, at Kommos, a fine paved road preceded the construction of Building T<sup>67</sup>. At Knossos, the present Royal Road appears to be a LM II reconstruction of an earlier pavement<sup>68</sup>. To the west, however, Warren's excavation showed that both the Royal Road and a T-junction were MM IB constructions and that the latter went out of use in MM III<sup>69</sup>. The same seems to have happened with the three roads that cross a paved area below the present car park, excavated in 1937<sup>70</sup>. Several grandstands were made in MM times along the Royal Road, with only some being rebuilt at the very end of LM IB or remaining in use till LM I<sup>71</sup>. South of the palace, the massive bridge-head and the stepped

58 The well-building at Mavrokolybo near Knossos is said to be Neopalatial (E. WETZELS, "Waterwerken op Minoïsch Kreta", *Tijdschrift voor Mediterrane Archeologie* 12 [1993], 21); for the Caravanserai, see *supra*, n. 26.

59 See WETZELS (*supra* n. 58), 19-27, who notes, however, that most were earlier constructions (p. 21).

60 K. BRANIGAN, "Minoan Settlements in East Crete", in P. UCKO *et al.*, eds., *Man, Settlement and Urbanism* (1972), 754.

61 LM III terracotta drains were also found in Block Pi at PK (BSA 11 [1904-1905], 289-290).

62 MAMAT, 126-134, esp. 131, n. 3. Something similar can be observed on the Mycenaean mainland, where the water reservoirs formed part of the defensive system (see e.g. M. BIERNACKA-LUBANSKA, "The Water Supply of the Mycenaean Citadels and its Relations with the Near East", in J. BEST & N. DE VRIES eds., *Interaction and Acculturation in the Mediterranean* [1980], 181-189).

63 In general, BRANIGAN (*supra* n. 60), 751-759; for Tylissos, see HAZZIDAKIS (*supra* n. 40), 71 and for Myrtos-Pyrgos, see CADOGAN (*supra* n. 25), 71.

64 S. DAMIANI-INDELICATO, "Gournia, cité minoenne", in *Aux origines de l'hellénisme. La Crète et la Grèce. Hommages à Henri van Effenterre* (1984), 50 (references).

65 H. van EFFENTERRE, *Le palais de Malia et la cité minoenne* (1980), 253-378.

66 At Palaikastro, the LM I road is on top of the MM street which was used as a drain in the Neopalatial town (BSA 11 [1904-1905], 278).

67 J.W. SHAW, "Excavations at Kommos (Crete) during 1984-1985", *Hesperia* 55 (1986), 251-252.

68 *AR* for 1958, 23.

69 *AR* for 1971-72, 21: he also found an EM road level. If these two road levels are the same as the ones found by Hood, no LM I street level was ever made; see also *PM* IV, 54, where Evans dates the Royal Road to MM II (Warren's new investigations [*supra* n. 31] may, however, modify this view).

70 HOOD and SMYTH (*supra* n. 36), 50, no 210-211.

71 *AR* for 1972-73, 27-28; *AR* for 1973-74, 34.

portico are said to be MM structures but the viaduct in its present form is thought to be LM I<sup>72</sup>. Thanks to recent research, the presence of a proper road system linking certain East-Cretan settlements has been revealed and it is likely that a similar system existed elsewhere on the island<sup>73</sup>. Of course, a proper communication network is a condition for proper government and the suggested watchtower system would fit well in the idea of a centralised state. Whether this network stayed in use all through the different periods is another matter: the effort put in its original construction, however, suggests that different political conditions may have prevailed in MM times, when the original system was constructed.

**Real urbanistic efforts**, the organised implantation of buildings, streets and squares may perhaps be identifiable in MM Malia, Gournia, and Palaikastro when a more or less regular street system connected the different parts of the settlement with the palace and courts. It has been suggested that the similarity in orientation of the MM buildings at Malia may even suggest a specific major building programme<sup>74</sup>. In LM I Crete, most houses followed the earlier established patterns but new houses were sometimes quite randomly placed, e.g. at Tylissos and Malia. One may even wonder whether the difference in the town plan of Neopalatial settlements is not the result of the degree to which the older pattern was followed. Little is known of LM III town planning but it has been suggested that an organized scheme lay at the basis of the town building programme of the Mycenaean buildings at H. Triada and something similar may exist at Tylissos<sup>75</sup>.

A final feature in which some public authority can perhaps be detected is the **funerary domain** (communal tombs and necropoleis)<sup>76</sup>. MM II was the last main period in which communal tombs were constructed in the Mesara and elsewhere<sup>77</sup>. Older tombs were of course reused in LM I, such as those at Knossos, Archanes and Poros, but Neopalatial funerary practices remain more or less unknown<sup>78</sup>. From LM II onwards, the Minoans again started to put energy into the building of tombs, e.g. with the construction of a tholos at Kefala and a fine tomb at Isopata<sup>79</sup>. The three best known necropoleis in LM III, Knossos, Armenoi and Archanes, all illustrate some kind of planning. The difference between the MM and later tombs is that the later ones are usually for a limited number of occupants but the quality of construction and the uniformity in shapes shows that specialised craftsmen were also busy.

72 PENDELBURY (*supra* n. 26), 68 dates it to MM I, however; *MAMAT*, 105, fig. 106; definitely dated to MM by HOOD and SMYTH (*supra* n. 36), 55, no 282.

73 WIENER (*supra* n. 2) tends rather to see these as indicative of a pan-Cretan political institution.

74 J.-C. POURSAT, *Guide de Malia au temps des premiers palais. Le Quartier Mu* (1992), *passim* for a discussion of the different buildings; Damiani-Indelicato suggested that the street system of Gournia was established in connection with an original open court in the centre of the town (DAMIANI-INDELICATO [*supra* n. 64], 53).

75 See V. LA ROSA, "Haghia Triada à l'époque mycénienne : l'utopie d'une ville-capitale", in J. DRIESSEN & A. FARNOUX eds., *La Crète mycénienne* (in press); B. HAYDEN, "Late Bronze Age Tylissos: House Plans and Cult Centers", *Expedition* 26:3 (1984), 37-46.

76 See I. PINI, *Beiträge zur minoischen Gräberkunde* (1968), *passim*; see also CADOGAN (*supra* n. 25), 71, for Myrtos-Pyrgos, where the tomb stayed in use into LM IA.

77 K. BRANIGAN, *The Tombs of Mesara* (1970), counted 22 EM I, 7 EM II, 14 MM I and 2 MM II tholoi in the Mesara; see also J. SOLES, *The Prepalatial Cemeteries at Mochlos and Gournia and the House Tombs of Bronze Age Crete* (*Hesperia Suppl.* 24, 1992).

78 In the cemetery at Archanes-Phourni, all funerary constructions date to the Pre-, Proto- or Postpalatial period, although some earlier tombs stayed in use into LM I: only a single building was constructed in LM I (no 4) and this must have been some kind of industrial installation (SAKELLARAKIS [*supra* n. 56], 67).

79 A. EVANS, *The Prehistoric Tombs of Knossos* (*Archaeologia* 49, 1906), 136; *PM* IV, 773-775.

The summary presented here is necessarily an over-simplification. Nevertheless, some general tendencies are obvious, as illustrated by architectural practices. Firstly, both regional and intra-site differences exist in each of the three periods discussed (MM II, LM I, LM II-III A). This implies that general conclusions are not to be expected and that regional variation may reflect differences in the existing political systems. The presence of similar canonical palaces in different regions may, however, suggest that the differences were less evident at the highest level of the hierarchy and that in each of the different periods, the participation in the power differed between the regions. In general, it appears that in MM II times, there is little or no indication of social inequality reflected by residential or funerary architecture. The state invested heavily in public buildings of utilitarian character and in the monumentality of some of its own buildings, in public spaces for gathering, exchange activities, and religion.

In LM I, by contrast, the state seems to have invested little in public amenities, except for the maintenance of some existing systems. More attention now goes to the monumentality of the central building and a few shrines. The élites, however, now manifest themselves by giving their buildings a monumental aspect and by adding storage, ceremonial, and cult rooms, thus underlining an evident social inequality. As yet, there is little evidence that this inequality also appeared in funerary contexts. In LM IIIA, only the state invests in worldly and religious symbols and only the élites are given sumptuary goods for the afterlife.

### Administration and bureaucracy

Public administration shows a different kind of specialist in action. It is best to distinguish between "administration" and "bureaucracy"<sup>80</sup> since the second involves a higher degree of craft-specialisation combined with a discipline that is usually lacking in more primitive administrations. Moreover, a bureaucracy needs written records whereas an administration can exist without them. There are different ways to approach administrations<sup>81</sup>: one can analyse their policies (how power and control are exercised), their structure (*i.e.* the various functional spheres), how the personnel (the professional officialdom) functioned or which techniques they used for communication, record-keeping and the processing of information. In this paper, only this last approach is briefly discussed, but one should be aware that whatever the approach, an administration assumes a power hierarchy and that if a government changes, changes in the administration are also bound to occur.

Clay records have the advantage of "moderate portability and considerable permanence"<sup>82</sup>, and, for the first time, gave an administration the possibility of organising itself on a more permanent basis and possessing a means of reference. Literacy in Aegean lands appears to have been rather limited because it was first of all a craft literacy<sup>83</sup>: an administrator wrote in the framework of his functions and responsibilities. This, however, also implies that a single tablet shows an administration at work. Weingarten's remark then

80 Bureaucracy has been defined as an institution that tries to achieve an administrative objective by transforming problems into routine duties and that tries to co-ordinate specialized tasks (cf. P.M. BLAU, "The Dynamics of Bureaucracy", in A. ETZIONI ed., *A Sociological Reader on Complex Organizations* [2nd ed. 1970], 388).

81 E.N. GLADDEN, *A History of Public Administration. I. From Earliest Times to the Eleventh Century* (1972), viii-x, 1: "First comes the initiator or leader to render society possible, then the organizer or administrator to give it permanence".

82 GLADDEN (*supra* n. 81), 237.

83 Except for its use in administration (including seals), writing occurs on stone and clay vessels (Cretan-Hieroglyphic, Linear A-B), on metal objects (Linear A) and architecture (Linear A). This limitation may perhaps be indicative that writing partly kept a sacred character.



that the presence of a single tablet fragment does only prove some degree of literacy and not an active bureaucracy<sup>84</sup>, is not justified therefore.

From the presence and nature of written records some inferences can be made which allow glimpses of the administration that issued these records and, by implication, of the governing body behind.

First of all, there is an obvious difference in the **proliferation** of written documents in the different periods. In MM times, administrative records are limited to palatial centres and to the spheres of palatial administration. Thus, documents in Cretan-Hieroglyphic have been found in the palaces of Knossos and Malia and a fragment in the shrine at Kato Symi. Archival documents both in "Proto-" and canonical Linear A occur in the palace of Phaistos<sup>85</sup>. Elsewhere, only seals or seal impressions in the Cretan-Hieroglyphic script occur.

In LM I, most settlements show some evidence for the use of the Linear A script, whether administrative or non-administrative. Most surprising perhaps, is that both palatial buildings and modest town houses reveal evidence for some form of administration. Again, intra-site and inter-site differences occur.

In LM IIIA, the Linear B script is again limited to palatial administrative contexts.

If administrative documents can be equated with organisation and some kind of political power, both the difference in proliferation and the change in the type of script used may well reflect political changes occurring from one period to the next<sup>86</sup>. The question whether more serious differences between the regions are hidden in the unequal proliferation of documents is another matter, since it could easily be the consequence of a difference in archaeological investigations. It is surprising nevertheless that although the west of the island has revealed Linear A and Linear B documents in the Neopalatial and Postpalatial periods, it is as yet devoid of earlier written evidence. The contrast between the widespread distribution of Cretan-Hieroglyphic documents in the north region of the central zone and the north-eastern part of the island, against the rather sparse presence of such items in the Messara and Amari area, may reflect some true differences among centres. Phaistos is, on present evidence, the first site to use a kind of Linear A for administrative purposes. A distribution map of Linear A findspots is misleading since it hides the absence of Linear A documents from LM IB contexts in the palaces at Knossos, Phaistos and Malia, where such documents occur in earlier contexts. Again, this absence could have political implications.

The Linear B findspots again suggest another picture, although it should not be forgotten that in the area of Knossos several mainly ritual objects were still inscribed in Linear A in LM II-III A (Kefala & the Unexplored Mansion; Poros figurine). And, as yet no vases inscribed in Linear B have been found in the Mesara or in the east of the island.

One may also examine the **type of script bearer** used in the different centres and periods. Cretan-Hieroglyphic script occurs on a specific variety of objects, but not all shapes have been found in the different centres. The two-sided bar is a shape absent from Knossos, but present at Phaistos (with Proto-Linear A), Malia, and now Kato Symi (both with Cretan-Hieroglyphic). The presence or absence of a particular document shape may indicate specific administrative processes. In Neopalatial times, document types are relatively uniform throughout Crete, and the basic shapes of page-shaped tablets, nodules, sealings and

84 J. WEINGARTEN, "Late Bronze Age Trade Within Crete: The Evidence from Seals and Sealings", in *Bronze Age Trade*, 310.

85 A.J. EVANS, *Scripta Minoa I* (1909), 21, for the only Cretan-Hieroglyphic document from Phaistos.

86 See already CHERRY (*supra* n. 3), 26.

roundels<sup>87</sup> have been attested in most places, although Malia has as yet no tablets, only four-sided bars. A difference in the size of the roundels among the different centres is also obvious. Some specific aspects of the tablets, such as holes in one of the sides, or the cutting of records, also occur at most Neopalatial sites as do the basic methods of recording<sup>88</sup>.

But even if there is a similarity in the general contents of the documents, as well as in recording practices and quantities<sup>89</sup> amongst the different Neopalatial sites, a comparison of Linear A with Linear B practices underlines the lack of **standardisation and discipline** as we know it from the Linear B records. Thus, in Cretan-Hieroglyphic, the sign for hundred is rendered at Knossos and Malia by oblique strokes; but in the Malia palace, the sign is also rendered by circles, just as in later Linear A. On the Linear A tablets of Hagia Triada, tens are represented both by dots and by horizontal bars. This lack of standardisation even within a single administration seems odd. Moreover, some fractional, syllabic, transactional or logographic signs appear only at specific site. Are these variations only a result of archaeology or do they suggest localised administrations? We believe the second possibility is indicated, since differences in the sealing practices among the respective sites also underline the fact that local conventions are often followed<sup>90</sup>. Weingarten explicitly remarked that "no two Minoan sites have identical sealing practices"<sup>91</sup> and the same observation goes for the impressions: the multiple sealing system (MSS) in LM I is virtually limited to Zakro whereas at Chania and H. Triada this represents less than 2 % of the total number of sealings<sup>92</sup>.

In a recent publication, Petruso claims that a pan-Aegean weight system existed in Neopalatial times<sup>93</sup>: the many local differences both in the weights and in the signs on the weights should warn us, however, not to make hasty conclusions.

What is perhaps most surprising in the Linear A records is the absence of recurring sign groups, whether intra-site or inter-site. In Linear B documents, one can observe how toponyms, anthroponyms or administrative terminology are constantly repeated within a single archives or, in the case of the latter, when the different archives are compared. Thus, even when a small Linear B fragment is found, it is sometimes possible to re-establish its original recording pattern. This is certainly a result of the discipline shown in following generally accepted bureaucratic procedures as well as the presence of a centralised redistributive system in each of the different Mycenaean kingdoms. The administration of each kingdom evidently dealt with the same people on different occasions.

87 Differences do exist, however: thus, it may be observed that the roundels from Chania are mostly inscribed on one side with a single sign, whereas those from H. Triada — with one or two exceptions — all bear proper inscriptions. In the first case, these are usually logograms, at H. Triada this is rarely the case.

88 Either a heading with logogram, followed by syllabic entries and numbers, or a series of entries with logograms (cf. types A and B in R. Palmer's contribution to this volume).

89 L. GODART, "L'économie de la Crète occidentale à partir des documents en linéaires A et B", *ProcCretCongChania*, 335; and R. PALMER (this volume).

90 WEINGARTEN (*supra* n. 84), 304.

91 J. WEINGARTEN, "Old and New Elements in the Seals and Sealings of the Temple Repository, Knossos", in *Transition. Le monde égéen du Bronze moyen au Bronze récent. Actes de la deuxième Rencontre égéenne internationale de l'Université de Liège (18-20 avril 1988)*, *Aegaeum* 3 (1989), 40. Thus, Zakro (House A) has mainly flat-based nodules and H. Triada especially hanging nodules, although some types occur in both places. The odd presence of an inscribed cone at Zakro, for instance, is seen as reflecting a H. Triada import.

92 WEINGARTEN (*supra* n. 84), 307.

93 K. PETRUSO, *Keos VIII. Ayia Irini. The Balance Weights* (1992), 61 for a summary.

The Neopalatial Linear A tablets contain only a few sign-groups that can, with some confidence, be interpreted as toponyms<sup>94</sup>. This dearth of place-names can only mean that the administrations rarely dealt with outlying settlements. References to major sites are also absent, again stressing that Linear A administrations deal with local affairs. The same is true in relation to the so-called **ku-ro** tablets, usually interpreted as the Minoan word for total. It is one of the few words that actually suggest some kind of standardised administrative practice in Linear A, but it is still rare and it is only attested at H. Triada and Zakro. This lack of standardisation and the absence of true bureaucratic procedures and the focus of the tablets in local affairs only are further corroborated by the **contents** of the records. It has been noted that Cretan-Hieroglyphic and Linear B generally show higher numbers than Linear A does<sup>95</sup>. Moreover, the quantities of commodities involved in Linear A records are relatively low<sup>96</sup> and it is very rare to find tablets dealing with luxury items, with military matters or with large numbers of people. All evidence thus underlines the impossibility of regarding the Linear A tablets as belonging to a single pan-Cretan administrative government. There is no evidence for regional control, only of a firm grip on local affairs. Recording did take place at different levels of Neopalatial society which implies a strong central control but only by a regionally-based administration with local power. The intense Cretan geographical compartmentalisation seems to go hand in hand with an administrative fragmentation, which, we feel, may represent a network of political units of different calibre.

### A diachronic view

Architects and "scribes" are responsible for two of the most typical Minoan cultural features. A comparison of the work of these two types of specialist underlines a series of differences from one period to the next. Both the differences observed among centres in the monumentality of buildings and the details of their administrations suggest that it is impossible to postulate a single administrative centre governing the whole of Protopalatial or Neopalatial Crete<sup>97</sup>. Instead we envision a mosaic of semi-independent centres, each perhaps with slightly different patterns of social stratification<sup>98</sup>. Regional variation is the rule rather than the exception for both periods.

94 See J. BENNET, "Knossos in Context: Comparative Perspectives on the Linear B Administration of LM II-III Crete", *AJA* 94 (1990), 199: **ku-ta** (at H. Triada), **pa-i-to** (twice at H. Triada), **se-to-i-ja** (at Prasa), **su-ki-ri-ta** (at Phaistos and H. Triada) and **ku-do-ni** (at H. Triada); some readings and identifications are doubtful, however.

95 J.-P. OLIVIER, "Les grands nombres dans les archives crétoises", *ProcCretCongChania*, 70-71: Olivier noted that there were only two Linear A texts in which large numbers were mentioned: 3000 vases on HT 31.6 and at least 1000 units of a commodity (A 551) on KH 81.2. In contrast, both documents in Cretan-Hieroglyphic and Linear B contain a fair quantity of such high numbers, and especially in the first script the frequency is surprisingly high (9 at Knossos, one in Quartier Mu) and may concern men.

96 C. ANTONELLI, "Il grano nei documenti in lineare A e nei testi in lineare B di Cnosso", *ProcCretCongChania*, 105-111: Antonelli counted 4.654 units of wheat in all Linear A documents against 24.032 in a single Knossian Linear B text.

97 See also P.M. WARREN, "Minoan Palaces", *Scientific American* July 1985, 99; J.F. LLOYD, *Settlements, Dwellings, and Painted Pottery: A Contribution to the History of Minoan Crete in the Early Late Bronze Age* (PhD New York University, 1990), 861 who has similar conclusions based on the architecture and objects of 20 Neopalatial settlements. The suggestion by Weingarten that four centres were active is likewise hard to defend: the absence of sealings and tablets must be first of all a consequence of archaeology; that essential differences in administrative practices may have existed is clear, however.

98 It is very possible that in Neopalatial times, kinship or territorial ties may have been much more relevant in some settlements (e.g. Gournia), whereas other sites (e.g. Palaikastro) had already developed into true stratified societies, showing a social inequality reflected by residential architecture.



In LM I, architecture obviously had a different symbolic component than before: the Neopalatial residences reflect the concentration of wealth and privilege, of political and ritual power. Energy is expended for personal use and select individuals control storage, cult activities and the movement of energy. This evolution from the earlier period can only mean that fewer social and ideological restrictions existed, allowing the élite to direct energy for their own use. Residential architecture reflects these changing social relations: energy is put in utility (increased comfort) and symbolism (e.g. façades that reflect group identity). These élites must have gained power after MM II times: power to control resources for their own profit and power to express this power in monumental architecture. Indeed, the differences observed in terms of architectural and administrative practices between Protopalatial, Neopalatial and "Mycenaean" society on Crete may suggest, firstly, that the different MM polities knew a more socially equal society perhaps closer to what has been dubbed "ranked" society, composed of territorial or kinship groups. In MM times, and especially at Malia, monumental architecture may have improved social integration with the public architecture serving the group-identity in a context of increased heterogeneity (social, economic, religious, ethnic?) of a population that was averse to such aggregating powers. This could imply that such group cohesion was needed *i.e.* there was a time of political or economic stress and that we find here the germs for the emergence of the Neopalatial elite <sup>99</sup>.

"Mycenaean" or LM IIIA Crete had developed — at least in part — into a true bureaucracy <sup>100</sup>, undoubtedly because sufficient differentiation among various spheres of activity (economical, political, religious etc.) existed <sup>101</sup>. The Knossian ruler managed to create a bureaucratic organisation that not only tried to cope with the problems caused by this differentiation, but also attempted to control the resources created by these various economic and social groups and to provide these groups with services that would make them dependent on their Knossian ruler <sup>102</sup>.

99 Political systems can change, Eisenstadt argued, if the intergroup structure changes or if intragroup changes take place: the first is manifested by the emergence of new groups or in the predominance of different groups, the second if shifts in the internal structure, the composition and strength of the major groups take place (S.N. EISENSTADT, *The Political Systems of Empires* [1963], 310). Some authors have argued that societies as such don't change but that elites are simply replaced by others (V. PARETO, "The Circulation of Elites", in A. ETZIONI & E. ETZIONI-HALEVY, *Social Change. Sources, Patterns and Consequences* [rev. ed. 1973], 26-31), or, in a ("rebouilli") Marxist view, by a subordinate class (cf. K. MARX & F. ENGELS, "The Class Struggle", in A. ETZIONI & E. ETZIONI-HALEVY, *op.cit.*, 32-39). Max Weber, in the same volume, argued that when old structures are exhausted, new charismatic leaders can emerge from outside the structure, giving it the coup de grâce and taking over till they too face the same problem and their charisma fades (in A. ETZIONI & E. ETZIONI-HALEVY, *op.cit.*, 43-53).

100 Neopalatial Crete may still have basically been a so-called "Early State", a structure based principally upon the concepts of reciprocity and genealogical distance from the sovereign. During LM IB, however, there may have been a development with the managerial and redistributive aspects becoming gradually more dominant. The moment the state organization functioned without taking recourse to the ruler's supernatural power or without perpetuating reciprocal obligations, the early state ends and is transformed into real statehood, with new concepts, an increased state hierarchy and an increasing orientation towards property: this stage was apparently reached by the end of LM II (cf. H.J.M. CLAESSEN & P. SKALNIK, *The Early State* [1978], 17, 21, 633-634, 642).

101 S.N. EISENSTADT, "Bureaucracy, Bureaucratization, and Debureaucratization", in A. ETZIONI ed., *A Sociological Reader on Complex Organizations* (rev. ed. 1970), 304-305.

102 This then seems to imply that by the end of LM II, Crete was transformed into a more differentiated political system, as shown by the Linear B tablets: they reflect an intense economic development with a stress on the productivity and rationalisation among the peasant and urban strata. It also appears that rural and urban centres had developed into centres which were economically differentiated, causing, as John Bennet has shown, an increase of relatively autonomous political power corresponding with the emergence of high levels of political organization. Each major settlement was represented by a secular, differentiated

We have a feeling that in MM II — if Malia is representative — and in LM IIIA Crete — if Knossos is representative —, the central organisations appeared to have managed much better to organise labour for common purposes, that more centralised state systems existed. Crete, for topographical reasons, is not prone to organisation in larger territorial units, except if forced to do so from outside <sup>103</sup>. It is possible that an unsuccessful attempt was made to create larger territorial units at the end of the Protopalatial Period resulting in a decrease of central power and an increase of the power of the elite <sup>104</sup>. By LM IIIA, the toponyms included in the Linear B tablets suggest that Knossos under a foreign (Mycenaean) power did manage to form a larger territorial and political entity <sup>105</sup>.

All changes create conflicts: the fire destructions at the end of MM II and LM I reflect conflict situations. The obvious manifestation of an élite culture in LM I suggests that the appearance and disappearance of new social groups served as the main instigator for these conflict situations <sup>106</sup>. Whether a similar evolution happened in all regions of the island is doubtful, however.

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leadership and by élites who conducted cultural and economic activities. These kept their autonomy once the central — unstable — palace system collapsed.

103 BENNET (*supra* n. 94), 193-211.

104 Some authors, such as Cadogan and Wiener, believe that Knossos caused the MM II destructions and become sole ruler of the island in LM I; BENNET (*supra* n. 94), 209-210 rightly stresses the differences between the various Cretan regions.

105 We also feel that this territorial limitation in the Mycenaean period suggests that the Mycenaeans only filled a political vacuum left after the LM IB destructions, *i.e.* they did not replace an earlier Knossian hegemony over the island.

106 For a military encounter, see already G. CADOGAN, "What Happened at the Old Palace at Knossos?", *Function Palaces*, 72; IDEM (*supra* n. 8), 174.