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JOHN BENNET

PALACES AND THEIR REGIONS:  
GEOGRAPHICAL ANALYSIS OF TERRITORIAL EXPLOITATION  
IN LATE BRONZE AGE CRETE AND GREECE

**Introduction\***

In this contribution, I first give an overview of the evidence for the geographic structures of the major Aegean Late Bronze Age polities of Knossos and Pylos, with some reference to other less well documented examples. The evidence available is textual (primarily documents written in an early form of Greek in the Linear B script in the 14th and 13th c. BC) and archaeological. I then suggest ways in which this geographical picture can help us approach various issues, such as the extent of economic and political integration within polities, inter-polity interaction and some implications for identity, as viewed both within and beyond the Aegean polities. I conclude with some brief thoughts on comparison. Much of what appears here is neither new, nor particularly controversial in Aegean archaeology, but presenting it in this context will, I hope, stimulate more productive comparison with the various Near Eastern states and a greater understanding of potential interactions across the eastern Mediterranean from the late 3rd to the late 2nd millennia BC.

The states that emerged in the second millennium BC in the Aegean from Southern Thessaly through Central Greece to the Peloponnese and Crete (Fig. 1) were relatively small-scale in comparison to those of Mesopotamia,<sup>1</sup> but perhaps, as noted by Branigan some years ago,<sup>2</sup> not dissimilar in size to those of the eastern Mediterranean coast like that of Ugarit, or, closer to the Aegean, Troy / Hisarlık in northwest Anatolia.<sup>3</sup> As an urban centre, Knossos stood out around the mid-2nd millennium BC (the Minoan 'Neopalatial' or Late Minoan I phase),<sup>4</sup> although the

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<sup>1</sup> Cf. J. BENNET, "Bronze Age Greece", in *The Oxford Handbook of the State in the Ancient Near East and Mediterranean*, P. Bang, W. Scheidel (ed.), Oxford 2012, 235-58.

<sup>2</sup> K. BRANIGAN, "Aspects of Minoan Urbanism", in *Urbanism in the Aegean Bronze Age*, K. Branigan (ed.), Sheffield Studies in Aegean Archaeology 4, Sheffield 2001, p. 41-42.

<sup>3</sup> M. YON, "Ugarit: the Urban Habitat. The Present State of the Archaeological Picture", *Bulletin of the American Schools of Oriental Research* 286 (1992), p. 19-34 (Ras Shamra); W. H. VAN SOLDT, *The Topography of the City-State of Ugarit*, Münster 2005, p. 71 (Ugarit's territory); M. KORFMANN, "Troia in Light of New Research (English edition)", *Universität Trier: Reden an der Universität, Dies Academicus 2003*, Trier 2004, p. 29; available from: [http://www.uni-tuebingen.de/troia/eng/trier\\_eng.pdf](http://www.uni-tuebingen.de/troia/eng/trier_eng.pdf) (last accessed 1 June 2012) (Troy).

<sup>4</sup> A recent estimate, on the basis of surface survey suggests an urban extent of 100-125 ha. in this period: T. M. WHITELAW, "The Urbanisation of Prehistoric Crete: Settlement Perspectives on Minoan State Formation", in *Back to the Beginning: Reassessing Social and Political Complexity on*

extent of its political control is debated, perhaps the entire island of Crete — c. 8,200 km<sup>2</sup> — at the same time.<sup>5</sup> In comparison, the major mainland urban centres of Mycenae, Thebes and Pylos were perhaps 32, 28 and 15 ha. respectively at their peak in the 13th century BC, by which time Knossos itself had shrunk considerably, although, as we shall see, it maintained administrative control over as much as half to two-thirds of Crete in the mid-14th century BC.<sup>6</sup>

Although writing existed on Crete from the very beginning of the 2nd millennium BC, the first two scripts in use — Cretan Hieroglyphic and Linear A — remain undeciphered.<sup>7</sup> This compromises our ability to understand the operation of the Minoan palatial polities in detail, including an estimation of their territorial extent.<sup>8</sup> The decipherment of the Linear B script in 1952 means that we can read the documents in use in the Late Bronze II–III periods (Late Minoan / Late Helladic II–III), c. 1400–1200 BC both on Crete and the Greek mainland.<sup>9</sup> We must, however, resist the temptation to extrapolate the Linear B textual evidence on administrative organisation back into earlier periods where the documents remain undeciphered. Partly for reasons of space and partly because of the existence of readable written documents, I focus in this contribution on the period 1400–1200 BC.

At this point it is worth reminding ourselves of the nature of the Mycenaean Linear B texts. The documents depended on accidental burning (usually assumed to be caused by burnt destructions of the structures in which they were housed) for their preservation. We only possess a ‘window’ into the administrative cycle current at the time the documents were preserved.<sup>10</sup> Even within the texts themselves there are no absolute chronological references, but occasional mentions of ‘this’, ‘next’ and ‘last year’ and several month names indicating at what point in the Mycenaean annual calendar a transaction (usually an offering to a deity) took place. The documents only relate to activities of interest to the palaces and so do not tell us anything like the

*Crete During the Early and Middle Bronze Age*, I. Schoep, P. Tomkins, Jan Driessen (ed.), Oxford 2012, p. 150.

<sup>5</sup> Cf. A. BEVAN, “Political Geography and Palatial Crete”, *Journal of Mediterranean Archaeology* 23.1 (2010), p. 27-54 on the issues.

<sup>6</sup> J. BENNET, “The Aegean Bronze Age”, in *The Cambridge Economic History of the Greco-Roman World*, I. Morris, R. Saller and W. Scheidel (ed.), Cambridge-New York 2007, p. 187, with references. Knossos in the mid-14th c. BC: J. BENNET, E. GRAMMATIKAKI, A. VASILAKIS, T. M. WHITELAW, “The Knossos Urban Landscape Project 2005: Preliminary Results”, in *Colloquium Romanum*, p. 106.

<sup>7</sup> See, e.g., J.-P. OLIVIER, “Cretan Writing in the Second Millenium B.C.”, *World Archaeology* 17:3 (1986), p. 377-389; H. TOMAS, “Cretan Hieroglyphic and Linear A”, in *The Oxford Handbook of the Bronze Age Aegean (ca. 3000-1000 BC)*, E. H. Cline (ed.), Oxford 2010, p. 340-55; see the contributions by A. Karnava and H. Tomas in this volume.

<sup>8</sup> Although, see I. SCHOEP, “Tablets and Territories? Reconstructing Late Minoan IB Political Geography through Undeciphered Documents”, *AJA* 103 (1999), p. 201-21; J.-P. OLIVIER, “Structure des archives palatiales en linéaire A et en linéaire B”, in *Système palatial*, p. 227-35.

<sup>9</sup> J.-P. OLIVIER, “Cretan Writing...”, cit. (n. 7); T. G. PALAIMA, “Linear B”, in *The Oxford Handbook of the Bronze Age Aegean (ca. 3000-1000 BC)*, E. H. Cline (ed.), Oxford 2010, p. 356-72.

<sup>10</sup> J. BENNET, “Agency and Bureaucracy: Thoughts on the Nature and Extent of Administration in Bronze Age Pylos”, in *Economy and Politics*, p. 29.

‘whole story’ of what was going on economically or politically in their region at the time.<sup>11</sup>

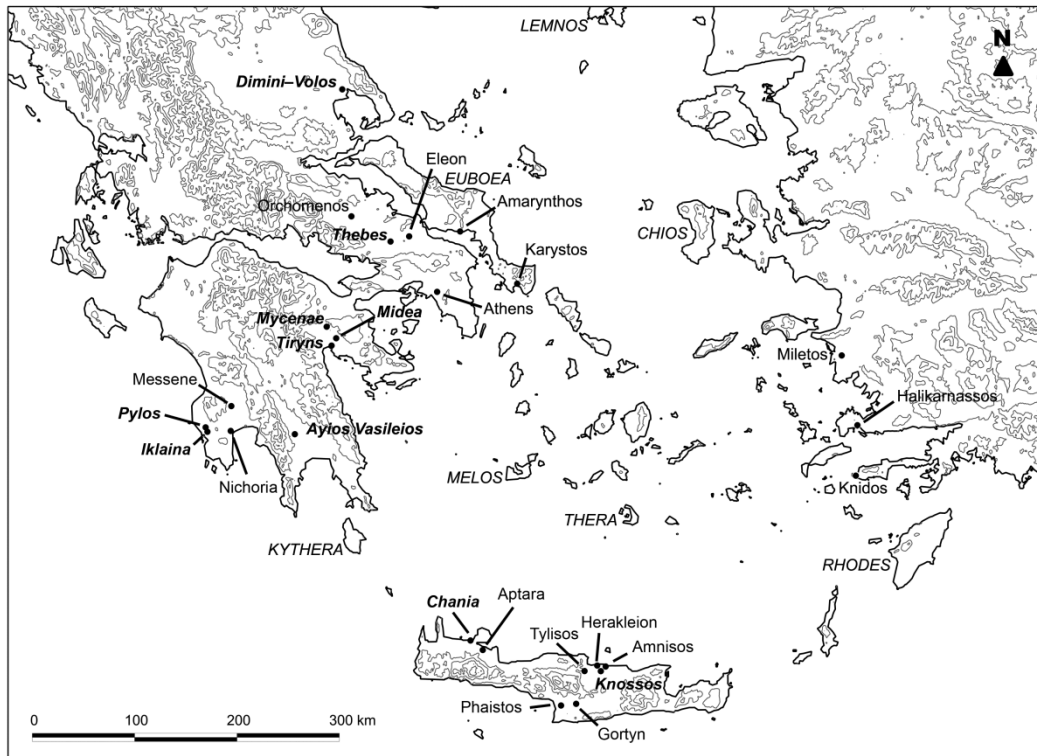


Fig. 1: Map of the Aegean to show locations mentioned in the text. Names in ***bold italic*** are those of sites where Linear B documents have been found. (J. Bennet)

However, the documents do give us information difficult, if not impossible, to recover archaeologically. They document organic / perishable commodities rarely preserved archaeologically, such as oil or textiles, and — crucially — give us quantities. We can often detect the presence of materials archaeologically, even if only indirectly, but rarely can we quantify either the numbers or the amounts present in any one place or in motion. Thus, for example, the presence of bronze tools, weapons and objects is well-attested in archaeological deposits, but the Pylos Jn texts give us an idea of the amount of bronze (c. 576 kg.) allocated to palace-sponsored smiths in one ‘administrative period’, as well as the fact that some have no allocations.<sup>12</sup> In the case of animals, such as the Knossos sheep flocks, the documents give us an insight into ‘livestock’ management (including the numbers of animals involved and thus an insight into the overall scale of the enterprise), whereas archaeological deposits usually provide ‘deadstock’ remains of animals after consumption, that is explicitly when no longer being managed for their ‘secondary

<sup>11</sup> Cf. J. BENNET, “The Aegean Bronze Age”, cit. (n. 6), p. 195-201.

<sup>12</sup> J. S. SMITH, “The Pylos Jn Series”, *Minos* 27-28 (1992-93), p. 210-11.

products'.<sup>13</sup> The quantities and quality of the cloth produced from this industry can also be assessed using a combination of the textual evidence with archaeological and comparative data.<sup>14</sup>

### **Why is this important?**

Geographical information is, of course, another area in which the texts make a major contribution, but not in isolation. The value of this contribution lies in several areas. Firstly, understanding the extent of polities facilitates an appreciation of their scale with implications for the resources — human, agricultural and mineral — available, as well as for the area over which political / economic power was exercised. Within an overall appreciation of scale, the combination of Linear B documentary data with archaeological data can help us understand how the larger territory was structured — were there, for example, provinces or districts within the overall territory and did these have subordinate centres through which the centre worked? From such analyses it is possible to suggest the degree of hierarchy that existed among settlements as well as the degree of political and / or economic integration within the overall polity. Combining the two datasets can also offer insights into the extent of palatial involvement and whether it too had a geographical pattern — greater in some, and lesser in other areas. Although Aegean texts tend not to have been collected in true archives<sup>15</sup> and are effectively synchronic documents, archaeological data can add a diachronic dimension allowing the reconstruction of tentative histories for earlier phases of some polities. Finally, it is possible that geographical terms (either from the Aegean or beyond) might offer some insight into concepts of identity projected by or maintained within the Mycenaean states. There are therefore real benefits in being able to draw out geographical data from the written materials of these Late Bronze Age polities.

### **Practicalities — how do we determine geography?**

I summarise only briefly how place-names are identified in the Linear B documents, since the issues are fairly well known and documented.<sup>16</sup> The identification of place-names was part of the key to Michael Ventris's decipherment of Linear B. Hypothesising that place-names were very likely to form one class of words used in Linear B, he suggested that some of these names might well be known in later

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<sup>13</sup> P. HALSTEAD, "Texts, Bones and Herders: Approaches to Animal Husbandry in Late Bronze Age Greece", in *Studies Killen*, p. 149-89.

<sup>14</sup> E. ANDERSSON-STRAND, M.-L. NOSCH (ed.), *Tools, Textiles and Contexts. Investigating Textile Production in the Aegean and Eastern Mediterranean Bronze Age*, Oxford 2012, in press.

<sup>15</sup> On the issue of 'archives' in general, see M. BROSIUS, "Ancient Archives and Concepts of Record-Keeping: An Introduction", in *Ancient Archives and Archival Traditions: Concepts of Record-Keeping in the Ancient World*, M. Brosius (ed.), Oxford 2003, p. 1-16; on 'archives' in Linear B, T. G. PALAIMA, "'Archives' and 'Scribes' and Information Hierarchy in Mycenaean Greek Linear B Records", *ibid.*, p. 153-94.

<sup>16</sup> J. BENNET, "The Geography of the Mycenaean Kingdoms", in *A Companion to Linear B: Mycenaean Greek Texts and their World*, Vol. 2, Y. Duhoux, A. Morpurgo Davies (ed.), Leuven 2011 (Bibliothèque des Cahiers de l'Institut de Linguistique de Louvain, 127), p. 137-168, with references.

historical periods. If they could be isolated in the documents, they would effectively act as ‘bilinguals’. Two place-names known from historical periods on Crete — Knossos and Amnisos — were identified and formed a key part of Ventris’s first development of the decipherment in his famous ‘Work Note 20’.<sup>17</sup>

After the decipherment, more historically attested place-names were recognised, such as Tylisos, Phaistos and Kydonia (modern Chania) on Crete, Pylos, Thebes and Lakedaimon on the mainland.<sup>18</sup> In Greek, place-names behave in a characteristic way morphologically: a base-form like *Knōsos* (Linear B *ko-no-so*); an ‘allative’ form *Knōson-de* (*ko-no-so-de*: ‘to Knossos’); more rarely an ‘ablative’ form *Knōsō-then* (*\*ko-no-so-te*: ‘from Knossos’, not attested in our extant documents); and, in addition, place-name adjectives, often (somewhat misleadingly) referred to as ‘ethnics’ *Knōsios* / *Knōsiā* (*ko-no-si-jo* / *-ja*: ‘Knossian’, masculine and feminine). The identification of forms like these in recognisable place-names enabled the isolation of the same pattern in other words (e.g., *pa-ki-ja-ne* / *pa-ki-ja-na-de* / *pa-ki-ja-ni-jo/-ja* at Pylos), especially when those occurred in similar documentary contexts, such as in lists or in series of parallel documents. From such analyses, we have identified just under 100 place-names in the Knossos archive,<sup>19</sup> almost 250 at Pylos,<sup>20</sup> perhaps 21 at Thebes,<sup>21</sup> and a handful at Mycenae, none of them identified with names known in later historical sources.<sup>22</sup>

A list of place-names, however, does not constitute a map of any polity. To produce a map requires situating these names in space. For the historically attested or ‘recognisable’ place-names, this means the identification by archaeology of occupation or use at that place in the period(s) to which the documents refer. If convincing, this avoids the potential problem of the place-name having moved since the period covered by the documents. It is much more difficult, however, to pinpoint previously unknown, or historically unattested place-names. In most instances this can only be achieved by association with known place-names as geographical ‘fixed points’. Research to combine attested and unattested place-names from Aegean documents was carried out for Crete by various scholars, notably John Killen, Jennifer McArthur and Tony Wilson,<sup>23</sup> and for Pylos by John Chadwick, John Cherry, Joan

<sup>17</sup> M. G. F. VENTRIS, *Work Notes on Minoan Language Research and Other Unedited Papers*, A. Sacconi (ed.), Rome 1988, 327-31.

<sup>18</sup> *Docs*, p. 146-50 (to 1956); J. K. MCARTHUR, “A Tentative Lexicon of Mycenaean Place-Names. Part I: The Knossos Tablets”, *Minos* 19.1,2 (1985), p. 1-136; J. K. MCARTHUR, *Place-Names in the Knossos Tablets: Identification and Location*, Salamanca 1993 (*Minos* Suppl., 9); A. P. SAINER, “An Index of the Place Names at Pylos”, *SMEA* 17 (1976), p. 17-63; M. DEL FREO, “The Geographical Names in the Linear B Texts from Thebes”, *Pasiphae* 3 (2009), p. 41-67.

<sup>19</sup> J. K. MCARTHUR, *Place-Names...*, cit. (n. 18); cf. J. BENNET, “The Structure of the Linear B Administration at Knossos”, *AJA* 89:2 (1985), p. 231-249; J. BENNET, *Aspects of the Administrative Organization of LM II–IIIB Crete: A Study Based on Archaeological and Textual Data*, PhD thesis, University of Cambridge 1986, p. 73-74.

<sup>20</sup> A. P. SAINER, “An Index...”, cit. (n. 18); cf. J. BENNET, “The Mycenaean Conceptualization of Space or Pylian Geography (...Yet Again!)”, *Floreat*, I, p. 131-157; J. CHADWICK, “The Mycenaean Documents”, *MME*, p. 102; M. LANG, “Pylian Place-Names”, *Studies Bennett*, p. 185.

<sup>21</sup> M. DEL FREO, cit. (n. 18), based on the current state of the archive.

<sup>22</sup> Cf. J. T. KILLEN, “On the Mycenae Ge Tablets”, *Res Mycenaeae*, p. 219.

<sup>23</sup> J. T. KILLEN, “The Knossos Texts and the Geography of Mycenaean Crete”, in *Mycenaean Geography. Proceedings of the Cambridge Colloquium, September 1976*, J. Bintliff (ed.), Cambridge

Carothers and others.<sup>24</sup> McArthur, Wilson, Cherry and Carothers applied statistical techniques similar to those used by Tobler and Wineburg to reconstruct the relative geography of the Old Assyrian colonies in Cappadocia.<sup>25</sup> The process depends on place-names occurring in association, ideally on lists or in closely related sets of documents, and on those associations being between geographically proximate place-names, not those linked by some other common feature, such as status or function.<sup>26</sup>

### Review of major palaces – Knossos, Pylos, Thebes

A combination of statistical and ‘intuitive’ studies of place-names across the Aegean Linear B world has produced relatively good results for those sites with the largest collections of texts (Knossos and Pylos) and outline results for Thebes, where documents are not (yet) so plentiful.<sup>27</sup>

In the case of the Knossos archive, the 98 identified place-names appear a total of 1,129 times in a corpus of c. 4,300 documents.<sup>28</sup> A complication at Knossos is that documents were preserved in at least two major horizons: the earlier, in the so-called ‘Room of the Chariot Tablets’ probably dates around 1400 BC,<sup>29</sup> while the majority of the remaining documents belong to a mid-14th c. destruction a generation or two later.<sup>30</sup> There is, fortunately, a high degree of similarity in the place-names attested in the two deposits, although Driessen has identified some possible differences, implying expansion within the period and the possibility of discontinuous control.<sup>31</sup> In the Knossos texts, as noted above, there are several place-names that are known from later historical documents. The toponymy of Crete, therefore, appears to be fairly stable between the Bronze Age and later historical periods. The most securely

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1977, p. 40-47; J. K. MCARTHUR, “The Textual Evidence for Location of Place-names in the Knossos Tablets”, *Minos* 17.1 (1981), p. 147-210, and EAD., *Place-Names...*, cit. (n. 18); A. L. WILSON, “The Place-names in the Linear B Tablets from Knossos: Some Preliminary Considerations”, *Minos* 16 (1977), p. 67-125.

<sup>24</sup> J. CHADWICK, “The Mycenaean Documents”, cit. (n. 20); J. F. CHERRY, “Investigating the Political Geography of an Early State by Multidimensional Scaling of Linear B Tablet Data”, in *Mycenaean Geography. Proceedings of the Cambridge Colloquium, September 1976*, J. L. Bintliff (ed.), Cambridge 1977, p. 76-83; J. J. CAROTHERS, *The Pylian Kingdom: A Case Study of an Early State*, PhD dissertation, University of California at Los Angeles, Los Angeles 1992; A. P. SAINER, “An Index...”, cit. (n. 18); summarised in J. BENNET, “The Mycenaean Conceptualization...”, cit. (n. 20).

<sup>25</sup> W. TOBLER, S. WINEBURG, “A Cappadocian Speculation”, *Nature* 231 (1971), p. 39-41; see now G. BARJAMOVIC, *Historical Geography of Anatolia in the Old Assyrian Colony Period*, Copenhagen 2011, p. 67, for a critical assessment in the context of a comprehensive re-study of the question.

<sup>26</sup> Cf. J. BENNET, “The Structure...”, cit. (n. 19), p. 240-42.

<sup>27</sup> I present an outline here; for more detail see J. BENNET, “The Geography...”, cit. (n. 16).

<sup>28</sup> T. G. PALAIMA, “‘Archives’ and ‘Scribes’...”, cit. (n. 15), p. 162. Figures for frequency of occurrence at both Knossos and Pylos have been tabulated by the author.

<sup>29</sup> J. DRIESSEN, *Scribes RCT*.

<sup>30</sup> J. DRIESSEN, “Chronology of the Linear B Texts”, in *A Companion to Linear B: Mycenaean Greek Texts and their World*, Vol. 1, Y. Duhoux, A. Morpurgo Davies (ed.), Leuven 2008 (Bibliothèque des cahiers de l'Institut de Linguistique de Louvain 120). p. 69-79, with references to alternative dating schemes.

<sup>31</sup> J. DRIESSEN, “Centre and Periphery: Some Observations on the Administration of the Kingdom of Knossos”, in *Economy and Politics*, p. 96-112.

recognised place-names are: Knossos (the centre itself), Amnisos, Tylisos, Phaistos, Aptara (in a form Aptarwa) and Kydonia (modern Chania). There are other possible equivalences, which are listed by Jennifer McArthur.<sup>32</sup>

By association with these ‘fixed’ points, it is possible to locate some place-names unattested in later documents. For example, a coherent group can be associated with the Kydonia region, a deduction independently confirmed by the West-Cretan composition of the clay of some ceramic storage–transport vessels called ‘stirrup-jars’, a small number of which bear place-names (*o-du-ru-wi-jo*, *wa-to* and possibly *si-ra-ri-jo*, on a vessel as yet not analysed) that fall within this western group, painted before firing.<sup>33</sup> By contrast, no place-names in the eastern section of the island, beyond the narrow Ierapetra isthmus, appear to have been mentioned in the Knossos documents and this strongly implies that this area lay beyond Knossian political interest at the time of the documents.<sup>34</sup>

When we assign place-names to relative geographical groupings, we observe that they appear to be treated differently within the administration: those closest to Knossos were perhaps administered directly, while those at one remove, to east, south and west, made more use of intermediate centres and probably local elite, while the far west, around Kydonia–Chania, may have been administered indirectly.<sup>35</sup> The discovery of three tablets in Kydonia–Chania in a mid-13th c. BC context twenty years ago caused quite a stir, since two showed similarities in hand-writing style to tablets attributed to a Knossos scribe, hand 115.<sup>36</sup> If so, they would have been more or less contemporary (i.e. within a ‘scribal lifetime’) with the Knossos documents, and might have been produced by a Knossos administrator at a local outpost in Chania. However, the quantity of material is insufficient to confirm the identity of the scribal hand, and it is now generally accepted that they were not contemporary with their Knossos counterparts, but about a century later.<sup>37</sup> They probably represent an independent administrative archive at Chania in this later period, but still using a broadly Knossian graphic style.

The Pylos archive presents a different picture. About 250 place-names are attested, including the centre itself, Pylos, but they only yield about 798 total occurrences in an archive of c. 1,100 documents.<sup>38</sup> In the region of Messenia, the southwestern corner of the Peloponnese, there appears to be little continuity of place-name usage from the Late Bronze Age to later historical periods. This no doubt has

<sup>32</sup> J. MCARTHUR, *Place-Names...*, cit. (n. 18), p. 125-52.

<sup>33</sup> H. W. HASKELL, R. E. JONES, P. M. DAY, J. T. KILLEN, *Transport Stirrup Jars of the Bronze Age Aegean and East Mediterranean*, Philadelphia, PA 2011.

<sup>34</sup> J. BENNET, “The Wild Country East of Dikte: The Problem of East Crete in the LMIII Period”, in *Studies Chadwick*, p. 77-88.

<sup>35</sup> J. BENNET, “The Structure...”, cit. (n. 19), p. 247-49.

<sup>36</sup> E. HALLAGER, M. VLASAKIS, B. P. HALLAGER, “New Linear B Tablets from Khania”, *Kadmos* 31 (1992), p. 61-87; J.-P. OLIVIER, “KN 115 = KH 115. Un même scribe à Knossos et à la Canée au MR IIIB: du soupçon à la certitude”, *BCH* 117 (1993), p. 19-33.

<sup>37</sup> T. G. PALAIMA, “Ten Reasons why KH 115 ≠ KN 115”, *Minos* 27-28 (1993), p. 261-281; J.-P. OLIVIER, “KN 115 et KH 115: Rectification”, *BCH* 120 (1996), p. 823.

<sup>38</sup> T. G. PALAIMA, “‘Archives’ and ‘Scribes’...”, cit. (n. 15), p. 162-63.



something to do with Medieval immigration by Slavic and Albanian speakers,<sup>39</sup> but may also reflect the profound discontinuity of settlement at the end of the Bronze Age, since this region shows one of the largest and most precipitous declines in known site numbers at this period.<sup>40</sup> The only *secure* place-name ‘fix’ is the centre itself, Pylos. This is not only confirmed by the presence of the documents at this site, but also by ancient geographical testimony: Strabo (8.4.1-2) indicates that the earlier location of Pylos was ‘under Aigaleon’, a mountain range in the region. This term almost certainly appears in the Pylos documents as ‘Aigolaion’.

Unlike the situation at Knossos, where we have had to reconstruct possible administrative zones on the basis of relative geography and patterns of occurrence, at Pylos there are explicit administrative divisions within the polity. The term Aigolaion occurs in the designation of two ‘provinces’ — *pe-ra<sub>3</sub>-ko-ra-i-ja* (*Peraigolaiā* <gē>) and *de-we-ro-a<sub>3</sub>-ko-ra-i-ja* (*Deuroigolaiā* <gē>), or ‘further’ and ‘hither’ Aigolaia, or the ‘Hither’ and ‘Further’ Provinces, as Linear B scholars have become accustomed to call them. It is attractive to see the Pylian designations as meaning ‘this-side-of’ and ‘beyond’ Aigolaion, now known as Aigaleon, or Ayia, the long, high ridge that runs from north-west to south-east across Messenia and is particularly prominent in the vicinity of the centre at Pylos.

In addition, the Pylos documents also include three page-shaped texts with fixed-order lists of place-names: two of these (PY Cn 608; Vn 20) list nine place-names in the same order, while the third (PY Jn 829) lists these nine again in the same order, followed by seven more. A further, fragmentary text (PY On 300) clearly listed the same 16 place-names, but with two explicit headings dividing them between the ‘Hither’ and ‘Further’ Provinces, ‘this-side-of’ and ‘beyond’ Aigolaion. Jn 829 then gives a complete list of nine Hither Province place-names, followed by seven in the Further Province. Finally a series of 17 individual, elongated documents — the so-called Ma series — each with a single place-name contains the nine Hither Province names, plus another eight, mostly recognisable in the Further Province listing, but one of the seven districts was probably sub-divided for these particular individual returns. We appear, then, to have, at the time of the documents, an overall polity split into two provinces and a series of 16 or 17 places functioning as district centres within the two provinces.<sup>41</sup>

Thebes, although clearly a major centre within the Mycenaean world, has presented a relatively small number of Linear B documents (363 to date<sup>42</sup>) due partly to the restricted possibilities for excavations within the modern city that covers the

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<sup>39</sup> Cf. D. J. GEORGACAS, W. A. McDONALD, *Place Names of Southwest Peloponnesus: Register and Indexes*, Minneapolis, MN 1967.

<sup>40</sup> *MME*, p. 142-43; J. L. DAVIS, S. E. ALCOCK, J. BENNET, Y. LOLOS, C. W. SHELMEARDINE, “The Pylos Regional Archaeological Project, Part I: Overview and the Archaeological Survey”, *Hesperia* 66 (1997), p. 424, 451-53; J. L. DAVIS (ed.), *Sandy Pylos: An Archaeological History from Nestor to Navarino*, 2nd ed., Princeton, NJ 2008, p. 147-50.

<sup>41</sup> J. BENNET, “Space through Time: Diachronic Perspectives on the Spatial Organization of the Pylian State”, in *Politeia*, vol. II, p. 587-602; ID., “The Mycenaean Conceptualization...”, cit. (n. 20), with references.

<sup>42</sup> *Fouilles de la Cadmée III*; V. L. ARAVANTINOS, L. GODART, A. SACCONI, “La tavoletta TH Uq 434”, *Colloquium Romanum*, p. 23-33.

ancient site (unlike the situation at Knossos or Pylos). Of the 21 possible place-names, several may be preserved in the later toponymy of the region, although these identifications are less well supported archaeologically than those of the Knossos archive.<sup>43</sup> As at Pylos and Knossos, one of the place-names attested is that of the centre itself, in the form *te-qa*, either *Thēg<sup>w</sup>ā* (singular, Theba) or *Thēg<sup>w</sup>ai* (plural, Thebai, as the site was later known).

Unfortunately, the relatively small collections of administrative documents from other mainland sites (Mycenae, Tiryns, Ayios Vasileios, Volos and Iklaina<sup>44</sup>) and from Chania on Crete offer very little in the way of place-name information, although one Chania tablet (KH Ar 4) has the ‘ethnic’ forms of place-names attested in the Knossos documents (probably functioning as personal-names) *wa-ti-jo* and *pu-na-si-jo*.<sup>45</sup> The names Mycenae (presumably *Mukānai*) and Tiryns (*Tiruns*) probably go back to the Bronze Age, but are not attested among the small number of documents at either site. The dearth of place-name information from these two large sites, heavily fortified in their 13th-century BC phases, is particularly frustrating, since it is difficult to understand their political relationship: did they each control a distinct territory or was one (presumably Mycenae) dominant over the other? The problem is ‘solved’ by the Greek epic tradition in the Homeric ‘Catalogue of Ships’ (*Iliad* 2), where complementary territories are assigned to Agamemnon (Mycenae and the Corinthia to the north) and to Diomedes (Tiryns and the southern Argolid and Troizinia to the east).<sup>46</sup> However, there is no secure way of determining whether this is a genuine Bronze Age reminiscence, reflecting perhaps a pre-palatial, early Mycenaean, or a post-palatial situation, or is simply an epic rationalisation.

The place-name evidence as a whole, therefore, can be used with some confidence to suggest quite extensive polities centred on Knossos (probably 4,500-5,000 km<sup>2</sup>, perhaps larger) and Pylos (c. 2,000 km<sup>2</sup>). Thebes’s territory may have been even larger, perhaps 4-5,000 km<sup>2</sup>, if it did include all the adjacent island of Euboea, as the presence of the names Amarynthos and Karystos suggests.<sup>47</sup> The recent discovery of Linear B documents at Ayios Vasileios (ancient name unknown) in Lakonia<sup>48</sup> implies another polity to the east of the Pamisos / Messenia valley, which formed Pylos’s Further Province at the time of the documents. If the territory of this polity was roughly co-extensive with that of the modern administrative district of Lakonia, then it would have been about 3,600 km<sup>2</sup>. Exactly how Mycenae and Tiryns co-existed remains unclear, as noted above, but it is possible that a large polity

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<sup>43</sup> Although survey and now excavation around and on the ancient site of Eleon (Lin B \**e-re-o*: cf. Thebes Ft 140.5) are currently in progress, for example: <http://web.uvic.ca/~bburke/EBAP/> (last accessed 25 July 2012).

<sup>44</sup> M. DEL FREO, “Rapport 2006-2010 sur les textes en écriture hiéroglyphique crétoise, en linéaire A et en linéaire B”, *Études Mycéniennes* 2010, p. 17-21.

<sup>45</sup> E. HALLAGER, M. VLASAKIS, B. P. HALLAGER, “New Linear B Tablets from Chania”, cit. (n. 36), p. 72-75.

<sup>46</sup> R. HOPE SIMPSON, J. F. LAZENBY, *The Catalogue of the Ships in Homer's Iliad*, Oxford 1970, p. 61-73.

<sup>47</sup> Although, since both these sites are coastal and lie in the southern half of the island, facing the mainland, it is possible that much of the island itself lay outside Thebes’ direct control.

<sup>48</sup> V. ARAVANTINOS, A. VASILOGAMVROU, “The first Linear B documents from Ayios Vasileios (Lakonia)”, in *Études mycéniennes* 2010, p. 41-54.

existed in the north-east Peloponnese comprising the Argolid, Corinthia and Troizinia, over 4,500 km<sup>2</sup>, based on the extent of the modern districts.<sup>49</sup>

### **Structure & integration – political / economic**

As I suggested above, geographical information can help us to understand structure and integration. We need to bear in mind first, as noted already, that the Pylos and Knossos documents differ in date and therefore historical context: the majority of the Knossos texts appear to date to the mid-14th c. BC, while those at Pylos are (less controversially) dated to the palace's destruction at the end of the 13th c. BC, the end of the LH IIIB period.<sup>50</sup> Pylos is therefore a *late* Mycenaean centre, operating in a period after the mid-13th c. BC destructions at Mycenae and Tiryns and in a Mediterranean environment possibly typified by the Gelidonya and Iria wrecks, with their suggestion of non-palatial trade.<sup>51</sup> The Knossos documents, on the other hand, belong mostly to a mid-14th c. BC environment, roughly contemporary with the Uluburun wreck, with its strong suggestion of palace-directed or palace-controlled trade.<sup>52</sup> Given that the two corpora belong to different historical contexts, we cannot be sure whether, leaving aside the vagaries of archaeological preservation, differences in the administration of the Knossos and Pylos polities simply reflect different practices or traditions, or different contingent historical circumstances.<sup>53</sup>

#### *Hierarchy and Integration*

We can begin to examine how the Knossos and Pylos polities articulated their regional involvement by looking simply at the number of place-names attested in relation to the probable size of their territories. As we saw above, we can plausibly identify 98 place-names in the Knossos texts, while the number is much larger for

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<sup>49</sup> Cf. J. BENNET, "Bronze Age Greece", cit. (n. 1), p. 244-46, including discussion of some other regions.

<sup>50</sup> Knossos: J. DRIESSEN, "Chronology", cit. (n. 30), p. 70-72. The main alternative dating, some time in the 13th c. BC (mid-LMIIIB), initially proposed by L. R. PALMER, has been argued most strenuously by E. HALLAGER, *The Mycenaean Palace at Knossos*, Stockholm 1977. Pylos: P. A. MOUNTJOY, "The Destruction of the Palace at Pylos Reconsidered", *Annual of the British School at Athens* 92 (1997), p. 109-137; S. VITALE, "The LH IIIB-LH IIIC Transition on the Mycenaean Mainland: Ceramic Phases and Terminology", *Hesperia* 75 (2006), p. 190-91, with references.

<sup>51</sup> G. BASS, "Cape Gelidonya Shipwreck", in *The Oxford Handbook of the Bronze Age Aegean (ca. 3000-1000 BC)*, E. H. Cline (ed.), Oxford 2010, p. 797-803 (Gelidonya); W. PHELPS, Y. LOLOS, Y. VICHOS (ed.), *The Point Iria Wreck: Interconnections in the Mediterranean ca. 1200 B.C. Proceedings of the International Conference, Island of Spetses, 19 September 1998*, Athens 1999 (Iria); see also: S. SHERRATT, "Potemkin Palaces and Route-Based Economies", in *Economy and Politics*, esp. p. 234-37, for one view of the overall situation in the late 13th-12th centuries BC.

<sup>52</sup> C. PULAK, "Uluburun Shipwreck", in *The Oxford Handbook of the Bronze Age Aegean (ca. 3000-1000 BC)*, E. H. Cline (ed.), Oxford 2010, p. 862-76.

<sup>53</sup> Even if we accept a late date for the Knossos archive, c. 1250 BC, mid-LM IIIB, it is still at least a generation or two earlier than the date of the Pylos texts; a mid-LM/LH IIIB destruction preserving the Knossos tablets would be roughly contemporary with the first destructions to hit Mycenae and Tiryns.

Pylos's, a total of 247.<sup>54</sup> Since Knossos's territory is much larger (perhaps c. 4,500-5,000 km<sup>2</sup>) than Pylos's (c. 2000 km<sup>2</sup>), it is clear that the density of place-names mentioned in each archive is different: one place-name every 46-51 km<sup>2</sup> for Knossos, as against one every 8.1 km<sup>2</sup> for Pylos.

It is unlikely that Crete was less densely settled by a factor of five in the mid-14th c. BC than Messenia was in the late 13th.<sup>55</sup> Nor is it likely that we have recovered archaeologically all the sites mentioned in either set of documents. The discrepancy between place-names mentioned and sites known archaeologically is, however, higher for Crete than for Messenia. It is more probable, therefore, that Knossos was dealing explicitly with fewer places than Pylos, and that they were spread over a larger area, and so presumably places of higher status or significance. Some confirmation for this explanation is offered by the frequency of occurrence of place-names in the two sets of documents. At Knossos only 25 (26%) place-names are mentioned once only, while at Pylos the equivalent figure is 116 (47%). Places mentioned only once might only be relevant to the centre in one particular, specialised context, while those mentioned more than once, especially those mentioned frequently, were of greater relevance to the regular processes of palatial management. In the Pylos polity, for example, 38 places are only mentioned in the context of flax production,<sup>56</sup> suggesting that they were places of minor 'political' significance, only relevant to the contribution of flax to the palace.

As we saw above, at Pylos there are a number of place-names that occur in fixed-order lists either contributing to, or receiving goods from, the centre. These number 16 or 17, and it is significant that most of them are amongst the most mentioned place-names in the documents. If we take the 20 most frequently occurring place-names, Pylos itself tops the list, with 57 occurrences, but eight of the nine Hither Province and three of the seven-eight Further Province district centres also rank there. In the case of Knossos, we have no explicit lists of sub-centres like those at Pylos, but it is noticeable that some of the most frequently mentioned place-names appear to have some status in the administration. Various criteria allow the identification of five places as plausible second-order centres: Phaistos and Kydonia (modern Chania), both identifiable with significant archaeological sites, in south and west Crete respectively, in use at the time of the documents, and *ku-ta-to*, *da-\*22-to*, and *se-to-i-ja* whose exact locations cannot be determined with certainty: the first two

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<sup>54</sup> The number at Pylos is slightly inflated, since it includes the two 'province' terms, as well as some 'ethnic' adjectives that refer to places outside the polity itself and some sanctuaries that might well be in or very close to the palace itself. Nevertheless, even if we exclude those instances, there remain well over 200 place-names; for statistical purposes below the figure of 247 is used.

<sup>55</sup> For Knossos, see J. BENNETT, "'Outside in the Distance': Problems in Understanding the Economic Geography of Mycenaean Palatial Territories", in *Studies Bennett*, p. 26-31, based on data in J. BENNETT, *Aspects of the Administrative Organization of LM II-III B Crete...*, cit. (n. 19); for Pylos, see J. BENNETT, "Space through Time...", cit. (n. 41), p. 594-96, with the qualification by R. HOPE SIMPSON that LH III B settlement numbers may have been significantly larger than estimated there: "Interdisciplinary Survey in Messenia, Southwest Peloponnese, Greece", *Geoarchaeology* 22 (2007), p. 112-13.

<sup>56</sup> According to M. LANG, "Pylian Place-Names", cit. (n. 20), p. 185.

probably lay in west-central Crete, the third to the east of Knossos.<sup>57</sup> Of these, Phaistos, *ku-ta-to* and *da-\*22-to* are three of the four most frequently attested place-names at Knossos, while Knossos and *se-to-i-ja* are both in the top 20. Kydonia, with 16 occurrences, might seem low, but its distance from the centre at Knossos might account for this. It might appear that Knossos is not nearly as frequently mentioned in its texts as Pylos is in its: Knossos registers 23 occurrences (2% of the total) and Pylos 57 (7%). This is a product of an administrative practice that tends only to mention Knossos when necessary, the implication being that *absence* of an explicit place-name signifies activity *at* the centre. Administrative practice at Pylos, on the other hand, is more explicit, but a high number (43) of the mentions of Pylos relate to 28 female work-groups at the centre<sup>58</sup> and it also occurs six times on a single document (Tn 316).

It seems likely, therefore, that both polities operated through sub-centres that were to varying degrees responsible for collecting goods (and perhaps also information) for forwarding to their respective centre. In the case of Pylos, there were named officials (the *ko-re-te* and *po-ro-ko-re-te*) at each of the district centres, probably responsible for this mobilisation (cf. Pylos Jn 829, a levy of bronze from all districts in the polity<sup>59</sup>). At Knossos, although the titles are attested on two documents (C 902 [six times]; V(6) 865 [twice]), it is not clear that the individuals are fulfilling the same role as at Pylos.

Combining these various pieces of information, then, it appears that the centre's 'administrative reach' was deeper at Pylos than at Knossos, where it was probably mediated via second-order places, which dealt themselves with lower-order sites.<sup>60</sup> That this is the case for Pylos is suggested by the existence of documents that break down contributions made through district centres (e.g. the Ma series) to the level of individual settlements (Pylos Mn 456 [for the district of *ro-u-so*; cf. Ma 365]; Mn 162 [for the district of *a-si-ja-ti-ja*; cf. Ma 397]), or the obligations and exemptions for individuals among the flax tablets (Nn 831).<sup>61</sup>

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<sup>57</sup> J. BENNET, "The Structure...", cit. (n. 19), p. 240-42. It is worth noting here that in this period the name *pa-i-to* might have referred not to the site of the earlier palace known as Phaistos, but to the site of Ayia Triada, whose archaeological significance in LM III is greater: e.g., J. CHADWICK, *The Mycenaean World*, Cambridge 1986, p. 53-54; J. BENNET, "'Collectors' or 'Owners'? An Examination of their Possible Function Within the Palatial Economy of LMIII Crete", *Mykenaiika*, p. 97 n. 96.

<sup>58</sup> J. CHADWICK, "The Women of Pylos", in *Studies Bennett*, p. 48-55.

<sup>59</sup> J. S. SMITH, "The Pylos Jn Series", cit. (n. 12), p. 205-209.

<sup>60</sup> J. BENNET, "Space through Time...", cit. (n. 55), p. 29.

<sup>61</sup> J. T. KILLEN, "Mycenaean Economy", in *A Companion to Linear B: Mycenaean Greek Texts and their World*, Vol. 1, Y. Duhoux, A. Morpurgo Davies (ed.), Leuven 2008 (Bibliothèque des cahiers de l'Institut de Linguistique de Louvain 120), 168-69.

*Economic Integration*<sup>62</sup>

The first point to note is that no Mycenaean palace appears to have attempted to manage the totality of its territory. Management was highly selective, as noted above, with an emphasis on the transformation into exchange products of local commodities by adding value. Chief among these products were textiles (especially wool, but also linen) and perfumed oil. Other products — metalwork, military equipment — may well have been produced for local consumption, display and security.<sup>63</sup> In order to support these ‘industries’, food was required for the workers and there is evidence that the palaces supported the production of grain (both barley and wheat) and figs, while labour (in the broadest sense, probably also including the carrying out of rituals) was rewarded with land allocations, at least at Pylos. Finally, a widely attested, if relatively small,<sup>64</sup> part of the ‘gross domestic product’ was the supplying of offerings (oil, honey, grain, textiles) for various deities to sanctuaries (both within and beyond the palace) and the provisioning of feasts, both from palatial resources and obligatory contributions from other members of the elite.<sup>65</sup>

We do not have much information in the texts on the details of *how* economic and political integration were achieved, but we can demonstrate that it was possible to manage manufacturing processes that were decentralised and depended on work carried out at a number of locations across the polity, both at Knossos and Pylos. In the case of Knossos, the woollen textile ‘industry’ required the maintenance of information on a large number of ‘palatial’ flocks (totalling perhaps 100,000 sheep) at over 30 locations, the monitoring of their wool yields and transfer of that wool to palace-supported female workgroups at about 15 places (their location indicated by ‘ethnic’ adjectives: ‘the women, of *x*, *y* or *z*’). Only at the final stage was finished cloth transshipped to the centre, Knossos. This system, characterised by the term *ta-ra-si-ja* (*talasia*),<sup>66</sup> operated over west-central, central and east-central Crete, while places in the ‘far’ west operated under a different system, recorded in a different manner and by different administrators. A similar system, using the same *talasia*

<sup>62</sup> For useful overviews of Mycenaean economic activity, see J. T. KILLEN, “Mycenaean Economy”, cit. (n. 61), p. 159-200; F. ROUGEMONT, *Contrôle économique et administration à l’époque des palais mycéniens (fin du II<sup>e</sup> millénaire av. J.-C.)*, Athens 2009; J. BENNET, “The Aegean Bronze Age”, cit. (n. 6).

<sup>63</sup> E.g., J. M. DRIESSEN, “The Arsenal of Knossos (Crete) and Mycenaean Chariot Forces”, in *Archaeological and Historical Aspects of West-European Societies. Album Amicorum André Van Doorselaer*, M. Lodewijckx (ed.), Leuven 1996, p. 481-98.

<sup>64</sup> L. M. BENDALL, *Economics of Religion in the Mycenaean World: Resources Dedicated to Religion in the Mycenaean Palace Economy*, Oxford 2007.

<sup>65</sup> T. G. PALAIMA, “Sacrificial Feasting in the Linear B Documents”, *Hesperia* 73.2 (2004), p. 97-126; L. M. BENDALL, “Fit For a King? Hierarchy, Exclusion, Aspiration and Desire in the Social Structure of Mycenaean Banqueting”, in *Food, Cuisine and Society in Prehistoric Greece*, P. Halstead, J. C. Barrett (ed.), Oxford 2004, 105-35; J. T. KILLEN, “Thebes Sealings, Knossos Tablets and Mycenaean State Banquets”, *BICS* 39 (1994), p. 67-84.

<sup>66</sup> For a valuable overview, see M.-L. NOSCH, “More Thoughts on the Mycenaean *ta-ra-si-ja* System”, in *Fiscality*, p. 161-82. There seem to be close parallels between this and the Mesopotamian *iškāru*, system, as noted by J. N. Postgate in discussion; see also, J. N. POSTGATE, “The Debris of Government: Reconstructing the Middle Assyrian State apparatus from Tablets and Potsherds”, *Iraq* 72 (2010), p. 19-37; *Chicago Assyrian Dictionary*, vol. I-J, s.v., p. 244-49.

term, operated at Pylos for metal (*ka-ko*, ‘copper’ or, more likely, ‘bronze’): almost 300 (preserved) ‘smiths’ (*ka-ke-we*) at 17 locations in both provinces are each allocated between 1.5 and 12 kg. of metal,<sup>67</sup> presumably to work into finished items (such as vessels, perhaps: Knossos K[1] 875) for delivery to the centre.<sup>68</sup>

The appearance in both of these instances is of palatial *control*, but it is likely to be a partial, palace-centred view of the situation. Halstead, for example, using the figures for ‘missing’ sheep on the Knossos flock census records, has suggested that the ‘flocks’ were maintained and replenished locally, from a larger ‘population’ of animals outside palatial ownership. In effect, in this system, the palace claimed rights to wool from round numbers of sheep. The wool remained *outside* the physical confines of the palace, moved from sheep to textile workshops, and only entered palatial stores as finished cloth. It is possible that this was how the Pylos bronze industry worked too: certain amounts of metal from a larger ‘pool’ controlled by local ‘smiths’ were claimed by the palace and allocated to certain ‘smiths’ for working up into finished products. The implication of both scenarios is that either palace was capable of controlling the information relevant to a multi-stage production process across quite large areas of its territory, without physical movement of the commodities into and out of the palace itself until the final stage.<sup>69</sup>

Other types of production were organised differently. In the case of perfumed oil, the ‘industry’ was more centralised beyond the production and delivery of the raw materials both at Knossos and at Pylos.<sup>70</sup> At Knossos, a group of administrators based in a particular location in the West Wing of the palace recorded assessments and deliveries of oil and other raw materials (cyperus, *ki-ta-no* [probably a resin, Gr. *kirtanos*], and *po-ni-ki-jo* [probably alkanet, a red dye]<sup>71</sup>) from a group of places that appear to have been in the general vicinity of Knossos, but production itself took place at the centre. We do not understand the provisioning of raw materials for the Pylos industry, but it is clear that production is centred on Pylos itself, perhaps under the direct management of high-status, trusted individuals.<sup>72</sup> Production involving high-value materials (ivory; gold; blue glass [Linear B *ku-wa-no*]) seems to have been concentrated exclusively on the palaces, who perhaps maintained a monopoly on supply.<sup>73</sup>

Some indication of the different historical circumstances in which Pylos was operating is perhaps offered by the Pylos cloth industry, where manufacture of cloth

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<sup>67</sup> J. S. SMITH, “The Pylos Jn Series”, cit. (n. 12), p. 209-15; M.-L. NOSCH, “More Thoughts on the Mycenaean *ta-ra-si-ja* System”, cit. (n. 66), p. 173.

<sup>68</sup> J. T. KILLEN, “Bronzeworking at Knossos and Pylos”, *Hermathena* 143 (1987), p. 61-72. Chariot wheels, too, may have been subject to the same system: KN So 4442; cf. J. T. KILLEN, “Some Thoughts on *ta-ra-si-ja*”, in *Economy and Politics*, p. 163-64.

<sup>69</sup> Cf. M.-L. NOSCH, *The Knossos Od Series: An Epigraphical Study*, Vienna 2007, p. 61-65.

<sup>70</sup> E. D. FOSTER, “An Administrative Department at Knossos Concerned with Perfumery and Offerings”, *Minos* 16 (1977), p. 19-51; C. W. SHELMEARDINE, *The Perfume Industry in Mycenaean Pylos*, Göteborg 1985.

<sup>71</sup> *DMic*, s.vv.

<sup>72</sup> J. T. KILLEN, “Some Thoughts on *ta-ra-si-ja*”, cit. (n. 68), p. 169-75.

<sup>73</sup> Cf., e.g., J. BENNET, “Palace™: Speculations on Palatial Production in Mycenaean Greece with (Some) Reference to Glass”, in *Vitreous Materials in the Late Bronze Age Aegean*, C. M. Jackson, E. C. Wager (ed.) (Sheffield Studies in Aegean Archaeology, 9), Oxford 2008, p. 151-72.

was predominantly carried out by female work groups, many of non-local origin, at Pylos itself (28 groups) and a place called Leuktron, possibly the secondary capital of the Further Province (6 groups).<sup>74</sup> It is possible that this reflects a movement in the less stable times of the late 13th c. BC away from the more decentralised *talasia* system attested at Knossos, but we cannot be certain, because it is unclear how the Pylos system operated in earlier times.

Finally, it is worth noting that some palatial interests seem to have ‘decayed’ with distance from the centre. Chief among these were land-holding (especially at Pylos, where detailed land-holding records exist for the nearby centre of *pa-ki-ja-ne*) and offerings.<sup>75</sup>

### *Political Integration – Pylos*

In the case of Pylos, it appears the polity was more integrated politically than that of Knossos. There was a formal structure of 16-17 subordinate centres, divided between two provinces. A series of documents — the Ma tablets — record either assessments or payments (never both) for *all* districts in six standard (so presumably not ecologically-sensitive) commodities; the implication of requiring commodities that were readily available in *all* parts of the polity is that the obligation is universal and therefore compliance is presumably as much an act of acceptance of authority as an economic transaction.<sup>76</sup> Similarly, *all* districts are required at the time of the documents to make a bronze contribution through local officials (Jn 829), the *ko-re-te* and the *po-ro-ko-re-te*. There is little evidence of any administration carried out below the level of the centre at Pylos, although it is possible that the ration records for female work groups in the Further Province were kept there, rather than at Pylos itself.<sup>77</sup> The recent discovery of a single Linear B tablet fragment at the site of Iklaina *Traganes*,<sup>78</sup> 4 km southeast of Pylos, and possibly to be equated with the district capital *\*a-pu<sub>2</sub>*,<sup>79</sup> might be taken as evidence of local administration in Linear B. However, the tablet’s context, no later than the mid-14th c. BC, might possibly belong to a period before the site came under Pylian control or represent different administrative practices at this earlier stage in the region. Finally, there is some evidence of local authority figures, such as the *qa-si-re-u / -we* (equivalent to the later,

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<sup>74</sup> J. CHADWICK, “The Women of Pylos”, cit. (n. 58); J. T. KILLEN, “The Textile Industries at Pylos and Knossos”, in *Pylos Comes Alive*, p. 49-63.

<sup>75</sup> J. T. KILLEN, “Mycenaean Economy”, cit. (n. 61), p. 163-78.

<sup>76</sup> J. T. KILLEN, “Last Year’s Debts on the Pylos Ma Tablets”, *SMEA* 25 (1984), p. 173-88; C. W. SHELMDINE, “The Pylos Ma Tablets Reconsidered”, *AJA* 77 (1973), p. 261-75.

<sup>77</sup> J. CHADWICK, “The Women of Pylos”, cit. (n. 58), p. 64-65. The issues surrounding whether there was a secondary capital at the place known as *re-u-ko-to-ro* are too complex to deal with here: see J. BENNETT, “*RE-U-KO-TO-RO ZA-WE-TE*: Leuktron as a Secondary Capital in the Pylos Kingdom?”, *Studies Killen*, p. 11-30, with references.

<sup>78</sup> C. W. SHELMDINE, “Iklaina tablet IK X1”, in *Études mycéniennes 2010*, p. 75-77.

<sup>79</sup> M. B. COSMOPOULOS, “The Political Landscape of Mycenaean States: *a-pu<sub>2</sub>* and the Hither Province of Pylos”, *AJA* 110.2 (2006), p. 205-28.



historical-period βασιλεύς / βασιλεῖς, meaning ‘king’), whose role in the Late Bronze Age was in craft organisation, especially metals.<sup>80</sup>

### *Political Integration – Knossos*

At Knossos, the situation is less clear in the texts. There is no clear evidence of polity-wide ‘taxation’, although there are two series of documents — the Knossos Mc and Nc series — that share similarities with the Pylos Ma texts.<sup>81</sup> It is difficult, however, to read them as a list of contributions from second-order centres, like the district-centres at Pylos. Although the Knossos Mc series place-names include *da-\*22-ti-jo*, *ku-ta-to* and *se-to-i-ja*, there are no other obvious major places, like Phaistos: i.e. the series does not appear to document a polity-wide tax levy. On the basis of the relative locations of place-names, we can suggest that integration varied with distance from Knossos: a group of places close to Knossos may have been directly managed, while others to the east, south and west of this region might have been managed through second-order centres; finally, the west of the island (especially the Kydonia / Chania region) may have been indirectly managed. This region certainly did not participate in the sheep / textile industry in the same manner, although the production of western textile workshops was monitored by Knossos scribes (the Lc [2] series, by hands 113 and 115). Driessen has suggested that Knossos’ ‘control’ may have been discontinuous, drawing particular products from areas with which it could maintain an exploitative relationship.<sup>82</sup> As we saw above, *some* districts have titled officials (including the terms *ko-re-te* and *po-ro-ko-re-te*: especially Knossos C 902) and the term *qa-si-re-we* is also present. There is no evidence of subsidiary administration, since the Linear B documents at Chania seem to post-date the main Knossos archive and there is insufficient evidence to demonstrate that they were written by a Knossos scribe.<sup>83</sup>

### *Contrasting Histories – Knossos*

To sketch the history of these polities, we need to draw in archaeological, as well as textual evidence. In the case of Knossos, many archaeologists believe that it dominated the entire island of Crete politically in the Neo-Palatial period, when the urban centre may have reached a size of over 100 ha. Other scholars do not automatically accept Knossos’ political dominance, especially in the early 15th c. BC, the LMIB period.<sup>84</sup> Whether or not Knossos was the sole primary centre in the Neo-

<sup>80</sup> Cf. P. CARLIER, *Royauté*, p. 108-16; also J. R. LENZ, *Kings and the Ideology of Kingship in Early Greece (c. 1200-700 B.C.): Epic, Archaeology, and History*, Ph.D. Dissertation, Columbia University 1993.

<sup>81</sup> J.-P. OLIVIER, “Une loi fiscale mycénienne”, *BCH* 98 (1974), p. 23-35; J. T. KILLEN, “A Note on the Knossos Mc Tablets”, *Fa ventia* 30.1-2 (2008), p. 47-52; M. PERNA, *Recherches sur la fiscalité mycénienne*, Nancy 2006, p. 273-85.

<sup>82</sup> J. DRIESSEN, “Centre and Periphery”, cit. (n. 31), p. 111-12.

<sup>83</sup> *Supra*, p. 000. [= ms. p. 9]

<sup>84</sup> E.g., J. M. DRIESSEN, C. MACDONALD, *The Troubled Island: Minoan Crete before and after the Santorini Eruption (Aegaeum 17)*, Liège 1997; I. SCHOEP, “Tablets and Territories?...”, cit. (n. 8).

Palatial period (based on archaeological criteria), there is clear evidence, in the form of Linear A administrative documents of various types, at a number of sites, both large and small, throughout the island. This does not prove that these places were independent, of course, and one group of sealed documents, impressed with high-quality signets and attested at a number of sites (including Akrotiri on Thera in a context earlier by some margin), has been used to suggest Knossian control over much of the island.<sup>85</sup>

If Knossos did control the entire island in the Neo-Palatial period, then by the LM II – IIIA period its control had shrunk, probably not extending to the eastern one-third or so. However, this is the only period of the Bronze Age in which we can demonstrate beyond reasonable doubt Knossos' dominance over much of island; it lasted perhaps for a century (from the mid-15th to the mid-14th c. BC). Control of Crete from a single centre is historically an inherently unstable situation that has only been achieved by *outside* powers (Rome, with its capital at Gortyn; Venice and the Ottoman Empire, with their capital at Candia / Kandiye, modern Herakleion).<sup>86</sup>

The situation on Crete, then, might have gone from Neo-Palatial 'simplicity' with Knossos in control to Final Palatial 'complexity' when at least parts of the island were not under Knossian control. Alternatively, if Knossos was only one of a number of polities in the Neo-Palatial period, then in LMII-III A1 these were amalgamated into a short-lived 'simplicity' that broke down after about a century to be followed again by 'complexity' in LMIII A2 and beyond. Whichever is true, it is likely, given the place-name evidence of second-order centres, that Knossos built its control on the basis of pre-existing centres of power.<sup>87</sup> Also, finally, it may be significant that the system documented in the Knossos Linear B texts is probably closer to its point of origin in the LMI period (not more than a century?) than that at Pylos was to the formative period of the Mycenaean palatial culture, the early Mycenaean, or LHI-II, period (more than two centuries?).

### *Contrasting Histories – Pylos*

In the case of Pylos, the historical development is more clearly from 'complexity' to 'simplicity' – multiple early Mycenaean centres competed with one another (using mortuary display in tholos tombs, etc.) before certain settlements, like Pylos, became dominant.<sup>88</sup> By the mid-14th c. BC, Pylos had probably begun to incorporate eastern Messenia, as is strongly suggested by changes at the site of Nichoria, while by c. 1300 BC (the date of the construction of the palace complex as we know it), political power seems to have become concentrated on a single, eccentric centre at Bronze Age Pylos,

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<sup>85</sup> Y. GOREN, D. PANAGIOTOPOULOS, "The 'Lords of the Rings': An Analytical Approach to the Riddle of the 'Knossian Replica Rings'", *BICS* 52 (2009), p. 257-58; O. KRZYSZKOWSKA, *Aegean Seals: An Introduction* (BICS Supplement 85), London 2005, p. 188-92 (including discussion of the Thera impression).

<sup>86</sup> J. BENNET, "Knossos in Context: Comparative Perspectives on the Linear B Administration of LM II-III Crete", *AJA* 94.2 (1990), p. 193-212.

<sup>87</sup> Cf. J. BENNET, "The Structure...", cit. (n. 19), p. 242-45.

<sup>88</sup> J. BENNET, "Pylos: The Expansion of a Mycenaean Palatial Center", *Rethinking Mycenaean Palaces* II, p. 29-39; J. L. DAVIS, *Sandy Pylos...*, cit. (n. 40), p. 125-26.

the site of Ano Englianos.<sup>89</sup> That Pylos extended its power from west to east is strongly implied by the terminology ‘this-side-of-’ and ‘beyond-Aigolaion’, since ‘beyond’ can only have meaning from a Pylian perspective. In the historical period, a centre was ‘created’ for Messenia in the form of the city of Messene, immediately below Mt Ithome, an artificial creation (369 BC) in the wake of Spartan defeat at Leuktra. Prior to this the true political centre lay further east still, in Sparta. In the Bronze Age Pylos may have been favoured as a centre, despite its location in relation to its political territory, because of its access to the sea, especially if we accept the reconstruction of an artificially-enhanced harbour basin below the site, north of the Osmanaga Lagoon.<sup>90</sup>

### Identity – External and Internal Perceptions

There is very little evidence in the form of place-names for inter-polity interaction within the Aegean world. A document found at Mycenae (**X 508**) appears to record a delivery of cloth to Thebes, presumably the palace site in Boeotia. Among the recently published texts from Thebes itself, there are references to an ‘ethnic’ or personal name, ‘Lakedaim(o)nios’ (e.g. Thebes **Ft 275**), perhaps implying an origin for this individual in the Lakonia region and therefore ties between Thebes and that region, although the references are not in a context of exchange.

Given the archaeologically well documented links between the Aegean world and the wider eastern Mediterranean, we might expect references in the Linear B documents to external polities in either trade or diplomatic contexts. However, explicit references to trade are notoriously absent from the Linear B documents.<sup>91</sup> Diplomatic documents simply do not exist in Linear B and the only possible example of which I am aware is a tablet in Hittite found at the Hittite capital Hattuša that some scholars claim is a translation of a letter from the king of Ahhiyawa to the Hittite king (probably Muwattalli II).<sup>92</sup> There are also probable non-local ethnics functioning as personal names: Aiguptios, Kyprios, Alassios, etc.<sup>93</sup>

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<sup>89</sup> J. BENNET, “The Mycenaean Conceptualization...”, cit. (n. 20), p. 143, on Nichoria, with a more recent interpretation of its Linear B place-name: T. G. PALAIMA, “Θέμις in the Mycenaean Lexicon and the Etymology of the Place-Name \**ti-mi-to a-ko*”, *Faventia* 22 (2000) p. 7-19; J. L. DAVIS, J. BENNET, “Making Mycenaean: Warfare, Territorial Expansion, and Representations of the other in the Pylian Kingdom”, in *Polemos*, p. 105-20.

<sup>90</sup> E. ZANGGER, M. E. TIMPSON, S. B. YAZVENKO, F. KUHNKE, J. KNAUSS, “The Pylos Regional Archaeological Project, Part II: Landscape Evolution and Site Preservation”, *Hesperia* 66 (1997), p. 619-623; R. HOPE SIMPSON, D. K. HAGEL, *Mycenaean Fortifications, Highways, Dams and Canals*, Sävedalen 2006, p. 210-12.

<sup>91</sup> Discussion in J. T. KILLEN, “Mycenaean Economy”, cit. (n. 61), p. 181-89.

<sup>92</sup> Discussed in G. M. BECKMAN, T. R. BRYCE, E. H. CLINE, *The Ahhiyawa Texts*, Atlanta, GA 2011, p. 134-39 (AHT 6), with references; cf. also the comments of H. C. MELCHERT, “Mycenaean and Hittite Diplomatic Correspondence: Fact and Fiction”, text of conference paper to appear in *Mycenaean and Anatolians in the Late Bronze Age: The Ahhiyawa Question*, A. Teffeteller (ed.): available at: [www.linguistics.ucla.edu/people/Melchert/montrealtext.pdf](http://www.linguistics.ucla.edu/people/Melchert/montrealtext.pdf) (last accessed 29 August 2012).

<sup>93</sup> J. BENNET, “The Geography...”, cit. (n. 16), p. 157-58.

More promising are external textual references to Crete or mainland Greece, which we appear to have in the form of the appearance in Egyptian texts and representations of the terms Keftiu and Tanay, and, in Hittite documents, Ahhiyawa, although the identifications are not without controversy, notably over the latter: whether it constituted a single polity or a general region, even whether the term refers to mainland Greece at all.<sup>94</sup> It should be stressed that these are always qualified with a term like ‘man of *x*’, ‘chief of *x*’, or ‘king of *x*’; they are not of themselves ethnonyms, but geographical terms. One implication of that is that the political / social reality behind references to ‘men of’ or ‘king of’ might have varied through time, or a ruler from either Mycenae or Thebes could, in theory, have been called ‘man / king of Ahhiyawa’ at the same time.

These references do not reflect political structure beneath the broad, geographical level, however. One document may do so: the so-called ‘Kom el-Hetan list, a series of names carved on one of the statue bases in the mortuary temple of Amenhotep III (1391-1353 BC): Amnisos, Phaistos, Kydonia, Mycenae, Thebes (possibly to be read as Tegea), Messan(i)a (cf. *me-za-na*: Pylos Cn 3.1), Nauplia, Kythera, possibly Waleia (later Elis?), or Wilios (Troy?), Knossos, Amnisos (again) and Lyktos.<sup>95</sup> If we can correlate the information encoded in this list — one of several in the temple that listed places under Pharaoh’s control throughout the known world — with Aegean chronology, then we can suggest that it might reflect an Aegean of the first part of the 14th c. BC (i.e. it is unlikely to post-date Amenhotep’s death), within the period when the Knossos Linear B administration was in operation, but *prior* to the ‘unified’ Pylos polity of late 13th c. BC. If so, mention of the term *me-za-na*, mentioned later in the Pylos texts (Cn 3.1) perhaps as a corporate group, but not Pylos may be significant.

Within the Mycenaean polities, concepts of identity are difficult to tease out. Linear B scholars loosely refer to the adjectival forms of place-names as ‘ethnics’, but this is a formal, rather than a functional description.<sup>96</sup> Nevertheless, there are some interesting patterns in their use. At Pylos, for example, from a total of 247 place-names, only 37 (16%) have an ‘ethnic’ form attested, while the statistic for Knossos is 50 of 98 (51%). If we take place-name occurrences, then of the 798 total occurrences at Pylos, 98 (12%) are of the ‘ethnic’ form; at Knossos, however, of 1,129 total occurrences, 183 (16%) are of the ‘ethnic’ form. At Knossos, the ‘ethnic’ form is used to denote the origin or location of things or people; the usage is essentially ‘administrative’ and, since many of the references fall within the woollen textile industry records, perhaps relates to the decentralised nature of that industry. On

<sup>94</sup> J. BENNET, “The Geography...”, cit. (n. 16), p. 158-62. The Hittite documents have recently been collected in G. M. BECKMAN *et al.*, *The Ahhiyawa Texts*, cit. (n. 92), with references to an extensive literature.

<sup>95</sup> E. EDEL, M. GÖRG, *Die Ortsnamenliste im nördlichen Säulenhof des Totentempels Amenophis III*, Wiesbaden 2005; E. H. CLINE, “Amenhotep III and the Aegean: A Reassessment of Egypt-Cretan Relations in the 14th century B.C.”, *Orientalia* 56 (1987), p. 1-36; J. BENNET, “The Geography...”, cit. (n. 16), p. 159-61.

<sup>96</sup> These place-derived forms sometimes appear as personal names, such as the *wa-ti-jo* and *pu-na-si-jo* in a list of men on a tablet from Chania (KH Ar 4.1 .2) and, we assume, the name *a<sub>3</sub>-ku-pi-ti-jo* (Aiguptios), for example, on a Knossos sheep-census tablet Db 1105.B: cf. J. BENNET, “The Geography...”, cit. (n. 16), p. 157-58.

occasion, however, it is necessary to define a group *at* a particular place: thus, for example, the *ko-u-re-ja* and the *te-pe-ja* (feminine collective adjectives describing workers of two particular types of textile) are distinguished at Knossos (e.g., Knossos Ak[1]643; Lc[1]548, 549).

At Pylos this practice is more prevalent and ‘ethnic’ forms are combined with particular place-names *at which* people are based, notably in the Aa, Ab and Ad series, where series of female workgroups identified by their ‘ethnic’ form appear at various places, including Pylos, *ro-u-so* and *re-u-ko-to-ro*:<sup>97</sup> the *a-\*64-ja* (Aswiai?) at *pu-ro* and *re-u-ko-to-ro*; the *ki-ni-di-ja* (Knidiai), *ki-si-wi-ja* (Xiwiai?), *ko-ro-ki-ja* (Krokiai?), *ku-te-ra<sub>3</sub>* (Kytheriai), and *ra-mi-ni-ja* (Lamniai) at *pu-ro* alone; the *mi-ra-ti-ja* (Milatiai) at *pu-ro* and *ro-u-so*; and, finally, the *ze-pu<sub>2</sub>-ra<sub>3</sub>* (Zephyriai) at *pu-ro ra-u-ra-ti-jo* (the Further Province Pylos<sup>98</sup>). The implication of this pattern is that identity is not necessarily defined by location, since these women are clearly not *at* the location implied by their ‘ethnic’ adjective. However, in a sense the usage is similar to the use of ‘ethnics’ at Knossos: in this instance they define the origin of these people, but the origin, in this case, happens to lie outside the Pylos polity. At Knossos, however, the use of an ‘ethnic’ is more likely to denote simply location, not origin.

A small number of ‘ethnic’ forms at Pylos show a different pattern and may refer to groups interior to the polity, but, like those just mentioned, can be located *at* certain places. A group of these is attested on a document (PY Cn 3) that appears to record contributions of oxen from various groups defined by ‘ethnics’ *at* certain locations, all under the collective term *me-za-na* (perhaps equivalent to later Messenia, and reminiscent of the term on the Kom el-Hetan list of Amenhotep III). These same terms recur, against the same place-names, on a series of documents recording ‘watchers of the coast’ (the *o-ka* tablets).<sup>99</sup> It is therefore possible that these groups reflect diverse (ethnic?) identities beneath the homogenous elite (material) culture, identities that resurfaced again in the post-Bronze Age ‘fragmentation’ of the mainland Greek world.

### Conclusion – Comparison *cui bono*?

Not long after the decipherment of Linear B, in a review of the first edition of *Documents of Mycenaean Greek*, Moses Finley, with characteristic clarity, advocated the use of comparison in attempting to understand the recently deciphered Linear B documents:

The first question is: comparison with whom? Inevitably, the discovery that the language of the tablets was Greek at once directed attention to Greek sources, and particularly to the oldest, the *Iliad* and *Odyssey*.... Because the Greek language survived, many Mycenaean

<sup>97</sup> For detail, including identification of the non-local ‘ethnics’, see J. CHADWICK, “The Women of Pylos”, cit. (n. 58).

<sup>98</sup> Cf. A. P. SAINER, “An Index...”, cit. (n. 18), p. 52 on this place-name, distinguished from the centre Pylos by the adjective *ra-u-ra-ti-jo*, clearly referring to one of the Further Province districts *ra-wa-ra-ta<sub>2</sub>*.

<sup>99</sup> *Docs<sup>2</sup>*, p. 184-85, 188-94, 427-30; cf. also J. T. KILLEN, **TITLE**, in *Fiscality*, p. 73-74.

terms lived on, too, but it is a mistake to assume that, where institutions are concerned, their meanings remained essentially unaltered in the radically different society whose embryo we see in the Homeric poems. Once that is admitted, the usefulness of Greek analogies ebbs away to a very thin trickle.... The alternative source of comparisons is the world which was contemporary with Mycenae – Egypt, Syria, Asia Minor, Mesopotamia – irrespective of membership in one or another language group... The urgent next step is typological. The bits-and-pieces method of comparative analysis is both limited and, ultimately, misleading.<sup>100</sup>

Finley's words should resonate for participants in this workshop, which was convened to compare the palace economies of the Bronze Age Near East and of the Aegean. But, over 50 years on from Finley, we should be clear why comparison is relevant. First, it is *not* relevant because we imagine there to be a 'genetic' relationship between Aegean writing and administration (the two should be distinguished) in the sense that they appeared in the Aegean as 'genetic' descendants of earlier systems in the Near East; the chronological, cultural, linguistic and structural differences are too great for this to be a plausible scenario. Although often written on clay, Aegean scripts bear no resemblance to cuneiform. If the practice of writing (as opposed to the idea) in the Aegean had a specific source, then it is much more likely to have been an area with which certain inhabitants of Crete had *direct* links towards the end of the 3rd millennium BC: the coastal Levant, not Mesopotamia, and very probably not Egypt. Byblos is an attractive candidate, with its poorly understood syllabic script.<sup>101</sup> Within the Aegean development *was* genetic, in the sense that the Cretan Hieroglyphic and Linear A scripts *were* related, whatever one's view on the nature of that relationship (different scripts and/or different languages behind them), and it is also clear that Linear B, the latest script, represented an adaptation of Linear A.<sup>102</sup>

A more fruitful basis for comparison is 'typological' (in Finley's sense) or 'contextual', in the sense of a 'contextual analogy',<sup>103</sup> where we imagine that the *scale* or *nature* of the systems are similar. It was on this basis that Finley sought to draw attention away from later Greek systems that he saw as utterly different in scale and nature from those of the Near East, a general point widely accepted in our field.<sup>104</sup> Scholars sought comparison between Linear B and *earlier* Mesopotamian systems, revealing an assumption that the Linear B system, distant from the ultimate origins of writing and administration, must reflect an earlier 'evolutionary' stage, or they sought examples where the nature of palatial control was considered similar. In fact, as was clear at this workshop, the variations among Near Eastern systems (of any date) were

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<sup>100</sup> M. I. FINLEY, "The Mycenaean Tablets and Economic History", *Economic History Review* 10 (1957), p. 128-41 (quotation at p. 139-40); cf. also *Docs*<sup>1</sup>, p. 106.

<sup>101</sup> M. DUNAND, *Byblia grammata: documents et recherches sur le développement de l'écriture en Phénicie*, Beirut 1945; P. T. DANIELS, W. BRIGHT, *The World's Writing Systems*, Oxford 1996, p. 29-30; cf. I. SCHOEP, "2006. Looking Beyond the First Palaces: Elites and the Agency of Power in EM III-MM II Crete", *AJA* 110 (2006), p. 44-48, 54 n. 163.

<sup>102</sup> See A. Karnava and H. Tomas, this volume.

<sup>103</sup> See, for example, I. HODDER, *The Present Past: An Introduction to Anthropology for Archaeologists*, London 1982, p. 11-27, on analogy in archaeology.

<sup>104</sup> See, for example, J. T. KILLEN, "Mycenaean Economy", cit. (n. 61), p. 159-61, with a concise summary of how comparison has developed since Finley.

considerable,<sup>105</sup> and those between any single system and practices in the Aegean are often as striking as their similarities, including fundamental differences such as the use of seals rolled over the surface of clay documents. The value of comparison between the Aegean systems and those of Mesopotamia is therefore unclear, except in the vaguest sense of suggesting the possible, given broadly similar circumstances.

However, material remains and limited textual evidence demonstrate that Aegean and eastern Mediterranean polities *were* interconnected, and increasingly so from the later third millennium BC. So, it is not surprising to see the development of a writing system in the Aegean at precisely this time, whatever the nature of its origin. This is, in effect, a *historical* connection. The fact that the Cretan Hieroglyphic and Linear A scripts remain undeciphered limits our ability to understand administration in the Minoan palatial periods, but there is nothing in the archaeological record yet to suggest the same breadth of uses for writing as existed at many periods in the contemporary Near East, even though we have clearly lost an unknown quantity of documents written on perishable materials, papyrus and/or parchment. The Linear B using polities, however, were approximately contemporary with the administration in the city-state of Ugarit, c. mid-14th-beginning of the 12th c. BC. It is almost certain that there were direct contacts between Aegean polities and that of Ugarit, as is strongly suggested by ceramics and other links like the recent discovery at Tiryns of a cuneiform-inscribed ivory rod.<sup>106</sup>

Here we can return to the theme of this contribution, since study of the geography of the city-state of Ugarit has demonstrated striking similarities of scale and structure with the Aegean, especially Pylos.<sup>107</sup> The state was probably about the same size as that of Pylos (c. 2000 km<sup>2</sup>), while the centre itself at Ras Shamra (c. 22 ha.<sup>108</sup>) was smaller than Mycenae, but larger than Pylos. Moreover, Van Soldt lists 206 place-names from the archives, with further ‘broken’ examples, a figure strikingly similar to that again in the Pylos archive.<sup>109</sup> The Ugaritic place-names can be arranged by district, but, as at Knossos but not at Pylos, there does not seem to have been a formal ‘provincial’ division.<sup>110</sup> Whether we can go further and suggest deeper ‘commonalities’ is a question beyond the scope of this paper, but it is worth considering the possibility that interaction between Aegean and eastern Mediterranean

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<sup>105</sup> J. N. POSTGATE, “System and Style in Three Near Eastern Bureaucracies”, in *Economy and Politics*, p. 181-94 highlighting differences in three periods: Ur III, Old Babylonian and Middle Assyrian.

<sup>106</sup> Ceramics: M. YON, V. KARAGEORGHIS, N. HIRSCHFELD, *Ras Shamra-Ougarit XIII. Céramiques Mycéniennes d’Ougarit* Nicosia 2000; Tiryns find: C. COHEN, J. MARAN, M. VETTERS, “An Ivory Rod with a Cuneiform Inscription, Most Probably Ugaritic, from a Final Palatial Workshop in the Lower Citadel of Tiryns”, *AA* 2010.2, p. 1-22.

<sup>107</sup> W. H. VAN SOLDT, *The Topography of the City-State of Ugarit...*, cit. (n. 3). J. N. Postgate makes a similar observation in a forthcoming book manuscript comparing Late Bronze Age administrative systems across the Near East and the Aegean; I thank him for permission to mention this here.

<sup>108</sup> M. YON, “Ugarit: the Urban Habitat...”, cit. (n. 3), p. 23.

<sup>109</sup> W. H. VAN SOLDT, *The Topography of the City-State of Ugarit...*, cit. (n. 3), p. 111-14; Pylos, above p. 000. [ms. p. 9]

<sup>110</sup> W. H. VAN SOLDT, *The Topography of the City-State of Ugarit...*, cit. (n. 3), p. 144.

systems represented 'historical' links, rather than simply 'typological' similarities or 'genetic' descent.