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8

‘Archives’ and ‘Scribes’ and Information Hierarchy in Mycenaean Greek Linear B Records

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Within the context of the ancient written records and archives discussed in this volume, the Mycenaean Greek Linear B material is distinctive in the following ways:

(1) The clay documents at each site are ‘temporary’ records used to monitor economic activities within textually unspecified administrative periods of less than a year.

(2) All records seem to be ‘active’, i.e. we have no ‘dead’ archives.

(3) All records are ‘anonymous’. None contains any direct reference to the scribe who wrote it or any scribal signatures or seal impressions. There is no attested word for ‘scribe’ and no clear evidence to associate any of the officials mentioned in the texts with

Note. For bibliography see p. 188.

When I speak of the ‘location’ of Linear B tablets in what follows I mean an architecturally or otherwise defined spatial unit at an archaeological site, as opposed to ‘site’, which refers to the site as a whole. I occasionally use ‘tablets’ to refer generically to Linear B inscribed tablets, sealings, and labels. Elsewhere ‘tablets’ means specifically Mycenaean clay documents of the leaf-shaped and page-shaped classes, i.e. clay records which are not sealings or labels. This should be clear from the context.

Linear B inscribed tablets, sealings, and labels from the so-called ‘Room of the Chariot Tablets’ (RCT) at Knossos are important comparative evidence for understanding the function of the ‘Archives Complex’ (AC) within the administrative system of the palatial centre at Pylos. Jan Driessen kindly let me use before publication his comprehensive treatment of the RCT inscriptions (Driessen 2000).

the writers of the tablets (but cf. Bennet 2001 and Driessen 1992; 1994–5).

(4) There are no ‘official’ documents, e.g. contracts, documents of ownership or property transfer, loans, wills, records of merchants and traders, designed to be kept in the possession of the parties involved and/or in state or city archives and to have probative value in legal proceedings.

(5) No documents attest to a broader use of writing or higher ‘public’ literacy: there are no Mycenaean literary, judicial, historical-propagandistic documents, no ‘private’ economic records, no personal or official letters, and no documents relating to scribal training or intended for scribal reference such as syllabic *abecedaria*, lexical lists, or sample forms of documents.

(6) The scale of documentation is comparatively small. There are now c.5,500 inscribed clay documents and c.160 painted vase inscriptions from all the sites in the Mycenaean palatial period (c.1450–1200 BC) (Driessen 2000: 21). These average fewer than 14 phonetic or ideographic (non-numerical) signs (not words!) per text. Fewer than 150 tablets have texts exceeding 50 non-numerical signs (Palaima 1990b: 84 and nn. 3–5).

Mycenologists have therefore been challenged to study this evidence from many different perspectives. We have identified scribal hands through the study of palaeography and other diagnostic features such as spelling, tablet typology, and habits of text presentation, and have then studied scribal assignments and the overall systems and procedures used to provide and preserve economic information at individual Mycenaean sites. In most cases we have precise knowledge of the find contexts of individual tablets and even fragments, and can study them in their archaeological contexts and thereby determine the function of the locations where inscriptions were found and why they were found there. We have also identified coherent groups of tablets (by subjects and by scribal hands) and how they are related to one another. Thus we have well-developed sensibilities about how scribes worked individually and within larger systems.

I shall discuss how information is assembled, used, and stored on clay records written in the Linear B script¹ at different ad-

¹ I have tried everywhere to give references to clear and succinct treatments of relevant points. For the way in which the Linear B script developed, worked,

ministrative levels and for different purposes within the record-keeping systems of the Mycenaean Greek palatial period. I shall focus on records from the palatial centre at Pylos (c.1200 BC) in south-west Greece² and its AC with a view to understanding better the distinctive features of Mycenaean record-keeping and what is meant within Mycenaean culture by such concepts as 'archives' and 'scribe'. I shall refer to records from other palatial sites of the Mycenaean full-palatial period (c.1450–1200 BC),³ where they supplement or complement the Pylos data.⁴

First I shall discuss the archaeological contexts of the extant

and was used and the subjects treated in the texts, I recommend the following: Chadwick (1987a) (well-illustrated overview); Ruipérez and Melena (1996) (extensive up-to-date discussion of all aspects of the textual evidence incorporating many new interpretative approaches and advances); Palaima (1987a) (succinct discussion of literacy); Duhoux (1985) (sound overview of Linear B as a functioning script and its relationship to other Aegean script systems); Palaima (1988b) (exhaustive treatment of the evidence for the origin and development of Linear B); Bartonek (1983) (summary of the subjects treated on tablets from all the sites and comparative analysis between sites of such important data as the amount of information on tablets); Bartonek (1992) (systematic analysis of the Mycenaean *lexicon*); Piteros, Olivier, and Melena (1990) (the best introduction to inscribed sealings and their functions, using the sizeable collection from Thebes as a basis); Palaima (1996a) (concise treatment of how inscribed sealings relate to other administrative records); Killen (1994; 1996) (study of how sealings and other clay records relate to the administrative process of livestock management and preparations for state banquets); Palaima (2000) (study of the standard transactional vocabulary found in Linear B tablets and inscribed sealings); Palaima (1987b) (detailed comparative study of Mycenaean sealings, inscribed and uninscribed, in their Aegean context and of how sealings fit into the overall structure of Mycenaean economic administration); Pini (1997) (specialist study of the sealings, uninscribed and inscribed, from Pylos). The best general accounts of the interpretation of Mycenaean texts remain Ventrìs and Chadwick (1973) and Hiller and Panagl (1976). Hooker (1980) is also useful.

² Blegen and Rawson (1966) (the fundamental interpretative description of the archaeological remains from the site); Palaima and Shelmerdine (1984) (interdisciplinary specialist studies of the site as a functioning palatial centre); Shelmerdine (1998) (succinct discussion of the daily operation of the palatial centre).

³ For the most recent overviews of the archaeological framework within which the textual material must be interpreted, cf. Rehak and Younger (1998) (from Minoan neopalatial to the period traditionally called the 'Mycenaean' period of Crete); Shelmerdine (1997) (comprehensive survey of the full-palatial period of the Greek mainland from the vantage point of both archaeological and textual data); Treuil, Darcque, *et al.* (1989) (the most recent 'global' overview of archaeological and textual evidence for Minoan and Mycenaean civilization by a team of specialists).

⁴ For a recent full study of administrative texts from Mycenae, representative of a site with a limited number of 73 records found in free-standing buildings disconnected from the central palatial complex, cf. Varias García (1993).

Linear B inscriptions and how they were used as administrative documents. This is necessary for proper interpretation of the archival aspects of the texts. I shall then present in general and theoretical terms Mycenological views, first of the AC and other spatially delimited assemblages of Linear B records; and second on the status of 'scribes'. Finally, I shall discuss a dossier of tablets that show how writing was used for processing information at different levels within the administrative hierarchy of the palatial center at Pylos. These will illuminate points addressed in other contributions to this volume.

Pylos is the only Mycenaean palatial centre with a centralized system-dominant⁵ location for the collection, processing, and storage of written documents to which the term 'Archives Complex' has been applied (Figures 8.1, 8.2).⁶ Six other sites (Knossos in central Crete and Khania in west Crete (Figure 8.3); Mycenae, Tiryns, and Midea in the Argolid in the south central Greek mainland and Thebes in Boeotia in the north central Greek mainland (Figure 8.4)) have produced inscribed administrative documents, but none has an administrative *locus* comparable to the Pylos AC. This may be due, at least in part, to the hazardous nature of archaeological discoveries. Variables include the care and precision of excavation, especially in the detection and recovery of inscribed materials; the extent of excavation at different sites; the settlement histories of particular sites, especially where later habitation has destroyed important areas of a late Bronze Age settlement; and the precise moments when areas where clay records were used and stored underwent the burning destructions necessary to preserve the texts.⁷ Thus on current evidence it is difficult to prove that any of the discernible differences between sites in how surviving written records

⁵ By 'system-dominant' I mean containing a significant percentage of documents from the site, a significant percentage of longer texts of a later (or 'higher') stage in information processing, a significant 'coverage' of the kinds of subjects that are treated at a more rudimentary level of recording elsewhere at the centre, a significant concentration of 'scribes', and clear evidence for scribal interaction and hierarchy. I prefer not to try to quantify what is 'significant', but to leave it in each case to be justified by argument.

⁶ In fact, it is problematical whether, or at least in what sense, the term 'archives' should be applied to the assemblage of inscribed documents in these two rooms (see below). Cf. Driessen (1997; 2000) and Bennet (2001). For a full view of the Pylos scribal administration cf. Palaima (1988a); Palaima and Wright (1985); Sjöquist and Åström (1985); Palmer (1994); and Olivier (1997).

⁷ For the importance of identifying burning destruction levels at sites with Mycenaean tablets, cf. Hallager, Vlasakis, and Hallager (1992).

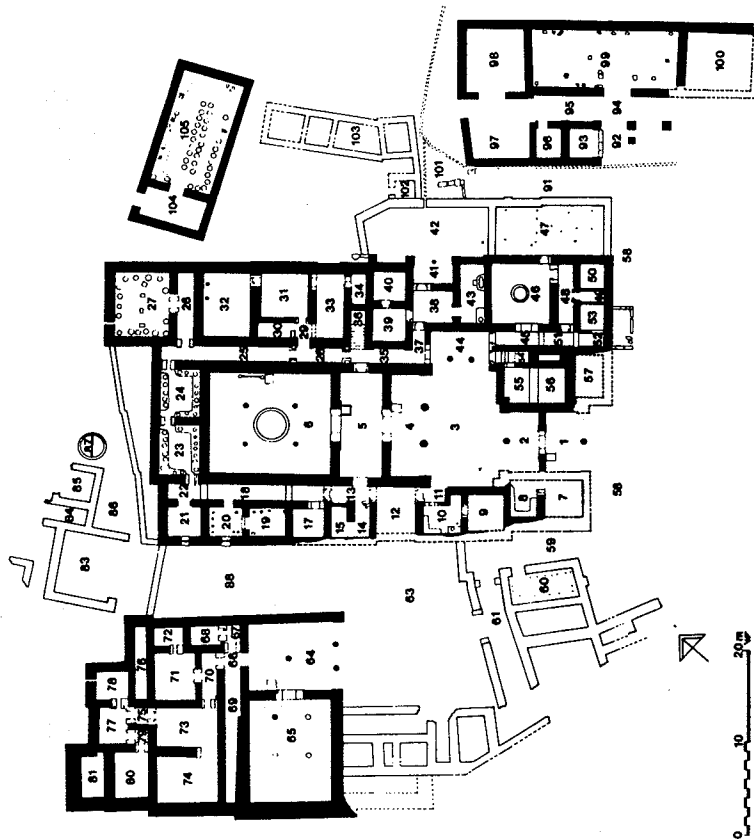


FIG. 8.1. Pylos, plan of final state of the Palace of Nestor (Palaima and Wright 1985: 253 ill. 2). Archives Complex = rooms 7-8. North-east Workshop = rooms 92-100. Circles in areas 1 and 2 are column bases, visible at right of Figs. 8.2 and 8.9 in grid-squares 09 and 89

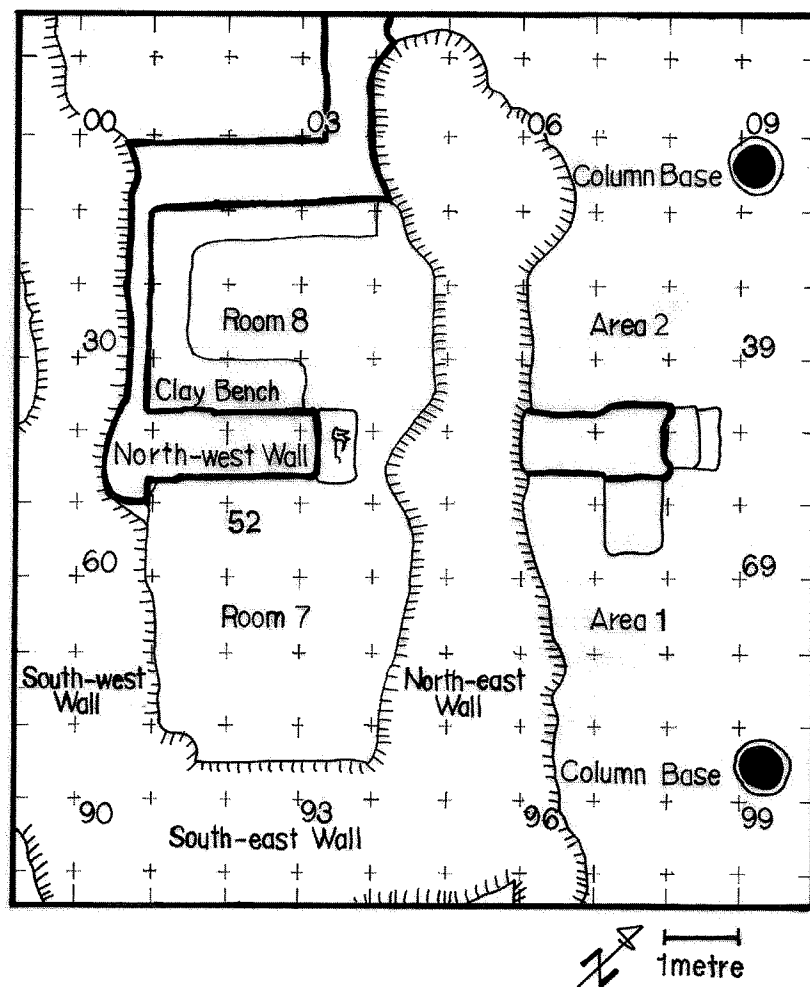


FIG. 8.2. Pylos, Archives Complex with realigned grid (courtesy Kevin Pluta).

Circles at right in grid-squares 09 and 89 are column bases seen in areas 1 and 2 in Fig. 8.1. Grid-square 52 contains tablet-transport-basket labels

were used⁸ is meaningfully representative of how Linear B was used in general at a given site. We cannot assume that differences apparent in the selective extant data were the result of conscious responses by those who directed or worked within the local economic administrative systems to the peculiar needs of individual centres and the territories which they controlled and exploited.⁹

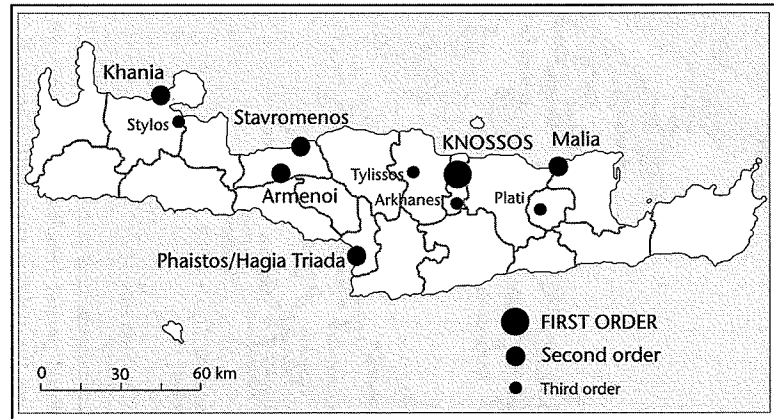


FIG. 8.3. Mycenaean Crete in LM III showing hierarchical ranking of sites (Bennet 1990: 208 fig. 5). Knossos and Khania are the sites with Linear B 'tablets'

Noteworthy is the conservative uniformity in document typology (Figure 8.5), text formatting, palaeographic traditions, phonological, logographical, and metrical character repertoires and values,

⁸ For example, I argued in Palaima (1988a) that the higher proportion of longer texts at Pylos (Bartonek 1983) could be attributed to the existence of the AC and the centripetal force of the administrative system at Pylos, which required collecting information about individual transactions, often on leaf-shaped tablets, and then processing it, with correction, revision, and supplementation, in recensions and summaries, often on page-shaped tablets. This seems to be confirmed by the architectural scale and design of the palatial centre at Pylos and the relative size and complexity of the regional economic processes which the centre used writing to monitor and control. For the latter, cf. Bennet (1998). It is true that the Knossian system of departments and bureaux seems less centralized, yet there are a few long tablets from Knossos, and it is difficult to imagine that within given economic spheres the same need for summarizing and processing information did not exist.

⁹ Cf. Bennet (1985) for how the administration at Knossos functioned in relationship to centres of different scales in central and western Cretan territories. Bennet (1990) compares Minoan-Mycenaean regional administration with the systems that prevailed in the classical-Roman and Venetian periods. Bennet (1998) reconstructs how the palatial territory of Mycenaean Pylos developed and functioned.

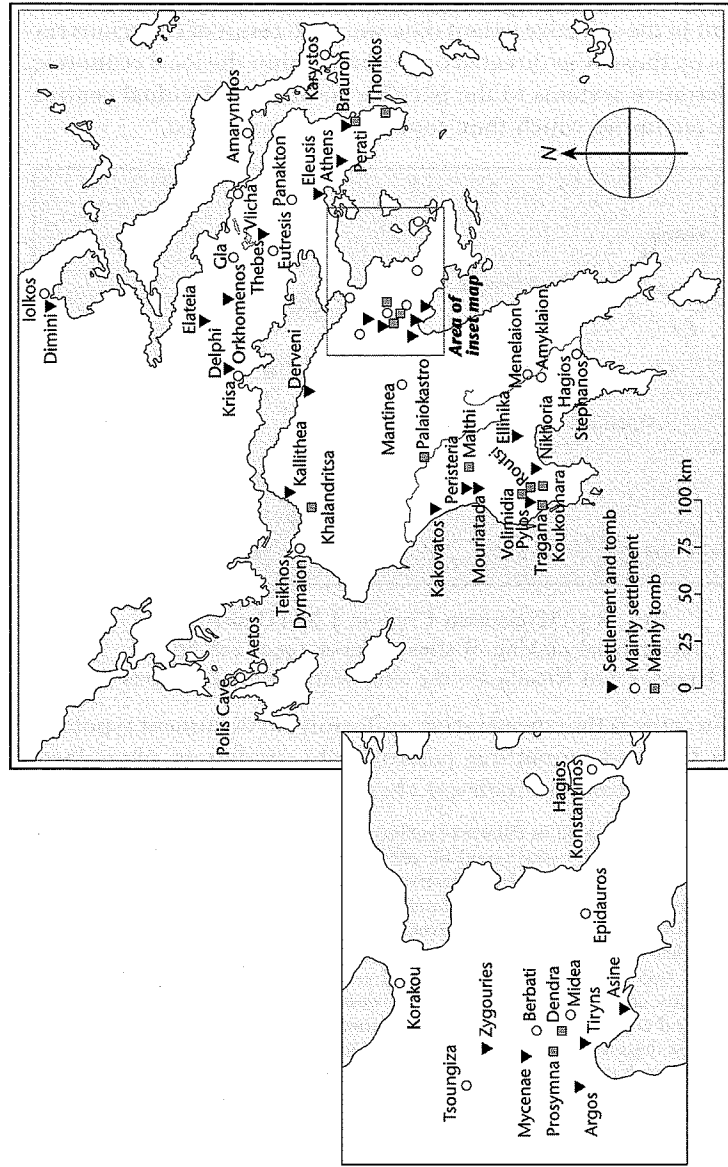
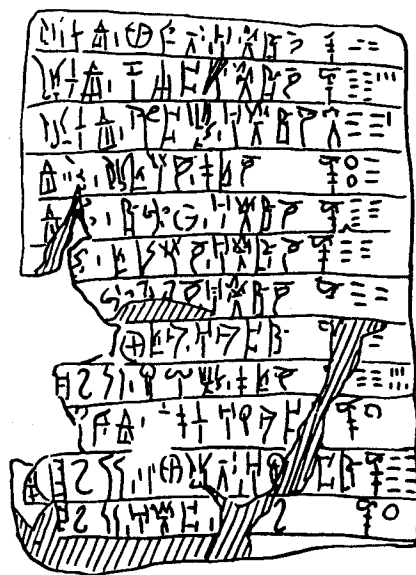
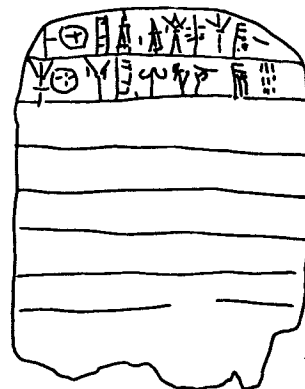


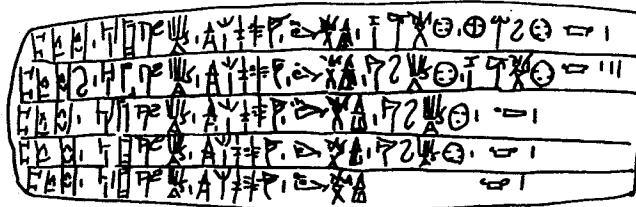
FIG. 8.4. The Mycenaean mainland in the palatial period (Shelmerdine 1997: 538, fig. 1). Pylos, Tiryns, Mycenae, Midea, and Thebes are the palatial sites with Linear B 'tablets'.



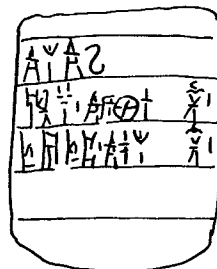
Cn 719 (15.4 × 11.2 × 1.5 cm.)



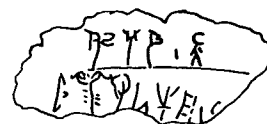
Gn 720 (10.1 × 8.0 × 1.6 cm.)



Ta 721 (5.5 × 17.0 × 1.4 cm.)



An 723 (7.3 × 5.7 × 1.5 cm.)



Wa 114 (3.2 × 6.8 × 0.8 cm.)

FIG. 8.5. Drawings of Linear B documents from Pylos. Page-shaped tablets Cn 719, Gn 720, and An 723. Modified leaf-shaped tablet Ta 721. Tablet-transport-basket label Wa 114. Note ideographic signs and numerical signs at right ends of most lines after phonetic text (Bennett 1955: 15, 84)

transactional vocabulary, and even 'dialect' that prevails among sites in separate regions.¹⁰ Apart from a few typological peculiarities of the clay records¹¹ from what seems to be an early administrative unit at Knossos, the basic forms of records and procedures for using them remain fixed, allowing for ingenious minor variations by scribes in order to solve particular formatting and data-entry problems,¹² over a period of at least 200 years. This in itself argues for a common and traditional 'professionalism' among the 'administrators' who wrote the records.

Knossos is the only other 'Mycenaean' palatial centre with a quantity of records distributed across the site sufficiently representative of a full range of written administrative activities at any given period (Figure 8.6). Unfortunately, chronological problems associated with the now c.4,266 Knossos tablets and fragments (Driessen 2000: 22–3)¹³ still make it impossible to reconstruct its overall scribal administration as accurately as can be done in the case of Pylos.¹⁴ With the exception of 2–4 tablets, all of the c.1,115

¹⁰ For a good understanding of the appearance of sealings, cf. the plates in Pini (1997). On document typology, cf. also Ruipérez and Melena (1996), 52–3. One can speak of an 'administrative *κωρή*' among the mainland sites. The Khania tablets are so similar to the Knossos tablets (Palaima 1992–3; Olivier 1993; 1996) that one must posit some direct influence in the scribal tradition. Besides the close palaeographic affinities between the tablets of 'scribes' KH 115 and KN 115, a text like KH Gq 5 conforms in information layout to the principles seen in records of similar subjects from Knossos (KN Gg series). For the common and limited repertory of transactional vocabulary, in the texts both of tablets and of inscribed sealings, cf. Palaima (2000a). On the minimal evidence for different dialects or idiolects in tablets coming from so many different regions, cf. Thompson (1996–7 [1998]) and Palaima (2002).

¹¹ For example, tablets known as '*simili*-joins', some rather exiguous tablets, and a distinctive 'transitional' sealing type from an early phase at Knossos. The first two of these might be inventive responses to the peculiar record-keeping necessities of the administrative unit in which they occur. At Pylos a few comparable exiguous tablets (e.g. La 628, La 632, and La 635) were found fallen into the central throne room (Room 6). The 'transitional' sealing (Weingarten 1988: 10–11) seems to be attributable to the change from Minoan Linear A text and sealing typology to Mycenaean Linear B typology. Cf. Palaima (1990b).

¹² For a clear example of a scribe efficiently arriving at solutions for rather complicated data entry, cf. Palaima (1999), with fuller references, and Del Frio (1998).

¹³ Numbers estimated from the ongoing work of identifying and joining smaller fragments. Cf. Driessen (2000).

¹⁴ The reconstruction by Olivier (1967) was predicated upon the assumption of a 'unity of the archives', which assigned all the surviving texts to a single destruction horizon. This has now been disproved. Olivier's scribal identifications and analyses of specialized administrative units are the prototypes for further study. See also Sjöquist and Åström (1991).

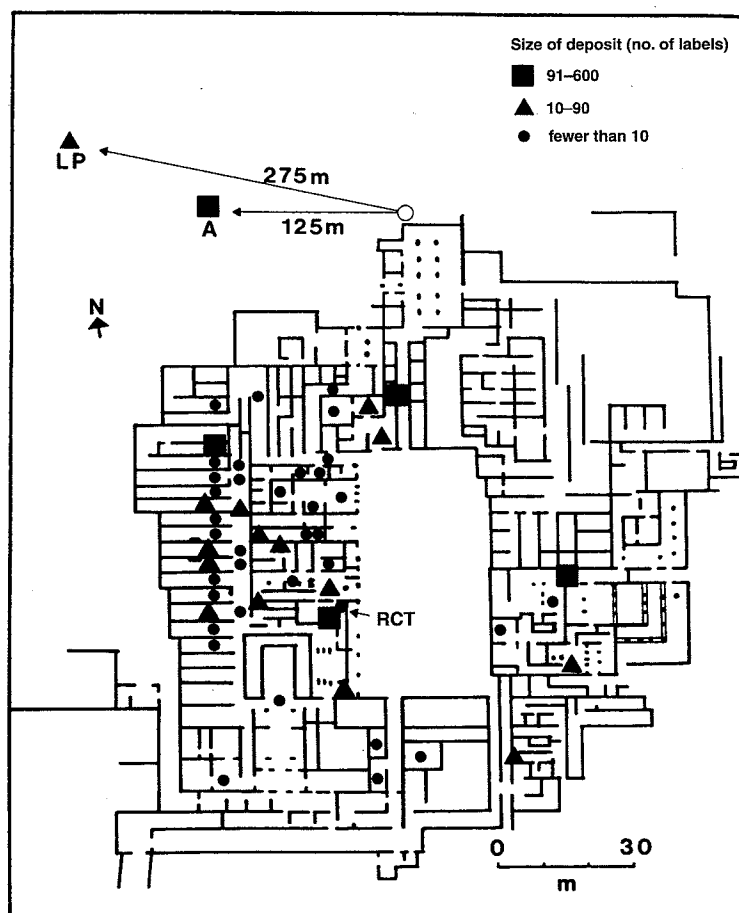


FIG. 8.6. Schematic plan of the palatial centre at Knossos indicating principal areas where inscribed Linear B documents were found (Bennet 1985: 232, ill. 1). A=Arsenal; LP=Little Palace; RCT=Room of the Chariot Tablets

inscribed documents¹⁵ from the site of Pylos can be associated with the destruction stratum dated by most scholars to the end of LH

¹⁵ Cf. Shelmerdine (1997), 563-65, for a discussion of recent discoveries of Linear B tablets, sealings, and inscribed stirrup-jar fragments from the Greek mainland. These include three tablet fragments (one 'joining' an existing tablet) and an inscribed sealing from Pylos. J. L. Melena has informed me (email, 4 Jan. 1999) that tablet La 623[+]La 625 and others from the *megaron* at Pylos might date from a phase earlier than the destruction of the palatial complex.

IIIB (c.1200 BC).¹⁶ The Linear B inscriptions from other mainland sites also date to mid-/late LH IIIB (1250–1200 BC). The palaeographically diagnostic material from Khania in western Crete dates to the end of LM IIIB: 1 (c.1250 BC). It shows affinities with some of the Knossos inscriptions.¹⁷ However, one unified group of c.648 Knossos tablets from a location known as the Room of the Chariot Tablets (hereafter RCT=the area marked 124 in Figure 8.7) is dated to the end of LM II (c.1400 BC). Other potential tablet-preserving destructions at Knossos (Figure 8.7) range from the end of LM IIIA: 1 (c.1375–1350 BC) to the end of LM IIIB (1200 BC) (Driessen 1997). The chief compensation for our inability to understand clearly how the site of Knossos functioned administratively overall at any of these destruction phases is the thorough study of the RCT material by Jan Driessen (Driessen 1989; 2000). This gives us a detailed picture of an administrative unit that used written records mainly for the monitoring and distribution of military equipment (chariots, body armour, horses) to a Greek-dominated military élite.¹⁸ This bureaucratic unit serves as a good foil to the Pylos AC.¹⁹

It is important to emphasize several other points about the

¹⁶ Cf. Palaima (1988a) *sub* Hand 91 and Class iv, where I had identified Ae 995, Xa 1419, and Xn 1449 as palaeographically unique within the Pylos material, a uniqueness reinforced by the find contexts for Ae 995 and Xa 1419. The small fragments Ua 994 and Xa 1420 were tentatively associated with these two tablets respectively on the basis of associated findspots and some graphic characteristics. Tablet Xn 1449 has now been joined by Melena (1998: 165–7), to a larger tablet Vn 1339 of the North-east Workshop and attributed to Class iii. This leaves Ae 995 and Xa 1419 as certain evidence for ‘Hand 91’ and Ua 994 and Xa 1420 as less certain evidence for Class iv.

¹⁷ For the chronological implications of the Khania material cf. Palaima (1992–3) and now Olivier (1996).

¹⁸ Driessen (1996); Firth (1992–3). The RCT tablets are palaeographically unified and distinctive. The texts are isolated prosopographically and exhibit linguistic and typological peculiarities that separate them from the rest of the Knossos inscribed material and support the proposed early dating (Driessen 1990: 64–5; Weingarten 1988: 10–11).

¹⁹ The AC contains c.767 non-fragmentary tablets (excluding X– series) and the RCT contains c.648 tablets (including 246 tablets of the Xd series, many of which are intentionally cut *simili*-joins). The raw numbers would put them potentially at the same level of administrative importance and function. However, the AC differs from the RCT in that it contains much longer and more informationally complex sets, a much greater number of full series devoted to widely varying economic subjects, 19 ‘labels’ (series Wa) for tablet sets vs. 0 in the RCT, and scribes of three major palaeographical classes vs. scribes conforming to a single departmental writing style. Moreover, a number of scribes from the AC are not restricted to tablets found in the complex, but have tablets in other locations.

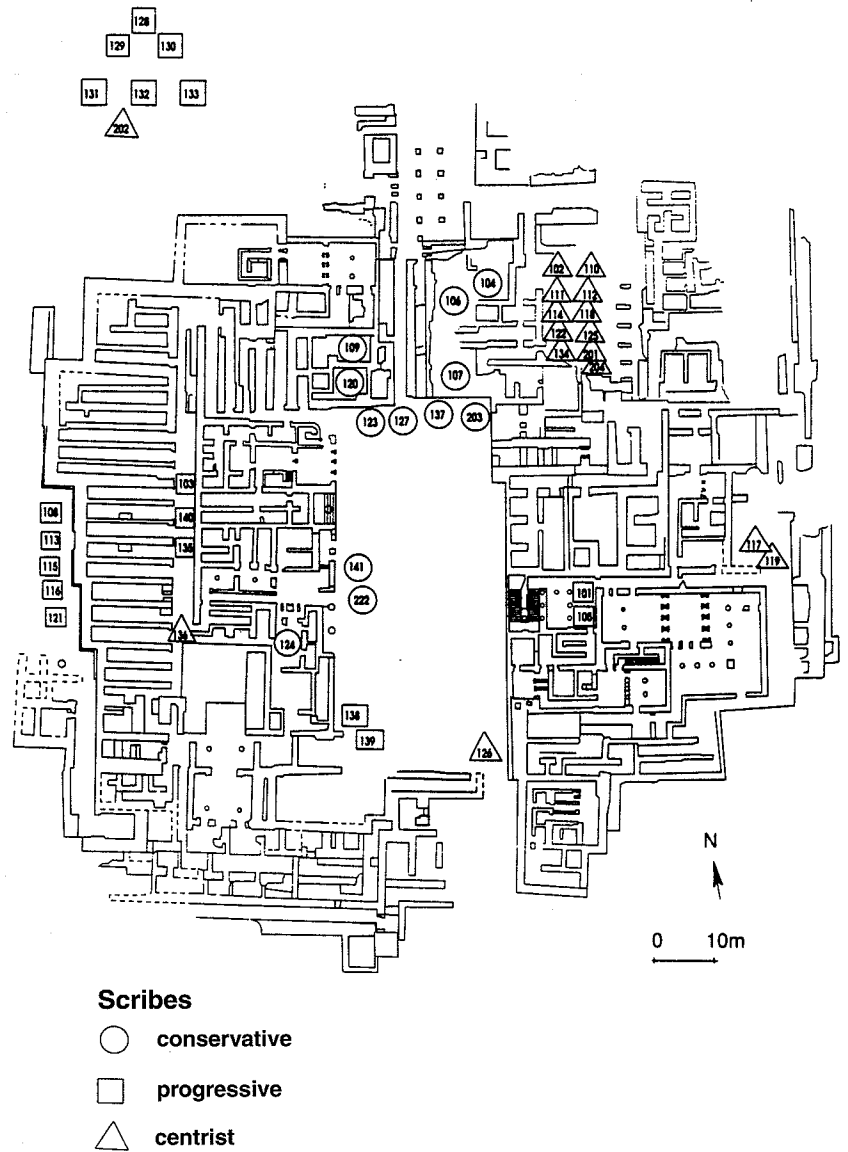


FIG. 8.7. Distribution of scribal hands at Knossos classified according to conservative, centrist, and progressive palaeographic styles (Driessen 1997: 131, fig. 9). The RCT is identified by Scribe 124

Linear B texts. First, the evidence of Linear B writing so far known and published is concerned with economy: the control of goods, materials, and economic resources (animate and inanimate) and/or the management of economic activities. These include:²⁰

- the centralized acquisition of raw materials through regional tax assessments, specific levies, standardized or emergency recycling, and perhaps through middleman exchanges involving 'payments' (Killen 1995);
- the distribution, transfer, and delivery of raw materials to manufacturers or workshops (conspicuous at Pylos is the 'joinery' or 'wheel-assembly' workshop mentioned as **a-mo-te-jo* in the texts and located in the North-east Building, rooms 92–100 in Figure 8.1) and of agricultural products and manufactured goods and artefacts to human recipients (including rations to a sizeable dependent labour force) or to divinities (as offerings or preparations for sacrifices or contributions to commensal banqueting ceremonies);
- the production, refurbishing, and storage of finished goods within specialized industries (wool and linen cloth production; leather work; woodworking; the manufacture of perfumed oil; bronze production; military equipment; pottery; furniture; work with precious materials such as gold, ivory, and lapis lazuli);
- agricultural production (including wheat, barley, figs, olives, honey, olive oil, wine, spices);
- management of livestock (sheep, goats, pigs, cattle, deer, horses);
- supervision of land tenure as a system of reciprocally obligatory compensation, support, and/or reward of individuals for various levels of service to the palatial centres or within religious districts and sanctuaries;
- inventories (e.g. of military equipment, vessels, and furniture).

The palatial centres also monitor on tablets human beings and their disposition, their presence or absence, their status, and their aggregate numbers in specific 'assignments' (designated by reference to place or person 'in charge'): dependent workers (especially women workers in the elaborate cloth production in-

²⁰ The following list is representative, not exhaustive. For a survey of the textual and archaeological evidence for Mycenaean economy, cf. Killen (1985), and Voutsaki and Killen (2001).

dustries (Chadwick 1988)), specialist workers (e.g. wall-builders, 'architects', cowherds, fire-kindlers, shipbuilders, bakers, 'honey-masters', leather workers, potters, bow-makers, throne-makers, fullers, *kuanos*-workers, goldsmiths, bronzesmiths). The focus is on palatial interests. Evidence for a 'temple sphere' is difficult to interpret. Certainly there are no 'archives' or 'deposits' of tablets within the palatial centres that are devoted strictly to the economy of religious institutions. Our knowledge is limited by the fact that we have little in the way of archaeological documentation for the provincial sanctuaries, shrines, and religious personnel that are amply attested in the documents.²¹

This near-total focus on economy²² applies to records on clay documents (leaf-shaped tablets, page-shaped tablets, labels, sealings: Figure 8.5). The large repertory and frequent use of Linear B ideographic/logographic characters on these documents, and the peculiar way in which they are used—divorced from 'lexical syntax' and in 'bookkeeping slots' after individual or aggregate entries (Figure 8.5)—all reinforce the economic and accounting nature of the documents.²³ The other main class of materials inscribed in

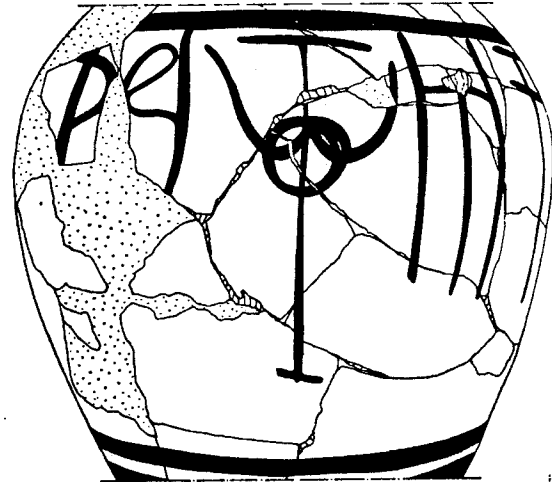
²¹ Cf. Killen (1985), 255–6, 288–90, and Palaima (forthcoming *a*). Extra-palatial written information is extremely limited, if not non-existent.

²² Even certain military registers among the Pylos tablets which are generally viewed as non-economic might have an economic purpose, since they monitor manpower contributed from specific communities and individuals and the provision of such human resources might be considered in determining the levels of obligation that these communities have in other economic spheres. In the Ma taxation series and the Na flax series, communities are granted exemptions and deferments because of their specialist workers.

²³ In Fig. 8.5 the ideograms occur at the far right of the tablets and before numerical signs: circle='100', horizontal line='10' and vertical line='1'. The ideograms are: rams and she-goat (Cn 719), wine (Gn 720), footstools (Ta 721), man (An 723). Tablets, excluding small fragments, without non-numerical ideograms are exceedingly rare. The main exceptions are the Vc and Vd 'simili-join' tablets from the RCT and other V- tablets from the RCT and elsewhere at Knossos (mainly registries of single human beings without the MAN ideogram). There are c.104 V- tablets from the RCT. By contrast, the entire site of Pylos yielded c.17 V- series documents.

There are c.120 ideographic/logographic signs that stand for commodities or objects, animate or inanimate. Phonetic signs can also be used individually or monogrammatically as logographic abbreviations: e.g. NI 'figs', SA 'flax', WE 'yearling', ME+RI 'honey', TU+RO₂ 'cheese'. The ideograms stand removed from, most frequently at the end of, lexical entries, where they are almost without exception followed by numerical signs or metrical *and* numerical signs designating quantity and amount. The ideograms can, as it were, refer back to word-units in a lexical entry that gloss or qualify the ideogram, e.g. *e-ra₃-wo* and OLE 'oil', *e-re-ta* and VIR 'man', *ti-ri-po* and *201^{VAS}. This feature is purely and simply a bookkeeping/accounting convenience or habit.

(a)



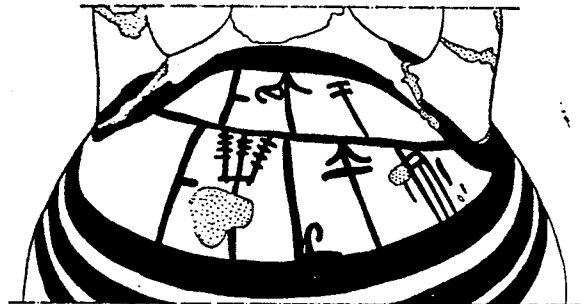
1:4



1:10

q-rē-zō-me-ne wa-to, re-u-ko-jō[

(b)



1:4

.1 *da-*22-to* .2 *da-pu₂-ra-zo, wa*

FIG. 8.8. Drawings of painted texts of inscribed stirrup jars: (a) TH Z 851 from Thebes, and (b) EL Z 1 from Eleusis (Sacconi 1974: 113)

Linear B also seems economic in purpose: the painted inscriptions on transport stirrup jars (Figure 8.8) (Sacconi 1974; Hallager 1987), the formulae and style of which Van Alfen (1996–7 [1998]) has interpreted as serving the same kinds of administrative functions as certain of the inscribed sealings and 'collector' livestock texts.²⁴ The restriction of writing, as so far attested, virtually exclusively to economic topics and the severe chronological limitations on the validity or utility of information in the documents (cf. n. 26) are two key factors in raising the question of whether and in what sense we should call any particular spatially identifiable collection of Linear B tablets 'archives'. The largest and most elaborate such collection in any one location is the AC at Pylos. Neither it nor any other collection of Linear B documents satisfies a definition of 'archives' which stresses the historical value of stored records and the process of intentional transference of records from the contexts in which their information was originally valid to a different environment for long-term preservation.²⁵

The length of time during which the information in collected records was intended to remain useful for reference is a crucial factor in defining ancient 'archives' and in interpreting the Pylos AC. Records in the AC probably cover between two and five months of selected economic activities within a given administrative period (Palaima 1995).²⁶ Fissore (1994: 345) stresses that for

²⁴ In so doing, Van Alfen argues that the inscriptions did not serve as 'trademark' labels for the contents of the stirrup jars and that even the nearly 'illegible' inscriptions which seem to have been produced by illiterate pot painters were intentional and meant to convey important information relating to the economic production process. There are a select few painted inscriptions on fragments of other types of vase, e.g. TI Z 28 and KN Z 1715 (both decorated cups).

²⁵ i.e. 'archives' defined as 'non-current records that, because of their long-range value, have been transferred to an *ad hoc* agency' (Posner 1972: 4). Such a definition can be applied to the Mycenaean documents only if one severely limits the definitions of 'non-current' and 'long-range' to include texts whose information has been recorded for several days to several months. Cf. Fissore (1994) on the problem of using modern theoretical conceptions of 'archives' to identify and analyse ancient 'archives' and their functions, and the review article of Driessen (1994–5) on the pre-writing and literate stages of development of archival procedures (using tokens, sealings, and written texts) in the Middle and Near East and Aegean from the 7th to the 2nd millennium BC.

²⁶ Estimated on the basis of the number of possible month or festival names recognizable on the tablets, the absence of any official temporal designations by reference to individual holders of office or position (e.g. magistrates or other officials, including rulers), references to 'last year' (PY Ma 126, Ma 193, Ma 216, Ma 378, Ma 397, Ub 1316, 1317; cf. KN So 4442, Dp 7742; MY Oe 111, Ue 652), 'this year' (PY Aq 64, Ma 225; cf. KN Fh 5451, Gg 5637+8243, and perhaps abbrevi-

the very concept of 'archives' to be 'used profitably for the ancient era' one must emphasize its functional meaning as a 'pre-set system of rationalized conservation according to rules which permit the later use of documents for [an] administration's internal needs, but not necessarily with a view to permanent conservation' and also keep in mind that some ancient archival practices are directed mainly at 'the problem of administrative control, with its specific requirements and regular rhythms of use and discard'.²⁷ This kind of definition of 'archives' makes the term more applicable to the Pylos AC by stressing the following features: 'pre-set' planning as opposed to *ad hoc* responses; 'system' as opposed to *ad hoc* arrangement; 'rationalized' and 'rules', which re-emphasize the intentionality and standardized (i.e. commonly agreed and therefore commonly understood and useful) organization in the first two features; 'internal administrative needs' and 'administrative control', which de-emphasize the tendency to have the term 'archives' pertain only to written documents of a 'higher order', e.g. historical, literary, religious, legal, and diplomatic texts; and 'rhythms of use and discard', which acknowledges that economic documents, both literate and pre-literate, often have a short-term utility according to standard and predetermined administrative cycles, e.g. the concept of the 'fiscal year' or 'quarterly earnings reports'.

Driessen (1994–5) undertakes a critique of Fissore (1994) and attempts to define 'archives' from an Aegeanist perspective, using the AC and the RCT as primary assemblages of Linear B data. Reasonably positing a stage where information from the clay-tablet records collected and stored in the Pylos AC would be transferred onto perishable materials for longer-term preservation and reference, Driessen coins the term 'pre-archives' for Mycenaean archives such as the AC: 'chronologically limited and transitional central depositories with an interrelated series of current records which were meant to be reviewed and selected before copying onto perishable material and disposal of the clay records' (Driessen 1994–5: 244).

ated as *za* on the KN Do records of sheep flocks), 'next year' (PY Ma 365), and 'yearly' (PY Es 644), and references to agricultural and other activities that give a seasonal fix.

²⁷ Fissore (1994), 344, observes that by applying certain modern criteria of centralized 'historical archives' to ancient collections of records, we would eliminate from study all but 'central, royal or state archives'.

Bennet takes up an opposite position, arguing that there is 'no compelling need for a further stage of documentation on a perishable medium such as papyrus or parchment' and certainly no level of economic planning 'in addition to the "one-year window" attested on clay' (Bennet 2001: 27).

The arguments for another stage of information processing and storage beyond the clay-tablet stage in the AC are reasonable and based on an understanding of formal aspects of Linear B script and document typology, and on administrative considerations. We should acknowledge, however, that they are *argumenta ex silentio* and that Bennet's counter-arguments have considerable merit. The written forms of the characters of the script are cursive and complex, and as such better suited to writing with pen or brush and ink or paint, as in the stirrup-jar inscriptions. These elaborate forms are retained over time without the kind of simplification that would have made writing on clay easier (contrast the development of cuneiform or even the post-archaic classes of Cypro-Minoan script). One way of explaining such conservatism is to posit the existence of 'pen or brush' writing on ephemeral documents of a 'higher order' (economic or otherwise), to which writing on clay would then have conformed and which would have exerted a constant conservative 'cursive' influence on the styles of writing that scribes used when they wrote on clay. We do have evidence for the use of parchment documents in association with Minoan flat-based nodules (Hallager 1997: i. 135–58; Weingarten 1983).²⁸ Although this sealing type disappears in the Mycenaean period, this has to do with changes in prevailing transactional and administrative systems and not, one would think, with the total elimination of 'pen or brush' writing.

The administrative argument posits the need to store, in a spatially economical way and for a longer time than the current administrative period, the detailed information on summary tablets (e.g. the Pylos En and Ep land series) and the administratively vital information pertaining to such topics as yearly regional taxation (e.g. the Pylos Ma and Na series), inventories or lists of precious vessels and furniture (PY Ta series, KN K[1] 740 and K[1] 872), offerings to deities (PY Fr series, KN Fp and Gg series), and what one imagines is much more comparable *contem-*

²⁸ Pini (1997), 55 and n. 5, calls these 'Päkchenplomben'; 708 of these 'document sealings' are known from nine Minoan sites on Crete.

porary information unattested in the records found in the AC at the time of its destruction. In substance, then, Driessen's view of the AC differs from my own not in how he thinks it functioned within the overall administrative bureaucracy of the palatial complex, but in the coining of a new term to differentiate the record assemblage of the AC from non-extant higher-order records.

Given the paucity of chronological references in the extant documents—the phrases 'last year', 'this year', and 'next year' are found on fewer than 20 of the c.5,500 clay records now published (above, n. 26)²⁹—and the total absence of any entries on the clay tablets to differentiate between records of one administrative period and another, we assume that all records in a given assemblage come from the period under way at the time of the destruction which preserved the texts. This applies even to the clearest case, where data from single-transaction preliminary records are compiled into longer summary records, information in them being revised in the process (PY Eb, Eo, En, and Ep series). In the unlikely case that any of the records in the AC come from a prior administrative period, they must have been identified as such by some non-surviving form of labelling, e.g. with 'pen or brush' inscriptions, or by filing in specific locations or in other ways, e.g. special types of containers, that so far have escaped us.

My own definition of the AC as a system-dominant place for the administrative use of writing at the palatial centre of Pylos stresses its distinctive features in contrast with collections of tablets found elsewhere, mainly in work and storage areas (for which the standard term in Mycenaean pinacology is 'deposits').³⁰ The differences between the AC and deposits of Linear B tablets found in other locations include: the physical types of tablets, the length

²⁹ This approximate figure includes the many new fragments from Knossos studied over the last fifteen years and new discoveries of tablets and inscribed sealings at Khania, Midea, Pylos, Tiryns, and Thebes since Bartonek (1983). The most important recent discovery is of 238 documents, many very fragmentary, at Thebes in 1993–5. These are now published, with idiosyncratic interpretations, in Aravantinos, Godart, and Sacconi (2001). For interpretative problems see Palaima (forthcoming *b* and *c*).

³⁰ For the following discussion cf. Palaima (1988a), 171–89, and Palaima and Wright (1985), 257–8, tables 1–2. 'Deposits' are defined as: 'tablets, especially separate small groups of tablets like those in Rooms 23, 38 and 99 [at Pylos], that are associated with work done or materials stored where the tablets were found'.

and make-up of sets and 'dossiers', the kinds of information on the tablets, their manner of storage, and the general purposes served by the tablet information. The AC is characterized by all the following features: (1) records dealing with a variety of subjects; (2) coherent sets of records and 'dossiers' of sets; (3) longer sets of records, such as summaries, compilations, and final recensions, that are of more than temporary importance; (4) records written by a considerable number of different scribes; (5) evidence of scribal interaction and patent hierarchical ranking of scribes; (6) evidence of systematic arrangement and filing. It is fair to say that the records in the AC give it the appearance of being a comprehensive or 'global' economic-administrative office. There are no aspects of the economy covered by the 200 records found in 'deposits' elsewhere in the palatial complex that are not represented directly or indirectly in the written information housed in the AC at the moment of its destruction.

The central location of the AC in the architectural layout of the palatial centre (cf. Figure 8.1), especially during its final stage of occupation, when architectural modifications made its position even more prominent, is an additional 'archival' feature. Note also that in the Pylos texts time references to the year in progress, the year past, and the upcoming year are confined to records from the AC (tablets of series Ma, Aq, and Es) and to room 99 of the North-east Workshop (tablets Ub 1316 and 1317). This marks out the collections of records in these two locations as different from the strict 'deposits' of tablets found in areas such as the oil storeroom (room 23) and the vase storage area (room 20).³¹ These latter have a 'contemporary' focus on immediate work in hand: various distributions of oil from the stores and keeping track of vases.

I have used the word 'scribes' to refer to the writers of the extant Linear B clay records. This term obviously means different things in different cultural contexts. A fuller understanding of its meaning in a Mycenaean setting is important for understanding the nature of the AC. There is no known Mycenaean word for 'scribe'. None of the texts is signed by the scribe or official who wrote it.³² None of the tablets bears a seal impression

³¹ Cf. Shelmerdine (1987) for a treatment of texts and activities in the North-east Workshop.

³² Some few tablets, e.g. PY An 261 and Cn 655 (Palaima 1988a: 51-8), contain

or other mark to identify authorship or administrative responsibility. Inscribed nodules bear seal impressions, but it is unclear whether the seal identifies the writer of the brief written texts on the facets of the sealing. In fact, we do not know whom or what authority in the economic transactions within which sealings were used the seal impression identifies. Moreover, the proportion of inscribed to uninscribed sealings at Knossos and Pylos is relatively small: only 22 out of 164 sealings at Pylos bear inscriptions, and the proportion is even smaller for the AC: 1 out of 18 (Palaima 1987*b*; Pini 1997). Thus it is clear that sealings primarily maintained their original function (as in the Minoan period)³³ as recording instruments within transactions that did not *require* the use of writing (Palaima 2001). We can at least tentatively propose the converse: non-scribes impressed seals on some of the sealings (Palaima 1987*b*; Palaima 1994*b*). The writers of Linear B documents remain as anonymous now as they were forty years ago when the seminal article by Bennett appeared (Bennett 1960).

The tablet-writers are identifiable by their writing styles and habits. Mycenologists generally use the term 'scribal hand' to make it clear that the 'scribes' have been identified by such means. Given the complexity of sign-shapes, the large phonetic and ideographic/logographic repertoires of signs, and the relative freedom which the tablet-writers had in producing any given tablet,³⁴ it has been possible to identify individual 'scribes' and to develop categories of certainty with regard to their identification (Bennett 1947; Olivier 1967; Palaima 1988*a*: 18–33; Driessen 1988; 2000; Sjöquist and Åström 1985; 1991; Aravantinos, Godart, and Sacconi 2001). At Pylos we have 25 identifiable hands and another 7 or so secondary or probable hands from the destruction phase of administration; at

substantial work by two different 'scribes'. Others contain the intervention of a second scribe to correct or add information, e.g. KH Ar 4 (Palaima 1992–3).

³³ For the Minoan Linear A period, the sealing material from Hagia Triada and Kato Zakro proves that sealing administration and written administration were more complementary than integrated with one another (Palaima 1994*b*).

³⁴ The particular form of a tablet, the layout and formulae used for information entry upon it, and even spellings of words were in large measure left to, and therefore diagnostic of, the individual tablet-writers. Cf. Sjöquist and Åström (1985; 1991) and the contributions by Palaima and Olivier to these respective volumes for the identification of tablet-manufacturers by palm-print analysis and how they possibly relate to the tablet-writers. Cf. also Palaima (1990–1).

Knossos we have *c.*50 certain hands and 27 secondary hands from all periods (Olivier 1967; Driessen 1988; 2000).³⁵

Figuring out the status of Mycenaean 'scribes' is more difficult. Olivier (1967), 135–6, is certainly correct in calling them administrative 'fonctionnaires', but the question of whether their status was intimately connected with their ability to write or whether their ability to write was acquired because of their prominence as palatial or provincial administrators or as members of military, economic, or social élites still remains open. Olivier (1967), 135, viewed the individual hands as functionaries who in the course of their activities as administrative officials, 'perhaps at an elevated level', acquired the art of writing. Driessen (1992), 198–200, has analysed the different categories of élites in the Linear B documents as defined either explicitly by 'nomenclature'³⁶ or by their clearly elevated status—militarily, religiously, politically, or economically—within the Linear B records. In defining 'administrative' élite, he argues further that this category would be the least exclusive and that in fact we could expect some crossover into other categories: that is, that it would be reasonable to expect that a tablet-writer might also

³⁵ Olivier (1967), 102, reckons that 100 is a reasonable estimate of the total number of scribes at Knossos. The Knossian administration was organized according to a system of departments and bureaux (essentially interrelated departments) within each of which the writing styles of 'scribes' are so similar to each other that it is reasonable to conclude that individuals learnt to write within the tradition and style of a particular department or bureau. The best example of this is the RCT, where *c.*10 major and 3 secondary hands wrote *c.*648 tablets (Driessen 1988). However, their styles are so close to one another that Olivier (1967) designated them all as Scribe 124 and distinguished them one from the other by the addition of a small letter. Driessen (1988; 2000) now brings a sophisticated array of evidence and methods to bear on the material and proposes more certain identifications. The situation is further complicated at Knossos by the much greater brevity of most tablets, which therefore offer less evidence, individually and even in sets, for identification of hands. Although the same system of departmental organization is not found at Pylos, the scribal hands identifiable in tablets from the destruction phase at Pylos can be assigned to three general classes of writing style each represented by a scribe (Hand 1, Hand 21, and Hand 41 respectively) who is prominent with regard to the kinds of texts he writes, the importance of the subjects he records, and his relationship to other scribes. Cf. Palaima (1988a).

³⁶ i.e. if an individual is explicitly referred to by such titles as *ra-wa-ke-ta* 'military leader', or *i-je-re-u* 'priest', or *e-ge-ta* 'follower', or *qa-si-re-u* 'chief', or *ko-re-te* 'district official'. The most conspicuous élite class of individuals identifiable prosopographically by the contexts of their occurrence in the tablets is the so-called 'collectors' (Bennet 1992). These individuals (27 at Knossos and 4 at Pylos) are nowhere identified by title, but by their appearance within texts pertaining to the cloth production industry, as 'controllers' of herds of sheep and as 'owners' of collectives of women cloth workers.

be a member of one of the other élites. Thus he suggests that the 'scribe' at Knossos who recorded information about flocks of sheep in central Crete was also the administrative functionary in charge of this important aspect of Knossian economy.³⁷ Bennet (2001), 31–5, argues further that Mycenaean "scribes" belong among the performers of the administration, not the "back-stage" staff and that 'we should collapse the categories "scribes" and "members of the élite"', thereby linking the activities of scribes to overall strategies of the maintenance and representation of power within the polity'.

I do not doubt that it is possible that some of our 'scribes' have a high economic, political, religious, social, or administrative status (apart from their function as 'tablet-writers' *per se*).³⁸ However, Driessen's suggestion about 'scribe' and 'administrative functionary' and Bennet's equation of tablet-writers with 'members of the élite' are not without problems. They are problematical for Pylos, where a number of major scribes write records about widely diverse economic subjects with no clear pattern of specialization by geographic area or economic sphere. Conversely, several 'scribes' work on different aspects of the same economic subject without necessarily implying that they were responsible for the economic management of the aspects they record. Hand 2 wrote records of bronze allotments to smiths in groups (Jn series along with Hand 21) (Smith 1992–3) and a record of 'recycling' or 'transference' of bronze from religious sanctuaries into the palatial sphere for weapons manufacture (Jn 829) (Palaima 2001). He also wrote the major extant regional taxation records (series Ma), records of allotments of oil to sanctuaries and deities (series Fr), a record of oil transfer between unguent-boilers (Fr 1184), a record of the distribution of barley and figs to sanctuaries (Fn 187), and an inspection inventory of furniture, vases, and implements that was connected with a commensal banqueting ceremony (Ta series). It is difficult to see here any unifying thread that would define the role of this 'scribe' within a single 'office' of economic administration.

It is possible that the individual known as Hand 2 was in charge

³⁷ Textile production from wool was *the* major Cretan palatial industry. The Knossos Da–Dg records monitored c.100,000 sheep (Killen 1985: 250–1).

³⁸ Spelling idiosyncrasies and other linguistic peculiarities of Mycenaean 'scribes' have been explained by their belonging to and operating within high-ranking and exclusive social groups. Cf. Palaima (2002).

of managing such diverse economic spheres during the 2–5 months for which his activities are documented. But we have to remember that our documentation is partial and the actual range of responsibilities of Hand 2 and other comparable 'scribal hands' throughout an entire administrative cycle would have been even greater. It is to my mind more likely (*contra* Bennet 2001) that Hand 2 was a highly trained and competent 'tablet-writer', or, if you will, 'accountant' or 'information manager', who in some cases accompanied the parties responsible for various aspects of the economy and in other cases compiled on page-shaped documents information reported to him in oral or written form that had to be centrally processed.³⁹

The AC consists of two rooms (Figures 8.1, 8.2) located at the main entrance (during the late LH IIIB phase) to the central palatial building and ideally situated along routes of movement to other key areas of the palatial complex (the South-west Building and the North-east Workshop). Its location and arrangement make it accessible for the internal and external flow of information. The room with internal access (room 8) seems to have been devoted primarily to clay-tablet filing, storage, and referencing. The room with external access (room 7) seems to have been the main *locus* for the receipt of incoming tablets and information and for temporary storage of texts during the initial stages of information-processing (Palaima and Wright 1985; Palaima 1995; 1996b; Pluta 1996–7 [1998]). The rooms are fairly small. Room 7 has usable interior space of about 4 m. by 4 m., some of which was taken up by a large *pithos* (clay storage vessel) in the southern corner of the room and by conjectured shelving along the north-east and south-east walls. Room 8, where most tablets were stored, is even smaller: c.4 m. by less than 3 m., with two areas in the line of doorway traffic flow and with c.3.5 m.² taken up by a low clay bench along the three interior walls. The tablets were found distributed

³⁹ Palaima (2000b) summarizes the textual history of the PY Ta series as part of ongoing research. I think that it is most probable that certain features of the Ta texts derive from a process of visual inspection and dictation. That is, the Ta series, the heading of which declares that a person named *pu₂-ke-qi-ri* examined the items inventoried, was not written by *pu₂-ke-qi-ri*, but by a 'scribe' assigned to or receiving information ultimately derived from him. I think the evidence favours the former. If true, this would at least indicate that neither Driessen's nor Bennet's suggestion can be universally applied: 'scribe' and 'élite administrator in charge' were in some cases different persons.

on the floors of these two rooms and some on the bench in room 8 (Figure 8.9).

The basis for an even better understanding of how this complex functioned as a centre for tablet collection, storage, and processing is being provided now by Pluta (1996–7 [1998]), who is working systematically on clarifying and mapping tablet findspots and material remains in order to trace the original storage locations and physical arrangement of the two rooms. Figure 8.9 shows the distribution of tablets in the AC.⁴⁰ The great majority are found, often in coherent sets, in room 8. Seven labels (small flat pieces of clay finger-pressed onto wickerwork baskets and bearing very brief summaries that identify the contents of tablets in the baskets) are found in room 8.⁴¹ The majority (twelve) come from room 7. Nine of these come from grid location 5214, either with the series to which they belong (e.g. series Sh, dealing with refurbishment of body armour: Palaima 1996b) or without it.⁴² This makes it possible to see that a standard practice was to deliver tablets or sets of tablets in wicker baskets to room 7, where they were temporarily stored in grid 52 until their contents were checked and it was determined how the information in them had to be processed and whether and where this information was to be stored. It now seems that there was room for storage shelving along the north-east wall (grids 55–65)

⁴⁰ The grid plans in Figs. 8.2 and 8.9 designate each 1-m.-square grid-square in the AC by *italicized* co-ordinate numbers from 00 to 99. Within each individual grid-square a grid of like orientation composed of 1-cm.-square grid-squares is imagined and its co-ordinate numbers are given as immediately following non-italicized numbers. Thus reference is made to a specific tablet findspot by a four-digit string of *italicized* and non-italicized numbers designating the real grid-square and the imagined grid-square inserted into it. For example, grid 52 in room 7 shows an isolated cluster of clay labels and leaf-shaped tablets recording armour located south (immediately left) of the doorway between rooms 7 and 8. The labels are all in grid 5214, i.e. the single dot in grid 52 in Fig. 8.9 closest to the cross-wall separating rooms 7 and 8.

⁴¹ Wa 114 1335; Wa 362 2345 3441; Wa 401 2382; Wa 1093 3462; Wa 1008 1321; Wa 1148 and 1248 are generally assigned to room 8. Wa 114 in Fig. 8.5 is a typical label text giving the following information: 'monthly (rations)' WOMEN 'further province'. Wa 1008 also refers to the same subject and was found in the same area with the individual tablets of the series giving the appropriate information for these women workers: 'WOMEN thus grain-(. . .)'.
⁴² The text of Wa 731 reads 'contributions | to the sheep-flayers' and the important commensal banqueting document Un 718 (found in grid 83) records such 'contributions to the sheep-flayers' coming from the *ra-wa-ke-ta* (the military leader), the *da-mo* (the collective local 'people'), another social group known as the *wo-ro-ki-jo-ne-jo ka-ma*, and an individual who might be the *wanaks* or 'king' of Pylos. Cf. Palaima (2002).

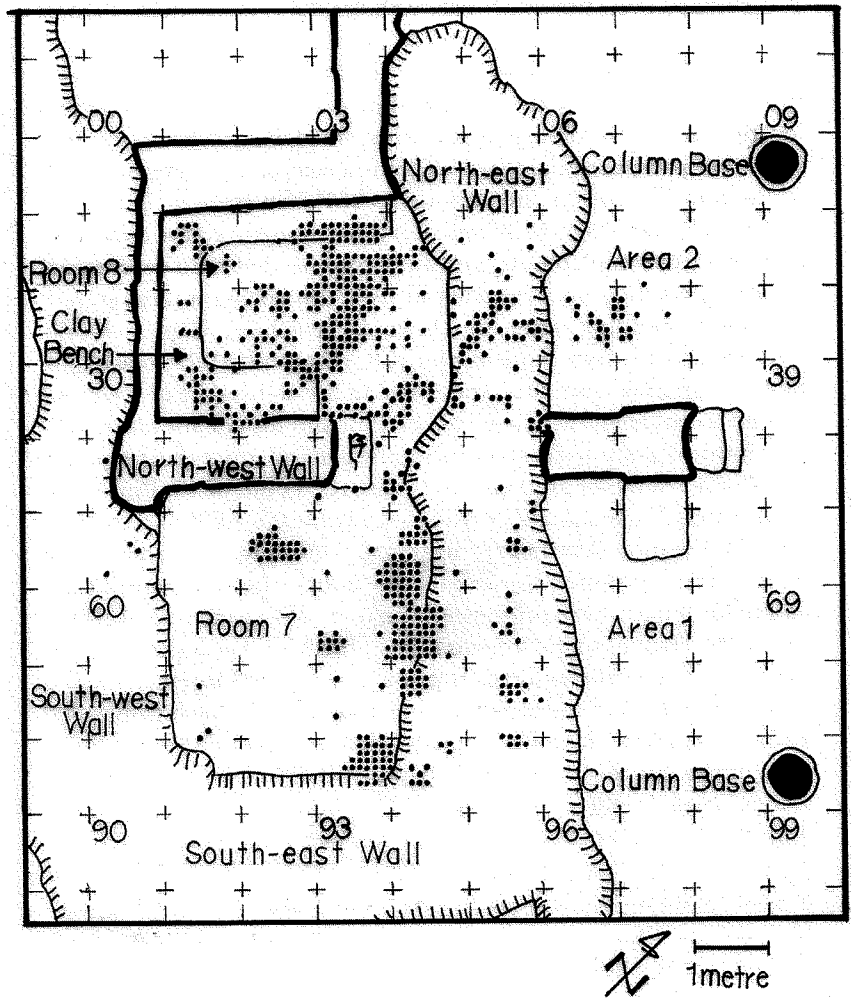


FIG. 8.9. Distribution of tablets in the Archives Complex at Pylos (Pluta 1996-7 [1998]: 239, fig. 7); cf. Figs. 8.1 and 8.2

and perhaps even the south-east wall (grid 83) of room 7. Tablets could have been temporarily stored on these shelves while 'in process'. Tablets found in grid 83 offer the best example (as explained in Palaima 1995) of texts which had just arrived in the AC. In this location, set off from the rest of the inscribed documents in the AC, were the 'prospective' record of commensal banqueting offerings to Poseidon by the chief components of Pylian society (Un 718)⁴³ and the Ta tablets, which inventory the numbers and condition of vessels, fire implements, and furniture needed on a ceremonial occasion. Room 7 also contains in its south corner a large *pithos*, perhaps for holding water, which would have been of use in working with clay records. Note in Figure 8.9 the general absence of any tablet fragments from the 'work area' in the south part of room 7.

The recent analysis of sealings by Pini and his collaborators further improves our understanding of the general process of handling and storage of tablet information in the AC: 15 out of 16 (Pini 1997: 110) sealings of assignable provenance from the AC⁴⁴ and the one inscribed sealing (Wr 1457)⁴⁵ in this group come from room 8, in which tablets grouped by series seem to have been systematically stored for longer-term reference. The text of Wr 1457 (OX-HIDE/'payment') relates to the information of the Ma taxation set (Olivier 1997: 71-2) found clustered in grids 13 and 23.⁴⁶ Furthermore, a large percentage of the sealings here seem to have been impressed with rings of precious metal, a phenomenon seen elsewhere at Pylos only in the North-east Workshop, particularly rooms 98-9, which shares other 'higher-order' features of information management with the AC. In more commonplace work and storage areas (rooms 24, 95, and 105) less precious soft- and hard-stone lentoids are used almost exclusively. The sealings in room 8 (and rooms 98-9) and the high quality of the seal rings used to make them suggest either that they were connected with the sealing of containers for tablets or

⁴³ Tablet Un 718 is 'prospective' in the sense that its text declares that an individual who is probably the *wanaks* or 'king' of Pylos 'will give' a contribution and likewise that the 'military leader' or *ra-wa-ke-ta* 'will give'.

⁴⁴ Three sealings are ascribed generally to rooms 7-8.

⁴⁵ Unfortunately without a known findspot, so it cannot be assigned to a grid location in order to see how it relates to those tablet series which share information with it.

⁴⁶ Tablets of the Ma set record taxation figures of six commodities or products assessed in fixed proportion (and paid, exempted, or still due) from the major districts into which the two provinces of the territory of Pylos were divided; *152 (known to be ox-hide from its phonetic ligature) is one of these six commodities.

that they were somehow themselves primary data for the economic activities recorded in the tablets. Along with the sealings, seven bronze hinges or handles were found in room 8. The most conspicuous were found on the bench in the southernmost corner of the room (Blegen and Rawson 1966: 1. 98), along with a singular clay 'label' (Wa 569 in Melena 1996–7 [1998]: 161), the back of which was impressed on a smooth surface such as the wooden side of a container. These finds give us some evidence for what must have been systematic storage arrangements for sets of tablets in room 8.

Approximately 767 tablets (excluding those of the fragmentary Xa and Xn series) come from the AC in comparison with c.200 such tablets from other locations. The difference in information hierarchy and function between the AC and these other areas and the system dominance of the AC are made clear by the following statistics. Of 111 tablets that contain 50 or more ideographic or syllabic signs, 109 come from the AC.⁴⁷ These come from series dealing with personnel, livestock management, land tenure, the distribution of foodstuffs to specialist workers and communities, flax production and 'taxation', leather hides (?), furniture, vessels, ritual offerings to deities, and preparations for commensal banquets. Only two tablets of such length (An 1281 and Cn 1287) come from outside the AC, but significantly again from room 99 in the North-east Workshop. An 1281 is a list of single and paired human beings, some with religious associations. Cn 1287 lists she-goats singly, with one exceptional pair, against 10 individuals recorded by name. Six of these individuals are further designated by function ('fuller', 'potter', and 'servant of the deity *di-u-ja*' among them). Neither An 1281 nor Cn 1287 is a higher-order economic document of the kind we find in the AC, e.g. the Ma documents on regional taxation, the meticulous land-tenure documents of the E series (both preliminary leaf-shaped tablets and page-shaped updated compilations therefrom), the Cn page-shaped lists of flocks under the direction of specified 'collectors', or the page-shaped lists of military and rower personnel. The tablets from the single site-wide destruction stratum then provide us with a frozen image of administrative activity over a longer period. But we can reconstruct the flow of

⁴⁷ Contrast this high percentage of full page-shaped texts in the AC at Pylos with the RCT at Knossos, where only 11 of 648 tablets are page-shaped and about a third of all tablets contain a single brief syllabic entry, usually a man's name. See Driessen (2000), 43, 195.

information, the interrelationship of series of texts, the interaction of scribes, the movement of tablets, and the process of economic administration in storerooms, in work areas, and in the AC, where we get a clear view of record-processing and filing activities.

Mycenaean scribes are 'anonymous', but it is also true that the 'scribes' do not refer within their texts to administrative offices (as opposed to individual *officials*), departments, or other elements of administrative organization. Mycenologists rely on the attributions of records to scribal hands and knowledge of the find contexts of the tablets to understand the structure of the administrative information system. Thus we do not define texts relating to the same general economic subject as belonging to the same 'office', unless the tablets or sets are clearly unified.

A small number of tablets and sealings at Pylos refer to the manufacture of spears and javelins and the delivery of raw pieces of wood that would eventually be worked into spear shafts or chariot axles. By studying these tablets as an ensemble according to find locations and the transactional levels at which their information was used, we can see economic and work activities in process and trace the interests of different administrative units.⁴⁸

On the primary level are sealings or 'nodules' relating to the handling of materials. These come from the North-east Workshop (Figure 8.1, rooms 92–100). On a slightly higher level are leaf-shaped tablets recording the quantities of a few different items without any additional information. Higher still are fuller tablets relating to the assignments of personnel or to larger quantities of items. All these texts come from the workshop area, where supervision of the delivery, collection, and distribution of raw materials, management of work and the workforce, and monitoring of finished products took place. At the highest administrative level is a single text from the AC which records the 'contribution' of bulk shipments of two categories of raw wood from 'woodcutters' and a specific territorial organization.

⁴⁸ New data and joins in Shelmerdine and Bennet (1995) and Melena (1996–7 [1998]), 165–7. I present translations of the tablets here. This will introduce some ambiguity since it involves reasoned choice among proposed interpretations and on occasion judicious textual restoration. Italicization within transcriptions indicates that a reading is incomplete or not clearly preserved. Question marks indicate that a reading is particularly vexed. Bold letters **X** and **Y** (thus) on Vn 1339 represent partial or unclear—but different—word-units.

*Sealings*⁴⁹ (North-east Workshop)

- PY Wr 1480 1. 'pertaining to the *wanaks*'
2. of javelins
3. shafts
- PY Wr 1328 1. *seal impression* (CMS 1, no. 318)
(room 98) .2-.3 shafts for infantry spears⁵⁰
- PY Wr 1329 .1 *sigillum* (CMS 1, no. 317)
(room 98) .2 20
.3 *uninscribed*

Leaf-shaped tablets (North-east Workshop)

- PY Va 1323 .1 'axle-sized pieces of wood' of inferior quality 32
(room 99)
- PY Va 1324 .1 shafts for spears 30
(room 99) .2 shafts for infantry spears⁵¹ 20; 'axle-sized pieces of wood' 2

Page-shaped tablets (North-east Workshop)

- PY An 1282 .1 for chariots MEN 18; for wheels MEN 18
(room 99) .2 for flint points MEN 13; for halters MEN 5
.3 for shafts⁵² MEN 36
- PY Vn 1339 .1 shafts for spears 32; X 127
(room 99) .2 '(twigs) for wickerwork'? Y 6
.3 axle-sized pieces of wood⁵³ 8
.4 ? 6
- PY Vn 1341 .1-.2 *text damaged and lexical items obscure*
(room 99) .3 the deity *potnia*⁵⁴

⁴⁹ For the sealings the 'line' numbers refer to the three facets formed by impressing a seal upon a lump of clay while holding it in one's hands or fingers. The CMS numbers identify specific seals.

⁵⁰ The two facets are not clearly delimited; the text is arranged as if they were a single surface.

⁵¹ The 'scribes' seem to have differentiated different styles of a basic weapon type. Cf. Jn 829: *pa-ta-jo-i* (referring to a hurling spear or 'javelin') and *e-ke-si* (referring to a thrusting spear). The shafts for a thrusting spear *e-ke-i-ja* probably required stouter pieces of raw wood than the shafts for javelins. Since the adjectival forms on Va 1324 distinguish between shafts for 'thrusting spears' and shafts for 'infantry spears', it is impossible for us to decide whether the latter are some special modified kind of 'thrusting spears' for infantry or spears that would be categorized as 'javelins'. I have therefore translated as 'spear' throughout.

⁵² Of spears.

⁵³ Or perhaps 'axles' *per se*.

⁵⁴ The association of *potnia* with the North-east Workshop is confirmed in other tablets such as An 1281.

- .4 '(twigs) for wickerwork for targets'⁵⁵
- .5 *text damaged*
- .6 '(twigs) for wickerwork for ?' 5
- .7 'X of javelins' 200
- .8 *left part of text missing and right part uninscribed*

Page-shaped tablet (AC)

- | | | |
|----------|----|---|
| PY Vn 10 | .1 | thus contribute the woodcutters |
| (room 8) | .2 | to the wheel-assembly workshop 'saplings' 50 |
| | .3 | and 'axle-sized pieces of wood' 50 |
| | .4 | and so many the territorial organization of <i>Lousos</i> ⁵⁶ |
| | | 'axle-sized pieces of wood' |
| | .5 | 100 and so many 'saplings' 100 |

Notice how minimalistic the texts from the North-east Workshop are in comparison with the fuller text from the central archives and the different levels of interest reflected in them. Vn 10 (Palaima 1980) makes transactional details—and here details that could have been registered on sealings: 'thus they are giving' (*o-di-do-si*) and 'to the wheel-assembly workshop' (*a-mo-te-jo-na-de*)—explicit in a heading and/or first section and then lets them be understood and unexpressed subsequently. The text of Vn 10 has always been read with the subject of the first entry plural: 'thus the woodcutters give to the wheel-assembly workshop: "saplings" 50 and axle-sized pieces of wood 50'. The second entry reads: 'and so many the territorial organization of *Lousos* (gives): axle-sized pieces of wood 100 and so many "saplings" 100'. At some earlier stage individual woodcutters might have contributed their raw materials in transactions requiring sealings; likewise sealings might have been used by whatever parties contributed to the shipments from *Lousos*. These are of no concern to the central administration, which needs information about bulk shipments from two 'collective' sources to the 'wheel-assembly workshop', where the production and refurbishing of chariot wheels take place. It is clear from the archaeological remains and tablet finds that the 'wheel-assembly workshop' is the North-east Workshop (cf. the references to 'axles' or 'axle-sized pieces of wood' on Va 1323, Va 1324, and Vn 1339 and to chariots and wheels on An 1282).

The texts from the North-east Workshop contain little in the way of specific references to persons, collective groups, or institu-

⁵⁵ Or '(twigs) for wickerwork for hurdles'. The quantity here is surprisingly unspecified.

⁵⁶ *Lousos* is a toponym.

tions which might be responsible for these materials,⁵⁷ nor do they record any obligations or transactions that might have been associated with gathering, working on, or disbursing these materials. Line .3 of Vn 1341 seems to connect the 'wickerwork material' of a surprisingly unspecified quantity in line .4 with the deity *potnia*. If we were able to read line .5 more securely, it might reveal, in the same formatting position as *potnia* on line .3, an individual or institution responsible for the materials recorded in lines .6–.7.

The laconic nature of the texts from the North-east Workshop can be explained in two ways. First, the texts are in the nature of shorthand notes or inventories of materials and workers that would be needed for planning aspects of work. Second, the texts reflect transactional processes for some of which sealings were used. These are understood here by the managers who use these tablets for reference in the workshop environment. They understand the context for the much-abridged information on these tablets.

Va 1323 and Va 1324 look very much like 'culling inventories', documents that record the results of an inspection process whereby the quality of individual pieces in a bulk delivery of the kind recorded in Vn 10 is judged and it is then determined what the raw pieces might best be suited for. The North-east Workshop, as text An 1282 makes clear, would have used thicker and thinner lengths of raw wood (generically specified as 'axles' or, in our translation, 'axle-sized pieces of wood') for chariot axles and also for spear and javelin handles. We might wonder whether it is a coincidence that the shafts for 'spears' and 'infantry spears' in Va 1324 add up to 50, as in the contribution of both 'saplings' and 'axle-sized pieces of wood' from the woodcutters on Vn 10. Also intriguing is the coincidence that our longer summary list Vn 1339 records 32 'shafts for spears', the same number as the 32 'axle-sized pieces of wood' of inferior quality on Va 1323 and the 30 'shafts for spears' and 2 'axle-sized pieces of wood' on Va 1324. We can imagine that either the 32 'axle-sized pieces of wood of inferior quality' on Va 1323 were found suitable for use as the shafts for spears recorded on Vn 1339 .1, or that the division of 50 'axle-sized pieces of wood' or 'saplings' was examined and culled at first into 30 future shafts for thrusting spears, 20 future shafts for 'spears for infantry', and 2 'axle-sized

⁵⁷ An 1282 is a roster of groups of men assigned to work with chariots, horse halters, and spears. But they are not recorded with specific quantities of raw materials or finished products.

pieces of wood', but that later these last two pieces of raw material were also allocated for thrusting spears. We should note here that the same term (Myc. *a-ko-so-ne*) seems to have been used by convention at all stages of the production process in reference to the raw wood of a size suitable to be used for finished 'axles' and eventually the finished axles themselves. This creates problems for us as modern interpreters, but the tablet-writers involved with these procedures would have known by document type and by textual and administrative context what *a-ko-so-ne* meant in any particular record.

Wr 1480 seems to indicate that a single sealing accompanied a group of spear shafts in the North-east Workshop and that these somehow came under the control or sphere of the *wanaks*. The reference in Wr 1480 is to wooden shafts of a size that would have been used for javelins by affixing the kind of bronze point recorded in PY Jn 829 (and there specified as for 'javelins' and 'spears'). We may recall that Jn 829 from the AC records the collection of used 'temple' bronze from the 16 major locales of the two provinces of Pylos. Again, the AC monitors the big picture, while the document from the North-east Workshop records specific work.

Wr 1328 with its text 'shafts for infantry spears' is typical of most inscribed sealings. It contains no numerical entry and no information as to its sphere of concern or the particular nature of the transaction involved. The seal impression undoubtedly conveys necessary information about personal or official responsibility. However, we should note that Wr 1329 from the same room 98 gives only the number 20 (with a different seal countermark from that of 1328). This coincidence with the entry of 20 'shafts for infantry spears' in Va 1324 can hardly be without significance. We might then group Wr 1328 with Wr 1329 and read them as a unified text:

Wr 1328 'shafts for infantry spears'
Wr 1329 20

Two responsible parties would seem to have been involved. Each made a seal impression on a sealing. One sealing indicates by writing that this is a batch of raw material for the shafts of infantry spears; the second that they are, at some stage, 20 in number. The sealings, if not the materials with which they are associated, are eventually taken to room 98. In room 99 a scribe of a different class (class ii) from the scribe who wrote the text of Wr 1328 (class i) writes up the record Va 1324. The central administration in the

AC is concerned with none of this. It contains only a record (Vn 10) that verifies the general fulfilment of a delivery obligation by particular groups. Vn 10 makes explicit the collective/institutional sources and the destination of all the raw materials delivered. It would attest to the fulfilment of obligations by the 'woodcutters' and the territorial collective of *Lousos*. Such a text might also be useful in managing and planning the rate of general production work going on in the environs of the palatial centre.

'Scribes' in the North-east Workshop are meanwhile busy noting how the raw materials in such a delivery were used and integrating such activities into other work. This involves the use of both uninscribed and inscribed sealings accompanying deliveries. In addition, leaf-shaped and longer page-shaped texts are used to record shorthand information that would have been readily understood by those who were managing the work activities. An 1282 records the systematic assignment of men in groups of 18 and multiples thereof to different purposes.⁵⁸ As many (36) are assigned to work on spear shafts as to work on chariot assemblage (18) and chariot wheels (18) combined. But all the work implied in An 1282 can be traced to records like the delivery on Vn 10. Men are set to work at making shafts for spears (and spear points) as well as chariots and their wheels (and halters for their horses). The only related information that has yet reached, or ever reaches, the AC is the record of the major shipment of the vital raw materials from those responsible in the provincial territory which the palatial centre controlled. The AC also contains a full inventory (Sa series) of chariot wheels, their state of repair or disrepair, and the parties responsible for working on them. These tablets seem to have been transferred from the North-east Workshop (Palaima 1988a: 93). Other records (tablets Vn 46 and Vn 879) in the AC connected with raw-wood resources list wood pieces suitable for ship construction (Hocker and Palaima 1990-1), and Vn 865 registers 'shipbuilders'. But again the actual details of lower-level stages of production were of no concern to the AC at the time when the palatial centre was destroyed.

It is clear that the AC was concerned with higher levels of economic management and with subjects of concern to the palatial centre proper. It is also clear that tracking of the progress of raw materials from delivery through production went on in workshop

⁵⁸ Note, as in Vn 10 and the Pylos Ma taxation records, the preference for round-figure or proportional quotas: cf. Killen (1985), 246-7 nn. 23-35.

contexts. Likewise the disbursement or receipt of commodities (oil, wine) from or by central stores was documented in leaf-shaped tablets and inscribed sealings from the appropriate storage rooms. Such texts are on-the-spot notations. If their information were to be conveyed to the AC, one imagines that such texts would be used as 'memory aids' for the administrator doing the reporting or that texts with fuller specific information (at least about responsible parties and the nature of obligations outstanding or already met) would have been written and conveyed.

The other alternative is for the AC to send out 'scribes' to do visual inspection of finished or stored materials. We have examples of this in the Sh and Ta series. In both cases the occasion and/or the nature of the work obligation and the responsible party or official are explicitly recorded in a way that is not common in tablets from 'deposits' at Pylos. The hierarchy of information then builds from workshop and storage documents through documents delivered to AC room 7 to documents systematically filed in room 8 to the posited non-extant records in pen or brush (if Driessen 1994-5 is right, and Bennet 2001 is wrong). This hierarchy can be traced in the kinds of information recorded in texts, the importance of the subjects treated, and even in document typology. It is no accident that sealings, which we may consider to be basic single-transaction records, are found in great numbers outside the AC. Their use in room 8 now bears further investigation. But I would not be surprised to discover that such sealings, made by costly metal rings, were used in connection with specific tablet series and attested to the authority and responsibility of the 'scribes' who wrote the texts. Nor is it an accident that nearly all of the longest page-shaped summaries and lists are found in the AC (with the exception of the higher-status 'deposit' in the North-east Workshop).

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