

# LABOR IN THE ANCIENT WORLD

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COVER ART: A stone relief of the Pre-Sargonic ruler of Lagash named Ur-Nanshe (ca. 2400 BC = ED IIIa). AO 2344.

The upper register of the relief shows the construction of a temple, with Ur-Nanshe carrying a corvée basket (*tupšikku*). In the lower register, a feast culminating the construction is depicted.

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## 10.

### The Mycenaean Mobilization of Labor in Agriculture and Building Projects: Institutions, Individuals, Compensation and Status in the Linear B Tablets

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In the many regions of mainland Greece and the island of Crete that are best suited to sustaining sizable human populations, during what is known as the full Mycenaean palatial period (approximately 1400–1200 BC with a ramping up 1600–1400 BC), complex systems of social, economic and political organization developed and functioned efficiently by successfully adjusting to local conditions and producing special forms of local products that became desirable in the international trade networks of the period. Chief among these were varieties of perfumed olive oil (archaeologically visible through the widespread finds of distinctive clay transport vessels of varying sizes known as stirrup jars *and* attested in clay tablet records that monitored transactions and other features of the production and distribution of the perfumed oil and associated pottery) and high-quality fabrics and garments made of locally produced high-grade linen and wool and making use of “royal” purple murex dye among other coloring agents (all archaeologically invisible, except in images of fabrics, garments and other items of cloth in contemporary fresco representations *and* attested in the texts of clay tablets and a variety of related clay writing forms that record aspects of the overall production, *e.g.*, [a] the providing of raw materials; [b] the doling out of what Mycenologists call rations, but following Steinkeller and Jursa in this volume we will more properly call food allotments, to specialist workers; and [c] the reckoning of the numbers and sometimes the provenience of

such workers, their work specializations and their physical locations in workshops administered by the bureaucratic apparatuses of the palatial complexes; [d] the destinations for shipments of finished products, and so on).

These regional industries and others like them (there are at least eleven work-specialists identified, usually collectively, by compound noun formations using as a second element *-wo-ko* = *-φοργος* ‘worker’, e.g., *ku-wa-no-wo-ko* = “a specialist working with *κύανος* = a lapis-lazuli-colored material”) required careful organization of material and human resources and making sure that specialist workers involved in all facets of the operation of such industries were in place and as efficiently and continuously at work as possible. This organization is reflected in the clay tablet records in what is known as the Linear B script that have been recovered almost exclusively from palatial centers.<sup>1</sup>

Piotr Steinkeller’s starting points or thematic guidelines regarding labor and its mobilization from an early Mesopotamian perspective raise questions that are interesting to consider in the Mycenaean palatial period. To borrow a term from the classical period, the *politeia* (or the general ethos and organized system of life that prevailed in the territories under the control of palatial centers) of each region was sustained by intensive and careful economic exploitation reinforced by equally carefully promoted ideological systems.<sup>2</sup> How labor was organized, directed, sustained and controlled and how the labor of individuals or collective groups was apportioned among or exacted from varying interest groups

<sup>1</sup> For the most up-to-date and concise overviews of the Linear B tablet evidence, its nature, the methods and resources for studying the texts, the chronology and nature of the individual archives and deposits of tablets, and the general historical picture into which the tablets fit and for which they provide their peculiar evidence, see Palmer 2008, Driessen 2008, de Fidio 2008 and Shelmerdine 1998. For a concise discussion of Mycenaean “industries” within a larger context of economic organization, see Shelmerdine and Bennet 2008, especially 303–306. It should be assumed throughout, unless otherwise specified, that interpretations, etymologies and semantic specifications of Mycenaean and historical Greek words rely on entries in Aura Jorro 1985 and 1993 (with indices now on-line at <http://www.cervantesvirtual.com/bib/portal/diccionariomicenico/pcuartonivelf9e1.html?conten=presentacion>); Beekes 2010 (now on-line at <http://iedo.brillonline.nl/dictionaries/content/greek/index.html>); and Chantraine 2009.

<sup>2</sup> For the importance of the ideology of “abundance,” “satisfying,” “benefiting” and “securing” promoted by the palatial centers in nomenclature, feasting rituals and even personal naming practices, see Palaima 2012a, 2008 (especially p. 385), 2007 and 2004a.

(in the interests of the individual themselves and the families, clans, towns and larger or more powerful interest groups to which they belonged, with which they identified, and by which they could be influenced or compelled) are important questions that I shall now try to answer at least partially in the paper that follows.

I will focus on three main points: (1) the different types of obligation, requirement, reward and benefit attached to the labor and production of individuals and groups; (2) the stake that the palatial centers had in work activities, especially larger scale *corvée*-type projects, recorded on the tablets; and (3) how the methods used by the palatial centers to see that their interests were met developed through time. I am trying as much as possible to avoid a handbook-style overview. I deal with particulars in the texts that I believe offer insights into both the complexities of the socioeconomic palatial systems and the problems Mycenologists face when trying to interpret how the inhabitants of Mycenaean palatial territories went about their work and how the elites at various levels in the socio-political and economic hierarchies went about seeing that work in their own interests was undertaken and completed.

I stress again from the start the peculiar nature of the Linear B documentation.<sup>3</sup> The clay tablets are bare-boned economic records focused on palatial concerns and written by still “anonymous” individuals trained in the skill and practice of writing and somehow involved with keeping track of how resources are being used, and where, when, why, and by and for whom.<sup>4</sup> The records and the information-gathering, -retrieving, -preserving, -checking and -dispensing activities that they reflect are focused almost exclusively on the “needs” of the palatial centers and the elites who were located at palatial centers or regional centers linked to them.<sup>5</sup> The records are written by individuals trained in the Linear B script and in the mechanics of recordkeeping on clay tablets and other forms of clay documents (in the Mycenaean period mainly labels and counter-inscribed sealings). These tablet-writers would themselves have

<sup>3</sup> See Palaima 2004b and 2003 and Duhoux 2011.

<sup>4</sup> On the nature of Aegean literacy and on Mycenaean writing and the role of writing and those who used writing in the Mycenaean palatial period, see Pluta 2011 and Palaima 2011a: 95–124.

<sup>5</sup> These needs include the need to fulfill obligations, specific and general, to regional elites and the general populations of the territories in which the palatial centers were situated and the need to live up to the ideological identities that the palatial centers and their elites created and promoted. See Palaima 2012a.



been the primary users of the clay records *per se* and for purposes that seem to be in some way “mnemonic.”

Killen describes the Linear B clay records, from an economic perspective, as “merely *temporary* records: aides-mémoire, often of an extremely laconic character, which relate, with a few possible exceptions, only to the single, last year before the destruction of the particular palace [*i.e.*, palatial center] that contained the [particular] archive.”<sup>6</sup> Thus the texts generally contain the categories of data the tablet-writers anticipated needing within a given administrative year. The broad and narrow contexts for these data were known to the Linear B tablet-writers. They themselves were likely the very readers consulting the tablets later. Consequently they often forego writing down information that they know, and that we do not know, but would like to know. Therefore, we have to ferret out answers to questions about features of Mycenaean economic practices that are readily available in Near Eastern economic records. But the exercise is salutary for Mycenologists, and we hope for Near and Middle Eastern scholarly specialists looking on, like spectators at a Greek tragedy, with a mixture of pity and fear.

The paper by Dimitri Nakassis in this volume looks at the records from the perspective of prosopography and agency theory, with a focus on the best documented, archaeologically and textually, palatial territory, the region of Messenia in southwestern Greece, and the persons recorded individually or collectively, with titles and work specialties or responsibilities designated or not, in the surviving Linear B clay-tablet records from the main controlling center in late Bronze Age Messenia, the so-called Palace of Nestor at Pylos.<sup>7</sup> His work represents a significant break-

<sup>6</sup> For a standard synthetic view of the Mycenaean economy and the contents of the Linear B tablets, see Killen 2008. The description of the nature of the tablet evidence comes from p. 162. Our emphasis (*eg.*, Palaima 2007 and 2012a) on how the palatial centers necessarily used ideology to maintain fine balances within what we might call the political power structures in the territories over which they presided and the emphasis of Nakassis 2006 and 2013 (and this volume) on agency theory both make the “control” of the Mycenaean palatial center seem much less all-encompassing and forcefully and restrictively imposed.

<sup>7</sup> On the geography of the regions connected with the three palatial centers (Knossos in north central Crete, Pylos in Messenia in the southwestern Greek mainland and Thebes in Boeotia in central Greece north of Athens) that have yielded major collections of tablets, see Bennet 2011: especially 148–157; and Palaima 2011b. For a two-stage scholarly assessment, in 1999 and 2007, of the Palace of Nestor as an engineer of the palatial economy of Messenia, see Galaty and Parkinson (2007).

through in helping us see that the Mycenaean palatial centers and the elites who held power at them made use of preexisting and still functioning systems of organization and existing relationships among individuals at various levels in the socio-political and economic power hierarchies in the territory of Messenia and in well-defined provinces, districts and settlements within it.<sup>8</sup>

Some of the structures and methods of mobilizing and controlling labor that we can detect in the Linear B records must have pre-existed the imposition or insertion of the palatial system and then been adapted to new conditions and ways of operating. Others continued to operate at local and regional levels fairly independently of the palatial centers even in the period we are discussing. The palatial centers made use of these in partial, sometimes seemingly *ad hoc*, ways using *do ut des* and *quid pro quo* strategies with entities and individuals in towns, clan groups and natural geographical areas. We would also stress that economic, political, military and social security were main concerns for all inhabitants of a palatial territory, no matter on what terms they performed their labor.<sup>9</sup> We are looking here at major questions and problems regarding the mobilization of labor and issues surrounding remuneration, compensation and other methods of mobilizing workers and gathering resources and materials so that the work the palatial centers viewed as within their sphere of interest got done.

### Mobilization of Labor in Agriculture

Given the intensive focus of Linear B clay records, at every site where they are found, upon the here and now of single administrative periods (mostly annual, with rare references to next year and last year), we do not have a historical perspective that would document how systems and practices came into being and evolved over time. Where there are different approaches to labor mobilization within our surviving records and where the terminology reflects, etymologically or otherwise, concerns that we might consider on the one hand primary or original and on the other hand secondary or later, we can make conjectures and suggestions about how the procedures seen in our texts, dating mainly from the mid to late 13<sup>th</sup> century BCE, evolved from earlier stages.

In the records of land use—and again we emphasize that these occasion-specific records are kept for the purposes of the palatial centers and reflect their perspectives, we see what looks like a system of landholding,

<sup>8</sup> Nakassis 2013.

<sup>9</sup> Palaima 2012a and 2007.

rather than landowning. The system attested in the Linear B records likely developed as social, economic and political networks evolved from single smaller localities into districts with settlements of different populations, different natural resources and different geographical strategic advantages or disadvantages. These districts, in turn, would then have been configured into natural and mutually beneficial combinations of districts, followed by the formation of regions and provinces, within what we see finally as holistic palatial territories.<sup>10</sup> In the end, what Killen has to say is suitably cautious and represents, we believe, something like the *opinio communis*:<sup>11</sup> “[I]t is still not possible to say for certain who ultimately owned the land in Mycenaean kingdoms; but there is a good deal of evidence to suggest that, just as palaces and temples in the Near East were often significant owners of land, so the central institutions in the Mycenaean world had an effective control over—even if they did not technically own—substantial tracts of the arable [land].”

Just as there exists at the end of the full palatial period a hierarchy of interdependent individuals of varying power, authority and influence—and corresponding duties and obligations, there are also indications of how collective groups operated at varying levels from the local settlements and towns to regional centers and upward to provincial capitals.

Top down, the personal power hierarchy<sup>12</sup> descends from the *wanax* (“king”) and *lāwāgetās* (“leader or collector of the *lāwos* = adult males capable of and responsible for bearing arms”) through palatially appoint-

<sup>10</sup> See Hope Simpson 2014: 45–70, for a full picture of the political and economic geography of Messenia during the late Mycenaean palatial period, with attention paid to the texts and the archaeological remains. See Nakassis 2013: 181–183, for a capsule summary of the gradual formation of the whole of Messenia into a coherent, unified palatial territory between 1700/1675–1420/1410 BCE and 1330/15–1200/1190 BCE.

<sup>11</sup> Killen 2008: 162. On the almost sacred aspect of “earth” (γῆ) as the concept nearest to what we call “nature” and on belief in its “eternal” quality as the conceptual underpinning for human beings “occupying,” “partitioning,” “improving upon” and “making use of” portions of land in the daily lives of human societies, see Palaima 2014: 93–96. It is this concept that ultimately gives rise to the notion that land is not “owned” by individual persons or human social groups, but simply occupied and temporarily possessed.

<sup>12</sup> For somewhat differing, but still mainstream, comprehensive overviews of palatial officials, other officials, the *dāmos* and collective bodies of control, influence and mobilization, see Shelmerdine 2008: 127–135 and Nakassis 2013: 6–19. These views differ from mine presented here mainly in determining from whom various officials derive their powers and authority and whose interests they are primarily obligated to serve.

ed officials known as the *dāmokoroi* (literally “satisfiers of the *dāmos*”)<sup>13</sup> and the *korestēres* and *prokorestēres* (literally “agents and vice-agents of satisfaction,” *i.e.*, again, palatially appointed head administrators and vice-administrators<sup>14</sup> of major districts within provinces), to longstanding heads of village settlements known as *g<sup>w</sup>asilēwes* (in historical times “kings”, but in the late Mycenaean palatial period local “big men” or village chieftains who interact with palatial officials and interests, but derive

<sup>13</sup> The *dāmos*, often translated as the “people” as a whole or even as a local community or village, is in fact in the Mycenaean palatial period in all cases, so far as I can tell, the body or group of collective (at any level of community organization) land-holders who manage land allotments and use. We have evidence that the persons who make up the *dāmos* are known as *telestai*. It is easy to understand how this group eventually over time came to stand for both the territory made up of the land they controlled and dispensed and also the people who lived on that land, physically and in terms of dependence upon it for their own survival.

The *dāmokoroi* are effectively palatially appointed or palatially sanctioned and ratified “governors” of major provinces. They would have functioned much like satraps, singular *xšāθrapāvan*, literally “protectors of the province,” the Median/Persian king’s eyes and ears, in the satrapies into which the Median and then Persian empire was organized from the mid-7<sup>th</sup> century BC onward. In Pylos tablet Ta 711, we have recorded as the time phrase marking the ceremonial occasion for compiling a written inventory of ritual vessels, implements and furniture: “when the *wanax* appointed *au-ke-wa* as *dāmokoros*.” The nature of the items inventoried mark the occasion as an important ritual event (Palaima 2004: 234). This indicates that the palatial ruler made the appointment of the “governor” (at least as an overseer of palatial interests) of each province. Ideologically, however, the emphasis is on what this personage can do to bring satisfaction to the inhabitants of the region he oversees.

<sup>14</sup> The standard translation of these terms as “mayor” and “vice-mayor” gives a false sense of the source or basis of their power—the *korestēres* and *prokorestēres* are palatially appointed, not locally selected or elected—and of the range of their power. The term “mayor” implies a very defined geographical area of concern and a perspective limited to the population, resources and concerns of that relatively small area. A “mayor” is quite literally the “bigger” man in the local scheme of things, the top who looks down upon a small geographical area. As a term, “mayor” does not make significant the groups and interests that lie above figures so designated in the power hierarchy of the whole palatial territory. The officials known as *korestēres* and *prokorestēres*, however, seem to look to affairs in what we call districts or in modern terms “counties” and look “top-down” from, and in the interests of, the real top, *i.e.*, the palatial center.

their status and authority locally).<sup>15</sup> There are also individuals designated as *e-ge-ta* = *hek<sup>w</sup>etai*, traditionally in Mycenaean studies translated as “followers.” In my view the *hek<sup>w</sup>etai* are “agents of making others follow or attend,” *i.e.*, very close in meaning to “mobilizers” of personnel, often for military service.<sup>16</sup>

Within this structure we find that land is parceled out basically for “holding” as a “benefit.” The exact term used for such a landholding parcel is an *onāton*.<sup>17</sup> We may compare the equivalent Carolingian land-parcel allotment, a *beneficium*. The Mycenaean term *onāton* shares with the Latin term an underlying sense of *usufruct*, namely that by holding and using the land, the holder gains a “fruit” of his or her labor (*usufruct*), “is done well or does well,” *i.e.*, he benefits, by so doing (*beneficium*), and

<sup>15</sup> Palaima 2006a. Given the etymological and ideological links among *dāmokoros*, *korestēr* and *prokorestēr*, and the fact that all three terms disappear with the demise of the palatial centers, I am persuaded that all three terms and offices are linked to the administrative apparatus of the palatial centers and that holders of these offices managed economic, political and other matters in the interests of the palatial centers, interfacing with figures like the *g<sup>w</sup>asilēwes* and perhaps the regional elites known in modern parlance as “collectors,” who derive their power and authority from political, economic and social groups and longstanding social ranking at the town or district levels.

<sup>16</sup> Ruijgh 2011: 285, points out that the active form *\*sek<sup>w</sup>ō* of the verb that in the middle means “to follow” has causative use (“make X to follow”) in the stage of Greek represented by the Linear B tablets. See in Duhoux 2008: 386–387, the fuller discussion of the form *a-pi-e-ge* (Thebes tablet Fq 254) = *amphi-he-sk<sup>w</sup>-e*, as a reduplicated aorist (without augment) in causative sense = “he made people to follow/be around him” (although the word is subject to alternative reconstructions and semantic interpretations, *e.g.*, Melena 2014: 39, 118, interpreting it from *sek<sup>w</sup>-/sk<sup>w</sup>-* “to say”). See also Nakassis 2012: 272–273. Nakassis 2013: 7 and 89, stresses the military sphere in which the 13 men designated as *hek<sup>w</sup>etai* at Pylos mostly operate as a clue to their primary function. He views their involvement in the religious sphere as perhaps a “by product of their high standing among palatial officials.” He rightly emphasizes that since contingents of mobilized men in the *o-ka* tablets have each only one *hek<sup>w</sup>etai*, these figures may “act as a liaison between the palace and the troops.” I argue further that the causative force of the verb suggests that the liaison service provided by these figures was as actual mobilizers of the forces under their control.

<sup>17</sup> In the historical period, the term that is used for a parcel of land within a community (*klāros*) has a proposed etymology as a piece of stone or wood that is drawn in an allotment procedure (Beekes 2010: 715; Chantraine 2009: 522). To be *ἄκληρος* signifies being landless, poor, detached from the community defined by ownership of land within it. The term disassociates the conferring of land from any kind of power transaction or relationship.

finds so doing “useful and helpful and advantageous”—this is the root meaning of *onāton* as seen in the historical Greek verb *ὀνίτημι*.

The records frequently stipulate that land is “held” (Myc. Gk. *e-ke* = *ἔχει*) by specified parties under the oversight or through the authorization of the *dāmos*, which, as we noted above (n. 13), in origin means, and in the late Mycenaean period still functions as, the “collective group of individuals who see to the parceling out of landholdings under different terms and conditions.”<sup>18</sup> Since the pertinent sets of tablets relate to land, or to contributions expected from parcels of land held by individuals or collective groups, in specific locales, a reasonable assumption is made that each *dāmos* reference is particular to the area in question on the text in which it occurs. Other terms and conditions for landholding are still not fully understood and are mainly interpreted by how they stand in contrast to the basic land parcel, *i.e.*, the *onāton* that someone “occupies and uses” or “holds” (*e-ke* = *ἔχει*).

What we can put together from the texts we have is as follows.<sup>19</sup> Allotments of larger or smaller plots of land are made to individuals for their use according to the status they acquire through their work within the palatial systems and related components of social organization. That is to say, the allotments are made in return for work or service performed or provided. Holding the allotments then was contingent upon such work or service continuing to be performed or provided. Access to plots of land for raising crops and maintaining livestock would have been a great benefit to individuals, their families and clan groups and consequently a great carrot to encourage a high level of performance of work and fulfillment of service obligations and a great stick to see that satisfactory work continued to be done and obligations continued to be met. It was a reward for work that far exceeded either the food allotments apportioned to groups of captive women working within the Pylian cloth industry (Aa, Ab and Ad series at Pylos)<sup>20</sup> or the quantities given out as daily food allotments in return for work to about 67 names or occupational titles (and even animals where the allocation stands for the person-

<sup>18</sup> The word is analyzable as *\*deh<sub>2</sub>-mo-s* and is connected with the notions of “dividing,” “parceling,” “partitioning.”

<sup>19</sup> See now Nakassis 2013: 124–135 for a succinct analysis of individual landholders in the Pylos corpus.

<sup>20</sup> Chadwick 1988; Palaima 2011b: 64–65; for specific calculations of quantities see Palaima 2006b: 145. These dependent worker women each get about 0.64 liters of grain (on whether this is wheat or barley, see below n. 27) and a like amount of figs daily.

nel associated with their care, maintenance or use) as more than basic food maintenance in the Thebes Fq series, e.g. Fq 254[+]255.<sup>21</sup> For the individual plot-holders, the system seems to have had built into it ways to encourage a high level of productivity and to discourage complacency and potential fall-offs in productivity over time. For the elites in the palatial centers, the system had the potential to bring more resources within palatial territories into use through time.<sup>22</sup>

The basic parcel of land assignable was called a *ko-to-na* = *ktoinā*, a term that seems to signify in the late palatial period simply a parcel of land or ground-plot.<sup>23</sup> Del Freo has put forward the most sensible and ingenious explanation of the chief ways of distinguishing such plots of land within the Linear B records:<sup>24</sup>

From the point of view of the Mycenaean palatial administrative systems, the land parcels were classified according to demographic kinds of criteria. One was making then a distinction between parcels that were “inhabited” and those that were “uninhabited”. In the first group (“inhabited” land) were those parcels that are called *ki-ti-me-na* and *pu-te-ri-ja*; in the second group, those that are called *ke-ke-me-na*. All of these parcels of land were probably distributed by the palatial centers according to the principle of *conditional tenure*, even if it is possible that the obligations varied as a function of the conditions of fundamental land occupancy. In particular, it seems probable that the parcels termed *pu-te-ri-ja* had been subjected to a system of allotments at two levels, in this sense that the parcels which had already been allocated to the “planters” in order to make sure of their exploitation could eventually also be ceded in turn to other individuals.

The simplest way to view the rather complex terminology applied to land plots and landholders is through imaginative use of etymology. With regard to landholdings, the term *ke-ke-me-na* is contrasted with the term

<sup>21</sup> Palaima 2006b: 144–146. On the Fq series, allotments of 0.8 liters of grain (barley? or wheat?; see below n. 27) are common and some quantities reach 3.2, 4.8, 5.6 liters.

<sup>22</sup> See Palaima 2014: 98–99, for fuller discussion on how deserted (even perhaps once occupied, but now no longer agriculturally active) land (Mycenaean *e-re-mo* = *erēmos* or *erēmon*, cf. modern English “hermit”) and wild (*i.e.*, never before put into any kind of agricultural use) land (Mycenaean *a-ko-ro* = *agros* or plural *agroī*) were brought into productive use.

<sup>23</sup> Del Freo 2001: 31; Duhoux 2008: 299, with historical (Rhodian) parallel.

<sup>24</sup> Del Freo 2001: 42. Translation mine.

*ki-ti-me-na*. These are basically descriptive terms. *ke-ke-me-na*, from the root *\*g<sup>h</sup>eh<sub>1</sub>-* “to be empty, void”, is uncultivated, undeveloped land. *ki-ti-me-na* refers to a plot of land that is “built upon” or “cultivated,” *i.e.*, taken out of a “wild” or “natural” state through what we might call farming (sowed grain crops) or planting (fruit and vine crops) activities. The Indo-European form *\*t<sup>h</sup>kei-*, to which *ki-ti-me-na* is related, seems to continue an older present form of the root *\*tek-* “to procreate”.<sup>25</sup> Conceptually then the Mycenaeans viewed agriculture, arboriculture and viticulture literally as processes that cause the land to be productive, hence the extended related meanings of “cultivate” or “found” or “build upon” or “inhabit.” An individual who does this can be termed a *ki-ti-ta* = κτίτης or κτίστης. A second way to bring land “to fruition” or “an inhabited state” is by assigning it for a time to a *pu-te* = φυτήρ or “planter” of vine and tree crops. This kind of land is known specifically and literally as *pu-te-ri-ja* “plantation” land. There are instances where a *pu-te* is allotted *ke-ke-me-na*, *i.e.*, “uninhabited” or “empty” land, which is then understood as land that he is bringing into cultivation. *ke-ke-me-na* land is listed in the Pylos E-series as *pa-ro da-mo*, *i.e.*, somehow in control of the local *dāmos* organization.<sup>26</sup>

Also operating, it seems at the level of the *dāmos*, are individuals known as *te-re-ta* = *telestai* = “men of service,” derived from the word *telos* meaning, *inter alia*, a “service commitment.” 14 *telestai* are recorded in the Pylos En/Eo landholding texts and 45 *telestai* are recorded at the western Cretan site of *a-pa-ta-wa* on Knossos tablet Am 826.1. We also have recorded a case (Pylos Eb 149.1) where the *te-re-ta* is specifically noted to have to live up to his title, namely he is obliged to perform a service “*telos*” (the infinitival form of the denominative verb is *te-re-ja-e*). But we also learn there that he is not doing so.

Other landholders known as *ka-ma-e-we* (literally those having to do with plots of land known as *ka-ma*) are listed as holding collectively plots of land of the *ke-ke-me-na* type on an *o-na-to* basis and “working” (*wo-zo-te*) these plots (Pylos tablet Ed 236.2). There is an oft-cited correspondence in Pylos tablets Un 718 and Er 312. The *dāmos* group is responsible for foodstuff contributions to a feast in quantities recorded on tablet Un 718. These amounts of foodstuffs seem to be based on the amount of land that the *dāmos* in the district of *sa-ra-pe-da* controls,

<sup>25</sup> Beekes 2010: 791.

<sup>26</sup> Nakassis 2006: 75–76.



namely 30 GRA<sup>27</sup> units as recorded on tablet Er 312 as the seed grain quantity of land (see below). On Er 312, three *telestai* stand in for the *dāmos*. We do not know if these three stand in for a larger number of *telestai* in this *dāmos* or are themselves the full group.

For a sense of scale, we should note that land is measured in terms of seed grain. We now fortunately, because of the indefatigable ingenuity of José Melena, can calculate rough equivalents in actual land measure.<sup>28</sup> The three *telestai* on tablet Er 312 hold 30 GRA units worth of land. This equals ca. 45 acres of wheat land or 22.5 acres of barley land. 14 *telestai* at the site of *pa-ki-ja-ne* hold 44 GRA units. This would equal about 66 acres of land sown with wheat or 33 acres of land sown with barley. The unspecified number of *ka-ma-e-we* on Pylos Ed 236.2 are responsible for working 30.25 GRA units, *i.e.*, 45.375 acres of wheat land or 22.6875 of barley land.

A sense of scale of how important land is as an incentive and reward for labor and service is indicated by the case of an individual named *e-\*65-to*.<sup>29</sup> *e-\*65-to* is a “servant” (*do-e-ro*)<sup>30</sup> of the deity. He “holds” an *onāton* plot of *ki-ti-me-na* land and is classed explicitly thereby as an

<sup>27</sup> There are two main types of grain listed in the Linear B texts, barley and wheat. There is now still some controversy as to whether the original identifications of sign \*120 GRA(num) as wheat and sign \*121 HORD(eum) as barley are correct. See Palmer 1989, 1992, 1999. Melena 2014: 137, follows the traditional designations. Arguments are based on caloric values and on what classes of individuals receive barley (a coarser grain) and wheat (a finer grain). There is no entirely clear solution, since GRA, as we have seen, is allocated to women, some of them likely spear-captives or at least foreign slaves, working in the Pylos cloth industry (Ab series). But it is also offered to the god Poseidon (Es series) and contributed as a main grain to important communal and palatially sponsored feasts. HORD meanwhile is also given to a variety of deities and religious officials and sanctuaries (*e.g.*, Fn 187), to individuals identified by personal name or occupational titles (Thebes Fq series), and to laborers listed collectively on tablets dealing with *corvée* type projects (Fn 7). We shall here skirt the issue mainly by speaking of grain generically when discussing texts that use the ideograms GRA and HORD.

<sup>28</sup> Melena 2014: 159–160. 1 hectare is 100 ares or 10,000 square meters or 2.471 acres in US and British imperial land measurement. Melena has calculated on the basis of seeding quotients of 1:6 that 1 GRA unit (= 96 liters) of seed grain would produce 576 liters of wheat. Using modern equivalencies for Messenia of 10 hectoliters per hectare for wheat and 18 hectoliters per hectare for barley, Melena proposes that 1 GRA unit of seed grain would sow ca. 60 ares (ca. 1.5 acres) of land in wheat and 33 ares (ca. 0.83 acres) of land in barley.

*o-na-te* (\*ὄνατήρ), *i.e.*, a possessor of an *o-na-to* (literally an agent of benefit or, in this case, an active recipient of the reward of landholding, in Spanish a “beneficiario”). He is one of seven individuals who is recorded as holding an *o-na-to* plot from one of the 14 *telestai* in the district of *pa-ki-ja-na*, who is named *ru-\**83. The size of *e-\**65-*to*’s land allotment here is measured as  $\frac{1}{60}$  of a GRA unit, *i.e.*, 0.025 acres equaling 1,089 square feet of wheat land, or 0.0125 acres equaling 545 square feet of barley land. On tablet En 609, the same individual holds  $\frac{1}{5}$  of a GRA unit as an *onāton* parcel (0.3 acres of wheat land or 0.15 acres of barley land). By contrast *pe-ki-ta*, the royal fuller, holds a like *onāton* plot of *ki-ti-me-na* land in the quantity of  $\frac{1}{10}$  of a GRA unit (0.15 acres of wheat land or 0.075 acres of barley land). According to these levels of land usage rewards, *e-\**65-*to*, the “servant” of the deity, holds one plot of land that at most is about 30 feet by 36 feet in area, a kind of garden plot. His other plot is at most ca. 13,000 square feet or 130 feet by 100 feet. The royal fuller holds a plot that is roughly 65 by 67 feet.

It is clear that rewards in terms of assignments of landholding plots in return for work and service performance were to this extent micro-managed, but also no doubt appreciated by the recipients.

### Large-Scale Work Projects: Tools and Raw Materials

Unfortunately, the Linear B documents do not give us information about distributing tools and equipment to laborers involved in building projects, agricultural work or specialized crafts and industries. This is best seen by surveying the full ideographical repertory found in the corpus of Linear B inscriptions as we now know it.<sup>31</sup>

Only two items in this large repertory, roughly ninety of which are manufactured items (including vases, furniture, garments, work materials like ingots, hides and cloth bundles, and implements, all with some form of practical non-military use) are the kinds of work tools we would associate with *corvée* labor projects (road work, bridges, dams, major irrigation projects) and connected with the extraction and hauling of quarried stone and felled wood to building sites and handling stone and

<sup>29</sup> Nakassis 2013: 265

<sup>30</sup> *do-e-ro* (later Greek *doulos* “slave”) seems here to be an honorific term, much as Roman Catholic altar boys were known as “servers” at the ritual known as Mass. On records of bronze allotment (Jn series) the term seems to denote the condition of actual, non-ritual servitude.

<sup>31</sup> Melena 2014: 134–152.

wood during building projects (including palatial structures, workshops, fortification walls, and monumental burials in what are called *tholoi* and chamber tombs).<sup>32</sup> We leave out here ideograms for different kinds of crops and trees, foodstuffs, animals, human beings and all sorts of weaponry.<sup>33</sup>

The two tools that could be given out for major labor operations are:

(1) \*74, which also occurs as a phonetic abbreviation associated with other ideograms with the meaning *zeugos* or “pair.” But \*74 is used independently twice on tablets at Knossos in textual contexts that make clear that the ideographic use of the sign on those two tablets is meant to stand for “saw” (Mycenaean Greek *pi-ri-je = priēn*). Sign \*74 resembles a saw schematically in shape.

and

(2) \*182, which, judging from its form, may specify large tongs or pincers used to hold and move building stones.<sup>34</sup>

That the only two work implements recorded ideographically seem by their form to be connected with construction activities in stone makes large-scale building projects stand out within the corpus of Linear B texts relating to the mobilization of labor, despite the rarity of the references.<sup>35</sup>

Knossos K 740.1–5

*tablet damaged above*

- .1 ]traces of writing[  
 .2 *dip*as BRONZE \*214<sup>NAS</sup>+DI 30[  
 .3 *qe-ro*<sub>2</sub> “BRONZE” \*255 16  
 .4 *ku-ru-su*-\*56 \*207<sup>NAS</sup> 1  
 .5 *priēn* ZE 1 Translation: saw SAW 1

The items are: on line .2 sizable bronze vases; on line .3 bronze platelets to be riveted together in the construction of larger-scale bronze vessels;<sup>36</sup>

<sup>32</sup> On the scale and practical manpower, man-hour and equipment aspects of major public works projects during the Mycenaean palatial period, see Loader 1998:96–122 and appendix 4; Santillo Frizell 1998; Zangger 1994 and 2008.

<sup>33</sup> Melena 2014:150–151, itemizes 23 ideograms designating spears, javelins, arrows, bows, helmets, body armor, and chariots and their component parts.

<sup>34</sup> Melena 2014:151–152.

<sup>35</sup> For large-scale bronze saws on Minoan Crete, see Wells 1974 (for a brief, well-illustrated overview), and Shaw 2009:44–51. For the Mycenaean evidence for saws themselves and for cutting marks from different kinds of saws, see Blackwell 2014.

<sup>36</sup> Palaima 2004c:276–278.

on line .4 a three-legged vase with a neck and handles perhaps with a Minoan name and perhaps used for placement over fires;<sup>37</sup> and finally on line .5 a single saw with its material unspecified, but most likely, too, of bronze.

Knossos R 1562

*prī]ēnes* ZE 12                      Translation: saws SAW 12

Knossos U 876

\*182 8 *amphithe[tērsi]*<sup>38</sup> Translation: PINCER? 8 for the stone-clampers?

Since we have a text at Pylos (Fn 7) that lists on consecutive lines in two sections daily and monthly allotments of grain to *toikhodomoī* (wall-builders), *prētēres* (sawyers) and a *pantektōn* (something like a general building project director or contractor) and because of the association on K 740 of the ideogram ZE with vases made of metal, there is less to question here about the idea that we are dealing with large-scale bronze saws used in the cutting of timber and perhaps even stone blocks in the course of building projects.<sup>39</sup> We should also repeat that it is unusual that the

<sup>37</sup> Melena 2014: 147, remarks that the form of the vase and new tablet evidence from the Laconian site of Hagios Vasileios cast doubt on interpreting the beginning of the name of the vessel *ku-ru-su-* as connected with the Greek word for “gold” *khrusos*, itself a loan word.

<sup>38</sup> This reading of the lexical unit is conjectural on my part. The noun would be a formation in *-tēr* parallel to *pi-ri-je-te-re*, dative plural *pi-ri-je-te-si*, and indicate, after the entry of the 8 stone-pincer devices that they are for the people who literally are the “set-on-both-siders,” *i.e.*, “the stone clampers.” J. L. Melena (personal communication 06/16/2014) notes that my reconstructed form is sound, but it is a new word unattested in historical Greek, so that he prefers to restore (also so far unattested in the Linear B texts) *lamphithe[toi]* or *lamphithe[tai]*, either as a noun gloss on or as an adjective describing ideogram \*182. But the same objection as to the placement of the term relative to the ideogram would apply, and even more forcefully. Jörg Welhartner, who is doing a full study of Linear B ideograms, adjuncts and ligatures, writes (personal communication 06/17/2014): “I know of no case where the word identifying the logogram comes after logogram and quantity.” Moreover, the *-tēr* suffix is productive in Mycenaean Greek (cf. *ko-re-te* and *po-ro-ko-re-te*), and in historical Greek we do get an agent noun in the form *pristēr* = “sawyer”.

<sup>39</sup> On building techniques and tools and workers using them Shaw 2009: 53–54, 145–146, 166–169; and 46–51 for stone-cutting with saws. For how saws and other tools like hammers, adzes, chisels and wedges might have been used in Mycenaean palatial quarrying and building work, see Loader 1998: 46–49. Most recently, Nicholas Blackwell’s meticulous study of the Lion Gate relief at Mycenae offers solid evidence that straight-edge, convex and pendulum saws were in use on major stone construction projects (including evidence from masonry at Tiryns and on tholoi in the Mycenae area) in the late Mycenaean palatial period, 13<sup>th</sup> century BC (Blackwell 2014: 459–464, 466, 470 and fig. 18).

“stone pincer tongs” on Knossos U 876 are being distributed to the “stone-clampers” since the recipients of distributions on Linear B texts in all cases I can think of precede the ideogram and number entries. That is, we would expect: *amphithe[ērsi \*182 8*. But the contextual association on a single short tablet reinforces our identification and interpretation of the ideogram and the fragmentary word-entry. And it would be an even more unusual positioning if the word-unit to be restored here were the name of the item itself, *i.e.*, the stone pincer tongs.

We get some sense occasionally and, as usual in Linear B texts, indirectly that distributions of work tools were made regularly and that some claim to “ownership” of this equipment, in its used condition, stayed with the distributing authorities, as represented by overseers of work “in the field,” as it were. For example, on Pylos tablet Jn 829, the administration in the palatial center calculates the quantities of “recycled” bronze that the palatial *korestēres* and *prokorestēres* in each of the 16 districts of its two provinces will provide by collections they undertake through interactions, respectively, with functionaries known as *du-ma-te* (superintendents, perhaps of sanctuaries; singular *du-ma*)<sup>40</sup> and with “religious” and “agricultural” functionaries known as “key-bearers” (likely temple treasurers) and “fig-supervisors” (tree-fruit overseers) and “overseers of digging” (likely supervisors of grapevine tenders and irrigators). The tablet reads as follows:

Jn 829

- .01 thus will give the *ko-re-te-re*, and *du-ma-te*,  
 .02 and *po-ro-ko-re-te-re*, and “key-bearers”, and “fig-supervisors”, and “digging supervisors”  
 .03 temple bronze as points for light javelins and spears  
 .04 at pi-\*82 , *ko-re-te* , BRONZE 2 kg. *po-ro-ko-re-te* BRONZE 0.75 kg.  
 .05 at me-ta-pa , *ko-re-te* BRONZE 2 kg. *po-ro-ko-re-te* BRONZE 0.75 kg.  
 .06 at pe-to-no , *ko-re-te* BRONZE 2 kg. *po-ro-ko-re-te* BRONZE 0.75 kg.  
 .07 at pa-ki-ja-ne , *ko-re-te* BRONZE 2 kg. *po-ro-ko-re-te* BRONZE 0.75 kg.  
 .08 at a-pu<sub>2</sub> , *ko-re-te* BRONZE 2 kg. *po-ro-ko-re-te* BRONZE 0.75 kg.  
 .09 at a-ke-re-wa , *ko-re-te* BRONZE 2 kg. *po-ro-ko-re-te* BRONZE 0.75 kg.  
 .10 at ro-u-so , *ko-re-te* BRONZE 2 kg. *po-ro-ko-re-te* BRONZE 0.75 kg.  
 .11 at ka-ra-do-ro , *ko-re-te* BRONZE 2 kg. *po-ro-ko-re-te* BRONZE 0.75 kg.

<sup>40</sup> Aura Jorro 1985:195 *s.v.* *du-ma* §8 and §9. The *du-ma* is reasonably connected with later Greek *δάμαρ*, *-αρτος* “wife.” Its etymology is opaque, *i.e.*, unknown, but links with Indo-European roots and Greek words for “house” (literally “a building constructed in layers”) and “fasten” or “join” have been proposed, as well as a connection with the later Greek *ταμῖα* that argues for *du-ma* being a pre-Greek term (Beekes 2010:301, *s.v.* *δάμαρ*).

.12 at ri-]jo ,	<i>ko-re-te</i>	BRONZE 2 kg.	<i>po-ro-ko-re-te</i>	BRONZE 0.75 kg.
.13 at ti-mi-to-a-ko	<i>ko-re-te</i>	BRONZE 2 kg.	<i>po-ro-ko-re-te</i>	BRONZE 0.75 kg.
.14 at ra-]wa-ra-ta <sub>2</sub>	<i>ko-re-te</i>	BRONZE 2.75 kg.	<i>po-ro-ko-re-te</i>	BRONZE 0.75 kg.
.15 at sa-]ma-ra ,	<i>ko-re-te</i>	BRONZE 3.75 kg.	<i>po-ro-ko-re-te</i>	0.75 kg.
.16 at a-si-ja-ti-ja	<i>ko-re-te</i>	BRONZE 2 kg.	<i>po-ro-ko-re-te</i>	0.75 kg.
.17 at e-ra-te-re-wa	<i>ko-re-te</i>	BRONZE 2 kg.	<i>po-ro-ko-re-te</i>	0.75 kg.
.18 at za-ma-e-wi-ja	<i>ko-re-te</i>	BRONZE 3.75 <sup>2</sup> kg.	<i>po-ro-ko-re-te</i>	0.75 kg.
.19 at e-ro ,	<i>ko-re-te</i>	BRONZE 3.75 <sup>2</sup> kg.	<i>po-ro-ko-re-te</i>	0.75 kg.

In this operation, the two palatial agents (*korestēres* and *prokorestēres*) looking to the interests of the palatial center in each of the sixteen districts have an authorized claim to what appears to be the scrap-metal bronze that comes from worn tools used in agriculture and from cult implements that are in disposable condition. They interact with power figures appropriate to their own two levels—it would seem that the lower-ranking *prokorestēres* see to the actual process of gathering the recyclable bronze objects and pieces in cooperation with the Mycenaean versions of temple treasurers and the overseers of work teams who do the planting and tending of fig trees and vines.

Following this transaction in reverse, we might posit reasonably that the palatial center could lay claim to these objects because they had been responsible for their distribution or donation in the first place. But again this is a view from the palatial center. The record is concerned with these activities at a higher administrative level than one that would let us see the gritty details of how the bronze tools for arboriculture and viticulture or the bronze cultic implements were given out in the first place and even how they later were retrieved in a worn-out state from persons and localities within the provincial districts.

In livestock tablets (C- series) from Knossos, oxen specified as *we-ka-ta* (φεργάτης = a “worker” in the singular), *i.e.*, “worker” oxen are given out in one case in paired teams (C 5734 *we-]ka-ta* BOS ZE 20, where ZE here is used, as we noted above, as an acrophonic abbreviation for the word *zeugos*, a pair, here literally a “yoked pair”) and in other cases (*e.g.*, Ce 59) in multiples of 2 located at different sites in Crete, among them, *da-wo*<sup>41</sup>

<sup>41</sup> The site of *da-wo* is a major agricultural center located somewhere in the Mesara plain in south central Crete. The plain is a major bread basket on the island. *da-wo* may be the site now known as Hagia Triada (or Holy Trinity), named in modern times after a nearby abandoned medieval village and located three kilometers northwest of the Minoan palatial center of Phaistos. *da-wo* is the site of a large “harvest” *a-ma* record KN F(2) 852 that records roughly a million liters of grain and large quantities of olives and *cyperus*. The

in south central Crete, Tyliisos in north central Crete relatively near Knossos and Kydonia, the major center on the northern coast in the far west of the island. On Ce 59, for each of the entries dealing with the sites of *ku-ta-to*, *da-\*22-to* and Tyliisos, in the upper space above the designation *we-ka-ta*, there are annotations: for the site *ku-ta-to* a probable man's name (*ta-ra-me-to*) is written, and for the other two sites a two-sign word which in early scholarship was interpreted as *da-mo* = *dāmos*. In the most recent edition, the reading of the first sign of what was read as *da-mo* is now considered uncertain.<sup>42</sup>

Still, the traditional reading on Ce 59 is not definitively ruled out and the occurrence of the *dāmos* in two entries in an allocation of worker oxen that could be put to agricultural use would make good sense. Moreover, the written stipulation of the "person in charge" at *ku-ta-to* and of the *dāmos* as the responsible entity at *da-\*22-to* and Tyliisos might be linked to the fact that these three sites are geographically in the orbit of the palatial center at Knossos, while *da-wo* and *ku-do-ni-ja* are remote and in other natural territories (the northwestern or eastern Mesara and far western Crete, respectively).

It appears that the palatial center had a concern with managing these major animate tools of traction and hauling and in three nearby sites entrusted an individual (perhaps a minor "collector")<sup>43</sup> and the *dāmos* or

grain alone would require 1,000 hectares of in-use agricultural land and most likely 1,000 additional hectares lying fallow (Bennet 1985: 237 and n. 18). For the general administrative map of Mycenaean Knossos, see Bennet 1985: 236, Ill. 4 and table 1 on page 239. Tyliisos = TURISO. *da-\*22-to* has a west central location. Privitera 2014: 436, 440 and n. 88, argues that Hagia Triada took on the name of *pa-i-to* (Phaistos) in the post-LM I B Mycenaean phase on the island of Crete and suggests that perhaps *da-wo* should be located in the eastern Mesara.

<sup>42</sup> Chadwick *et al.* 1986: 34 now read in the entry for *da-\*22-to*: [.]*-mō*; and for Tyliisos [.]*-mo*. For the Tyliisos entry they consider a reading "*dā-mo* virtually impossible; perhaps *ṛe-mo*." We should note that the whole of line .3 is over an erasure, making the reading particularly difficult. Since the editors' apparatus remark and the accompanying photograph do not completely rule out the original reading, we might have here a reference to the involvement of the *dāmos*, as opposed to two occurrences of the same otherwise unattested personal name.

<sup>43</sup> At Pylos, one of the four major "collectors," *we-(u-)da-ne-u*, is listed frequently with livestock, in fact nearly twenty times, including with *a-ko-ra* (literally a "collection") of sheep. On Cn 418, he is in charge of fatted bulls whose color markings are described, an indication that they are being prepared for a sacrificial feasting event. See Olivier 2001: 141; Palaima 1989: 104–108.

ganization to see to their care and use. We do not know in specific what projects these animals were being used for, or on what basis the animals were located at these sites. But in other texts, *e.g.*, Pylos tablets An 18 and An 852, ox-tenders (*qo-u-ko-ro*) are listed along with wall-builders (*toikhodomoi*), men of service (*telestai*), and *tektones* (carpenters or construction workers), suggesting that the worker oxen they tended were to be put to use at least part of the time in building operations. On another tablet An 830, four groups of ox-tenders (18 to 66 in number) are recorded in a context having to do with *ke-ke-me-na* “uninhabited” land, perhaps in the process of converting it to agricultural production.<sup>44</sup>

Because the palatial center at Knossos is here on Ce 59 noting the placement of the animals in different localities, we can assume they have an interest in seeing to the work services to which the worker animals are put. Knossos tablet Ce 50 is a peculiar case. On both the front and the back of the tablet are recorded four entries of the same sequence of personal names and associated classes of livestock. The individuals and their associated kinds and numbers of livestock, respectively front and back, are:

*a-qi-ru* (male sheep, front 134 and back 190);  
*qa-ra<sub>2</sub>-wo* (female sheep, front 43 and back 144);  
*a-nu-ko* (female sheep, front 51 and back 133); and  
*ro-ru* (female sheep, front 32 and back 150).

The *recto* text is annotated with small-scale interspersed signs referring to what seems to be the site of *te-pa-ra* and the interests of an individual known as *pe-re-qo-ta*. The *verso* specifies in the same way that the animals are *o-pa* or “finishing” work. When the term *o-pa* is used with animals, it mostly has to do with fattening and bringing them into a proper state for use, generally for sacrifice and consumption at feasts, and generally in the palatial interest.<sup>45</sup> On the top side of the leaf-shaped tablet, the scribe has inscribed an entry of 6 male *we-ka-ta* oxen. Extrapolating from Ce 59, we might conclude that here at the site of *te-pa-ra*, the figure *pe-re-qo-ta* is responsible from the central administration’s point of view (as are *ta-ra-me-to* and the two possible *dāmos* groups on Ce 59) for the worker oxen specified as located here. This would be consistent with groups of workers who are listed en masse in other tablets, especially the Pylos tablets to which we have just referred.

<sup>44</sup> Palaima 1989:101.

<sup>45</sup> Palaima 2004a:227; Killen 1999.



### Public Projects: Mobilization and Participation

We have already mentioned above the harvest labor that underlies the large harvests recorded on the Knossos texts, *e.g.*, F 852 with its massive harvest of grain at the site of *da-wo*. On a smaller scale, the palatial center at Knossos is interested in a “harvest” (*a-ma*) recorded in the brief text of an unfortunately fragmentary tablet (F 845) that lacks its place entry. The text of F 845 does note the involvement of the *dāmos* (see above on Ce 59) with recorded amounts of 8 (and perhaps more, given that the area on the tablet surface where units for signs for “ten” would occur is damaged) GRA units (= 768 liters of grain), and 12 units of wild olives (equaling perhaps 1,152 liters).

We have also already mentioned, too, that Pylos tablet Fn 7 specifies both daily and monthly allotments of foodstuffs made to a group of 20 *toikhodomoi* (wall builders), 5 *priētēres* (sawyers) and a single *pantektōn* (general building project manager). The wall builders and sawyers receive each 1.2 liters of grain daily. The *pantektōn* 3.2 liters. Two other individuals (*qa-ra<sub>2</sub>* and *pa-ka*) are also listed there, apparently by personal name, as receiving grain and olives. How the operation was managed, who was responsible for having the supplies of grain on hand and for conveying and distributing them to the working parties, whether this text referred to a specific project being undertaken and where, and whether the central administration knew or cared to know the identity of the *pantektōn*, are all unknown to us. We can say minimally that these two groups of specialist workers and the *pantektōn* were capable of working collaboratively on a project and that they either had been or were about to be mobilized for such a project.<sup>46</sup> The palatial center clearly has an interest in maintaining these workers for a period of a month.

A similar association among wall builders, ox-tenders and most likely either *telestai* (“service men”) or *tektones* (“carpenters” or “construction workers”) is found on Pylos tablet An 18.<sup>47</sup> Its heading seems to have to do with the occupation or office known as an *ereutēr* “inspector or examiner,” but there is no sure way of knowing the precise significance of the fragmentary word and heading. Of the conjectures made by eminent Mycenologists C.J. Ruijgh and M. Lejeune,<sup>48</sup> it strikes me that, if, as is likely, the heading refers to the contents of the entire tablet, we should

<sup>46</sup> Like reasoning applies to Pylos tablet An 18.

<sup>47</sup> I have used here the abbreviation *top* = *toponym* to indicate that the word in a particular position is a place name designation. The most likely restoration in line .11 is either *telestai* or *tektones*.

<sup>48</sup> See Aura Jorro 1985:243 *s.v.*

read *e-re-u-te-ri-jo*, *i.e.*, a reference that the entries on the tablets concern “persons in the sphere of interest of the *ereutēr* or inspector.”

A figure by the name of *di-wi-je-u*, a personal name that seems to be derived from a theonym and to mean literally something like the man having to do with the goddess *di-wi-ja*,<sup>49</sup> holds the title of *ereutēr* on tablet Cn 3. On Cn 3.2, he is recipient of oxen destined for sacrifice. He is attested again in the *o-ka* “coastal guard contingents” series as a *hek<sup>w</sup>etās* or “mobilizer” (see below).

The two toponyms specified in lines .9 and .11 of tablet An 18 have important associations: the area of *ti-no* with the *lāwagetās* (see below) and the area of *pa-ki-ja-ne* as the main religious district associated with the palatial center. The tablet as a whole then looks to be a report of single men of some importance in place at these different locations—and in one case missing—and somehow all viewed as under the oversight of an *ereutēr*.

In line .12 of An 18, the number 256 interpreted either as the number of “carpenters” or as the number of “men of service” in the sanctuary district of *pa-ki-ja-ne* would seem to be a high figure.<sup>50</sup> Given the detailed list of landholdings that we have for the district of *pa-ki-ja-ne* (also designated as *pa-ki-ja-na* and *pa-ki-ja-ni-ja*) close to the palatial center proper, a case can be made that the district and its many sanctuaries could accommodate that many “men of service” in its agricultural activities or that the word *tektōn* might still not have a specific designation as “carpenter”, *i.e.*, woodworker, per se, but would mean something more general, and appropriate to its root meaning, like “construction worker” or “builder,” as we have been glossing it and for precisely this reason.

#### An 18

- |     |                                  |              |        |                  |
|-----|----------------------------------|--------------|--------|------------------|
| .1  | e-re-u-te-ri-]                   |              |        |                  |
| .2  | te-ko-to-na-pe                   | VIR          | [      |                  |
| .3  | i-na-ni-ja                       | VIR          | 1[     | ja VIR           |
| .4  | re-ši-we-i                       | YIR          | ]      | 1 a-se-e VIR     |
| .5  |                                  | <i>vacat</i> |        |                  |
| .6  | te-re-ne-we , to-ko-do-mo a-pe-o | VIR          | 1      |                  |
| .7  | i-na-ne                          | VIR          | 1      | te-ko-to-na-pe 1 |
| .8  |                                  | <i>vacat</i> |        |                  |
| .9  | qo-u-ko-ro ti-no                 | VIR          | 90     |                  |
| .10 |                                  | <i>vacat</i> |        |                  |
| .11 | pa-ki-ja-si , to-so , te-[ ]     |              |        |                  |
| .12 |                                  | VIR          | 256[ ] | <i>vacat</i>     |

<sup>49</sup> See Aura Jorro 1985: 182 *s.v.* § 8.

<sup>50</sup> But see below Knossos tablet Am 826.

An 18

at *top* MANat *top* MAN 1 at *top*? MAN [at *top* MAN 1 at *top* MAN 1*blank line*at *top*, wall builder absent MAN 1at *top* MAN 1 at *top* 1*blank line*ox-tenders at *ti-no*<sup>top</sup> MAN 90*blank line*at *pa-ki-ja-ne*<sup>top</sup>, so many, *te*-[ ]

MAN 256?

One of the other ways, beside through “inspectors,” that the palatial centers managed their own interests is through individuals of high status who do not fill any official position or hold any title in the bureaucratic hierarchy that kept track of, and integrated itself into, all activities in their palatial territories. These individuals are known as “collectors.”<sup>51</sup>

Citing Mesopotamian parallels, Nakassis argues, in my view convincingly, that the “collectors” were Mesopotamian-style entrepreneurs, but not palatial administrators per se:<sup>52</sup>

It is equally possible to compare the Mycenaean “collectors” to these Mesopotamian entrepreneurs, individuals who could hold important positions as administrators but also had various interests of their own. This might explain why “collectors” are referred to by personal name rather than by official title, why their activities are so diverse, and why it is difficult to separate out the “collectors” from other named individuals. So, although the activities of “collectors” were tracked by the palatial documents, their high standing makes it difficult to imagine they were merely employees of the palace.

<sup>51</sup> Nakassis 2013: 7–8 (with further references there in notes 41–47); 168–169; and especially 174–175. Only two of the individuals identifiable as collectors are associated with official titles, and those indirectly. As Nakassis 2018: 18, n. 98, explains, in one case the individual *Alksoitās* may be *hek<sup>w</sup>etās*, but there is a preferable interpretation of the syntax where his name and the term co-occur; in the other case, the individual *Amphimēdēs* has “personal servants” who are described adjectivally as *hek<sup>w</sup>esioi*. However, it is possible that they are so described because they have connections with another individual or other individuals classed as *hek<sup>w</sup>etai*.

<sup>52</sup> Nakassis 2013: 174–175.

I myself have argued that these elite individuals, who appear as important economic agents and facilitators, could have served the same functions in the relatively newly formed palatial regions as the Carolingian *Reichsaristokratie*.<sup>53</sup> On Knossos tablet E 847 a collector known as *a-no-go-ta*, whose name appears in eleven texts having diverse purposes,<sup>54</sup> is listed, we hypothesize by a reasonable restoration of a missing part of the text, at Knossos as in control of a quantity of grain for a single-month (designated by the lunate “month” ideogram) in the amount of 10.2 whole units (= ca. 980 liters). Two other entries for individuals follow with the same scale of grain, the last (to an otherwise unattested individual known as *da-na-mo*) for around 11 GRA units (= 1,056 liters).

We can get some comparative sense of the scale by noting that the *pantektōn* on Pylos Fn 7 received as his individual compensation for a month 1 HORD unit. This would seem to suggest that the monthly allocations or held amounts on KN E 847 are significant rewards granted to the collector *a-no-go-ta* and to *da-na-mo*, or are amounts to be used for distribution later at much larger scales of operation. We should stress again that whether these amounts of grain were intended to be for the personal use of the parties listed on KN E 847 or for some use relating to projects in which the palatial center itself had an interest we do not know.

We get other hints of mobilization either for agricultural or building purposes in texts that simply list the number of persons involved in specific locations. For example, the palatial center at Knossos had need of a text that records the following:

Knossos Am 826

- .1 men of *a-pa-ta-wa* , *telestai* MAN 45[  
 .2 *tektones* MAN 5 [

The association of this many individuals of the higher landholding class (45 *telestai* or “service men”) who are involved in *dāmos* affairs with 5 building-project supervisors (*tektones*) resembles the association on Pylos tablet Fn 7 of 1 *pantektōn* with 20 wall-builders and 5 sawyers. The regular numbers on KN Am 826 suggest that there existed, at the time the tablet was written, at or from *a-pa-ta-wa*, five working groups or teams of ten consisting each of 1 *tektōn* and 9 *telestai*.

<sup>53</sup> Palaima 2012a: 349–350.

<sup>54</sup> Olivier 2001: 142.

Besides “collectors” in the economic sphere and the *korestēres* and *prokorestēres* appointed by the palatial authorities who see to the economic and political interests, broadly defined, of the palatial centers, the individuals known as *hek<sup>w</sup>etai* (whom we have called “mobilizers”) appear to play a clear role in “military” mobilization in the Pylos *o-ka* tablets. However, these records do not have an explicit bearing upon or furnish information about the economic aspects of such activities.<sup>55</sup>

Nonetheless, the actions of the *hek<sup>w</sup>etai* are related in some ways to economic mobilization. Take, for example, the simple text from Pylos An 1. It records some basic information: 30 rowers total drawn from five different communities (and listed against them in numbers 8, 5, 4, 6 and 7) are “going to the site of *Pleurōn*” (in my opinion best located somewhere in Messenia). Why would such a text be written? Again in my opinion,<sup>56</sup> An 1 is best explained as written not only to verify that a full crew of rowers is on their way to *Pleurōn*, but also so that the five small communities providing these rowers may have the fact of their contributions explicitly known to the palatial center so that their reduced manpower resources and their fulfillment of this service of providing rowers may be taken into consideration when deciding how to mobilize manpower for other work projects.

Unfortunately Knossos text B 1055 is laconic in content and also incompletely preserved. It is structured as a typical “census” of men under the overall tablet heading on line 1:

*ko-no-si-jo , e-qe-ta ,*

This two-word heading phrase is interpretable as a rubric declaration meaning either

*knōsioi hek<sup>w</sup>etai* = the men listed hereon are “Knossian *hek<sup>w</sup>etai*”

or

*knōsiōi hek<sup>w</sup>etāi* = the men listed hereon are “for the Knossian *hek<sup>w</sup>etās*”.<sup>57</sup>

<sup>55</sup> Shelmerdine 2008:146–147, makes clear that the data of personnel mobilization and placement in the *o-ka* tablets are “not tied to any records of rations or equipment.” Killen 2008:180, declares that these texts “are concerned with military (or para-military) disposition” and are thus only economic in secondary or tertiary ways.

<sup>56</sup> Palaima 2011b:66, n. 28.

<sup>57</sup> That is, the *hek<sup>w</sup>etās* has some kind of interests in them.

The tablet itself is too fragmentary to offer us solid reasons to choose among various alternative interpretations of the heading. The standard interpretation posits that the approximately 13 men who seem to be listed on the tablet singly by personal name may be the “Knossian *hek<sup>w</sup>etai*” in the nominative of rubric on line .1. It is then further proposed, not unreasonably as the Linear B tablets go, that the entry on line .9:

“so many men all totaled MAN 213”

refers to the aggregate total number of *hek<sup>w</sup>etai* who would comprise the full dossier made up of a number of other tablets, no longer preserved, giving names of *hek<sup>w</sup>etai* at other sites.<sup>58</sup> All totaled there would be 213 *hek<sup>w</sup>etai* operating at whatever number of sites were taken up in this dossier, with 13 of these *hek<sup>w</sup>etai* identified as being at Knossos. This at least gives us some sense of the scale at which the *hek<sup>w</sup>etai* were present within the economic system at Knossos, and helps us to see that individuals with this designation, too, were out in the regional landscape, perhaps at sites like Tylissos, *u-ta-no*, *se-toi-ja*, Phaistos and *ku-do-ni-ja* (Khania).<sup>59</sup> We should caution, however, that other interpretations of the text of B 1055 are possible and that two entire lines (.4-5) are missing from this nine-line text.

Besides the individuals acting in the interests of the palatial centers to mobilize and maintain economic resources, animate and inanimate, and to manage work projects, there are also three other prestige groups that, like the *dāmos* in the sphere of local land use, are also involved in labor mobilization. These three are:

- (1) the *ra-wa-ke-si-ja* = *lāwagesiā* (as securely restored on Knossos tablet As 1516), an organization responding to the authority of the *lāwagetās*;
- (2) the *qa-si-re-wi-ja* = *g<sup>w</sup>asilewiā* (KN As 1516.12, PY Fn 50.1–.3 and Fn 867.3), bodies either made up of *g<sup>w</sup>asilēwes* or led by one of them in local village areas;

<sup>58</sup> Deger-Jalkotzy 1978:94–96, who points out that the scribe who wrote B 1055, also may have written tablet B 807 which lists men from Tylissos (unknown quantity) and men from the site of *u-ta-no* (237), *i.e.*, on a similar scale of massed personnel as B 1088.

<sup>59</sup> Deger-Jalkotzy 1978:96–97, opines that Linear B tablets attest to 200 or so chariots (Driessen 1995:491–493, estimates 250 chariots and 500 horses attested in the Linear B records as under maintenance at Knossos) and that the fact that we have a total number of *hek<sup>w</sup>etai* recorded of a similar number “ist vielleicht kein Zufall.”

(3) and *ke-ro-si-ja* = *geronsia* = later *gerousia* (Pylos tablet An 261.2–.17 and v. .1–.2 and .4–.7), councils of elders operating at the village level and organizing and mobilizing labor and the exploitation of other resources.<sup>60</sup>

It is instructive to focus on a single individual here within the Pylos records and how his role in the texts illuminates the complexity of economic operations. The person known as *a-pi-qo-ta*<sup>61</sup> occurs on three tablets. On one (Jn 431.6) of the tablets of the allocation of raw bronze to smiths in various locales, *a-pi-qo-ta* appears as a *qa-si-re-u* = *g<sup>w</sup>asileus*, a power figure within local communities with large status on this small-scale. He also appears as the possessor of a *geronsia* that has recorded against it 17 men. Finally there are five individually named men listed and recorded against the *geronsia* of *a-pi-qo-ta* on tablet An 261.13–17. Moreover, on the verso of An 261, the four different *geronsiai* are listed with a group of land-holding men known as *ka-ma-e-we*, i.e., the men who have to do with the special kind of landholding known as a *ka-ma*, a higher status of landholding that is associated with a specific obligation to perform work. By association then the 20, 18, 17 and 14 men recorded on An 261 by tablet-writers at the palatial center would likewise be fulfilling some kind of work obligation. Deger-Jalkotzy clarifies for us as well as one can what seems to be going on here:<sup>62</sup>

Both *qa-si-re-wi-ja* and *ke-ro-si-ja* designated groups of men who originated from the local level of the province of a Mycenaean kingdom. But while the operations of the *qa-si-re-wi-ja* seem to have been related to the organisation of labour at the economy *within* the Mycenaean palace system, *ke-ro-si-ja* remained outside the sphere. May we then assume that *ke-ro-si-ja* was a term which refers to the socio-political conditions of the local districts which were normally not mentioned by the central bureaucrats at Pylos?

She further posits that the *ke-ro-si-ja* consists of “senior members of a kin group who may have been the heads of descent groups.”<sup>63</sup>

<sup>60</sup> For a complete list of Mycenaean social units that to some degree control human activity and resources, see Palaima 2012b: 701. For the most up-to-date, thorough, perceptive and sensible discussion of textual data for the operation of Mycenaean *g<sup>w</sup>asilewīā* and *geronsia* in the context of Mycenaean palatial society, see Deger-Jalkotzy 1998–99.

<sup>61</sup> Nakassis 2013: 209.

<sup>62</sup> Deger-Jalkotzy 1998–1999: 75.

<sup>63</sup> Deger-Jalkotzy 1998–1999: 80.

The difficulty here is to figure out what is meant by activities being inside and outside the Mycenaean palatial system. What is clear is that *a-pi-qa-ta* is a *g<sup>w</sup>asileus* and appears in palatial texts when the palace needs to distribute bronze to individuals who have other economic concerns, e.g., herding. So far as our documentation indicates, however, neither *a-pi-qa-ta* nor any of his three peers on An 261 as “possessors” of a *geronsia*, is a palatial “mobilizer” (*hek<sup>w</sup>etās*); nor are any of the four classed as “collectors.”

To be cautious, we might wonder whether this is simply the result of the grounds by which we identify and classify “collectors”. If we were to classify the mobilization that is clearly taking place on tablet An 261 and related tablets as an economic operation, a case could be made for the designation of “collectors” to be used here. After all the latest individuals to be identified as collectors (those with interests in bronze smith work, olive oil production and middleman economic transactions) were once not recognized as such.<sup>64</sup>

I think in the end, it is best to avoid trying to make distinctions as to whether classes of individuals or persons holding particular statuses are inside or outside the palatial system. The palatial centers did “rule” their territories and the other power centers, local communities and persons residing or brought within their territories. We should concentrate on the entities and institutions and officials with which they interacted.

What the foregoing discussion has demonstrated is how all-encompassing the *politeia* of the Mycenaean palatial system was. But the nature of economic activity within the system and the terms upon which labor projects were conceived, implemented, worked upon and completed involved a broad range of actors and agents and interests. The palatial centers, it would seem, were aware of boundaries of authority, interest, obligation and benefit. But they seem not to have done away with local big men (*g<sup>w</sup>asilēwes*) or sib groups, clans and elders (*gerontes* and *geronsiai*). Each palatial center would have had long experience of negotiating such relationships and interactions with regional elites known as *hek<sup>w</sup>etai* and “collectors” in its own immediate district, before it became the paramount site of a region. As we have mentioned, too, the delicacy with which palatial centers like Pylos (and Knossos where the same titles are attested) approached such matters is underscored by the ideological message of the titles they use when they want to effect matters directly through their own appointees (*korestēres*, *prokorestēres* and *dāmokoroi*).

<sup>64</sup> Olivier 2001: 140 n. 111, 149–151.



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*Abbreviations*

*AJA* *American Journal of Archaeology*

ÖAdW Österreichische Akademie der Wissenschaften

C.S.I.C. Consejo Superior de Investigaciones Científicas

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