

THE PENNSYLVANIA STATE UNIVERSITY
SCHREYER HONORS COLLEGE

DEPARTMENT OF CLASSICS AND ANCIENT MEDITERRANEAN STUDIES

PYLIAN POLITICAL AND SUBSISTENCE ECONOMY: PRODUCTION,
MOBILIZATION, AND EXCHANGE STRATEGIES

ROBIN MAXWELL KEIRE
FALL 2013

A thesis
submitted in partial fulfillment
of the requirements
for baccalaureate degrees in Anthropology and Classics and Ancient Mediterranean
Studies
with honors in Classics and Ancient Mediterranean Studies

Reviewed and approved* by the following:

Mary Lou Zimmerman Munn
Senior Lecturer in Classics and Ancient Mediterranean Studies
Director of Undergraduate Studies
Honors Advisor and Thesis Supervisor

Mark Munn
Professor, Greek History and Greek Archaeology, Classics and Ancient
Mediterranean Studies and History
Head, Department of Classics and Ancient Mediterranean Studies
Faculty Reader

* Signatures are on file in the Schreyer Honors College.

ABSTRACT

Since the decipherment of the Linear B documents by Michael Ventris, Mycenaean scholars have attempted to model the economy of Pylos. Research into Pylos has long been dominated by excavations of the palace as well as the palace's role in the economy as revealed by the Linear B texts. It has long been believed that the palace played a dominant redistributive role in the Pylian polity. However, little attention has been placed on individuals and regions outside the palace. This thesis, using textual and archaeological evidence, attempts to show the role of individuals and regions as the main driving force of Pylian economy, while the palace used mobilization and exchange networks to acquire goods from the distributed network of production.

TABLE OF CONTENTS

List of Figures	iii
Acknowledgements.....	iv
Chapter 1 Introduction	1
Chapter 2 Staple, Wealth Finance and the Linear B Records.....	2
Chapter 3 Pylian Hierarchy.....	6
Chapter 4 Production of Staples and Prestige Goods	9
Chapter 5 Pylian Economic Interactions.....	17
Chapter 6 Conclusion.....	32
BIBLIOGRAPHY	33

LIST OF FIGURES

Figure 1-1. Map of the Palace and Surrounding Area30

Figure 1-2. Palace at Pylos: Floor Plan.....31

ACKNOWLEDGEMENTS

I wish to thank my thesis and honors advisor, Professor Mary Lou Munn. Without her, I would have not been able to finish. I appreciate her effort and work in making comments and suggestions on this thesis. I deeply value her time spent guiding me along on this work. I also wish to thank Professor Mark Munn, who was very helpful in the preliminary stages and set me on the right direction and for his work as well as being a reader for this thesis.

I would also like to thank Professor Ken Hirth in the Anthropology department for teaching a thought provoking class on economy. During that class my freshman year, I developed an interest in economy. I would later extend this interest to the Aegean and hopefully with the same amount of spirit.

Finally, I would like to thank my family for their love and support throughout my days at Penn State.

Chapter 1

Introduction

The coming of the Late Bronze Age in Greece brought increasing social complexity and the emergence of Mycenaean social elite. Several aspects of this were the development of elite centers, known as palaces, the restructuring of the economy, and the development of a writing system. Mycenaean palaces emerged at several sites on mainland Greece; these sites include: Mycenae, Tiryns, Thebes, and Pylos. These palaces are recognized by their distinct architectural features: ashlar construction, a megaron formed by a porch, vestibule, and a rectangular room with four columns around a central hearth, and a throne on the right. Evidence for the placement of the throne is found at Pylos; at Thebes, the megaron has yet to be discovered. Mycenaean palatial culture only lasted 300-400 years and the palaces were destroyed ca. 1200 BCE. In this thesis, I consider Linear B texts and archaeological evidence to show that Pylos's economy was not dominated by redistribution and the palace, but rather was made up of various economic interactions which involved mobilization, production, and exchange networks that were operating at the various levels of the Pylian social hierarchy.

Chapter 2

Staple, Wealth Finance and the Linear B Records

Pylos engaged in staple and wealth finance. Staple finance can be defined as “obligatory payments” of subsistence goods, which are used to support palatial craftsmen. The Pylian economy, for those outside the palace, was centered on agriculture. Agrarian economies that are wholly based on staple finance have been called “redistributive” and pay costs in transporting and storing staples because of their weight and size.¹ When the Linear B texts were first deciphered, the palace at Pylos was seen as an entity having great power or influence on the economy; this view stems from the excavation focus on the palace.² Redistribution was used to describe the palace’s role.³ The palace was seen as a central authority, which pooled goods and gave them back out to the periphery. However, Pylos engaged in wealth finance and was neither wholly agrarian nor centralized.⁴ Wealth finance has been defined as the “manufacture and procurement of special products that are used as a means of payment” and can be collected as finished goods or as raw materials waiting to be converted; the benefit of

¹ D’Altroy and Earle 1985, 188.

² See Blegen, Rawson, and Lang 1966 for the excavation at Pylos. Earlier work was done by Kourouniotis and Blegen in 1939. Since Blegen’s work and many others, focus was placed on the palace while neglecting the hinterland. The decipherment and study of the Linear B texts continued this focus. See Figure 1-1 for a map of the surrounding region.

³ Finley 1957, 135. Finley states that the tablets show: “a massive redistributive operation, in which all personnel, and all activities, all movements of both persons and goods were parceled out, payments were made (i.e., allocations, quotas, rations) according to fixed schedules which were frequently corrected and re-established (perhaps even annually).”

⁴ See Polanyi 1968, 321-34 who describes redistribution and uses it for Mycenae.

wealth finance is that its transportation cost is lower than moving staples, but exchanging wealth goods back into staples is difficult.⁵ The Pylian palace operated in such a way that allowed it to focus on prestige goods while simultaneously exerting indirect control over the production of staples. Redistribution and long-distance exchange was used by elites while individual households of non-elites engaged in reciprocity. Exchange operates within social structures, whether it is political or cultural. While these social structures evolved overtime, exchange evolved right alongside.⁶ These changes include a “shift” of resource use to palaces, a hierarchy led by a *wanax*, and a restructuring of access to certain commodities based on social status.⁷ The resource shift placed certain raw materials and commodities in elite hands. Elites sought to keep records in order to document their transactions and stored goods at the palace as well as maintain control over prestige goods. The use of prestige goods allowed elites to differentiate each other in the hierarchy and such goods had controlled access in a politically and culturally restricted sphere. While only elites had access to prestige goods, staples were accessed by elites as well as non-elites. One form of sphere of exchange that would have occurred would be within kin relations between two exchange partners.⁸ While elites could exchange with their kin, non-elites would do the same with their kin; however, there would be little exchange between these social groups. Reciprocity occurs when two exchange partners are roughly socially equivalent. However, transactions between elites and the lower classes would have been a tax. The value of goods was not determined by

⁵ D'Altroy and Earle 1985, 188.

⁶ See Mee and Cavanagh 1984 for an examination of social status using burial. Social hierarchy and status begin to change in the Early Helladic onward to the Late Helladic.

⁷ Shelmerdine 2001, 352-3.

⁸ Reciprocal exchanges take into account social distance. The closer the person in relation, the more likely the exchange is truly equal.

production alone. Value can change during exchange and economic gains are made through new trades and negotiation.⁹ These gains could be achieved by elites and non-elites in their respective spheres of the economy.

Linear B texts provide some evidence of palatial control within the economy. Linear B was the Mycenaean script and was recorded on tablets, which were preserved by the palace's fiery destruction.¹⁰ The value of the Linear B texts is that they provide insight into Pylian hierarchy and palatial interests. Whether or not these tablets are temporary does not matter; they show palatial power.¹¹ The palace probably used the records on a needs basis and once the records were no longer useful, new space was made or the tablets were recycled or disposed.¹² However, such a textual emphasis distorts the true nature of palatial involvement and power. While the tablets have a vast amount of information, the majority of the tablets come from the palace.¹³ Due to their origins, the tablets have a bias towards elite palatial life and fail to show what is economically occurring in the hinterland and lower levels of social stratification. This bias is further compounded by the fact that the tablets only record economic information and all other information gleaned from them are tangential; there is little to no information on civic or religious life.¹⁴ Although some of the texts are fragmentary, they are an important source, which compliments archaeological evidence. One can both overestimate as well as

⁹ See Voutsaki 1995, 7-12. Voutsaki explains how value is determined. While Voutsaki states that labor is not a commodity and that exchange and consumption play a role in value, production too plays a role in the form of access to technology and knowledge.

¹⁰ For tablet production see Ventris and Chadwick 1973, 18-24. Tablets were produced by scribes.

¹¹ See Chadwick 1976, 27-8. See Bennet's dispute with "temporary" records. He argues that the tablets were used for the long-term Bennet 2001, 27-9. However, Killen believes these documents to be temporary Killen 2008, 162. This thesis accepts that the tablets were not temporary.

¹² Since the tablets were made out of clay, scribes were able to recycle them by placing them in water to form a new tablet.

¹³ Shelmerdine 2008, 115.

¹⁴ Shelmerdine 2007, 41.

underestimate the level of control that the palace had in the polity.¹⁵ These biases in the texts have resulted in misinterpreting the role of the palace and the control it exerted over certain commodities. Textual and archaeological reinterpretation is required in order to understand the roles and status of individuals as well as interactions between them in the texts as well as being shown in the archaeological record.

¹⁵ de Fidio 2001, 18-9. De Fidio further shows the danger of assuming that everything outside the palace is part of the “private sector”.

Chapter 3

Pylian Hierarchy

In order to understand palatial control and how it affects exchange, one needs to examine the stratification and social hierarchy, which stems from the palace. At the very top, the *wanax* or king, who resided at the palace, had the largest landholdings in the polity. Since the texts focus on the economic role of the *wanax*, not much is known about the individual's roles. However, PY Ta 711 shows the *wanax* appointing an individual to the palatial administration and in PY Un 2, the *wanax* is involved in a royal initiation ceremony. Appointments made by the *wanax* shows the civic authority the individual held in palatial operations. While theoretically the *wanax* had political power throughout the polity, his immediate power surrounded the palace. Second in rank to the *wanax* was the *lawagetas*, who had one-third the amount of land what the *wanax* owned, had slaves, and was not exempt from obligations of providing flax to the palace, but like the *wanax*, the *lawagetas* was required to make offerings to the gods. The base of the palatial aristocracy was composed of administrative officials. These elites worked on the daily aspects of the palace and procured the required commodities. The *e-qe-ta* or *hek^wetai* were apart of various sectors of the economy and were representatives of the palace; the names of these individuals suggest that these titles were hereditary. Other types of

palatial officials existed as well. The people who were involved with obtaining goods for the palace have been termed “collectors” and four have been identified at Pylos.¹⁶

Officials, who were subordinate to the palatial administration, existed at the provincial and local level and had their own bureaucracy. Land outside the palace was divided into provinces and placed into the control of a *da-mo-ko-ro*, who is shown in the PY Eb and Ep series to have allocated communal land and had their own assistants, *da-ma-te*. This allocation of land shows that peasants had access to land for their own use rather than just for the production of the palace. Such access is crucial in supporting their households because staples were not redistributed back to the local level. Provinces can be further broken down into towns, which were placed under the control of a *ko-re-te* and their assistant *po-ro-ko-re-te* as shown in PY Jn 829.¹⁷ Having local officials would have provided the possibility for settlements to organize at a larger yet local level to meet subsistence needs and such officials may have lead the mobilization of goods in their respective communities. The landed local elite, *telestai*, were local supervisors and had palatial obligations as well as making up part of the *damos*.¹⁸ The *damos* was the most local institutional level of the hierarchy; however, the term is problematic. Members of the communities were plot holders who had to fulfill their obligations to the palace mainly in foodstuffs such as wine, barley, olives, pigs, and goats as listed in PY Un 138 as well as flax as noted in PY Ng 319 and 332.¹⁹ Since the palace added a production burden to settlements, settlement members would have need to find a way to intensify

¹⁶ Shelmerdine 2008, 128-32. See also Nakassis 2013, 18 for issues of the modern term of “collector”.

¹⁷ Shelmerdine 2008, 133-4.

¹⁸ Nakassis 2013, 12. Nakassis places the *telestai* with the *damos* and references Chadwick 1976, 76. The *damos* may refer to a community or a group of local administrators. The term could mean both.

¹⁹ Bennet 2001, 113 and Shelmerdine 2008, 134.

production to meet their own subsistence needs as well. The PY Er, Es, and Un 718 tablets record that one of the greatest palatial demands was wheat.²⁰ Landholders either had land that was identified as *temenos* or as *ka-ma-e-we* which seems to be a particular piece of land devoted to the production of the palace.²¹ The distinction shows how landholders divided their land for production as well as having communal land as support. Local communities would have had to produce staples to support themselves and consisted of the less well documented lower classes of Mycenaean society.²²

²⁰ Killen 2008, 163-6.

²¹ See Ventris and Chadwick 1973, 120,261.

²² For a model of society see Nakassis 2013, 6. While models can be helpful, they run the risk of oversimplifying and overlooking a certain aspect of the system. In this case, local communities can be further broken down by landholders and peasants. See Kilian 1988 for hierarchies at other mainland Mycenaean sites.

Chapter 4

Production of Staples and Prestige Goods

Peasants engaged in producing a variety of staples to create a surplus in order to meet palatial obligations and to cope with crop failure. Staple production included legumes, grain, tree crops, herd animals, all of which could be used alongside wild local variants. Once a household achieved a surplus it could help others. These reciprocal transactions would not have been under the purview of the palatial administration, but may have fallen under the local administration and certainly at the discretion of individual households. Landholders would have had to face labor-intensive periods to meet production demands and mobilize labor at the local level. At any rate, the community was in control of producing for their own needs.

The palace appears to have placed a greater effort in recording animals than crops.²³ The palace controlled animals because of their value. Tablet Aq 64 records fodder and suggests that the palace loaned draft animals to landholders.²⁴ Such loans would make sense because obtaining and taking care for animals is costly; households would have needed to produce even more for animals that they would have used during only certain periods. These loans could also create obligations for landholders to

²³ Palmer 1999, 463-6.

²⁴ Halstead 2001, 40-1. While draft animals may have been used, there is no information, according to Halstead, on how labor is mobilized.

handover part of the staple production to the palace; landholders would have given in turn the animals to the plot holders. While the palace was involved in loaning animals to landholders, it also extracted animals from them. The tablets show that the palace was interested in particular herds, especially herds in the wool industry.²⁵ Based on the Linear B evidence from Knossos, Pylos may have engaged in a reciprocal exchange with individual herders.²⁶ In exchange for the herders' labor to produce wool, the palace would provide sheep, which the herders would use to grow their personal flocks. Animal products were another palatial interest that the palace extracted from the provinces. Cheese appears twice as offerings to Poseidon in PY Un 718 and as listed as goods among others in PY Un 1185; the frequency of cheese in the Linear B texts shows that while cheese was a common product, it was a relatively valuable staple. With evidence of decentralized labor for sheep flocks, Palmer's suggestion that cheese was common holds because landholders would have had other animals for their own use. The palace was also interested in meat. Cuts are identified in PY Ub 1318 listing deer, boar, and agrimi and PY Cr 591 along with 868+875 lists deer, though these are the few recordings of meat that exist. Meat was probably not readily available due to its scarcity and its perishable nature, but also due to the control that the palace placed upon it in a prestige sphere. The value of meat is further highlighted by the Linear B texts. Hunters

²⁵ Palmer 1999, 463.

²⁶ See Halstead 2001, 43. This evidence comes from the Knossian tablet series during the Mycenaean phase and used here to suggest something similar occurred at Pylos. Knossos was the elite center on Crete during the Mycenaean period. Deficits appear in the KN D tablets, which would not have been sustainable and shepherds probably used palatial ewes to grow their personal flock and then in turn give the palace yearlings. In this specific case, the herders' exchange their labor for the use of palatial sheep. Also see Ventris and Chadwick 1973, 199-208 for textual documentation and Halstead 1999.

were paid in flax for their work, which is recorded in Na 248.²⁷ The palace was willing to offer incentives to gain meat. The evidence suggests that these provisions were going to elites and that animals were not raised primarily for slaughter, though religious sacrifices did occur.

Another semi-controlled commodity was ceramics. Ceramic goods were important to Pylos as suggested by the sheer quantity of pottery at the palace. Palatial ceramic consumption can be attributed to just four areas which make up 94.8% of the palatial ceramic assemblage and the rest can be attributed to daily use.²⁸ The ceramic concentration within the rooms suggests the occurrence of important elite activities occurring based on palatial context and quantity. These areas include room 9 with kylikes; room 60 made of a variety of ceramics, including jars, bowls, kraters, and cups, suggesting eating; room 67-68 consist of the only coarse ware in the palace, and rooms 18-22 have a variety of ceramics as well, making up 77.7% of the palatial assemblage with a raw count of 6593 pieces.²⁹ What is interesting about the distribution is that coarse ware makes up a smaller portion and their concentration in just two rooms. Fine wares have social significance whereas coarse ware was used for storage, which would have been closed off within the palace to control access. Based on the distribution of ceramics, internal and external demand may have played a role.³⁰ Whitelaw sees fine wares as being used as gifts, whereas coarse ware pieces were a part of the “internal” palatial demand because they were used only for storage. The quantity of both fine and coarse wares supports Whitelaw’s conclusions. While demand for coarse ware would have been

²⁷ Palmer 1999, 467-9.

²⁸ Whitelaw 2001, 52-4.

²⁹ Whitelaw 2001, 57-60.

³⁰ Whitelaw 2001, 60.

low for utilitarian needs, fine wares were needed to fill the expanding elite exchange. Tn 996 show “irregular” transactions with regional potters who made use of “inferior” clay.³¹ Chemical and petrographic analysis sheds light on the production and distribution of these ceramics. The majority of fine wares suggest that the palace had direct control over production because these wares were produced from the same source of clay. Various production sites would have produced ceramics from different sources of clay. One ceramic workshop or a small group of ceramic workshops would have lent itself to being controlled by the palace. A workshop would probably be near the palace; however determining a workshop has been problematic. Furthermore, differentiation could be seen in stem diameter. The majority of fine ware kylikes had a two centimeter stem diameter while coarse ware kylikes had a two and one-half diameter stem; such craftsmanship suggests one potter made the fine ware kylikes.³² It appears that the palace also had a monopoly on specialized craftsmen for fine ware production. Coarse ware production shows greater variability and suggests that regional workshops created them. A distributed production network would have saved transportation costs with a workshop being near the palace and regional workshops fulfilling local needs.³³ Petrographic analysis supports the chemical findings and shows that fine wares had “earthy argillaceous” materials with a fine fabric while coarse wares had opaque materials.³⁴ The most important difference was the temperature at which fine and coarse wares were fired, which is a sign of their uniformity. Coarse wares were fired at low temperatures while fine wares required high temperatures; the variability of low temperature firings further

³¹ Shelmerdine 2007, 75-7.

³² Galaty 1999, 47.

³³ A palatial workshop has proved hard to find. This issue shall be discussed further on.

³⁴ Galaty 1999, 47-9. Fine wares were also found not to have any tempering. Galaty 1999, 57.

suggests regional workshops.³⁵ The palace could still assert control and meet elite demand through just a few workshops, though one workshop with a few potters could perhaps produce enough.

Ceramics are a difficult commodity to place in terms of value in the palatial economy. Clay is neither a precious material nor is it highly valued and ceramic production is not labor-intensive.³⁶ Labor did not add a significant amount to the cost of ceramics. Galaty notes that fine wares required high temperature firing while coarse wares only needed low temperatures. Thus a bottle neck in the production of fine wares occurred due to the palatial technological investment in kilns which would have added to the value of fine wares. This bottleneck may show how a restricted sphere of exchange emerges. While coarse wares moved along in elite and non-elite spheres, fine wares only moved within elite spheres. Thus ceramics at Pylos were not completely under the control of the palace and should be divided on the basis of their exchange movement. Galaty makes an important point on palatial control:

“In Pylos, the LH IIIB pottery industry was not controlled by and did not exist solely because of the palace, but it did attain new scales of economy or levels of intensity in response to opportunities made available, probably inadvertently, by the state.”³⁷

Another commodity that acted similarly to fine ware ceramics was obsidian. In the Late Bronze Age, obsidian was still being used on the mainland; however, out of the fifteen sites identified by the Pylos Regional Archaeological Project, Romanou was the

³⁵ Galaty 1999, 65-71. While there is general uniformity, there is just enough variation in the fine kylikes to suggest more than one workshop Galaty 1999, 71. However, the amount of variation is not as great as the coarse wares and probably means that either just a few or possibly one workshop created fine wares for the palace. There were only four potters assigned to the palace Whitelaw 2001, 71-2.

³⁶ See Galaty 1999, 78 and Knappett 2001, 86-8.

³⁷ Galaty 1999, 82.

only site to be producing blades till the end.³⁸ Like fine ware ceramics, obsidian was centrally produced, but it was outside palatial control. Obsidian was extracted from Melos and then manufactured on the coast; such production, however, has not been found in the Linear B texts, which suggests that the obsidian industry was independent.³⁹

Prestige goods can be defined as having controlled production and within their own restricted sphere of exchange. Archaeological evidence shows that the palace stored prestige and staple goods, including, which included olive oil, wine, and perfume.⁴⁰ Wine has the best documentation of a prestige good being dispersed across the polity. The palace would make assessments, which were made by leaders of each town as shown in PY Jn 829.⁴¹ Some vineyards were not near the palace as suggested by the types of assessments made by the palace. While nearby lands were under direct assessment, indirect assessments along with proportional rankings was used to extract wine from farther away lands. While wine production was dispersed, it was still under the control of the palace or at least under the landed elite, though there was probably some overlap in control since inner and outer elite palatial interests may have not always matched. The greatest economic barrier to producing wine would have been having sufficient landholdings for the vines.⁴² Landholdings played a large role in one's rank in Mycenaean society and land-tenure documents shows a majority of land in elite hands. Elite officials in the provinces were the ones who had the means to produce the wine as noted by PY Un 718 and PY Vn 20 shows that wine being dispersed to the towns was

³⁸ Parkinson 2007, 90-3.

³⁹ Parkinson 2007, 96.

⁴⁰ Bennet 2007, 29. Some prestige goods were stored with Linear B tablets, most notably perfumed oils Shelmerdine 1998, 88.

⁴¹ See Palmer 1994, 188 and Palmer 1995, 277.

⁴² Palmer 1994, 187-9.

based on individual and group social rank.⁴³ While wine was used in elite contexts, its use intersected with other contexts. While wine could be used in a religious context, wine could also be used in usual transactions of other commodities as shown in the Un series.⁴⁴ Wine probably was in a similar value range along with animal products if not higher. Sealings show elites met their palatial obligations of wine and the amount recorded is three times the capacity that the palace had available in the wine magazine, evidence which supports redistribution of wine among elites and this consumption pattern can be seen also at Mycenae and Knossos.⁴⁵

The palace appears to have controlled more rigidly perfumed oils than wine. Perfume was stored in stirrup jars or smaller votive jars. The storage denotes secular and religious use of perfume. The religious context of perfume is better known in the Linear B texts of PY 627, which records coriander, fruit, cyperus, honey, and wine as ingredients in perfume; for their work, unguent makers were paid in wool.⁴⁶ Distribution of the raw materials for production allowed the palace to assert control. The *wanax* and the deities received perfume allotments.⁴⁷ Since perfume is not seen in non-elite contexts, especially in the Linear B texts, perfume can be regarded as a prestige item strictly under the control of the palace.

Textiles and their raw materials were controlled by the palace as well. Flax production recorded in the Na and Ng tablets show a direct tax. Flax exemptions, based on landholdings, were made for bronze-smiths and hunters. These exemptions show that

⁴³ Palmer 1995, 277-9.

⁴⁴ See Palmer 1995, 278 and Palmer 1994, 190.

⁴⁵ See Palmer 1995, 282 and Palmer 1994, 194.

⁴⁶ Shelmerdine 1998, 103.

⁴⁷ Shelmerdine 1998, 106. Elites had the choice of sage or rose perfume, while other palatial sites made their own type of perfume; see Palmer 1999, 469.

while landholdings were integral in social status, other factors played into that status as well, such as profession. Flax is potentially linked to conscription because it could have been used for armor.⁴⁸ If indeed flax was used for military purposes, then there would be strict control because of its military value, though fine textiles may have been enough reason for control. Production of textiles has been recorded in the Aa, Ab, and Ad series which involved several groups of flax producers, two the largest being at Pylos and Leuktron.⁴⁹ Even textile production was dispersed, though it was under palatial control as shown by ration payments.⁵⁰

⁴⁸ Halstead 2001, 44-5.

⁴⁹ Shelmerdine 2007, 43.

⁵⁰ For a greater understanding of textiles as well as other prestige goods around the Aegean see *Kosmos Jewellery, Adornments and Textiles in the Aegean Bronze Age Proceedings of the 13th International Aegean Conference* 2010.

Chapter 5

Pylian Economic Interactions

Working towards a palatial economic model defining control is difficult due to the nature of the gaps in the archaeological and textual evidence.⁵¹ An economy is a complex system due to its variety of interactions. However, it is probably best to think of the Pylian palace in these terms:

“Within the system the palace functioned not as a redistributive center, as traditionally interpreted, but rather as a center of elite competition, one that was organized almost exclusively around the production of prestige goods.”⁵²

The palace acquired prestige goods in a variety of ways. The palace used specialization as a strategy to acquire prestige goods. Specialization can be defined as following: “use of a narrow range of resources, emphasis on a part of the range of resources, a narrow use of a particular resource, and where the converse is true.” Pylos engaged in all three aspects of specialization. Elites focused on the production of prestige goods: perfumed oils, bronze, textiles, chariots among other items as well as using staples in an elite setting to promote palatial authority. At the subsistence level, there was a diversification of staples as shown by botanical and faunal finds; while households did not specialize, the palace focused on cereals. However, archaeological evidence for households is still

⁵¹ For a floor plan of the palace, see Figure 1-2

⁵² Parkinson 2007, 87.

lacking for specialization, but households did have a variety of strategies to achieve a surplus. Households could reduce fallowing and increase tilling the land already owned, expand their land, or a combination of those.⁵³ Staples needed to be stored if a surplus was going to be any good to plot and landholders. Storage of staples and prestige goods could be used to: control variability of supply, to “synchronize production time of goods”, and to provide during crop failure.⁵⁴ At the subsistence level, farmers needed to produce for three reasons: households needed to meet their needs, meet palatial obligations, and store for bad years. Surplus at the household level was used as a buffer that could be used in reciprocal exchanges with other households. A surplus could be used as a way to leverage exchanges with other households, which required assistance during another year.

The palace mobilized staples at the regional level to support itself without intensification.⁵⁵ The palace used staples to support craftsmen and hold banquets. PY Un 2 lists foodstuffs for a ceremony for the *wanax*; these foodstuffs included: barley, cyperus, flour, olives, honey, figs, rams, an ox, ewes, goats, pigs and wine; elites distributed these goods at the town of Sphagianes.⁵⁶ Elites altered the context of staples by using them in great quantity and within a restricted group. Banquets occurred in other regional settings as well such as at Malthi. Malthi was a settlement in northern Messenia where there was a central house on top of a terrace and a group of houses lined the settlement’s walls. While the arrangement of houses suggests a hierarchal order, such an order is further highlighted within the central house. The halls of the central house have

⁵³ Halstead 1992, 106-10.

⁵⁴ D’Altroy and Earle 1985, 190.

⁵⁵ Halstead 1992, 110.

⁵⁶ See Shelmerdine 2007, 41 and Bennet 1998, 112.

ash, animal bones, and kylikes as well as ceramics with a yellow slip, which suggests that these local elites imitated palatial fine wares.⁵⁷ While these local elites may have imitated palatial fine-wares, these ceramics were probably produced at the local level. One can see further palatial influence on the central house in the megaron like room with all the features, such as a hearth with bone, ash, and wood, but the room lacks a proper propylon; near this room lay pithoi and cooking pots.⁵⁸ The evidence of the initiation ceremony and the evidence at Malthi change the discussion on feasting since the evidence clearly shows that banquets occurred within and outside palatial control, but still in control of elites. Local elites would have needed to use local exchange networks rather than relying on the palace to obtain goods. While PY Un 2, 47, and 718 record feasts occurring at regional sites, it is still unclear if non-elites took part.⁵⁹ Just because non-elites did not contribute to the feasts does not necessarily mean that they were not also part of the consumption of goods, but they probably were not a part due to dichotomy of goods for elites and non-elites.

PY Er 312, 880, and PY 718 record regions having proportional obligations to support feasts.⁶⁰ These obligations suggest that regions not only had feasts outside the palace, such as at Malthi, but also contributed to feasts at the palace and that access is more nuanced than previously thought. The archaeological evidence compliments Linear B textual evidence. Feasting has been identified at the palace by a combination of iconography, “feasting paraphernalia” and the megaron complex.⁶¹ At the palatial level

⁵⁷ Bendall 2004, 124.

⁵⁸ Bendall 2004, 125.

⁵⁹ Palaima 2004, 226.

⁶⁰ Nakassis 2012, 2.

⁶¹ Palaima 2004, 232.

there is strong evidence, which supports religious influences on banqueting. PY Tn 316 records gifts for major and minor deities during religious dates, which suggests that multiple temples and sanctuaries were involved across the region.⁶² PY Un 6, 7, 25, 718, along with PY Cn 418 show animal sacrifices, which also occurred at Thebes and recorded in the C series tablets at Knossos.⁶³ These tablets show the relative value of animals in the Aegean. Animals commanded a high price as suggested by their dearth in the texts and by their association with elite consumption as well as their use in a religious context. Elite individuals made contributions to feasts. An individual by the name of *we-u-da-ne-o* made animal contributions, was a landholder, and was recorded in the E series as well as Na 816, 1041, and Un 1993 and has been identified as a palatial “collector” in Cn 40+; another contribution by *du-ni-jo* provided barley, olives, animals, and was recorded as a landholder in Ea59+ and Ep 705.⁶⁴ PY 718 specifically refers to the *e-ke-ra-wo*, who tops the list and followed respectively by the *lawagetas*, *damos*, and finally the *wo-ro-ki-jo-ne-jo ka-ma*, which is similar to the corporate group the *damos*. These contributions show the prestige aspect of banqueting since elites would know who contributed which goods to the feast and supports Parkinson’s idea of an “elite center of competition” in action.

Banqueting in the Palace at Pylos has also been detected archaeologically. A deposit of Burned bones, consisting of mandibles, femurs, and humeri of cattle, were discovered inside and around the palace and the provenience of these bones suggest that

⁶² Palaima 2004, 219.

⁶³ Palaima 2004, 222-7.

⁶⁴ Bendall 2004, 105-6.

the bones were buried deliberately.⁶⁵ The burial of bones supports the occurrence of animal sacrifices and fits with the Linear B textual evidence of contributions to deities. Sacrifices to deities are also associated with occasions for feasting. Cut marks and bone fractures are consistent with stripping of meat.⁶⁶ Religious ceremonies could combined with feasts put on by elites would provide bonding opportunities for elites. Contributions of wealth to such festive occasions may have been a way to show “commitment” to the palatial “power structure” and to create new exchange relationships.⁶⁷ Such feasts would have been important to incorporate new members to the elite ranks. In room seven of the palace, cow bones were found along with pithoi fragments, a sword, a spearhead, and miniature kylikes.⁶⁸ All of these items may have been part of a feasting context. The spearhead type is from the MH period as well as the pithoi fragments, the sword dates to the 14th century BCE, and the kylikes are too small for drinking.⁶⁹ The sword’s cultural value along with the older form of the spearhead and pithoi, which suggest prestige drawn from the past, all suggest some elite activity and possibly feasting. However, the discovery of over two-hundred tablets stored along the northeast wall supports a feasting context, especially since this was where Un718 was stored alongside the Ta series, which was a record of weapons that may have been used in animal sacrifice, though there is no evidence to suggest that the sacrifice occurred within room seven.⁷⁰ The combination of the artifacts and Linear B texts in room seven supports the occurrence of elite feasting in this room.

⁶⁵ Stocker and Davis 2004, 181-2.

⁶⁶ Stocker and Davis 2004, 182.

⁶⁷ Bendall 2004, 110.

⁶⁸ Stocker and Davis 2004, 184.

⁶⁹ Stocker and Davis 2004, 190. The sword’s dating may cause a chronological issue for context.

⁷⁰ Stocker and Davis 2004, 188-92.

Other areas of the palace have been identified as banqueting areas. Banquets may have been held in court 63 and 83; rooms 6, 67, 68, where cooking pots were found in 67 and 68, as well as the southwest building and room 105, which supported activities in the courtyards. While some rooms appear to have been pantries, others may have actually been used for receptions. Rooms 18-22 have kylikes, dippers, cups, and bowls; all of which suggest eating and food being served.⁷¹ Overall, the architectural design of the building physically creates restricted spaces where individuals meet and allows for controlled access to certain areas.⁷²

While the palace used storage for staples as a means to survive through crop failure and support craftsmen, it also used it as a means to synchronize production. The palace stored raw materials that needed to go out to a workshop to create prestige goods. However, the existence of a workshop in the palace is dubious at best. A workshop can be defined a variety of ways. In a Mycenaean context, a permanent workshop is a full time area of production, which can be directly associated with the palace by its contents or location, or be a semi/independent workshop to support local needs part time. One of the most striking aspects of a workshop associated with the palaces of Thebes, Mycenae, and Tiryns is that all of them do not have Linear B tablets.⁷³ The distinction of a lack of Linear B tablets is an important one because tablets are connected with storage. A workshop may have a few tablets because it is associated with the palace and a scribe may have written on tablets there to bring back to the palace. However, a workshop

⁷¹ Bendall 2004, 112-9.

⁷² Bendall 2004, 124.

⁷³ Tournavitou 1988, 447,56.

would not have the quantity of tablets as many of the rooms in the palace because workshops are areas of production.

Until recently, it was believed that the palace had a workshop.⁷⁴ The palace appears to have been the authority on being the storage center of prestige raw materials. The palace stored raw materials in the northeast building for chariot production, which included wood, leather, bronze, silver, and ivory; bronze pieces and leather were found in room 99, while Linear B texts recording and cross referencing administrators and craftsmen were found in the northeast building.⁷⁵ Lists of administrators and craftsmen do not fit the context of a Mycenaean mainland workshop; workshops are areas of production rather than administration. It would make more sense if the tablets were recording incoming and outgoing workshop goods. Lupack sees a religious influence on the northeast building. She identifies a shrine with an altar at the doorway of room 93 due to the fact that kylikes and a votive kylix were found there, and she further argues that the area is not a workshop as no raw materials were unearthed there.⁷⁶ Further religious involvement is shown in An 1281, which refers to *Potnia* and lists workers being assigned to managers, and Fn 50 shows rations being given to those managers.⁷⁷

Bendall does not agree that the northeast building was a workshop and does not see it as shrine. Room 93 lacked figurines and the broken ones were insignificant in number; room 93's "altar" has no parallel at other sites. Also, the grade of the slope in the room suggests that there was no shrine; the slope was probably was used to assist in

⁷⁴ See Blegen's work as well as Bennet 2007, 34, who believes that the palace was adding workshops and storage space right up until its destruction.

⁷⁵ Schon 2007, 134-40.

⁷⁶ Lupack 2007, 58.

⁷⁷ Lupack 2008, 124.

moving goods into room 99.⁷⁸ When the northeast building was first unearthed, excavators were unsure of the building's purpose.⁷⁹ The northeast building's Linear B texts indicate that it was used for storage. The building had the second most amount of Linear B texts and had roughly as many kylike stems as the wine magazine.⁸⁰ The lack of tools and the ivory findings of finished goods as well as the size of the building, which would not have supported chariot production as listed in An 1282, further indicate the northeast building was a storage area.⁸¹ Palatial elites did not have direct control over manufacturing; however, this would fall under the power of regional and local elites.

Land tenure shows that production of prestige goods was not at the palace, but rather in the provinces. Pylian administration divided the polity into a hither and further province based on the geographic location of Mount Aigalon; the hither province had nine settlements and the further province had seven to eight settlements, including the closest settlement *pa-ki-na-je*. Settlement hierarchy shows diffused power and was based on contributions to the palace as recorded in On 300, Jn 829, Cn 608, and Vn 20, as well as the Na and Ng series; from these recordings, there was at least a four tier hierarchy: palaces, towns, villages, and villages not connected with the palace.⁸² The important aspects of this hierarchy can be seen in the district of A-pu₂. It was here, among other probable regional production sites, that the palace had its manufacturing base. Bronze-smiths received raw materials to work on and returned the finished products to the palace,

⁷⁸ Bendall 2003, 186.

⁷⁹ See Bendall 2003, 183-4. The Linear B texts were just deciphered five years previously and Blegen originally thought the building was an armory. However, a circular reasoning of using texts to find evidence to further support the texts took hold. The northeastern building should be seen as a warehouse.

⁸⁰ Bendall 2003, 184-5. See also Bendall 2003, 186-7.; the sealings show that only "low level administration" was involved.

⁸¹ Bendall 2003, 189-207.

⁸² Cosmopoulos 2013, 205-12.

which is recorded in Jn 693. Iklaina Traghanes may be associated with A-pu₂ and possibly is the district's administration center based on size, quality, and quantity of small finds, architecture, and location; a surface survey has yielded sherds from kylikes, cups, kraters, dippers, jars, and different types of bowls. The discovery of over 1,000 pieces of slag at the town of Katsigimas along with bovine figurines, conical spindle whorls, terra-cotta loom weights, stone querns, and one flint arrowhead suggest that the town was an industrial site in the district.⁸³ The bronze-smiths at A-pu₂ shows that palatial storage was used as a means to control the flow of raw materials, though the palace had to ensure it received its finished goods back, hence the records.⁸⁴ However, bronze-smiths in general may have had very different roles than previously thought. The majority of smiths received metals from the palace, but some used their own metal; the smiths receiving allotments only received enough to be part-time workers and that many were also herders.⁸⁵ If this is the case, even these high-ranking members of society tended to their own needs, which allowed the palace to not be overburdened by obligations.⁸⁶ The sites Dendra, Iklaina, and Myrisinochori were probably villages, which engaged in agriculture and were not connected with the palace.⁸⁷ These sites may have played a role in communal land or in supporting the peasants rather than the landed elite.

Another independent source of production may have been what has been termed as the “religious sector” by Lupack. Religious officials had land. One Linear B tablet

⁸³ Cosmopoulos 2013, 217-22. Iklaina is roughly 5 km away from the palace. See Figure 1-1.

⁸⁴ See Nakassis 2013, 13. It appears that at the local level a *g^wasileus* was involved in allocating metal to smiths and part of the local administration. This particular individual would be known later as βασιλεύς.

⁸⁵ Nakassis 2013, 74-9.

⁸⁶ See Nakassis 2013, 115. The smiths are also mentioned alongside the *hek^wetai* and suggest that the smiths had some higher social level in society.

⁸⁷ Cosmopoulos 2013, 222.

records a dispute between the *damos* and a priestess over whether or not the land was reserved for deities or if it was communal land; since the dispute was also about potential production of the land as well, the tablet records the potential yield of the plot.⁸⁸ The distinction between secular land and religious land suggests that religious officials and the sanctuaries they operated were independent. If they were not independent, there would be no need to have a distinct designation for Pylian cadasters. Religious officials also fall in the group of “collectors” in the Linear B texts. While there is still a dispute over the role of collectors, they are recorded as collecting sheep in PY Cn 655 and Kn Da-Dg series.⁸⁹ The religious sector also had its own craftsmen. PY Un 249 records spices being delivered to a *Potnian* unguent maker, PY Jn 19 records *Potnian* bronze-smiths, and a *Potnian* manager being assigned workers in PY 1281.⁹⁰ Lupack suggests that religious smiths also served their local communities.⁹¹ Since Cosmopoulos shows that smiths operated in the hinterland, smiths, either secular or religious, may have served local communities. However, more workshops need to be discovered and analyzed to understand not only religious and secular contexts, but the very nature of a Pylian workshop because the palace has none to offer.⁹²

The Pylian economy was not simply a redistributive system, but rather it had redistributive elements. Redistribution was used as a model to describe the economy of chiefdoms, but it is not a category and “no total economy should be characterized as

⁸⁸ Shelmerdine 1998, 92-3.

⁸⁹ Lupack 2008, 86-92. Civic and religious aspects are hard to separate because in Mycenaean culture they appear combined

⁹⁰ Lupack 2007, 55-7. The Linear B texts records goods being offered to *Potnia* as well as workers being assigned to *Potnia*. *Potnia* is the major deity of Pylos and is recorded along with other deities.

⁹¹ Lupack 2008, 115.

⁹² See Lupack 2008, 116. Jn 310 and 431 make a secular and religious distinction.

redistributive, only sectors that were centrally managed for finance.”⁹³ Redistribution was only part of the political economy. A political economy can be defined as “the material flows of goods and labor through a society channeled to create wealth and to finance institutions of rule.”⁹⁴ The Linear B texts show that festivals and banquets were used to redistribute staples among elites rather than being used throughout the polity; Earle has found this behavior in Hawaiian chiefdoms where elites used redistribution to support themselves and those goods remained at the top.⁹⁵ These restricted spheres of exchange helped create the hierarchy of local, regional, and palatial elites. Earle suggests three possible ways that “bottlenecks” of goods emerged in the Aegean: ownership of land, taxing maritime traders, and control of craft production.⁹⁶ Contributions were made by those elites who had access to land and the power to extract resources. Land was leased to individuals.⁹⁷ The lease could be the basis for obligations at the local level where plot holders paid landholders in staples for being able to use the land to support themselves. If Halstead’s assessment of draft animals is correct, palatial loans of such animals along with sheep, as noted by Killen, then are further obligations at the palatial level between landed elites and palatial elites. Non-elites and elites interacted with each other at the regional level, but then go their separate ways.

Households, once they paid their obligations, would also continue to meet their own needs. Domestic production, as described by Sahlins, was:

“Envisioned as ideal household self-sufficiency in which household members produced most of what the household

⁹³ Earle 2011, 237-41.

⁹⁴ Earle 2002, 1.

⁹⁵ Earle 2011, 239.

⁹⁶ Earle 2011, 242.

⁹⁷ Ventris and Chadwick 1973, 239.

needed. Such a subsistence economy would not be growth oriented; the household's size would determine its consumer needs, and households would work to meet those needs."⁹⁸

While households met their own needs, they generated a surplus to meet their obligations to elites. However, exchange at the household level was done reciprocally. Earle notes that these exchanges occur because of a lack of resources and economic uncertainty.⁹⁹ Intra-household exchanges fall under what is known as general reciprocity. General reciprocity is an exchange of assistance that is near, but not entirely equal to what has been previously given.¹⁰⁰

The political economy is the other sphere based on elite "membership", where elites fulfilled inter-obligations; these obligations included rations and feasts. However, these obligations were not met by using palatial centralization. As noted by Nakassis et al:

"Redistribution remains a problematic term. It is vague and potentially misleading, since for many scholars, it denotes the wholesale pooling of all economic production. More importantly, perhaps, is that, in a strict sense, it simply indicates a pattern of movement of goods characterized by centrality."¹⁰¹

Naming the economy as redistribution looks over all the exchange strategies that are outside the palace. Instead of redistribution, discussion should be around mobilization of goods and exchange strategies. While labels for economies can be helpful at times, labels are often not nuanced enough. Discussion on economy is difficult because it is embedded in society and a variety of exchanges and different aspects of production occur.¹⁰²

⁹⁸ See Earle 2002, 5. and Sahlins 1972.

⁹⁹ Earle 2002, 9.

¹⁰⁰ Sahlins 1972, 193-4.

¹⁰¹ Nakassis et al. 2011, 181-2.

¹⁰² See Polanyi 1968 for the concept of an embedded economy in a traditional economy.

Production is nested at the various levels of the Pylian polity. Since redistribution is just an aspect of palatial and landed elites, it appears that elite control or power was also vested in production.¹⁰³ While elites can be broken down into landed and palatial elites, social class in any society has a much broader and nuanced spectrum. Recent discussion has led to the use of “non-palatial” or “para-palatial economy”.¹⁰⁴ While problematic, this form of discussion is needed.¹⁰⁵ Any economy should be looked at from the bottom up and not the other way around. Redistribution and long-distance exchange was only controlled.¹⁰⁶

¹⁰³ For a brief statement on Marxist thought see Earle 2002, 9.

¹⁰⁴ See Nakassis 2013, 2, who notes the use and those scholars who do use the term.

¹⁰⁵ These terms are problematic because they still focus is on the palace. Political and subsistence economy, used in Anthropology, are better to describe the economy at Pylos.

¹⁰⁶ For long-distance exchange and world system theory see Parkinson 2010, . and *Bronze Age Trade in the Mediterranean Papers Presented at the Conference held at Rewley House, Oxford in December 1989* 1991.

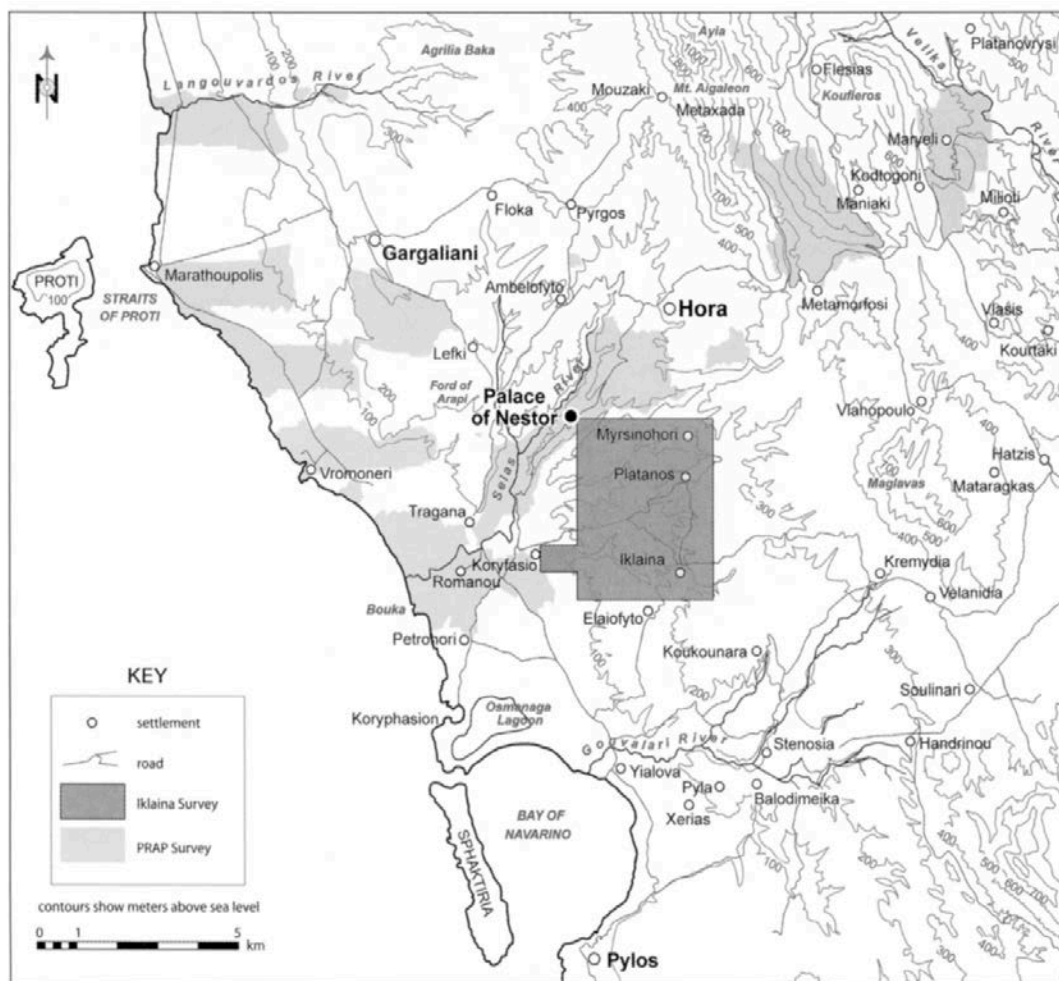
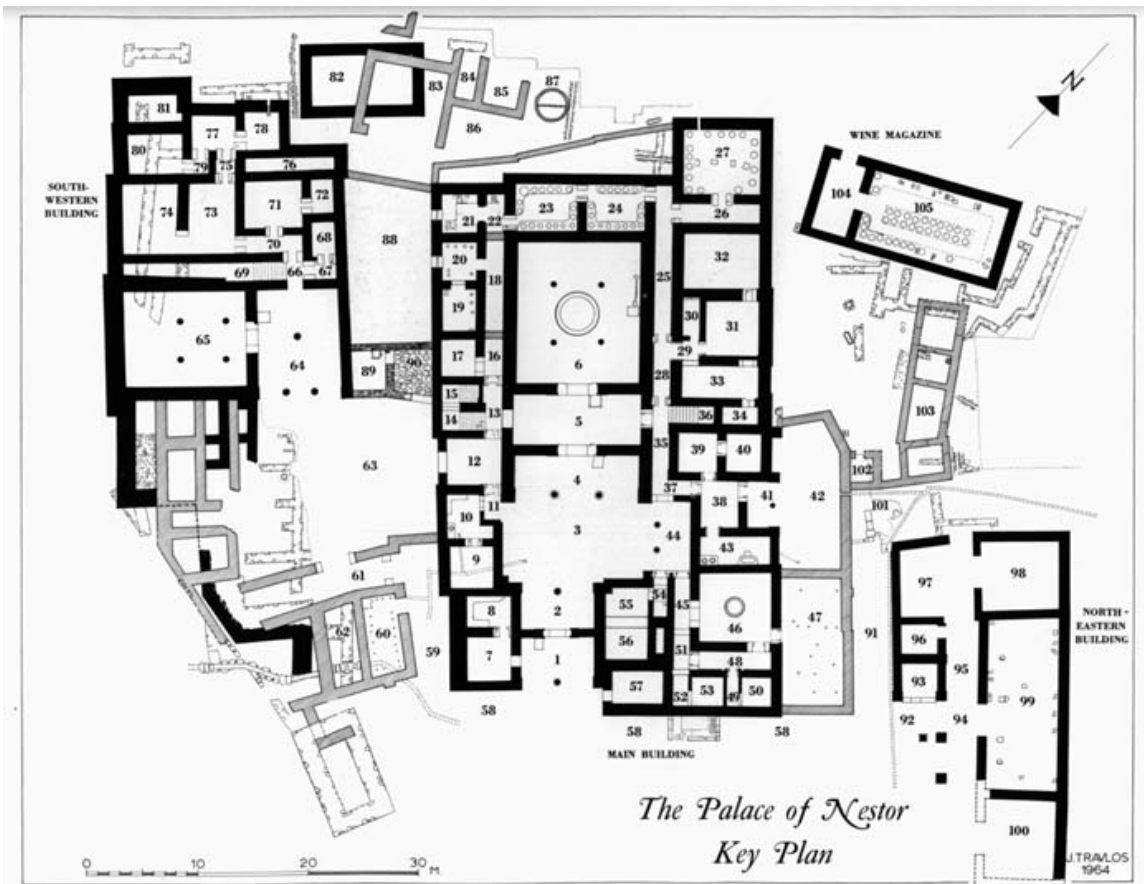


Fig. 5. Map of Messenia, showing the location of Iklaina and the survey area in relation to PRAP (drawing by R. Robertson).

Cosmopoulos 2013, 219.

Figure 1-1. Map of the Palace and Surrounding Area



proteus.brown.edu/greekpast/4870

Figure 1-2. Palace at Pylos: Floor Plan

Chapter 6

Conclusion

The Pylian palace approached resource extraction using a variety of strategies. Its economy was divided into a subsistence and political economy in which staples and prestige goods operated in separate spheres of exchange. The palace did not use redistribution as a mechanism to meet the needs of the polity. At the palatial level, redistribution and long-distance trade was used in part to meet the needs of elites. Some prestige goods were mobilized at the regional level and reciprocal exchanges were made and production was regional rather than centralized. At the local level, reciprocal exchanges seem more important as a way to create obligations between local elites and non-elites. Social status varied among craftsmen and identifying individuals and their relationship to the palace is important in understanding the diffused power that elites had over the polity. The various production and exchange strategies reveal the complex interactions within the Pylian economic and social order. Further progress can be made in Pylian economy by continuing to study the Linear B texts, but also by using theory from Anthropology and expanding the scope of field surveys and excavations beyond the palace to understand the lower classes of Pylos.

BIBLIOGRAPHY

- Bendall, L. M. 2003. "A Reconsideration of the Northeastern Building at Pylos: Evidence for a Mycenaean Redistributive Center." *AJA* 107:181-231.
- . 2004. "Fit for a King? Hierarchy, Exclusion, Aspiration, and Desire in the Social Structure of Mycenaean Banqueting." In *Food, Cuisine and Society in Prehistoric Greece*, edited by P. Halstead and J. C. Barrett, 105-35. Oxford: Oxbow Books.
- Bennet, J. 1998. "The Linear B Archives and the Kingdom of Nestor." In *Sandy Pylos*, edited by J. L. Davis, 111-33. Austin: University of Texas.
- . 2001. "Agency and Bureaucracy: Thoughts on the Nature and Extent of Administration in Bronze Age Pylos." In *Economy and Politics in the Mycenaean Palace States Proceedings of a Conference held on 1-3 July 1999 in the Faculty of Classics, Cambridge*, edited by S. Voutsaki, J. Killen and Cambridge Philological Society, 25-37. Cambridge: Cambridge Philological Society.
- . 2007. "Pylos: The Expansion of a Mycenaean Palatial Center." In *Rethinking Mycenaean Palaces II*, edited by M.L. Galaty and W.A. Parkinson, 29-39. Los Angeles: Cotsen Institute of Archaeology, University of California.
- Blegen, C.W., M. Rawson, and M. L. Lang. 1966. *The Palace of Nestor at Pylos in Western Messenia*. Princeton, New Jersey: Princeton University Press.

- Bronze Age Trade in the Mediterranean Papers Presented at the Conference held at Rewley House, Oxford in December 1989.* 1991. Edited by N. H. Gale. Vol. 90. Jonsered: Paul Åströms Förlag.
- Chadwick, J. 1976. *The Mycenaean World*. New York: Cambridge University Press.
- Cosmopoulos, Michael B. 2013. "The Political Landscape of Mycenaean States: A-pu₂ and the Hither Province of Pylos." *AJA* 110:205-28.
- D'Altroy, T.N., and T. Earle. 1985. "Staple Finance, Wealth Finance, and Storage in the Inka Political Economy." *Curr Anthr* 26:187-206.
- de Fidio, P. 2001. "Centralization and Its Limits in the Mycenaean Palatial System." In *Economy and Politics in the Mycenaean Palace States: Proceedings of a Conference Held on 1-3 July 1999 in the Faculty of Classics Cambridge*, edited by S. Voutsaki, J. T. Killen and Cambridge Philological Society, 15-24. Cambridge: Cambridge Philological Society.
- Earle, T. 2002. *Bronze Age Economics: The Beginnings of Political Economies*. Boulder, Colorado: Westview Press.
- . 2011. "Redistribution in Aegean Societies. Redistribution and the Political Economy: The Evolution of an Idea." *AJA* 115:237-44.
- Finley, M.I. 1957. "The Mycenaean Tablets and Economic History." *The Economic History Review* 10:128-41.
- Galaty, M.L. 1999. *Nestor's Wine Cups: Investigating Ceramic Manufacture and Exchange in a Late Bronze Age "Mycenaean" State*, BAR International Series. Oxford: J. & E. Hedges.

- Halstead, P. 1992. "Agriculture in the Bronze Age Aegean: Towards a Model of Palatial Economy." In *Agriculture in Ancient Greece: Proceedings of the Seventh International Symposium at the Swedish Institute at Athens, 16-17 May, 1990*, edited by B. Wells, 105-17. Göteborg, Sweden: Stockholm: The Institute.
- . 1999. "On the Meaning and Wider Significance of O in Knossos Sheep Records." *BSA* 94:145-66.
- . 2001. "Mycenaean Wheat, Flax, and Sheep: Palatial Intervention in Farming and Its Implications for Rural Society." In *Economy and Politics in the Mycenaean Palace States: Proceedings of a Conference Held on 1-3 July 1999 in the Faculty of Classics, Cambridge*, edited by S. Voutsaki, J. T. Killen and Cambridge Philological Society, 38-50. Cambridge: Cambridge Philological Society.
- Kilian, K. 1988. "The Emergence of Wanax Ideology in the Mycenaean Palaces." *OJA* 7:291-302.
- Killen, J.T. 2008. "Mycenaean Economy." In *A Companion to Linear B: Mycenaean Greek Texts and Their World*, edited by Y. Duhoux and A. M. Davies, 159-200. Dudley, Massachusetts: Peeters.
- Knappett, C. 2001. "Overseen or Overlooked? Ceramic Production in a Mycenaean Palatial System." In *Economy and Politics in the Mycenaean Palace States: Proceedings of a Conference Held on 1-3 July 1999 in the Faculty of Classics, Cambridge*, edited by S. Voutsaki, J. T. Killen and Cambridge Philological Society, 80-95. Cambridge: Cambridge Philological Society.

- Kosmos Jewellery, Adornments and Textiles in the Aegean Bronze Age Proceedings of the 13th International Aegean Conference*. 2010. Edited by M.-L. Nosch and R. Laffineur. Liege: Peeters.
- Kourouniotis, K., and C.W. Blegen. 1939. "Excavations at Pylos." *AJA* 43:557-76.
- Lupack, S. 2007. "Palaces, Sanctuaries, and Workshops: The Role of the Religious Sector in Mycenaean Economics." In *Rethinking Mycenaean Palaces II*, edited by M. L. Galaty and W. A. Parkinson, 54-65. Los Angeles: Cotsen Institute of Archaeology, University of California, Los Angeles.
- . 2008. *The Role of the Religious Sector in the Economy of Late Bronze Age Mycenaean Greece*, BAR International Series. Oxford: Archaeopress.
- Mee, C.B., and W.G. Cavanagh. 1984. "Mycenaean Tombs As Evidence for Social and Political Organisation." *OJA* 3 (3):45-64.
- Nakassis, D. 2012. "Prestige and Interest: Feasting and the King at Mycenaean Pylos." *Hesperia* 81:1-30.
- . 2013. *Individuals and Society in Mycenaean Pylos*. Leiden: Brill.
- Nakassis, D., W.A. Parkinson, and M.L. Galaty. 2011. "Redistribution in Aegean Palatial Societies. Redistributive Economies from a Theoretical and Cross-Cultural Perspective." *AJA* 115:177-84.
- Palaima, T.G. 2004. "Sacrificial Feasting in the Linear B Documents." *Hesperia* 73:217-46.
- Palmer, R. 1994. *Wine in the Mycenaean Economy*. Vol. 10. Liège: Université de Liège, Histoire de l'art et archéologie de la Grèce antique.

- . 1995. “Wine and Viticulture in the Linear A and B Texts of the Bronze Age Aegean.” In *The Origins and Ancient History of Wine*, edited by P. E. McGovern, S. J. Flemings and S. H. Katz, 269-85. Philadelphia: Gordon and Breach Publishers.
- . 1999. “Perishable Goods in Mycenaean Texts.” In *Florent Studia Mycenaea: Akten Des X. Internationalen Mykenologischen Colloquiums in Salzburg Vom 1.-5. Mai 1995*, edited by S. Deger-Jalkotzy, S. Hiller and O. Panagl, 463-85. Wien: verlag der Österreichischen Akademie der Wissenschaften.
- Parkinson, W.A. 2007. “Chipping Away at a Mycenaean Economy.” In *Rethinking Mycenaean Palaces II*, edited by M.L. Galaty and W.A. Parkinson, 87-101. Los Angeles: Cotsen Institute of Archaeology, University of California.
- . 2010. “Beyond the Peer: Social Interaction and Political Evolution in the Bronze Age Aegean.” In *Political Economies of the Aegean Bronze Age Papers from the Langford Conference, Florida State University, Tallahassee, 22-24 February 2007*, edited by D. J. Pullen, 11-34. Oxford: Oxbow Books.
- Polanyi, K. 1968. *Primitive, Archaic, and Modern Economies: Essays of Karl Polanyi*. Edited by G. Dalton. Garden City, New York: Anchor Books.
- Sahlins, M. 1972. *Stone Age Economics*. Chicago: Aldine-Atherton.
- Schon, R. 2007. “Chariots, Industry, and Elite Power.” In *Rethinking Mycenaean Palaces II*, edited by M.L. Galaty and W.A. Parkinson, 133-45. Los Angeles: Cotsen Institute of Archaeology, University of California.
- Shelmerdine, C.W. 1998. “The Palace and Its Operations.” In *Sandy Pylos*, edited by J.L. Davis, 81-96. Austin: University of Texas.

- . 1998. “The Perfumed Oil Industry.” In *Sandy Pylos*, edited by J.L. Davis, 101-9. Austin: University of Texas.
- . 2001. “Review of Aegean Prehistory VI: The Palatial Bronze Age of the Southern and Central Greek Mainland.” In *Aegean Prehistory: A Review*, edited by T. Cullen, 329-81. Boston: Archaeological Institute of America.
- . 2007. “Administration in the Mycenaean Palaces Where's the Chief?” In *Rethinking Mycenaean Palaces II*, edited by M. L. Galaty and W. A. Parkinson, 40-53. Los Angeles Cotsen Institute of Archaeology, University of California.
- . 2008. “Mycenaean Society.” In *A Companion to Linear B: Mycenaean Greek Texts and Their World*, edited by Y. Duhoux and A.M. Davies, 115-58. Dudley, Massachusetts: Peeters.
- Stocker, S.R., and J.L. Davis. 2004. “Animal Sacrifice, Archives, and Feasting at the Palace of Nestor.” *Hesperia* 73:179-95.
- Tournavitou, Iphigenia. 1988. “Towards an Identification of a Workshop Space.” In *Problems in Greek History: Papers Presented at the Centenary Conference of the British School of Archaeology at Athens, Manchester, April 1986*, edited by E. B. French and K. A. Wardle, 447-67. Bristol: Bristol Classical Press.
- Ventris, Michael, and John Chadwick. 1973. *Documents in Mycenaean Greek*. 2 ed. Cambridge: Cambridge University Press.
- Voutsaki, Sofia. 1995. “Value and Exchange in Pre-Monetary Societies: Anthropological Debates and Aegean Archaeology.” In *Trade and Production in Premonetary Greece: Aspects of Trade Proceedings of the Third International Workshop*,

Athens 1993, edited by C. Gillis, C. Risberg and B. Sjöberg, 7-17. Jonsered, Sweden: Paul Åström.

Whitelaw, Todd. 2001. "Reading Between the Tablets: Assessing the Mycenaean Palatial Involvement in Ceramic Production and Consumption." In *Economy and Politics in the Mycenaean Palace States: Proceedings of a Conference Held on 1-3 July 1999 in the Faculty of Classics, Cambridge*, edited by S. Voutsaki, J. T. Killen and Cambridge Philological Society, 51-79. Cambridge: Cambridge Philological Society.

ACADEMIC VITA

Robin Maxwell Keire

robinmkeire@gmail.com

Education

Bachelor of Arts in Anthropology

Bachelor of Arts in Classics and Ancient Mediterranean Studies with honors

Minor in Latin

Honors and Awards

Dean's List

Paterno Fellow Fall 2013

Study Abroad/Field Work

Egypt Summer 2010

Mendes Excavation Egypt Penn State Summer 2010

Thebes Excavation Greece Bucknell University 2012

Language Proficiency

Basic Spanish

Intermediate German

Latin