

Strategies of Pottery Acquisition in the Mycenaean Palace at Pylos

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ABSTRACT

This paper focuses on pottery acquisition strategies at the Mycenaean palace at Pylos, analysing mostly the final period of its existence. By the 13th century BC the palace at Pylos, after 300 years of development, was a complex, bureaucratic, administrative, and industrialized institution. The strategy of the pottery acquisition by the palace is demonstrated to be a network of co-dependence between the palace, the 'royal' potter and other contracted manufacturers. They were specialized craftsmen who cooperated with the palace under different conditions. The pottery industry was affected by a hierarchy of producers directed by the palace, as the 'royal' potter supported the king in fulfilling his duties and enjoyed special privileges. Underlying the model is the use of the theory of entanglement. Outlining the wide web of dependences between things and humans involved in the Pylian pottery industry reflects the internal complexity and gradual evolution of the system.

KEYWORDS

Mycenaean culture; pottery; entanglement; economy; socio-economy.

INTRODUCTION

The following article discusses strategies of pottery acquisition in the Mycenaean palace of Pylos, located on the Ano Englianos hill in Messenia in the south-western Peloponnese, mainly in the Late Helladic (LH) IIIB phase, dated roughly to the 13th century BC.¹ It was the apogee of the development of Late Bronze Age (LBA) culture in Greece. The Mycenaean civilization derived from Middle Helladic (MH) Greece, dominated the entire Aegean and created the first complex, urban-type civilization in mainland Europe. Various ways of collecting, distributing and consuming ceramics by the palace constituted a system, which can be analysed as an entanglement, a web of dependences between things and humans, defined and discussed as a foundation of culture by Ian Hodder (2012). His theory constitutes the methodological framework of this paper. General analysis is mainly focused on patterns of pottery distribution inside the palace, chemical analysis of the ceramics and interpretation of Linear B records, based on published literature.

The Mycenaean economy has been a subject of much discussion, mainly focusing on aspects of palatial redistribution, exchange and control systems (e.g. VOUTSAKI – KILLEN 2001; PULLEN

1 This is the main chronological scope of the paper, as most of the evidence comes from it and the acquisition system in its fully developed form described below presumably existed solely in this period. However, the analysis of the creation and evolution of the system will need to use data coming from earlier periods (MH–LH II).

2010). The idea of the ‘palace’,² which was assumed to be dominant in the Mycenaean social landscape, still constitutes the foundations of our thinking about the economic processes of the Late Bronze Age Aegean. More recently, many scholars argued for a clear duality in the Mycenaean economy. Namely that it consisted of a palatial sector, visible thanks to the archives of Linear B tablets, as well as a ‘non-palatial’ sector, identifiable from the archaeological remains and only sporadically appearing in the archives (SHELMEKDINE – PALAIMA 1984; BENNET 2001; KNAPPET 2001; SHERRATT 2001; WHITELAW 2001; GALATY 2007; BENNET – HALSTEAD 2014; NAKASSIS 2015). These observations caused a crucial shift in our view of Mycenaean economies. The rather simple redistributive model was replaced by several more complicated proposals, including a model of palatial mobilization (HALSTEAD 1992; 2007) and another model based on wealth and staple finances (GALATY – PARKINSON 2007; NAKASSIS 2010). With these new perspectives, the discussion about Late Bronze Age Aegean economies has moved towards issues of craft specialization, markets and levels of palatial involvement (PARKINSON – NAKASSIS – GALATY 2013; PARKINSON – PULLEN 2014). The current discourse about the Mycenaean economy is focused on its heterogeneity and complexity. The Mycenaean economic system, while dominated by the palace and redistribution system, the scale of which is a matter of much debate (NAKASSIS – PARKINSON – GALATY 2011), also contains elements, outside this scheme, which are variable, and can differ between centres, and are perhaps a variant of the wider Eastern Mediterranean palatial systems seen in areas such as Anatolia, Syro-Palestine or Mesopotamia (DE FIDIO 2001).

HYPOTHESIS AND METHODOLOGY

My hypothesis is that there was an organized system of pottery acquisition at the Mycenaean palace of Pylos.³ However, this hypothesis has already been proven to be true by multiple scholars, with the use of various sources and through a range of methods (e.g. GALATY 1999; WHITELAW 2001; HRUBY 2006). It should be noted immediately, that in terms of the proposed model of the acquisition system, this article aims to provide an advance on previous scholarship in part through a synthesis of previous ideas to which it is indebted. While the application of a new methodology did not lead to a breakthrough in the interpretation of the available data, my approach is nonetheless innovative, since it is not so much a demonstration of *how* the system worked, but rather an attempt to understand in more abstract terms *why* it worked in the particular way it did. This is with the use of entanglement theory (HODDER 2012; 2014), which allows one to analyse all the dimensions of relations between the various types of entities involved in the system alongside its internal dynamics. Crucially, it also helps to reach the historical trajectory behind every system, as seeing the starting moment of each entanglement enables the understanding of its later development and reveals the reasons behind the final shape of the analysed network. This approach can help us to integrate our knowledge of a particular part of the palatial system with the broader processes of the shaping of Mycenaean states and of their economy. This paper tries to demonstrate how strategies of the everyday functioning of the Mycenaean palace can be observed as a result of massive cultural changes, occurring over centuries.

2 The Mycenaean palace should be seen in a dualistic way, on one hand as a monumental architectural complex centered around a *megaron*, of multiple social and economic functions. At the same time, it is the highest institution of Mycenaean culture, embodying the power of a *wanax* (king) and an elite supporting him, over a hierarchical social system and centralized palatial economy.

3 The null variant of the hypothesis is that there was no such organized system.

The theory of entanglement (HODDER 2012; 2014) is a syncretic theoretical construct that links numerous scientific social theories created in the last few decades. It is based on the idea of an open, constantly growing network of entangled humans and things, entrapped together with multiple categories of often unconscious mutual dependence. These links work in all possible directions, thus we can find human-human dependence, but also human-thing, thing-human and thing-thing relations. Especially noteworthy is Hodder's explanation of the complex network of relations between people and things, while maintaining the practical, technical and material dimension of these relationships. Universality and the broad perspective of entanglement theory make it an effective tool for analysing any system or network that binds together different sets of factors. The chronological dimension of each entanglement, which always has a tendency towards constant growth, both in range and internal complexity, is also crucial for this theoretical approach. The development of the entanglement leads to a limiting of the ability of entangled humans to consciously modify the network and creates its 'tautness', an entrapment of objects within the network. The growing number of mutually dependent humans and things trapped within the system prevents even the most influential individuals from controlling the entire entanglement. As an entity, it can be untied due to multiple internal or external factors, which can eliminate its key objects, causing the collapse of the entire network of dependence. This historical trajectory is universal for all systems created by humans, including the Mycenaean culture. The latter has formed at least two wide ranging entanglements – palatial and post-palatial (after the collapse of the palaces, the most important elements of the previously developed system, it was completely reoriented and a new set of dependences emerged).

To understand how entanglements are created, one has to understand how they *fit* each other. Hodder uses this verb in two complementary meanings – 'adapted to an end or design' and 'harmonized with'. His term 'fittingness' is supposed to cover both these aspects and emphasize their interdependence. Fittingness is always nested in the specific context, within which entities are fitting at one level and this allows further fitting at other levels (HODDER 2012, 113–115). An additional form of tautness and fittingness at the same time, is produced by the human tendency to seek coherence (HODDER 2012, 119–132). Hodder reveals also a large amount of complementarity between Entanglement and Evolution. The core elements of evolutionary theory, variation, inheritance, transmission and differential fitness can be found in entanglements. Additionally, dependences, abstractions, resonances and affordances all have an impact on entanglements and thus on the evolutionary selection of traits. However, fittingness, as a heterogeneous matrix, does not require a reductive moment. Evolutionary theory combined with entanglement allows a non-reductive approach to the evolution and persistence of humans and things (HODDER 2012, 139–148).

THE PALATIAL POTTERY ASSEMBLAGE AT PYLOS

A total number of 8,540 vessels were recorded by Blegen and Rawson (1966) in their publication of the palace.⁴ Almost 95 % of the palatial pottery was located in four locations: room 9, room

4 The actual amount of excavated pottery is very difficult to estimate, mostly because of the practice of discarding undecorated pottery, which was common in field work conducted in the 1950s. The actual number of ceramics in the destruction deposit was probably higher (HRUBY 2006, 203–207). However, when it comes to the following analysis I will refer to the said number of 8,540 vessels, following most previous scholarship.

60, rooms 67–68 and rooms 18–22 (see **Fig. 1**). This immediately suggests the areas of most interest (WHITELAW 2001, 52–54). The main ceramic forms at the palace at Pylos were 5 types of basins, 5 types of bowls, 9 types of cups, 6 types of dippers and, significantly 19 types of kylikes (KNAPPET 2001, 82; HRUBY 2010, 198). The latter constituted almost 50 % of the entire assemblage. They were mostly plain, simple and undecorated (GALATY 2007, 75). It is noteworthy that about 75–90 % of the entire palatial ceramic assemblage was fine ware (HRUBY 2006, 201). The pottery in the palace could generally be found in two contexts: *in situ*, as floor deposits, or fallen from the upper floors. An intense fire, which destroyed the palace, had also vitrified and distorted many vessels. Thus, the situation was generally difficult to interpret (MOUNTJOY 1993, 155). Vessels from the palace (with the emphasis put on pantries 18–22, see below) were put into a typology by Rawson (1966), which was more recently revised and corrected by Hruby (2006; 2010).

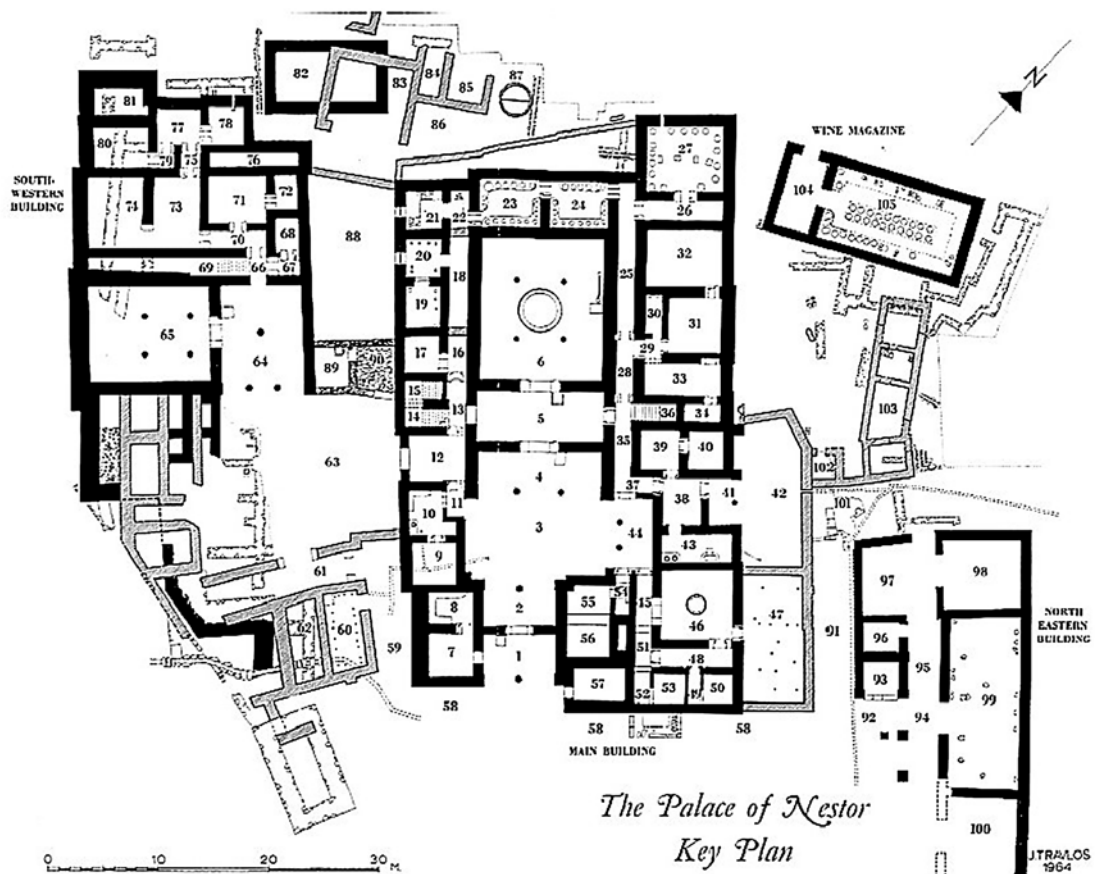


Fig. 1: Key plan of the Mycenaean Palace at Pylos, drawing by J. Travalos (after HRUBY 2006, fig. 1.2).

The distribution of pottery within the palace was heavily focused on the four areas mentioned above, all located in the southern part of the complex (WHITELAW 2001, 53). The most important of them appear to be a series of inter-linked pantries 18–22. Together they contained 6,593 vessels, about 77.2 % of the entire assemblage. Pottery was organized and segregated, some was stored on wooden shelves, which left some remains, primarily post-holes (WHITELAW 2001, 57). Those pantries contained a variety of mostly fine ware shapes (number of vessels in parentheses): basins (16), various bowls (1,337), ‘teacups’ (1,151), other cups (13), dippers (495),

kylikes (3,516), tankards (3), jugs (52), amphoras (33), jars (4) and kraters (24) (HRUBY 2010, 196). Most can be assigned as drinking/eating vessels, but not all of them.

Some trends in ceramic storage can be seen, although the system is not entirely clear (HRUBY 2010). First, room 19 contained wooden shelving and 2,853 kylikes, without any other shape. Room 21 had mainly 'teacups' and shallow bowls, and room 22 – dippers (HRUBY 2010, 196–197). Another pantry, room 9 had a particularly simple assemblage, containing about 500–600 fine ware kylikes, which represents over 6 % of the entire site assemblage. In the adjacent room 10 there were built-in storage jars, most probably for wine (WHITELAW 2001, 54–57). In the South-western Building there were two inter-linked warehouses associated with pottery storage. Rooms 67–68 contained about 190 vessels, mostly coarse ware cooking and some storage shapes. It is a small but very significant group, as most of the palatial assemblages contained only fine tableware or large storage vessels, thus far we lack collections associated with food preparation. Unfortunately, a lot of pottery from this group was discarded and vessel numbers are sometimes difficult to estimate (WHITELAW 2001, 57). Room 68 contained around 30 kraters and several dozen two- and one-handled jugs. A small number of the latter had also been found in room 67, together with over 50 braziers, 50 tripods and 2 lids (LIS 2006, 8). East of the South-western Building, behind the open courtyard 63/88, there was a series of late constructions including room 60. It contained 761 vessels, about 8.9 % of the entire assemblage, and the second largest collection in the palace. It consisted of a wide range of shapes, including both fine ware and coarse ware, of a variety of possible functions including drinking, eating, food preparation and storage (WHITELAW 2001, 57). Excavators found there (numbers of vessels in parentheses) basins (76), shallow angular bowls (51), spouted bowls (89), cups (93), miniature kylikes (82), kylikes (267), jugs (20), piriform jar (1), kraters (31), ladles/lamps (39), tripods/incense burners (5) and lids (6) (LIS 2006, 8; LIS 2016, 504). It was recently suggested, on the basis of a macroscopic analysis of the material and careful examination of the manufacturing technique, that this group was produced by two potters from outside Pylos (LIS 2016).

The rest of the palace is said to contain about 447 vessels, 5.2 % of the total, spread over the entire complex (WHITELAW 2001, 54).⁵ Forms that often occur in other rooms are usually large storage vessels, like pithoi, which can sometimes be built into the floors (WHITELAW 2001, 54). Those appear, for example, in the Wine Magazine, room 10, and room 43. The latter, being most probably a bathroom, needed pithoi for storing water. Inside of them undecorated kylikes were found, probably for pouring water over the bather (MOUNTJOY 1993, 157). Rooms 23, 24, and 27, olive oil storerooms, contained large coarse jars, set into stucco coated stands. Many large jars for olive oil appeared also in the north-eastern wing of the palace, in rooms 30, 31, 33, 34 and 38 (BLEGEN – RAWSON 1966, 132–139, 153–170). However, in general the pottery distribution at the site tends to concentrate around its south-western part. It also appears that only there, pottery itself was stored as a commodity (WHITELAW 2001, 54).

Around 90 square metres out of the approx. 2,000 square metres of the palace was used for storing ceramics (GALATY 2007, 75). The well-known rooms 18–22 contained over 6,500 vessels, probably for serving communal feasts held in corridor 63/88. This is most probable, especially since this is the only area with direct access to those pantries, which are rather cut off from the rest of the Main Building. Further, the specific range of the recovered shapes suggests that pantries 18–22 have a coherent assemblage, designed for a specific and restricted use, mostly eating and drinking (WHITELAW 2001, 57–58). The material from these pantries was

5 However, this is probably significantly underestimated (see the previous footnote, HRUBY 2006, 203).

analysed by Hruby (2006). Her macroscopic analysis of production processes, together with fingerprint analysis, strongly suggests that all the vessels were probably made by the same potter (HRUBY 2006, 202–207). It was even proposed that all the fine ware ceramics from the palace were made by this one producer (HRUBY 2006, 200; WIENER 2007, 273). Although there are some surprising metrical variations of the material from pantries 18–22, they have been proved not to exclude that possibility (HRUBY 2014, 55). Hruby interprets them as proof that the vessels were made very fast, carelessly, with the emphasis on quantity not on quality. In this situation, the variability could actually somehow prove that the production was specialized, even if the standardization was not its priority. It may also overlap with the potter's lack of experience, skill or finesse, which can be seen in the material (HRUBY 2014, 56).

Storage rooms 9, 60, 67 and 68 had more diverse assemblages. Room 9 was close to the central part of the palace and contained over 500 kylikes. It was previously interpreted as a waiting room, which was indicated by its location, the pottery collection, and built-in jars for wine from the adjacent room 10 (WHITELAW 2001, 54–57). However, all of this evidence can also support a hypothesis, in which there were multiple, hierarchically designed, levels of communal feasts organized by the palace (BENDALL 2004; THALER 2006; 2015; 2016).⁶ Each social group allowed to participate in the event was supposed to have its own space (inside of the palace, court 63/88, court 58) with an assigned pantry to serve it (respectively room 9, rooms 18–22, room 60). In this hypothesis room 9 serves the highest members of the society, who feasted together with the king inside the central court (room 3) or even the main *megaron* (room 6). The limited selection of shapes present in room 9 (kylikes only) could have been also supplemented with metal vessels, that are not preserved at the palace, but are known to be used by the Mycenaean elite (BENDALL 2004). Room 60 which contained a wider range of nearly 800 vessels both for drinking and eating, could have served the lowest class of feast participants, invited to what was almost the outer court 58. However, the most recent analysis of this material by Lis (2016) shows that the diverse group kept in room 60 could also serve the needs of the olive oil industry and funerary practices held outside the palace.⁷ A relatively small number of vessels were located in rooms 67–68. Yet this group, being complementary with the one from room 60, was very significant and contained mostly coarse ware pottery, associated with cooking and food preparation (WHITELAW 2001, 52–62). The cooking pottery from rooms 67–68 could have been used to prepare food on both a daily basis and on special occasions, as is partially suggested by the nature of the assemblage. Some of the shapes appear to be designed for use outside, also it is hard to recognise any other assemblage within the palace that could serve food preparation for a large gathering. This puts these pantries also into a special feasting context (LIS 2006, 16–18).

Other types of pottery consumption within the palace involved the production of certain goods, storage and trade. The latter would be recognized probably only on a local scale, since Messenian pottery has not so far been found anywhere outside Greece (HASKELL 1984). The palace was presumably the largest pottery consumer on the regional pottery market, although its quantitative and qualitative impact on the industry is not that obvious. Both Whitelaw and Hruby, who investigated the topic extensively, estimate the annual palatial demand for pottery

6 The idea of the following three partial division of feast participants was actually first brought up by Bendall (2004), and then it gained much more foundation with the analyses made by Thaler. These being mainly visual integration analysis, topological access and control analysis (THALER 2006; 2015; 2016), which were part of a broader study of potential for control and segregation in Mycenaean palaces.

7 The latter is indicated by a large number of miniature kylikes and incense burners coming from room 60 (LIS 2006, 2016).

at about 12,000 vessels (WHITELAW 2001, 65; HRUBY 2006, 203). Based on the ethnographic data and analysis of household assemblages from Mycenae, Whitelaw concludes that the palace would need 1–2 potters and consumed no more than 1–2 % of the total state pottery production (WHITELAW 2001, 65). Hruby agrees on the first conclusion, but criticizes the latter, rightly pointing out the exceptional character of excavated Mycenaean households.⁸ Her estimation of the number of potters working in Messenia, and hence the total production output, is ten times smaller than that of Whitelaw. She proposes that only 10–20 individuals produced ceramics in the region, instead of the 104–208 calculated by Whitelaw (HRUBY 2006, 203). Thus, if one accepts her estimation, it can be said that the palace consumed roughly 10–20 % of the annual state pottery production.⁹ This would certainly make it a dominant consumer that would have a large impact on the market even without any planned acquisition system. Nevertheless, the fact would remain that 80–90 % of Messenian pottery was not produced for the palace. Thus, it cannot necessarily be said that it shaped the industry just through consumption alone. However, purely quantitative factors are not the only ones which are significant when it comes to an analysis of any prehistoric economic system. The low value of the product and the lack of economic necessity does not necessarily imply that the palatial elites were not interested in controlling the industry (KNAPPET 2001; GALATY 2007).

The palatial ceramic assemblage can be roughly divided into two groups: fine ware, consisting mostly of kylikes, with some utilitarian vessels, and coarse ware, consisting mostly of utilitarian pottery, with very few kylikes (GALATY 2007). Within these two basic categories there were four fabrics or clay recipes identified by Galaty in his analysis of Messenian pottery. There was only one fabric used for fine ware vessels (Galaty's Fabric 2), and three coarse ware fabrics (Galaty's Fabrics 1a, 1b, 1c), two of which were associated with pithoi (GALATY 1999, 50). The storage system did not follow directly this division, one may see only some trends in individual warehouses, like storing kylikes mostly in pantries 18–20, and cooking vessels mostly in rooms 67–68 (WHITELAW 2001). It was also proposed that the storage system could have been connected with the diversification of pottery sources, or even that each warehouse was collecting pottery on its own (HRUBY 2010). There are also some clear differences between the vessels from each warehouse, for example pots from room 60 are generally darker and coarser than those from palatial pantries 18–22 (GALATY 2007, 85). This corresponds with the observations made by Lis on the manufacturing technique used to produce material from room 60 (LIS 2016).

ARCHAEOLOGICAL EVIDENCE OF POTTERY PRODUCTION

In the entire region of Messenia, no pottery workshops nor other manufacturing remains securely datable to LH III have been found (GALATY 2007, 80–81). However, there exists evidence for the production of ceramics in the earlier periods, at the very centre of our interest – on the Ano Englianos ridge. In the Early Mycenaean period, during the existence of the first pre-palatial complex, there was then a small pottery kiln on the acropolis, close to the fortification gates. The almost oval structure had three courses of crude bricks preserved together with a central support. There were no trial pieces or rejected failures collected around it, but there was no doubt about the identification. All of the around 100 pottery fragments

8 Whitelaw uses West House and House of Sphinxes as his examples of domestic assemblages (WHITELAW 2001, 64). This is debatable, as they both seem to be elite structures of multiple functions.

9 This estimation comes from keeping the palatial demand for ceramics at the level described above (12,000 vessels), but at the same time lowering the overall state production ten times.

that were found in its vicinity belonged to the Early Mycenaean period, pointing to its time of functioning (BLEGEN *et al.* 1973, 19–20). Detailed examination of those fragments showed that the kiln had to have gone out of use before LH IIB (MOUNTJOY 1993, 121). This limited evidence of pottery production in the region has the potential to be informative, given the specific location, although one has also to acknowledge the possibility of a research bias.

CHEMICAL ANALYSIS OF THE PALATIAL POTTERY

The largest dataset on the chemical analysis of pottery from Messenia was provided by Galaty and his collaborators, using weak acid extraction (WAE) and ICP spectroscopy (GALATY 2007). Material for analysis was obtained during the Pylos Regional Archaeological Project (PRAP, see DAVIS 1997; 1998), and consisted of 310 samples from 18 sites, including 114 kylix fragments (see **Fig. 2**). In addition, PRAP's database was searched for evidence of the production of ceramics and each LH IIB site from the survey was re-examined intensively. Interviews with local potters as well as a thorough examination of the sources of clay in Messenia were conducted in the course of the analysis. The regional clay sources were found to be not particularly numerous, although some of them had an excellent quality, including the one identified in the immediate vicinity of the palace. Clearly some settlements may have had better natural conditions for the mass production of ceramics than others (GALATY 2007, 79–81).

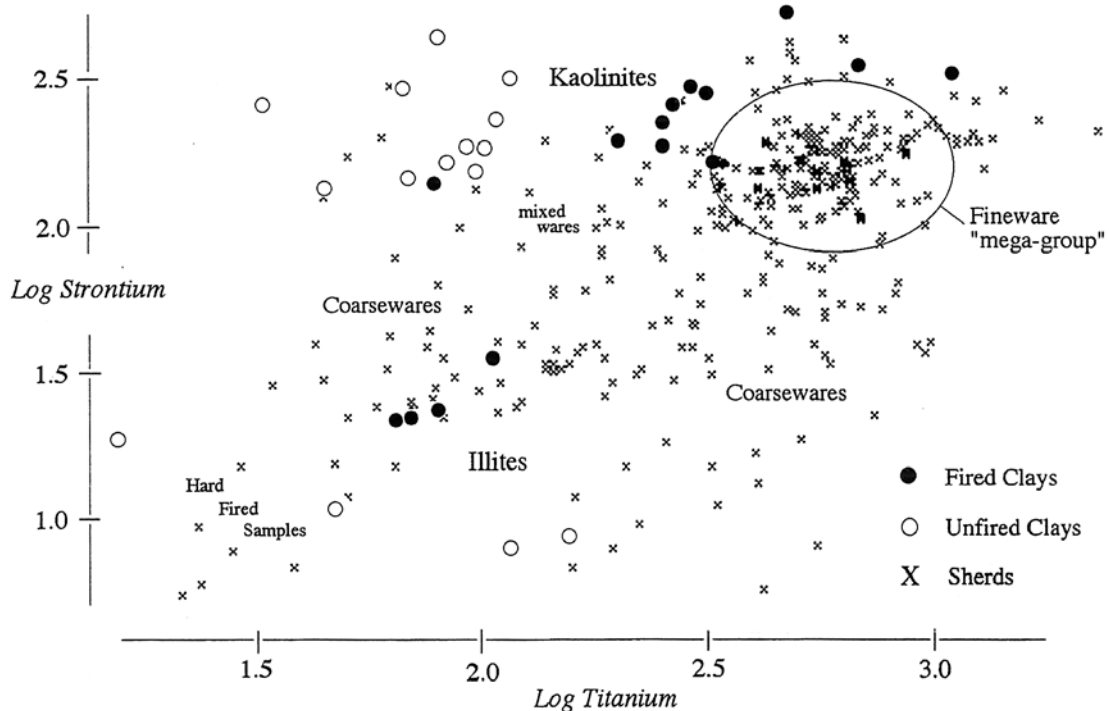


Fig. 2: Results of Galaty's chemical analysis of Messenian pottery, presented as a scatterplot of ceramic and clay samples for log strontium versus log titanium (after GALATY 2007, fig. 8.4).

Galaty's chemical analysis of clay sources in Messenia led to interesting conclusions. The two main types of clay used for pottery production were kaolinite, used for the manufacture of most of the kylikes and illite, used for the production of a certain number of kylikes and most of the utilitarian ware. Vessels made with illite are usually dark-red, coarse, with large inclusions. This kind of clay is of an inferior quality but readily available, and as such could be a material used by local potters. In turn, naturally pure kaolinite of very good quality enabled mass production with the use of the fast wheel (GALATY 2007, 83). The only LH site in Messenia associated with beds of kaolinite is Ano Englianos. In fact, there is no evidence of the use of this type of clay for pottery production in Messenia until the MH period and the introduction of the fast-wheel and the 'Minyan' ceramic forms, together with the development of Pylos (GALATY 2010, 233–234).

The analysed kylikes could generally be divided into two groups – a chemically uniform mega-group of fine ware kylikes of kaolinite and a smaller group of coarse ware kylikes of illite, perhaps aiming to emulate fine ware products. Utilitarian vessels were more diverse with three groups being identified. These were one for both kinds of clay mentioned above, and the third one being a mixture of them (GALATY 2010, 237). This division generally follows Hruby's observations on ceramic fabrics from the palace (HRUBY 2006). All three utilitarian types were characterized by a wide distribution, and kylikes of the mega-group existed in all sampled LH IIIB sites. The data therefore show the existence of a dual scale of production – one consisting of workshops distributing locally and one large manufacturer, selling in the larger regional market.¹⁰ Most kylikes and fine ware utilitarian vessels seem to have been mass-produced in a large workshop, using kaolinite and a fast wheel (GALATY 2007, 83). Probably this manufacturer produced all the kylikes used by the palace and a large part of those distributed in the region. This again follows previously discussed ceramic analysis. To quote Galaty directly: 'Generally speaking the organization of the Pylian utilitarian ceramic industry reveal, in comparison, a marked difference in the production, distribution, and consumption of fine wares, especially kylikes. Kylikes are represented by far fewer paste groups and by much higher degree of elemental homogeneity than utilitarian wares' (GALATY 2007, 82).

10 In fact, Galaty has supplemented this data with his interpretation of tablet PY Vn 130, to suggest that the palace was controlling and taxing local workshops. According to Galaty the tablet talks about a contract or a supply, made by Kessandros of containers with strainers, known as *agea* in Classical Greek. The tablet contains a list of 11 settlements and regions providing merchandise, along with quantities – usually 3 to 9 vessels. The reasons for obtaining them in so many different places remain unclear, suggesting some form of 'tithes' or 'operating tax'. The palace would obtain in this way some control over regional workshops, avoiding the costs of the transport of goods (GALATY 2007, 76–77). However, such a reading of tablet PY Vn 130 has been criticized and rejected by notable scholars specializing in Linear B (KILLEN 2007, 117; PALAIMA 2014). According to them it could rather regard the collection of bronze, not clay vessels (KILLEN 2007, 117) or preparation of perfumes organized by the palace in different locations (PALAIMA 2014, 88–89). If Galaty's interpretation of the tablet is rejected, it is difficult to propose any other evidence for palatial control over local ceramic workshops. In fact, his data may be used to support the opposite, and point to only a few contracted specialized manufacturers supplying the palace (see below).

ANALYSIS OF WRITTEN SOURCES

References to pottery and potters in the Linear B archives are rare, although they do occur, and should be treated as a valuable source of evidence. However, the very form of Mycenaean archives limits their use. Their purely administrative, and probably temporary nature forces us to remember the wide spectrum of materials and people which the records do not mention but which may have existed and have had certain roles in Mycenaean society (BENNET 2001, 25–26; NAKASSIS 2010, 127). What we find in the texts is that the palace had at least 4,000 dependent personnel: slaves, craftsmen, servants, priests and cult personnel, political and administrative officials and soldiers serving on land or sea (HILLER 1988, 53–68). The palace's role was dominant in the social, economic and political landscape of the region, however, we should not fall into an overestimation of the involvement of the palace in all areas of life. Ultimately, the elite had the desire to control only sectors that were important to them, by focusing their economic strength on products necessary for the functioning of the system or of significant ritual, aesthetic or commercial value (DE FIDIO 2001; KNAPPETT 2001; GALATY 2007). These, so called prestige items, had value due to the time needed to manufacture them, or cause of their specific context of use, such as import or export. Although there never occurred complete control of the system of pottery production, certain ceramic forms may actually fit the above description (KNAPPETT 2001, 86–87).

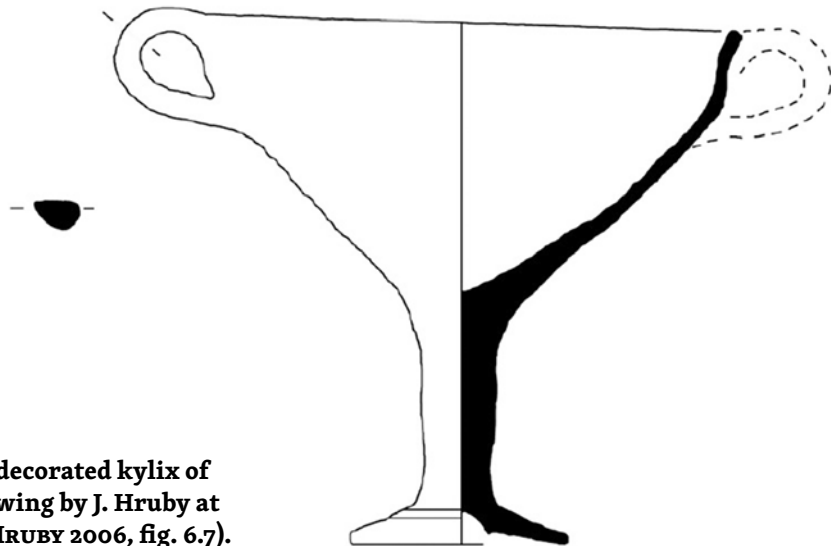


Fig. 3: A typical fine undecorated kylix of a standard size, drawing by J. Hruby at a scale of 1:2 (after HRUBY 2006, fig. 6.7).

The vessel connected the most with the prestige sphere is the kylix (see **Fig. 3**). Kylikes were associated with communal feasts organized by the elite to demonstrate their own power and prestige and create bonds between various social groups. The organization of such feasts is now accepted as one of the cornerstones of the Mycenaean social system and one of the main duties of the *wanax* (NAKASSIS 2012). It is noteworthy that the goods collected for organizing feasts constitute more than a half of all the staples listed in the archives. This makes feasts a very important factor not only socially, but also economically, as it used a considerable amount (possibly even most) of the palace's economic power and redistributive capacity (NAKASSIS 2010, 135). In this context, the kylix became heavily 'politically charged', by bringing with it a particular set of meanings and serving the fulfilment of targets, despite its simple, usually

undecorated and universal form (KNAPPETT 2001). Its specific symbolic meanings are attested with finds of kylikes in ritual contexts: miniature kylikes, frescoes depicting toasting rituals and many others (GALATY 2007, 76). The wide distribution of this form may also result from a non-elite imitation of upper class behaviour (KNAPPETT 2001). The latter could have even been deliberately used by the palace, if one considers the specific LH IIIB reality. Kylikes, as a special form of pottery, had an exceptional meaning for the palace administration, especially during the LH IIIB, when intensified control over the flow of prestigious goods and ritualistic behaviour of feasting aimed at strengthening social bonds, gained in importance (GALATY 2007; VOUTSAKI 2001). This is further reinforced by observations made by Thaler, on the possibility of social segregation inside of Mycenaean palaces, also during communal feasts (THALER 2016). All of this indicates that in certain contexts and circumstances, some forms of pottery, mainly kylikes but perhaps also other drinking vessels, could gain prestige qualities. This could have led to a particular interest of elites in controlling their production and in securing their acquisition by the palace, as they were essential for the operation of the social system (PALAIMA 1997, 411; VOUTSAKI 2001, 205–207; GALATY 2007, 76).

Out of all the personnel listed in the archives, only four craftsmen are described as potters (PALAIMA 1997, 410–411). For two of them, no secure information can be derived, except that they are from a place called *re-ka-ta-ne*. One of the possibilities is that they were specialized, mobile craftsmen, at that moment serving the palace (PAPADOPOULOS 1997, 459). The latter hypothesis has been recently strengthened by observations made by Lis on the material from room 60 (LIS 2016). With a lot of caution, it can be assumed that producers of this assemblage, presumably two foreign potters, might be equated with the two craftsmen from *re-ka-ta-ne* known from the Linear B tablet (LIS 2016, 510). Also interesting is the textual evidence about the other pair. One of them, named *qe-ta-ko* is found in what appears to be a religious context. He is listed among servants of particular deities and cult personnel, with a mention of sacrificial animals (KNAPPETT 2001, 85). More recently, it was suggested that *qe-ta-ko* served multiple roles, including being potter, smith, land and animal holder. His name appeared in many contexts in the archives, and probably referred to one individual (NAKASSIS 2008). Manufacturing pottery and bronzes could have been naturally connected, as they both demanded control of firing conditions, which is a specialized knowledge (HRUBY 2013, 423). He could have served as an economic broker or administrator in both the palatial and the wider Messenian economy, and was variously rewarded. The appearance of figures like *qe-ta-ko* could have been associated with the growing palatial control over the production of staple goods (GALATY 2010, 238–239).

The last potter is named *pi-ri-ta-wo*, and is described as ‘royal’, literally ‘pertaining to’ or ‘of’ the *wanax*. Three craftsmen in the Pylos tablets were referred to as *wanakteros*. These are the potter (*ke-ra-me-u*), the fuller (*ka-na-pe-in*) and the probable armorer (*e-te-to-mo*). In most interpretations, these particular craftsmen are linked with the religious or ceremonial obligations of the king. At the same time, it is noteworthy that their listing on the tablet was found in the NE Building. The traditional interpretation of this structure as a temple workshop (TEGYEY 1984) has been more recently rejected on the basis of insufficient evidence (BENDALL 2003, 184–185). The building was probably a redistributive centre – a clearing-house for goods entering the palace complex as a whole (BENDALL 2003, 181). The ‘royal’ craftsmen seem to participate in the social process of emphasizing the rank and status of the *wanax* and possessing land in return for these services (PALAIMA 1997). Indeed, *pi-ri-ta-wo* occurs on the lists of landholders, which puts him in a very small group of owners, the elite of Mycenaean society (WHITELAW 2001, 71; HILLER 1988). Probably he was also serving other roles, like *qe-ta-ko*, being an important figure in the palatial economy. It is highly probable that he acted only

as the administrator and broker, for example owning ceramic workshops, but not working there himself (GALATY 2010, 238).¹¹

It would make sense to reconsider the potters listed on the tablets (and therefore to some extent 'administered') as the producers of palatial pottery collections, including the thousands of kylikes found in the palatial pantries. They were helping the *wanax* in fulfilling one of his most important obligations, which was the organization of communal feasting (KNAPPETT 2001, 87–89). Probably this function would affect especially the 'royal' potter, whose workshop may have produced almost all the kylikes used by the palace. Such activity had to be of interest to the palatial bureaucracy, which might have inspired and supported the craftsman, because of common interests (GALATY 2007, 74–76). In this way, the pottery production appears in the range of state administration and involvement, as some of the artisans produced things particularly necessary for the kingdom. However, it should not be equated here that the palatial contract was necessarily associated with numerous benefits only. The various ways of obtaining goods by the palace can be treated as part of a contract, including obligations in return for use-rights to land-holdings and/or other privileges, but also direct or indirect taxation, or even forced labour (PAPADOPOULOS 1997, 459; WHITELOW 2001, 72).

It seems that the palace did not need any more providers than those few known from the written sources and who can be called contracted. It is clear that no single potter or workshop was producing the palatial collection, diverse in shapes and fabrics (WHITELOW 2001, 54). However, as stated above, 1–2 potters should have been able to fill the needs of the palace (WHITELOW 2001, 65), thus four should definitely have been enough, and there is simply no need to look for other producers supplying the pantries. This assumption is also supported by the results of Galaty's chemical analysis. It may be merely coincidental that there were four ceramic fabrics identified in the palace, and at the same time only four potters appear in the archives (HRUBY 2013, 424). An equation of those two kinds of sources is tempting, especially when one interprets the 'royal' potter as the above mentioned 'large manufacturer'. However, even if this assumption is rejected, the four identified fabrics, suggesting four possible places of origin of the palatial pottery, point that only a few workshops were supplying the palace. The other potters in Messenia during LH IIIB were working without any state control, for the needs of local, market-based economies (WHITELOW 2001, 68).

From the existing evidence it is clear that in LH IIIB Pylos there was no complicated and entirely controlled system of palatial involvement into pottery production, which existed for example for the textile or olive oil industries (WHITELOW 2001, 78). The reasons for this could be simple. Easy access to the material (clay), which is also easy to extract, suggests a difficulty of the construction of any meaningful system of control. Pottery in most contexts was not a prestige good, which would result in less interest in its production by the elite (KNAPPETT 2001, 86–87). It is more accurate thus to speak only about a palatial strategy for pottery acquisition, which was associated with the superficial interest in the pottery industry. The palace had only a slight influence on the system of production, without it being directly supervised. But 'there are grounds for reasoning that the craft may not have been totally overlooked either' (KNAPPETT 2001, 94).

11 That would fit the situation where the quantity, not the quality was the workshop priority, and the 'royal' potter could hire less skilled or experienced craftsmen, as suggested by Hruby (2013, 424–425; HRUBY 2014). This does not exclude the possibility of all fine ware ceramics from the pantries being made by one hand, as still there could have been only one potter working in the workshop owned by *pi-ri-ta-wo*, or a few of them – but only one responsible for that particular order.

TAUTNESS AND ENTRAPMENT

To understand how the pottery acquisition entanglement appeared in LH IIIB, one has to first look for the ways and reasons of its development. The evidence for the organization of Pylian society in LH I–IIIA is not that clear, although I would look for the very beginnings of the palatial pottery acquisition entanglement in the limited evidence of pottery production on the Englianos ridge in phases LH I–II, during the existence of the first pre-palatial complex. One can presume that at this point, the first structure on the acropolis, already associated with the elite, had its own source of ceramics, in the form of a small pottery kiln (BLEGEN *et al.* 1973, 19–20). Assuming that at this stage the inhabitants of the hill had lower requirements than the developed palace of LH IIIB, one potter with one kiln should fill their basic needs, although other subsequent ways of collecting ceramics cannot be excluded. Then, together with the construction of the palace, the expansion of the Lower Town and the formation of the Pylian kingdom, the pottery acquisition entanglement started to develop (BENNET 2007). The first basic link within the network was created at the very moment when the palace started to depend on external producers in order to supply its own pantries. From the beginning it was certainly a two-way relationship, as the palatial elite was at this point able to either collect the required pottery in exchange for resources or land which they now controlled, or force subordinated producers to deliver their goods. When the local elites were overcome, the acquisition system could be simply incorporated into the network of dependencies that was already active and developing (VOUTSAKI 2001; 2010). Thus, the origins of the contracts system can be traced back to the LH IIB/IIIA period and the contemporary process of gaining domination over the region by the Pylian elites (BENNET 2007, 39). The entanglement at that point was presumably much simpler, since it was its initial phase. It is possible that the ‘royal’ potter’s contract was the first to be implemented, as the formation of the state likely had to be supported by strengthening the position of the *wanax*, also by appointing attached specialists of high status (BRUMFIEL – EARLE 1987; BLACKMAN *et al.* 1993).¹²

The entanglement further expanded in the following phases, together with changes within the palace and the state. When the archives and recording system started to be used, it was entangled with the pottery acquisition, even if it seems that string was not strong (very few records on pottery in the archives). In LH IIIB the entanglement developed together with architectural changes made in the palace. The creation of the pottery pantries, the Wine Magazine and finally the concentration of the olive oil industry within the palatial complex had all tied new strings within the entanglement. From an open, easily accessible residence, the palace had changed into a real labyrinth of courts and corridors, strictly closed and controlled (WRIGHT 1984; BENDALL 2004; THALER 2006; 2016; see also **Fig. 1**). The way the palace was redesigned was a result of the development of the Pylian state, which at this time evolved from a simple chiefdom maintained by a set of dependencies between regional elites to a highly bureaucratic state, based on palatial control of men and resources. At the same time, these changes

12 The theory of two types of specialization, depending on the context of production, have developed in the social sciences since the 1980s (BRUMFIEL – EARLE 1987; BLACKMAN *et al.* 1993). One can clearly see some similarities in definitions of ‘attached specialization’ and ‘independent specialization’ and two types of pottery providers that one can identify in LBA Messenia, namely the contracted providers of the palace, and all the other manufacturers. One can call the former ‘attached’, as they were somehow overseen and linked with the palatial elite, which was interested in their products. The latter can be generally called ‘independent’, since the vast majority of their work was sold on the market. Obviously, these terms should be used carefully and with an understanding of the meanings and interpretations hidden behind them (KNAPPET 2001, 88–89).

themselves had multiple economic and social implications. Among others, they allowed the control of people moving to and inside the palace, supporting more complicated, evolving systems of acquisition, storage and consumption of goods (such as the system of pottery acquisition). The architectural evolution of the palace also enabled the organization of massive communal feasts. Only after the creation of additional courts and pantries in LH IIIB was it possible to have held them in the hierarchical order described above (BENDALL 2004; THALER 2016). Changes inside the palace further strengthened the role and appearance of the *wanax* by controlling the form and appearance of the way in which visitors entered the *megaron* (THALER 2006). From a wider perspective, in LH IIIB the growing palatial control over the economy and increasing concentration of resources and economic power within the palace caused also increased demand for ceramics and further development of the acquisition system (WRIGHT 1984; SHELMERDINE 2001; GALATY 2007, 85–86).¹³ It is probably with regard to this point that one ought to look for the last transformation of the entanglement, as it extended its range and reached producers from outside the immediate vicinity of the capital, or even outside the kingdom. The mobilization of these various producers was introduced through additional contracts. That would be the situation at the end of the LH IIIB period, shortly before the final destruction of the palace (VITALE 2006). At this moment the entanglement entrapped a wide set of things and humans and could not be easily changed. Its development went along with key changes in Mycenaean society during the entire Late Helladic period. The trajectory of those transformations was too heterogeneous to be controlled and predicted. Ultimately, the entanglements always have a tendency to become larger and more complex. In this situation, the evolution of general, large entanglements of the palace at Pylos and Mycenaean culture dragged behind them changes in this more local and limited entanglement of pottery acquisition (HODDER 2012, 167–178).

The decision made by the elite from Ano Englianos at some point in LH II, not to produce the ceramics on their own any more was the starting point of the entanglement, which entrapped all the later inhabitants of the palace with its effects. That is how the ‘tautness’ of this particular entanglement was created (HODDER 2012, 103–105). Entrapment of humans in a constantly developing set of relations is the key dimension of the entanglement and things’ dependence on humans (HODDER 2012, 85–87). It may be hard to see that entrapment when thinking about pottery. It was only rarely repaired, usually breakage caused it to be discarded (WHITELAW 2001, 62–67). One may say that only special vases (usually precious large storage vessels) were able to have some agency, since humans were more likely to take care of them. However, when analysing the entire palatial assemblage as a single part of a material culture, it is actually possible to see the entrapment. Supplementing the palatial assemblage of vessels had to be frequent and constant, causing the actions of humans due to the relatively short ‘temporalities’ of individual vessels (HODDER 2012, 98–101).¹⁴ When treated as one object, the entire palatial assemblage caused constant human activity around it. It had to be organized for on-going use and constantly supplemented due to continuous losses. The palace needed around 12,000 vessels a year, but it probably never had that number in storage rooms, as this is the estimate of the annual consumption regarding the high breakage rate among certain shapes (WHITELAW 2001, 52–62; HRUBY 2006, 203). Some assemblages, especially those associated with

13 The same processes were presumably occurring also in other Mycenaean states (see for example VOUTSAKI 2010 for a discussion on the Argolid).

14 Albeit not all of them, as some large storage vases could have ‘temporality’ longer than the average human life of that era, however then they were entrapping humans with a different set of dependences, requiring maintenance, repairs or filling with liquids.

drinking and eating had a life cycle counted in months rather than in years (WHITELAW 2001, 62). Additionally, the pottery had to be moved around the palace, as it was used during various interactions (see below), causing constant human movement to and away from the ceramic warehouses. The storage system for thousands of vessels had to be planned, organized and maintained. Also, it had to cooperate with and fit various other activities maintained at the palace. One could imagine that there were certain palatial servants responsible for keeping the pantries clean and well-organized, as well as some officials, administrators and scribes responsible for the constant acquisition and recording of the collection (GALATY 2007; HRUBY 2010, 201–203). At Pylos, 13 vessel names are attested on Linear B tablets, highlighting the complexity of the recording and storage system (HRUBY 2010, 201). The pottery from the palace was attracting a lot of human attention, entrapping inhabitants of the complex in the wide web of dependences. They could not easily escape from the system that they had developed, as the requirements had to be constantly fulfilled, and there was no own source or alternative acquisition strategy prepared. Even the most influential individual acting within the entanglement, namely the *wanax*, could only alternate certain strings, for example by arranging new contracts,¹⁵ but was probably not able to change the system dramatically, being himself tied with various dependencies. Thus, for example, he could appoint a new ‘royal’ potter and in this way affect the entanglement but could not refrain from maintaining this position, as it was a part of a wider network in which even the king was entangled.

THE ENTANGLEMENT

Here I will try to present the entanglement of the palatial pottery acquisition system in its last form, known from most of the available data (see **Fig. 4**). As stated above it reached this stage in LH IIIB, after a long development that cannot be very precisely followed. The palace depended on external producers of pottery, who in turn depended on various goods that it could provide to them. This process affected the local ceramic industry and caused further expansion of the dependence network. The ‘royal’ potter had become a high-ranking producer, cooperating with the palace, supporting the *wanax* in fulfilling his duties and in return enjoying special privileges. His contract was the most vital string of the entanglement, and the main co-dependency occurring within the system. The *wanax* and the ‘royal’ potter depended on each other in the process of gaining and maintaining the prestige, as the former placed the latter on top of the hierarchy of local ceramic producers in return for support in fulfilling certain social obligations. One can imagine a situation in which an independent craftsman, gets the title of ‘royal’ potter and in exchange for royal recognition,¹⁶ from time to time fulfils the palatial contract. This does not preclude the model constructed by Galaty, with competition between potters for obtaining beneficial palatial contracts (GALATY 1999). In fact, it is likely, that the position of the ‘royal’ potter was desirable for all the pottery manufacturers in the kingdom. It was probably associated not only with material privileges but also a unique prestige expressed also through their special social position to the *wanax*. I believe that the ‘royal’ potter should be associated with the mass, fast-wheel production of fine ware kylikes and other drinking vessels, manufactured mostly with kaolinite of the best quality (GALATY

15 However, in most cases this was probably the obligation of lower rank officials, responsible for the everyday functioning of the palace.

16 Obviously accompanied by a certain amount of material goods and most importantly, the landholding (see above).

2007, 82–85). The products of the ‘royal’ potter were kept mostly in the pantries 18–22, serving the need of the communal feasting, occurring in the nearby corridors (WHITELAW 2001, 58). The supply of thousands of fine ware drinking and eating vessels, especially kylikes, was crucial for the frequent and successful organization of these gatherings (HRUBY 2006).

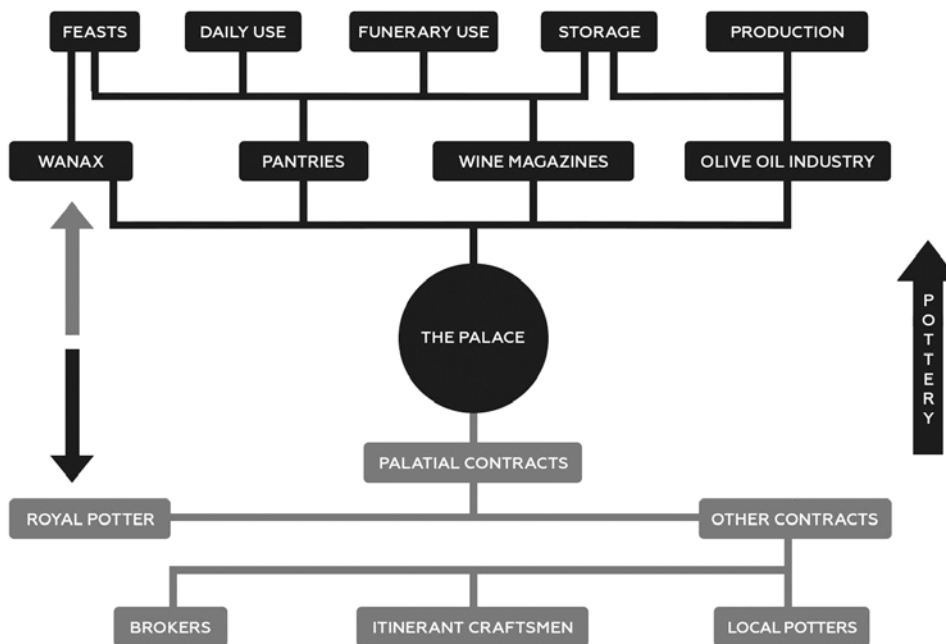


Fig. 4: Simplified schematic presentation of the pottery acquisition system in the Palace at Pylos. The special relationship of the ‘royal’ potter and the wanax is additionally marked by a double arrow.

The other potters listed on the tablets are the other parts of the pottery acquisition system. They were manufacturing most if not all of the other vessels from the palace (both fine and coarse ware) on the basis of palatial contracts, creating various kinds of obligations and dependences, possibly not always limited to the exchange of vessels for land or resources, as in the case of the ‘royal’ potter. Available sources suggest that at the moment of its destruction, the palace, except for the contract of *pi-ri-ta-wo*, had three other potters supplying its pantries. These were two craftsmen from *re-ka-ta-ne*, possibly responsible for supplying room 60 (LIS 2016, 510), and *qe-ta-ko*, whose products remain unknown. It is possible that all of them, including the ‘royal’ potter, were also responsible for other special tasks, including the production of stirrup jars for olive oil (HASKELL 1984) or of the decoration of exceptionally luxurious vessels. Both cases are examples of ceramics gaining a greater than normal value. As such their products can be considered to be prestigious items, which would indicate palatial interest and control over their workshop (PALAIMA 1997). As mentioned above, some of the contracted manufacturers could have come from regions outside the immediate vicinity of Pylos, or even from outside the kingdom (LIS 2016, 506–511). Ceramics of various shapes, fabrics and clays were kept in multiple warehouses in the palace, namely rooms 9, 19–22, 67–68, and 60. Possibly each one could even acquire vessels on its own (or rather through an official responsible for it), based on their own

needs and tasks and having different contracted providers (WHITELOW 2001). It is doubtful that the system was strictly controlled, centrally organized and regularly implemented.

The view presented here, that few producers were involved in the palatial economy, and that the rest of the regional industry was comprised of independent craftsman, fits well with the current vision of the Mycenaean economy as generally divided into two worlds of palatial and non-palatial systems. However, these two fundamental aspects of the Mycenaean political and economic landscape, the palace and rural communities, should not be seen as being in opposition. The palace worked rather like a stimulant, accelerating processes of hierarchisation that had already occurred in local societies. Evidence of the agency of the non-palatial societies, although few, cannot be underestimated. It is them who constituted the foundations and livelihoods of the system, and at the same time created the 'anti-system' of their own, of unknown economic and political power. While the central role of the palace is not the subject of the current discussion (in qualitative criterion), the existence of non-systemic structures and the complexity of the system itself raises many doubts and questions (DE FIDIO 2001).

DEPENDENCES

In this paragraph I will discuss in more detail some of the dependences between humans and things within the entanglement that have not yet been highlighted above. To start with the human-thing dependence, it is obvious to say that the palace inhabitants relied on their pottery. They needed it to store certain goods, but also to eat and drink. To a certain extent the range of used shapes also constrained them, allowing them only to prepare certain meals and serve them in certain ways (LIS 2006; HRUBY 2008). This relation had a special depth when it comes to feast participants and organizers, the latter being the palatial elite. Feast participants depended more on pottery than normal daily users. All, or most of them had to use kylikes, which during feasts were most probably gaining additional ritual and political meaning (HRUBY 2006; NAKASSIS 2012). It was also most probably meaningful what kind of a kylix one used – fine ware, coarse ware, decorated, undecorated or finally metal (BENDALL 2004, 122–123). This could mean that a person's status at the table relied on kylix type, making that social identification related to a material thing (HODDER 2012, 23–27). On the other hand, the feast organizers also depended on kylikes and other vessels which served the participants. The elite, and especially the *wanax*, had to organize a successful gathering to maintain the social order (PALAIMA 1997; GALATY 2007; NAKASSIS 2012). This success was connected also with the ceramics used during feasts, and with the workshops which produced them. The latter relation has also other dimensions as there were intermediaries of this dependency – potters. They were also dependent on both the pottery, as it was their selling product and hallmark, but also the means of its production (wheel, clay, kiln, fuel etc.) gathered in another 'thing' they relied on – a workshop. On the periphery of this entanglement there is also a dependence between the palace's administrators and their means of recording, as they needed them to organize the acquisition of goods (GALATY 2007). Most of the relations described above are purely materialistic and rather non-reflective (HODDER 2012, 18–21). As we take for granted that the plate on our table will work, 'Mycenaeans' probably did the same. However, returning to communal feasts and ceramics, this is the kind of dependency which they most likely actually thought through and reflected on. At this point, the material world penetrated the abstract set of human-human relations. Kylikes appear to be one of the very things that allowed cognition, formed social bonds and 'made the human possible', because he can think through it (GALATY 2010, 237; HODDER 2012, 36).

When it comes to the thing-thing relations and chain of interactions occurring, we can see that in the pottery assemblage from the palace almost all the kinds of connections outlined by Hodder (2012, 42–48). The process of production occurred in workshops, through the means already mentioned above. During the procurement of the material and then the manufacturing process, various interactions with means of production, the potter and his workers occur. A basic chain of operations which appeared during Mycenaean ceramic manufacturing included clay extraction, transport, formation, drying, firing, (sometimes) decoration (KNAPPETT 2001, 80–82). Then the ceramics had to be exchanged with the palace for some other things. Ceramics were used and maintained, which again involved various interactions with palatial administrators (acquisition, exchange, recording, organizing storage), service (moving around the complex, food preparation, industrial production, storage) or more general palace inhabitants (drinking, eating, pouring etc. – daily use). It always happened with relations to other things. Vessels were used to store other things, or to serve, pour, drink or eat them. Sometimes large storage vases were also repaired with lead seals (BLEGEN – RAWSON 1966), which caused further interactions with external or palatial craftsmen. Finally, the discarding of broken vessels was done by the personnel of the pottery storage rooms, which most probably caused also a report to the individual responsible for the acquisition of broken shapes (another interaction). In the end the entire assemblage gets discarded during the destruction of the palace and untying of the entanglement. The post-deposition process occurred heavily and transformed the pottery assemblage into the form and state known to us.

Within these sets of dependences, we clearly also have human-human relations, which have been partially already discussed above. Some of the key parts of the Mycenaean social system can be related to this entanglement. The potters cooperating with the palace relied on its rulers, who provided them with goods and privileges.¹⁷ The elite depended on potters, who were responsible for the delivery of certain vessels. Those were used in the palace on a daily basis (that is also crucial for the comfort of the inhabitants), but also on important occasions (communal feasts), when it was especially important to provide all the participants with proper shapes (KNAPPETT 2001). Feast participants were probably of all social classes, except slaves, and they relied on the elite in many ways (BENDALL 2004; THALER 2015). Focusing only on the pottery entanglement here, we can point out two basic dimensions of the dependence between the society and the elite, in relation to feasting. First, it was an important element of a redistribution system, and some part of the feast's role was probably to distribute food among the people. Secondly, feasts had a major social and political role being a chance to gain or lose position (NAKASSIS 2010). Thus, the lower classes of society, in this instance probably mostly people of the town of Pylos, were dependent on the *wanax*, who organized feasts. Also, the rest of the redistribution system can be related to the pottery entanglement, as rations for the palace personnel had to be distributed in something. On the other hand, the elite equally relied on the lower classes, as they were the foundation of the system, working and maintaining the state, thus their satisfaction was essential (DE FIDIO 2001).¹⁸

The dependency of the elite on the pottery required for feasts, took place via the 'royal' potter. At the moment of the palace destruction that was an individual named *pi-ri-ta-wo* (HRUBY 2006, 199). He was the one responsible for delivering thousands of eating and drink-

17 However, they most probably also worked on the market, thus being only partially dependent on the palace (see PARKINSON – NAKASSIS – GALATY 2013).

18 The dynamics of human-human relations within the discussed entanglement underwent multiple evolutions, strictly connected with the changes inside the palace and development of the Pylian state as described above.

ing vessels, especially kylikes. Taking this idea further – he depended on various means of production gathered in his manufacture. Generally, the same set of relations can be assigned to all the other potters and brokers working for the palace on the basis of palatial contracts. They were all intermediaries of the palace's inhabitants' dependence on pottery. Also, it was in their workshops that the vessels were gaining a particular set of affordances and constraints due to the tools, techniques and materials they used. The latter was briefly discussed above, as the difference between the use of illite in provincial workshops and kaolinite in Pylian manufactures seems to constitute the basis of a division between fine tableware and utilitarian coarse ware. Those two categories had affordances which differed greatly, as they were designed for completely different tasks (eating and drinking vs food preparation and storage). This division is sometimes blurred, proving that the set of factors defining the nature of a thing is wide (HODDER 2012, 39–52). Humans who were mostly entrapped within the entanglement were feast participants and palace inhabitants, including officials and service, together with contracted potters. They were all entrapped within a complex set of dependences and dependencies, as they relied on but also often constrained each other (WHITELAW 2001; GALATY 2007; 2010; NAKASSIS 2010).

Affordances and constraints of vessels from the palace are related to various other factors. First of all, specific shapes are designed for specific actions, thus the shape determines the pottery's capabilities (KNAPPETT 2005). Focusing on the kylikes from pantries 18–22 again, these are produced to allow a single person to drink a certain amount of liquid (depending on the size, which varied a lot). They were mass produced and often of inferior quality, manufactured very quickly, thus most probably only basic utility was important for humans. This certainly limited their functionality, as they probably could not be used to serve the most elite inhabitants of the palace (HRUBY 2014). Their quality generally depended on the clay and the potter's skill, together with other things which he had to use in production (wheel, kiln, fuel, etc.) (GALATY 2007).

In my opinion the entanglement can be described as concentrated (mainly due to the spatial limitation) and integrated. It had only a few key elements, and the most important and vital string between the palace and the 'royal' potter could be enough for the system to work even without other elements (HODDER 2012, 107).¹⁹ Surely, if the need appeared, *pi-ri-ta-wo* would be able to support the *wanax* also with some utilitarian vessels. He most probably could be also easily replaced by another producer if he was not able to fulfil his duties any more (GALATY 1999). However, the entanglement can still be described as weak, because it was based entirely on the existence and activity of the palace at Pylos. History proved that this institution was not going to last forever. When the complex collapsed around 1200 BC, the entanglement got untied at its very centre, as the situation of the local pottery industry and society changed completely. At this point the entanglement rapidly transformed because of the disappearance or serious change of earlier existing sets of dependences between certain things and humans (HODDER 2012, 99–101). Together with the entire system of pottery distribution it was replaced by a new entanglement of pottery exchange within LH IIIC Messenia. Presumably, some of the old relations within the ceramic industry and market were still valid, as the change of style was gradual (VITALE 2006).

19 Assuming that he produced the entire assemblage from pantries 18–22, that is over 70 % of the totality.

FITTINGNESS

The mechanisms behind the relations and similarities between various entanglements operating in a larger network of dependences are discussed by Hodder under the term 'fittingness' (see above, HODDER 2012, 115–137). The human tendency to seek coherence, which is the core of 'fittingness', often produces the additional form of tautness and strengthens the humans' entrapment within the web of dependences (HODDER 2012, 119–120, 135–137). It can be very well observed in the discussed entanglement and is the major element of two events that shaped it – moving the pottery production out of the acropolis and appointing the royal potter.

The decision to stop producing ceramics on the acropolis was most probably directly linked with the change of its function in the LH IIB/IIIA1 period. As it became the seat of the institution controlling the region, its residential character had to be much more formal, thus the pottery kiln did not fit there anymore. At the same time, it fit the situation to move the pottery acquisition inside the developing system of dependences between the palace and local elites, and in this way create its other part. At the early stages of building the state this was probably highly needed, as were every other means to strengthen the palace and the *wanax*. Thus, even if economically it could be more productive to develop its own production as a result of growing demand for pottery (especially that some of the infrastructure was already there, together with the very close, excellent clay sources of Ano Englianos) that was not an option. The pottery acquisition entanglement, nested in a wider palatial economy network, had to follow a general evolution of a growing set of dependences.

The 'royal' potter, as well as other 'royal' craftsmen, got his title not because it was necessary to finalize transaction, but to fit the elaborate context in which his products were used. In this particular case this means ritual feasts. He had to be 'royal', if he was supposed to assist the *wanax*, and be on top of the hierarchy of local regional producers, even if his assist was clearly materialistic and fairly simple (PALAIMA 1997; NAKASSIS 2012). It was the context in which his products were used that made the palace create a special kind of contract, so that everything and everybody associated with the king and the palace fit together. So, the main string of the entanglement was actually defined by this search for coherence. It seems that appointing the 'royal' potter, and to a lesser extent arranging other contracts, was also the only way in which the palace actually affected the regional pottery industry. Inspiring the development of a hierarchy among producers can be the way to mark one's own power and control, even if it was only superficial and illusory. That had to fit the entire system in which the palace was overseeing all the industries which were needed for its continuous activity (GALATY 2007).²⁰ The pottery was needed (feasts, olive oil industry, daily use etc.), thus even symbolic palatial control and involvement were necessary, so that (again) everything could fit together (KNAPPETT 2001). In a wider perspective, the material (delivery of goods, payment in rations or land) and abstract (contracts, titles, taxation) sets of dependences between the palace and the pottery producers were also part of a bigger picture of the Late Bronze Age Messenian and Mycenaean economy. The pottery acquisition entanglement often duplicated characteristics that can be assigned to those wider systems. Their dualistic nature, with the palatial and non-palatial sector is also visible, even if the proportions are different and the involvement of the administration very limited (BENNET – HALSTEAD 2014). The pottery

²⁰ Thus, for example, the production and exchange of obsidian tools, could be truly overlooked, as it was completely irrelevant for the palace (PARKINSON 2007).

industry of Messenia was mobilized by the palace,²¹ heterogeneous (as it originated from different changes of the Pylian state and the Mycenaean culture), complex (various forms of dependences and interactions), with various kinds of workshops (from mass manufactures to household kilns) and a mix of redistributive and market-based mechanisms.

The theory of entanglement can also be seen as a useful method of analysing the differences between various Mycenaean kingdoms and their economies. The pottery industry of the Argolid had its own entanglement, which developed in a different way and can be described with different characteristics, however it still had to fit the wider entanglements of the regional economy, the state of Mycenae, the Mycenaean economy and finally the entire Late Bronze Age palatial culture of Greece. It operated in the same wider context as the Messenian web of dependences discussed in this paper. This happens mostly because fittingness, a crucial part of every entanglement, is always nested in a particular context and hierarchical. It allows entities which fit at one level to further fit at other levels (HODDER 2012, 114–115).

CONCLUSIONS

During its long development, the palace at Pylos created, for various reasons, a system of pottery acquisition through different palatial contracts. The hypothesis stated at the very beginning of the paper has to be verified positively. The system developed often without direct control, its evolution accompanied more general changes occurring in the Mycenaean society and economy over the centuries, as it always had to fit them. Despite this, the palace controlled those parts of the regional pottery industry which were necessary to maintain the social system. The mechanisms of this control were delicate, and based on supporting the hierarchisation of producers, but the system was certainly organized, even if in many cases not centrally planned. Seen as an entanglement, it entrapped multiple humans and things within a wide set of dependences, which can be traced back to the very beginnings of the Pylian state in the period LH II. Its evolution from a local chiefdom to a bureaucratic palatial state dragged behind it the spread and growing complexity of the pottery acquisition entanglement. In its final form it included contracts of a diversified nature, with various producers, from high-ranking manufacturers and brokers to mobile craftsmen. The entanglement also tied the system of storing pottery in four organized pantries and consuming it in numerous ways. Ceramics were needed not only for the daily activity of the palace, including olive oil production, but also to organize massive communal feasts, which presumably helped the elite to maintain the social system of LH IIIB Mycenaean kingdoms.

21 In Messenia that process was most probably often only illusory, as demonstrated in the presented model. However, this is not a general tendency in the Mycenaean culture, as in the Argolid the situation seems to be utterly different, with the palace actually controlling the industry and supporting its development (see for example SCHALLIN 2002 and KLINTBERG 2011, also SHELMEKDINE 1999 for a wider study of regional differences in Mycenaean administration).

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