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Gold in the Linear B tablets

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*Introduction**

Gold is a heavy, rare material, but easy to be worked on due to its malleability, it has a shining colour and a high resistance to corrosion.¹ Accordingly, it has attracted women and men from time immemorial and served as a symbol of status, prestige, wealth, and power: gold was used widely for conspicuous consumption² and ostentatious elite (funerary)³ display – marking social and economic differentiation – in virtually all periods and all cultures across Europe, the eastern Mediterranean and Egypt from the Final Neolithic or the Early Bronze Age respectively onwards; and this holds also true for the Mycenaean palatial period, although there is much less archaeological evidence for gold in this period (c. 1400-1200 BC) than in the preceding Shaft Grave period (1700/1600-1500 BC).⁴ Along with material evidence and pictorial representations for objects made of this precious metal, first and foremost in wall paintings, the Mycenaean palatial period also provides written evidence for gold by means of Linear B records. This written evidence is the focus of the following paper.⁵

* For reading and editing the text and for making valuable suggestions for improvement I am much indebted to Marie-Louise Nosch, John Killen and, especially, Tom Palaima.

¹ On gold in various ancient cultures, see, e.g. DEGER-JALKOTZY & SCHINDEL 2009; MELLER *et al.* 2014. On gold in the (Aegean) Bronze Age, see, e.g. ARMBRUSTER 2013; BETANCOURT 1983.

² For a good introduction into the concept of conspicuous consumption that provides further references to this topic, see LEGARRA HERRERO 2019, 110-112.

³ On the symbolic value of gold in funerary contexts of Middle and Late Helladic Greece, see WHITTAKER 2006.

⁴ Good overviews about gold in the Mycenaean world: DAVIS 1983; ZAVADIL 2009.

⁵ For a short overview of the written evidence of the Mycenaean period, ZAVADIL 2009, 110-111.

The Linear B term for gold

The Greek word for gold, χρυσός, is a loan word from a Semitic source.⁶ In the Linear B corpus this word is attested several times, both as noun (*ku-ru-so /khrusos/* χρυσός, ‘gold,’ and various forms) and as an adjective (*ku-ru-so /khrussos/* < **khrus-yos*, ‘golden,’ and various forms).⁷ In tablets of the Pylian **Ta** series,⁸ which is arguably a list of precious items related to ceremonial feasting, gold is recorded as inlay for and part of chairs and a footstool respectively (**PY Ta 707, 714**) and, according to an interpretation recently suggested by Tom Palaima and Nicholas Blackwell, in the form of “two ceremonial gold-decorated bridle devices to control the animals during a sacrificial ritual” (**PY Ta 716**).⁹ In a tablet from Knossos, **KN K(1) 872**, *ku-ru-so* is used to specify (parts of) three Vapheio cups recorded by means of the logogram *218^{vas}.¹⁰ Since two rhyta in the shape of a bull’s head (*227^{vas}) used for libations are also listed the overall context of this tablet may be religious in nature. A clear religious context is provided by a tablet from Pylos, **PY Ae 303**, which lists ‘slaves’ of a priestess next to gold, which is modified as sacred (Gr. ἱερός), *ku-ru-so-jo i-je-ro-jo /khrusojo hijerojol*. The meaning of the phrase ‘sacred gold’ and the exact interpretation of the whole tablet, however, are under discussion.¹¹

The word for gold also forms part of the occupational designation *ku-ru-so-wo-ko /khrusoworgos/* *χρυσοφοργός, which designates the goldsmith.¹² As there is a separate term for the smith working with cop-

⁶ WITCZAK 1994, 55, with references to various etymological dictionaries.

⁷ CHADWICK 1998-1999, 32. For a compilation of all references, see *DMic* s.v.

⁸ BENDALL 2007, 241; *Docs*¹, 332-348; *Docs*², 496-502; PALMER 1969, 338-363; WEILHARTNER 2005, 139-140. An extended bibliography on the **PY Ta** series is provided by PALAIMA & BLACKWELL 2020.

⁹ PALAIMA & BLACKWELL 2020, 77. The two ritual bridle devices/chains are also described as “with gold wrapping or plating on this side and that and perhaps overlaid on toggles or cheek pieces” (p. 67), as “with golden laminate on both sides” (p. 69) or as “gold-leaf covered” (p. 77).

¹⁰ BENDALL 2007, 243; *Docs*¹, 330; PALMER 1969, 363. On the logograms *218^{vas} and *227^{vas} as well as on matchable vessels from the archaeological record, see VANDENABEELE & OLIVIER 1979, 200-205, 268-271.

¹¹ *Docs*¹, 166; KILLEN 1992, 378; PALMER 1969, 127, 278; ZURBACH 2017, 663-668. For a summary, see BENDALL 2007, 24. NB: As regards the interpretation of *ku-ru-so-jo i-je-ro-jo* no definite decision can be made on the question which term represents the noun and which the adjective. Therefore, *ku-ru-so-jo i-je-ro-jo* may be either “sacred gold” or “gold of the sanctuary”. The first interpretation, however, is generally preferred.

¹² BENDALL 2007, 242; LINDGREN 1973, 91. In Classical Greek a goldsmith is designated as χρυσοποιός, χρυσοτέκτων or χρυσοχόος, see DALFEN 2009, 25. A parallel Mycenaean term for a

per and tin, i.e., bronze (*ka-ke-u /khalkeus/ χαλκεύς*, ‘bronzesmith’), a goldsmith can be seen as a prominent craftsperson in Mycenaean society, who has specialised in working with a valuable material and in making prestige items, grave goods and ritual objects. Due to the fact that tablet **PY An 207** lists four goldsmiths – along with some other craftsmen such as potters, bow-makers or tailors/saddlers – as being present at a single place (*a-nu-wa*), there seem to be sufficient resources in gold at the disposal for the goldsmiths to work with on the verge of the destruction of the palace of Pylos.¹³

Another term involving gold may be attested on a tablet from Knossos, **KN K(1) 740**. As it seems, *ku-ru-su-**56 is the name for a globular, two-handled vessel with three feet (**207*^{VAS}). However, whether the first part of this term really refers to *ku-ru-so*, ‘gold’ is under discussion;¹⁴ there is no parallel for a compound consisting of an adjective denoting the material and a noun representing the name of the vessel. Nevertheless, given the fact that the use of *-su-* and the syllabogram **56* in *ku-ru-su-**56 might indicate a loan word, we cannot rule out such a compound. Other vessels (*di-pa*) listed in this tablet are clearly made of bronze. This, however, is indicated by the logogram for bronze: *di-pa* AES **214*^{VAS}+DI 30[.

*The Linear B logogram for gold (*141/AUR)*

Along with the term for gold, reference to this precious metal is made by means of a logogram. The logogram **141/AUR* is attested only in Pylos and it is used either as a sign to denote the raw material/pieces of scrap (**PY Jo 438**; on this tablet see below) – just as the logogram **140/AES* denotes bronze¹⁵ in the Pylian **Jn** series – or as an annotation to logograms of vessels denoting their material (**PY Tn 316; 996**) – again like the logogram for bronze.

The inventory tablet **PY Tn 996** records vessels of gold next to vessels of bronze, and vessels, the material of which is not specified, and are

highly skilled craftsperson who creates fine objects out of another precious material is *ku-wa-no-wo-ko /kuwanoworgos/ κυβανοργός*, ‘worker of blue glass (paste)’.

¹³ Like most of the tablets from the palace of Pylos, **An 207** belongs to the destruction horizon at the end of the palatial period c. 1200 BC.

¹⁴ BENDALL 2007, 243; *Docs*¹, 327; *Docs*², 558; VANDENABEELE & OLIVIER 1979, 245.

¹⁵ On the discussion whether this logogram denotes bronze or copper, see *Docs*¹, 351; SMITH 1992-1993, 172-175.

therefore likely to be of clay.¹⁶ In line 4 the logogram for gold specifies a single bowl without handles and a small pedestal (AUR *208^{VAS}) called *po-ka-ta-ma* – as opposed to another three vessels of this type made of bronze (AES *208^{VAS}). In addition, in line 3 the logogram for gold may appear after the entry of seven vessels made of bronze (AES *205^{VAS}) called *a-te-we*; the term **a-te-u* denotes a tall jug with one handle. Since these vessels are specified as being made of bronze, it seems possible – by analogy to the entries of the *po-ka-ta-ma*-vessels made of bronze and gold respectively listed in line 4 of this tablet – that the small scratch following this entry is part of the logogram for gold referring to another entry of *a-te-we* vessels, which, however, is not preserved.

Vessels made of gold are also recorded on the famous tablet of offerings **PY Tn 316**.¹⁷ This document lists 13 vessels as gifts (*do-ra /dōra/ δῶρα*) for gods by means of three different logograms modified by the logogram for gold: eight simple bowls without handles (AUR *213^{VAS}), three cups with two small handles identified as kylikes (AUR *215^{VAS}), and two handleless conical bowls on a high cylindrical stem resembling chalices (AUR *216^{VAS}), which are, just like the kylikes, without doubt drinking cups. These 13 gold vessels are to be offered within several processions to a number of female and male divine recipients located at various shrines in the sanctuary district of *pa-ki-ja-ne* located in the vicinity of Pylos (and likely including it).

Although the shape of the logogram *141/AUR (Fig. 1), which consists of an X with two semi-circles at the point of intersection and, optionally, a small horizontal stroke at the top of the sign, bears some resemblance to syllabogram *47, the suggestion of Krzysztof Witczak, who takes this logogram as a monogram (coined of the syllabic signs *47/? and *42/*wo* and representing the (not documented) native Greek term for gold later to be replaced by the Semitic loan word χρυσός), should be abandoned.¹⁸ Up to now, there is no convincing proposal for the origin of this logogram. The same holds true for the logogram denoting bronze (*140/

¹⁶ BENDALL 2007, 241; *Docs*¹, 338-339; *Docs*², 572. On the logograms for the vessels in question, see VANDENABEELE & OLIVIER 1979, 209 fig. 137 (*208^{VAS}) and 252-253 fig. 173 (*205^{VAS}). Along with the various vessels this tablet also records three bathtubs “for bathing” (*re-wo-te-re-jo* *225).

¹⁷ On tablet **PY Tn 316**, see BENDALL 2007, 22-23, 241-242 and WEILHARTNER 2013, 152-153 with further references. On the logograms, see VANDENABEELE & OLIVIER 1979, 183-185 fig. 116 (*213^{VAS}), 210-212 fig. 138 (*215^{VAS}), and 212-216 fig. 140 (*216^{VAS}). For arguments of a LH IIIIB date of the production of these vessels, see WEILHARTNER 2013, 163-167 figs. 6-12.

¹⁸ WITCZAK 1994, 56.

AES), which, on present evidence, is the only other metal recorded on Linear B tablets by means of a logogram.¹⁹

Ever since the decipherment of Linear B, sign *141/AUR has been viewed to denote gold,²⁰ and even before the decipherment Emmett Bennett wrote that “the small quantities with this ideogram in Kn01 [= PY Jo 438] would indicate a material of considerable intrinsic value.”²¹ Although far from certain, the small amounts of some entries (about 60 g) and the use of the logogram to indicate the material of vessels strongly speak in favour of this interpretation.

It was Louis Godart who proposed that two variant forms of this logogram, which were up to then viewed as graphic variants not reflecting any difference in meaning, represent in fact two different metals. He views variant A (Fig. 1a) as a reference to gold and the more simplified variant B (Fig. 1b) as a reference to silver.²² Subsequently, Anna Sacconi, and then Jean-Pierre Olivier and Maurizio Del Freo adopted this proposal: in their recently published text editions of the Pylos tablets they all differentiate between *141/AUR (for gold) and *141bis/ARG (for silver).²³ In turn, José Melena makes a similar differentiation and uses AURb for the more simplified variant, which he views to denote either silver or electrum (an alloy of gold).²⁴ Unfortunately, none of the authors pay to the resolutions of the Signary Committee as published in the proceedings of the Colloquium on Mycenaean Studies at Copenhagen, where it was suggested to suppress *141bis acknowledging the need for a further in-depth discussion.²⁵

¹⁹ See below, Fig. 6.

²⁰ See, e.g. FURUMARK 1953, 116 fig. 5 (Gold?); DEROY 1962, 38; *Docs*, 351.

²¹ BENNETT 1950, 218.

²² GODART 2009. See also, FRANCESCHETTI 2012, 252-253, 256-257.

²³ ARN 206-210, 393; *PTT*² IX, 239-240.

²⁴ *PT*³.

²⁵ *Aegean Scripts* 2015, 837: “Finally, after a presentation of the data by Dr. Vassilis Petrakis and considered discussion, it was suggested to reverse the decision of the 13th colloquium in Paris to create a variant transliteration for *141 (i.e. *141bis), since there could be actually three variant signs on the tablet [sc. PY Tn 316] not distributed by scribal hand. Possible scribal variation should not be given as an ideogram variant but rather discussed in interpretation or apparatus. It was therefore suggested to suppress *141bis. This suggestion, however, has been subsequently criticized by some CIPEM members. The Committee therefore acknowledges that there is need for a further in-depth discussion, and suggests that the next colloquium makes the final decision on *141 and *141bis.”



Fig. 1. Variant forms of the Linear B logogram for gold (AUR) at Pylos: a. AUR on **PY Tn 316v.3/5** (after ARN 208); b. AUR on **PY Tn 316v.6/9** (after ARN 208); c. AUR on **PY Tn 316.4** (after ARN 206); d. AUR on **PY Jo 438.23** (after ARN 39); e. AUR on **PY Jo 438.27** (after ARN 39); f. AUR on **PY Jo 438.15** (after ARN 39).

Looking at the variant forms in detail one notes that the variations are restricted to the top of the sign: the variants viewed by Godart as gold (Fig. 1a) have a short horizontal stroke at the top of the sign, whereas the variants viewed as silver do not have this stroke (Fig. 1b). The assumption that this minor variation should result in two different logograms referring to different materials has, to the best of my knowledge, no parallels within the whole Linear B corpus. Aside from that, some examples on **PY Tn 316** and most examples on **PY Jo 438** show the first variant with two additional small vertical strokes, which are added within the triangle (Fig. 1c).²⁶ Moreover, in the lower half of tablet **PY Jo 438** even more variants appear: a variant with only one additional small vertical stroke added within the triangle (Fig. 1d), a variant, where the horizontal stroke is clearly abbreviated (Fig. 1e), and a variant, which has the two additional small vertical strokes but is written seemingly without the horizontal stroke, as this sign (nearly) touches the line above (Fig. 1f).²⁷ This compilation of all variants – and especially the variant on **Jo 438** without the horizontal stroke (Fig. 1f) – seems to speak against the differentiation made by Godart. In addition, as Tom Palaima kindly reminds me, **Tn 316** is a tablet that was formatted and written hurriedly in an exceptionally complicated way on a tablet surface that was not conducive to writing perfect forms of individual signs. It has a good many instances where standard elements of signs are omitted (see, e.g., the various forms of the syllabogram *-qe-*) as the scribe rushed through writing the text.

As I tried to show in my paper at the last Mycenological colloquium, there is good evidence to view variant forms of logograms as a

²⁶ This led Petrakis at the last Mycenological colloquium at Copenhagen to consider the existence of actually three variants, see n. 25.

²⁷ In *PT II*, 49, the sign on line .15 is drawn without the two additional vertical strokes. However, the horizontal stroke is clearly missing. This is also true for the sign on line .17.

reflection of scribal idiosyncracies and/or chronological developments, and to consider them insignificant in terms of meaning.²⁸ To repeat one example, I refer to the logogram of wool, which documents a remarkable diversity of shapes.²⁹ The various parts of the logogram display significant differences in shape, size, and internal relation of proportions; some parts have even been omitted (Fig. 2a-c). Nevertheless, the morphological diversity of this sign does not imply any difference in meaning. And this statement holds true both for abstract and pictorial logograms.³⁰

Even more, there are clear examples of variant forms of logograms written by the same scribe on the same tablet. The various logograms of olive oil as written within the tablets **KN Fp(1) 1** and **Fp(1) 48** clearly demonstrate that variant forms written by one and the same scribe on the same tablet are mere graphic variants (Fig. 3a-b). Another example is provided by tablet **KN Ak(2) 616**, which shows two logograms for woman (Fig. 4a-b), the first with dots (indicating breasts), the second without dots (which is the more usual way how scribes drew this sign). As has been made clear by Emmett Bennett (for the logogram for olive oil/OLE) and John Chadwick respectively (for the logogram for woman/MUL) a long time ago, there is no valid basis to postulate any difference in meaning of the variants in question.³¹



Fig. 3. Variant forms of the Linear B logogram for olive oil (OLE) written by scribal Hand 138 at Knossos: a. OLE on **KN Fp(1) 1.5** (after *CoMIK I, 1*); b. OLE on **KN Fp(1) 1.9** (after *CoMIK I, 1*).



Fig. 4. Variant forms of the Linear B logogram for woman (MUL) written by scribal Hand 108 at Knossos: a. MUL on **KN Ak(2) 616.1** (after *CoMIK I, 227*); b. MUL on **KN Ak(2) 616.1** (after *CoMIK I, 227*).

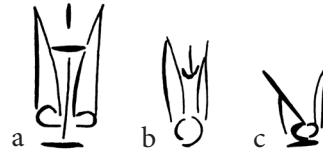


Fig. 2. Variant forms of the Linear B logogram for wool (LANA) at Knossos: a. LANA on **KN Dk(1) 5733** (after *CoMIK III, 123*); b. LANA on **KN Lc(1) 525** (after *CoMIK I, 190*); c. LANA on **KN Od(4) 485** (after *CoMIK I, 176*).

²⁸ WEILHARTNER 2017a.

²⁹ For details, see NOSCH 2007, 15-21; WEILHARTNER forthcoming.

³⁰ For more examples see WEILHARTNER 2017a.

³¹ BENNETT 1966, 17; CHADWICK 1963, 124-125.

As it seems, during the process of repeating logograms on the same tablet, scribes usually failed to produce exact images, either through carelessness or to save time or space. The scribes were not bound to strictly standardized sign-forms, as long as the text was comprehensible to those persons who were involved in the transactions recorded or who would consult it later. Therefore, for the time being, I would suggest to maintain the traditional interpretation of all variant forms of the sign *141/AUR as gold (Fig. 1). The omission of the small horizontal stroke may be due to carelessness or simplification caused, at times, by the fact that the logogram (nearly) touches the line above it. A similar minor variation is to be observed, for example, among the logograms for wool (Fig. 2) or woman (Fig. 5): some variants show a small horizontal stroke (albeit at the bottom of the sign and not at the top), some variants do not. As in the case with the logogram for gold, at times both variations appear among signs written by the same scribe (Fig. 5). Furthermore, a comparable minor variation is attested in the logogram for bronze, which consists of a straight, single, vertical line and a small second element of rectangular shape near the middle of the vertical stroke (Fig. 6). Within the **PY Jn** series the sign as drawn by scribal Hand 2 usually shows an additional horizontal stroke within the small rectangle, whereas scribal Hand 21, like his colleagues at the palace of Knossos, omits this option. However, on occasion both variants appear on the same tablet written by the same scribe (Fig. 6a-b). And this, again, seems to speak in favour of viewing all variant forms of *141 as referring to a single metal i.e. gold.

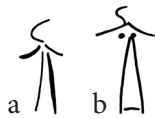


Fig. 5. Variant forms of the Linear B logogram for woman (MUL) written by scribal Hand 103 at Knossos: a. MUL on KN Ak(1) 610.1 (after *CoMIK* I, 224); b. MUL on KN Ak(1) 612.A (after *CoMIK* I, 225).

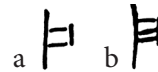


Fig. 6. Variant forms of the Linear B logogram for bronze (AES) written by scribal Hand 2 at Pylos: a. AES on PY Jn 478.2 (after ARN 18); b. AES on PY Jn 478.3 (after ARN 18)

PY Jo 438: Evidence for non-palatial acquisition of gold?

Archaeological evidence of highly valued prestige goods made of exotic materials in the Greek mainland leaves no doubt that Mycenaean kingdoms participated in the international networks of exchange of the

Late Bronze Age eastern Mediterranean and Egypt.³² Workshops dealing with precious materials are concentrated in palatial centres and written sources provide clear evidence for palatial craft specialists working with non-local materials such as ivory (*e-re-pa /elephas/ ἑλέφας*), blue glass (*ku-wa-no /kuwanos/ κύανος*) or gold (*ku-ru-so /khrusos/ χρυσός*).³³ This evidence hints at a strong desire for palatial centres to control access to long-distance exchange and production of prestige items made of exotic materials. The composite nature of some objects, combining different foreign materials on the same product, clearly reflects palatial elite self-definition and conspicuous consumption typical for palace-sponsored production. It has therefore been suggested that the palaces dominated, if not monopolised, commerce in high-valued materials that were not locally available assuming that they were “the only organizations with sufficient capital and political authority to acquire [...] high-value commodities and raw materials” from abroad.³⁴ On the basis of the location of workshops dealing with precious raw materials (which are documented only at palatial sites) on the entire Greek mainland as well as of the patterns of deposition of valuable items in tombs and settlements in the Argolid Sofia Voutsaki suggests that in the Mycenaean palatial period (LH III A2-LH III B) palatial centres controlled the production, circulation and consumption of prestige items made of ivory, faience, semi-precious stones and precious metals.³⁵ Consequently, she assumes that palatial centres exerted full control over external supplies. By contrast, Sue Sherratt takes a rather different position arguing (at the same conference) that palatial centres neither had the means nor the desire to exert overall control over long-distance exchange (which she envisions as organized along a series of interlinked and overlapping chains of longer-distance route networks involving different carriers and systems rather than operated by single carriers traversing the entire distance).³⁶

³² CLINE 1994; VAN WIJNGAARDEN 2016, 353-356.

³³ BENNET 2007, 200; BERNABÉ & LUJÁN 2008, 203-204, 211-213, 227; DE FIDIO 2001, 20.

³⁴ BENNET 2007, 191. See also p. 200.

³⁵ VOUTSAKI 2001; 2010.

³⁶ SHERRATT 2001, esp. 238. On the discussion whether the acquisition of exotic raw materials and finished prestige items was administered and controlled exclusively by palatial centres or whether local elites in various places were able to acquire imported materials and luxury products independently of the palace via independent merchants, see, e.g., DE FIDIO 2001, 20; VAN WIJNGAARDEN 2016, 349-350.

Gold, which is not readily available in the south Aegean and has to be imported from external sources, was clearly part of high-level diplomatic (gift)-exchange between rulers of different regions of the eastern Mediterranean and Egypt as is demonstrated by the Late Bronze Age Amarna letters.³⁷ Even though there is no direct evidence in these correspondences it seems highly likely that the rulers of Mycenaean kingdoms were among the recipients in such an exchange network. However, a page-shaped Linear B tablet from Pylos, **PY Jo 438**, on which 29 entries dealing with various amounts of gold are listed by means of the recurring logogram *AUR*,³⁸ seems to suggest that (raw/unworked) gold or scrap pieces of gold reached the Greek mainland also by ‘private’ trade mechanisms, driven by agents who were not attached to the palatial economic system. Although the poorly preserved heading line – which is lost apart from the last word, *ko-re-te* – does not make its purpose clear, the layout of the text, the parallels of the bronze requisition text **PY Jn 829**, the nominative case of the entries (whether place names, personal names, titles or a combination of them) and the regularity of the quantities point to an interpretation as a record of quantities of gold to be paid by local officials to the palace;³⁹ this tablet may be viewed as a “special taxation record.”⁴⁰ As it seems, the palatial administration takes a close interest in recording considerable quantities of gold, which range from *P* 3 [63 g] via *N* 1 [250 g] to *M* 1 [1 kg] and which add up to 5-6 kg of this material.⁴¹ These quantities are to be sent in the form of contributions by a large number of local officials – among them *ko-re-te*, *po-ro-ko-re-te*, *mo-ro-qa*, *qa-si-re-u*, and, probably, *du-ma*. Whether this happened in the context of raising funds to finance foreign mercenaries to assist in the defence of the kingdom, as suggested by John Chadwick,⁴² or on an

³⁷ CLINE 1994, 35; LEGARRA HERRERO 2019, 108; VAN WIJNGAARDEN 2016, 356.

³⁸ CHADWICK 1998-1999, 31-34.

³⁹ If (some of) the local officials are viewed as local representatives of the palace they would collect the taxes rather than pay them from their own holdings. On the differentiation between locally based officials and palatial appointees, see NAKASSIS 2013, 8-14 with further references.

⁴⁰ BENDALL 2007, 242; CHADWICK 1998-1999, 33; *Docs!*, 359. See also KILLEN 2006, 85 n. 18: “The evidence of **Jo 438**, however, which records contributions of gold by local officials to the palace, makes it clear that some gold at least was available in the districts.”

⁴¹ BENDALL 2007, 242; CHADWICK 1998-1999, 33. In this context it seems interesting to note that all gold objects from the Shaft Graves taken together weigh about 15kg, see ZAVADIL 2009, 99.

⁴² CHADWICK 1998-1999, 37.

other special yet unclear occasion,⁴³ this tablet provides strong positive evidence for the assumption that the local officials of the districts, which make up the territory controlled by the palace of Pylos, had gold at their disposal. Whatever the purpose for sending all this gold to the palace, it seems rather unlikely that this gold, which was sent to the palace as a compulsory levy, should have been originally obtained via the palace.

Further evidence for the view that local elites were able to acquire gold independently of the palace may be provided by the (comparatively frequent) deposition of gold items in chamber tombs of LH IIIA2-B date of the site Antheia/Ellinika.⁴⁴ On present evidence there is no straight-forward link between (the various settlements of) this site located near the eastern border of Messenia and the palace of Pylos.

In addition, investigations (by means of non-invasive measurements) on the composition of alloys of more than 400 gold artefacts of Messenia point to different origins of the gold used.⁴⁵ The great heterogeneity of the data speaks against the hypothesis of acquisition of gold from a single source but rather points to a multiplicity of sources, even for a single artefact. This, in turn, may be another argument for the view that gold arrived in Mycenaean Greece through different forms of exchange, taking place at the same time and overlapping with each other. Consequently, I doubt that the authorities of Mycenaean palaces had complete control over external trade in gold or internal distribution of gold. In any event, two tablets from Pylos (**PY An 35; Un 443**), which record *tu-ru-pte-ri-ja /struptēria/* cf. στρυπτήρια and are likely to reflect extraterritorial trade in alum (which is not available in Messenia) taking place independently of the palace, clearly point to the existence of multiple mechanisms of exchange.⁴⁶ On balance, allowing for archaeological as well as written data, I argue in favour for a non-palatial sector acting not only in regional economic affairs of Mycenaean polities⁴⁷ but also in the mechanisms of external exchange and acquisition of high-valued exotic materials.

⁴³ In any event, the total quantity of gold recorded on this tablet seems to be too high to be viewed as a transaction to be delivered on a regular basis, see CHADWICK 1998-1999, 33.

⁴⁴ ZAVADIL 2013, 274-287.

⁴⁵ GIGANTE & RIDOLFI 2020, 546-548.

⁴⁶ On these tablets, see BENNET 2007, 201; HALSTEAD 1992, 71 f. See also WEILHARTNER 2017b, 206 with further references.

⁴⁷ For the non-palatial sector of Mycenaean economy, see HALSTEAD 1992 and various papers in VOUTSAKI & KILLEN 2001. For a summary of this topic, see BENNET 2007, 195-196. See also WEILHARTNER 2017b, 203-207, 219 fig. 1 with further references.

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