Mycenaean *a-re-se-si* and Homeric ἄλεισον Revisited

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1. Introduction

- 1.1. The word *a-re-se-si* occurs only once in the Linear B tablets, on PY Ub 1318:¹
- .1 au-ke-i-ja-te-we, ka-tu-re-wi-ja-i di-pte-ra 4 [•-•-•] di-pte-ra 2 au-ke-i-ja-te-we, o-ka, di-pte-ra[
- .3 me-ti-ja-no, to-pa, ru-de-a₂, di-pte-ra 1 a-re-se-si, e-ru-ta-ra, di-pte-ra 3 wo-di-je-ja, pe-di-ra 2
- .4 we-e-wi-ja , di-pte-ra , 10 wi-ri-no , we-ru-ma-ta , ti-ri-ṣi , ze-u-ke-si l
- .5 wi-ri-no, pe-di-ro, e-ma-ta 4 e-ra-pe-ja, e-pi-u-ru-te-we, E 2
- .6 a-pe-i-ja, u-po, ka-ro, we-[$\;\;$]-ja l $\;\;$ u-po, we-e-wi-ja, e-ra-pe-jaE l
- .7 mu-te-we, we-re-ne-ja, ku[]pe-re 1 mu-te-we, di-pte-ra, a₃-za, pe-di-ro-i 1
- .8 vacat
- .9 vacat

The tablet registers deliveries of leather and hides of different animals to various male and female workers. They are intended for the production of a number of leather objects ranging from parts of the equipment of draft animals (ka-tu-re-wi-ja-i

¹ Text according to E. L. Bennett Jr. et al., *The Palace of Nestor at Pylos in Westem Messenia* IV *The Inscribed Documents* [draft version, November 2013 = https://www.academia.edu/5788888/DRAFT_VERSION_NOT_DEFINI TIVE_Bennett_Melena_Olivier_Firth_Palaima_The_Palace_of_Nestor_at _Pylos_in_Western_Messenia_Volume_IV_The_Inscribed_Documents].

/kanthulēwijāhi/ and *o-pi-de-so-mo ka-tu-ro2* /opidesmōi kanthuljōn/)² and various types of cords and ropes (*o-ka* /hokhāi/, *wo-ro-ma-ta* /wlōmata/, *to-pa ru-de-a2* /storpha rudeha/) to pieces of garment (*e-pi-u-ru-te-we* /epiwrūntēwei/, *u-po ka-ro* /hupokairōi/ and *u-po we-e-wi-ja* /hupowehēwijāi/) and sandals (*pe-di-ra* πέδīλα).³ It is, therefore, expected that *a-re-se-si* is also a leather object. Morphologically, *a-re-se-si* must be a dative plural with a final value, expressing the object to be produced with the three pieces of red leather (*e-ru-ta-ra di-pte-ra ἐρυθραὶ* διφθέραι) assigned probably to the same worker (*me-ti-ja-no*) mentioned at the beginning of line 3, in the same way, e.g., as the datives *ka-tu-re-wi-ja-i* and *pe-di-ro-i* in lines 1 and 7 record the purpose of the allocated materials.

1.2. The only possible connection of *a-re-se-si* to a Greek word was put forward by Ruijgh,⁴ who noted the similarity to Homeric ἄλεισον, a thematic neuter noun meaning 'cup, goblet'.⁵ The Mycenaean word would thus be the dative plural /aleise(s)si/ of a neuter *s*-stem */aleisos/. Ruijgh proposed a meaning 'sack', and in order to reconcile the meaning of the Homeric word with the fact that Myc. *a-re-se-si* must refer to a leather object, he suggested that ἄλεισον must have come to refer to a cup in the shape of a sack, in the same way as κάναστρον, originally 'basket', came to mean 'basket-shaped

² For the interpretation of dat. pl. *ka-tu-re-wi-ja-i* /kanthulēwijāhi/ 'saddlebags', as well as the adjective *ka-tu-ro*₂ /kanthuljōn/ in relation to κανθήλια 'panniers at the side of a pack-saddle' see F. Aura Jorro, *Diccionario micénico* I—II (Madrid 1985–1993) s.vv. [hereafter *DMic*.].

³ For details about the interpretation of all these terms and their possible connections to words attested in first-millennium Greek, see *DMic.* s.vv. and A. Bernabé and E. R. Luján, "Documenti relativi a pelle e manufatti in pelle," in M. Perna et al. (eds.), *Manuale di Epigrafia Micenea* II (Padua 2017) 567–587, at 572–575, with further references.

⁴ C. J. Ruijgh, Études sur la grammaire et le vocabulaire du grec mycénien (Amsterdam 1967) 356 (§316).

⁵ For older interpretations, which are no longer tenable, see *DMic.* s.v.

vessel'⁶ and modern archaeologists use the word ἀσκός 'skin made into a bag, winesack' to refer to a 'sack-shaped vessel'.⁷ Ruijgh's proposal has been accepted without further discussion, and similar explanations are found in the scholarly literature. Aura Jorro, elaborating on Ruijgh's proposal, added the meaning 'wineskin' (Spanish *odre*),⁸ which would fit well with the fact that this must be a leather container.⁹

1.3. It is my intention in this paper to carry out a comprehensive revision and reappraisal of the occurrences of Homeric ἄλεισον, as well as of the archaeological evidence of leather vessels, in order to advance a somewhat different proposal for the interpretation of Myc. *a-re-se-si*.

2. ἄλεισον in Homer and beyond

- 2.1. The word ἄλεισον occurs twice in the *Iliad* and seven times in the *Odyssey*: 10
- (a) Nestor arrives in Peleus' palace and finds him performing a sacrifice (*Il.* 11.772–775):

γέρων δ' iππηλάτα Πηλεύς πίονα μηρία καῖε βοὸς Διὶ τερπικεραύνω αὐλῆς ἐν χόρτω· ἔχε δὲ χρύσειον ἄλεισον, σπένδων αἴθοπα οἶνον ἐπ' αἰθομένοις ἱεροῖσιν· The old man, Peleus, driver of horses, Was burning greasy cattle thighs for Zeus, who rejoices in thunder, In the court of the palace. He was holding a golden cup And pouring red wine on the burning offerings.

⁶ See LSJ s.v.

⁷ Alternatively, Ruijgh, *Études* 356 n.18, envisaged a semantic change 'wine sack' > 'wine cup'.

⁸ DMic. s.v.

⁹ For a global reconsideration of the use of wineskins in Antiquity and its advantages and disadvantages see B. Wills and A. Watts, "Why Wineskins? The Exploration of the Relationship between Wine and Skin Containers," in S. Harris et al. (eds.), *Why Leather? The Material and Cultural Dimensions of Leather* (Leiden 2014) 123–134.

¹⁰ Text: M. West, *Homerus. Ilias* I–II (Stuttgart/Leipzig//Munich/Leipzig 1998–2000), and *Homerus. Odyssea* (Berlin/Boston 2017).

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(b) Priam tries to obtain Hermes' favor by offering him an ἄλεισον (*Il.* 24.429–431):

"ἀλλ' ἄγε δὴ τόδε δέξαι ἐμέο πάρα καλὸν ἄλεισον, αὐτόν τε ῥῦσαι, πέμψον δέ με σύν γε θεοῖσιν, ὄφρά κεν ἐς κλισίην Πηληϊάδεω ἀφίκωμαι."
"Do accept this beautiful cup from me, And protect me, and guide me with the gods So that I can reach the tent of the son of Peleus."

(c) Pisistratos, Nestor's son, invites Telemachos and Mentor to join in the banquet (*Od.* 3.43–51):

"εὔχεο νῦν, ὧ ξεῖνε, Ποσειδάωνι ἄνακτι· τοῦ γὰρ καὶ δαίτης ἠντήσατε δεῦρο μολόντες. αὐτὰρ ἐπὴν σπείσης τε καὶ εὕξεαι, ἣ θέμις ἐστίν, δὸς καὶ τούτω ἔπειτα δέπας μελιηδέος οἴνου σπείσαι, έπεὶ καὶ τοῦτον ὀΐομαι ἀθανάτοισιν εύχεσθαι · πάντες δὲ θεῶν χατέουσ' ἄνθρωποι. άλλὰ νεώτερός ἐστιν, ὁμηλικίη δ' ἐμοὶ αὐτῷ· τοὔνεκα σοὶ προτέρω δώσω χρύσειον ἄλεισον." ώς είπων έν χερσὶ τίθει δέπας ἡδέος οἴνου: χαίρε δ' Άθηναίη πεπνυμένω ἀνδρὶ δικαίω, ούνεκα οἱ προτέρη δῶκε χρύσειον ἄλεισον· "Now pray, foreigner, to lord Poseidon, Since in a banquet for him you are now going to take part. And after making a libation and praying, as the law is, Give the cup of sweetest wine also to this man To make a libation, for I think he will also pray To the inmortals: all men are in need of the gods. But he is younger, he is about my age, Therefore I will give the golden cup to you first." Thus he said and he put the cup of sweet wine in his hands. Athena rejoiced with this wise fair man, For he had given the golden cup to her first.

(d) Menelaos is providing Telemachos with an account of his past adventures and asks him to stay longer at his place (*Od.* 4.587–592):

"ἀλλ' ἄγε νῦν ἐπίμεινον ἐνὶ μεγάροισιν ἐμοῖσιν, ὅφρα κεν ἑνδεκάτη τε δυωδεκάτη τε γένηται καὶ τότε σ' εὖ πέμψω, δώσω δέ τοι ἀγλαὰ δῶρα, τρεῖς ἵππους καὶ δίφρον ἐύξοον · αὐτὰρ ἔπειτα

δώσω καλὸν ἄλεισον, ἵνα σπένδησθα θεοῖσιν ἀθανάτοις ἐμέθεν μεμνημένος ἤματα πάντα."
"Do stay now in my palace
Until the eleventh or twelfth day arrives.
I will let you go then and I will give you precious gifts,
Three horses and a nicely worked chariot, and then
I will give you a beautiful cup to make libations to the immortal Gods, remembering me every day."

(e) Alcinous summons his servant Arete to bring a number of presents for Odysseus (*Od.* 8.430–432):

"καί οἱ ἐγὼ τόδ' ἄλεισον ἐμὸν περικαλλὲς ὀπάσσω, χρύσεον, ὄφρ' ἐμέθεν μεμνημένος ἤματα πάντα σπένδη ἐνὶ μεγάρῳ Διί τ' ἄλλοισίν τε θεοῖσιν."
"I will also give him this splendid golden cup Of mine, so that, remembering me every day, He makes libations in his palace to Zeus and the other gods."

(f) Menelaos assures Telemachos that he will be provided with

(f) Menelaos assures Telemachos that he will be provided with precious gifts on leaving (*Od.* 15.82–85):

"οὐδέ τις ἥμεας αὔτως ἀππέμψει, δώσει δε τι ἕν γε φέρεσθαι, ἢε τινα τριπόδων εὐχάλκων ἢε λεβήτων, ἢε δύ' ἡμιόνους, ἢε χρύσειον ἄλεισον."
"No one will let us
Part like this, but will provide us with something to take with us, Either a tripod of excellent bronze or a cauldron Or two mules or a golden cup."

(g) Eumeneus' mother steals three cups while leaving her husband's palace (*Od.* 15.466–470):

"ηὖρε δ' ἐνὶ προδόμῳ ἠμὲν δέπα' ἠδὲ τραπέζας ἀνδρῶν δαιτυμόνων, οί μεο πατέρ' ἀμφεπένοντο οἱ μὲν ἄρ' ἐς θῶκον πρόμολον δήμοιό τε φῆμιν, ἣ δ' αἶψα τρί' ἄλεισα κατακρύψασ' ὑπὸ κόλπῳ ἔκφερεν."

"She found in the fore-chamber cups and tables Of some guests who were entertained by my father. They had gone out to the seat of the people's assembly And she quickly hid three cups in her lap." (h) Odysseus starts killing the suitors (*Od.* 22.8–12):

ἡ, καὶ ἐπ' Ἀντινόῳ ἰθύνετο πικρὸν ὀϊστόν. ἤτοι ὁ καλὸν ἄλεισον ἀναιρήσεσθαι ἔμελλε, χρύσεον ἄμφωτον, καὶ δὴ μετὰ χερσὶν ἐνώμα, ὄφρα πίοι οἴνοιο· φόνος δέ οἱ οὐκ ἐνὶ θυμῷ μέμβλετο.

Thus he said, and directed a sharp arrow to Antinous. He was about to raise the beautiful golden Two-handled cup, holding it with his hands To drink wine. Death was indeed not in his thoughts.

The majority of the occurrences of ἄλεισον in Homer are in religious contexts, specifically in ritual banquets and feasts (*Il.* 11.774, *Od.* 3.50–53), when it is used for libations, as explicitly stated also at *Od.* 4.591 and 8.430. No information about the uses of the ἄλεισον is provided in two passages (*Od.* 15.85 and 469), while at *Il.* 24.429 Priam is trying to persuade Hermes, disguised as a young prince, to help him by offering an ἄλεισον. The only apparent exception would be the suitors' banquet, but the ritual context is assured by the libations referred to in the previous book, at *Od.* 21.270–274 (οί δ' ἐπεὶ οὖν σπεῖσάν τε πίον θ', "after they made libations and drank") and Antinous' words, reported by Odysseus, urging the suitors "to leave the bow and turn to the gods" (νῦν μὲν παῦσαι τόξον, ἐπιτρέψαι δὲ θεοῖσιν, *Od.* 21.279).

As for the actual descriptions of this kind of cup, it is said in several passages that it was made of gold, which fits well with its ritual use, and Od. 22.9–10 adds the information that it could have two handles (ἄμφωτον). Very interestingly, the word δέπας is used as a synonym for ἄλεισον in several passages: at Od. 3.41, 46, and 51, the very same cup referred to as ἄλεισον at 3.50 and 53 is called δέπας, and then δέπας ἀμφικύπελλον at 3.63, when Mentor-Athena passes it on to Telemachos. Similarly, the cup that Antinous is about to drink from is called ἄλεισον at Od. 22.9, but δέπας at 22.17 when it is falling from his hands. Od. 15.466–469 further reinforces the idea that ἄλεισον must be a type of δέπας. This fact was discussed by ancient lexicographers, as we shall see (§2.3).

2.2. Masculine ἄλεισος appears to occur in Aristophanes, in a parody of Aeschylus' style (Ar. fr.634 K.-A. = *Et.Magn.* 61.17):

γίγνωσκε τὸν ἄλεισόν <τε> καὶ τὰ γράμματα.

Be aware of the cup and the letters (on it).

Even if neither ἄλεισον nor ἄλεισος is attested in the extant plays of Aeschylus, there is no doubt that Aristophanes mentioned it as one of the (real or supposed) Homerisms in Aeschylus' works, and therefore it cannot be considered a current word in the language of the time.

2.3. After Homer, ἄλεισον occurs only in learned lexicographic discussions. Athenaeus mentions the word several times. ¹¹ In two passages, he clearly states that ἄλεισον, δέπας, and κύπελλον refer to the same type of vessel: ¹²

άλεισον καὶ δέπας τὸ αὐτό (783Α)

κύπελλον. τοῦτο πότερόν ἐστιν ταὐτὸν τῷ ἀλείσῷ καὶ τῷ δέπᾳ <καὶ μόνον> ὀνόματι διαλλάσσει (482Ε)

In spite of this initial statement, Athenaeus does then introduce a difference between ἄλεισον and δέπας, which were two-handled, and κύπελλον, which was not: 13

η διάφορος ην ὁ τύπος καὶ οὐχ ώσπερ τὸ δέπας καὶ τὸ ἄλεισον ἀμφικύπελλον, οὕτω [δὲ] καὶ τοῦτο, κυφὸν δὲ μόνον

In contrast, ἄλεισον and κισσύβιον (the kind of wooden drinking cup used by the Cyclops at *Od.* 9.346) must be different and, therefore, in Athenaeus' view (477C) Callimachus was wrong when using them as synonyms (fr.178.11–14 Pf.):

Καλλίμαχος δ' ἔοικε διαμαρτάνειν ἐν τῷ συγχρήσει τῶν ὀνομάτων, λέγων ἐπὶ τοῦ οἰκείου ξένου τοῦ παρὰ τῷ Ἀθηναίῳ Πόλλιδι

¹¹ Ath. 12E, 189F, 783A, 477C, 479C, 480F, 482E.

¹² Text: G. Kaibel, Athenaei Naucratitae Dipnosophistarum Libri XV (Leipzig 1897–1990).

 $^{^{13}}$ ἀμφικύπελλος may refer to a 'double cup' in Homer, but, since Aristarchus, it was interpreted as meaning 'two-handled' (see LSJ and DGE s.v.). The latter makes more sense in Athenaeus' discussion, especially when he further states: ἢ ἀμφικύπελλα οἷον ἀμφίκυρτα ἀπὸ τῶν ἄτων, διὰ τὸ τοιαῦτα εἶναι τῆ κατασκευῆ (482F).

συνεστιασθέντος αὐτῷ·

καὶ γὰρ ὁ Θρηικίην μὲν ἀνήνατο χανδὸν ἄμυστιν ζωροποτεῖν, ὀλίγῳ δ' ἥδετο κισσυβίῳ. τῷ μὲν ἐγὼ τόδ' ἔλεξα περιστείχοντος ἀλείσου τὸ τρίτον.

ὁ γὰρ λέγων ἄλεισον τὸ αὐτὸ καὶ κισσύβιον τὴν ἀκριβῆ θέσιν τῶν ὀνομάτων οὐ διαφυλάττει. 14

From the information provided by Athenaeus about the use of the word by the historian Marsyas to refer to the hip socket, we can guess that, in Marsyas' time (3rd cent. B.C.), $\alpha\lambda\epsilon$ ($\alpha\lambda\epsilon$) was considered a kind of cup (*FGrHist* 135–6 F 23 = Ath. 479C):

Μαρσύας δέ φησι τὸ ἐν τῷ ἰσχίῳ ὀστοῦν καλεῖσθαι ἄλεισον καὶ κύλικα

This also fits well with the information from Hermonax's Cretan glossary provided by Athenaeus (480F):

Έρμῶναξ δ' ἐν Συνωνύμοις οὕτως γράφει· "ἄλεισον, ποτήριον, κύπελλον, ἄμφωτις, σκύφος, κύλιξ, κώθων, καρχήσιον, φιάλη."

Summing up: for Athenaeus, based on the discussion of the Homeric evidence and the learned tradition, $\ddot{\alpha}\lambda\epsilon\iota\sigma\sigma\nu$ was a type of two-handled drinking cup and it was synonymous with $\delta\epsilon\pi\alpha\varsigma$.

- 3. Cups and leather: Homeric ἄλεισον and Mycenaean a-re-se-si
- 3.1. From analysing the occurrences of ἄλεισον in the Homeric poems and elsewhere, it seems clear that the word referred to a certain kind of cup, which could be made of gold and, at least sometimes, had handles. As we have seen, in the Homeric poems it could be interchanged with $\delta έπας$ and the ancient lexicographers assumed, therefore, that it was synonymous with it. However, we should be cautious when projecting this identification back to Mycenaean times, since such flexibility in the use of terms was acceptable in archaic Greek epic, while

¹⁴ Athenaeus' quotation differs from other sources. Pfeiffer's text: καὶ γὰρ ὁ Θρηϊκίην μὲν ἀπέστυγε χανδὸν ἄμυστιν οἰνοποτεῖν, ὀλίγῳ δ' ἥδετο κισσυβίῳ. τῷ μὲν ἐγὼ τάδ' ἔλεξα περιστείχοντος ἀλείσου τὸ τρίτον, εὖτ' ἐδάην οὔνομα καὶ γενεήν·

Mycenaean scribes used this kind of technical vocabulary in a more precise and nuanced way. In fact, the word di-pa /dipas/, which seems to correspond to Hom. δέπας, occurs several times in the Linear B tablets and corresponds to logogram *202^{VAS}. It is, in fact, a kind of jar that can lack handles or else have three or four handles. It must, therefore, be different from an */aleisos/.

Coming back to the interpretation of *a-re-se-si*, the context of the PY Ub 1318 tablet points undoubtedly to a leather object that *me-ti-ja-no* (possibly the personal name /mēstiānōr/)¹⁶ had to manufacture with the three hides that were handed to him. In addition to the *a-re-se-si*, he was also responsible for the production of a number of *to-pa ru-de-a*₂ (probably /storp^ha rudeha/),¹⁷ i.e. a certain kind of leather ropes, with one more hide.¹⁸

If we now bring together the Homeric and Mycenaean data, why should we not think of leather cups or goblets? In the following paragraphs, I will try to argue in favor of this possibility.¹⁹

17 For the meaning of these two words see *DMic*. s.vv. The interpretation of ru-de-a₂ in connection to Hesychius' gloss ρυδεῦ· περιπλέκεται was put forward by J. L. Melena, review of M. Ventris and J. Chadwick, *Documents in Mycenaean Greek*² (1973), *Minos* 15 [1976] 233–239, at 238, and further developed by E. Peruzzi, "A Mycenaean Antecedent for rudens," Minos 16 (1977) 228–235. As for to-pa /storpha/, see Bernabé and Luján, in Manuale di Epigrafia Micenea 574.

¹⁸ See Cato *Agr.*135.3–5 for the use of fresh hides, tanned, rubbed with fat, and then twisted, to produce cables for wine presses, as pointed out by C. Van Driel-Murray, "Tanning and Leather," in J. P. Oleson (ed.), *The Oxford Handbook of Engineering and Technology in the Classical World* (Oxford 2008) 483–495, at 487.

¹⁹ The only reference to this possibility that I have found is S. Sherrat, "Feasting in Homeric Epic," *Hesperia* 73 (2004) 301–337, at 318 n.66. She states that given that *a-re-se-si* occurs on PY Ub 1318 preceded by the word *di-pte-ra*, it must be a leather object. The fact that *a-re-se-si* occurs after *di-pte-ra* is, in fact, not relevant, since, given the structure of the tablet (see §1.1

¹⁵ See *DMic.* s.v., with further references.

¹⁶ See DMic. s.v.

3.2. Leather vessels are known since prehistory and, in fact, they are still in use;²⁰ suffice it to recall, for instance, the usual sets for dice games. In fact, as Gordon Childe remarked long ago.21 some of the oldest designs in prehistoric ceramics very likely imitate previous leather models, in the same way as some of them reproduce basket decoration and, later on, would imitate metal vases. This observation has also been made for Aegean prehistory, specifically for ceramic vessels at Neolithic Knossos,²² and it is proved by the shape of certain vases from Neolithic Cyprus, such as those classified as "fantastic vases" in the Cesnola collection at the Metropolitan Museum of New York— the shape of some of them clearly corresponds to leather or skin bags and containers.²³ The influence of basketry and leatherwork on the forms of certain vessels in Early, Middle, and Late Bronze Age Cyprus is also easily discernable,²⁴ with a number of vases showing "strap-like handles, connected to the neck of the base by a double collar."25

above), what matters is that it is followed by *e-ru-ta-ra di-pte-ra* and the numeral 3. Sherrat goes on to state that an ἄλεισον must have originally been a leather mug or wineskin and refers this idea to Ruijgh and Aura Jorro. However, the extremely interesting possibility of a leather mug had not been put forward by those scholars.

- ²⁰ See K. Grömer, G. Russ-Popa, and K. Saliari, "Products of Animal Skin from Antiquity to the Medieval Period," *Annalen des Naturhistorischen Museums Wien (Serie A)* 119 (2017) 69–93, for a recent overview of the use of leather in Antiquity and the Middle Ages, esp. 74–75 and 83–84 for household objects, among which are drinking vessels and flasks. R. J. Forbes, *Studies in Ancient Technology* V (Leiden 1957) 15–16 and 23, mentions Neolithic leather bowls and beakers, as well as leather vessels dating back to pre-dynastic Nubia.
- ²¹ V. G. Childe, *The Dawn of Civilization*⁶ (London 1957) 39, 194, 266, 267, 287, 290, 293, 303, 305, 324.
- ²² P. D. Tomkins, *The Production, Circulation and Comsumption of Ceramic Vessels at Early Neolithic Knossos, Crete* (diss. Univ. Sheffield 2001) 38 and 415–418.
- ²³ J. L. Myres, Handbook of the Cesnola Collection of Antiquities from Cyprus (New York 1914) 15–16. See also V. Karageorgis, Ancient Art from Cyprus. The Cesnola Collection in The Metropolitan Museum of Art (New York 2000) 28.
 - ²⁴ Myres, Handbook of the Cesnola Collection 17–18, 25–26, 32, 36–37.
 - ²⁵ Myres, Handbook of the Cesnola Collection 39. There were also miniature

Unfortunately, leather is a highly perishable material and only in some lucky circumstances have certain leather objects from Prehistory survived.²⁶ In fact, in the European and Mediterranean areas, leather becomes more frequent in archaeological findings only from Roman times onwards, owing to a change in the way that it was processed by using vegetal tanning.²⁷ Our direct knowledge of leather, especially in the Aegean area, is therefore quite limited. This may lead to an underestimation of its use and importance, even if it has been stated that leather was "antiquity's plastic."²⁸

We know, however, that leather work was highly developed in the Aegean area,²⁹ as proved by the Linear B tablets themselves, from which we can retrieve extremely interesting information about this craft.³⁰ Traces of organic materials, among which is a leather vessel, have been found in the fill of the rooms $\Delta 18a$ and $\Delta 18b$ in sector Δ of the settlement at Akrotiri in Thera in the

vases with this type of handle (Myres, Handbook of the Cesnola Collection 40).

- ²⁶ For a general view of the problems of dealing with leather in archaeology see S. Harris, "Introduction. Leather in Archaeology: Between Material Properties, Materiality and Technological Choices," in S. Harris et al. (eds.), Why Leather? The Material and Cultural Dimensions of Leather (Leiden 2014) 9–21.
- ²⁷ Harris, in *Why Leather?* 12, with further references; also Van Driel-Murray, in *The Oxford Handbook of Engineering* 483–484 and 487. For a recent, comprehensive review of the use of vegetable tannins over time and their geographical distribution see L. Falcão and M. E. M. Araújo, "Vegetable Tannins used in the Manufacture of Historical Leathers," *Molecules* 23.5, 1081 (2018) (http://www.mdpi.com/1420-3049/23/5/1081).
- ²⁸ "Leather is antiquity's plastic, supplying a versatile, supple, hardwearing and waterproof material": Van Driel-Murray, in *The Oxford Handbook of Engineering* 48.
- 29 R. D. G. Evely, *Minoan Crafts: Tools and Techniques* II (Jonsered 2000) 522–527, has gathered the (quite scarse) information about leatherwork in Minoan times with reference to the Egyptian parallels, and a catalogue of artifacts that may be related to leatherwork.
- ³⁰ For a recent, comprehensive survey of the information about leatherwork provided by the Linear B tablets see Bernabé and Luján, in *Manuale di Epigrafia Micenea* 567–587.

Late Cycladic I period.³¹ And, even if it is much later in time, it is worth mentioning that, in one of the Macedonian burials at Vergina, the iron lid of a leather vessel has also been found.³²

One of the possibilities of making leather into vessels was moulding. This involved soaking leather in boiling water and and then putting it in or on a mould. The leather was then left to dry, so that it acquired the desired shape. This technique may have been known in Minoan times,³³ and it was probably in use in Egypt about 1600 B.C., as certain solid objects that have the shape of clay pots have been found in Mostagedda graves—they have been interpreted as cores for moulding leather vessels.³⁴

3.3. Therefore, if we can assume that leather vessels were produced and circulated in the Aegean area during the Bronze Age, and the occurrences of Homeric ἄλεισον prove that it was a type of cup, it is very likely that Myc. a-re-se-si (dative plural of an s-stem */aleisos/) refers to leather cups. Taking into account the contexts in which Hom. ἄλεισον is mentioned, we may guess that the use of leather cups in Mycenaean times will have probably been quite exceptional and the leather cups that me-ti-ja-no was expected to produce for the palace of Pylos could have had a ritual or religious use. This, indeed, must remain a hypothesis, but the fact that the a-re-se-si occur only once in the Linear B tablets, in contrast to other kinds of vessels, and the leather employed for their manufacture was dyed in red colour, shows that they were quite exceptional objects, probably not in-

³¹ I. Nikolakopoulou, *Storage, Storage Facilities and Island Economy: The Evidence from LCI Akrotiri, Thera* (diss. Univ. Bristol 2002) II 495, based on the information of the excavation reports and notebooks.

 $^{^{32}}$ It was found together with other various goods that have been interpreted as the remains of a pyre associated with a cist grave (Tomb Γ), dating to the fourth century B.C.; see Z. H. Archibald, *Ancient Economies of the Northern Aegean. Fifth to First Centuries BC* (Oxford 2013) 310.

 $^{^{\}rm 33}$ Evely, Minoan Crafts 525, in his discussion of Minoan leatherwork, mentions the "cuir bouilli" technique.

³⁴ Forbes, Studies in Ancient Technology V 23.

tended for an ordinary use.³⁵

- 3.4. Finally, if this proposal for Myc. a-re-se-si is right, a new set of etymological connections of this word may surface. Since Ruiigh. 36 a pre-Hellenic origin has been accepted for this word, which would also account for the alternation with thematic ἄλεισον.37 However, if an */aleisos/ was originally a leather vessel, an etymological relationship to ἀλείφω 'anoint the skin with oil' and ἀλίνω 'smear' might be envisaged. Derivatives of the former are in fact attested in Mycenaean Greek (dat.-instr. a-re-pa-te ἀλειφατει 'unguent', dat. sg. a-ro-pa ἀλοιφᾶι 'unguent', nom. pl. a-ro-po /aloiphoi/ 'unguent-maker', nom. sg. a-re-pe-se-u /aleip-seus/ 'unguent-maker', nom. sg. *a-re-pa-zo-o* /aleiphazohos/ and a-re-po-zo-o /aleiphozohos/ 'perfumeboiler'),³⁸ and the existence of ἀλοιμός 'polishing, plastering', alongside a-re-se-si, may suggest that there were derivatives of that stem without $-p^h$ -.³⁹
- 35 Mycenaeans were, therefore, acquainted with the leather dying process. Further references to red leather are found on PY Ub 1315, in which the production of a set of sixteen red leather skins is recorded. The red dye may have been obtained from the plant referred to as *po-ni-ki-jo* φοινίκιον, probably the *Rubia tinctorum* L., as suggested by J. L. Melena, "La producción de plantas aromáticas en Cnoso," *EClás* 78 (1976) 177–190, at 186. It was fixed on the leather by means of *tu-ru-pte-ri-ja* στρῦπτηρία 'alum', on which see M. Perna, "L'alun dans les documents en linéaire B," in P. Borgard et al. (eds.), *L'alun de Méditerranée* (Naples 2005) 39–42, and R. Firth, "Re-considering Alum on the Linear B Tablets," in C. Gillis et al. (eds.), *Ancient Textiles. Production, Craft and Society* (Oxford 2007) 130–138.
 - ³⁶ Ruijgh, Études 356 (§316).
- ³⁷ P. Chantraine, *Dictionnnaire étymologique de la langue grecque* (Paris 1968–1980) s.v., favoured the idea of a 'Mediterranean' loanword; R. Beekes, *Etymological Dictionary of Greek* (Leiden 2010) s.v., states that it lacks an etymology and could be a loan.
- ³⁸ For the interpretation of these terms see *DMic*. s.vv. *a-re-pe-se-u* occurs on TH Av 106 and was considered a personal name by the editors of the Thebes tablets: V. L. Aravantinos, L. Godart, and A. Sacconi, *Thèbes. Fouilles de la Cadmée* I (Pisa/Rome 2001) 178. However, it can be best explained as an appelative in *-eus* just like other occupational nouns of the same tablet.
 - ³⁹ However, an alternative explanation, assuming an evolution *άλοιφμός

The etymology of those two verbs is, however, quite problematic⁴⁰ and this prevents us from reaching solid conclusions. They could both derive from the root *h2leiH- 'anoint, smear', which has been posited for Proto-Indo-European.⁴¹ */aleisos/might, therefore, be a derivative in -sos from the e-grade of that root, which is the most common vowel grade for neuter nouns in -os/-es in Greek, although there are exceptions.⁴² Rubbing with various types of oils or fats remained for a long time the usual way to cure leather and make it waterproof, as shown by references to this process found even in Homer (Il. 17.389–393).⁴³ This would be the semantic link to */aleisos/, but, in view of the above-mentioned difficulties, this etymology can only be tentative.⁴⁴

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- > ἀλοιμμός > ἀλοιμός, cannot be ruled out either (see Chantraine s.v. ἀλείφω).
- ⁴⁰ See Chantraine and Beekes s.vv., as well as H. Seldeslachts, Études de morphologie historique du verbe latin et indo-européen (Louvain 2001) 74–84, for an extensive discussion of the data from the various Indo-European languages.
- ⁴¹ See M. Kümmel, in H. Rix, *Lexikon der indogermanischen Verben*² (Wiesbaden 2001) 277–278. The initial laryngeal of the root (* h_2 -) would account for the initial $\dot{\alpha}$ of the Greek words, while it would have been lost in other Indo-European languages, as in Lat. *linō* 'smear'.
- ⁴² They have been thoroughly surveyed by T. Meißner, S-stems Nouns and Adjectives in Greek and Proto-Indo-European: A Diachronic Study in Word Formation (Oxford 2005) 64-86. A small number of derivatives in -sos occur in Greek, as pointed out by P. Chaintraine, La formation des noms en grec ancien (Paris 1933) 421.
 - ⁴³ See Van Driel-Murray, in *The Oxford Handbook of Engineering* 485.
- ⁴⁴ This paper is part of the research project FFI2015-63981-C3-2, which has the financial support of the Spanish Ministry of Economy and Competitiveness. I am very grateful to two anonymous reviewers of *GRBS* for their valuable comments and suggestions.