THE LINEAR B IDEOGRAM *134

Out of about 170 Linear B ideograms so far known, there are c. 25—30 undeciphered or only doubtfully identified. As they consist of stylised and abstract forms, it is difficult to recognize any object in them. Furthermore they are rare symbols and the extremely scanty material in which they occur does not offer any reliable clue to their identity.

In comparison with the deciphered ideograms they are, in fact, not many. Bearing in mind that among them there are some scribal variants, their number is probably less, and the frequency of these rare signs is quite limited. However, they represent a great obstacle to the interpretation of the texts in which they appear. Sometimes the whole series is obscure, because the ideogram is not identified.

One of the undeciphered ideograms is **134*[1]) which occurs in KN C 7063, 1. 2; U 5592 and MY Go610, 1—4. It obviously originates from the Linear A L 44, and consists of a frame, tapered towards the top, and open at the bottom.Two or three horizontal strokes cross the frame. In the middle they are not linked like the horizontal lines of the syllabic sign **38 (e)*, which is also developed from L 44 (cf. *Docs*. p. 33). The number of the horizontal strokes of **134* is not constant. In KN C 7063 there are two strokes on either side. But in KN U 5592, as well as in MY Go610 there are three strokes, except line 1 of the latter, where only two strokes occur on the right hand side. The syllabogram **38 (e)* is usually written with two horizontal strokes, but in the Mycenae tablets there are cases (Hand 58) with only one. In the same manner the different number of horizontal strokes (two or three) probably does not affect the meaning of the ideogram **134*.

Similar to this symbol is the ideogram which characterizes the MY Oi series (701—704, 706) and also appears in Ue661 and probably in the sealing Wt700. J. Chadwick (*MT III*, p. 57) allows the possibility that it may be a scribal variant of **134*, but he also points out some differences between them. In **134* the horizontal strokes cross the frame, whereas in the ideogram of Oi series they hardly touch it. In his view this difference is similar to that between syllabic *pa* and *te*. Therefore he concludes that it is better to separate this ideogram from **134* and he numbered it **190*.

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[1]) It is given without identification and with a question mark in *Docs*. 50; L. Deroy, *Initiation*, 38; Gallavotti — Sacconi, *Inscr. Pyl.* XIII; Anna Morpurgo, *Lexicon*, XXIX; Bennett, *MT II*, 101; *Myc. Studies Wingspread*, 258.

But it is to be noticed that there are cases in which the horizontal strokes of **190* do slightly cross the frame lines as in **134* (cf. Oi701,6 and Wt700). Bennett showed (*MT III*, p. 68f.) that MY Go610 is written by Hand 58, and Oi series by 63 and 64. If the scribes of Oi tablets were in the habit of writing the whole frame of the ideogram first, and then the horizontal strokes, may be they intentionally avoided letting them cross the frame, because a line written (on the soft clay) across another tends to deflect it. As the frame of **190* is narrow, and the strokes quite large, so that there is not room enough to write such strokes between the frame lines, they are probably omitted on purpose. It is noticeable that the frame lines of **134* in KN C 7063 and MY Go610 are written with interruptions in the places where the horizontal strokes cross them. Meanwhile the frame lines of the ideogram numbered **190* are curved in the places where they are touched and crossed. The number of horizontal strokes of **190* is not constant either. Usually they are three (Ue661 and most of the Oi tablets), but there are cases with two strokes on either side (Oi706; — 703,3), or three strokes on one side and two on the other (cf. Oi702,2—4; — 704,2), the same as in Go610,1. There is even a case with two strokes on one and only one on the other side (cf. Oi703,2). In fact **134* is followed by the sign for liquid measures in Go610, and **190* has not so far appeared with any fractional sign which would show how it was measured. But **134* in KN C 7063 and U 5592 is also followed by whole numbers, probably counted in units. Thus, it seems likely that there is no reason to separate **190* from **134*. They are probably variants of one and the same ideogram (cf. fig. 1.)

Recently J. Chadwick[2]) drew my attention to the ideogram **179* (KN U 96) asking whether it is not another version of **134*. Apparently there are more differences between it and **134*, than between the latter and **190*. **179* consists of a double frame which is not joined at the top, but it is closed at the bottom. Two horizontal lines are written in the middle of the frame and they do not cross the external frame lines (p. 273). The suggestion that it might be another variant of **134* should not be ignored, but now it is difficult to say anything with certainty, because it appears only once in a fragment without any context. Only new material may shed more light on it.

The Knossos tablets in which **134* appears are small fragments without any vocabulary context (see p. 273)[3]). My Go610 consists only of personal names. On the Oi tablets occur the divine name *si-to-po-ti-ni-ja*, some personal and occupational names. Ue661 consists of only one word-phrase *jo-po-ro-te-ke* '*hō prothēke*' and two other compound ideograms (cf. *MT III*, pp. 51,62). Thus, it is not easy to guess the meaning of the ideogram from this vocabulary context. L 44, from which **134* is derived, also does not help much for its identification, because the value of this Linear A sign is not known. However, two attempts

[2]) In his letter of 9th Nov. 1965.

[3]) I am most obliged to Dr. John Chadwick for sending me the photographs of these Knossos tablets, and for his valuable suggestions in connection with this paper.

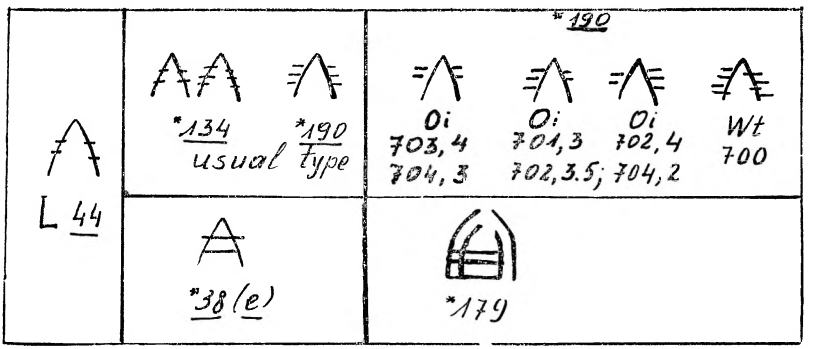
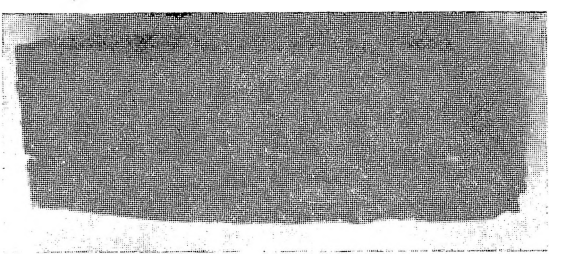
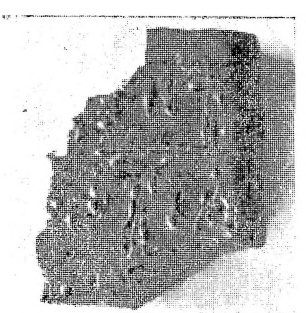


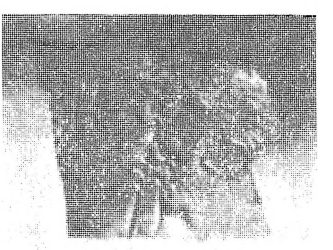
Fig. 1



KN U 96



C 7063



U 5592

at the identifying of **134* have been made so far. Having in mind the fact that the commodity expressed by this ideogram is associated with sheep in KN C 7063 and measured with liquid measures in MY Go610, J. Chadwick (*MT II* p. 110) suggested MILK. On the basis of the abbreviation RI, written on the reverse of MY Go610, L. R. Palmer concluded that it is LINSEED OIL[4]).

Palmer's identification of **134* is closely related to his interpretation of PY Ma and Na series. According to him the abbreviation *RI*+**117* in PY Ma tablets means LINSEED. He also seeks to prove that the commodity of Na tablets marked by SA (**31*) and described in PY Nn228 as *ri-no* is not flax, but *linseed* too. The fact, noticed by H. Mühlestein[5]), that some guard troops of the *O-ka* tablets, e. g. *ko-ro-ku-ra-i-jo*, *ke-ki-de*, *u-ru-pi-ja-jo*, appear in the Na tablets and their number corresponds to the number of SA units, gave him reason to conclude that the troops have received linseed as an emergency ration[6]), as in classical times (cf. Thuc. IV, 26,8). On the other hand, his restoration of the word *ko-ri*[*-ja-do-*]*no* in PY Nn831, where the ideogram of *linon* SA (**31*) also occurs, led him to the conclusion that Ma and Na series are concerned with raw materials for unguents and perfumes[7]), like MY Ge tablets to which Go610 belongs. In connection with this, he proposed another possible explanation why some troops of the *o-ka* tablets get 1 unit apiece of SA, namely that it is a certain amount of oil/unguent, which were necessary for all classes[8]).

In considering whether P.'s identification of **134* is correct or not, one cannot dispense with some comments on his interpretation of PY Ma and Na series, as well as other ideograms. If we accept that **140* described as *ka-ko* is χαλκός 'bronze', **130* — *e-raj-wo* is ἔλαιον 'oil', from the methodical point of view there is no reason to deny that **31*—SA[9]) (or a plant), described as *ri-no* in Na tablets, means λίνον. The meaning of the word λίνον is not linseed, but *flax*, *cord*, *thread*, *linen cloth*, *linen garment*, or the plant *flax* (LSGEL, s. v.); for linseed in Greek is used the phrase λίνου σπέρμα (Thuc. IV, 26, 8). This is, probably, the only passage in ancient literature which refers to linseed as an ingre-

[4]) L. R. Palmer, *Mycenaeans and Minoans*, London 1961, p. 61; *The Interpretation of Mycenaean Texts*, Oxford 1963, 9; cf. also Gnomon Bd. 29 (1957), p. 575 and Bd. 31 (1959), p. 432.

[5]) *Die Oka Tafeln*, Basel 1956, 17f.

[6]) *Myc. and Min.* 142f.; *Interpr.* 306.

[7]) *Interpr.* 272.

[8]) *Ibidem* 312.

[9]) Palmer's attitude about **31* (SA) is not clear. From his interpretation of Na series (*Myc. and Min.* 143; *Interpr.* 312) it seems that it denotes *linseed*, used as an emergency ration, but he also admits that it is an abbreviation of *sa-pi-de* σάρπιδες 'boxes' (?), taken as a unit measurment of 'aromatics', used in the manufacture of perfumes and unguents (*Interpr.* pp. 311, 313; cf. also L. Deroy, Ant. Cl. 29, 1960, pp. 315—318; *Initiat.* 49). — Judging by the form of the ideogram itself it seems that it represented first the plant *flax* and then *linen thread* and *bales of linen cloth*. „The phonetic use of the sign bears no apparent relation to the initial of the Greek word" (*Docs.* 295).

dient in rations for human consumption[10]). That *ri-no* means λίνον, one can see from the phrase *ri-no re-po-to* (KN J 695, 1; PY Un1322,4) λίνον λεπτόν (cf. *Il.* 18, 595, etc.), which P. cannot reject.

It is known that the region of Messenia is very suitable for the production of flax. According to the statistics of the Greek Ministry of Agriculture more than half the flax production in present-day Greece for fibre comes from Messenia[11]). This fact may indicate that in Mycenaean times too flax was probably an important product in this area. Thus, the great number of places within the jurisdiction of Pylos assessed by means of this commodity is not surprising. It is not impossible that some people who produced flax or linen, and were assessed by the palace for some quantity of it, might subsequently during the emergency, have been appointed to some special duties.

L. R. Palmer denies that **152*+*WI* in Ma tablets denotes *oxhide*, because it does not agree with his theory that this series deals with raw materials for unguent and perfumes. But the basis on which this theory is founded is not at all sound. As we have mentioned, it depends on his restoration of the word *ko-ri*[*-ja-do-*]*no* in the heading of Nn831. This line is restored by Ventris and Chadwick in *Docs.* (p. 290) and M. Lejeune (*Ét. micén.* p. 141f.) *ko-ri*[*-to ri*]*-no*. It is to be added that the gap in the broken heading is larger than the syllables [*-ja-do-*] restored by Palmer. There is room enough either for three narrower signs, or for two with some space between them, if two words were written here, as the proposed *ko-ri-*[*to ri*]*-no*. In view of the ideogram SA which appears in this inscription, it is more probable that the second word in the heading was *ri-no*, as in Nn228.

According to P. *RI*+**117* in Ma tablets is an abbreviation of *ri-no* and denotes *linseed* (*Interp.* 9, 302). Meanwhile, the same abbreviation on the reverse of MY Go610, together with the ideogram **134* on the obverse, means *linseed oil*. In fact there are cases where RI, inscribed in an ideogram denotes linen, not linseed, e. g. **162* — LORICA +*RI* in KN Le178+281. Undoubtedly, linseed and linseed oil might have been largely used in Mycenaean times, but we cannot exaggerate this commodity and discover it in every RI. If the identification of **134* as 'linseed oil' is correct, then it should fit to every text where this ideogram appears. But it is difficult to understand the relation between linseed oil and sheep on KN C 7063[12]).

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[10]) Its inclusion here is due to a special reason, and this J. Chadwick finds in the fact that these rations were smuggled into Sphakteria by underwater swimmers; thus they had to withstant immersion in sea-water. By mixing poppy-seed and honey with an oily substance the risk of the food being spoiled would be much reduced, though it would of course be somewhat unpalatable.

[11]) J. Chadwick, *Burocrazia di uno stato miceneo*, Riv. di Filol. e di Istruzione Classica, XL, N. S. 1962, p. 352.

[12]) As a matter of fact, the residue of linseed in the form of oilcakes, after linseed oil is made, may be used as a concentrated or conditioning feed for livestock (В. П. Мослов, И. М. Скворцов, М. Г. Чижевски, *Аіроūехника йольевых кульūур*, transl. into Serb. by Relja Dimitrijević, Beograd 1947, p. 299; cf. also *Encyclo-*

The suggestion of J. Chadwick that **134* means milk also encounters some difficulties. On the same tablet not only ewes, but rams are mentioned as well.

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Apparently, **134* represents some product not only from ewes, but from rams too. Taking into consideration the places in which this ideogram appears, I suggested[13]) that it might represent animal fat, tallow, SEBUM. If the abbreviation RI of Go610 refers to this ideogram, it might denote λίπος, -εος 'animal fat, lard, tallow'. Tallow is one of the products of fat sheep and goats, and especially of rams and he-goats which were reared in very great numbers in Mycenaean times. There is evidence that in ancient times this product was not only eaten, but also used in the manufacture of perfumes, candles, as well as in offerings, medicine, etc.[14]) The fact that there are several classical Greek words of I.-E. origin for fat and tallow: δημός, πιμελή, στέαρ, λίπος, shows that this article was well known and largely used not only by Greeks, but also by the other Indo-European peoples.

In its natural state tallow is solid and is usually measured with dry measures; it seems therefore that the fractional signs for liquid measure in MY Go610 contradict this identification. But it is known that this commodity may easily change its condition. It is remarkable that the etymology of the words for tallow and fat points to its fluidity, as well as to its solidity.

Thus, δημός[15]) 'animal fat', Alb. *dhjamë* 'fat, grease, tallow', Arm. **tam-* in *tam-uk* 'wet, moist', *tamk-anam* 'ὑγραίνομαι', Skt. *dānu-* 'to drop', Av. *dānu* 'river, stream', Osset. *don* 'water, river', Celt. *Danuvius* 'Danube' from the root *dā-*. According to J. Pokorny and H. Frisk the tallow is called δημός due to „der Eigenschaft des Fettes, beim Kochen und Braten flüssig zu werden"[16]). In the Slavonic languages the word for tallow *loj* from *lijati, liti*[17]) means something which can be poured.

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paedia Britannica, ed. 1963, vol. IX, p. 365). But it is to be noticed that **134* follows sheep ideogram in the same way as **145* LANA, therefore it obviously means some product from sheep, not food for them.

[13]) *Observations on Mycenaean Epigraphy*, Klio 1965, in the press.

[14]) R. J. Forbes, *Studies in Ancient Technology*, vol. III, Leiden 1955, pp. 1, 7: „All the fats at the disposal of the ancient perfumer were animal. . . . Ox fat, sheep fat and goose fat are mentioned in very early texts and there was a special term for the fat of a sacrificial animal, often mentioned in medical texts". Cf. *Encycl. Brit.*, vol. 16, p. 745: „Candles and lamps using oil, tallow or beeswax have been used for thousand of years".

[15]) Cf. μῆλα. . . πίονα δημῷ Hom. *Od.* 9, 464.

[16]) J. Pokorny, *Idg. etym. Wb.* 175; H. Frisk, *Gr. etym.* s. v.

[17]) Cf. Max Vasmer, *Russisches etym. Wb.*, Heidelberg 1955, Bd. II., s, v.; Ст. Младенов, *Етим. и правоп. речник на бълг. език*, София 1936, 278; *Rječnik hrv. ili spr. jezika*, izd. Jugosl. Akad., Zagreb, s. v.

Similarly πιμελή 'soft fat' (<*pī-m-os), Lat. *opīmus*, *pinguis*, Skt. *pīnah* 'fat, thick', *páyas-* 'juice, water, milk', Lith. *pienas* 'milk', from the root **poi-*, **pi-* 'to teem with fluidity'[18]), cf. πῖαρ πίων πίειρα πίον[19]). For Skt. *pivas* 'fat' and Slav *pivo* 'beer' see below, p. 343.

Opposite to πιμελή is στέαρ, -ατος 'solid, hard fat', 'suet', Skt. *stiya* 'standing water', *styatē* 'becoming hard' < **sta-* 'stand'[20]), but also it denotes any animal fat, cf. στέαρ τῆς ἄρκτου, Thphr. *Odores* 63; σ. δελφίνων Xen. *Anab.* 5, 4, 28; σ. χήνειον, ὀρνίθειον, etc.

The most common name for this commodity is λίπος[21]), named from its characteristic which allows it to be smeared, used in greasing, anointing, cf. Skt. *limpati* 'stick', Lat. *lippus* < *lipos* 'bleareyed', Lith. *limpu, lipti* 'stick', OSl. *prilьpnǫti*, etc.[22]) From the same root is ἄλειφαρ, Myc. *a-re-pa*, ἀλοιφή, ἀλείφω, cf. Myc. *a-re-pa-te*.

If the tallow is to be stored and kept for longer, it must be melted[23]), poured into vessels and hardened in moulds. Vessels wider at the top and narrower at the bottom must be used, so that the pieces of tallow may be taken out easily after they have hardened. For that reason either the sides of the vessel are soaked and some water is left at the bottom, before the hot tallow is poured, so that it does not stick, or if it is poured into a dry vessel, when it has hardened, the vessel must be slightly heated in order to release the lump of tallow[24]). Thus, the shape of these lumps depends on that of vessels.

There is a reference to tallow in Hom. *Od.* 21, 178—179. When Penelope's suitors were not strong enough to bend Odysseus bow, they asked the goatherd Melantheus to make a fire and to fetch a big round cake of suet which they would soften by heat and smear the bow with:

> ἐκ δέ στέατος ἔνεικε μέγαν τροχὸν ἔνδον ἐόντος
> ὄφρα νέοι θάλποντες, ἐπιχρίοντες ἀλοιφῇ. . .

The round cakes of suet mentioned by Homer are obviously moulded in the same manner. The pieces of tallow, produced by Mycenaeans may very well have been cone-shaped, similar to the ideogram itself. If we invert **134* we can easily recognize in it the shape of such a tapering vessel, a great number of which we can see among the finds of Mycenaean times.

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[18]) J. B. Hofmann, *Etym. Wb. d. Gr.*, s. v.

[19]) Cf. πίονας αἶγας, *Od.* 17, 180; πίονα μῆλα *Od.* 9, 315, etc.

[20]) Hofmann, *o. c.*, s. v.

[21]) Schwyz. (*Gr. Gr.* I, p. 512) states that λίπος is „sicher (innerlich) jünger," but the Skt. *répas* 'fleck, dirt' shows that it is an old I.-E. word, derived from the root **leip-* **loip-*.

[22]) H. Frisk, *o. c.*, s, v.

[23]) There are references that the tallow was preserved with salt in ancient times, cf. ἁλιστὰ λίπη Palladas, *Anth. Pal.*, but melting was also known, as we can see from Athen.: Τῶν οὖν λιπαρῶν ἀφαιρεῖται τὸ λίπος ἡ πύρωσις (cf. Stephanus, *Th. L. Gr.*, s. v.).

[24]) I have seen this process of preparing tallow in the villages near Kičevo, Tetovo and Skopje, and have heard that the same method is in use in other parts of Macedonia.

In some villages of our country, especially among the Albanian Moslem population, which still keeps up the old traditions, one can see tallow produced in a way similar to that mentioned by Homer. For the lumps of tallow, which they eat during the whole year, now they use more often shallow vessels and produce round cakes, like Homer's

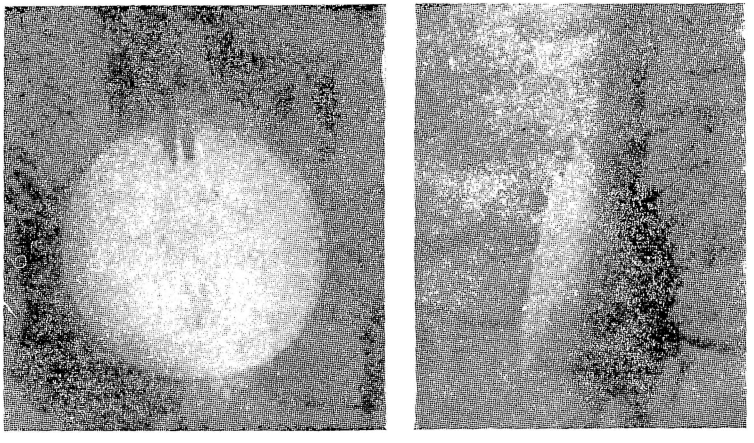

Fig. 2

τροχοὶ στέατος. But they also use vessels and bowls of different kinds for that purpose. One can see vessels of the same type as that found at Mycenae (cf. *MT III*, p. 28, fig. 55) and the bowl from the House of Shields (cf. *MT II*,p. 25, fig. 24). They do not make the lumps too thick, because, when they are thin, it is easier to cut them, when their wives prepare meals (see fig. 2 *a*, *b* and 3 *a*, *b*)[25]).

Usually they put strings in the vessel into which molten tallow is to be poured. After it has hardened, the tallow can be hung by those strings like beeswax. As the tallow may easily become rancid[26]), they hang it in a cool and airy place, usually near the kitchen. The lumps of tallow they produce now are not very heavy, usually of 2—3 kr., and they use only one string bent in such a way, that both of its ends are put in the molten tallow; for bigger lumps, probably, strings on both sides are necessary. On that basis one can suppose that the horizontal strokes of the ideogram **134* represent the strings which not only allowed the lump of tallow to be easily removed, but may also have served for hanging it.

[25]) The lumps of tallow produced by Redžep Bekir from the village of Batince, near Skopje in Nov. 1965.

[26]) Cf. Г. Н. Колужки, *Оріанична химична тєхнолоіия, часть I Масьни индустрии*, София 1933, p. 117.

Now, we may turn to the measurement of tallow. Owing to its peculiarities, tallow might either have been reckoned quantitatively by the number of pieces, if they were of a standard volume, or measured with liquid measures according to the volume of the vessel into which it was poured. It is to be noticed that mutton tallow is a quite heavy

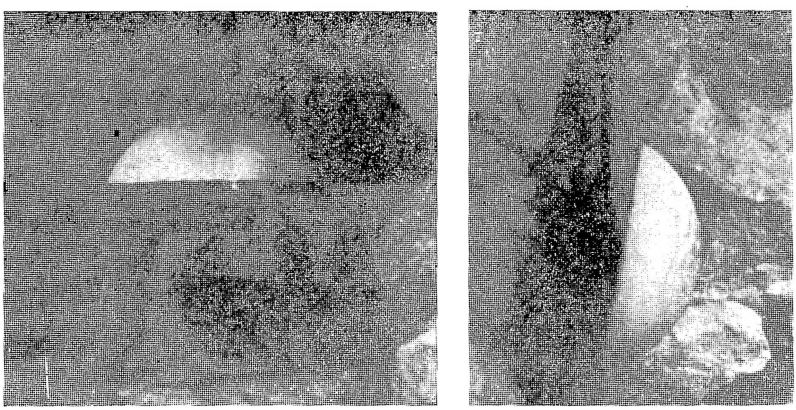

Fig. 3

fat; its specific gravity at 15°C is 0,937 — 0,961[27]). Therefore it is not impossible for it to be measured with liquid measures, as we can see from MY Go610. There are places where even now milk is measured either in kilograms or litres. In Mycenaean times honey could be counted in units of ἀμφορεῖς (cf. KN Gg tablets, PY Un267,7).

In KN C 7063,1 after two rams and 1 ewe, there are 4 of **134*, and in the line, 2, after 1 ram and 1 *pa* (παλαιά) ewe — again 4 **134*. If only these rams and ewes were mentioned on this tablet, then the 4 numbers of **134* probably represent *pieces* of tallow, because from a fat ewe about 5—6 kg. of tallow may be extracted.

In KN U 5592 the ideogram **134* is followed by the sign for 100. The ideogram numbered **190* in MY Ue661 is also followed by the figure 100. This may seem a great quantity of tallow. But I have evidence that some families of the Moslem Albanian population in Macedonia in former times when they kept goats, in the autumn used to store as much as 100 or 150 kg. of tallow as food for the whole year. Thus the quantity mentioned is not at all excessive for a Mycenaean palace.

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[27]) D. Holde — C. Meyerheim, *Untersuchungen der Kohlenwasserstofföle und Fette*[5]), Berlin 1918, 584.

As suggested above **190* is probably a variant of **134*, and it too might denote tallow, which, here counted in units, is distributed to some groups of people and probably used in offerings to *si-to-po-ti-ni-ja Sitōi Potniāi* 'for the Lady Sitō' (*MT III*, p. 58).

Skopje. *P. Hr. Ilievski.*

ZU HERAKLIT

Es ist wahr, daß Heraklit aufgrund seiner Lehre an zwei gegensätzlichen Lehren teilgenommen hatte, das heißt, an der Aktualitätstheorie und an der Substantialitätstheorie — das steht ganz außer Zweifel. Bei ersterer wird er als deren Vertreter *kat'exochen* betrachtet — wie später auch Plotin und Fichte — denn die „Realität" ist ein Ergebnis der Idee des Werdens und algemeinhin einer jeden Veränderung, wie dies ja die Theorie des Fließens jenes Philosophen von Ephesus ganz klar zeigt.

In der zweiten besteht die Realität jedoch nicht im Werden, sondern in einem Wesen, das heißt, in einer unveränderlichen Idee; so lesen wir in einem Fragment von Heraklit folgenden Satz: „Ὁκόσων λόγους ἤκουσα, οὐδεὶς ἀφικνεῖται ἐς τοῦτο, ὥστε γινώσκειν ὅτι σοφόν ἐστι πάντων κεχωρισμένον"[1]). (fragm. 108 = Stob. floril. I 174 Hense). Aus dieser Stelle geht klar hervor, daß der Sinn des „Σοφόν" (Οὐσία) an dem Fließen des anderen Fühlbaren nicht teilhat, sondern, ganz im Gegenteil, „κεχωρισμένον" von den anderen „*res*" vorhanden und folglich von ihnen nicht abhängig ist. Kurz gesagt, obiger Sinn des „Σοφόν" existiert als unveränderliche Idee, das heißt, die Realität wohnt der „Οὐσία", dem „Εἶναι" also inne und nicht dem Werden und der Veränderung.

Athen. *A. N. Zumpos.*

[1]) Die Interpretation bei Diels-Kranz lautet folgendermaßen: „Von allen, deren Worte ich vernommen, gelangt keiner dazu zu erkennen, daß das Weise etwas von allen Abgesondertes ist."