MITTEILUNGEN

THE WACE AND BLEGEN CONFERENCE IN ATHENS, 1989

A conference dedicated to the memories of A. J. B. Wace and C. W. Blegen and their scholarly collaboration, sponsored jointly by the American School of Classical Studies at Athens and the British School of Archaeology at Athens, was held at the Blegen Library on December 2–3, 1989. The highly interesting main theme was: "Pottery as Evidence for Trade in the Aegean Bronze Age: 1939–1989". The conference, with numerous participants and a large Athenian audience, went very smoothly, and was splendidly organized by the Directors of both Schools, W. Coulson and E. French. Coulson made a welcoming speech of preface to the conference and the two honoured great scholars: then French communicated vividly her "Introductory Thoughts" about her father and Blegen.

An exhibition prepared by C. Zerner on the work of both scholars entitled "A Friendship in the realms of Bronze" was displayed at the Gennadios Library of the American School, along with a fine poster session of P. Day and others in Loring Hall, where the receptions were held.

The conference, often highly technical, and an occasion for presenting much new evidence, was divided into four sessions on each day. It was opened by two lengthy scholarly papers, those of J. Rutter, "EH pottery: Inferences about exchange and production from style and clay composition", and of C. Zerner, "New perspectives on Trade in pottery in MH Greece", with special reference to Lerna and the system of potters' marks.

Of reference to the Late Bronze Age were the papers of K. Demakopoulou, "Argive Mycenaean pottery: Evidence from the Nekropolis at Kokla" (with new material which attracted the keen attention of the audience); of P. Mountjoy, "Regional Mycenaean pottery"; and of V. Watrous about contemporary Crete, "Cretan Relations with the Aegean", in which the speaker dealt at length and very successfully with the interaction between cultures, with reference also to religious beliefs.

Three speakers shifted attention to Cyprus, the Levant and Egypt: G. Cadogan, V. Hankey, ever a tireless explorer of these countries, and J. Balensi. Three other speakers covered the remaining areas, Northern Greece, Italy and Asia Minor: K. Wardle, L. Vagnetti with her scholarly "Fifty Years of Studies of Mycenaean Pottery in Italy", and E. French with a short review.

The second day was devoted to numerous papers, many of the speakers being Greeks of the new generation fluent in English: A. Sampson spoke about

his important work at Manika in Euboea and its connections with the Aegean and Asia Minor; Y. Lolos about Mycenaean Salamis; O. Kakavogianni about an EH settlement at Koropi in Attica; L. Papazoglou about the pottery from the chamber-tombs of Patras; and M. Theochari, L. Parlama and E. Hatzipoulou together about Palamari at Skyros. Another joint and technical paper by P. P. Betancourt, G. Myer and C. Zerner examined the evidence from ceramic petrography of Cycladic imports into Lerna. V. A. Cambitoglou and J. Papadopoulos spoke at some length about "The earliest Mycenaeans in Macedonia" (an area outside the Mycenaean *koine*), and J. Maran made a preliminary report about the MH and LH pottery from the steep hill of Kiafa Thiti near Vari — one of the few Albanian place-names to escape the official revision of such toponyms in Attica!

The second session covered various topics of great interest, but we can here refer to little more than the titles. S. Immerwahr delivered a paper entitled "The Mycenaean Pictorial Style Fifty Years Later", reviewing the topic of her Bryn Mawr College dissertation of 1943. H. Haskell and R. Jones spoke about the "Coarse-ware stirrup-jars", and N. Hirschfeld about the "Incised marks (post-firing) on Aegean wares". G. Korres and H.-G. Buchholz delivered jointly a paper about "Chora Museum no. 20". E. Cline expounded a scholarly account of the contributions of Wace and Blegen concerning Eastern imports to the Greek mainland. The theme of D. Small was "'Barbarian' Ware and Aegean Economics".

Several contributions were made about the islands. S. Hiller examined the interesting Minoan and Minoanized pottery of Aigina, M. Marthari the contacts between Thera and the Mainland, and O. Hadjianastasiou the Naxian pottery. The LM I and Mycenaean pottery found in 1922 in the Vathy Cave on Kalymnos was M. Benzi's subject. A. Farnoux — the only speaker in French — examined Mycenaean Delos, an important early religious centre, and Birgitta Hallager the Mycenaean pottery in Crete, which she found not to be evidence of Mycenaean political involvement in the island. Of special interest was the paper of O. Negbi about "Stirrup-jars versus Canaanite jars; their contents and reciprocal trade".

The final session included two papers about Cyprus: H.-G. Buchholz spoke about the Mycenaean pottery from Tamassus, and A. South and P. Russel dealt jointly with the Mycenaean pottery and social hierarchy of Kalavassos. Mycenaean pottery from Italy was examined by the Italian scholars E. Re, L. Marazzi and S. Tusa. Troy attracted the attention of both J. Sperling (with regard to traders' activity) and E. French in her main paper in this conference about the Mycenaean problem. The pottery trade was also the chosen subject of W. Donovan, who put "New Questions in Old Evidence". Finally C. Lambrou-Philipson approached a complex and interesting topic, the limitation of the 'pottery model' in the identification of trading colonies.

COSTIS DAVARAS

TWO PROBLEMATIC READINGS ON HT 34

1. The fraction sign at the end of Line 3 (Fig. 1)

In a paper on the numerical fractions in Linear A (Kadmos 13, 1975, 9—116), I analysed the text of HT 34 and, following the general consensus of Pugliese Carratelli, Brice and Raison-Pope (Index I), I read the composite fraction at the end of line 3 as Lm6 (modern style EK), 7T.

The readings which have been published since that time (GORILA I, 197, 64—5; Index II, 1977, 302; and Corpus 1980, 55—6) have all interpreted this fraction sign as HK, λT. There is an abrasion to the bottom right of the first of the two signs 77, which explains the ambiguity.

In order to resolve the crucial question of the identity of the sign, I have measured, on all thirteen certain occurrences of fraction sign H in the Linear A corpus, the ratio between the height of the lower part of the sign, below the junction of the 'legs', and the full height of the sign, both on the facsimiles and on the photographs. The resulting figures from the facsimiles are plotted as dots in Figure 1. In the case of the problematic sign of HT 34.3, I have calculated the maximum figure for this ratio, on the assumption that the legs joined at the top of the abraded surface. The resulting statistic is plotted as a cross in Figure 1.

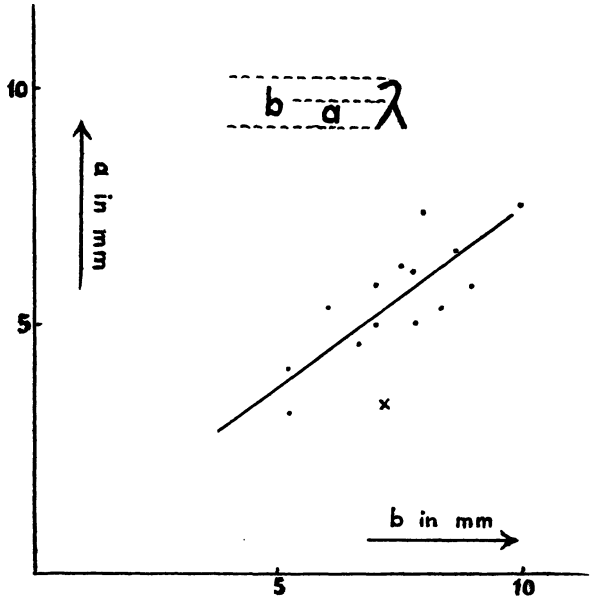

Fig. 1

It is immediately clear that the cross is well away from the median line and, in fact, so far outside the range of the dots as to make it most unlikely that the sign represents H, 𐄇, and that we should revert to its earlier identification as E, 𐄉.

2. The 'postscript' numerals in Line 6 (Fig. 2)

In Line 6 one finds seven horizontal dashes (representing the figure of seventy), the last of which crosses and overlies the second of a group of five verticals, 3 + 2, which group is only thinly incised in the clay. Thereafter, the figure of thirty, in its turn, is followed by a group denoting seven units, written underneath the former and, in the words of GORILA "gravé dans l'largile un peu plus sèche". Indeed this last group is less deeply incised than the group of digits on line 5[1].

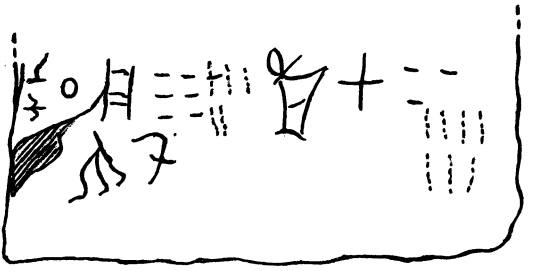

Fig. 2

As for the sign-groups associated with the numerals, L551 𐄋, *mu/ku* is unique, but its significance follows from the subsequent L1 𐄃 = *pa*$_3$, which denotes a class of labour, as in the list of labourers on HT9b. Furthermore, the group L103–22 𐄁𐄂, *ki-ro*, has been found to indicate supervisors of labour[2].

We can exclude the possibility of a fully palimpsested text; not only because of the remark in GORILA, but also because the tablet shows no trace of a previous text. The most satisfactory explanation of the text is to regard the faintly incised groups of units, '5' and '7', as not intended to be read as part of the recorded text, but as 'aides-memoires', jotted down by the scribe ahead of the items to which they referred, and then over-written as the inscription proceeded. So the scribe, having written L551 '100', jotted down the units '5'

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[1] In the style of the Corpus this part of the text is rendered as follows: 551(100) 1(70) 103–22(30), with the annotion "70 dernière dizaine sous ((5))".

[2] Cf. the author, Kadmos 11, 1972, 1–24. Their total in service is recorded on HT 1, cf. The author, Minos 16, 1977, 7–11, and Kadmos 11, op. cit.

further along the line, to remind him that the 100 labourers were divided into 5 groups. Likewise, the faintly inscribed '7' units referred to the division of the 70 L1 labourers into seven groups.

Line 6 may be paraphrased as follows: *mu/ku* 100 (÷5), *pa*$_3$ 70(÷7), *ki-ro* 30. This makes sense if 100 *mu/ku* labourers worked in groups of five, requiring twenty supervisors (*ki-ro*), and the 70 *pa*$_3$, in groups of seven with ten *ki-ro*, making a total of thirty *ki-ro* as recorded.

Since the text represents a pay-list, as indicated[3] by the familiar notation *sara*$_2$, which is found on line 1, it remains to be shown that the listed commodities can be allocated in a satisfactory fashion to the various people mentioned.

DANIEL A. WAS

DIE MINOISCHEN MASSEINHEITEN: KORREKTUREN ZU KADMOS 21, 1982, 15–25

Aufgrund neuer Erkenntnisse sind einige der in dem genannten Zwischenbericht aufgeführten Daten zu berichtigen. Im Rahmen der Messungen an Gefäßen und Behälter, die ich auf Kreta durchführen konnte, habe ich festgestellt, daß die in unserem System allgemein durchgeführten Vereinfachungen durch Ab- und Aufrundung im Grunde unzulässig sind.

Seite 16, Zeile 16, 18

28 dm^3 als Rauminhalt eines cmf ist eine solche unzulässige Vereinfachung. Der von Graham festgesetzte Fuß ist gemäß seinen Angaben nicht 30,36 cm sondern 30,36$\overline{36}$ cm lang. Volle 28 dm^3 werden nicht erreicht. Bezogen auf dm beträgt das Raummaß 27,9937672 dm^3.

Seite 16, Zeile 30

Als Schreibfehler, im Sinne von Übertragungsfehler, würde eine Eintragung ‚32' sich nicht auf Khoinikes, wie im Text behauptet, sondern auf das von Was (in Minos XVII/81) aufgeführte Maß ḳa ḍo beziehen, das – mit einem berichtigten Volumen von 19,24571495 dm^3 – das 1/32. Teil eines Standardvolumens von 22 cmf entspräche. Aufgrund der auf kretischem Boden durchgeführten Messungen (sie sind noch nicht abgeschlossen), kann das Maß von Was als gesichert angesehen werden. Bezogen auf 22 cmf als Standardeinheit, wäre 1 Khoinix (bleiben wir bei dieser Bezeichnung) das 1/704. Teil.

Seite 17, Zeilen 1, 2, 15

Der Khoinix, als 1/32. Teil des cmf, ist mit 0,875 dm^3 ebenfalls überbewertet. Sein Volumen entspricht nur 0,87480523 dm^3, das Volumen des abgeleiteten Talents (50 Khoinikes) somit 43,74026150 dm^3. Das Standardvolumen von 22 cmf hat demnach 615,86287840 dm^3 als Inhalt. Der im Kadmos-Text als

[3] Cf. the author, Kadmos 11, op. cit.

‚Beweis' aufgeführte Pithos aus Zakros hat im übrigen ein aufgrund durchgeführter Messungen festgesetztes Volumen von 617,339 dm^3, eine Abweichung von 0,24% vom Idealvolumen. Die Abweichungen der Inhalte von dem Idealvolumen bewegen sich bei 22-cmf-Behältern zwischen −0,8% und +0,4%.

Seite 19, Zeile 6 ff.
Wie demnächst (d. h. nach Beendigung der Meßreihe) in ‚Minoan Storage Capacities' erläutert wird, besteht Anlaß zur Vermutung, daß das Maßsystem der Minoer auf eine Unterteilung in 192 Teilen beruht. Das 3/64. Teil eines Standardvolumens zu 615,86287840 dm^3 beträgt 28,868571 dm^3, nahe dem — sicherlich ebenfalls gerundeten — Wert von 28,8 dm^3 in Linear B (Chadwick und Van Leuven in Nestor). Es ist nicht auszuschließen, daß dieser Wert deckungsgleich mit dem von Herrn Dr. Was ist, seine 29 kg sind sicherlich ebenfalls (auf)gerundet.

Die wohl unerhebliche Berechnung eines (variablen) Füllgewichtes sollte entfallen.

Seite 19, Zeile 28
Es ist davon auszugehen, daß die Angaben, 50 Khoinikes (entspricht ein Volumentalent) Saatgut würden für eine Fläche aroura benötigt, richtig sind, wie in Minoan Storage Capacities erläutert werden wird. Der von Was angeführte und von mir übernommene Wert 170,6 dm^3/ha muß jedoch geändert werden. Dieser Wert fällt durch das Raster der hypothetischen minoischen Unterteilung. Hochgerechnet auf ein Talentvolumen (22 × 43,74026150, oder 1100 × 0,87480523 = 962,285730 dm^3), 170,6 dm^3 ist nicht im Einklang mit dem Schema zu setzen, eine Korrektur auf 170,40476456 dm^3, entsprechend 17/96 des Standard-Volumentalentes, führt nicht zu brauchbaren Ergebnissen. 1/6 (= 32/192) des Volumentalentes entspräche 160,38095883 dm^3. Das 3/16. (36/192.) Teil führt zu 180,42857439 dm^3, wie wir sehen werden, ebenfalls zu unbrauchbaren Werten.

Seite 20, Zeilen 1 ff.
Einzufügen ist das Verhältnis mf^2/m^2: 1 mf^2 entspricht $(0{,}303\overline{636})^2$ = 0,09219504 m^2. Die Ermittlung der Werte ‚aroura' und ‚da':

$$\frac{\text{50 khoinikes}}{\text{Saatgut/ha}} \times 1\text{ ha} = 1\text{ aroura in } m^2$$

$$\frac{43{,}74026150}{170{,}40476456} \times 10000 = 2566{,}845\ m^2$$

in mf^2: 2566,845 : 0,09219504 = 27841,46522416 mf^2
Schenkellänge : 166,85761 mf
Auf Basis 3/16.:

$$\frac{43{,}74026150}{180{,}42857439} \times 10000 = 2424{,}2425\ m^2$$

in mf^2: 2424,2425 : 0,09219504 = 26294,71715615 mf^2
Schenkellänge: 162,15645 mf.

Auf Basis 1/6:

$$\frac{43{,}74026150}{160{,}38095883} \times 10000 = 2727{,}2727\ m^2$$

in mf^2: 2727,2727 : 0,09219504 = 29581,55558043 mf^2
Schenkellänge 171,99289 mf.
Für das Flächenmaß ‚da‘:

$$\frac{78{,}73247070}{170{,}040476456} \times 10000 = 4620{,}3210\ m^2$$

in mf^2: 4620,3210 : 0,09219504 = 50114,63740349 mf^2
Schenkellänge: 223,8615600 mf

$$\frac{78{,}73247070}{180{,}42857439} \times 10000 = 4363{,}6365\ m^2$$

in mf^2: 4363,6365 : 0,09219504 = 47330,49088107 mf^2
Schenkellänge: 217,5557100 mf

$$\frac{78{,}73247070}{160{,}38095883} \times 10000 = 4909{,}0909\ m^2$$

in mf^2: 4909,0909 : 0,09219504 = 53246,80047864 mf^2
Schenkellänge 230,75268 mf

Wie aus den Berechnungen ersichtlich ist, liegen die 1/6-Volumentalent-Werte den in dem Zwischenbericht genannten Zahlen für die aroura (170 mf) und da (zu ändern in 230 mf) am nächsten.

Die Angaben in den Tabellen sind dementsprechend zu ändern.

ANTON BOSKAMP

A ROYAL EGYPTIAN 'NODULUS' FROM CANAAN*

In 1988, the late R. Giveon published a seal impression from Tel Michal in northern Israel:

110 ITEM: Bulla (?) (actually rather a clay ball without traces of string or the like, thus not having served as a bulla); impression of a seal with linear (?) engraving....[1]

The '*bulla* that does not seal' can immediately be recognized as an Egyptian form of *nodulus*, that is, our 'sealing that does not seal', without perforation or

* Noduli (sing. nodulus), clay nodules without perforation or any visible means of fastening, have been discussed in my series of articles in Kadmos: 'Some Unusual Minoan Clay Nodules' (Kadmos 25, 1986, 1–21; hereafter *Noduli*) and its addenda (*Addendum I* = Kadmos 26, 1987, 38–43; *Addendum II* = Kadmos 29, 1990, 16–23).

[1] R. Giveon, Scarabs from Recent Excavations in Israel, Freiburg, 1988, 94–95; this bulla (the term here describes a 'sealing' rather than an envelope) was a surface find. The bulla as nodulus obviates the amuletic interpretation of A. R. Schulman ('Two Scarab Impressions from Tel Michal', Tel Aviv 5, 1978, 148–151).

Fig. 1

any form of attachment whatsoever. This is now the earliest nodulus known from Egypt: its seal impression (Fig. 1) bears the cartouche of Amenemhat III (1859–1814 B. C.) of the late 12th Dynasty, a reign which falls within the Middle Minoan IIA period on Crete.[2] The nodulus is thus roughly contemporary with the newly-found round-based noduli from MM IIA Knossos (*Addendum II*, **A-14**).[3]

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[2] I am following the Egyptian high chronology: K. A. Kitchen, The Basics of Egyptian Chronology in Relation to the Bronze Age, in (P. Aström, ed.) High, Middle or Low, Göteborg, 1987, 37–55; for the equation with MM IIA Crete, see P. Warren & V. Hankey, Aegean Bronze Age Chronology, Bristol, 1989, 131–135 (compare n. 3 below).
The Uronarti sealings (including seven noduli) are later, dated by their excavator to the 13th Dynasty, i. e. after 1801 B. C. (G. A. Reisner, 'Clay Sealings of Dynasty XIII from Uronarti Fort', Kush III, 1955, 26–69). He also pointed out (*op. cit.* 35–36) that sealings stamped by many of the same seals occurred throughout the fort so all deposits must have been contemporary. However, O. Tufnell ('Seal Impressions from Kahun and Uronarti', JEA LXI, 1975, 67–69) dates the seals on stylistic grounds to the second half of the 12th as well as to the 13th Dynasty. Seals can, of course, remain in use over long periods of time so Tufnell's stylistic evaluation does not necessarily challenge the date of the *sealings*.

[3] Their approximate contemporaneity is supported by the recent discovery at Tell el-Dabʿa of Classical Kamares sherds in a stratum dated to the decades immediately following the end of the 12th Dynasty, i. e. post 1801 B. C. (M. Bietak, 'The Middle Bronze Age of the Levant: A New Approach to Relative and Absolute Chronology', in Aström *op. cit.* [supra n. 2] 91, 114).

Besides bringing the use of noduli out of Nubia and into the highest official circles, this Egyptian royal nodulus may shed some light on two problems discussed in my recent articles on noduli.

First, regarding the origin of noduli, I suggested that the nodulus/docket had been introduced as part of a wholesale importation into Crete, possibly early in the First Palace Period, of sealing administrative practices from the Near East or Egypt (*Noduli* 18 n. 66, *Addendum I* 40–41). The simultaneous discovery of these earlier Egyptian and Minoan noduli lends support to an Egyptian route and thus the Egyptian origin of at least one Minoan administrative document.

Secondly, regarding the function of the document, I argued that noduli were essentially dockets but could, in certain circumstances, also serve as tokens (*Addendum II* 19–20); as such, they would have an inter-city communication value, identifying Minoan travellers on route or on arrival at other centres and entitling these travellers to locally-supplied goods and services. The nodulus from Tel Michal on the south Levantine coast (some 20 km north of later Jaffa) strongly supports this hypothesis. No settlement is known at Tel Michal before MB IIB,[4] making it all but certain that the royal nodulus did not originate on this site. Equally, it seems unlikely that the nodulus was actually destined for Tel Michal, which would have required as intended recipient either a resident Egyptian or at least a Canaanite capable of recognizing the royal scarab impression.[5] Yet, its presence must mean that this coastal site was partially inhabited in the late-19th century,[6] though perhaps as no more than an archaeologically-undetectable staging post on the sea route between Egypt and the north.[7] It seems reasonable to assume that this nodulus/token carried by a royal messenger was meant to arrive at some more civilized centre further to the north, perhaps at Byblos.[8]

JUDITH WEINGARTEN

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[4] The start of MB IIB is dated shortly after ca. 1700 B.C. by Bietak (*op. cit.* [supra n. 3] 97); *pace* W. A. Ward, 'Scarab Typology and Archaeological Context, AJA 91, 1987, 531, who dates the transition MB IIA/IIB to the first half of the 19th century.

[5] The 12th Dynasty 'Story of Sinuhe' shows that unofficial channels also existed for the reception of Egyptian messengers on the Syro-Palestinian route: 'The envoy who came north or who went south to the residence stayed with me', that is, in Sinuhe's tent encampment (trans. M. Lichtheim, Ancient Egyptian Literature, I, Berkeley, 1975, 227). The Residence at this time was at Itjtawy (el-Lisht) between the Faiyum and Memphis.

[6] Giveon *loc. cit.* (supra n. 1). However, if this scarab is understood as an amulet rather than a seal (Schulman *op. cit.* [supra n. 1] 149), it would have no real chronological value.

[7] In the Roman period, the only Roman fort on the southern Levantine coast was at Tel Michal, presumably the best location from which to guard a fleet from pirates and to protect the thriving grain trade along this coast (S. Derfler, 'The Roman Fortress at Tel Michal and Jewish Piracy Based in Jaffa', paper read at the 85th AIA General Meeting, reported in AJA 88, 1984, 242).

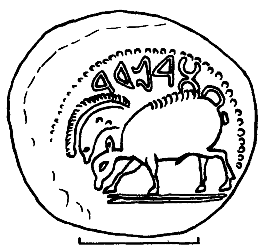
[8] Alternatively, the messenger could have carried a supply of identical noduli, one to be turned in at each halt (but one doubts that the stop at Tel Michal was planned).

(cont. overleaf)

AN INSTANCE OF THE LYCIAN NAME FOR XANTHOS IN CARIAN SCRIPT

I wish to propose a new reading of the five characters on the obverse of one of the coins of the Lycian dynast *Kuprlli*, a coin legend which has been anomalous and problematic. The proposed reading removes the difficulty. It also makes a small but definite contribution to the corpus of Carian texts and, by giving us the native name of Xanthos in Carian script, it adds a snippet of evidence about the political situation in the region during the second quarter of the fifth century BC.

The coin in question is designated M 301a in "Die lykischen Münzlegenden" by Otto Mørkholm and Günter Neumann, Göttingen, 1978 (hereafter abbreviated to Lyk. Münz.). The coins of *Kuprlli* outnumber those of any other single dynast, and, apart from M 301a, he uses Lycian script for all the inscriptions, which was apparently the general practice.



M 301a Vs. Stater

Only one other definite instance is known to me of Carian script being used by a dynast whose epigraphic output is otherwise in Lycian, and that is the two-letter text [Carian characters] that is read as *er* and seen as an abbreviation of the name *Erbbina* (J. Friedrich, Kleinasiatische Sprachdenkmäler, Berlin, 1932 pp. 106–7 and O. Masson in Kadmos 13, 1975, 127 ff.). There remain indeed a few coins with one or more unfamiliar symbols upon them, but as yet they offer us nothing useful to compare.

M 301a has *kuprlli* in Lycian script on the reverse, while the problematic sequence [Carian characters] appears on the obverse. Mørkholm and Neumann quote the suggestion by M. Meier-Brügger that this could be read from right to left as *θ a ? r a* in Carian script. The third symbol [Carian character] is a mystery, while those that we can transcribe offer no clue to the significance of the text.

The right-to-left direction is presumably suggested by the orientation of the third symbol and also by an earlier reading of the two *a* symbols in Mørkholm and Zahle's "The Coinage of Kuprlli", *Acta Archaeologica* XLIII, 1972, where the text in question is shown as [Carian characters], with *a* seen as pointing to the left.

In any event, late Middle Kingdom land and sea traffic between Egypt and Byblos must have been intense. At the time of this nodulus there is evidence that Byblos was politically and religiously considered part of Egypt: its ruler, though a native, bore the same *hȝty* title as that of administrators within Egypt; its goddess, the 'Lady of Byblos', was now identified with Egyptian Hathor (W. H. F. Kuykendall, Egyptian Religious Activity in Palestine and Syria during the Third and Second Millennia Before Christ, diss. Johns Hopkins, 1965, 186–187). Obviously, the use of impersonal tokens would have facilitated the travels of messengers across language boundaries and into areas where literacy would be limited.

In Lyk. Münz., published six years later, the text appears under M 301a with *a* pointing the other way, as shown in the previous paragraph.

The symbol for *a* actually used on the coin is nearly an equilateral triangle, and the five symbols of the text are inconsistently rotated in their positioning round inside the curve of the boundary circle. Opinion seems to have swung as to which line is the vertical 'backbone' of the *a* and which apex points to the side. This turn-around in the authors' views means that taking the text right to left now requires us to read the Carian *a* backwards.

The Carian *r*, as is seen for instance in 𐊴𐊹 = *er* already cited, normally points 'against the flow' and so is in effect a reversed image of the Lycian *r*. In reading M 301a from right to left, as is tentatively done in Lyk. Münz., we are required to take the Carian *r* backwards, just as we are for the *a*. The theta is neutral as to direction, and only the hapax symbol 𐊫 stands as a signpost to a right-to-left orientation, positively contrary to the normal rule for the *a* and *r*.

M 301a cries out to be read left to right, with normal Carian *a*, *r* and *θ* filling four of the five positions in the text. Given *Kuprlli*'s other coins from Xanthos, it takes little to see that the mystery middle character is simply the Carian *n* written double, with one symbol above the other. In the resulting digraph the lower *n*, for whatever reason, is rotated about its horizontal axis to make a mirror reflection of the upper *n*. In Lycian coin legends we were familiar with the name of Xanthos in the inflected form *arñnahe* or some abbreviated version of it. From M 301a we now have a matching Carian form *arn̲n̲aθ*.

It has long been clear that *arñna-* is the Lycian form of the *Arna* that Stephen of Byzantium notes as the native name of Xanthos. In M 301a this stem appears in a Carian word in an inflected form that presumably corresponds to the Lycian possessive *arñnahe*. Since coin legends are often arbitrarily truncated, we cannot tell whether the theta falls at the true word-end in Carian, but it at least gives us evidence of a termination that consists of, or perhaps merely starts with, *-(a)θ*.

Also noteworthy is the fact that the Carian replicates in its own way the usual Lycian habit of doubling a consonant after *r*. Whereas Lycian uses a special symbol, transcribed *ñ*, for the first *n*, Carian has a digraph of the two letters. We cannot tell whether this reflects Carian orthography in general, or whether the text merely seeks to repeat the Lycian spelling in this particular case. It is tempting to test other Carian texts to see, for instance, whether the symbol 𐊧 is really a digraph for a doubled 𐊬 with the same relationship as that of 𐊫 to 𐊪.

Set beside the other coins that refer to Xanthos, M 301a may be described as one half of a Lycian-Karian 'mini-quasi-bilingual': the Lycian name of Xanthos is found in Carian surroundings; confirmation is gained of some Carian letters, with a limited insight into the use of digraphs; a soupçon of Carian morphology is revealed. It remains to ask why a coin issued in Xanthos and bearing the dynast's name in Lycian should choose Carian script for the Lycian place-name.

I am wary, without more evidence, of proposing that *arn̲na-* is the true Carian name of Xanthos, rather than merely a transliteration of the Lycian form. Whether or not such a coin was expected to circulate in Caria too, it seems that M 301a was acknowledging some sort of cultural inter-penetration, a situation which the Lycian trilingual inscriptions of a later date confirm.

Was the legend perhaps framed at the whim of a Carian moneyer in the employ of *Kuprlli*? Some other Lycian coins show spelling mistakes, and literary quality control may not have been a priority, so a hypothetical Carian moneyer could perhaps have exercised such freedom of action.

Was there an influential Carian-speaking element in the population that fell under *Kuprlli*'s influence or direct control? If so, we may be observing the product of a deliberate diplomatic effort. As finds from both Caria and Lycia continue to build up, we may one day have a clearer picture against which to set M 301a. In the meantime it re-emerges as a mildly informative new document.

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