

## A Picture by Giovanni da Bologna in the Brera

also, to whom perhaps he owes a certain sentiment of simple humanity rather than any details of form.

Of the three works of Giovanni da Bologna which have come down to us, the Brera picture is probably the second in order of time, leaving the priority perhaps to the *S. Christopher* at Padua, and placing third No. 17 of the Accademia at Venice. Two of the main reasons which lead me to this conclusion are, firstly, the more popular character and greater realism of the Venice picture with the uncrowned Madonna, and the ground on which she is seated covered with flowers; secondly, the evidence of the signatures. The first is entirely in Latin, indicating perhaps the intention of a foreign painter to give his name in

its official form, while the third signature, written in Venetian,<sup>8</sup> is indubitable evidence of his long residence among the lagoons.

The rectangular shape of the Brera picture, without any arch, a form somewhat unusual at the period, may raise doubts whether it may not be a side-piece cut off from a work of larger dimensions, but this supposition is shown to be unfounded, when we observe that the priming and colour do not extend to the extreme edges of the panel, but leave a border of bare wood about two inches wide. The picture may have been the centre of a polyptych, but we have no positive proof that this was the case.

<sup>8</sup>Note the forms; Latin, *Johannes*; Venetian, *Zuanc*; Bolognese, *Zuan*, *Zvan*.

## AN INTERPRETATION OF THE PHAISTOS DISK BY F. MELIAN STAWELL (NEWNHAM COLLEGE)

**L**AST January (1911) there appeared in "Harper's Magazine" an essay by Professor Hempl, of Stanford University, that attracted, and deservedly, a considerable amount of attention. It contained a proposed key to the solution of the symbols stamped on the famous clay disk found in 1908 by Dr. Pernier of the Italian Mission at Phaistos, in Crete. By the kindness of Dr. Evans and the Clarendon Press I am able here to reproduce from "Scripta Minoa" full illustrations of the disk itself, and of the forty-five separate signs printed upon it.<sup>1</sup> As yet no other example of the script has been found, though it may have affinities with the other forms of writing practised in Crete. Until this year no one had published any attempt at decipherment, and full credit must be given to Professor Hempl for being first in the field. We who follow reap the advantage of his labour, and personally I have no doubt that many of the sound-values he proposed are right. Also, the markedly pictorial character of the signs made it probable from the first that he was correct in supposing that the script might be some kind of syllabary, each sign standing for the first letter or first syllable of the common name for the object. But the trouble with Hempl's interpretation was that some of the names he assumed did not fit the signs, while others could hardly have been common in Greek of any period; further, his reading was in anything but natural Greek; and finally, the sense it gave could not be called satisfactory. Still, there were at least one or two words, *Ἀθήνη* and *σεμνή*, which seemed very probable, and many of us, who were interested in Greek, thought that something might be done by working on Hempl's lines. The

result has been what I cannot help thinking is the discovery of a simple and reasonable system which gives a most interesting and coherent sense.

I have had valuable help and criticism from various friends,<sup>2</sup> especially Miss Jane Harrison and Mr. James Cunningham of Argyll Lodge, S. Andrew's, who was the first to read B 25 (*Μάμερσα* on Hempl's system, *Μάμαρσα* on mine), and who suggested *κλάδος* for the olive-spray. The essential point in the investigation was to find, if possible, a natural word or word-root, suitable to the object presented, and this, I believe, has been done. From the nature of the *débris* among which the disk was found, both Dr. Pernier and Dr. Evans dated it at the close of the Middle Minoan period, *circa* 1600 B.C. Therefore, if the language turned out to be Greek, it was likely to show a primitive character, which I consider it does. But therefore, also, one could not expect that all the words would actually be found in historical Greek. I think, however, that I have sound analogies for any forms that I have assumed. It has been known for some years that there existed in historical times a Cyprian syllabary with peculiar characters of its own, and it seemed likely that there might be some connexion between this and the script on the disk. But as scholars do not date the oldest Cyprian inscription further back than the seventh century B.C.,<sup>3</sup> neither the rules nor the signs were likely to be identical in all respects. I was entirely ignorant of the details of the Cyprian script, and it occurred to me that I might draw some advantage even from this ignorance. If, independently, a coherent scheme could be made from the disk itself, and if afterwards this could be seen to have affinities

<sup>2</sup>None of them, however, is in any way committed to my conclusions.

<sup>3</sup>See, for instance, Thumb, *Handbuch der Griechischen Dialekte* Heidelberg, 1909, §268.



## An Interpretation of the Phaistos Disk

with the Cyprian, the coincidence would be, so far as it went, additional evidence. And this did turn out to be the case. After I had worked out the values to my mind, I compared the result with the Cyprian syllabary (and its allied forms), as given on p. vii of Thumb's "Handbuch", to which I must refer the reader. I found a distinct correspondence which seemed plainly to indicate that many of the Cyprian signs were the linearized descendants of those on the disk. My data did not allow the comparison to be complete. Thumb gives only the best-known among the Cyprian characters, while the disk itself is so small and has so much repetition that it can hardly contain all the signs that must have been in use. But taking the twenty-seven sounds represented in both scripts I found that in twenty-one signs there appeared a marked affinity, in two a connexion seemed possible, and only in four could I trace no likeness at all.<sup>4</sup> The correspondence in the rules will appear below. I give on pages 25-27 an explanatory table of the signs.

### NOTES.—(A) ON THE SIGNS.

It will be noticed with interest how many of the words are Homeric and of old Indo-European stock.

2. *The Man's Head*.—Either ἀνὴρ or ἄνθρωπος, the only Greek words for *man*, would do for this sign, since both give the same sound-value. It happens again (in Nos. 8, 32, 35, and perhaps also in 28 and 34) for the signs to be so chosen that more than one word might naturally be guessed, but in each case all would give practically the same value. This may actually have been foreseen, as a latitude of this kind would be a real advantage in picture-writing, giving the reader more than one chance of guessing right.

3. *The Criminal*.—I take the mark on the face to be a brand. The original object of branding is that the criminal should be a *marked man*. Our use of "criminal" is exactly parallel to the use of κακός.

12. *The Shield*.—The other common name for shield is σάκος, and for the purposes of this inscription it would not matter if the reader did guess σα wherever the shield-sign occurs. (See below on the reading and compare NOTES B. IV.)

14. *The Weaving-weights*.—The Homeric loom was upright (like the Icelandic) and actually in classical times we know that the warp was weighted at the bottom (like the Icelandic) to keep the threads straight. The slots that Evans observed are, I

suggest, for the attachment of these threads. If the weights were used in pairs like this and if the odd threads were tied to the slots we see, and the even threads to corresponding slots on the opposite side, it would help to keep the lines of the warp apart so as to allow the passage of the weft. The weaving-weights that survive are mostly of this shape but are not in pairs,<sup>5</sup> the primitive arrangement having, I presume, been superseded by the later κανόνες.

The word that I have proposed, κείρωμα, does not, so far as I know, occur with precisely this sense in any author extant, but it is clear (a) that its meaning varied, and (b) that it, like its cognate κᾶρος, κείρωσις, had something to do with the *fastening and dividing of the warp*. Homer applies the epithet κειροσέων to linen *closely-woven* (Od. vii, 107). Hesychius refers to κειρώματα as τὰ διαχωρίστικα τῶν στημόνων πλέγματα (cf. Eustathius, 1571, *locus classicus*), while Callimachus (Fr. 265) uses κείρωμα to mean the web in general.

It does not seem far-fetched to suppose that it, or one of its cognates, could have meant this arrangement of the weights to which the threads were fastened and which helped to divide them.

17. *Plane (Scraper)*.—Not, of course, in an elaborate modern frame, but made like a short-handled broad-edged chisel. I am not sure of the actual word, but from a host of passages in Homer it is practically certain that the Achaeans must have had some polishing-tool the name of which began with ξυ.

18. *Carpenter's Angle, or Set-square*.—The word guessed for this, ῥάχιν, appears originally to mean *ridge*. Heretofore it has not been known to occur with precisely the required sense, but I think we may now recognize it in Soph. (Fr. 21), κέστρα σιδηρᾶ πλευρὰ καὶ κατὰ ῥάχιν (ἤλαννε παίων).<sup>6</sup>

"(He beat out) the sides with the iron hammer and according to the square (*rachis*)".

19. *Primitive Plough-handle*.—Compare the illustration of a plough, still used in Mysia, in the "Dict. Ant." (Aratrum). Hesiod speaks of an αὐτόγυον or plough-frame made all in one piece from a forked bough. In our sign I conclude that the short end is the plough-tail, while the longer served for share-beam, the upper limb representing the spring of the pole.

20. *Mead (Strong Drink)*.—I owe this suggestion to my friend, Mr. R. J. G. Mayor. It seems to me undoubtedly right, and it has the *naïveté* that marks the whole signary. Evans observes that the vase is of the primitive ἀσκός type, and in

<sup>4</sup> The signs are as follows: *Connexion doubtful*—α (αἰλουρος), ο (τόξον). *Probable*—ι (ἰρηξ), ο (ὄχλεός, third sign Thumb), υ (ὕς, first sign), ρα (ῥάχιν, third sign), λα (λαβή), λο (λωτός), λυ (λύρα), μα (μάχαιρα), με (μέθυ, second sign), να (νάρθηξ), νε (νηῦς, third sign), πα (παῖν), πε (πέλεκυς), πο (ποταμός, three signs), τα (ἄθα, breast, two signs), τι (τιηρήξ), κα (κακός), κε (γε, γτεῖς), κυ (γυνή, second sign), σα (σαμβύκη), σε (σφῆξ, three signs). *Connexion unlikely*—μο (μοχλός), τυ (θύνος), σι (σίλφιον), κο (κορώνη, κόλυμβος).

<sup>5</sup> There are, however, ancient Cretan weights, cubical, with a hole pierced at each of the four corners. See Brit. Mus. Vase Room I. Readers of *The Burlington Magazine* may be referred also to the able article by Luther Hooper in the February number, *The Technique of Greek and Roman Weaving*. Mr. Hooper, himself a skilled weaver, shows what splendid results can be obtained by the simplest appliances.

<sup>6</sup> These two words are conjectural, this part of the passage being corrupt.

# An Interpretation of the Phaistos Disk

## EXPLANATORY TABLE OF THE SIGNS ON THE DISK

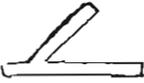
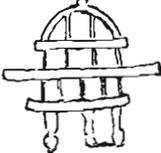
(The numbering and order are taken from Evans's "Scripta Minoa")

The vowels should be pronounced as in Italian.

	Object	Greek Name or Word-root	Sound- Value		Object	Greek Name or Word-root	Sound- Value
1	 Running Man	θέων	θέ, θι	9	 Tiara	τιηρήs (H.)	τι
2	 Man's Head	άνήρ, άνθρωπος (H.)	άν	10	 Arrow	ίός	ιω
3	 Bad Man (branded criminal)	κακός	κά	11	 Bow	τόξον (H.)	τω
4	 Captive	άιχμάλωτος	αι	12	 Shield	άσπίς	ας
5	 Boy	παίς (H.)	πα	13	 Club	κορώνη	κω
6	 Woman	γυνή (H.)	γυ, κυ	14	 Pair of Weaving- weights	καίρωμα	και
7	 Woman's Breast	√θα (H.) (cf. τιθήνη)	τα	15	 Axe	πέλεκυς	πε
8	 Hand bound with Cestus	χείρ or κεστός	κ	16	 Dirk	μάχαιρα (H.)	μα



# An Interpretation of the Phaistos Disk

	Object	Greek Name or Word-root	Sound- Value		Object	Greek Name or Word-root	Sound- Value		
17		Plane	ξύρον, ξύστρον	ξυ	26		Horn (of Ox)	κέρας (H.)	κέ
18		Carpenter's Angle	ράχης (H.)	ρα	27		Hide (of Ox)	δέρμα (H.)	δε, θέ
		<i>Hempl gives only the sound-value in his article, but I think ράχης must be the word he has in mind.</i>							
19		Handle of Primitive Plough	λαβή	λα̃, λε̃	28		Foot (of Ox)	βου-πούς	βω
20		Mead (in jug)	μέθυ	με	29		Cat	άιλουρος (H.)	α
21		Comb for the Loom	γτείς (κτείς) or κερκίς	γέ	30		Sheep's Head	όίς (H.)	ω
22		Reins	ιμάς (H.)	ι	31		Hawk	ϊρηξ	ι̃
23		Bolt	{μοχλός (H.) όχλεύς	{μω̃, μα̃ ο̃	32		Dove	κόλυμβος (H.)	κο̃
24		House	δομοί δῶμα	δο̃, दा	33		Tunny-fish	θυννος (H.)	θυ, τυ
25		Ship	νηϋς (H.)	νε̃	34		Wasp	σφήξ (σής = moth H.)	σε, σω

# An Interpretation of the Phaistos Disk

Object	Greek Name or Word-root	Sound- Value		Object	Greek Name or Word-root	Sound- Value
35 	Plant of some kind	νάρθηξ (νάρδος H.)	να	41 	Mast-rest	ἰστοδόκη ἴ
36 	Spray	κλάδος	κλα	42 	Primitive Saw	πρίων π
37 	Silphium	σίλφιον	σι, σε	43 	Sambuca, a triangular musical instrument	σαμβίκη (H.) σα
38 	Lotus (seen from above)	λωτός	λω	44 	Boar's Head (conven- tionalized)	ῥς (H.) ῥ
39 	Crocus	κρόκος	κρο	45 	River (conven- tionalized)	ποταμός πο
40 	Lyre	λύρα	λυ			

Homer the goatskin itself is regularly used for carrying wine.<sup>7</sup>

23. *Bolt*.—Hesych. gives ὀχλεύς as = μοχλός, and the words have been thought akin (*cf.* μία for ἴα, etc.).

28. *Foot of Ox*.—βου-ποῦς is not actually found, but *cf.* βουκράνιον and βόνυλωστος. Miss Harrison calls to my notice the phrase applied to Dionysus in the hymn of the women at Elis τῶ βοέω ποδι θύων (Plut. Q. Gr. xxxvi). Hempl suggested ποῦς, but ποῦς means *any* foot—*e.g.*, a man's—while this one clearly belongs to an animal.

32. *Dove*.—In later Greek κόλυμβος means *a diver*, but Mr. Dakyns observes that Hempl's suggestion is confirmed by the connection between *dove* and *diver*, *Taube* and *Taufen*.<sup>8</sup>

<sup>7</sup>In Evans's tracing the vessel has a handle (see his note p. 278), but I cannot detect any signs of it on the fine cast in the B. M. If there was no handle, the resemblance to the askos itself would be all the stronger.

<sup>8</sup>The bird, however, is not unlike a crow, and κόραξ, κορώνη, κολοῖς would give the same sound-value.

34. *Wasp*.—With the wings spread, as often, so as to cover the "waist". σῆς (Hempl) would give the same sound-value. But σφήξ we know to be Homeric and Indo-European, whereas we do not know the history of σῆς behind Pindar. Evans suggested that the insect was a bee, and Mr. Cunningham writes that a bee-keeping friend tells him "the Cyprian wild honey-bee is so like a wasp that they can hardly be told apart".

37. *Silphium* was an article of commerce in classical Greece, and Evans has already pointed out that it may appear in the regular Minoan script.

40. *Lyre*.—Compare the lyre on the hydria in the Brit. Mus. (Room of G. and R. Domestic Life, *Music*). Also the lyre in the Minoan signary No. 29b, and for the Saw *cf.* No. 23 (S. M., p. 232).

41. *Mast-holder*.—From Il. i, 434 and the Schol. we learn that the Homeric ship had a piece of timber (ξύλον) set up at the stern-end to support the mast when lowered by the fore-stays. The slot seen in our sign and the notches at top and



## An Interpretation of the Phaistos Disk

bottom may well be for ropes to lash the mast and keep it steady. I cannot but think that the object aslant between stern and centre in the ship-sign is the same board seen in profile.

44. *Boar's Head*.—I am doubtful about this. The difference in treatment between it and the other animal figures is obvious and startling. It does, however, show a resemblance to the boar's head in the more linearised form of the Minoan pictograph (S. M., p. 261), and it may have been taken over from that. Unfortunately it occurs only once on the disk.

45. *River*.—See Evans and Pernier, who agree that this may represent water.

### (B) ON THE SOUND-VALUES.

The signary is partly syllabic and partly alphabetic.

I have allowed a certain amount of vowel variation, but no more than we often find in Attic Greek—viz., (1) an interchange of  $\iota$  and  $\epsilon$ , *cp.*  $\tau\acute{\iota}\text{-}\theta\eta\text{-}\mu\iota$  redpl. from  $\sqrt{\theta\epsilon}$ ; (2) of  $a$  and  $\epsilon$ , *cp.* the parallel forms  $\text{'}\acute{\alpha}\theta\eta\eta\text{'}$ ,  $\text{'}\acute{\alpha}\theta\eta\eta\grave{\alpha}$ ; (3) of  $\epsilon$  and  $\bar{o}$ , *cp.*  $\delta\acute{\epsilon}\delta\omega\kappa\alpha$ , redpl. from  $\sqrt{\delta\bar{o}}$ ; and (4) of  $\bar{o}$  and  $a$ , *cp.*  $\kappa\acute{\tau}\acute{\alpha}\sigma\mu\alpha\iota$  contr. into  $\kappa\acute{\tau}\acute{\alpha}\mu\alpha\iota$ . As regards consonant variation, the interchange of  $\gamma$  and  $\kappa$  is perfectly regular (*e.g.*,  $\gamma\acute{\nu}\acute{\alpha}\pi\tau\omega = \kappa\acute{\nu}\acute{\alpha}\pi\tau\omega$ ), and so is that of  $\delta$  and  $\theta$ , and  $\theta$  and  $\tau$ ,  $\theta$  being simply "the aspirated dental mute" (Liddell and Scott).

There are no real duplicate signs, but in one instance I have allowed the same sign to have two quite distinct values; No. 23 could be pronounced either *mo* or *o*. This, however, is no worse than our hard and soft *c*, not to speak of other English enormities.

I have treated  $\kappa\rho$  and  $\kappa\lambda$  as equivalent to one letter. But they are practically so treated in the classical poets, not being considered to lengthen necessarily any short vowel after which they occur.

For reading the disk from the Table there are a few points to be noticed.

I. As in inscriptions of the historical period long  $\bar{a}$ ,  $\bar{\epsilon}$ ,  $\bar{o}$ , can stand for  $a$ ,  $\epsilon$ ,  $\phi$ , and  $ou$  is equivalent to  $v$ . (see Meister, *Die Griech. Dialekte*, pp. 238-9; and L. and S. *sub v, \eta*.) Aspirates are not always indicated.

II. When two consonants are meant to be sounded together the first may be written with the sign that usually involves a vowel, the silence of the vowel being inferred. This is a regular rule in Cyprian (see Hempl *op. cit.*, and Thumb.)

III.  $\nu$  ( $n$ ) may be omitted entirely in the script, as in Cyprian, wherever the sound comes before a consonant.

IV.  $a$  may be added to a syllable or a single letter without any indication in the signary; *e.g.*,  $\theta\acute{\epsilon}\acute{\alpha}$  may be read from the sign for  $\theta\epsilon$ ;  $\kappa\acute{\alpha}$  from that or  $\kappa$ ;  $\iota\acute{\alpha}$  from that for  $\iota$ .

For this I know no parallel in Cyprian, but I am indebted to the kindness and learning of my friend Mr. J. H. Mason for the following from Sanscrit. Monier Williams's *Grammar*, p. 3, § 2 (4th edition): "The short vowel  $a$  is never written unless it begin a word, because it is supposed to be inherent in every consonant."

V. Double consonants—*e.g.*,  $\sigma\sigma$ —are written with only one sign. This is also the rule in Cyprian.

The inscription, on either face of the disk, starts, I believe, as Hempl pointed out, from the upright dotted line at the circumference. Evans suggested beginning at the centre, arguing that by winding out thus, the writer would have a free run for the end of his inscription and would not have to calculate exactly the distance from circumference to centre. This argument would be strong if we assume that the size of the disk was not already determined by other considerations. But this is an assumption, and one that I do not think we should make. It would be odd to choose this circular form of writing *par gaieté de cœur*, and I would suggest that there may be a very good external reason both for the shape and size of the disk. Both are exactly suited to a pair of cymbals, convenient for grasping in either hand,<sup>9</sup> and Dr. Pernier has already urged that the disk is a matrix. I believe it is a matrix for the cymbals used in the traditional rites of a great goddess, inscribed with the invocation that the worshippers had to chant. It is matter of common knowledge what importance primitive races attach to the correct repetition of the right formula, and hence we should have a natural reason for the care shown in printing the inscription. It will be seen that my reading fully bears out this theory.

If the size of the disk were fixed beforehand, it would be just as difficult to calculate from centre to circumference as *vice versa*, and therefore full weight must be allowed to the following significant fact. The signs are divided into groups, and on Face A the same sign-group occurs twice over, A 15 and A 3. But in A 3 (the group nearest the centre) the signs are *cramped*, and in such a way that it is impossible to tell which sign ought to come first, the man's head or the shield. Now a writer would *cramp* like this only if he were getting to the end of his space. And, on the other hand, *the cramping would not matter if the words had already been given*, since then the reader would have the clue (*cp.* our use of "*etc.*"). Therefore, I infer that A 15 comes first. This, to my mind, is conclusive, and it may be added that the nearer the circumference the more symmetric are the circles; that on neither face is the central sign really in the centre; and that in drawing a spiral it is natural for the beginning to be the

<sup>9</sup> The actual size of the disk is given in the photographs; diameter 6.67 in. (S. M., p. 23.)



THE PHAISTOS DISK : FACE B

AN INTERPRETATION OF THE PHAISTOS DISK  
PLATE I







THE PHAISTOS DISK : FACE A

## An Interpretation of the Phaistos Disk

more symmetric. Finally, there is no doubt that in so small a disk the inscription is easiest to read at the circumference, and certainly it is best to begin an inscription where it is easiest to read, especially one that is full of repetition.

If, then, we start from the circumference and hold the disk stationary (the signs being just as easy to read upside-down), the inscription runs clock-wise, that is to say, from left to right in the upper arc and from right to left in the lower. (Scholars will compare the resulting change of direction with the *boustrophedon* writing, *i.e.*, in lines alternately left to right and back again, already known to us in early Greece.) If the cymbals were held in position for clashing and in such a way that the dotted line came, to borrow an illustration from the clock, somewhere about 8 o'clock for the right hand (FACE B) [PLATE I] and about 4 o'clock for the left (FACE A) [PLATE II], the inscription would begin with the signs upright and in the place most convenient, under the circumstances, for the reader, *viz.*, close to the thumb. Thus the whole thing would the better serve the purpose for which I believe it was designed—that of a portable psalm-book.

I have altered the relation of the photographs to the page, but not, of course, to each other. On the disk itself the one dotted line is directly behind the other. This seems to bear out my theory about the pair of cymbals, and the impression of the curves to support the commencement at the periphery: *e.g.*, on Face B the largest circle seems to have been drawn first, in one sweep from the dotted line to the running man, and then the next from the running man to the third fist.

Evans observed that beside the upright divisions there appeared under certain signs a slanting dash (engraved by hand, not printed, like the signs themselves), and that these dashes occurred at corresponding intervals on either face. He suggested that they indicated breaks of some kind in the composition, and taken in connexion with the long dividing line at A 19 and B 19 they produced a markedly rhythmic arrangement of the sign-groups, which actually recalled the strophic character of a Greek chorus. Finally, as there were thirty-one groups on Face A and only thirty on Face B, and as there was nothing else to indicate which face really came first, Evans suggested that Face A might be the second of the two. I believe the content of the hymn quite bears this out: and indeed it is remarkable how many of Evans's suggestions are confirmed by my reading.

The hymn appears to be in a regular dochmiac metre, and this is a fact of great importance since the dochmiac measure was the one traditionally assigned to Corybantic and Bacchic rites. "Dochmiac verses . . . are based upon a foot compounded of the bacchius and the iambus, - - - | - called the *dochmius*. This peculiar foot appears in nineteen

different forms, by resolving the long syllables and admitting irrational longs in place of the two shorts." (Goodwin, *Gk. Gr.* § 302.) The most famous example in classical literature is from the opening speeches of Cassandra in the *Agamemnon*, which show much greater variety than we have here. The "Bacchic" and "Iambic" feet may be intermixed without any definite law.

The upright lines on the disk mark the end of a foot or group of feet: they always coincide with the end of a word, but some of the feet contain more words than one. In the last syllable of a division, as in the last syllable of an iambic line, a short quantity may take the place of a long.

We may now proceed to the actual reading.

FACE B	<i>Sign-value</i>	<i>Translation</i>
B 30 Evans's numbering (32 Hempl's numbering)	ἀνασσ', ἱά, λῦται	An-as, i(a), lu-ta! Lady, all hail, deliver!
B 29 (33)	δεᾶ ποτανα.	De(a), po-ta-na! Divine one, Queen!
B 28 (34)	ἀνωσιώπα.	An-si-o-pa! Now hush! (To a fellow-worshipper) <i>Pause</i>
B 27 (35)	ἱανέ, δεᾶ,	I(a)-ne, de(a), Heal, divine one!
B 26 (36)	τύ, δομασσα	Tu, do-me-as(a) Thou, victorious
B 25 (37)	Μάμαρσα.	Ma-ma-ra-sa! Mamersa! <i>Pause.</i>
B 24 (38)	κῶθι κροτου,	Ko-thi kro-tu! Hark to the clash!
B 23 (39)	παᾶ, κῶθι ρᾶ.	Pe-ta, ko-thi-ra! Lady, O hearken!
B 22 (40)	ἱά, σεπνη,	I(a), se-p-ne! All hail, holy one!
B 21 (41)	ταᾶ, δολοῦνα.	Ta, do-lu-na! Hail, wise one!
B 20 (42)	ᾶγκεκλου	An-ke-kla-lu! Now cry aloud
B 19 (43)	θηνέλλω, θεᾶ.	The-ne-lo, the(a)! "Halleluia, Goddess!" <i>Pause.</i>

# An Interpretation of the Phaistos Disk



B 18 (44)  
 ἄ, δῶδόμεναι,

A ! Do-do- Ah ! Give ! give !  
 me-na !

B 17 (45)  
 μάκαιρα.

Ma-kai-ra ! Blessed one !

B 16 (46)  
 ἄ, τῦ, θεᾶ,

A ! Tu, the(a) ! Ah ! Thou,  
 Goddess !

B 15 (47)  
 γυναικόκροτου

Gu-na-ko-kro- To whom the  
 tu ! women clash !

B 14 (48)  
 ἀντίθη, θεα.

An-ti-the, the- Arise,  
 (a) ! O Goddess !

B 13 (49)  
 ἄ, κλατάγκ,

A, kla-ta-(n)-k ! Ho, Clang !  
 Pause

B 12 (50)  
 ἀκάκω,

A-k(a)-ko ! Give ear,

B 11 (51)  
 ἄ, πότα.

A, po-ta ! O Queen !  
 Pause.

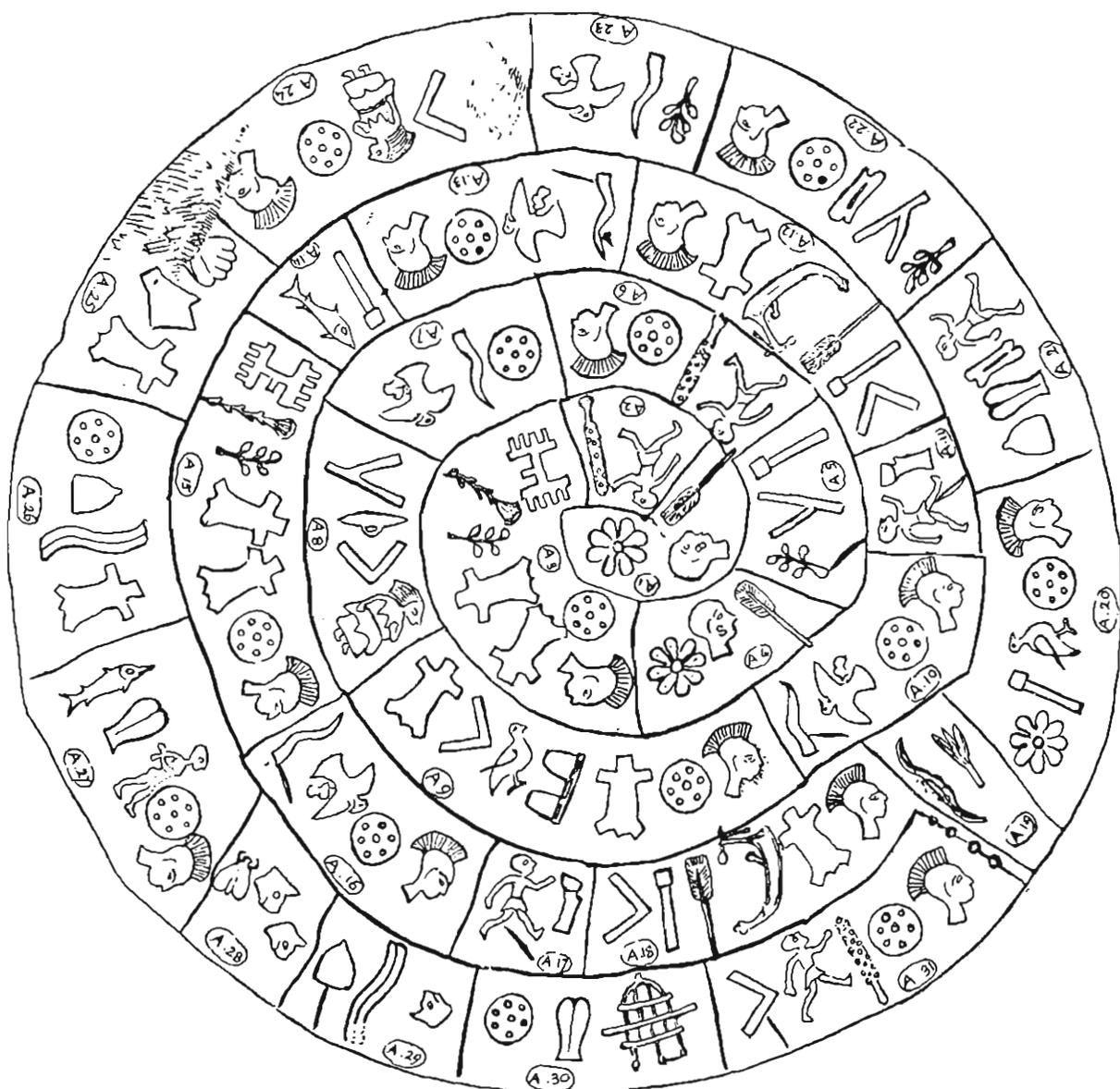
B 10 (52)  
 ἰά, ἄ, κλατάγκ.

I(a), a, kla-ta- All hail ! Ho !  
 (n)-k ! Clang !  
 Pause.

## An Interpretation of the Phaistos Disk

B 9 (53) δε̄ᾱ σ̄ε̄μν̄ḡ,	De(a)se-mo-ne !	Holy divine one !	A 24 (8) ἄνασσα, κυρα,	An-as(a), ku-ra, Lady, Mistress,
B 8 (54) τᾱ, ρ̄αννᾱ,	Ta, ra-na !	Behold, beloved !	A 23 (9) ἱκ̄ḡνᾱι.	Hi-ke-na ! Come !
B 7 (55) τᾱ, πο̄τᾱ.	Ta, po-ta !	Behold, Queen ! <i>Pause.</i>	A 22 (10) ἄνασσ', ἱλάν,	An-as, hi-la-na ! Lady, be gracious !
B 6 (56) τᾱ, Μᾱρᾱ, δ̄ᾱ.	Ta, Ma-ra, da !	Behold, War- rior, Goddess !	A 21 (11) θε̄', ἱλον' τᾱ,	The, hi-lu. Ta, Goddess, be merciful ! Be- hold,
B 5 (57) ἰά, ἄ, κλατάγκ.	I(a), a, kla-ta- (n)-k !	All hail ! Ho ! Clang ! <i>Pause.</i>	A 20 (12) ἄνασσα, κοολῶ	An-as(a), Lady, I call on ko-o-lo (thee)
B 4 (58) τιω, κρατά,	Ti-o, kro-ra-ta !	I honour (thee), mighty one !	A 19 (13) κρο̄τψ̄.	Kro-to ! With the clash ! <i>Pause.</i>
B 3 (59) ἄγγουναότα,	An-gu-na-o-ta !	Queen of the Ways !	A 18 (14) 'Ἄνθῆνη, ἰώ, Μαρά,	An - the - ne, io, Athena, behold, Ma-ra ! Warrior !
B 2 (60) ἄ, σ̄ε̄μν̄ḡ	A, se-mo-ne	Ah, holy	A 17 (15) βῶθε̄ι.	Bo-the ! Help ! <i>Pause.</i>
B 1 (61) πο̄τᾱ.	Po-ta !	Queen ! <i>End of Strophe.</i>	A 16 (16) ἄνασσ', ἱκε̄.	An-as, hi-ke ! Lady, come ! <i>Pause.</i>
FACE A A 31 (1) ἄνασσα, κῶθί ρ̄ᾱ.	An-as(a), ko-thi ra !	Lady, O hearken ! <i>Pause.</i>	A 15 (17) ἄνασσα, (θέθεναι σίγην, θῶω̄)	An-as(a), — the- the-na sigē(n), Lady ! — keep silence,
A 30 (2) δολουσᾱ,	Do-lu-as(a),	Cunning one !	A 14 (18) ἄνασσ', ἱκε̄.	Thu-o. — I sacrifice — An-as, hi-ke ! Lady, come ! <i>Pause.</i>
A 29 (3) ἄ, πο̄τᾱ.	A, po-ta !	Ah, Queen ! <i>Pause.</i>	A 12 (20) 'Ἄνθῆνη, ἰώ, Μαρά,	An - the - ne, io, Athena, behold, Ma-ra. Warrior !
A 28 (4) ἄψω,	A-a-so,	I will sing,	A 11 (21) βῶθε̄ι.	Bo-the ! Help ! <i>Pause.</i>
A 27 (5) ἄνασσ, ἄ, λύτου.	An-as, ai, lu-tu !	Lady, oh, thou must deliver !	A 10 (22) ἄνασσ', ἱκε̄.	An-as, hi-ke ! Lady, come ! <i>Pause.</i>
A 26 (6) Δε̄ᾱ πο̄τάς,	De(a) po-ta-as,	Divine one, mighty Queen !	A 9 (23) ἄνασσα, δέκα, κορά δε̄ᾱ,	An-as(a), de-kai, Lady, receive, ko-ra de(a), maiden divine,
A 25 (7) δ̄ε̄, ἕκα.	De, huk(a) !	Divine one, Giver of Rain ! <i>Pause.</i>		

# An Interpretation of the Phaistos Disk



A 8 (24)  
 $\bar{\kappa}\bar{\upsilon}\bar{\rho}\bar{\alpha}, \xi\bar{\omicron}\bar{\lambda}\bar{\alpha}$

Ku-ra, xu-la! Mistress, the spoils!

A 7 (25)  
 $\bar{\eta}\bar{\kappa}\bar{\epsilon}\bar{\alpha}\bar{\iota}$

Hi-ke-as(a) or Oh, come!  
 Hi-ke-sa!

A 6 (26)  
 $\bar{\alpha}\bar{\nu}\bar{\alpha}\bar{\sigma}\bar{\sigma}\bar{\alpha}, \bar{\kappa}\bar{\omega}\bar{\theta}\bar{\iota}$

An-as(a), ko-thi! Lady, hearken!

A 5 (27)  
 $\bar{\mu}\bar{\omicron}\bar{\lambda}\bar{\epsilon}\bar{\iota}\bar{\nu}\bar{\alpha}$

Mo-le-na! Draw near!  
 Pause.

A 4 (28)  
 $\bar{\iota}\bar{\omicron}, \bar{\kappa}\bar{\alpha}\bar{\lambda}\bar{\omega}$

Io, ka-lo! Behold, I call!

A 3 (29)  
 $\bar{\alpha}\bar{\nu}\bar{\alpha}\bar{\sigma}\bar{\sigma}\bar{\alpha}, (\bar{\theta}\bar{\acute{\epsilon}}\bar{\theta}\bar{\epsilon}\bar{\nu}\bar{\alpha}\bar{\iota} \bar{\sigma}\bar{\iota}\bar{\gamma}\bar{\eta}\bar{\nu}\bar{\iota})$

An-as(a)!—the Lady!—keep  
 the-na si-ge(n), silence!

A 2 (30)  
 $\bar{\kappa}\bar{\omega}\bar{\theta}\bar{\iota}$

Ko-thi! Hearken!

A 1 (31)  
 $\bar{\iota}\bar{\omicron}, \bar{\kappa}\bar{\alpha}\bar{\lambda}\bar{\omega}$

Io, kalo! Behold, I call!  
 End of Antistrophe

## An Interpretation of the Phaistos Disk

### NOTES ON THE READING.

B 30. λῦται = λῦσαι. (So λῦτον A27 = λῦσον. Fut. Imp., a tense of the mood not found in classical Greek, but natural and expressive.) The forms tend to show a nonsigmatic character, which fits in both with Cyprian and Æolic. There is also a preference for α above η, and we find ξν for σν, as in Æolic.

B 29. *cp.* πόννα θεά, Od. v, 215 and elsewhere.

B 27. ἴανε. Aor. 2. regularly formed from ἰαίνω.—The verb is used in this sense by Quintus Smyrnæus, harking back, I believe, to an archaic use.

B 26. δομάσσα—I assume an adjective δομά-εσσα as from a base δομα. δομάσσα might also be read, and for δαμάω, see *sub voc.* L. and S. But the form with ο seems possible at this date in view of the Lat. *domitus*.

B 25. Μάμερσα is actually an old name for Athena (see L. and S. and *cp.* Lat. *Mamers*.)

B 24. κῶθι.—κῶθ is an old verb (*e.g.* Epicharmus). The imperative is formed as in λῶθι.

B 23. πτά.—I assume a shortened form for πότα *cp.* ἄνα for ἄναξ. πότα must have been the original form of πόννα, the ν strengthening the stem, as so often (*cp.* πόντις, the accepted original for πόντις.) The word may surely be recognized in the name of the old Roman goddess "*Vica Pola*", "*Victress, Mistress*". (Liv. ii, 7. Cic. De Leg. ii, 11, 28, *a vincendo et potuundo*. Preller. Röm. Myth., p. 609. I owe this reference to Mr. Cunningham.)

κῶθι ῥα, *cp.* κατά ῥ' ἔξεν, Il. xxiv, 522—"do sit down". Here and in τᾶ, below, we seem to see the earlier, and, as it were, more massive sense of the Homeric phrases.

B 22. σεπνή (√ σεπ) *e.g.* σεπτός.—Parallel to, and more primitive than, σεμνή.

B 21. τᾶ.—*cp.* Od. ix, 347: κύκλωψ, τῆ, πῖε οἶνον. Also the Cyprian Inscr., (135 Deecke Sammlung.) δολούνα=δολούονσα, *cp.* the δόλοι in which Athena delighted.

B 19. θηνέλλω.—Survives in the lighter phrases of Archilochus and Aristophanes "*τήνελλα, καλλίνικε*"; *cp.* our "Hooray" and the Norman "Haroo".

B 18. δοδόμεναι=διδόμεναι *cp.* δόμεναι Il. i, 116.—Inf. for Imper. as often (*cp.* θέθεναι A 15=τίθεναι).

B 15. γυναικοκρότου.—*Voc.* as from γυναικοκρότους. (It might also mean "*Lady of the Clash*": *cp.* *queeen* cognate with γύνη.) Rhea is actually called χαλκόκροτε in an Orphic hymn (Abel, xiv, 3.) And see Pindar Isth., 7 (6), 3.

B 14. ἀντίθη.—Att. ἀνίστη. For the avoidance of sigmatism, *cp.* *ti-shitha-mi*. Skt. redpl. from √ stha (L. & S. ἴστημι).

B 13. κλάταγκ.—Onomat. and half-way between ejaculation and verb, *cp.* our *Clank, Clang*. (For the effect in the poem compare Tennyson "*Clang, battleaxe and clash brand! Let the King reign!*") The whole context makes it clear that the object

of the cymbal-clashing was to arouse the goddess; "*Hear us, Baal!*" The word κλάταγκ itself may be the ancestor of the famous κόγξ in κόγξ ὄμπαξ, "*the cry of the initiated*," according to Hosychius.<sup>10</sup> The suggestion has been made to me by a friend that ὄμπαξ itself may be connected with Lat. *incus* (*anvil*.) An original ὄν-κακ-ς would imply only a perfectly regular change from κ to π and from ν to μ. The whole phrase would then mean "*Clang the gong (cymbal)!*" Mr. Cornford has made a similar suggestion (see J. E. Harrison, Proleg. to Greek Religion, pp. 161, 158).

B 12. ἀκάκω. Perf. Imp. ἀκούω (*cp.* Att. ἀκηκόα). The root probably contained the digamma which might account for the long ω.

B 6. Μᾶρά. The parallel I offer is Μαρ-νάς, an epithet of Zeus in Gaza (see L. and S.). The root is probably μαρ. *cp.* Hindustani *Maro* = *fight*; *cp.* also Μάμερσα, Mavors, Mars, and possibly Ἄρης.

B 3. ἀγγουνάσα. I offer this with some diffidence, but I do believe it presents a real parallel to ἀγῦιατα, "*God of the ways*," applied to Apollo (Ag. 1065, and *cp.* εἰνοδία, τριοδία, applied to Hecate). It has already been thought that ἀγῦια is derived from a perf. part. of ἄγω, and my form might well come from the 2nd aor., ἀγαγόν-σα = ἀγγουνα. The ἄν sign is used for the first syllable, because ν is assimilated to the following γ; it is indeed always so written in Attic.

A 30. δολούσσα. (Signs *do-lu-as*. In reading, of course, the α is absorbed into the preceding long υ.) *cp.* δολόεσσα Καλύψω, Od. vii, 245, in a good sense.

A 26. δεᾶ ποτάς I take as a primitive form to be compared with the later ποτνιάδες θεαί Eur., Or. 318.

A 25. ὕκα. This is particularly doubtful. Not only is the first sign obscure, but the adjective I assume (ὕκος) does not actually occur. But I propose it as a possible cult-epithet parallel to ὕης applied to Zeus and Bacchus as "*gods of fertilising moisture*". *cp.* ὕη applied to Semele and ὕαδες to the nursing nymphs, and above all ὕης Ἄττης, the cry in the rites of a great goddess quoted by Dem. 313, 27; also the passage from Proclus (quoted in Proleg. p. 161): "*In the Eleusinian Mysteries, looking up to the sky they cried aloud 'Rain' (ὕε), and looking down to earth they cried 'Be fruitful' (κύε)*". (Procl. ad Plat. Tim. p. 293.)

A 24. κυρά for later κυρία. *cp.* πόννα and ποτνία. Readers will be struck by the likeness in the next verses to the "*Kyrie Eleison, Christe eleison*" of the Church. So long an ancestry may it have. I take ι in ἰλᾶν, ἰλοῦ as short; *cp.* Il. i. 100, 147; but it could also be scanned long.

A 20. κολῶ.—I assume as a form, parallel to, or older than, the Attic κηλῶ, both of them being strengthened forms of καλῶ. *cp.* Eur. Alc. 359 ἡ κόρην Δήμητρος ἢ κείνης πόσιν ὕμνοισι κηλήσαντα.

<sup>10</sup> Lovers of Shelley will recall the delightful caricature by Hogg. (*Life of Shelley*, chap. VI. fin.)



## An Interpretation of the Phaistos Disk

(*cp.* also Thumb § 275, 8 for *καλήσω*, a Cyprian by-form.)

A 18.—The form *Ανθήγη* suggests that the old derivation from *άνθος* is right, and that the Anthesteria may have some connection with spring-time and flowers. The first syllable may be short as in *άνδροτήγη*. II. xxiv, 5.

A 9. *δέκαι*.—Non-sigmatic aorist. *cp.* Thumb § 275, 9.

If this interpretation is at all right, it is obvious that most interesting conclusions would follow. Athena appears at this early stage as a well-nigh universal goddess. Epithets and phrases associated later with other divinities are in this hymn hers. She is sky-goddess, healer, bountiful giver as well as queen of war and of wisdom. The hymn itself for all its primitive character shows already that subtle balance and rhythm, that sense for an effective opening and a dignified quiet close so characteristic of Greek poetry. The drawing of the signs themselves is equally significant. For the first time excavation has given us an example of art that we can feel to be truly Homeric: this is neither the accomplished but decadent Minoan work, nor the crude, if vigorous style of the Dipylon period: it is lucid, strong, graceful, buoyant. The difficult space is covered easily and successfully. The human figures are drawn with a liveliness that even borders on caricature, the animal forms and flowers in less detail, but with a delicate precision that recalls many an Homeric simile, the tools simplified so that only their essential lines are left. It is Homer's method, and the life suggested is Homer's. Weaving and shipcraft, weapons of war, and the lyre are taken as familiar to every

reader. On this little disk we seem to feel the whole life of the Achæians and the future promise of Greece.

Perhaps, after so much pedantry, one may be allowed a myth, which shall be true or false, as the reader will, and according to his discernment.

I had read all the words but one,—the one formed by the signs of the olive-spray, the breast, and the hand,—and this I could not decipher. I thought it might possibly be "*κτάγκε*" *Slay!*, but this did not satisfy me, for many reasons; and that evening I confessed to a scholarly friend that it annoyed me not to feel sure. "Oh", he answered, "you must not expect to solve it all at once." But secretly I did.

However, it was late at night, and I went to bed and slept peacefully. In the quiet dawn I awoke suddenly and heard, distinct and clear, like little flying bells, "*κόγξ, κόγξ ὄμπαξ*". "The very word!" I thought, and fell asleep again. In the broad daylight I saw that *κόγξ* was indeed the clue, and gave light on many things.

But I saw something else too. A silver crocus with a golden heart had sprung up in the night, just below my window, the very first crocus of the year. So something else was plain as well. Who was it that had come up through the crocus and in at my window when I was asleep? Who but Shelley himself? Shelley, like a flying, golden snake, bright-eyed and clear-voiced, crying as he cried long ago in the wild, eager tones his friend thought so unsuitable, but which, doubtless, were planned for this occasion—crying, loud and clear, "I have said 'konx ompax' and it is finished!"

## TINTORET

BY A. CLUTTON-BROCK

**I**T is strange, now that we have long books about many minor Italian artists, that so little should have been written about Tintoret, and that little of no great merit. Since Ruskin praised him, he has been very little criticized, and there has been no minute investigation of the facts of his life or of his art. The chronological order of his works has not been established, and no one has made a serious effort to establish it. But there is an even greater uncertainty about his merits. After more than three hundred years his reputation is still insecure, even among those who are best able to judge, and there is more difference of opinion about him than about any other famous artist.

Miss March Phillips' book<sup>1</sup> is not a great advance upon other books that have been written about Tintoret in the way either of biography or of criticism. We cannot complain that she has found

out nothing new about his life, for very likely there is nothing new to find out. At any rate there are no scandals about him to be reported. He was by all accounts, that is to say by Ridolfi's account, a man of simple and regular habits, who injured no man or woman and was adventurous only in his art. He did not care for fashionable society and would stand no nonsense from Aretino. Miss March Phillips relates all that is known about him so as to give us a clear and pleasant idea of his character. But when she comes to deal with his art she has nothing very valuable to say about it. Her criticism is not foolish and it should be useful to those who know nothing about Tintoret, but it consists for the most part of rather indiscriminate praise, and it does not help us to distinguish Tintoret very clearly from other Venetian artists. Tintoret, she says, "will always appeal most strongly to those who apprehend the imaginative and emotional side of life, and we

<sup>1</sup> *Tintoretto*, by Evelyn March Phillips. Methuen. 15s. net.



