The Problem with Linear B

by

B Newbound
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see
Acknowledgements
I say nothing of the holy and solemn shrine of Eleusis Where all the peoples of the earth Are made partakers of the mysteries, or of Samothrace or of those secret rites which are celebrated on Lemnos, By throngs of worshippers by night, in shadowy groves. For when these are examined by the light of reason, they seem to be a recognition of the powers of Nature rather than the power of <the> god<s>.  

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Preface

It is now just over a century since Sir Arthur Evans unearthed the first script-bearing tablets at Knossos.

The study of those objects was conditioned from the outset and has been conditioned ever since by assumptions about the context in which they were used and found.

The following pages demonstrate why those assumptions cannot be right, and set out an alternative. In demonstrating the negative, they do not represent a "theory". They go back to a prior essential stage, examination of the evidence, the objects on which Linear scripts are found, to establish its data content. The proposed alternative is built on the results of that inquiry.

Readers often turn to the conclusions of a book first. But if they do so here, and no more, then it will be at the expense of missing the main point. For what they see and the process of seeing itself are more important in these pages than what they read, images (and sounds) more important than printed words.

The narrative for the most part requires either no or very little knowledge of ancient Greek, but it does call upon all the qualities needed to engage with some seriously demanding visual art. Before starting, I recommend the brief comments on viewing Linear objects in Annex 1.

Acknowledgements

Aside from family and friends for help and support, I am grateful to those who have made images and other material available on the internet. However, where they have done so with restrictive copyright, I have generally decided, however strong the counter-vailing considerations, not to reproduce them here, for the reasons set out in a section discussing the selection of evidence in Annex 1.

In addition to the individuals cited in the following pages, I would like to thank, in particular, The British Museum, the several German institutions involved in the digitisation of the CMS (see Annex 1), the University of Salamanca (Minos), Wikipedia and associated initiatives and those who have made materials freely available for reuse on those sites, the Perseus under Philologic Project at Tufts University (LSJ), the Internet Archive (Scripta Minoa), and the University of Heidelberg (The Palace of Minos).

Where I have reproduced images, or parts of them, it has been because I thought it necessary in order to make the case. Ideally I would often have preferred a "link", but it was not feasible technically or in terms of facilitating comparison between existing interpretation of "original" images, such as it may be, and my review, critique or proposals. I have neither wanted nor been able to replicate the resolution of the "originals", and readers should refer to those instead for their own further study or other purposes.

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My use of their material in no way reflects their approval or otherwise of my statements or graphics (including extractions from and enlargements of photos). All mistakes are my own. I cannot guarantee that web pages are still live.
Section 1: the Administrative Model (AM): genesis and alternative

Introduction

"As was no doubt the case with the tablets and 'labels' of the earlier classes [Cretan hieroglyphs and Linear A], the great majority of the clay documents of Class B [Linear B] contained business records, such as accounts and inventories, and in nearly all cases are associated with numbers. The objects referred to by these lists are in almost all cases easily recognizable from the pictorial representations appended to the different entries."

So Sir Arthur Evans in Scripta Minoa I (pages 46-47). By "pictorial representation" he meant a sign, an "ideogram", perceived as representing the purported business item (a man, axe, pig etc). As a result, not only did he assume that the perceived Linear signs were generally administrative in nature, he also assumed that the related scripts were the only thing about the objects on which they are found (their "support") that merited study. Scripta Minoa I contains scarcely a single word about any other potential features. But then the impetus for Sir Arthur's excavations had been the prior conviction that the "Mycenaean palace" civilisation must have had writing to facilitate its sophistication. The administrative writings from the Middle East civilisations, in particular on clay, provided an obvious (or so it seemed) precedent. Yet, innocuous as it may sound, even the term "tablet" was already insidiously if unintentionally loaded, "documents" even more so.

From the early pages of Scripta Minoa I, Sir Arthur evidently also assumed that all pictographs, any pictorial representation of meaning, represented, a more primitive writing stage, precursor to more abstract, geometric, Linear signs. Those latter therefore had no pictorial implications or associations. It never seems to have crossed his mind that "pictographic" representations might be artistic elaborations of already known Linear signs, perfectly familiar, in principle, to their users, just like some calligraphy. And although he was alert to what he called "vain repetitions" in relation to Hittite and other inscriptions (page 6-7) - in other words, the presence on objects of marks wrongly identified as script when they were, purportedly, purely decorative - he made no mention of the possibility, say, of deliberately fainter incision or the extent to which it may have been lost or impaired over time and what difference that might make to purportedly obvious "readings" (whether of Linear signs or what are now termed ideograms or numbers), or on the great irregularity of tablet shape. On the other hand, he assumed that if tablets looked broken, then "fragments" they must be, even though the nature of the breaks, the nature of the depositions, and the absence of all those "missing" fragments in material that was otherwise so evidently durable should all have prompted doubt. Colouration was dismissed as assumed discolouration, caused by fire or damp or other natural accident. Similar preconceptions prevailed in the later excavations at Pylos that also unearthed many hundred perceived Linear "tablets".

It may have been a natural, but as will become clear it was all a most unfortunate set of inferences and assumptions. The Linear scripts (nor they alone among script systems) have gone on to exercise a similarly all-powerful, hypnotic, mesmerising effect, ever since. Commentary on the signs and their supports, individually or generally, never adverts to a possibly wider evidential picture. Only at one point in all Scripta Minoa Volume II did Professor Myres discuss a "tablet inscribed with seal engraver's designs", concluding that "The importance of this tablet is that it illustrates the use of clay as a draughtsman's material, as well as for script (page 66)."

Remarkable examples exist of the application of linear script of this class to other objects besides the clay tablets and sealings (page 36), and he goes on to discuss two cups, wall graffito at Hagia Triada, and a "libation table" with Linear A inscriptions.

1 Generally, but not totally. "Remarkable examples exist of the application of linear script of this class to other objects besides the clay tablets and sealings (page 36)," and he goes on to discuss two cups, wall graffito at Hagia Triada, and a "libation table" with Linear A inscriptions.
potentially alter our knowledge of this, fragmentary and limited, record of Late Bronze Age administration.... The different light source provides better readings of the tablets and allows the viewer to see fingerprints and erasures, identify writing techniques and traditions, and check the accuracy of transcriptions and of scribal hands' attributions.

It is even more unfortunate that this administrative presumption, the heart of the prevailing Administrative Model (AM) of Linear objects, looks seductively like hard science because it identifies what it thinks is fact-based content (numbers and related data), and a format that apparently lends itself to classification (such as "scribal hands"). But the assumption cannot be anything other than insecure if it takes no account of other and all the visual evidence on an object, if it fails to observe the most basic principle of evidence handling, namely examination of primary evidence, or as near as one may get to it, in the round for all its visual clues before proceeding to inference.

And from the early days of the Knossos excavations, there were such clues, strong indications that the administrative presumption was flying in the face of the evidence, at the expense of a valid alternative that the same visual evidence did actually support.

The "Knossos Pp Series"

In the early pages of Scripta Minoa I (page 43 and figure 21, at left) Evans describes how "In the South-East corner of the eighth West Magazine there also occurred on the floor level a small hoard of very imperfectly baked tablets. These were embedded in a clay mass which no doubt owed its formation to the dissolvent effects of moisture on what had originally been a much larger deposit of inscribed tablets. They were moreover accompanied by fragments of decayed gypsum, apparently belonging to a small coffer of that material in which they had been contained. What remained of the tablets themselves was in a very bad state, but with the aid of a plaster backing I was able to raise a series which were lying on their faces in a regular file, and thus to preserve a record of their original arrangement in the gypsum chest. From the pictorial figures, added to the linear inscriptions on these, it appears that they referred to bronze single-edged axes." Sir Arthur's observations on the effect of moisture are important when it comes to wider issues surrounding the distribution of Linear clay tablets. Here I want to focus on his insinuation that the tablets preserved their original arrangement in a filing system. Plainly Sir Arthur felt a need to explain the agglomeration, but the question is whether his explanation - both derived from and supporting the AM - is valid. For example, how and why was it...

3 Annex 1 discusses the nature of the, primarily photographic, evidence base.
4 The tablets now constitute the Knossos "Pp" series.
that, as he implies, some tablets survived the effect, as he perceived it, of moisture penetration, whilst others that did not contributed to the in-fill between the survivors? What circumstances could possibly generate such markedly differential deterioration in closely adjoining items?

One feature of the "surviving" tablets is that they have apparently been shaped, fractured and arranged, individually and collectively, to form gentle curves (my enlarged extract above, curves highlighted green). That such interventions could have occurred naturally or accidentally would be highly surprising.

Secondly, "script" incisions and other marks in a tablet continue, that is match up precisely with others both in the fill between tablets and in adjoining parts. There are many such occurrences, both horizontally between "fragments" and, more significantly, vertically between different tablets (examples shown in red, green, yellow below). It is difficult, even impossible to attribute such pattern to natural effects or chance. The breakage and distribution of the surviving tablets, particularly towards the top, suggests that they have been fragmented with some considerable force (see the first photograph above). Nor does the repeated fragmentation look like the effect of water erosion, and, if it was, it would be difficult, on Evans's own analysis, to understand how the affected tablets would have survived at all.
In particular, despite the heavy fragmentation, the incisions forming the horizontal grid line and "current bun" sign cross the tablet break exactly, without offset, yet the two "fragments" are slightly offset (the bottom edge of the right fragment is slightly below the left) and the pattern of their fragmentation does not match, so much so that it is impossible to see how the two fragments can ever have been conjoined.

In this last example, in order to support Evans's interpretation of the find, the exact continuity of the incisions across the fragmentation can only be based on the assumptions that the fragments were once a whole, the "scribe" incised his line and "bun" sign, the tablet was then fragmented into two, the edges of the two fragments differently eroded, but the two then miraculously realigned after fragmentation (and never subsequently disturbed) so that the line and sign exactly matched up across the divide, and the part of the "bun" sign lost in fragmentation is mysteriously irrelevant. That is impossible. Note also the exact continuity between tablets of the vertical incision or incisions. The only plausible explanation is that:

(a) the two fragments were always separate "fragments";
(b) they were "fixed", along with the rest of the collage, possibly in a part-gypsum mix, which is still visible between the fragments and the tablets;
(c) the author incised his line and "bun" across those "fragments" or arranged them so that they precisely aligned.

It follows that not only can the piece - and the entire KN Pp series - not be administrative, but it must also be some kind of deliberate art work, one that wanted to give the impression of "fragmentation", rather like the modern taste for "distressed" furniture.

Deliberate art work tends to involve images, and it is therefore reasonable to look for them here. On scrutiny, the entire collage appears full of two and three dimensional images, of such precision, albeit also multiplicity and complexity, that they cannot conceivably be dismissed as "fancy".

Two right-profiled female heads (green above) conveyed variously by moulding, abrasion, colouration, the chin and lips of the far right example being particularly fine.
A girl, probably, holds something in front of her or squats (red). The artwork suggests more than one perspective of her and images in which she is involved so I shall not try to detail them here. The image relies on colouration and various degrees of incision.

On a different scale in the same area, two right-profiled faces, a man (red) behind a pale-faced woman (yellow), with a further right-profiled figure (turquoise). Another visage shown earlier (green) is now even more visible. Again, the images are complex, suggested rather than complete.
Top left of the collage, the right-profiled standing figure’s right foot (green x) as well as face and right eye (y), turned to us, are detailed, and conveyed by precise use of the infill. But the composition is again designed to suggest multiple images of figures engaged in diverse activity. A left-profiled seated figure (turquoise), his or her hat merging into the shape of a heron or corvid (purple). (For which, see the PE RA KO KO WO motif in Section 6.)

Similar effects are achieved on a larger scale on the other side of the collage, where an apparent tablet fragment (turquoise z) corresponds to the position of a bent left-profiled figure’s left foot (purple). Facial features may be suggested by the in-fill, changing with the angle of view (compare yellow below).

Other figures (green, red) are suggested higher up on the same side of the piece, via moulding, incisions, and further exploitation of natural features of the infill.
Again, there are multiple, cognate images suggested in the area below, and my highlighting of a larger frontal face is imperfect. However, the incisions, abrasion, and colouration, howsoever derived, contribute, for example, to eyes and hair apparently of a toper (green) with drinking cup (red), the latter apparently suggested more than once in a kind of action motion.

To conclude with the Linear signage whose formation is particularly difficult to explain (above), the incisions are made with great precision to suggest, for example, profiled rodents with tails (red, white), and probably also an eye (turquoise), erotically draped moving thighs (green), and maybe more than one clock face showing various hours (yellow - there is possibly another apparently showing just past nine o'clock just left of the eye, though the clock features are conveyed by yet smaller figures). (For an explanation of the imagery, see TE RE O WA in Section 6.)
Nor is the "clay mass" of the KN Pp series a one-off. Similar features and problems recur, for example, in an individual tablet such as KN C 912b or verso (SM II plate LVI). It is difficult to tell from the photograph whether the arrowed area (turquoise arrows, my enlarged extract) is raised or sunken, but remarkable that the "grid lines" cross it perfectly not only horizontally, but vertically down its middle (green, red). That is not scribal action.

Although the imagery is not so easy to see, it is still unmistakable. I give one extract below from the same side rotated 180 degrees. The right-profiled face of the half figure (red, middle) is more immediately obvious than others, suggested faintly in left profile by "dots" and moulding (purple, turquoise). The larger right profile (red at right) is easy to miss, until you see it, when it becomes unforgettable.

Knossos KN Cn 911 (SM II plate LXX)

Evans had tablet KN Cn 911 (extract above) "embedded" in plaster (gypsum) because it was heavy and crackable5. But the gypsum he used for backing may not account for all or even any of the material visible around its perimeter. Initially I thought that what he used shows in the photograph as a whiter shade of white, it being otherwise apparently hard to explain the marked colour contrast (shown here left and right perimeter encircled in red). I now think that far less likely, and that Evans's gypsum really was - skilful - backing, largely though not quite entirely invisible in the photograph, just as the backing is very largely invisible in the KN Pp series photograph above.

Other parts of the "frame" are heavily speckled. It is mostly impossible to tell from the photograph what the speckling is, incision, shadow, paint. But at least one manifest incision (far left) and many speckled lines cross the boundary between clay tablet and (gypsum?) surround, as highlighted below (red) in my enlarged extract. That is difficult to explain except by design.

5 Yves Duhoux in Companion Volume II page 6 (see Annex 2).
Scribes are not in the business of making frames for an administrative document. So it is unlikely to be one. In fact, on closer scrutiny, the “tablet” appears to be made of strips or bands of clay, mini-tablets, just like the KN Pp series, only this time held together by a proper frame.

There are other indicators that the tablet’s perimeter may itself be a work of art. For example, rotated, the right side is proportioned and contoured to the physiognomy of a man or woman clinging to its side, with waist, hips, folds of dress, eyes, brow and hair delineated by moulding and speckling or colouration. It even conveys the illusion that the figure’s feet and legs are closer to us (shown at left).

In the same area, there is more than one strong suggestion of a face, carefully conveyed by detailed surface moulding as well as "dots", which makes random occurrence unlikely (above, red).

Similarly, other edges contain incisions and other features in the border that appear to "read across" into the body of the tablet (right, red), with the suggestion of right-profiled figures, one on another’s shoulders like acrobats (turquoise, green, blue, yellow).
In rotation, the "read across" of lines, variously formed, between border and body (red, turquoise) is still visible, but in addition, the apparent Linear signs and other marks are so arranged on the tablet that they suggest a curve or curves across the horizontal "grid lines" (green). That is easier to see in the larger photograph below (green arrows).

A frame is normally and precisely what artists put around an artwork, an image or images. It is therefore reasonable to look for images in the piece more generally. On scrutiny, it uses colour as well as moulding and incision to suggest multiple, complex images, of which I can illustrate only few as they apparently deliberately overlap. In its original rotation (as indicated by the Linear signs), the artistic techniques are used to suggest, for example, the open-mouthed, apparently woman's face (red) - as obvious as images get - less so, perhaps, the suggestion of another immediately below her left, her twisted body conveyed by colouration for her flesh, but note the suggestion of her left arm continuing in the border moulding (yellow). A much larger, but still carefully suggested frontal visage behind (turquoise).
There are many other images where a similar degree of intervention, in terms of the positioning and combination of formative elements, make anything other than deliberate artistic intent somewhere between highly unlikely and impossible. After rotation by 180 degrees, another example with remarkable configuration and delineation of a frontal face with staring eyes (green).

In the same rotation, the outline of a visage (red).

The piece is worn, but even if it wasn't it does not seem intended to present the *perfect* image of a face. But moulding, incision and colouration, in particular, are all used to suggest especially the hair line, eye sockets, lips, chin, nostrils - possibly more than one suggestion of the same - but it is
assuredly not the only image that the artist intended to convey in this rotation. Thus also the eyes of a male frontal face top left (red), but the top half of a right-profiled female figure in flight (yellow), her bent right arm conveyed by colouration. One suggestion may be that the man's left arm (also red) envelops her throat.

Rotated again, more images are suggested.
Moulding, incisions, colouration are variously used to suggest a frontal woman’s face (red), distinguished by eyes, brow and upper body line, a left-profiled elephant (green), broken pipes (turquoise) dripping in a cistern (yellow), and above all a huge, bleared eye ball (purple).

Rotated 90 degrees again (above), the piece suggests a right-profiled hare or rabbit (more than one suggestion, green, yellow, purple, nose completed by the “frame”) with the frontal profile of an open-beaked corvid on top (red, note the eyes). Below, the outline of a boot or shoe (turquoise).
Some might still argue that the "frame" is entirely the result of Sir Arthur’s backing plaster. In theory, perhaps, if it still survives, the frame might be analysed, from multiple areas, to help clarify its age. But given the artistic interventions to the whole piece that I have just proposed, such invasive sampling seems undesirable and unnecessary. In addition, it may turn out that Linear signs - though probably not the ones purportedly identified by the AM - help confirm the authenticity, and significance, of the frame. (See RI MA (K)O WA and other motifs in Section 6.)

But if the frame is genuine, it raises the obvious question how Sir Arthur, as well as later generations of academic researchers, managed to ignore both it and its implications so egregiously. One answer would be to begin speculating about the authenticity of the entire piece, whether it was not, in fact, some kind of forgery. I see no grounds and have no wish to question the integrity of Sir Arthur or any of those who assisted him in his undertakings. The answer is still, quite simply, I believe, that both he and they were already so convinced that they were dealing exclusively with administrative documents that the existence of some kind of - as they might perceive - accidental or coincidental border was of no interest whatsoever, a mere epiphenomenon that might be explained away - if ever the need arose - by any number of additional assumptions.

Problems with "damage"

Other examples illustrate the insidious effect of the administrative assumption in terms of engendering cognate and no less deleterious assumptions.

Sir Arthur discusses tablets "charred to such an extent as to obliterate the inscriptions (Scripta Minoa I page 41 and figure 18, my enlarged extract)." Whether or not he was right about that, he already assumed that "tablets" must bear Linear scripts, and if they didn’t then they had no other signification. But whilst the right side of one such piece (below) may appear broken (a relatively sheer, vertical snap), the left is formed in a way, whatever it may represent, that is hard to explain except by way of deliberate design. The right ear of the "vomiting dog" (probably, rather, digging) projects by delicately contrived indentation, the edge below it is smoothly curved (yellow). But the piece also conveys images (highlighted various other colours), through different kinds of intervention. The right-profiled head (red), with eye and notably lips marked by formation and colouration, is particularly obvious (once you see it), the semi-circular "clock" dial (green) onto which he looks or frontal piglet (purple) or frontal eyes in face (blue) less so.

6 Putative limited signage has since been identified on the tablets, which enjoy classificatory numbers, irrelevant here.
Another probably left-profiled, grazing hare or rabbit (red, below), plus right-profiled seated bird (turquoise) and one of the many suggestions of netting and playing field (green).

The suggestion of one or more right-profiled boots (red, turquoise below), female posterior and genitalia (green, one of a large number of similar suggestions in the piece), a figure deliberately curved to suggest a human player, like a diving goal keeper (purple), and frontal face with tam o’shanter (yellow).
Among other more detailed images (below), a right-profiled held cat or kitten (red), betrayed by ears (especially), eyes, paws, looking at rodent (turquoise) who merges into more clock faces (yellow, purple).

As far as I am aware Evans simply ignored any and all such possibilities. An assumption of perceived damage combined with an assumption of administrative function combined to blind him to evidence that could and probably should have gainsaid both. No less deleterious was his related implicit assumption that if the only thing that matters on an object is its perceived (or assumed) signs, then anything that impedes their visibility or enhancement must be damage or erasure or dirt.

The Phaistos Disk

The Phaistos Disk was discovered by Italian-led archaeologists at much the same time as Sir Arthur’s earliest excavations at Knossos, and he gave it prominent place in Scripta Minoa I (page 23 and figure 11a). The purportedly non-Linear signs - sometimes classified as a kind of “Cretan hieroglyphic” - have often been taken as evidence of a non-Linear script and an unknown language, of unknown relationship, at least for the AM, to the equally unknown Linear A. Perversely, the disk thereby provides some tangential “evidence” for the assumption that Linear A is both unknown and not Greek. The analysis, assumptions and conclusions are utterly flawed.
Sir Arthur Evans included a photograph of one side of the disk in the main text of Scripta Minoa I (below left). I set that beside a recent colour photograph available on the internet (François Collard, see Annex 2).

By the time of the more recent colour photograph, the disk had been "cleaned", more than once, removing some of the slip or colour or light abrasion that was still evident in Sir Arthur's (the Italian dig) photograph. Enlarged extracts of the photograph in Scripta Minoa (as above, not the over-lit photographs of Plates XII and XIII, also taken after the "thorough cleaning" mentioned on page 281) show that the disk carried other, albeit fainter images beside the apparently more obvious "signs". Thus several frontal figures (for example purple, red, yellow) holding or adjacent to various items (white, turquoise, possibly vessels and pig).

Part of the same area rotated 90 degrees left suggests the fine delineation of the right-profiled face and figure (red) holding a child (turquoise) looking back at the man, but probably with legs and feet extended. Also the suggestion of a swollen boot or shoe (green), plus other variously profiled faces (purple, white).

In a different extract below, representation of a youngster's right profile (turquoise), but also the suggestion of other frontal visages in the background (purple, yellow), with maybe the implication of someone's stylised fingers at front (red), also like two fans or hands.
of cards. But the eyes in a yet larger frontal visage below (green) may suggest a pig face.

In the central "panel" of the same, a column (blue), a right-profiled seated woman (red), maybe another column to her left. In the panel to her left, another figure or figures (purple), though I cannot see precisely what. The back of the figure highlighted crosses the divide line. The skill with which images can be suggested by minimal interventions is well demonstrated by the frontal faces at bottom (green) apparently reading or watching something (yellow), and maybe the larger right-profiled visage (white).

In the 180 degree rotation of the same extract below is the suggestion of a fish suspended from its tail (green) as well as the pillar or column again (blue, though the image may be something else), one or more held by the man (red) whose face, beard and hand are suggested above, or maybe his twin (yellow) in the right panel. Behind the dangling fish, the eyes, ears and suggested whiskers and nostrils (the same as the fish tail or fins) of a huge cat face (turquoise). But also two human figures shown separately further below, right-profiled (turquoise) and left-profiled (red), the latter holding a green ?spade, and the profiled feet of the second and hem lines of both assisting the effect.
The colour photograph is better for some details and, particularly on enlargement, reveals use of colour in the art work. The individual incised signs on which attention has so focused are not the same in all instances. Each one has been differentially designed. That is still clear after the cleaning, in other words even after much detail, colouration and hence variability of image has been erased. In the first illustration below left, the three “currant buns” (like Linear QE signs) have different perimeters and possibly different configuration of dots. The striding figures (below right) are probably also different, though less obviously so, in terms of configuration of head and eyes, angles of arms and legs, torso, coverage of dress, and hands.
Observation and comment on the additional images, as distinct from signs, of the Phaistos disk are rare to non-existent\(^7\). But it seems highly unlikely, even impossible that any interpretation of the signs that fails to take account of this accompanying imagery can be right. The same is, of course, true of Linear objects.

The apparently high concentration of such additional images makes the thesis that the Phaistos disk is some kind of forgery or hoax less likely. Its putative age - commonly estimated as somewhere in the second millennium BC - is another matter. Some precise imagery, in this case largely the more visible "signs", suggests that it dates to the Roman, Byzantine or even later period.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{image}
\caption{Comparison of Phaistos disk images with Roman Circus and gladiatorial arena structures.}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{image2}
\caption{Diagram of Roman Circus and gladiatorial arena structures.}
\end{figure}

(See note 8)

\begin{align*}
\text{\textbf{1}} &= \text{Linear "I"} \\
\text{\textbf{2}} &= \text{"KO"} \\
\text{\textbf{3}} &= \text{"TU"} \\
\text{\textbf{2}} &= \text{Linear "PU\textsuperscript{2}"} \\
\text{\textbf{2}} &= \text{"RU"} \\
\text{\textbf{2}} &= \text{"QE"}
\end{align*}

The first sign from the left looks like a side view of the structure, particularly starting gates, of a Roman Circus, e.g. Constantinople. The shape of the second sign group resembles a plan view of the same kind of hippodrome circuit seen from above (for the images, see Annex 2).

The first sign group also suggests the tiers of a gladiatorial arena, like the Colosseum. But the sign group as a whole also suggests a helmeted gladiator (at b) with mosaic comparison at c). The third sign group suggests a round arena viewed from above, but also a shield, with a partially right-profiled figure - maybe helmeted gladiator - to its right at d), similar image to the scene in c)\(^8\).

\(^7\) An exception may be Costis Davaras, Minoan Art in the Heraklion Museum, Editions Hannibal, Athens.

\(^8\) The signs do not affect the argument from imagery, but are possibly I PU\textsuperscript{2} | KO RU | TU QE, with each disk sign representing two vertically merged Linear signs. So, among other things, ἵππων κορυστῶν τε, hippwn korustwn te, of horses and helmeted men. For the vowel sounds, see the conclusions of Section 6.
The physiognomy of the human figures on the disk, as highlighted further above, would also seem more consistent with a relatively late date. For other possible confirmatory evidence see Section 10. (For the source of the gladiator mosaic image, see Annex 2.)

And "Linear A"?

Purported Linear A is found on a wider range of objects than purported Linear B (see note 1). My purpose in this subsection is not to examine the alleged basis for or perceived differences between the two scripts, but rather to demonstrate that Sir Arthur Evans brought to objects he perceived as Linear A the same kinds of assumption that he did to Linear B.

In volume 1 of The Palace of Minos (page 621, see Annex 2), Sir Arthur describes "a curious inscribed object...a fragment of a gypsum slab that had been used in a casual way by some Minoan workman as a kind of trial piece on which to practise the engraving of characters in the contemporary linear script. For this purpose, he had, as a guide, very irregularly scratched what were evidently intended to be three horizontal lines within which to incise the characters (Fig. 458)."

Whether or not Sir Arthur was right about the identity of the signs, or their characterisation as Linear A, what is remarkable is
- the non sequiturs in his assumptions about the piece. For example, why scratch a guide which is then so irregular, and largely unused?
- his further assumptions interpreting the piece, namely "Deducting accidental scratches and the guiding lines, the inscription seems to have been much as in Fig. 459." But are they "accidental"?
- his disregard for the configuration of the guide lines, the scratches and the variable colouration...
of the piece, as a result or reflection of which he makes no comment on any imagery to which they might contribute. Yet it is no less evident, no less worthy of comment than the putative Linear characters. I highlight some examples above, including a pig (red), of which there is more than one suggestion (brown, a right eye); a left-profiled bear head (turquoise); frontal legs in short tunic carrying a bucket (purple); right-profiled visages (blue, green); and a shell (yellow).

The artistry is arguably even more visible when the piece is rotated 180 degrees. So two right-profiled bird heads (purple, green, maybe parakeet) and a frontal behatted man or woman's face (blue). The effects rely on colouration as well as incisions and moulding.

The same problems arise with Evans's later discussion of a now better known object (Psykhro PS Za 2). In Scripta Minoa I (page 13ff) he describes how he discovered, "beneath a prehistoric stratum", the fragment of a black steatite "libation table" in the presumed Dictaean cave sanctuary on Crete. Based on his later Knossos finds, he identified incisions on it as a Linear A inscription. Still later work apparently identified other related fragments and additional signs.

Scripta Minoa I contained no photograph of the fragment itself, though it did of a putative reconstruction of the whole table. Black steatite is hard to photograph, even today, so that may be one reason why the volume contained a drawing instead (Figure 8 on page 15). But volume I of The Palace of Minos does contain a photograph (figure 466 page 628), greatly over-lit, but, its evidence may be compared with others more recent (e.g. http://crete.classics.ox.ac.uk/U3S1/U3S1L3.html, but the image is inverted).
The enlarged extract I have used focuses on the fragment that Sir Arthur discovered in the cave. In this rotation, the signage incisions do not appear to contribute much to imagery, but that reflects the lighting and the nature of the images involved. The part played by both deeper, structural and lighter, so-called scratch incisions is more overt, as well as by natural features of the rock, exploited by incision and abrasion to create and enhance effects.

A frontal pig and another right-profiled (red); a left-profiled donkey or horse head (purple); a rear and right-profiled erotically sprawled female (turquoise), and left-profiled male, one of several similar suggestions occupying similar lines and space (e.g. green); various other probable profiles (white, brown, blue). Though small, the frontal child’s face (red-arrowed) is sharply distinct. But it is hard to reflect the imagery because it is so dense, the same motif repeated in different, often adjoining forms.

Imagery and its interconnection with signage incisions may be clearer when the photo is rotated 180 degrees. That is again partly because of the lighting and the nature of the rock. The smoothed curvature of the now upper right edge does not appear to be a natural or accidental break.

The various incisions contribute to the suggestion of the headdress of a right-profiled visage (red), though more than one face is suggested. Incisions also aline to suggest a triangular pediment (turquoise) reflected by matching fainter lines at the other end. Both heavier and fainter incisions create other continuous lines (green) contributing to other imagery that would take too long to explicate. More obvious are the left-profiled feet and legs of a maybe seated figure (purple).
Again, Sir Arthur made no comment on any artistic, as opposed to functional and inscriptional aspects of the piece, a perspective perpetuated by the majority of any subsequent research and commentary.

Now the co-existence of art with purported (and undeciphered) Linear A has never been excluded, although often marginalised in favour of administrative or functional interpretations. There is therefore nothing inherently inconsistent in identifying images and art on Linear A pieces, particularly as, in a case like the (chthonic) pig, they may actually help substantiate aspects of pre-existing interpretations, including Sir Arthur’s. But it is still important to observe that
- the presence of the proposed imagery is as compelling as the perceived and apparently enigmatic or unknown signage. It demands as much attention, if not more, but it hasn’t received it;
- the proposed signage or its constituent incisions often contribute to the formation of the art work. It therefore seems unlikely that they are not correlated in some way;
- the imagery seems to be, again, multiple, complex, shifting with angle of view and rotation;
- as with the KN Pp series, some of the "fragmentation" may also be contrived, used to facilitate imagery. "Fragments" may have been fixed in a larger collage, a little like Sir Arthur’s reconstruction of the libation table. It is not necessarily the case that any more, undiscovered fragments of the libation table exist or ever existed.

Conclusions

There are several puzzling aspects of the libation table story. One is that a trained artist could draw a facsimile - now in Scripta Minoa I - without noticing at least the potential presence of imagery. If the drawing contains any such hints - and it may - either the artist or Sir Arthur or both somehow disregarded them in commentary.

An underlying problem may be the difficulty he faced - for all sorts of reasons - in recognising the complexity of "Minoan" art. Just as he saw "tablets" as necessarily administrative, he tended to see patent art forms within limiting preconceptions too, as we all do. In volume 3 of The Palace of Minos (page 173ff) he discusses the artistry of a stucco bull's head relief, noting a possible hoof found nearby (Figure 119, shown at left). He goes on to reject the idea that a further fragment (Figure 120, not shown here) is the bull’s horn in favour of the idea that it is a woman or cowgirl’s leg with puttee. But whilst the bull’s hoof may, from one perspective be that, it is equally well if not better shaped and incised to suggest the right-profiled torso of a woman accosted or raped by a man behind. Other images may well be contained in this and other rotations and on the object’s surface.
None of my comments, here or earlier should be taken as an attack on Evans's abilities or judgement. It is not as though succeeding generations have enjoyed any greater insight.

Similarly, was the "cleaning" of the Phaistos disk (not down to Evans) unique? Judging from the available photographs of Linear objects, I think it highly unlikely. If other Linear objects contain art work, then that too may also have been effaced or degraded in the cleaning. At Pylos, an excavation report stated that "the written [sic] surface could not be seen in the excavation stage, since a hard white lime accretion completely covered the surface\textsuperscript{9}." It is not clear whether this "accretion" was part of the tablets or something else. Evans, too, frequently commented on the presence of gypsum alongside tablets, though he thought some such instances involved a gypsum casket, and he may have been right, albeit a strange receptacle for purportedly ephemeral administrative documentation.

Inevitably, excavated objects carry extraneous material. Arguably it was impossible to recover the Pylos tablets, for example, without removing the lime accretion. But, leaving the cleaning issue to one side, given the putative effects of fire and water and simply age and abrasion, it is possible that the Linear objects looked not just different, but markedly different to their original users. What we now see might in some or even all cases be only the strongest impressions and stainings surviving from a once more visible supervening layer or layers and colour. But I use "markedly" advisedly, for it is also possible that the Linear objects were all and always also intended to look worn, fragmented and "distressed", as Evans's clay mass must indicate. But even if that is true, it remains the case that even very slight improvement to what we now see would make the task of seeing their possible images and identifying their potential signs exponentially easier and more secure.

More important, Evans's clay mass and the apparently framed tablet cannot be genuinely scribal or part of some administrative archive. The proof in terms of the contiguity of horizontal and vertical lines in apparently fragmented pieces is about as forensic as one can possibly expect. Nor do scribes make frames. Nor do they engage in the imagery still visible, on any rounded and object viewing, on those and other pieces discussed in this section.

From the images so far proposed, on the Phaistos disk as well as the Linear tablets, it will already be becoming apparent that they and their kind are likely to challenge either the putative date of the objects or our understanding of what is appropriate to it.

Some may contend that any images and art work are confined only to a few odd exceptions, that the bulk of the Linear corpus is something really very different. The assertion would be unreasonable. For decades the Knossos examples I have cited (the clay mass that became the KN Pp series, KN C 912, Kn Cn 911 and the "fire damage" specimen) have been taken as "typical", so suddenly now to regard them as "different" would be special pleading. But the next section will address the objection further.

\textsuperscript{9} DRAFT VERSION, NOT DEFINITIVE: Bennett, Melena, Olivier, Firth, Palaima, The Palace of Nestor at Pylos in Western Messenia, Volume IV: The Inscribed Documents, uploaded by J Melena to https://www.academia.edu/5788888/DRAFT_VERSION_NOT_DEFINITIVE_Bennett_Melena_Olivier_Firth_Palaima_The_Palace_of_Nestor_at_Pylos_in_Western_Messenia_Volume_IV_The_Inscribed_Documents page xix and note 10.
Section 2: the images of Linear objects

For reasons set out in the "selection of evidence" section of Annex 1 and for others that will become clear, I do not intend demonstrating an "exhaustive" analysis of Linear objects, merely sufficient illustration to begin to substantiate the case for the plausible presence of art work. It seems to make no difference whether an object is purportedly Linear A, Linear B, or hieroglyphic or pictographic, or even unacknowledged as far as the presence of signage is concerned, for example some seals or so-called sealings. On the same grounds, I show objects from different sites - such as Knossos, Pylos, Mycenae - without discrimination.

Some images may appear "anachronistic" in terms of fashion, style or technology; several examples have in fact already arisen. I have included such images because, in my view, they are ineluctable, and it is unacceptable to pretend that they do not exist. I ask the reader to suspend judgement rather than jump to conclusions based on what he or she thinks they know about the age of Linear objects or the technologies of the ancient world or the styles and fashions, real or aspirational, of its men, women and children. I speak with the condescension of hindsight, from my own mistakes in that regard. I return to dating and chronology in Section 10.

I have grouped examples in terms of the evident formation or moulding, colouration, and incisions, but it will become readily apparent that all of those combine in different measure to suggest images. I reiterate that it is preferable to view these and other pictures on a screen, not as an off-print. See the discussion about viewing Linear objects in Annex 1.

Formation

Some Linear B tablets suggest "fingers", primarily conveyed by precise and subtle moulding, but also incisions for knuckles, wrinkles and nails.¹

Thebes TH Ug 13 (photo, Minos: Revista de Filologia Egea [Internet]. 4 Nov 2009; 10(1), see Annex 2)

A left forefinger delineated sideways on by exactingly precise moulding, particularly for the tip and nail.

The Linear signs still look (just about) like signs. They may or may not contribute to the image (as wrinkles etc). But given its otherwise precise artistry, there is no reason to privilege their status in interpreting the object. Another "tablet" from Knossos gives a finger view from above, nails, knuckles and wrinkles suggested by incision.

Knossos KN Vc(1) 74 (photo, COMIK Volume I page 40, see Annex 2)

Other similar "finger" tablets include Knossos KN Ag 1654 and, with a different configuration, Khania KH Wa 1009 (Linear A, GORILA III, page 107²) where the clay is formed to suggest a down-pointing thumb and forefinger in a right hand curled from above.

¹ For the source of all photographs, see Annex 2. Extractions and enlargements are generally mine.
² See Annex 2, http://cefael.efa.gr/detail.php?site_id=1&actionID=page&prevpos=2&serie_id=EtCret&volume_number=21&issue_number=3&cefael=e74ecb5234b3e3c1c6f09942a7085a&x=14&y=6&ce=uir1p348o0r2dia9egae8e0agpn0sr&sp=131
Thebes TH Ug 3 (photo, see TH Ug 13 above)

Shaped, textured and coloured like a right-profiled snake head: the colouration and faint incision for the eye, just right of the slightly domed head, the two long parallel "cuts" beneath it and, especially, the indentation on the right edge for the mouth. But the moulding and incisions are also intended to suggest one or more sheep (green).

Rotated 90 degrees, the lower half is incised to suggest a pair of walking legs beneath short belted tunic (green at right). There may be more than one suggestion of the limbs, but some interventions appear designed to suggest the tips of the shoes.

Thebes TH Ug 2 (photo, see TH Ug 13 above)

Incisions and colour combine to suggest a frontal "oriental" face (turquoise) merging with another in front (green), and a large right-profiled pig head and snout (blue). Below, one or more very large eyes and maybe nose tip (red), and probably a left-profiled hare or rabbit (purple).
Rotated through 90 degrees, the "tablet" more visibly assumes a different form, a draped headless human torso. This "reading" helps explain the formation of the clay at the (now) top of the tablet. The slight protrusion marks the neck and missing head. The shoulders are sloped, the arms hang down in drapery at the sides (red). Many more images are suggested by incisions, particularly small children, right-profiled babe (blue) and shyly big-eyed frontal (turquoise). They are hard to highlight, partly because in some cases the child probably deliberately merges into a pig.

Cretan Hieroglyphic (photo, The Hieroglyphic Archive at Petras, Siteia by M Tsipopoulou and E Hallager, Danish Institute at Athens, see Annex 2³)

Extracted from the book’s front cover as above, but rotated 90 degrees right (above right), the moulding strongly suggests a (common) lizard head (photo Phil Gates, see Annex 2), the eye and brow being most obvious, enhanced by texture (skin) and colouration. The strong likeness does not exclude the co-existence of "hieroglyphs". Smaller images - which may or may not be conflated with signage - are embedded within the piece.

³ My use of the extract should not be interpreted as implied criticism of the publication as a whole.
The Problem with Linear B

THE Tablet 6 (John Younger) Museum of Prehistoric Thera 8366 (Linear A, photo see Annex 2)

Highlighted in red, right, a left-profiled bird’s head (especially eye and beak - I don’t think this is a modern metal peg) and white face or faces just highlighted in faint blue. A frontal standing figure (green) reads a vessel (purple).

Rotated 90 degrees left, a view, slightly from above, of a standing figure clasping items and frontal child (green) plus pig (turquoise).

Rotated 180 degrees, a frontal white-faced figure clasps a vessel (hands enlarged because closer to us).

But the piece is packed with complex imagery, including (in this last orientation) the erotic (further below). The thighs of the receding posterior image (green, red) are also suggested in miniature (blue). The faint but precise suggestion of a frontal pig visage bottom front (purple), beneath the
genitalia, overlaps a sheep (black, betrayed by its right ear shape), with a smaller seated figure bottom right corner, also holding a vessel in the lap (turquoise).

Incisions and maybe colouration also suggest tiny figures playing hurling, golf or similar. Similar scenes are visible in the original rotation (at right). Note the "goal" posts. For similar images, see the "fire damage" tablet in Section 1 (not highlighted there) and KN Fp 13 and THE Zb 1 below.

In further rotation the overall formation suggests a likeness to the continent of Africa, albeit the photographic angle makes the north slope away from us. Stylised it may be, but chunky Atlas or Hercules (red) is in the right place, holding pillars (several turquoise, long oblong blue) on his right and left sides, whilst Egypt is perhaps represented by a right-profiled Hathor (cow, purple) and maybe Egyptianised, mainly female visages (yellow, white), plus maybe more than one mouse (frontal face, ears, eyes, maybe whiskers and paws, green).
Knossos KN Fp 363 (photo SM II plate XXXIII, see Annex 2)

It is difficult to explain the formation of the piece other than as by design. If it is a map it is not perfect, and its formation suggests other, partly erotic images (e.g. detailing, green, to suggest right-profiled striding split legs), but note the apparent geographic precisions (red arrows).

The piece conveys other fine art work, as in an enlarged extract below (red), rendered by light incision and colouration.

Colouration

In terms of recognising the images of Linear art (and probably many signs), colour may be very important, but also more problematic than moulding or incisions for multiple reasons. What matters is not so much the surviving "absolute" colour (though that can still matter), but the boundaries and transitions where they are too regular, too patterned to be damage or coincidence.
Images on this tablet are rendered by a particularly remarkable combination of colouration, modulated Linear sign incisions, and fainter abrasions. It can take some time for the eye to detect the now - perhaps always - subtle colour shifts. The effects are aided, or hindered, by the fact that similar images, though achieved by different interventions, are juxtaposed.

The standard suggestion of a - headless - frontal torso is conveyed by shape, but some contouration and colouration for the collar. One frontal face (green) is more obvious than others (such as turquoise). Whilst a frontal piglet (yellow) is outlined mainly by incisions, a larger frontal pig (purple) appears to rely more on colouration for the ears.

The way in which colouration and incision combine to suggest facial imagery is clearer in this enlarged extract featuring a left-profiled visage, hair here showing red.

Khania KH 5, Khania Archaeological Museum (Linear A, photo by Ursus, see Annex 2)
The Problem with Linear B

Draft of 31 August 2018

By way of additional imagery, one of several diagnostic eyes (arrowed) as well as nose and ears help convey the suggestion of a right-profiled hare or rabbit (green). In Linear art, the creature is most often accompanied by a superimposed bird, especially corvid (see PE RA KO KO WO in Section 6), one such perhaps indicated by characteristic eye (yellow) within a larger left-frontal head and body conveyed by colour shifts, but it may also be accompanied, as here, by one or more superimposed large eyes (e.g. red). An eroticised frontal (or rear) torso (blue) is subject to the gaze of at least one pallid left-profiled on-looker (purple), the thighs also containing more than one frontal human face or eyes (white).

Again, a combination of formative elements is used to suggest multiple, similar, but always imperfect or indistinct images. The effects continue in rotation.

The top moulding helps suggest the shoulder straps of a frontal dress (blue), the incisions and some colouration large frontal faces pointing left (red) and right (turquoise), plus a fully frontal plump baby’s or young child’s face (green), a frontal pig head (yellow, though the area contains several porcine suggestions), plus possibly frontal shepherd (purple), hat conveyed almost entirely by colouration, and a further frontal child (white) below.
A right-profiled goose (green), duck (turquoise) and maybe other farmyard animals (red, large frontal pig head) are suggested in this rotated extract mainly by colour but also some moulding and incision. Far left edge, a small human figure carrying vessels or winnowing fan or similar (purple), but forming in turn the hair or head of a larger right-profiled probably female figure (yellow).

Mycenae MY V 659 (photo by Dennis Jarvis, see Annex 2) (my extract)

The facial images suggested by the tablet's colouration and incisions (eyes, for example), as well as the proportions, make accident or accidental survival unlikely. I highlight one female face (red), one potential frontal pig (green), though the female face is pregnant with suggestions of the animal, plus probably an erotically charged right-profiled torso (turquoise), although there are other, much stronger adjacent sexual images. A small figure "fishing", his legs dangling over the horizontal grid line and formed by the numeral below (purple).

Knossos KN Ce 50 recto (photo SM II plate XXIII) (enlarged extract)

Moulding, colouration and maybe additional materials (gypsum perhaps) project a 3-d effect as the figure with the white pupils (turquoise) advances towards the viewer. But, as ever, the images are multiple and complex. Among the erotic intimations, frontal thighs, genitalia and phallus (red). But also the frontal visage of a wide-eyed girl (green), as often with the hint of male eyes and face
behind hers (white). A left-profiled, stalking heron or crane (purple) and a large patterned, possibly erupting or ejaculating pot (yellow).

Knossos KN Ap 629 (SM II plate XLVIII) (enlarged extracts)

Colouration appears to be particularly important in suggesting a wide-eyed right-profiled, bearded, berobed and monkish reader (red), maybe holding book or scroll (green). But a fainter bearded profile below his (turquoise) appears to be looking into an upturned behatted woman's face (yellow). The far right edge is moulded and incised to suggest a larger right-profiled visage, over the right shoulder line, possibly with hands to mouth (purple).

Rotated 90 degrees, a very obvious frontal, maybe female visage with breasts below, maybe looking onto a sloping clock face (red), conveyed by moulding as much as by incisions, as well as the suggestion of probably more than one bear, difficult to highlight at this scale. (yellow).
The Problem with Linear B

Incisions

The signs are deliberately drawn and organised to form larger patterns beyond and in addition to the significance, artistic or otherwise, of the component parts. The effect is often aided by colouration (shading in black and white).

Knossos KN Og 833 (photo SM II plate LVII)

I cite this example not only for its graphics, but to illustrate how Linear incisions (red, turquoise) run across the horizontal "grid" lines. As scribal practice, such conjunctions would be not only unnecessary but confusing. The results (plus fainter lines or colour, purple) contribute to larger imagery, probably one or more human complex torsos.

Knossos KN Sd 4415+4417+4469

I am not sure the "fragments" originally made a single piece, and focus only on 04.15 as published in Scripta Minoa II (Plate XIV). I first show the photograph with Professor Myres' drawing, still the basis for the AM's interpretation of the object as a chariot-related fragment (the chariot pole, yoke etc).

b)  c)  d)

But the drawing misrepresents the shape of the bottom edge, and ignores other incisions no less visible or deliberate, whose configuration seems designed to suggest a fine rendition of a larger right-profiled face (red in b)), as well as a smaller (red in c) along with frontal cartoon rabbit (purple) and standing female figure with basket on arm (turquoise, green).

In rotation by 180 degrees, again the fine suggestion of a partly right-profiled face (red in d), but also left-profiled standing behatted man (green) with frontal donkey (turquoise).

The images are multiple, complex, suggested, there are many more, and they may yet include the suggestion of at least part of a chariot, but a full and accurate "reading" of the incisions and
moulding means that that cannot possibly or properly be regarded as the only intention of the creator of the piece.

Pylos PY Ta 641 (photo The Decipherment of Linear B, University of Cambridge, see Annex 2) (my enlarged extract)

The eyes and fingers of a frontal girl (red) conveyed largely by indentation, incisions and moulding, her outline conveyed mainly by colour. She holds the suggestion of various faint vessels, not highlighted below as they merge with other images including children large and small (turquoise) and similarly pigs (green). She also appears to be reading. The prone right-profiled white female visage (yellow, marked with purple X) at first sight looks as though it belongs more to a different rotation. Another apparently naked girl, suggested entirely by incisions, looks back over her right shoulder (blue).

Other images are more visible in other photographs not so exposed to extreme lighting. So in the extract below (photo National Archaeological Museum, Athens, see Annex 2), incisions, colouration
and moulding combine with considerable precision to suggest a frontal figure or bust (red), possibly reading something (green) with one or more children's heads between text and figure (turquoise).

Knossos KN Fp 13 (photo by vintagedept, see Annex 2) (my enlarged extracts)

A right-profiled standing figure wearing spectacles hooked over right ear (red) overlaps with a larger image of perhaps the same man's face also wearing spectacles (turquoise), as if given to reflect the concept of magnification.

Marked with green X are small profiled human figures, betrayed by heads, feet, legs, the most remarkable being the last two (purple X and Y), a right-profiled figure playing shinty, hurling or golf who has struck his ball (yellow) through the legs of the right-profiled girl in front of him.
There is no reason why an administrative scribe would have delineated any such figures in such a way. But the incisions also combine with moulding and colour to suggest a female right profile from the left edge (red), a male left-profile at right (turquoise), and another in the middle (yellow). The signs and other lines are drawn so that the same ones contribute to more than one visage. The four shown are not exhaustive. The effects are also used to suggest teasingly clad loins, with patent erotic intent (not highlighted).

Albeit taken at a different angle, with different lighting and with different technology, similar sorts of profile, often based on the same as well as different incisions, are suggested by an extract from the photograph in Scripta Minoa II (Plate XX) and also COMiK (not shown). I have added a possible shepherd (yellow) and lamb or kid (purple). Whilst the profiles in the two photographs may differ, and some on either may be "false" or could be improved, it seems a reasonable inference that the artist was deliberately using techniques to achieve precisely such variable effects.
Knossos KN Ra1540 (SM II plate XC)

Above, an open-mouthed, left-profiled, powerful male head (red, locks of hair and maybe cauliflower ear) looks onto the buttocks of a girl (turquoise) with rising hem. The eyes in thighs or buttocks (yellow) are a common indicator in Linear art of the same physiological area and psychological intent. But rotated (right), the moulding and incisions also suggest a right-profiled rider (red) with horse's head beneath (turquoise), plus, even at this diminished scale, finely featured frontal face (yellow). Atop, the faint, but characteristic features of a presumably mother bear (red), plus cub (turquoise), with more bears and others animals suggested further beneath (for example yellow).

Images on non-tablet Linear A objects, Cretan hieroglyphic, seals and sealings

The Linear A category includes stone "libation tables", metal objects, and "potsherds". With the exception of the last, they do not - or rather should not - share the same AM presumption that the signs must indicate solely administrative activity. In practice that has influenced interpretation of many items very heavily. Wherever Linear signs occur, so do the same art and artistic techniques, the same methods and motifs as on clay. Where the objects are not clay or metal (and even there too sometimes), the artist relies on natural phenomena in the material to help suggest images. On rock these are largely enhanced by incision, abrasion, and manipulation of edges.

Importantly, the apparent Linear signs or incisions in all cases form part of the imagery or art work.
Space precludes many examples. At the end, I append a short section on seals and "sealings". It is essential not to overlook their import, but difficult to know where best to include them.

Thera THE Zb 1 (photo by Olaf Tausch, see Annex 2) (my enlarged extracts)

An apparent fragment of a pithos rim. The economy with which highly accurate and realistic images are suggested is amazing.
Firstly, for example, a young, kerchiefed left-profiled woman (red) carrying a large vessel with prominent and maybe broken rim (turquoise).

Secondly, a "golfer", one perspective possibly being that he is towards the top of his back swing (though looking towards us), another that he has actually hit towards us (red). Another perspective, right-profiled, with typical "golfer's" high finish to the swing and face pointing to the sky. The ball or balls may be indicated (turquoise).

For similar "golfer" images see KN Fp 13 and THE Tablet 6 above. The sherd was reportedly found in the late 19th century a few hundred metres from the later Akrotiri site. These and other images that it suggests seem totally incompatible with a date near the time of the Thera volcanic eruption (1600-1500BC). I am not so sure. Shinty or hurling (Gaelic "caman" or similar - in the Linear script KA MA, the sound Γα Μα, Earth Mother, among other things, in Greek) is attested in ancient Celtic-Gaelic myths of Cuchulainn and others that may well go back far into the bronze age. For a possible ancient link between such distant locations and Greece, see the conclusion of Section 9.
Troullos TL Za 1, limestone ladle (photo The Palace of Minos I page 623ff figure 462, see Annex 2).

One of many ladles discovered at Minoan sites. The shape of the hollow is the frontal outline of a bear's head (green), but colouration also suggests a mincing probably posterior and thighs (not shown) and also a right-profiled probably shepherd (turquoise) with staff and frontal sheep head (red). The colouration of the hollow is manipulated to suggest many other images.

 Whilst at least some of the signs may be Linear script, some are perhaps deliberately illegible and others are devised to be miniature art works in their own right, their status as sound-signs also less clear.

 In an enlarged extract (above and below), an apparent single face breaks down into one behind another (red, turquoise), the signage highlighting eyes, whilst the sign on our far left is precisely configured to suggest an advancing, balancing figure (maybe holding objects in either outstretched arm), the yellow-arrowed sign on our right to suggest a right-profiled standing figure, possibly shepherd with crook. The minute scale has many parallels in "Minoan" art.
Knossos KN Zf 13 CMS II.3-38 (photo, see CMS in Annex 2) (my enlargement)

This famous gold ring is also tiny. Most photographs show far too much reflected light from its surface. In addition, the ring’s surface may have been worn by time and cleaning. Others have noted a similarity with the spiral signs of the Phaistos disk, but I don't believe attention has been drawn to the imagery or the way in which it too changes with rotation, again like the disk. The proposed Linear signs, along with fainter incisions, play an essential role in helping to create images. So do colour shifts, though I do not know how those were achieved.

Above, a left-profiled august man looks onto an eroticised torso (yellow), his hand (turquoise arrowed) apparently engaged in reading. Left, the right profiles of a woman (yellow), and man (turquoise) who may or may not be looking at the posterior of a woman whose eyes are suggested at base (green). On the right edge, a baby’s face (red).
Above, a frontal man (red) implicitly rides horse or mule (green ears), a haunting female visage above his left shoulder (blue), but above left the profiles of sheep (turquoise).

Left, the suggestion of a clock face with hands (turquoise), but we look onto the back of the head of a woman (yellow) who may be carrying standing left-profiled little child (red) and right-profiled pig (blue) emerging from a vessel (green). Beneath, the further suggestion of a frontal pig face (purple).

Steatite cup, Palaikastro PK Za (photo The Palace of Minos Volume 1 page 631 figure 460, see Annex 2) (my enlarged extract)
Above, the Linear incisions are used to suggest the frontal visage of a woman, maybe with headgear, arms raised (red). Her left arm merges with the face of a man (not highlighted). There is more than one suggestion and scale of face and figure (turquoise).

Below, a right-profiled bearded male visage with bill nose (turquoise) looks through the lens and barrel of an optical device (red), possibly at a receding female torso (yellow).

A woman leans forward (turquoise) perhaps to support a left-profiled standing young child or baby (red), whilst also apparently holding a vessel (green) to its posterior. (See TE RE O WA in Section 6.)

The projection of images relies on the natural formation and colouration of the rock, as well as highly skilled differential abrasion. But it is clear from the first illustration above that it also interacts with the Linear incisions. It is a stunning piece of art (and good photograph), containing many more images, also in different rotations.

Cretan hieroglyphic, green jasper seal, 1800BC, Heraklion Museum, CMS II,2-316d-2 (photo by Ingo Pini, see Annex 2) (my enlarged extracts)

An artistic component has long been recognised in objects bearing purported Cretan hieroglyphs, though in many cases some kind of administrative or other functionality is also attributed, which may be right. However, the assumption that the only thing that really matters is the "obvious signage" (interpreted as artistic or otherwise) is as unsound in this example as it is in the case of the Phaistos disk (Section 1, also sometimes categorised as hieroglyphic). Closer scrutiny indicates that the more obvious incisions form only part of fainter art work created by lighter incisions and abrasion and selective exploitation of features of the rock. Although it is not now clear whether the faintness of such details was deliberate or has been produced by wear, any interpretation of the "obvious signage" that fails to take account of them is unlikely to be wholly or even partly correct.

As has been recognised, the "correct" orientation of such pieces is not clear. Given the predilection of Linear art for images in rotation, it probably never was intended to be.

In this first extract, a right-profiled probably seated rabbit or hare (red), the much larger head and beak of a bird above (turquoise). See PE RA KO KO WO in Section 6. But higher up the suggestion seems to be of a right-profiled humming bird on the wing (yellow), or gull (purple).
On different scale in the same area, a left-profiled girl's face (red) looks onto a right-profiled roosting bird (purple, tail feathers in background), her brow suggestive of a breast and nipple (yellow). She also looks onto a frontal, fierce-eyed male face (green) that merges into maybe bear or pig (turquoise). Behind her, the "pupil" of the eye contains the suggestion of a left-profiled face (white), another much fainter, but precise on its upper right side.

Seals and sealings

The art work of Minoan and Mycenaean seals has been recognised, but not fully understood, maybe totally misunderstood. The "administrative assumption" still weighs preponderantly upon their interpretation both as individual items and in so far as their assumed raison d'être contributes to the Administrative Model.

Yet seals and, above all, "sealings" (in which I include noduli, roundels etc) show the same complex and suggestive artistic techniques and motifs as tablets and other Linear objects, regardless of whether or not they purportedly carry Linear or hieroglyphic signs.

CMS 1-006 (stone seal) (photo CMS, see Annex 2) (my enlargement and extraction)

Natural formation and colour plus multiple different incisions and abrasions combine to suggest a rear view of ducks or geese (green, turquoise), young birds (purple, red) and egg (white), as well as (smaller extract) a peeping cat's eye (turquoise) and rodent (red, hidden behind acorn or similar but for ears and receding hind quarter). But much of the imagery can only be appreciated with further magnification.
Rotated, an extract suggests warriors or maybe gladiators (red, green, purple) with rounded helmet and shields (turquoise), too detailed and realistic to be coincidence.

CMS II,7-17 Pla3, "sealing" (photo CMS, see Annex 2) (enlarged)
Focus on the "seal signs" obfuscates images in the bigger picture. For example, a right-profiled hare (red) and superimposed large corvid (turquoise, green), the beak merging with the ear. There is more than one perspective of each animal, or more than one such animal. Rotated, a man's face (red) above various conflated items and animals including probably the head of a bear (green).

CMS 2,5-001 Pla1 ("sealing") rotated (photo and drawing CMS, see Annex 2)

The photograph (rotated 90 degrees above) shows the central drawing is incomplete and inaccurate, a reflection of the administrative assumption rather than artistic competence. The impressions surrounding and indivisible from the "sealing" - down to the bend at the trouser knee of the heaving left-profiled figure (red) - mean this cannot be an administrative sealing.

Conclusions

If art is present on Linear objects, then it is likely to be both suggestive and complex in nature. It is not as simple as saying "Look, there's a man this way round, and turn it round and it looks like an elephant." All art is suggestive to different degrees in so far as it is a likeness. But Linear art is particularly suggestive because, though the images may observe artistic principles, for example proportion and perspective, they appear to be devised, wholly deliberately, with the intention of being incomplete. Dots, incisions, edge and colouration (shading in black and white photographs) are employed, often only just sufficiently, albeit skilfully, to suggest an image or, rather, multiple images.
Linear art is also peculiarly complex because, for example, those multiple different images are presented in different rotations or perspectives, because they vary in scale, because they are juxtaposed and even overlap. Throughout these pages, I have normally rotated Linear objects only by 90 degree intervals. Whilst that is a simple and tractable procedure for illustrative purposes, it is also misleading. I think it certain that the art forms were intended to be visible in many and subtler degrees of rotation and tilt, as well as from the side and the reverse, some also more visible than others in different light. See the discussion of cognate objects in Annex 1.

Given the complex nature of Linear art and the myriad objects involved, it is simply not feasible to demonstrate the presence of deliberated images in all of them. I can only submit that, so far, all objects with purported Linear signs that I have looked at contain consistent art work, in terms of the techniques and motifs. In some respects, for reasons I will explain in Section 10, it would be much easier if only a very few, even only just one, did not do so, but so far I have been unable to find the exception, much as I would like to.

"So why hasn't all this purported art work been seen before?" The main reason appears to be that our viewing - and I include myself in the "our" - has been totally distorted or blinded from the outset by the administrative assumption that we made about most or even all Linear objects. In addition, the objects are worn and faded, in some cases (though probably fewer than thought) damaged and fragmented, in others they have probably been "cleaned" of detail that would make the imagery clearer. Photographs have been taken to highlight only perceived Linear signs, at the expense of the visibility of art. Routinely, only the "front" of tablets are photographed, rarely the "back" or sides, even though I think it will emerge that art work is no less present on those facets too, however implausible that may at first seem. Finally, it really can be extremely difficult to see the art in anything at all until you actually do so. Only then does it become "obvious". Another example and parallel are the cave drawings at Creswell Crags on the border of Nottinghamshire and Derbyshire. Although the caves and the presence of other artefacts were well known "to science" for decades, it has only been in the last 15 years or so that the palaeolithic art work on the cave walls has been recognised and accepted.

Of course, the question - why hasn't it been seen before - can also be intended to imply "It hasn't been seen because it doesn't exist" or "It's faces in clouds."

It is impossible to disprove any such assertion when it is itself non-evidential and irrational, but, whilst there is scope for error in individual cases, and the suggestive nature of Linear art is particularly difficult, the assertion can be shown to be increasingly unlikely based on the accumulated evidence for the deliberated nature of the interventions, the repetition of artistic techniques and motifs, correlation between the meaning of signs and images, and consistency with a wider artistic tradition, some of which is already recognised. Those topics occupy the remaining sections of this book.

But if the proposition - Linear objects as art - is wholly or partially substantiated by others over time, then it follows that the objects in question, many if not all Linear tablets and related phenomena, cannot be genuinely scribal, or administrative in the sense in which that latter term has come to be understood, as the real documentation of an administrative or "palace" archive. No scribe expends time and effort devising complex imagery to ornament his records.

"But the decipherment of Linear B shows that the actual text, the content of the tablets, is scribal and administrative. It also contains scribal ideograms and numbers." The next section will discuss how and why the objection is flawed.

4 The art work is complex just like the art of Linear objects. Some of it exploits the natural features of the rock, so in some cases what may appear to be art may be purely natural formation as it reportedly shows no human intervention. The terminus ante quem for some images seems secure, but much remains to be done to identify and date the production of the art works.
Section 3: the signs of Linear objects

If art is present on Linear objects in the ways proposed in earlier sections, then not only can the Linear objects not be genuinely administrative, the current decipherment of Linear B (and transcription of Linear A) cannot be wholly or sometimes even partly accurate and complete either.

The specific reason why already emerged in Section 1, namely that thanks largely to the administrative assumption as well as assumptions about either the negligible or the wholesale effect of "damage", the decipherment process never looked at Linear objects properly in the first place, and it has therefore omitted or misread numerous signs in much the same way that it has failed to recognise images. The failings are now embedded in the process of scholarship itself.

"There is much to be learned from looking at the actual tablets or at least at photographs or drawings (Ruth Palmer page 26 of Companion Volume 1)." Yet in the first two volumes of Companion there are, at most, only half a dozen photographs of (often only parts of) tablets.

For various reasons, the availability of photographs of the majority of Linear objects was long delayed1. Those from Knossos did not appear in numbers until nearly 50 years after the initial excavation, and were only really publicly accessible, via the internet, in the last few years. Photographs of the hundreds of Pylos tablets were only made similarly available over 70 years after excavation. Restrictions on their further dissemination have often applied, as discussed in the paragraphs about the selection of evidence in Annex 1.

As a result, by the time such evidence was accessible, if not always fully usable, readings made by a very small number of researchers, all working on the basis of the administrative assumption, had long since taken hold. Despite the difficulties encountered by the decipherment, in general and in detail, when it came to explaining the tablet language, there was never any serious re-evaluation of the basis on which the readings had been made, only an expectation that photographic evidence might help clarify or modify the readings of individual signs ad hoc.

Hand-drawn abstracts of the Linear signs have routinely taken the place of photographs. Those never capture the precision, detail and complexity of the originals, often making large assumptions about what to include. For example, the cover of Introduction shows a drawing of KN Sc 230, and might be mistaken for a faithful replica, but it omits many incisions and other features. So do the original drawings in Scripta Minoa I and II (drawing 212-236 and plate XXVIII shown below).

Drawings at least make some attempt to capture some features of the primary evidence. But it is more normal for scholars studying the Linear scripts to rely on various standardisations of the drawings and, yet more common still, transliterations of those standard forms, of the putative sounds of the putative signs, into the Roman alphabet. Since the only thing that matters, according to the Administrative Model is the scribal data, why not?

So the rich visual complexity of Knossos KN Sc 230 is reduced by stages as illustrated below. The highly modulated and even incised bottom edge (below the blue line), the dark area and incisions immediately left of the horse head (enclosed by red line), and complexity of other areas (for example enclosed by green) are not just inadequately represented, they are effectively ignored.

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1 I emphasise "majority" because, to his considerable credit, Sir Arthur Evans was prompt to publish sufficient and sufficiently good photographs of his work to enable critical appraisal. There are various reasons why that didn’t happen, some of which I touch on elsewhere in this book.
It is impossible for any interpretation of the scripts or tablet that treats the primary evidence in this way to be wholly, maybe even partly right, whether in evaluating the piece as a whole or individual putative sign readings.

As regards the latter, I shall give only a few illustrations of the kind of difficulty or error arising, based mainly on the Pylos "tripod" tablet (PY Ta 641), but similar observations might be made of all current readings of all Linear objects. I continue to refer to the Administrative Model (AM) to describe the current decipherment of Linear objects as conditioned by the prevailing assumption as to their administrative nature and content.

Pylos PY Eq 213 (photo Minoernet, see Annex 2) (extract enlarged)

The "rope ladder" in what is line 5 continues down below the horizontal cross "rule" into line 6 where it curves right in decreasing segments. Why did the "scribe" incise the rungs there at all? The AM ignores them, but they cannot be an erasure because they are just as clear as those in line 5. The AM perceives the sign "ja" rather than "pa3" (standard forms left and right at bottom right), but designating the incisions as one sign or another does not answer the more fundamental question, why is the sign elaborated the way it is, pictorially?

Pylos PY Ta 641 (photos, my extracts and enlargements of black and white - The University of Cambridge, colour - John Sie Yuen Lee, see Annex 2)

Even the most highly illuminated available photograph of the "tripod" tablet (see Annex 1) indicates additional incisions, abrasions and deviations that are not explained by the current transcription. For example, compared with the standard forms shown beneath, the trace marks (blue) around the sign "u" (for example, the mark above the subsequent "word divider" - between the green "x" - has not been made by a lateral or vertical stroke); around "we"; possibly around "jo"; and also the unnecessarily wiggly right descender of "si" (as adjoining signs show the scribe was perfectly capable of an incisive straight). The AM either ignores such features completely, or dismisses them as "erasures".

o-pi-ri-mi-ni-jo TUN (1) BIG 1 EQU (ZE)
"Erasure" (or "palimpsest"), frequently invoked by the AM, is a convenient, but misleading concept:
- it means that we can ignore the visual evidence of whatever the "erasure" may be because we think we know better. It is an assumption of convenience;
- the putative erasure is often no such thing because the erasure or "remnant" is no less visible than incisions the AM chooses to identify;
- if erasures are visible on clay worn by the putative passage of 3500 years, then the traces were even more visible at the time, rendering the intelligibility of the tablet surface, even to the original "scribe", a matter of some perplexity.
Similarly, the AM reads two signs in the second and third lines, repeated for different vessels, as "di-pa", Greek δεπας, depas. As the AM acknowledges, the reading entails several difficulties:
- δεπας means cup in Greek, not the purported vessel which is repeatedly shown in the "ideograms" on this tablet;
- so far as I know *διπας, dipa(s) is not otherwise attested as a Greek form at all, ever;
- the terminal ending of the adjective that accompanies its first occurrence is wrong.
Three difficulties flowing from the reading of a sign should prompt re-examination of whether the reading is correct. In fact, occurrences of the perceived "di" sign do not conform to the pattern of a standard "di." See (a) and (b) below, the incisions of which do not conform to the standard form at (c), particularly as regards its bar of verticals. In addition, in several of its instances, the purported "di" sign has incision or mark to its upper left which the AM ignores even though it it just as legible as the components of its proposed "di." In both (a) and (b), it is still possible to perceive one or more right-profiled standing figures to our left of the presumed sign.

(a)  (b)  (c)

In this case, as in nearly all others, the extreme lighting to which the tablet was subjected has served to bleach out many of the interventions on its surface still visible in other photographs, interventions that serve to strengthen the visibility of images, pictures, and which may also contribute to the reading and understanding of signs.

Perhaps the most important instance is the presumed beginning of the tablet lines, far left edge, where the lighting has largely (not totally if you look hard) obliterated deliberate moulding or incisions that are still just visible in other photographs. The top left of all tablets is particularly vulnerable to genuine damage and also difficult to photograph, but it is unacceptable to ignore the evidence of deliberate interventions altogether. In general, whilst over-illumination can help to highlight some features, its rationale appears to be, again, a presumption that the only thing that matters is clarification of already presumed signage and its effect is very similar to the destructive "cleaning" witnessed on the Phaistos disk and probably many other Linear objects (including this one). It removes the effect of much colouration and can also efface the effect of light incisions or "low relief" and some moulding.
What the AM takes as a "word divider" may well not be that at all, here and in many other, maybe all instances. It is incised at a slight angle, relative to the interventions just picked out (in blue) above. It looks more plausible that the incision is actually part of a sign or art work obscured by wear or the photograph's lighting. It is hard to see what, even from other photographs, but remarkable that the "divider" curves into the subsequent sign in a different photograph (red arrowed at right).

The AM assumes that some signs are obviously vessels. Conventionally those now tend to be called "ideograms", though on this tablet even the AM probably rather adopts the view that the signs are attempts to delineate features of real objects, in other words not true "ideograms". But although the identification of some signs as portraying vessels may be partly right, viewed objectively (outside what the Administrative Model assumes is the context), their configuration is certainly such as to delineate not only vessels.

In the first example far left, note the disproportionate sides, kink in the right side, asymmetric waving arms, and hint of two feet, or two profiled "high fiving" standing "cartoon" figures forming each side. Similar observations might be made about other "vessel ideograms" on the tablet (also shown left). All of which matters because the AM understands the tablet, including these particular "ideograms", only in administrative terms when the related interventions or incisions, as they constitute the related pictures, do not actually warrant that or only that interpretation.

Similarly, the AM classifies the sign left (from a different photograph) as ideogram *201 TRIPOD. Customarily, it is now represented with curved sides. Certainly this one appears to have three feet, but its sides are straight, its handles elaborated. The resolution is difficult, but close scrutiny suggests that the sign has been drawn to suggest perhaps several subsidiary or associated images, for example of a figure on the left side of the "tripod" (red). See further below and related discussion in Section 7.

"But that need not affect the identification of the sign."

Maybe not in itself, but in fact there is a severe problem of consistency tending the other way. How graphically different is that putative tripod "ideogram" from other signs on the tablet that the AM regards as syllabograms? The "ke" on the far left (note the bend in the legs) and the "ri" (the walking man on the right) both carry a pictorial quality that distinguishes them from the standardised syllabogram forms (respectively at right), and in the case of "ke" the same sign earlier in the line (see red "ke" in first extract above). So too the putative "qe" of line 2, standard form shown at left, where the incisions have been deliberately made to suggest the outline and characteristics of a human face.

Influenced by its own wider assumptions about the content and reading of the tablets, the AM assumes that the tripod "ideogram" (*201) must only be that, without considering whether it might not be a syllabogram with pictorial enhancement, just like the "ke" and the "ri", or perhaps a compound representing two syllabograms.
The AM does not explain the relatively large gap between the "ke" and the "ideogram"; it assumes it marks word or sense division. No similarly large gap appears between syllabogram and "ideogram" elsewhere on the tablet. Enlargement and the other photographs suggest that "something might be going on" within it - the outline of a figure (as shown further above) may still just be visible, betrayed, for example, by his right foot (red arrowed) just disrupting the horizontal grid line - but it does not look like an "erasure".

The AM rarely explains the positioning, spacing, or size of the signs it identifies, which in itself gives no confidence that the identification of some or many is correct. So in the case of Knossos KN Dn 1088 (photo SM II plate LXXVI), it assumes a tablet break on the right edge, but at the same time requires to read incisions on the same - remarkably perpendicular - edge as constituents of numbers. There is no physical evidence of such a break, nor any credibility to the perceived "lateral" number. Compare the similar treatment of KN Vc 74 in Section 4 and KN Ra 1540 below. Such assumptions literally fabricate or deconstruct evidence to fit a preconception. In addition, the variant depth of incision and deliberate variation of number formation (e.g. green arrowed) appear intended to help suggest numerous images, as for example the variously profiled faces (various colours).

Knossos KN Ra 1540

The purported numeral signs (allegedly five horizontals for "50") are appallingly badly delineated, and in at least one case at X incised on the purportedly fragmented tablet side. Incredible as scribal behaviour, such features can only call into question whether the signs are numeric at all or constituents of something else by way of signage or image. Here, the strong light and angle of view of the black and white photograph help suggest, among other images, the visage of a bear, ears, eyes, nose and paw or paws. (Compare the same tablet bears in Section 2.)
Finally, the AM never properly or fully addresses the fact that one and the same tablet may contain many different forms of the same sign.

Knossos KN Co 906 (photo University of Cambridge, see Annex 2)

Every single sign for "hundred" is incised differently, as are many or all of the signs for "ten". So too patently the hundreds on Hagia Triada HT 92 (Linear A), extracted at right (photo GORILA Volume I page 144, École Française d' Athènes, see Annex 2). Here, plainly, the identification of the signs may be partly right, but the deliberated variety of formation - the multiple and differing incisions for a single sign - does not square with a plain administrative record nor, of course, multiple scribal hands, as those would not be required to record a numeral sign. For the mouse and tail at X (green), compare the rodent image in Evans's clay mass (KN Pp) in Section 1.

Pylos PY Cn 608 (photo see Annex 2) (my extracts and enlargement)

According to the AM, the tablet records contributions of pigs from various places, the sign group on the left in each line of this extract purportedly representing an ideogram for pig ("SUS") plus the syllabogram SI (all red circled). The putative SUS + SI combination is drawn differently, in some cases markedly differently, in every single line, and with great precision, as is particularly evident in lines 4-5 of the extract shown (extracted at right).

No scribe, no matter how novice, no matter how allegedly primitive the writing system would devise nine different forms of the same sign group in one and the same administrative document. "The differences record something different about the pigs in each case." How exactly would that work? Nine differences? "The tablet is the work of more than one scribe." Nine? The scribe was "doodling", and it didn't matter because "the contents were known only to himself." But why "doodle" just those signs and, in any case, why bother repeating the cluster at all? Is it even the same "ideogram" and a pig ideogram in each case? Is it always "SI"?

One might make other assumptions by way of explanation, all equally unverifiable. The simple fact is that in such cases the sign groups are pictorially different; it seems reasonable to infer that they may also be pictorially significant.

But not only does the AM simply ignore or fail to explain apparent sign variations within a tablet, it can also treat them inconsistently.
Knossos KN So(1) 4430

I give the photograph and drawing from Scripta Minoa II (04.30 plate XV) and AM transliteration from the Damos database. I have not seen the CoMIK version, but doubt that they differ. The National Archaeological Museum Athens also offers an on-line photograph (see Annex 2).

(a) ko-kì-da, o-pa ne-wa
(b) e-re-ka / o-da-twe-ta, a-ro2-a ROTA ZE 22 MO ROTA 1

But the drawing of the first wheel (from the left), which the AM reads as the third syllabogram "ka" in line ".b":
(a) does not reflect the image in the photograph at all accurately nor does that conform to the standard form of "ka", the current bun with four partitions (standard form at right);
(b) is no more or less artistic than the second and third wheels that the AM instead reads as the ROTA ideogram.

So the first "wheel" may not be "ka", or the others not ideogram "ROTA", the basis on which the AM differentiates between the three purported wheel signs being inconsistent.

The photograph shows that the second "wheel" would be miscentred, which makes no sense for a wheel or for an administrative record. Again, the AM’s drawing subtly, maybe subconsciously "corrects" the original image to suggest otherwise, to fit the administrative presumption.

The evidence for non-Linear signs

On Knossos KN Dd 1281 (photo SM II plate LXXIX) the numeral signs are, as often, badly incised for the purpose of numbers, leaving the quantity and hence plausibility of the tablet as scribal record in considerable doubt (left).

But rotated (right) the same signs appear designed to suggest not only images (most obviously of a right-profiled man with a pan on his head (green X) looking at the three horizontal incisions opposite), but Roman or Greco-Roman alphabetic letters "S E S" (red arrowed), more plausible, as such, than the numeral signs in the original orientation.
Part of Phaistos PH 11 (Linear A, GORILA I, page 299, photo École Française d'Athènes, see Annex 2) appears to be filled with "hash" incisions that make no literal or numerical sense in Linear script. The AM passes over any transcription; the hash pattern does not fit its assumption that tablets are always "administrative". A comparison of the photo extract with the drawn abstraction thereof shows that the AM has been imprecise and omitted detail in rendering incisions.

The signs highlighted red suggest the Greek (or Greco-Roman) capital alphabetic signs Σ (sigma), Η (eta), Λ (lambda) Ε (epsilon), Ω (omega) and Σ (sigma), possibly in a Byzantine hand, though the sigma may be more Roman, "S". The signs seem to be suggesting a larger reading ΒΑΣΗΛΕΩΣ, BASHLEWS, of the king, an attested Byzantine spelling.

On Knossos KN Fp 13 (photo vintagedept, see Annex 2, my enlarged extract), the signs of the second row, though they may be Linear, also seem deliberately designed to suggest inverted or mirror-image Greco-Roman alphabetic letters, Σ Ε Μ Α Ο ?S. These are supported, literally, by the "legs" of the - sporty - Linear signs. The formation is "hidden", but it would be a remarkable coincidence. See also SI MA O WA in Section 6.

Thera, THE Tablet 6 (John Younger, Museum of Prehistoric Thera 8366) (extract)

Faint and heavy incision apparently combine to suggest the Greek alphabetic letters θ Η Ρ Α, Θhra, Thera. They are considerably more visible and comprehensible than any Linear signage.

One possible support for the identification is that the artist would seem to be using the Greek alphabet letters to stand for sounds that would be written in Linear script TE RA or TI RA. Now, to anticipate Section 6 (conclusions), those same sounds in Linear script might represent (ἡ)η λα(ιτ), θηλαι, nipples. The piece is moulded, incised and coloured to suggest breasts and nipples, marked yellow and purple, as well as the top of the (red) "goal posts" (see θηλη in LSJ, attested
3rd century AD). Other homonyms formed on TE RA or TI RA might correlate to other imagery of the piece, such as (s)thla(i), στηλαι, the Pillars of Hercules (see Section 2, also Section 6 note 20).

Thera, THE Tablet 5 (John Younger, Museum of Prehistoric Thera 8366) (photo see Annex 2)

The Greco-Roman alphabetic signs Π Α Ι (red) are more convincing then the proposed Linear signs, read by rotating the object 180 degrees, for which see John Younger’s website. Both types of sign may be present. But whatever the signage, it is all far less obvious than, for example, the imagery of bears standing left-profiled with head turned away from us (turquoise). Or the frontal pig head (green).

Rotated 90 degrees, the piece suggests, for example, a small right-profiled pig (green) and small boy (red) reading a scroll (turquoise). The figure of a smith (black) possibly with tongs (left hand) and anvil or cauldron (yellow) forges what looks like coinage, metal bars, and at bottom a horseshoe (blue). The image is thus doubly remarkable, firstly because it appears to suggest that coinage was known at the time of the tablet, secondly because the figure of a smith would chime with Hephaestus Ἡφαιστός, whose name may be among the things suggested by the alphabetic signs (P(h)AI), but also a particularly apt presence on Thera. Neither coinage nor Greek alphabetic signs would appear to be consistent with the presumed date of the piece, before about 1600BC. But see Section 10.

2 I would hazard the signs at issue might be (a) alphabetic Greek Ε Ρ Α Ι Τ Ο (b) Linear signs SA MA O WA plus PE RA KO KO WO, but it would take far too long and be otherwise difficult to explain why.
Sir Arthur Evans seems to have assumed that the Linear objects he excavated must all be "old", belonging to the "Minoan" civilisation. As, on this assumption, they must predate the - to some extent also assumed - date of the first Greek alphabetic script, then he naturally turned a blind eye to the possibility that Linear objects might also carry "later" signage. Later researchers have followed his lead.

Already, however, the tablet he rescued with backing plaster (KN Cn 911 in Section 1) poses some potential challenges, though in a surprising form. At least in the cases to date the proposed alternative signs, although they may be non-Linear, still represent Greek sounds. But that may not always be the case, or immediately obvious case.

I must emphasise that the perception of such "Arabic" number signs in the enlarged extracts shown above may not be obvious or correct, but I must also emphasise that it is no less obvious or correct than that of almost any of the Linear signs on this particular tablet, the AM's reading of which is highly selective, verging on complete speculation, ignoring incisions and sign formation that go far beyond variants of standard forms. It is not clear that the signs generally, Linear or otherwise, were all intended to be real text, rather than an artistic device, like vain repetitions. But the right-profiled face (purple) looking at the two "3s" (red) is a remarkable coincidence. Spelling the Greek word for "three" (τρεις, treis) in Linear signage would require TE RE; the same signs and sounds could also represent τηρει, threi, "he or she is looking at" (namely at the adjacent sign or signs "3", and whatever else). (See also TE RE O WA in Section 6.)

Similar considerations apply to tablets in the clay mass (Section 1), such as KN Pp 499 which lies at its base. Evans was probably confident, as is the AM, that this last "file" in his perceived administrative "series" should contain a large totalling number for the items listed in other tablets in the series, higher up in the mass.

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3 Evans appears to have intended the term to denote repetitive motifs or decorations (key or volute patterns for example) rather than any extraneous art work, but the effect is in practice the same in both cases.
The AM reading interprets the "8" as two Linear hundred signs "0" placed vertically, followed by a horizontal dash for "10" (and seven vertical dashes, not shown in my extract). The arrangement of the hundreds would be unusual; the cursive lines actually form the loops of "8" not separate vertical "0s", and to the right the clay appears formed to suggest other "Arabic" numerals such as "5" and "2". Again, the point is that the perception of such "Arabic" signs is no less speculative, I think less so, than the AM's perception of a Linear "217". Possibly clearest of all is the right-profiled human figure (red).

Evans's thesis about the clay mass may not be completely wrong, but it is unlikely to be the whole story for the simple reason that it ignores no less visible evidence, of signs as well as images. There may be many other Linear tablets where non-Linear signs - of whatever kind - may be present. If they exist, I certainly find them more difficult to detect than Linear signs, for which there may be several reasons, including our own expectations, nor do they ever appear to form continuous text. If they exist, they may often be an incomplete suggestion, as commonly with Linear art. But for an example of indisputably Greek alphabetic characters on an object of no less patent Linear art (and arguably signs), see the discussion of CMS XI-325 in Section 7.

Greek or Roman alphabetic characters may seem marginally more plausible than "Arabic" numerals, but in either case they present difficult questions of dating and chronology, though no more so than some of the imagery of Linear tablets. I return to such issues in Section 10, but plainly one solution may be that the problem lies not with the signage, but false assumptions about the age of the Linear objects on which they are found.

Conclusions

The Administrative Model's failure to recognise the art work of Linear objects is thus exactly complemented by its failure to read signs accurately and fully, which in turn probably largely explains why the sounds that emerge from those signs, as proposed by the decipherment, contain relatively few, even very few, recognisably Greek words, and why the Greek is deficient or inconsistent in ways where, quite simply, it should not be, such as prepositional distribution (words like "in", "from"), the absent definite article (as Michael Ventris observed), missing common words such as "other" or "account" (allos, ἄλλος, and logos, λόγος). Another reason, as will emerge later, is that the decipherment has failed to identify the sounds corresponding to signs fully as well.

Whilst the AM makes what seems all too like an infinite regression of unfalsifiable and unverifiable subsidiary assumptions, linguistic and otherwise, to try and explain away those and other irregularities in the language, ultimately it resorts to circularity - that the reason the language is odd is because it is administrative shorthand. But, as we have seen, that can no longer serve as the "get out of jail" card. Linear objects cannot be properly administrative if they contain the kind of art work that they seem to.

The signage of Linear objects may, then, in many cases be different from what the AM thinks it is, its understanding of what they mean also incorrect. Whilst that applies to Linear syllabograms, it applies even more to "ideograms", as it is not clear that they are any such thing rather than, say, artistic elaborations of one or more syllabogram or even extraneous art work, akin to what Evans elsewhere referred to as "vain repetitions". It also extends to the identification of perhaps many proposed number signs, as their incisions too are often patently non-functional as a genuine record. It may also extend to some or all instances of the purported "word divider" as it is likely that the mark taken as the "divider" is normally part of some other sign or art work, visible on more careful scrutiny.

The proposed identification of "scribal hands" across different Linear objects is similarly insecure. A single artist, as distinct from a scribe, is perfectly capable of delineating wholly different forms of the same sign on a given object. But different artists are also capable of delineating what may look

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4 The story of Agesilaus's discovery of a bronze tablet in Plutarch's Morals (Vol VII, The Genius of Socrates, 383-385) and the Chronicles of Dictys, retold by Evans (SM I page 106-110), suggests that the ancient Greeks also had difficulties with recognising other or older scripts. The stories are not straight-forward, and it is only an assumption that the mysterious scripts were one of those currently categorised as Linear B or A. See also the conclusions to Section 9. Another possibility by way of script may be musical notation.
like the same formation of the same sign on different objects. The notion of "hands" or "schools" may not be entirely wrong, but the context for it is likely to be an artistic rather than scribal one.

However, even if the AM has got some or, occasionally, all of the text wrong, even if some numeral signs are something else, some tablets do carry real and credible numerals. So, since multiple and complex images appear to be present on all Linear objects, art work and numbers seem to be arising on one and the same tablet. On the face of it, that looks a difficult circle to square. But whilst the presence of complex art cannot but prejudice the authenticity of record (in such circumstances it simply cannot be real record), the converse is not necessarily the case, as art can use anything as its medium or matter, both visually and in sound. I will return to apparently genuine number signs in later sections (though I have given one hint of one way they might work in discussing "3" "TE RE" above).

The likely presence of similar artistic techniques and motifs in all Linear objects, together with the likelihood that signs have been misread and sounds inadequately understood, calls into deepest question, probably disproves any substantial distinction between "Linear B" and "Linear A". It may be true that purported "Linear A" objects generally do not carry horizontal grid lines (like ruled paper) where "Linear B" objects often - but not always - do. In fact, some so-called Linear A "libation table" inscriptions do carry equivalents, whilst on "Linear B" objects those "grid" lines are as difficult to explain scribally as is the total diversity of form of Linear tablets. They are erratically drawn, and the signs cross them no less wilfully. Whilst they may be intended to suggest some kind of listing or formulation on some tablets, their presence - like their absence - may have many other explanations in terms of their contribution to the creation or suggestion of images.

What appears to be the inherent nature of Linear art makes it challenging both to see and to explicate. Not only because on objects that might be several thousand years old, lines and dots may accumulate by accident so that the identification of an image may not always be true to the artist's original intention. But because the acquired facility with which images can be so suggested means that the artist apparently wanted to suggest multiple but never "perfect" imagery. The result is an artistic form - a complex, apparently almost cryptic art - with which the Western world, in particular, is no longer at all familiar or comfortable.

An additional and related complication is that, just as Linear images are deliberately complex and imperfect, so would it be logical and consistent if signs followed the same principle, in other words the artist extends the techniques of Linear art to the formation of Linear signs so that, for example, what may at first appear (sometimes rightly) to be a distinct sign breaks down (equally rightly) into component parts that may be other smaller, different signs, or incisions so vaguely delineated as to suggest more than one sign (a "fudge"), or "merely" art work whose import or relevance to the adjacent signage may be difficult to see.

Thus in the case of KN Co 906 (photo University of Cambridge, see Annex 2, enlarged extract), whilst the highly elaborated and irregular first "sign" may represent "ka", the no less visible right-profiled figure supporting it (purple) suggests "o", and "ka" itself dissolves into vessels (blue, green), and a small human figure (yellow) apparently astride a worm or phallus\(^5\). A larger face behind (black) has a nose formed by the abdomen of yellow man.

The putative presence of non-Linear signs on Linear objects appears to be part of the same artistic approach.

To proponents of the Administrative Model, the difficult and elusive nature of Linear objects and Linear art, including its signs, will just mean "faces in clouds" or "anything goes". But the boot is really on the other foot. For evidentially and scientifically, there is a whole world of difference between examining a Linear object for all the visual clues it might give as to the evidence for and formation of not only art work but any signs, and selecting only certain interventions on a surface on the assumption that they contribute to signs consistent with a preconception as to the administrative content of the piece. Whilst the former has difficulties and hazards, the latter has

\(^5\) For further discussion of the motif and possible Linear sign equivalents, O KO KO WO, see Section 6.
even more of the same, and of an even more serious or, frankly, terminal kind. Essentially, it is neither scientific nor evidence-based.

I can do nothing whatsoever about those who are unwilling to countenance the possibility of imagery in Linear objects. For those who are more open to the idea, the plausibility of the imagery, the compelling nature of the individual images, is one set of controls or checks on their existence and identity. So too is the repetition and consistency of artistic techniques and motifs both within the Linear corpus, and, if such be the case, in a wider artistic tradition of which Linear art may form part. I shall return to such matters in later sections.

But arguably the strongest and most immediate proof of the existence of complex, artistic images on Linear objects would be demonstration that some such image corresponds to the meaning of the signs - a correlation. Crudely, do the pictures fit the words?

The question is no less important for the decipherment of Linear B. For it might be argued that its misidentification and misunderstanding of signs is so severe that it undermines the very basis on which the decipherment has been made in the first place, so that, for example, all Linear signs are something akin to “vain repetition”, traces of artistic images, signs without real meaning serving in the cause of art as purely abstract calligraphy. The apparently random presence of non-Linear signs (Greek alphabetic, "Arabic" numerals) on Linear objects might, again, lend support to such a thesis.

Whilst some apparent signage - of whatever kind - may indeed be "only" art work, I do not think the objection is right. The decipherment of Linear B necessarily involved a reductionist approach, identifying standard forms behind perceived variant signs within and across individual objects. Whilst the process was inevitably selective, that does not mean that its results were always wrong. In enough cases - probably considerably fewer than is currently thought, but then thankfully not many are needed - the process rightly identified recurrent forms, united by a common underlying type. The failings followed only subsequently, for example when it came to explaining why Linear tablets contain such an overwhelming mass of variants on those standard forms, even on one and the same tablet, or in reading "standard form" back into incisions that simply do not bear it or in discounting the possibility that variation might be something other than the same sign in a different hand, for example two or more signs conjoined.

But even if the standard forms of at least a good number of Linear signs have been correctly, albeit somewhat serendipitously deduced, one might still argue that the decipherment itself, the critical association of signs with sounds, the inference that the language is Greek, is unproven, for the reason that the signage has evidently not been fully or properly identified. Michael Ventris’s identification (on PY Ta 641) of what can be seen as a tripod with signs spelling the Greek word "tripod" might be thought to provide a response to such a train of thought. But the problem with Ventris’s identification is, precisely, that some if not most of the signs of the tablet have indeed been misread, its art work totally neglected, the context of the piece inevitably misunderstood. Whilst I am certain the specific correlation, the three signs "ti ri po" with what looks like a tripod, is, in principle, correct, it is not for the reasons or in the way Michael Ventris thought. As it stands, the conclusion is not robust.

So a compelling correlation of proposed images and - not ideograms but - syllabograms (the latter providing spelling for sounds and words) thus becomes doubly important, not only to corroborate the presence of images, but to corroborate the basic decipherment of Linear B.
Section 4: images and signs

The aim of this section is to demonstrate that, in principle, a correlation exists between the proposed artistic images and the signs or words of Linear objects with the consequence that firstly the case for such imagery is itself corroborated, and secondarily so is the basic decipherment of the Linear signs, what sounds the signs stand for.

KN Vc 74 (photo COMiK Volume I page 40, see Annex 2, SM II drawings page 163)

The Administrative Model identifies the Linear signs PO RU KA TO\(^1\). I think that is right, though I explain why it is also probably an incomplete understanding in Sections 6 and 7. The AM proposes the name Πολυκαστος, Polykastos, but then regards the tablet as broken - despite the astonishingly perpendicular right-edge - and so lacking an ideogram that would expand its meaning. But it is hard to see what substantial continuation there could have been.

The fact that the - possibly blackened - tablet looks deliberately configured and incised to suggest a left-pointing finger (see Section 2) correlates to an obvious word play, πολυκ(υσ)το(ς), polu ka(υσ)to(ς), very burnt, a very burnt finger\(^2\).

KN Ai 739 (photo SM II plate LI) (my enlarged extracts)

The AM regards the tablet as being about people, workers or slaves. It identifies some of the Linear signs as A KE TI RI JA. Again, in so far as it goes, I think that is right.

The AM has some difficulty deciding what A KE TI RI JA might mean. One proposal is ἀσκητρία, asketria, female decorator or finisher, which may be possible and there may be associated images on the object. But one alternative for which there are clearer suggestive images is ἀκεστρία, sempstress. For the tablet appears to suggest (highlighted below), among other things, the needle (turquoise), thread and reel (purple), eyes, also enlarged (e.g. red, blue), magnified fingers with maybe thimble or pin cushion (green), and possibly the hot plate of an iron (yellow).

1 For clarity, I use capital letters for Roman alphabetical transcription of all Linear script, though conventionally it is reserved for Linear A, smaller letters for Linear B.
2 In Linear B spelling, as currently commonly understood, final consonants of Greek words, such as -s or -n or -r, are ignored, as are some consonants before consonants, as here "s" before "t"; diphthongs are often simplified to the first vowel (au>a); the same sign is used for "r" and "l".
The Linear signs and sounds might also suggest, as has been recognised, ἀγητρια, agetria, nurse. The suggestion corresponds to imagery on the right side of the tablet. The frontal face of a chubby-cheeked, curly-haired young child (red) with the left-profile or a woman to its left (yellow). The child may be looking at dolls (green). The imagery also seems to suggest guiding or helping a child to walk (purple, left-profile of a very young knee), maybe indicating ἁγητρια, haghtria, a woman who leads or guides. (Baby walker images appear elsewhere, for example near the girl outlined red in the KN Pp clay mass of Section 1 or PK Za 4 in Section 2.)

But the same area also seems to suggest a left-profiled man or woman (green) cutting a woman's thick hair. We see the back of her head and left shoulder (red), and the scissors in action (yellow), an extension of duties of the sempstress.

So which translation of A KE TI RI JA is right? It's the wrong question, one still reflecting an administrative presumption. The imagery suggests both at the same time, both corresponding to the same set of signs and sounds. And indeed there are other images of other activities, correlating either to additional signs or to additional sounds generated by those already identified. I shall return to such issues in later sections.

Malia MA Ze 11 (Linear A)

A stone at the Minoan palace of Malia on the north coast of Crete appears to bear a Linear inscription. I show below the GORILA photograph, plus the related "standard forms" of the signs. As often, the surface is worn. The existence and extent of any crack or damage is particularly difficult to determine from a photograph. In addition, the photograph is only of one small part of a much larger façade, containing numerous incisions. Whilst I think the GORILA identification is probably correct, the same Linear signs appear to be suggested more than once, on a larger scale, visible in a different, colour photograph.
Any which way, although Linear A is undeciphered, if, as has long been recognised, we apply to those three signs the sound values known for equivalent signs in deciphered Linear B, then the reading of the three sounds, from left to right, is QE SI TE. Which might not appear of any significance, possibly mere mason's marks. But let us assume, as the Administrative Model often does, that the signs represent a name. Applying the established "sound rules" of Linear B (or how the spelling works - see notes 2 and 4), the sounds of the last two signs correspond to the last two (or two and a half) syllables of Θερσιτης, Thersites. As for why the first sound of "Thersites" should be written by a sign "QE" and not "TE", there are at least two plausible explanations: (a) the mason or artist took the first sound or syllable of the name Θερσιτης, Thersites, as "g"h"-".
That would have some etymological basis if the name θερσίτης was related or thought to be related to the same word as the Greek for wild animal or beast; θηρ, t(h)hr\(^3\) (always with a long e, unlike the short "e" in Θερσίτης) is generally understood to derive from an Indo-European precursor "ghuer", mutated to g"her in Greek and also reflected in the Latin "fera", wild animal (feral). As has long been recognised, Linear B can represent the labio-velar sounds k"e, g"e, g"he with the sign for "QE", and, in this instance, Linear A appears to be doing the same\(^4\);

(b) alternatively (or maybe as well), for entirely artistic reasons, the artist wanted to use a sign that could depict a face. By the time he (please take "she" as read, though I think it unlikely) was creating this work of art, the Linear A or Linear B "QE" sound was already often pronounced as TE (a trend evidenced in the classical Greek pronunciation and representation of Indo-European k"e, Latin -que, "and", as Greek τε or te). So he used that sign instead of the normal Linear A or B for TE which had a less congenial, branched tree-like shape (see above).

In the Iliad (Book 2.212ff), Thersites, a bandy-legged trouble-maker with pointed head, is famously beaten on the back with a sceptre by Odysseus, and sheds a tear. In Goethe's Faust (a work drawing on sources not fully understood, but with a long history in German and other folklore), Thersites is struck by a herald with a mace, but turns into an egg from which emerge a bat and an adder. Finally, "polyommatus thersites" is a species of butterfly, the origin of whose name, as often with insects and spiders (and like the common "polyommatus icarus") appears lost.

The Malia stone probably shows repeated suggestions of the Homeric story, in different sizes and rotations, but I shall focus on the graphic representation of the "later" Faustian version.

The right-profiled herald (red at A) uses a sceptre (white) to beat the bent right-profiled Thersites (blue, B, with pointed head) on a back (turquoise) shaped like half an egg (with one or two individual stones), whilst the sleeved right arm and action of the flagellant suggest and are suggested by stones shaped and positioned to evoke wings of butterfly or bat (E, green). Above Thersites, the outline of the stone is sunk to suggest a large bat with spread wings (black, D), but the underlying head and eyes appear to be suggested in exactly the right position despite or partly because of the superimposed vegetation. The adder (purple, C) is suggested almost entirely by colouration, possibly with more than one perspective or form.

3 To represent Greek words with English spelling, I use "h" for Greek long "e" (η, eta) and "w" for long "o" (ω, omega), and represent Greek φ (phi) and χ (chi) by "ph" and "kh" and ξ (xi) and ψ (psi) by "ks" and "ps".

4 In Linear B spelling there are generally no distinct signs for voiced and voiceless consonants (thus KE serves for KE and GE), or for the aspirated consonants either, like the later Greek theta, θ; the script uses the signs for the equivalent unaspirated syllable TE (τε) instead of T(H)E (or in this case QE instead of a sign for the voiced and aspirated g"h). In addition, as mentioned above, final consonants, such as -s or -n or -r, are ignored, as are some consonants before consonants, as the "r" in "Thersites".

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As often in Linear art, there is more than one representation of the components, but the correspondence is remarkable, so too that the imagery is devised over two faces at right-angles. Remarkable as the Thersites-related imagery may be, it does not represent all the images on the stones. For example, an erupting left-profiled pig (blue), a left-profiled lion (red), a figure holding up an object (green), and probably another left-profiled male face, finely delineated.

The complex, suggestive art work continues in rotation, for example by 180 degrees.

Thus, highlighted below, towards the left, a right-profiled corpulent male face (yellow); on the far right edge, an erotic rear view of a woman's thighs and posterior with more than suggestion of a girl's face behind (e.g. frontal, turquoise), beneath more than one of a right-profiled white-muzzled donkey head (brown); a left-profiled probably shepherd face with hat (white), another frontal before him (black); more than one suggestion of the upturned frontal visage of a woman right on the stone edge (e.g. purple), her right shoulder or arm trailing back, and behind her more than one suggestion of a frontal probably male visage (e.g. green); and a frontal woman's torso (blue). Not all the images are overtly erotic, but they are multiple, almost layered in complexity.

Given the size and position of the stones, it may seem difficult to explain imagery apparently only visible to those standing on their heads, or looking through their legs, or using camera obscura techniques. Rotation seems to be an intrinsic part of Linear art.
Conclusions

In the case of the Thersites stone, the coincidence of signage (word) and image is compelling because the signage (albeit probably repeated) appears relatively simple, whilst the image is both unique and complex. Thersites is - so far as I have been able to determine to date - a rare example in Linear art of an unmistakable legendary character, or incident.

Some may object that MA Ze11 is for various reasons - including its several apparent "anachronisms" - "untypical". Later sections will return to the issues of dating and chronology. Plainly, a single example of correlated text cannot prove artistic images are present on all Linear objects, but it helps to strengthen the case. Nor can the example prove that the basic decipherment of Linear B is right, but, again, it goes a long way towards doing so. And, as the other earlier examples in this section serve to indicate, it is possible to work through the Linear corpus, identifying similar and probably better correlations.

In so doing, however, persistent difficulties arise from the fact that
- the existing identification of Linear signs on Linear objects often appears to be incorrect or incomplete (Section 3);
- images occur that do not seem to correspond to visible Linear signs (once correctly identified), as seems to be the case with the concluding images on the Thersites block (above) that don't seem to correlate to the sounds QE SI TE.

If there is a consistent correlation between images and signs in Linear art, then there must somehow be other signs or meanings as yet unread. Aside from the difficulties posed by the condition of the object and the nature of the photograph, it shows only part of the one surface, so one possibility is that other signs might be conveyed on other sides, or in different rotations of this or other sides. Another possibility may be that signs or their sounds are suggested pictorially or pictographically, just as a picture of an apple suggests the sounds of the word. Another that the decipherment's identification of sounds with signs may be incomplete. I return to such matters in Section 6.

But another approach to understanding the difficulties may be to explore, first, a completely different indicator of the plausibility of the existence of Linear art as a whole, namely the wider artistic or cultural tradition of which it seems to form part. Doing so may also help to begin to resolve a further obvious issue, namely the apparently random nature of the imagery.
Section 5: the art of the fertility cult

Aside from correlations between signs or words and images, another piece of evidence that might help corroborate the case for the presence of the latter on Linear objects would be if we could locate such art within some larger or wider cultural tradition.

That might also help address two other issues. Firstly, all those proposed images are all very well, but it just looks so random and chaotic. If it has one, what is its rationale? Secondly, as the administrative assumption no longer works - Linear objects cannot constitute a genuine administrative archive or reflect scribal activity - is there some alternative context that might begin to explain the existence and the nature of the Linear objects? After all, they exist, and there is a lot of them.

An answer may lie in analogues provided by the cult of Demeter and Persephone and related fertility or chthonic cults.

The - presumably later - Greek sanctuaries of the goddesses at Corinth and Cyrene and other cult sites associated with those and other chthonic deities have yielded, in total, tens of thousands of objects, particularly clay "figurines". There are several background reasons for thinking that they provide an analogy for Linear objects.

Firstly, such cult objects tend to be found at the "later" sanctuaries in clusters or caches, in much the same way as Linear tablets at the "palaces". They are also found in comparable numbers. The site at Corinth has yielded an estimated 28,000 pieces. Some of those are genuine fragments. But parts of the site remain unexcavated. So perhaps an estimate of 28,000 "figurines" (howsoever defined) is reasonable. The generally accepted view is that the sheer volume and use of a relatively low-value material such as clay indicate that the figurines, at Corinth as elsewhere, were necessarily "common". That conclusion may have some basis at some sites, but the reasoning is flawed. The sanctuary at Corinth flourished for at least 300 to 400 years, maybe much more. Even with the lower estimate, that equates to a rate of deposition of just 90 figurines a year. In the same way, a generous figure of 8,000 Linear objects at Knossos, even over only 200 years, equates to a deposition rate of just 40 a year.

Secondly, it is already understood that a mother earth or great goddess cult appears in closely related art forms in many periods, including the "Minoan" and later Greek. For example, miniature clay figurines, which are often only part of a body, "polos" (top hat) wearing men and women, and offering trays. Yet despite such, often very close visual and conceptual similarities, the fertility cult concept is arguably too universal for such things to prove a specific link and line.

Whilst it is not news, either, that figures associated with the "later" Demeter cult can be complex (the "face-in-belly" type for example) or that they often carry a pig or a child or both, or other cult-related items, less well known, maybe completely unrecognised is the likelihood that all such pieces share exactly the same artistic techniques and motifs as Linear art, in other words:

- multiple, complex images in and on one and the same object, with a mix of size, perspective, rotation and so forth;
- recurrent representations of not only a figure or figures carrying, for example, vessels, pigs, and children, but also erotic images of male and female genitalia and sex, "clock faces", bears, hare and corvid, cranes or herons, and shinty players, "golfers" and similar.

I have been able to look in detail at only a relatively small sample of photographs (plus two outstanding statue heads, possibly from Carthage in a private collection in Scotland) and can represent still fewer here, but I believe that the following propositions will prove applicable to the majority or even all of such "later" chthonic or fertility "cult" or "cultural" objects, howsoever they may be labelled, dated and located.

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1 Some see definitional problems in terms of whether a given site or find is really Demeter or Persephone or something else more or less closely related, and similarly with whether all figurines or statues representing a kouros or kora are "cult" or not. They may be right, but, as I hope will become clear, the same basic artistic techniques and motifs probably underly them all.

2 But for the severe problems of dating and chronology for some or all such items see Section 10.
Terracotta figurine of a pregnant girl from the comic stage (photo American School of Classical Studies, Corinth Excavations, Ioannidou-Bartzioti, see Annex 2)

The folds conceal or suggest the presence not only of one or more vessels (green) in front of the abdomen (which may indeed also be swollen to suggest pregnancy), but the right profile of a (rather fierce) pig (black). A child is implied by the top of his or her head peeping above a vessel rim, protruding and clutching hand, and little legs and feet hanging below the left arm (all red), although one might also take one or both of the feet as part of the ascending male figure left profiled on our right (blue).

The art work of the rest of the piece includes images conveyed by colouration - the child's hand, once enlarged, the head of a right-profiled figure pouring from a vessel (black, this probably also forms a pig snout and other things from a different angle), eyes in a face top left, one rather feline perspective of which is clearer slightly rotated (red), and just visible frontal eyes and hair line, too, in the pregnant vessel (black, below).

(My enlarged extracts from photo as above)
Unfortunately, the condition of the object and (good) photo do not facilitate demonstration of much of the other imagery that is present. Some is still just about visible, enough to suggest its multiplicity and complexity, such as the (multiple) suggestion of a right-profiled swimming duck or duckling (turquoise), standing figures (red, green) and hare or rabbit or maybe mouse (blue).

Cyrene 73-304 (photo Cyrene Terracottas, see Annex 2)

An apparently damaged, headless and legless figure carries a small vessel (red) in her right hand, though there may also be the suggestion of a right-profiled piglet ear, eye and snout (green), and perhaps other small vessels (red), despite the missing left arm. A bag hangs from her right forearm (purple, with female facial features) whilst a child appears to grasp the left breast (blue).

But form, colour and incision are used to suggest additional complex images. In the upper half, a boy's face peers out from the collar (green), standing and seated variously profiled figures right
and left hold various items (blue and yellow), and a frontal standing figure looks down (turquoise) so that we look onto the top or brow of his head. His right arm and hand stifle the pitched forward mouth and face of a girl leaning forward (purple).

The lower half of the figure relies mainly on colour for effects. But the moulding insinuates the back of a naked lower torso (blue), the hem riding above female genitalia (suggested by several faint hem lines), sniffed by at least one pig (red). Note also eyes in behatted frontal face (yellow).

Exploiting in part apparently natural features or damage, the lower part of the figure (my extracts) also suggests a heron (purple), front and right-profiled rabbits or hares (blue) and bird (red), and, shown separately, a figure (black) carrying a "vessel" (blue) and looking at a smaller figures (red).
Rotated 180 degrees, the suggestion remains of a torso (red), clutching a child in its left arm (green). A left-profiled figure (purple) outlined in the folds of the dress, beneath possibly a frontal sheep's face, suggested mainly by eyes and ears (turquoise).
The forearms and hands merge into goose or swan neck and heads (male bird blue, female red at right, my enlarged extract). There is the suggestion of considerably more imagery, but the angle, light and possibly wear make it difficult to identify.

Emory 66.0054 (photo American Excavations Samothrace, see Annex 2) (my enlarged extracts)

I offer only a couple of illustrations of the artistic potential or complexity of the piece. In its original rotation, like many others, it is shaped and coloured to suggest not just one figure, but a succession of them, one behind the other. The technique relies particularly on markings for the eyes, but there is also a spare left leg (red, green).

In rotation, the piece is delicately moulded to suggest a right-profiled mouse, marked especially by right eye and ears.
Head of Demeter, Corinth (photo American School of Classical Studies at Athens, Corinth excavations, see Annex 2)

Whatever the date and status of the head, its apparent damage is unlikely to be wholly or even partly accidental, as it appears to have been manipulated to help suggest images typical of Linear and cult art, also exploiting the natural potential of the rock. The hole in the head may have been to support it in 180 degree rotation.

The easiest feature to see (my enlarged extracts) is the frontal child or boy (green). To his side (purple) the suggestion of frontal bear or large pig head. The frontal possibly female figure (turquoise) is partly projected by exposure of the colour of the rock. Another, male visage to her left (blue). The right-striding figure (red) dissolves into similar female and male figures in similar pose. (For the imagery, see TE RE O WA in Section 6.)

In rotation, detailing produces the delicate image of a seated young woman, back to us looking over her left shoulder as she holds perhaps a child, a frontal older probably woman (turquoise) holding vessel (green), child...
The Problem with Linear B

Draft of 31 August 2018

(black), and maybe pig (not shown), and a frontal male visage (purple). However, the older woman dissolves into the suggestion of a behatted rustic, probably shepherd. The image of the younger woman relies on colouration of the rock, or maybe addition especially for the lips.

The imagery of the entire piece is dense, multiple images suggested by a huge amount of retouching and reworking.

Conclusions

So far as I have been able to determine, all works of art associated with the cult of Demeter and Persephone and related chthonic and fertility cults, no matter what medium,
- share the same suggestive, multiple, complex art forms and techniques as Linear art; and
- among other motifs (such as the hare and corvid) in particular share the basic motif of a figure carrying one or normally two vessels, a child (normally boy) and a pig. In other words, each piece is configured, as a whole, to suggest the motif in three dimensions, albeit it may only be an abstraction or "fragment" - part of a torso or even just a hand or hands - but the motif is also normally replicated not only in 3-d in at least some rotations, but also two dimensionally, conveyed by moulding, incision, colouration, anywhere on the piece and in different rotations.

The existence on purportedly later cult objects of what appears to be art exactly comparable to that of Linear objects should greatly enhance the chances of diagnosing and understanding both of them in a mutually reinforcing way, much as the correlation of images and signs or words on Linear objects. The identification of real, discrete Linear signs on a Linear object may not now always be a prerequisite to understanding, as the object's art may in any case conform to the wider cult tradition.

But any benefit comes with a cost. It may already be obvious that Linear art is, intrinsically, not exactly straightforward. That characterisation comports well with its projected place in a wider and longer tradition of "mystery" art. But it also means that understanding how the art works, both images and signs, particularly on individual objects, is likely to be considerably more challenging than it otherwise might. Mystery cults tend, unsurprisingly, to be about mystery, as well as, ultimately, if one is fortunate, revelation.
Section 6: cult images and words - theory

The art associated with "later" fertility cults, as outlined in the previous section
- helps to confirm the plausibility of imagery on Linear objects, as the same techniques and motifs (recurrent images) are found on both;
- provides a "fertility" as well as "mystery" context in which the imagery of both seems at home.
However, whilst the correlation of images and signs in Linear art is demonstrable in principle (as by Thersites in Section 4), it remains to be seen if and how they correlate more generally. In addition, whilst the nature of the imagery on Linear and later cult objects may be or may become reasonably clear on a case by case basis, it can still look unstructured, chaotic, almost meaningless.
Ideally, the next step, then, would be a gradual accumulation of examples showing how any correlation works. But that is extremely difficult to do because it requires accurate and complete identification of
- at least some from among multiple, but inherently complex and incomplete images;
- Linear signs, also often similarly and deliberately opaque;
- sounds corresponding to the Linear signs, where, from the accumulation of related images (see on) it becomes clear that the existing decipherment, though basically correct, is also significantly incomplete.
The difficulties are compounded by the wear and tear to the objects, what seems to be the inherently elusive nature of mystery cult art, and the overwhelming logistical problem of illustrating or discussing any aspect in anything other than many pages, even in the case of one single object.
I have therefore concluded that at this stage the only feasible way forward is to outline some of the conclusions, or propositions to which I have so far come, and then offer a few examples in the next section to indicate their plausibility.

Some first principles

Linear images, then, as evidenced even on a single object, are multiple and complex, often merging or fading into one another, rarely if ever perfect or complete. So, for example, what looks initially like a vessel becomes a pig which becomes a child, as on PY Ta 641 in Section 2.
My perception is that Linear sound works in much the same way, thus adhering to a consistent artistic principle. It plays with homonyms or variants of set or formulaic phrases, and those homonyms are then reflected in the diversity of image, and of course vice versa.
An approximate illustration of this "homonymic" art is the famous "Two Ronnies" comedy sketch where a man goes into a hardware shop and asks for "fork handles", but the shop keeper thinks he means "four candles". On a Linear object the word play would have its equivalent in images showing one or more "fork handles" as well as "four candles". It could also be represented by another image, namely "four canned Ls", four letter "Ls" inside a tin can or one "L" in four separate cans. The underlying sounds of the images are all recognisably the same, but the homonymic play does not have to be exact.
So whilst such word play can be based solely on two or more meanings of the same sound (as in "hose" or "bar" or "bat"), it can also be based on sound approximation. Indeed, it is often reliant on a confusion in the bridge or juncture between words (four -Candles, forK -handles) as well as between hard and soft consonants ("d" and "t" or "motorpike") or various forms of rhotacisation, the confusion between "r" and "l" and "w" ("wabbit and lice" for "rabbit and rice")². It is totally unimportant that the words in each play are different or slightly different, or that historically the variants may have different origins or etymologies, though understanding the etymological history can sometimes be helpful in understanding or evaluating the plausibility of a proposed pun. All that really matters, as in comic word play, is recognisability.

1 Arguably "homographs" if the focus is just on signage, but I think "homonym" - a word which sounds the same as another but has different meanings - is more familiar and serves well.
2 In other words, reliant on many of the "spelling rules" (more accurately "licences") of the existing decipherment of Linear B (note 5 below). For the dubious identification of the "word divider" see Section 3.
In Linear art, the sounds of "fork handles", "four candles" and "four canned Ls" might also be represented by, say, three Linear syllabograms, signs spelling the three sounds, roughly, "for" "can" "dells". I have italicised "might" because I am not yet certain that in Linear art the underlying formulaic phrases are always represented by Linear (or other) signs. In theory - they may be, but sometimes the signs conveying them may be physically hard to see because, for example, they are on unphotographed sides or in different rotations; or - in some other cases the phrases may be suggested only and entirely by the accumulation of accompanying homonymic images. Thus it is also possible that on some Linear objects most or even all the apparent signs have no function or meaning other than contributing to art work; - a hybrid of sign and image, a kind of pictograph. A picture of four canned "Ls" is one approximate illustration as the letter "L" is both the sound but also plays a part in the graphic. Probably the best example in Linear art is the basic motif, O KO KO WO, explained below. Many individual signs (or combined signs or sign groups as they often are) are highly pictorial, as if enacting one or more meanings of their sounds.

The fundamental point remains that in Linear and cult art images are chosen whose verbalisation or description reflects homonyms or variants of some basic underlying sound pattern or phrase, which might therefore be divined pictorially even if signs are absent or missed. However, it is the formulaic nature of the phrases, their repetition across and even within objects that gives structure and purpose to what would otherwise be an ingenious, but still haphazard correlation of images and sounds. The more so because at least one of the homonymic readings of the phrases, one of the meanings of the sounds, appears to be rooted in aspects of the fertility cult. That will become clearer when I discuss the individual formulae below.

The inherent nature of the Greek language combined with the structure and licences of the Linear syllabic system (largely as it is already understood) mean that the formulaic phrases are capable of generating a very large number of homonymic expressions, and hence related images, far more than "fork handles". But in addition - images on an object may correspond to homonyms of individual formulaic phrases in isolation, but also to homonyms suggested by combining two such phrases together into a longer run of sounds and word options; and - crucially, Linear signs on many objects appear to be intended as yet further additions to or continuations of the well-known formulae, principally to the basic motif discussed below, increasing the homonymic and imagistic potential still further.

As already suggested by Thersites in Section 4, the principle holds good that images correspond to the meanings of sounds, and vice versa, in a mutually reinforcing way. So the more specific the image, the more helpful it can be in identifying sounds and their signs. The repeated coincidence of multiple diverse images on tablets helps to confirm the validity of the basic decipherment of Linear B - what signs correspond to what sounds - but it also indicates that some additions to that understanding are required, largely because the signs are - probably deliberately - intended only as approximations to sounds. I summarise the main proposed such additions at the end of this section. Next, I shall try to show how the principles, outlined above, work in relation to several of the most common underlying formulaic phrases, as reflected in the images on Linear (and indeed later cult) objects.

O KO KO WO (O KO KO WA) - the basic motif

Linear and later cult objects show a figure carrying one or more vessels (pitchers etc), as well as a pig and child and, occasionally, more difficult to explain objects, such as boats. The representation usually occurs more than once. In fact, so pervasive and basic is it that the whole object is generally shaped around it. Although it may often appear to be only a "fragment", it is formed to suggest at least some component part of a figure carrying such items.

3 Section 4 has already insinuated and Section 7 contains further suggestions that the signs "QE SI TE" do not only mean "Thersites".
4 For clarity, I shall henceforth generally use capital letters to transcribe the Linear signs, even though conventionally they are reserved for "Linear A".
To focus just on carrying vessels, how might a Greek speaker give verbal expression to such an image? There are many possibilities, but one is ὀχ(ε)ω χο(ϝ)ον, χο(ϝ)ους or χο(ϝ)ας, I am carrying a pitcher or pitchers. The transliteration of the phrase into Linear script would be O KO KO WO or O KO KO WA.6

Some may object that okh(e)w, ὀχ(ε)ω, I carry, derives from an earlier, Indo-European *wokhe- so it must start with a digamma (ϝ), ὑχεω, wokhew, and the Linear script with "WO" not "O".

Not so. We do not know at what date digamma “disappears” in Greek either generally or in specific words6, nor how old many of the Linear objects are (see Section 10). Nor is it consistent to assume, as the decipherment does, that the Linear system can ignore an aspirate before initial vowels (writing "a-" instead of "ha-"), but not a weak "w-" before a vowel. It is also important to bear in mind that the signs serve only as approximants to sounds that we perforce and conventionally designate as “O” “WO etc’.

By contrast, one strong indication that O KO KO WO really is a plausible verbalisation of the image of a figure carrying vessels is provided by the corresponding Linear signs. How would each syllable be represented in the Linear script?

O    KO    KO    WO or WO

"O" is what Sir Arthur Evans sometimes described as the "throne" sign because it looks like the abstract right profile of a seated or standing figure holding something up.

"KO" is an oval with downward projection, which pictorially might suggest many things, but among the plausible visual candidates is the profile of a vessel or its brim from which liquid or grain is poured in a stream. The basic motif requires two of them, one in each hand.

"WO" again might suggest many things pictorially, but its distinctive features are always two feet, two pronounced rightward projections at the midriff and a lesser leftwards. Normally (pace the standard forms) it also has at least the suggestion of a "head". One might visualise it as the profile of a stick man with arms raised holding items in each hand6.

Sequentially, then, the shape of these Linear signs plays out the imagery of the basic motif as elaborated in 2-d or 3-d forms of Linear and cult art - "O" the seated or standing figure holding the two vessels "KO". The presence or contribution of "WO" is not always immediately obvious. Possibly it is sometimes visualised as incorporated in a pictorial "O", the figure holding the vessels in both hands suggesting not just "O", but the two rightward projections of "WO". But on many

5 According to the Linear "spelling rules" (better "licences"), as currently accepted, the script normally: drops consonants "s" "n" "r" and "l" in final position, and the first consonant of a consonantal cluster ("st" or "rt"); does not distinguish long from short vowels and ignores the second vowel in diphthongs (double vowels), so TE for te(i) or O for o(u); does not distinguish voiced from voiceless consonants (except probably "d" and "t") or aspirated ("th") from unaspirated ("t"). In English transliteration of Greek, I use "w" for Greek omega ω and "h" for Greek eta η, and sometimes "y" for "u" where that is already the common English transliteration or translation.

6 See also note 9 below. The "WO" in KO WO, khowo(n), χο(ϝ)ον may plausibly be regarded as a glide sound ("w" between "o" "o") or etymologically correct, or both. For the conflated meanings and endings of χοός/ χους ("measure of capacity" "pitcher"), see LSJ. Whilst χοή/ χοα(ι) generally means only "pouring(s)", that might not exclude its use as a metonym for "a vessel (that pours)", particularly in "cult" language.

7 Similar considerations apply to the objection that the verb ὀχεω okhew would not be contracted to ὀχω okhw at this "early" date. See John Chadwick's slightly pained observations on the "anachronism" of contracted verbs in Linear B in Documents page 299.

8 The version of "WO" on John Younger's Linear A website (the one on the left above) is, I think, a better rendition of the underlying "standard" than the form commonly published (the one on the right).

9 The visual commonality of the form of the Linear "O" and "WO" signs might also suggest that originally they were one and the same, in which case the basic motif might originally have been as much WO KO KO WO as O KO KO WO. The circular or palindromic WO KO - KO WO would be appropriate in acoustic art celebrating a fertility cycle. But in many cases artists may have wanted to conflated the two signs,
objects the "WO" really is separately represented, for example by the limbs of a smaller figure (such as a child or doll) carried by the main figure.

These component signs of the basic motif can be found set out as such on some tablets, but often in forms that are very hard, for us at least, to recognise. Where they are, it seems to be precisely because the artist wants to draw attention to play with the basic motif and its artistic signage. More commonly, they are conveyed, often repeatedly, in condensed pictorial or pictographic form - a figure carrying some or all from among the relevant items.

The same sounds and same signs would also be the Linear way of representing "I hold a boy child", O KO KO WO, okhw ko(r)won, ὀχῳ κορ(ϝ)ον, ὀχῳ κορον. The plausibility of the form korwos κορος is reasonably well attested in later alphabetic Greek. At some unknown date it appears likely that the (in its own terms apparently orthographically correct) Linear spelling KO WO was still being used when the pronunciation was now commonly koros or kouros, κορος or κουρος, where the "w" or digamma (ϝ) had been dropped or absorbed. In other words the signs KO WO were still being used when contemporary pronunciation might rather have suggested the Linear signs KO RO. But if one uses KO WO to spell koros κορος, then the door is open to spell many other words, properly spelled with Linear RO, with WO instead. Again, it is important to remember that the Linear signs are sound approximations, and that word play is interested in confusion and conflation, not phonetic and orthographic precision.

On that basis, arguably the most important homonymic variant or play is O KO KO WO (instead of the "correct" O KO KO RO), ὀχῳ χοιρον (ορ χοιρους), okhw khoiron (or khoirous), I hold or carry a pig (or pigs). The reason is that it routinely provides the apparent purpose or pretext for the Linear object - record of a personal offering to the fertility goddesses - and helps to explain, for example, number signs, where those are real (see Section 4): O KO KO WO 2, ὀχῳ χοιρους δυο, I bring two pigs.

But it is abundantly clear from the recurrent imagery found on Linear and later cult objects that the basic motif - the set of sounds O KO KO WO - is the starting point or explanation for a large quantity of further homonymic plays and variants. I tabulate some of the homonyms below as it helps to see the sound patterns and the "logic" of the associated word and image play:

- ὀχῳ χο(ϝ)ον, okhw kho(ϝ)on, I carry a vessel
- ὀχῳ κορ(ϝ)ον, okhw kor(ϝ)on, I carry a boy or doll (puppet)
- ὀχῳ κορον, okhw koron, I carry a broom.
- ὀχῳ κολον, okhw kolon, I carry intestines (often on the head) or a stumpy-horned cow
- ὀχῳ χωλον, okhw khwlon, I support a lame man, the human or material support (stick or crutch) being a common image
- ὀχῳ κοιλον, okhw koilon, I carry a hollow thing - a ship, shield, vault (of heaven), shepherd's crook, the crook being the hollow or "coiled" thing (for the shepherd see TE RE O WA below);
- ὀχῳ κωλον, okhw kwlon, I carry a shaft, particularly of a ladder
- ὀχῳ χοιρον, okhw khoiron, I carry a Pig - but the word also means a large fish (see LSJ) as well as female genitalia

(In most cases, an alternative might be ὀχος χουο etc, okhos khoou, a carrier of a vessel etc)

- ὀγκος χοιρος, onkos khoiros, a huge pig etc.
- Ὀρκου κορος, Horkou koros, son of the god of the Underworld.

More stretching examples include:
- ὀχος κορ(ϝ)ου, okhos korwou, "kouro holder", a man or boy in a wheel (acrobat) or round or any such circumference. See KN Co 906 in Section 6, and KN Dk 1073 and PY Ta 641 in Section 7 for artistically diverse examples;
- ὀ (σ)κωψ κουν, ho (s)kwps kown, the "knowing" owl;
οἰκον κορω, oikon korw, I sweep the house;  
οἰκος κορων, oikos korwn, house of girls, brothel;  
οἰκος χωρων, oikos khwrwn, house that moves, descriptor of a snail or a turtle or migrant bird;  
ό χουν χων, ho khoun khown, the one who digs earth, of ploughmen, dogs, bears, or turtles;  
όγκω ωκων, okhw onkon wion, I carry a massive egg (a cuckoo’s egg for example);  
όγκω κο(υ)ρον, onkw ko(u)ron, or οκκον ώιον, okkon onkow (I magnify the eye, Linear and cult art being full of images of enlarged eyes or generally men and boys looking through "glasses" as in KN Fp 13 or PK Za 4 in Section 2)\(^{13}\);  
όγκος χωρων, onkos khwrwn, a hump moving, a camel;  
ό κοχλος, ho kokhlos, the shell. Shells are possibly present on all Linear objects. See PE RA KO WO below. There are probably many reasons as to why.

Similar observations may apply to a variant of the basic motif - O KO KO WA. Except for its final sign, its signs convey many of the same visual and semantic meaning as O KO KO WO, and with the same scope for word play.

Most, if perhaps not quite all of these word plays are all the more plausible because they elaborate visible, physical aspects of the Demeter-Persphone and related fertility cults. Obviously so in the case of children, pigs, various vessels for grain or liquid, and human sexuality, its organs and expressions. But so too, for example, "one who digs" of ploughmen, but also bears (who hibernate, and see also under TE RE O WA below); the owl, pertinent to Persephone (Hora, Spring) not only because of the Underworld, tombs, night, and omens, but because it is among the earliest birds to presage the onset of spring; birds and eggs generally, and the creatures that prey on them, like snakes. Similarly, migrating birds like geese and ducks.

The related images can all be played "straight", but a considerable part of the artistry is the inexhaustible wit with which such commonplace is represented. Some of the play also becomes more conceptual, more abstract, more distant from the originating genius, revolving more around visual, audible and semantic play for play's sake:

- the eye pupil, doll or puppet theme, all represented by verbal and visual play on "ko(r)wo" and "ko(r)wa" (κορ(ϝ)ος κορ(ϝ)α) seems partly to reflect ambivalence about the age of Kore (Persephone) when she is raped by the king of the Underworld. Was she still playing with her dolls? Seeing and sight are favourite motifs, perhaps partly because of Persephone’s peculiar Underworld vision (or lack of it);

- an additional reason for the importance of "sight" is the overlap with the idea of "magnification", also present in the basic motif (O KO, onk(o)w, ōγκ(ο)w, or [K]O KO WO, onkow, ὀγκω). It can mean a real, physical "making big" (trait of fertility), but it is often represented, quite literally, as visual magnification in the sense in which we normally use the term today;

- the sounds or syllabograms of the basic motif O KO KO WO can also express the negative: ou okhw, οὐ όω, or ou ekhw, οὐ ἔχω, the later Greek contraction οὐχω. So that all the things that Linear figures can carry or hold, they also might not. That may help explain the many Linear and cult figurines without limbs (kowo or kowa, kwlon or kwla, κωλον or κωλα - hands, arms, foot, leg or phallus) or proper eyes and eye balls (kowo or kowa, koros or kora, κορος or κορα). They are not necessarily damaged or fragmentary, but were always so intended;

- many sanctuary sites from Minoan through to later periods were home to apparent dedications of clay limbs, swollen limbs, and figures carrying boats. Whilst it is impossible to disprove traditional explanations for some or all of these (dedications by the sick, by mariners, albeit at mountain sanctuaries), such objects may also represent 3-d images of word play based on the basic motif: O KO KO WO, ὀγκων κωλον, onkon kwlon, swollen limb, όχω κωλον, okhw koilon, I carry a hollow thing, that is the hull of a boat;

- in Scripta Minoa I Sir Arthur Evans referred almost en passant to "a bath-shaped vessel of terracotta containing a whole hoard of inscribed tablets (page 18)." Similarly, John Younger's Linear A website reports that on Thera sealings were found along with Linear A tablets inside a bathtub. Now a bathtub is not an obvious place to put, let alone store tablets, even less so around the time of a volcanic eruption. But the collocation makes sense as conceptual art, word and image play on the basic motif: O KO KO WO, όχος χων, a container of pourings, exactly what a

\(^{13}\) LSJ indicates that in "later" Greek only κορα means "eye pupil", but the imagery of Linear objects suggests that, at least in this context, κορος was also used. For ὀκκος see LSJ.
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bath tub is\textsuperscript{14}. But then so too is a "libation table" and a ladle (see PS Za 2 in Section 1 and TL Za 1 in Section 2).

For other examples of such conceptual art revolving around the basic motif, see discussion of the Bloomberg London finds in Section 8.

The basic motif - supplements

Often, the Linear object is purporting to describe someone bringing pigs to the goddesses. So a frequent sequel to Ο ΚΟ ΚΟ ΛΟ ΟΙ is ΚΕ ΜΑ (more rarely ΚΙ ΜΑ or ΚΑ ΜΑ or ΚΑ ΜΙ):
\begin{itemize}
  \item - ὀχω χοιρους Γηι Μαι, okhw khoirous Ghi Mai, I bring pigs to (the) Earth Mother.
\end{itemize}

The signs ΚΕ ΜΑ are often conjoined\textsuperscript{15}. And ΚΕ ΜΑ provides abundant opportunity for further sound and image play, for example ΚΕ ΜΑ κερμα kerma, anything cut, a coin; χειμα kheima winter or storm; σχημα skhema form, or, shape (usefully employed when combined with yet further sounds and word play); γευμα geuma repast; and (borrowing the "-O" from the preceding "WO") ὀγκημα onkhma a thing that honks, especially a donkey or mule. One of the more obvious (and probably common) sound and image plays is along the lines of ὀγκων κωλουν (ἐ)γημα, onkon kwlon (e)ghma, swelling the phallus I have ejaculated.

Pigs are normally also brought for the goddess's daughter (Kore), but there are numerous ways of representing the idea. The simplest might be Ο ΚΟ ΚΟ ΛΟ ΟΙ ΚΕ ΜΑ ΛΑ, ὀχω χοιρους Γηι (ἁ)μα Κορ(ϝ)αι, okhw khoirous Ghi (ha)ma Kor(w)ai, I carry pigs for Earth together with (her) Daughter.

However, the apparent dedication might be set out differently, for example by repeating Ο ΚΟ ΚΟ ΛΟ ΟΙ but adding ΚΟ ΛΑ instead of ΚΕ ΜΑ. Or by using a different descriptor for the Daughter such as Ο ΛΑ, Ὠρα, Hwra, Spring, or ΣΙ ΜΑ ΛΑ ΛΑ (see below), and probably Α ΤΑ (Αὐτα Auta Herself) and (Α) ΡΑ (Ἀλλα, Alla, the Other One).

The basic motif may be preceded or followed by ΤΕ ΡΕ ΛΑ (see below). But aside from its combination with other such formulaic phrases, the basic motif may be combined with additional Linear signs (and they necessarily are the syllabic signs), ostensibly to qualify the offering being made, usually something about the pig or pigs such as size, colour, origin, or about the specific occasion. Because the basic motif is almost universally suggested on the left side or top left side of a tablet by a picture or pictures of the "carrying" figure, the first "obvious" Linear signs that tablets often present are those of the sequential qualifying words.

Plainly, the qualifiers, and their homonyms, are legion. One common example is ΤΟ ΛΟ, θολος, tholos, inky black, of the pig, but a homonym for other senses of θολος, as well as θορος (semen) θορω (I see or look, for θεωρω), and more.

In theory, the other formulaic phrases set out below might, in one of their homonymic variants, serve as stand-alone dedicatory expressions, dispensing with the need to lead with the basic motif.

**ΤΕ ΡΕ ΛΑ (or Ο) ΛΑ**

Linear objects are full of people looking at edges. KN Cn 911 in Section 1 has some examples. But as well as the edge of the tablet, the "edge" can be one of the (in fact irregular) "grid" lines often drawn across tablets; they frequently contain eye dots, or eye dots immediately above and below. Now one way of verbalising the image of someone looking at an edge or edges in Greek is to say τηρει ὀαν or ὀας, threi oan or oas, he looks at an edge or edges (or borders or fringes),

\textsuperscript{14} John Younger's note also records that another sealing was found "inside a wood box with a complete balance set of 2 bronze pans with pivot beam, a bronze ring, and two disc weights (lead and stone)." Whilst some may regard the collection as evidence of administrative activity, it is in several respects puzzling if so it be. But a pair of scales seems to be a common image in Linear art, often because it reflects word play with the ΤΕ ΡΕ ΛΑ motif, τελει αἰωραν, telei aiwran, "it performs balancing". So far as I can see, all Thera seals and sealings carry not just any art form, but the techniques and motifs of Linear or cult art.

\textsuperscript{15} I have tried to indicate a typical such conjunction schematically here and in later examples for conjoined ΤΕ ΡΕ, ΛΑ ΛΑ and ΣΙ ΜΑ, but because the "script" is so pictorial they are only a reduction or approximation.
which in the Linear script, as currently understood, could be written TE RE O/WA, the "W" being either a glide sound between the vowels or maybe having an etymological origin. The word ὀα or ωια also means "drawers", apparently a loin cloth two of whose ends encircle the waist, while the third passes up between the legs to join them.

But Linear objects are also full of birds looking at eggs, and one way of verbalising that image in Greek would be τηρεί ωια, threi wia, he looks at eggs, which again in the Linear script could be written TE RE O/WA.

For convenience I tabulate these and other plays on TE RE O/WA as set out below:

τηρει ὀαν or ὀας, terei oan (or) oas, he or she looks at an edge or edges, or hem of a dress, or "drawers";

τηρει ωιαν, threi wian, he or she looks at a "tail", of tailed animals, but also the female genitals, normally from behind, where the use of ὀα for "drawers" no doubt helped the association;

τηρει υλαν, threi oalan, he or she looks at a "pest", whether a rodent (an obviously tailed animal) or a female bear. The bear, in particular, can also be the one doing the looking;

τηρει ὁ(f)ας, he watches sheep. See O KO KO WO, the shepherd's crook above. Although ὀας appears to be an unattested or poorly attested form of the noun in "classical" Greek (see LSJ), the shepherd and his charges is a very common image on Linear and cult objects;

τηρει ωιαν, threi wian, he or she looks at time, a clock face. But time (Spring) can also do the looking. Similarly a cockerel can observe or make time - τηρει or τελει ωιαν, threi, or, telei wian;

τρεις ωια, treis wia, the three seasons or ages of man;

tελει or τελει Ωρας, tellei, or, telh Hwras, the rights of spring or the dues due to Spring, and probably τελει ωιαν, telew Hwran, I celebrate Spring;

τηρει ωια or ωιαν, threi wia, or, hwran, he or she (normally a bird) looks at eggs or observes spring;

tελει άιωραν, telei aiwran, he or she makes any kind of oscillatory movement or suspension. So of sexual activity, but also men or women on stilts, or a high trapeze, or a pair of scales, or waddling baby learning to walk;

τηρει έυλας, terei eulas, he or she observes worms. Commonly of birds and hedgehogs, sometimes surprised individuals, it requires reading the sign "U" in place of "O". See note 21 and the conclusions to this section;

τερει or τερεω οὐραν, terei, or, terew ouran, he or she penetrates the female genitalia.

The TE RE O(U) WA motif and related images appear, I think, on all Linear objects, often in multiple positions. Over time it probably becomes the dominant theme. Plainly, many of the images again relate to fertility or a fertility cycle.

But do the relevant Linear signs actually appear on Linear objects? Yes, I think they often do, but, as ever, they can be hard to discern for many reasons, including the fact that, unsurprisingly given one of the homonymic meanings, they

16 According to LSJ, the word is also found in alphabetic Greek as ωια and ωια (as well as ὀα), which is probably closer to what the Linear equivalents are based on. Whatever the dialect or idiolect, it all appears to be the same sound and word.

17 The "i" in ωιαν, egg, is poorly understood and very weak.

18 In word play, the verbs τηρεω, τελεω and τερεω might be either contracted (τηρει, threi etc), in which case they are "he" "she" "it" or uncontracted (τηρεω threw etc), in which case "I". The variation does not work for all the homonyms.

19 O(U) WA may also reflect the sound of a (cult) word for "bear" akin to the Latin "ursa".

20 Unless there is also Linear signage QE RE where hunting images occur, such images appear to reflect the fact that the more etymologically correct QE RE had come to be routinely pronounced TE RE. See the discussion of "Thersites" in Section 4.
are often located on or near edges. The TE and RE are often combined on the same sign stem, like a "tree", and similarly O or U and WA. The images might often equally suggest, and the signs can also be read as O(U) WA TE RE, which suggest sometimes the same, sometimes different homonyms. It can be difficult or impossible to tell the sign order, and the creator (and the reader) probably didn't much mind. Linear art is about creating rather than limiting possibilities.

TE RE O WA can be used before or, especially, after O KO KO WO to suggest more complex phrases and images. So ὀχω χοιρον Γηι ἁμα ἀτελει Ὡραι or possibly ἀθληι Ὡραι, okhw khoiron Ghi hama atelei Hwrai, I carry a pig for Earth together with immature or suffering Hwra; ὀχω κορον, θηλη(ν) ὥραι, okhw koron, thhlhn horai, I hold a child, he is looking at (my) nipple (to suckle), or, typically τελει οὐρα, telei oura, he is doing wee-wees; ὀλκου κορος τηρει οὐλας, holkou koros threi oulas, of the tawse a boy observes the scars.

<table>
<thead>
<tr>
<th>Motif image</th>
<th>Greek</th>
<th>English transliteration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snub-nosed girl sees or someone sees such girl(s)</td>
<td>σιμα(ς) ὥραι</td>
<td>sima(s) horai. The word is associated with many young animals, and seems appropriate for Kore in the Underworld</td>
</tr>
<tr>
<td>He or she sees (reads) a note</td>
<td>σημα ὥραι</td>
<td>shma horai. Linear tablets are full of images of figures apparently reading books, news-sheets, maps, and amphora marks</td>
</tr>
<tr>
<td>He or she sees a signal, flag</td>
<td>σημα ὥραι</td>
<td>shma horai. So, apparently, a &quot;golfer&quot; (see PE RA KO KO WO), but more generally anybody observing any kind of signal, including a dog, or a gladiator awaiting the &quot;thumbs up or down&quot; sign</td>
</tr>
<tr>
<td>Sign of the time or Spring</td>
<td>σημα ὡρας or Ὡρας</td>
<td>shma hwaras or Hwras. So an image of birds singing, egg-minding and so forth, but anything associated with spring, such as hares, hedgehogs, bears</td>
</tr>
<tr>
<td>He or she sees a tomb</td>
<td>σημα ὥραι</td>
<td>A funeral scene or similar or steps descending to a tomb. An owl (bird of ill omen)</td>
</tr>
<tr>
<td>Sign of the time (or weather or season), hand of a clock</td>
<td>σημα ὡρας</td>
<td>The hand is formed by the Linear sign SI. See discussion below the table</td>
</tr>
<tr>
<td>Sign or point of the &quot;tail&quot;</td>
<td>σημα οὐρας</td>
<td>The clock hand described</td>
</tr>
</tbody>
</table>

21 It is almost impossible to distinguish "O" and "U" when adjacent to or forming the left side of "WA". The top "bar" of "WA" may in many cases also be, or actually be a suggestion of Linear "U".

22 ΚΕ ΜΑ ΤΕ ΡΕ Ο ΝΤΑ, also Γη Μα τε Ρεοουλα, Gh Ma te Rheoula, Earth Mother also the Little Rhea? I think Rheoula (Ῥεουλα, Ρεουλλα or similar) is highly likely, but the diminutive formation is not otherwise attested, so far as I know, until more recent Greek. For τε, te, see the conclusions of this section.
<table>
<thead>
<tr>
<th>(normally female genitals)</th>
<th>above generally also points (accurately) to the genitalia, usually from behind</th>
</tr>
</thead>
<tbody>
<tr>
<td>He or she sees &quot;rubbing&quot;</td>
<td>ψηγμα όραι</td>
</tr>
<tr>
<td>Rubbing of the &quot;tail&quot;</td>
<td>ψηγμα ούρας</td>
</tr>
<tr>
<td>Rubbing of grain</td>
<td>ψηγμα ούλας</td>
</tr>
<tr>
<td>A worn thing of time</td>
<td>ψηγμα άρας</td>
</tr>
<tr>
<td>The Sphinx</td>
<td>σιμα όραι, σημα όραι, σημα άρας</td>
</tr>
</tbody>
</table>

For the use of Greek alphabetic characters to spell SEMA OWA(S) see KN Fp 13 in Section 3. The Linear sign SE MA might also provide many of the homonyms, but I cannot think of an occurrence. The combination may have been spurned because it does not lend itself to such artistic form as SI MA, whose two signs - both the currently perceived Linear B and Linear A forms, the latter perhaps more common - are routinely if variously conjoined.

SA MA (Doric σαμα for σημα) is also found, the signs again in combination, and sometimes it is difficult to tell whether the artist intends SI MA or SA MA or indeed both. The homonyms that may be formed from SA MA are plainly slightly different (so ἡσσαμα, psalma, singing or plucking, σαμα, sagma, "stuffing" or packsaddle, SA MA O WA, ἕς Μα ὤραν, es Ma Hwran, to Mother (Earth) [and] Hora (for the preposition see the conclusions to this section)²³.

Although SI MA O WA is used in combination with O KO KO WO (sometimes after, say, KE MA), it commonly occurs in isolation anywhere on the object in a micro-scene suggesting clocks or genitalia or, normally, both. The shape of the combined signs lends itself to such representation.

It is typical of Linear art that SI MA O WA can suggest not only "a sign of spring" (its beginning) but "the tomb of spring" (its end). Compare TE RE O WA, τελαει Όρα, Spring rises (begins) or τελει Όρα, telei Hwra, Spring ends. After -O, one probably common word play conveyed by SI MA O WA would seem to be ὀ-ψιμα ὤρα, o-psima hura, late season (in the year) or time, but I am not yet clear what exactly is meant. The signs might also be written or read in the order O WA SI MA, suggesting further homonymic variants.

Imagery on Thera Tablet 6 in Section 2 seems particularly associated with SI MA O WA.

<table>
<thead>
<tr>
<th>RI MA - O WA or KO WA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motif image</td>
</tr>
<tr>
<td>Older and younger woman</td>
</tr>
</tbody>
</table>

²³ SI MA might perhaps reflect an early form *ἰ(ν)ς Μα for later εἰς Μα, eis Ma, to Mother. See the discussion of prepositions in the conclusions to this section.
<table>
<thead>
<tr>
<th><strong>Lion and younger woman</strong></th>
<th>Λίς (ά)μα Κορ(ϕ)αι or Ωραι</th>
<th>or Spring, her daughter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broken effusion, pipe, vessel</td>
<td>ρηγμα χοας</td>
<td>Lithama Korwai or Hwrai. Kore’s Underworld abductor is frequently suggested as a lion</td>
</tr>
<tr>
<td><strong>Breakage of hem, fringe or tail</strong></td>
<td>ρηγμα όας</td>
<td>rhhgma oas. Animals lose their tails, women their hems</td>
</tr>
<tr>
<td><strong>End or breakage of time or time piece (clock), or a broken thing of time</strong></td>
<td>ληγμα or ρηγμα ώρας</td>
<td>lhgma, or, rhhgma hwras. Again, Linear art likes to present objects as time-worn</td>
</tr>
<tr>
<td><strong>End or breakage of earth</strong></td>
<td>ληγμα or ρηγμα χωρας</td>
<td>lhgma, or, rhhgma khwras. Linear art features real or pseudo maps, and earthquake scenes</td>
</tr>
<tr>
<td><strong>He see the end, a breakage</strong></td>
<td>ληγμα or ρηγμα όραι</td>
<td>lhgma, or, rhhgma horai, an idea open to many images</td>
</tr>
<tr>
<td><strong>Throwing of a girl</strong></td>
<td>ριμμα κορας</td>
<td>rhimma koras, as in acrobatics, or from a saddle, or bull-leaping</td>
</tr>
<tr>
<td><strong>Bleariness of eye or seeing blurs</strong></td>
<td>λημα(ι) κορας or λημας όραι</td>
<td>lhma(i) koras, or, lhmas horai. See LSJ λημη λημαω</td>
</tr>
<tr>
<td><strong>People in conversation etc</strong></td>
<td>ρημα άκουας</td>
<td>rhima akouas. A saying for hearing or hearsay. The Earth Mother and Kore are often in converse</td>
</tr>
<tr>
<td><strong>Great noise, or deafness.</strong></td>
<td>ρηγμα άκουας</td>
<td>rhhgma akouas. Some images suggest ear trumpets. Trumpeting elephants also fit the basic motif (onkon kolon or kwlon, massive trunk).</td>
</tr>
</tbody>
</table>

Just as SI MA O WA is commoner than SE MA, so RI MA than RE MA, probably because it offers more scope for word and image play. But sometimes both sound patterns are suggested on the same object.

The variant RI MA KO WE supplies almost identical and indeed larger word play. Where the formulaic phrase is reflected solely by accumulated images, it is impossible to tell whether the artist envisages "WE" or "WA" or both. Where the related Linear signs are discernible, "WA" is perhaps more common.

Imagery within the “framed” tablet KN Cn 911 in Section 1 seems to be largely playing with RI MA KO WA, whilst the figures round the outside literally make the frame and engage in acrobatics, τελει οαν and τελει αἰωραν, both homonyms of TE RE O WA.

Conceptually, word play on SI MA O WA and RI MA (K)O WA helps to explain the worn and fragmentary nature of many Linear and other cult finds.
PE RA KO KO WO or WA

Whilst the relevant images, some listed below, point to the identity of the underlying phrase, I find it difficult to pin down the appropriate related "cult" phrase. There may be more than one, for example:
- (ὑ)περ λαχους κορ(ϝ)ων or κορ(ϝ)ου, huper lakhous kor(ϝ)wn, or, kor(ϝ)ou, [I bring a pig] for the allotment (in childbirth) of children, or a male child;
- (ὑ)περ ἀγω χοιρον, (hu)per agw khoiron, I bring a pig additionally, for example for Kore (Persephone), or ύπερ ἀγω Κορ(ϝ)ας, I bring (understand pig or whatever else) for Kore;
- σπειρας ἀγω χοιρον, speiras agw khoiron, I bring a pig of the "Spira" (an equivalent to the Bacchic Thiasos troop of celebrants, see LSJ). See also discussion of the "crane dance" below.

The difficulty highlights a more general problem, that we may not even know some of the relevant cult phraseology or vocabulary because it does not exist in any other, literary source.

An apparent oddity is the way in which the "r" of, for example, ύπερ "hyper", instead of being omitted (as final consonants are normally dropped in Linear spelling) sometimes merges with the following syllable "r+a", Linear "RA". But in a word play context, the oddity is less odd, for example because there are other homonyms where the presence and position of "r" is normal, as in the first example above and the first few examples below.

<table>
<thead>
<tr>
<th>Motif image</th>
<th>Greek</th>
<th>English transliteration</th>
</tr>
</thead>
<tbody>
<tr>
<td>A black bird, especially corvid, above a hare.</td>
<td>ὑπερ λαγω κορος or κοραξ</td>
<td>huper lagw koros or korax. The hare is always a hare (or rabbit), but the corvid can instead be any word pun on KO RO, such as a (large) eye. A common and widespread motif</td>
</tr>
<tr>
<td>A stork, crane or heron stalking</td>
<td>πελαργος χωρων</td>
<td>pelargos khwroon. Storks (migrants) deliver babies! See also the &quot;crane dance&quot; below</td>
</tr>
<tr>
<td>Land of the storks or cranes and pygmies</td>
<td>πελαργων χωρος</td>
<td>pelargwn khwros, their annual spring battle with the pygmies being legendary</td>
</tr>
<tr>
<td>Seated or standing figure bringing child etc from the right side of a Linear object</td>
<td>περαν ἀγω κορ(ϝ)ον</td>
<td>peran agw kor(ϝ)on. The scene complements the imagery of the basic motif, where a figure is conveying the items from the left</td>
</tr>
<tr>
<td>Typical Greek landscape or dance</td>
<td>Πελασγος χωρος or χορος</td>
<td>Pelasgos khwros or khoros, Pelasgian land or dance</td>
</tr>
<tr>
<td>Seaside or beach scene, angry sea</td>
<td>πελαγους χωρος, χολος</td>
<td>pelagous khwros, kholos.</td>
</tr>
<tr>
<td>A youth or country playing ball games</td>
<td>σφαιρας ἀγων or άσκων κορος or χωρος</td>
<td>sphairas agwn, or, askwn koros or khwros. The omission of initial &quot;s-&quot; is already part of the Linear &quot;spelling rules&quot;. For &quot;E&quot; as &quot;ai&quot; see the conclusions to this section</td>
</tr>
<tr>
<td>Boxing youth</td>
<td>σπειρας ἀγων or άσκων κορος</td>
<td>speiras agwn, or, askwn koros. For σπειρα as boxing glove, see LSJ</td>
</tr>
</tbody>
</table>
A simply enormous pig | υπεραγων χοιρος | huperagwn khoiros. Bigger even than a mere ργκος χοιρος (Ο ΚΟ ΚΟ WO)

Vigorous sex | περαν ή υπερ ργω κωλον | peran, or, huper agw kwlon, I drive the phallus through or up. There are other potential erotic word plays to similar effect

Shell spirals | σπειραι κοχλου | speirai kokhlo. Spirals and coils are very common in Linear and related art. See also the myth of Minos and Daedalus. Possibly a “shell” is a cult word for a Linear object, but there may be other cult significance

Dance spirals | σπειρασ ργων χορος | speiras agwn khoros. The spring”crane dance” (see for example the Wikipedia “hyporchema” entry) was apparently led by a γερανουλκος, geran-oulkos, which suggests that another homonymic variant of Ο ΚΟ ΚΟ WO might be ολκος χορου, holkos khorou, or similar. The dance also formed a “chain”, τελει οαν, telei oan, it forms an edge. But dance formation and movement are now among the hardest things to identify with any confidence in Linear images

Evans’s “fire-damaged” fragment in Section 1 offers several of the above images. This formulaic motif appears to be suggested primarily by images. What sign formation there is often seems to relate to highly curved, conjoined signs for PE RA. (See KN Vc 74 in Section 7.)

Conclusions

One inference from the repetition of images apparently sharing a common underlying formula or expression is that the sounds to which the Linear signs correspond are also more approximate than the decipherment of Linear B proposed:
- "I" ("i", and all syllabograms containing it) also corresponds to a long "e" sound, later Greek eta (η H), and also a contracted "ea" sound (just like the later Greek η);
- "U" (and all syllabograms containing it) also corresponds to later Greek omega (ω Ω) as well as ου and eu (ou and eu);
- "E" (and all syllabograms containing it) also corresponds to an "ai" (αι) diphthong;
- "S" also corresponds to "ps" and "ks" (ψ ξ);
- "W" also corresponds to "r" and "l".

Such approximations - and arguably many already recognised by the existing Linear "spelling rules" (licences) - may or may not reflect real sounds, as commonly articulated, in the
contemporary language, but they were apparently close enough to be plausible in the context of Linear art’s homonymic word play. But it is possible that the play was also or at some point became more of a conceptual word game, like Scrabble. If you know the Linear signs and the "spelling rules" with which they work, then the challenge is to form as many word patterns (and hence corresponding images) as you can from the given signs.

It may be convenient at this point to offer some additional and more technical proposals about how Linear signage works.

Linear word play relies heavily on the end vowel sound of one word supplying the vowel sound of the beginning of another, ignoring any consonantal ending (-n, -s etc) as the decipherment’s spelling rules already recognise. For that reason, I now doubt even more strongly that the decipherment’s putative "word divider" exists (see Section 3).

So far, I see no evidence that "ideograms" or volume measures, as identified by the Administrative Model, exist as such either. The incisions that have been so interpreted are either elaborations of one or more syllabograms or other art work (akin to "vain repetitions"). The quasipictorial content of the putative Linear "ideograms" would suggest different things to different people (as is indeed still the case today with the AM’s interpretation of some purported Linear ideograms), and in few or no cases would it be clear what exact word (sounds) a Linear "ideogram" corresponded to. In the context of Linear art, where the identification of sound, albeit approximate, is key, such ideograms would be non-functional - you couldn’t tell what sound was being intended.

But whilst the proposed Linear ideograms probably do not exist, instead Linear art employs a complex image or sign group to convey multiple sounds, as illustrated by the "carrying" figure or signs combined to reinforce the suggestion of a pointing clock hand.

Where number signs are real, rather than art work, they may have real numerical significance (normally, I think, the number of pigs conveyed), but in homonymic word play they also serve as an alternative to spelling the sounds of the number in Linear syllabograms, just as we might right “2 4 tea” instead of “two for tea” or “You 1 2” for “you won too”. So the Linear number sign “I I” (2) equates to the sound "du o" Greek δυω, duw, I go down into, as well as δυο, duo, two. The number lending itself to the greatest play is "III" 3, τρεις, treis, TE RE, which can feature in representations of the TE RE O WA formula. (For the possibility that "Arabic" 3 was also used, see the discussion of non-Linear signs in Section 3 and CMS 1-006 in Section 7.)

Some Linear number signs often seem to represent not the whole numeral as sounded in "later" classical Greek, but instead drop a weak (often unaccented) initial vowel, perhaps partly because it is also often preceded by a vowel sound ending the preceding word. So, for example, the Linear sign for 8 ὀκτω oktw would stand for the sounds KO TO (and homonyms based on such sound), 9 ἐννεα ennea, those for NE (JA). One might compare some modern Greek words, like χταποδι khtapodi for octopus. The number sign "I" ἑν hen appears to be conceived of as if it equated to the Linear syllabogram sound "NE" (that is (E)NE) (see note 24).

Prepositions, related adjectives and adverbs and maybe other common words also often seem to drop weak (often unaccented) initial vowels for the same reason, so PO for ύπο under (and probably ἀπο apo from), PE for ὑπερ huper over, and MA for ἁμα hama, together with. Monosyllabic prepositions like ἐν ἐς ἐκ (en es ek) drop the initial vowel and either merge with the sound of the word that follows if it begins with a vowel, or follow the normal Linear spelling rule (licence) for one consonant followed by another (so KO KO might represent εκ κο- or κω- or χω- or χο-). Again, some modern Greek words, like στην sthn for "ἐς την" "es thn", "into the". But Linear, like classical Greek "prepositions" may also follow the noun they govern, when similar rules apply.

The "later" Greek τε, te (“and”) appears to be written both QE and TE (for the reasoning see note 20 above), and to mean "also", so that its position is more flexible than it appears to be in much of classical Greek: "dogs also cats", or "dogs cats also".

24 If, in some cases, it does exist, given that it looks like the Linear number "1" sign (namely "|"), its articulation may correspond to the sound "NE". See the discussion of numerals and prepositions; NE would appear to be the stand-alone Linear sign and sound for en(e) ἑν, in, as in "insert" (divider), hence also (as Linear spelling doesn’t recognise "h" aspiration) ἑν, hen, one.
Intervocalic "g", so long as it is between two closely similar-sounding vowels, appears to be often dropped, as in some modern Greek. So λο(γ)ο(ς), lo(γ)o(s) becomes just RO in Linear script, and λεγει, legei, RE.

One issue is the extent to which Linear art tolerates mixtures of so-called dialect, such as οὐλα oula instead of οὐλη oulh for "rodent" or "bear" or σιμα sima instead of σιμη simh, snub-nosed girl. It would take too long to discuss here and I don't know the answer. My instinct has been to reject a mixture of dialect forms within a word, but to some extent tolerate it in adjoining words. "Later" Greek art forms mix dialects, just as, of course, do our own in English (and American). It is part of the rules of the game or the "artistic" licence.

Sceptics may object to these and other propositions on philological or other technical grounds. There are specific rebuttals to such complaints, for example that:

- Linear "spelling rules" already recognise a single sign can serve for "r" as well as "l" and it is simply an assumption, and an inconsistent one, that a sign cannot serve for "w" "r" and "l". See also the discussion of κορ(ϝ)ος kor(ϝ)os under O KO KO WO;
- "Later" Greek embraces a sound change whereby "ai" becomes sounded as "e", and eta (η) is pronounced like "i". So these are not changes inherently alien to the Greek language or its speakers;
- if Linear script has two signs (O and U) for long "o" and two (E and I) for long "e", then it is remarkably similar to the development of two signs for long "o" in "later" alphabetic Greek, namely "ο" (omicron, in some dialects) and "ω" (omega, in some others), and two for long "e" (ε and η). In many cases it is difficult to tell whether the sign "WA", in particular is preceded or conjoined with "O" or "U" or both, and not in the artist's interests to delimit the choice.

But the larger points by way of response remain that:

- the hard evidence of the repeated motif images is worth far more, evidentially, than any number of unevidenced assumptions about Greek language development and its date, or about the date of Linear objects (for which see Section 10);
- fundamentally, such scepticism is applying the wrong - academic - criteria in the wrong context. These are not scribal records, but works of art influenced by a traditional "cult" context. They are about sound and image play, so they push the boundaries, quite literally, of both.

I return to some of the apparent oddities of Linear signage and the language behind it in Section 10.

The next section will offer some illustrations of the homonymic word and image play, as based on the formulaic phrases, that appears to underpin all Linear art and Linear objects.

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25 I have not studied the relevant tablets closely, but the practice might mean that one homonym for the perceived and notorious KO RE TE of some Pylian tablets - if the reading of the signs is right - would be χορ(γε)ης, khorh(ge)ths, provider.

26 But in the case of, for example, the endings of feminine first declension nouns, conscious or unconscious dissimilation of sound may well be another factor.
Section 7: cult images and words - examples

The main purpose of this section is to illustrate how the formulaic phrases proposed in the previous section might typically work in combination with images and signs in Linear and cult art. It does not aim to analyse any one object in full nor accumulate multiple examples, but rather to indicate the plausibility of the approach there outlined by identifying, as with the Thersites stone in Section 4, correlations of image and sound (sign)\(^1\). That often works best if it is possible to identify one or more images that are so distinctive that the match with the proposed signs (sounds) would be implausible as anything except by design.

Mycenae MY Ge 604 (photo by Marsyas, see Annex 2) (my enlarged extract first below)

The tablet contains apparently lengthy Linear signage that has been purportedly identified and transliterated to indicate that it must have something to do with "spices".

Leaving aside other difficulties with that conclusion, it is worth taking the opportunity to point out, once more, that in this as many other cases the current identifications of the Linear signs on which the conclusion is based are highly speculative. I have put standard forms (black with alphabetic transcription of the sound) beside some of those identifications. Some may be right or partly right, but most ignore incisions every bit as visible as those chosen as diagnostic of the perceived sign as well as many that are only marginally fainter (some such highlighted blue).

The art work of the signs, judging by the number and pattern of incisions, is intense, but it may be that the condition of the object as well as the difficulties of photography render it impossible to determine what smaller images those incisions are suggesting. As a result, it is, at present, impossible to correlate proposed sign with proposed image at that scalar level.

And it may also be futile to try to do so. For on a larger scale, it is evident that the incisions of the putative signs are essential in contributing to larger art work. On that basis they may, after all, be only akin to "vain repetitions"\(^2\) rather than real signs with their own meanings.

At any rate, they demonstrably contribute to the suggestion of images that correlate to the formulaic phrases (and their homonyms), as proposed in Section 6.

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1 For details on the source of all photographs, see Annex 2. For existing perception, if any, of signage, see GORILA for Linear A and the Damos database for Linear B tablets. For convenience I will continue to use capital letters to transliterate the sounds of all Linear signs.
2 See Section 1 and Section 3 note 3.
So in b) below, a headless frontal torso (red) carries right-profiled vessels (yellow). The intention appears to be that the neck of a vessel is going up and down as tipped: Ο ΚΟ ΚΟ ΨΟ ΣΕ ΡΕ Ο ΨΑ, ὁχων χο(ϝ)ον τελει αἰωραν, okhwn kho(ϝ)on telei aiwran, the one carrying a vessel causes its oscillation. Or ὁγκος χους, onkos khoos, a large vessel does the same whilst being poured.

A right-profiled dog or bear head (turquoise, with right paw) looks at a clock face with hands (purple) and has a smaller version (blue) by his right ear: Ο ΚΟ ΚΟ ΨΟ ΣΕ ΡΕ Ο ΨΑ, ὁ χουν χουν θρει ὡραν, ho khoun khown threi hwran, the one digging earth observes time.

b)

Other images highlighted in b) suggest children, but I highlight them only to show how apparent signage contributes to art work (profiled faces green, white). It is not only time the dog or bear observes. It is looking onto one or more perspectives of exposed buttocks suggested by the black colouration (one outlined red in c)): τηρει οὐραν, threi, ouran, he looks at "tail" or genitalia.
The blackened area in and of itself also correlates to the same motifs: Ο ΚΟ ΚΟ ΒΩ ΤΕ ΡΕ Ο ΗΑ, ὁ κοχλος τελει οὐραν, the kohl (see LSJ) makes a "tail".

The right edge of the tablet is used to help suggest the image of one or more large shoes (white), by implication limbs or members, so perhaps ὄγκον κωλόν τελει αἰώραν, onkon kwlon telei aiwran, a large limb makes oscillation (as in walking, probably on a suggested balance pole or beam).

A right-profiled woman's face (green) has a dangling ear-ring (purple): ὁ κοχλος τελει αἰώραν, ho kohllos telei aiwran, the shell ear-ring makes oscillation.

Above the shoe, the suggestion of the frontal visage of a man (yellow) possibly looking through an optical aid: ὄγκων κορων τηλε ὀρας, onkon koron thle horai, magnifying the eye he sees afar.

The tablet is packed with these and other representations of the formulaic phrases. So within the woman's head, a partially right-profiled man (turquoise) appears to be reading scrolls or sheets: SI ΜΑ Ω ΗΑ, σημα ὀρας, he sees a note. An apparently accidental hole (blue) appears rather to be deliberately conformed to help suggest the profile of a hare or rabbit's head, the eye shape being diagnostic. The hare or rabbit is characteristic of the presence of another common motif - PE RA ΚΟ ΚΟ ΒΩ (see Section 6) - with its own set of word and image play.

I do not pretend to have here identified all the images, or those that I have in the most convincing ways. The correlations between image and sound can often be very complex, but also precise, demanding many hours' study. But this brief analysis is, I think, sufficient to begin to show the relationship between images and the formulaic phrases of Linear and cult art. It also serves to demonstrate how incisions, whether or not also for real signage, contribute to image formation, and how in Linear art apparent damage is often an integral part of intended imagery, as with the woman's face (green, dependent on a "crack") and the hare's eye (blue).

KN Vc 74 (photo COMiK Volume I page 40, see Annex 2)

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The simple correlation of image or concept and sound proposed in Section 4 is evidentially more cogent than an isolated name, but it still looks "orphaned". If we look at the tablet again (above), it is evident that there is other signage or art work preceding and following PO RU KA TO, indicated by the blue and purple arrows. In particular "TO" (which may be conjoined with KA) is conflated with or followed by additional incisions. Unfortunately, the condition of the object and the photograph inhibit, for now, the deduction of any further signs in terms of surface interventions. But there is a suggestion of probably more than one seated figure holding items (blue), and manifest interventions towards the right edge of the tablet (yellow). Given that, let us assume that the additional sounds of the tablet start, as most seem to, with the basic motif and end with a typical amplification, all of which may be conveyed pictorially rather than by signage:

Ο KO KO WO - PO RU KA TO - KE MA TE RE O (or U) WA.

A "straight" cult reading might then be, say, όχω χωρόν πολυ χαρτόν Γηι ἁμα ἀτελει Ὡραι, okhw khoiron polu kharton Ghi hama atelei Hwrai, I carry a pig most pleasing for Earth together with the inchoate Spring. (See discussion of O KO KO WO and TE RE O WA in Section 6.)

Unfortunately, again, in the rotation above, whilst there is abundance of imagery, including that related to the basic motif (the "carrying" figure), it is difficult to identify it with the necessary precision to test or prove the assumption. But rotated 90 degrees left or right it is a different story.

b)  

The sounds O KO KO WO - PO RU KA TO - KE MA TE RE O WA are reflected in:

b) ό χουν χων πολυ κατω σχημα τηρει ούλας, ho khoun khown polu katw skhhma threi oulas, the one digging earth far down observes the form of a bear. A frontal cartoon dog (red, though there is more than one version of the canine) sees the frontal head of a moon-eyed bear (turquoise). But he also sees "tail" in two senses. Firstly, the frontal cat (purple) heading away from him. Secondly, the posterior of probably a bending woman (yellow). In both cases the sounds might better be taken as something like πολυ χαρτόν σχημα τηρει ούρας, polu kharton skhhma threi ouras, he observes the most pleasurable form of a "tail".

c) όχος χωλου πολυ σκαστον όχημα τελει αἰώραν or όχος χωλου πολυ χαρτον όχημα τελει ώραν, okhos khowlu polu skaston okhhma telei aiwran, or, okhos khowlu polu karthon okhmma telei hwr, an invalid's carriage, a most halting vehicle, wobbles about, or an invalid's carriage, a very pleasing vehicle, makes good time (speed or ease). The frontal figure (red) pushes a wheeled chair (yellow) in which sits a man with an invalid's cap (green) and maybe blanket over knees (the currant bun or KA sign). Again, there are many variants around the same sounds. The related image and word play is probably more inventive than my preliminary sketch can achieve.
d) (different rotation)
όχων κορον πολλούς κατ’ οίκημα τελει αἰωραν, having many brushes house by house he performs oscillation. At the base, a chimney sweep (yellow) with one or more brushes in front of his chin whilst with one hand he thrusts a brush up and down (purple). Again, there are many alternative homonyms of the sounds with similar sentiments. The sweep will reappear (see KN Dk 1073 below). His erotic motion appears to be part of the wit. In this case, it is likely that he also causes or confronts a fire, οχων κορον πολυ καυστον, okhwn koron polu kauston, carrying a brush very burnt, because the top of the tablet has a fireman's helmet (white) and maybe reel (the "KA" sign). (I have also highlighted the fine suggestion of a larger frontal face (blue).)

ογκον οἰκουρος φορων χαρτων σχημα τηρει οὐλας, the house-minder carrying a mass of papers observes the form of a bear. In d) a frontal cat (red) carries one or more containers (turquoise) within which is more than one image of a bear (green). There are many alternative homonyms of the sounds conveying much the same idea. Apparently οἰκουρος not only because cats mind the house from rodents, but because they pee in it (see οὐρεω etc in LSJ). The cat is also likely to be looking at mouse droppings, χεσμα τηρει οὐλας, khesma threi oulas, observes the defecation of a pest, or the shape of a tail, σχημα τηρει οὐρας, skhhma threi ouras. The cat can be seen as wearing a fire helmet too.

To return to the burnt finger, οχων κωλον πολυ καυστον σχημα τηρει οὐλας, okhwn kwlon polu kauston skhhma threi oulas, one having a very burnt "member" observes the formation of a scar. The scarring is perhaps discernible in the original photograph above. Or τελει αἰωραν, makes to-and-fro (up and down) to cool it.

The sounds of the signs create potential for numerous additional word and image plays, including, as ever, the erotic. With a better photograph, it should be possible to see more of them, and to improve the correlations. Linear art is very exact and very exacting in detailing and demanding the best possible matches. It is likely that the formulaic phrase PE RA KO KO WO is also represented or suggested, and its homonyms then further complement the imagery. So, for example, ὁ χουν χοων πολυ καμπτον σχημα τηρει οὑρας "πε ρα" ἀγον κοιλον, ho khoun, khown polu kampton skhhma threi ouras, "pe ra" agon koilon, the one who digs earth (the dog or bear) observes the very curved formation of the tail [as] describing "PE RA" curved, or, in low relief. It may be moving, but the cat's tail suggests (one option in b) white highlighted) the highly distinctive curves of the combined Linear syllabograms PE RA (see Section 6), though KO KO WO is harder to see in this photograph. For κοιλον, see LSJ. Plainly, a most erudite and curious dog, as its face suggests.

Phaistos disk (photo SM I, see Section 1) (my enlarged extracts)
other side of the disk). PE RA, περαν, peran, also perhaps indicates the disk can be "read" or viewed in opposite directions, as it probably can. There appears to be a snail - with protruding eyes - at the entrance to or exit from the snail shell's spiral maze (turquoise).

Despite "cleaning" (see Section 1) image and word play is still reasonably accessible in at least one case, both in terms of the coincidence of images suggestive of the same underlying sounds, and also equivalent Linear signs, albeit in more pictorial form

b)
The suspended fish (red in b)) seems formed to suggest Linear signs TE + RE, the right-profiled man (green) "O", and in the background columns of a - probably tottering - building (possibly αὐλα, court) "WA". So TE RE O WA. The sounds of the signage correlate to images.

For the cat face looking at the fish tail, see Section 1 - τηρει οὐραν, threi ouran. But in c) below, also τηρει οὐλα, threi oula, a bear is looking (right-profiled green); τηρει ωραν, threi hwran, he or she is looking at time, for example of a frontal dog (black, also turquoise in d)) with the clock mechanism (cog, pendulum or face turquoise in c)). Another right-profiled face (blue, maybe with head-dress) also looks toward the time-piece. The man at white X looks onto a "tail" (red) - τηρει οὐραν, threi ouran - both a more animal tail that runs across his brow, but also the left-profiled suggestion of a probably female split-legged posterior. Top right, possibly the suggestion of a bird (possibly cuckoo) awaiting spring (yellow), also τηρει ωραν, threi hwran.
But the same area also contains images designed to reflect the basic motif (Ο ΚΟ ΚΟ ΒΟ), where it is often difficult to distinguish between imagery and signage (see Section 6).

d) So there is the suggestion of more than one right-profiled figure from the left side carrying items now too small to highlight (red, green). Above, the frontal image of a flop-eared dog (turquoise), ὁ χουν χουν, ho khoun khown, the one who digs earth. And then left-profiled a standing figure holding a column (purple) or maybe also digging. The fact that he is obviously pointing in the opposite direction may suggest the formulaic phrase ΠΕ ΡΑ ΚΟ ΚΟ ΒΟ, περαν ἀγων κωλον, peran agwn kwlon, carrying a column in the opposite direction.

The nature of Linear art suggests many more images, large and small, created by minimal, but precisely detailed interventions. So in e) a large frontal pig face with dangling right trotter (turquoise), whose ear is in the shape of both a shell (red) and a bear head (green): Ο ΚΟ ΚΟ ΒΟ ΤΕ ΡΕ Ο ΒΑ, ὁ κοχλος τελει ουας or ούλαν, ho kokhlos telei ouas, or, oulan, the shell makes an ear or pest (bear).

Malia MA Ze 11 (Linear A) (photo by Timothy Heath, see Section 4) (my enlarged extracts)

Whilst the evidence is strong that the Thersites stone (Section 4) shows a correlation of Linear signs with images of the legendary character, it would, as such, be something of an "orphan", and the block contains other images that do not obviously correlate to the same sounds as "Thersites".

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Across the block, the signage is not only repeated on different scales, but suggested in ways that may be more Linear or more pictorial. In b) are multiple suggestions of differently sized right-profiled figures carrying similarly diverse vessels, all and any of which supply Linear O and repeat KO, whilst WO is supplied either by one of the carrying figures or the prongs of a ladder (see on). I have highlighted elements of the basic motif red and green. Whilst QE SI TE may be represented by incisions as highlighted in Section 4, the signs are also suggested further to the right, as highlighted blue, yellow and white. In between these two groups, Linear SA is suggested both by the shape of the butterfly stones (see Section 4), but also other incisions and rock colouration (purple), similarly Linear NE by exploitation of the stone formation and colouration. The signs U and WA (black) are backgrounded, conveyed primarily by what appears to be residual colour, but reflecting incised rock.

The result is O KO KO WO SA U WA NE QE SI TE. I think it certain that the formulaic PE RA KO KO WO (Section 6) is intended to the right, but I shall not attempt to show it here.

A "straight" cult-related reading might be ὁ χουν χοων ἐς αὐραν θηρ ἐξηλθε, for the hands.  In c) a left-profiled woman (yellow) looks over her shoulder at a man (red) who has raised the hem or dress for oscillation turned out a beast.  In c) a left-profiled terrier (red) with paw and digging into the air means the prey has come out.  In d), a left-profiled cow, standing or head only, is highlighted (purple, yellow).  The insect is visible in several forms; I have tried to indicate (black) one perspective of its striped abdomen, left wing, head, and sting (the spit for the pig above).  Space precludes discussing the etymological as well as pictorial basis for σφῆς or φειρ.  Another word play would involve ψην, gall fly, but the basic idea is that the cow is being driven mad by a gad fly or similar.

The object offers much more word and image play, erotic and otherwise.  In d) I have highlighted the outline of a large clock (green), a smaller version of which can be seen in b) (blue and yellow for the hands).  There is another clock face in the GORILA photograph in Section 4).  So one play may involve SA U WA, ἔς ζῆς ὄρα, heks hai horai, six o'clock.  In c) I have highlighted blue a smaller right-profiled fish swimming beside a larger.  The play probably involves φειρ, pilot fish.

There probably are related images on the stone, but they are hard to discern.  Here are some other, more graphic examples of how the images correlate to the proposed signs and sounds:

i) ὁ ἐκχωρων ἐς αὐραν θηρ ἐξηλθε, the one going out (of its pupa) into the air is a Thersites (butterfly, see Section 4), and faintly highlighted purple.  Another word play would involve σφῆς, sphhks, spit (see on);

ii) ὁ γόγκος χουρος ἐς αὐραν or ἐς σφῆς αὐνει | ὅπερ ἐπήλεθε, onkos khoiros es auran or eks aulas ainei threr eshilthe, a huge pig into the air, or, out of the yard means a wild beast has gone in [to the yard].  See the pig and lion highlighted in Section 4, and faintly highlighted purple (pig's head) and black in c) above.  Another image suggests the pig's posterior (also purple, next to the lion) is impaled on a σφῆς, sphhks, spit (see on);

iii) ὁ γόγκος κολος ἐς αὐνει σφῆς or φειρ ἐσηλθε, onkos kolos eks aulas ainei sphhks, or, pthheir eshilthe, a large stumpy or one-horned cow out of the yard means a wasp or louse has got in.  In d) more than one left-profiled cow, standing or head only, is highlighted (purple, yellow).  The insect is visible in several forms; I have tried to indicate (black) one perspective of its striped abdomen, left wing, head, and sting (the spit for the pig above).  Space precludes discussing the etymological as well as pictorial basis for σφῆς or φειρ.  Another word play would involve ψην, gall fly, but the basic idea is that the cow is being driven mad by a gad fly or similar;  

iv) ὁ χουν κωλον ἐς αὐναν ἀνήρ τε ἐξηφήθη, okhw kwlon es aulan anhr te hepsithr, the man carrying the ladder (green in c) into the court [is] also a smelter.  Again, the basic idea is that the court or yard in c) is engulfed in flames (suggested by the configuration of the white-arrowed red rock), but there are many potential variants, such as σφῆς ἔξηθθη, sphhks ekshphthh, the rafter (in the triangular pediment, turquoise) has combusted, or even ὅπερ ἔξηθθη, thrr ekshphthh, the wild beast has caught fire, for so the lion (black in c) appears;

v) ὁ χουν χουν ἐς αὐραν αἰνει ἄνηρ ἐξηφήθη, ho khoun khown es auran ainei threr eshilthe, the earth digger into the air means the prey has come out.  In d), a left-profiled terrier (red) with paw and earth confronts a right-profiled rabbit (white);

vi) ὁ χουν κωλον ἐς αὐραν ἄνηρ θηρ ἐξηφθε, the man swelling his phallus for oscillation turned out a beast.  In c) a left-profiled woman (yellow) looks over her shoulder at a man (red) who has raised the hem or dress with obvious intent; behind him to his right is the lion (black in c)).  So too the man (turquoise) lifting a column into the air (ὁ χουν κωλον ἐς αὐραν, okhw kwlon es auran).
The multiplicity of complex images and forms of the same sign (also in rotation - see Section 4), may indicate that, although there was an original artist, later generations have made their own additions, perhaps especially the top surface to reflect a maybe later, non-Homeric Thersites.

KN Dk 1073 (photo SM II plate XXX) (my enlarged extracts)

The Administrative Model regards this as a typical tablet in a "series" about sheep that, on its analysis, accounts for by far the largest subject class of Linear B Knossos tablets.

The left edge, as often, contains numerous suggestions of the basic motif O KO KO WO, but, as equally often, they are hard to see because of wear and lighting. One right-profiled standing figure is suggested by the left edge moulding (red), but there are others maybe seated (yellow), and possibly one striding inside the "KA" sign (red), suggesting the "WO" of the basic motif, but also maybe representing it pictorially in his or her own right. The first three more obviously incised signs - KA MI NI (purple) - I concur with existing views, as also with "TO", but both NI and TO have appended or conjoined signs, visible as fainter incision, moulding or colouration. Identification
becomes more difficult, as often on Linear objects, because the signage is conflated with images, and the same sign can be suggested more than once, sometimes as "abstract" standardised form, sometimes more pictorially. So the RI (purple) below, with other versions (probably a "golfer's high finish") in the area marked with purple Xs, whilst O (or U, yellow) combined with possibly a now almost too faint WA is suggested pictorially by two *backgrounded* right-profiled cartoon standing figures holding *foregrounded* basket flowers or similar that help form the stems of RE (blue). O WA may also be supplied by a figure standing further right, but that art work seems to belong preponderantly to the signage that follows (which I omit here).

In addition the same signs are probably suggested on different scales, and the signage breaks out into more than one line. The presence of KE MA is made probable by the fact that on a larger scale in the background is a large frontal image of a broad-faced "KE MA" Γη Μα, Mother Earth (green). There is also the suggestion of a left-profiled KE MA, κεμας, deer (white), its horns forming part of "KO", but there is no room to show it fully. The result is O KO KO WO KA MI NI JO TO WO KE MA KO RI TE RE O WA. It is plausible because various images correspond exactly with homonymic word play based on those sounds.
A right-profiled chimney sweep (red above) holds a brush (yellow, more than one suggestion) vertically as if up a chimney: ὁ χων κοροκαμινιον, okhwn koron kaminion, “the one holding the brush of the furnace or chimney”, is the key, enabling many verbal plays with the remaining signs and sounds: θολον σχημα (or σκεμμα) κορης τηρει οὐραν, tholon skhma (or skemma) korhs threi ouran, he views a sooty formation (or conception) [as] a girl's "tail" (turquoise, rear view); θολον σχημα χωρις τηρει οὐλας, observes the dark formation of the bear (pest) separately, for the bear face in front of him breaks up into different bears (e.g. purple, red); θολου χευμα or χερμα σχοληι τελει αἴωραν, tholou kheuma or kherma skholhi telei aiwran, he makes the
soot's down-pouring or gritty bits with difficulty [into a] balance, for he appears to have slung huge bags of soot (green above) across his shoulders;

θολον σχημα κορης τηρει οὐλας, he sees the sooty form of a girl [as] worms. For the "worms" (yellow) on the large girl's face (red) opposite the sweep, see the separate image above.

But other unique images, correlated to the sounds of the signs, are provided by the right side of the tablet.

ὀγκος χοιρος [?] θ(ε)ωρων or τορων σχημα κορης τηρει οὐλαν or ώραν or θηλην όραι, onkos khoiros [?] th(e)wrwn or torwn skhhma korhs threi oulan or hwran, or, thlhn horai, a huge pig [?] viewing or penetrating the form of a girl observes a bear face (red) or time (turquoise), or sees a nipple (yellow, though the bear's nose serves as well). The left-profiled pig (green, there is more than one suggestion, as there is of the bear) looks past the frontal image of a girl apparently applying make up (purple). But he may also view or penetrate the "form of a girl" in terms of the erotic view of her midriff seen by the chimney sweep (turquoise further above).

The square-bracketed question mark reflects the fact that it is difficult to determine from the images what a pig KA MI NI JO is. Perhaps χασμην ἐνιων, khasmhn eniwn, one entering a chasm (for pigs were thrown into pits in mystery-related cult), so ὀγκος χοιρος χασμην ἐνιων θολον οἴκημα Κορης τηλε όραι, onkos khoiros khasmhnh eniwn thlon oikhma Korhs thle horai, a huge pig going into a chasm sees afar Kore's home (for the treatment of ἐν- see Section 6 conclusions). Or Γας μηνιος, Earth's monthly, for the tablet, in one reading, seems to suggest sacrifice of a pig a month. Although "μηνιος" as an adjective for "month" is not attested in "later" Greek, it must be a possibility in a cult context. Or maybe unattested καρμινιος, carmine, red, or just καμινιος, sooty.

There is a plausible "chimney" or furnace pig or cow in the crack (above white), and on the far left edge of the tablet (see red, turquoise inset in third photo above). A "straight" cult reading of the signs might suggest ὀχω χοιρον κα(ρ)μινιον θολον Γηι ἁμα Κορηι τελη ώρας, okhw khoiron ka(r)minion tholon Ghi hama Korhi telh hwras, I bring a pig red-black, or sooty-black, for Earth as
well as Kore, the rights of the season. I think carminium is certainly one of the intended homonymic plays, but it would take too long to explain why from the imagery. Carminium is currently thought to be, in Europe at least, a medieval innovation.

There is at least one other image on the right side of the tablet to corroborate the signs so far identified.

ὄγκων κορον καμινιου θολου οι φθορου σχημα χωρις τηλε όροι, onkwn koron kaminiou tholou, or, phthorou skhhma khwris thle horai, one magnifying the eye distinctly sees afar the form of furnaced soot or an engine-driven destroyer. A right-profiled figure (red) uses lenses (blue) to see the smoke curls (turquoise) from one or more ocean vessels (green) probably with chimney. There is more than one suggestion of the scenario. The presence of the magnification theme is strengthened by more than one suggestion of an enlarged eye or eye ball (purple).

Plainly, I have focused only on some of the tablet's signs. Nonetheless those form a continuous "text", and their correlation with images is striking. Other signs and images relate to PE RA KO KO WO, the contrariwise large pig providing part of the related imagery, as well as repeats and expansions of the basic motif. But to show all that would take up an unmanageably large amount of space.

PY Ta 641

In many cases - and the famous tripod tablet is a good illustration - it is difficult to identify signs because the artist elaborates or distorts the signage so that the related incisions or other interventions also convey one or more pictures that elucidate one or more meanings of the signs.

One beneficial consequence is that, in theory, you don't need to understand the literal signs to understand the meanings of the tablet. You can follow the "comic strip" pictures instead. In reality, I conjecture that the technique was always intended to be teasing - a partial disclosure of each of visual, acoustic and semantic meanings - but at any rate for us the difficulties are compounded because the objects have suffered an all too important degree of wear and discolouration, photographs struggle to capture requisite lighting and angles, and we ourselves are unfamiliar with the vernacular, the tricks of the trade, the traditions or expectations of the art.

(my enlarged extracts from photo by Matthew Scarborough, see Annex 2)
Using one of the best available photographs to retrieve detail at the start, the top left, of the tablet, whilst the current reading of the first three Linear signs is, in itself, correct, I see differently for the remainder as below.

The result, however, only becomes fully intelligible preceded by the basic motif, O KO KO WO. Such preface is justifiable as the left edge carries numerous suggestions of the “carrying figure” appropriate to the motif. I will not illustrate that separately, but include one or two such figures in the first illustration of imagery reflecting word play with the resulting sounds, O KO KO WO TI RI PO KE MA TE RE O WA.
A left-profiled seated or standing figure (turquoise, smaller-visaged version purple) loads a donkey (red) with vessels (green, yellow) but using poles or a ladder crossing the donkey’s back. The ladder extends further right on the tablet, with probably a further vessel at the end.

The ladder extends further right on the tablet, with probably a further vessel at the end.

Although another formulaic expression intervenes, the oscillation or balance idea probably extends to informing the sign that Michael Ventris and others took as a tripod ideogram.

A large vessel tripod shaped makes an oscillation. The "ideogram" is indeed a picture, among other things, of men (green, one only) carrying a vessel on a pole (purple), but it also represents the Linear signs O or U WA (that also forms part of the further formulaic expression I have no room to discuss here). Both sounds and image are replete with possibilities, such as όχων κορος τριτουν σχημα τηρεϊ οας, okhwn koros tripoun skhhma threi oas, a lad carrying a tripod sees the form of a pair of drawers, for the "tripod" dissolves into the shape of a huge undone loincloth. Or one of the carrying lads (red) тελει αιωραν, telei aiwrans, makes an oscillation, not only of the vessel, but in congress with a woman beneath him (turquoise).

Further illustration of the initial signs and sounds of the tablet comes from its right edge.
The frontal outline of the carrying girl is highlighted for visual reference (yellow, see Section 2). ὁ κοχλος θηλης ὑπο σχημα τελει οὐλας, or ὡρας, the shell the-nipple-beneath makes the shape of a bear, or, time. The whole tablet is full of breasts and nipples, but in this extract a mussel (blue...
arrowed) is positioned beneath the suggestion of more than one breast (green, the breast pointed both up and down). The shell dissolves into the tiny frontal visage of a bear (red at our left), as well as a cat (white) looking at the bear or rodent (not highlighted), οἶκων οἰκουρος θηλης υπο σχημα τηρει οὐλας, oikwn oikouros thlhhs hupo skhhma threi oulas, the "home guard" (euphemism for cat) dwelling the-nipple-beneath sees the form of a bear (or rodent). The shell's left side forms a pig's face (black) whose snout appears to be a tiny clock face (also red).

But there is the suggestion of more than one shell. Another, suggested by colour and swirl pattern, forms another, left-profiled standing bear (also red), plus the buttocks of a girl (purple): οἴκων κοχλον θηλης υπο σχημα τελει οὐλας ή στηλης, oikwn kokhlon thlhhs hupo skhhma telei oulas, or, ouras, the shell the-nipple-beneath makes the shape of a bear or "tail". Further left what initially appears to be one or more profiled swollen or booted feet (white) also suggests an explicit rear view of a seated figure beneath a nipple (black) or a stele (red), όγκον κωλον θηλης (or στηλης) υπο σχημα τελει οὐρας, ogon kwlon thlhhs (or sthlhs hupo) a swollen limb a-nipple-(or stele)-beneath makes the form of a "tail". (For υπο hupo see the conclusions of Section 6.)

Although it seems common, as here, for, particularly the first - often expanded - motif of a Linear tablet to be replicated in image and word play all over an object, many may also contain further formulae, also expanded, and some of those may correlate more exactly to some of the images, as well as suggesting others of their own.

In addition, throughout PY Ta 641 (and I believe the technique is again common, particularly with longer apparent texts), the sign groups that should stand for the sounds of the formulaic phrases are increasingly replaced by one or more solo images suggestive of the entire same phrase, with increasingly little visibility of the individual component signs themselves. It is as though, say, the whole basic motif - Ο ΚΟ ΚΟ ΡΙ ΚΕ ΜΑ ΤΕ ΡΕ Ο ΝΑ - is suggested more by the image of a man carrying a ladder (όχω κωλον, okhw kwlon) than by its discrete Linear signs. Those may still be suggested, but the condition of the object and photograph can make them almost illegible. In such circumstances, the tablet is excruciatingly difficult to read as literal text. But it is possible to infer the signs (and sounds) from the accompanying images.

So in the second line (b) below) enough detail survives to suggest figures, such as the profiled face (green), maybe part of the basic motif, and various standing figures (purple, red, yellow). One figure (red) is characteristic of Linear RI. Similarly in c) right-profiled figures (yellow, green) holding a vessel (white), maybe ladder (purple), with a trace (blue) of what may form Linear KO.

But the images strongly suggest Ο ΚΟ ΚΟ ΡΙ ΚΕ ΜΑ ΤΕ ΡΕ Ο ΝΑ. Aside from the aforementioned and other suggestions of the basic motif, the turquoise-arrowed image at b) suggests a handsome man inside a pot, that is an Ο ΚΟ ΚΟ ΡΙ, όχος κορου, container of a youth. The visage in d) (red) is looking at three digits, |||, ΤΕ ΡΕ Ο ΝΑ, τρεις όραι, treis horai. More fully: όχων κορου κορης, χευμα τελει αἰώραν, a youth [and] girl [being] holders, the pouring [vessel] oscillates, describing precisely what is going on in the image in b) marked with a green X; όχων κορους σχοληι κεμας τελει αἰώραν, holding youths or puppets at leisure (grazing), the deer makes a balance. The images at e) highlight the frontal head of a young deer (red) supporting puppet acrobats (turquoise) in its horns; όχων κωλον χωρις χεμα τελει αἰώραν, holding a ladder without a block (at its base) causes oscillation, as suggested by the figures (red, turquoise) in c);

b)
όχων κορος σχολη σχημα τηρει or τελει αἰώρας, okhwn korous skholi skhhma threi, or, telei aïwras, carrying boys (puppets) at leisure he makes an acrobatic formation, referencing the face (red) or the suggestion of a frontal puppeteer (purple) in d) plus the figures (turquoise) in c) and e).

There are other, probably better matches between (more precisely identified) images and sounds, but the repeated correspondences - and there are others - make chance unlikely. The proposals also correspond to the traces of surviving signage. The most difficult "missing" sign group is KE MA, probably contained or in and around the vessel (χευμα, kheuma, green X at b)).

CMS 1-006 (photo CMS see Annex 2)

The image and word play of Linear art extends into seals and "sealings" and related objects that the Administrative Model associates with administration. I shall give only a couple of brief examples to illustrate the principle.
Section 2 highlighted figures with round helmets and shields, emblematic of the basic motif "O KO KO WO", ὀχω κοιλον, okhw koilon, I carry a [shield] hollow. It is also possible to see more than one seated or standing figure (yellow in b)) right-profiled from the left edge carrying vessels and otherwise suggesting the motif. The piece also contains a likeness of the coccyx bone, "os sacrum" area (c)). The prominence given to the bowl or vessel plus the repeated hirundine shape suggests the artist wishes to convey additionally Linear KO KU (b)), κοκκυξ, coccyx. Hirundines - par excellence sign of spring - fly right. Whilst the formulaic phrase (Section 6) TE RE O(U) WA may be conveyed here in pictorial Linear signs (thus there is the suggestion of a court, turquoise, often associated with WA), it is more suggestive that what also looks like "Arabic" "3" is repeated in the context of such vernal creatures as hirundines. That is τρεις, treis, TE RE (three) and ὡρα, hwra (spring), O (or U) WA. So O KO KO WO - KO KU - TE RE O WA:

- ὀχων ὀγκον ὠιον κοκκυξ τελει ὡραν, okhwn onkon wion kokkuks telei hwran, carrying a large egg the cuckoo makes spring. Α swelling-tummied, right-profiled standing cuckoo chick (green), also kokkuξ, appears to have one large egg (red) and two smaller ones (turquoise) inside it;
- οἰκος χωρων κογχους τελει ὡρας or ὀχων χοου κογχους τελει ὡραν, oikos khwrwn konkhous telei hwras, or, okhwn khoou konkhous telei hwran, the "mobile home" (migrant hirundine) makes cocoons in spring, or, the one having cocoons of mud [for nests] makes spring.

CMS XI 325 (photo CMS, see Annex 2)

From Section 3 it seems that Linear art is not necessarily wedded solely to Linear signs, that it can use Greek alphabetic letters, for example, to express the sounds with which it plays (just as we use Roman alphabet transliteration). It has been suggested that this particular seal stone may be a late, possibly very late reproduction. That may or may not be so (see Section 10). There may well be Linear signs present, but I will focus only on reading the alphabetic Greek signs fully.

The incisions (purple) indicate not only MA KA, but MA NI (or NH) KA, and MA KA NI KA. For I think the artist also wanted to insinuate K (first left turquoise) and A (yellow), the K prompted by similarity with the pattern of the more visible, smaller K at right (turquoise), though its upper lateral as well as A (yellow) are hard to see, maybe deliberately, maybe because of wear or lighting.

MA KA NI KA, Μα Γα Νεα Γα, Mother Earth, New Earth, describes Kore's succession to her Mother's position. The piece may contain several related images, but a younger right-profiled woman (red) appears to stare in profile down on an older one left-profiled (green). (For "I as "ea" see Section 6 conclusions.) But much of the remaining imagery of the piece appears to flow from the conceit that the (taken as read) main formulaic expressions of Linear art (see Section 6) are followed by either MANIKA, μανικα, manically, or MAKANIKA, μαχανικα, mechanically:
O KO KO WO MA KA NI KA, ὀγκωκορον μαχανικα, I enlarge the eye mechanically, a telescope or binoculars (held vertically, green below);

TE RE O WA MA [KA] NI KA, τελειαίωραν μανικα, telei aiwran manika, he carries out oscillation manically, a crouched right-profiled figure left (turquoise) furiously pushing another on a swing (red). τελει ὡραν μαχανικα, telei hwran makhanika, he tells the time mechanically, perhaps the oddly crested cockerel (purple). θηλην ὁραι μανικα, thhlhn horai manika, of a frontal face (white) looking obsessively at a breast and nipple (purple).

PE RA KO KO WO MA KA NI KA, πελαγος χωρων μαχανικα, pelagos khwrwn makhanika, probably of the right-profiled dolphin (yellow). Much of the image and word play explores the erotic implications of the manic or mechanical.

Later cult figurines

Since "later" cult art seems to share the same techniques and images as Linear art (Section 5), does it also share the Linear signs? To some extent the answer would appear to be "No" because they haven't been recognised to date on cult figurines and so forth. One possibility is that they are there, but on non-obvious sides, in non-obvious rotations and places. Leaving that aside, however, to some extent the answer is also plainly "Yes" in so far as the basic motif is inherently pictorial. Cult art is therefore full of images of a variously profiled figures carrying vessels, pigs, children, some or all of which can be seen as pictorial representations of Linear signs O KO KO WO.

It also seems likely that later cult objects contain images reflective of the other main formulaic expressions too. So the key question is rather whether the art work, the imagery, is formed in such a way that it appears to be intended to suggest not just perhaps Linear signs equating to the formulaic phrases, but additional Linear signs, with which the imagery in turn also plays. To which I think the answer is also "Yes". I will give only a couple of examples.
As a figure, "she" (see on) conforms pictorially or in 3-d to the basic motif, as she stands (blue above, Linear "O", maybe also "WO", but facing us) holding one or two vessels (green, "KO"). The figure pouring from another vessel (red) supplies maybe a redundant "WO", or incorporates all elements of the motif again. The child and pig are harder to see in the folds, but they are suggested (see Section 5). The figurine can thus be interpreted solely as an embodiment of the basic motif. But aside from the difficulty of seeing some of its typical features, the figurine carries a marked profile thanks to the kink in its bent right elbow. Now this formation is characteristic of one and only one Linear sign, namely "PO". If we assume that the artist wanted to suggest "PO", then, in conjunction with the other signs implicit in the formation we have "PO KO KO WO". The signs and sounds "PO KO KO WO" enable image and word play along the following lines:

- (ὑ)ποχω χοιρον or κορ(ϝ)ον, (hu)pokhw khoiron, or, korwon, I carry up a pig or child, a "straight" cult rendition of the signs and sounds. For the prepositional form, see Section 6 conclusions;
- που όχω χοιρον or κορ(ϝ)ον, pou okhw khoiron or korwon, where am I holding pig or child? That would suggest that, by this date, original "k"o- Linear QO- was heard as "po-" and might so be written. Of course, it is a very apt and witty question, given the contrived folds of the art work, for the answer to which see Section 5. Similarly perhaps
- που κοχλος, pou kokhlos, where is the shell? The folds radiating from the "vessel" she carries contribute to the suggestion of some such shell (red, murex ramosus photo by H Zell, see Annex 2)

-pokos kho(w)o(s), ποκος χο(ϝ)ος, a fleece [is] a pouring vessel; the man (green) pours out from a container above his shoulder bearing within it, at one angle, the features of a sheep (purple).

Another "play" revolves around an erotic interpretation. For the climbing man on the side of the figurine (red) is having phallic problems, as if O KO KO WO TE RE O WA, ὄγκων κώλον τελει αἰωραν, onkwon kwlon telei aiwrn, enlarging the phallus he makes oscillation. The issue seems to be where to put his rising member amidst the choice of female "tails" or genitalia (green, but the folds suggest more than two) bent over to receive him. For a closer view of the latter see Section 5. But the play is repeated on a larger scale in the figurine as a whole. The "vessel" also carries the visage of a girl bent over towards us (see Section 5), with perhaps an earlier stage of her inclination above its brim (turquoise). But if she is bending over towards us, then the face of the figurine at the top must be someone else. It has notably masculine features (black). The implication is that it is a he, penetrating the bending woman from behind, but because of the folds of her clothing that he is holding up, he is having some difficulty with the target. Possibly his errant phallus is suggested by the mouth of the vessel being evacuated (also black, lower right). The base of the figurine may suggest more than one pair of feet.

Thus both the smaller and the larger scene are plays around PO KO KO WO, pou (o)khw or khw kwlon, που (ὁ)χω or χω κώλον, "where do I have or bury my phallus?"
The art of the figurine thus suggests that its creator was familiar with the underlying Linear signs that inform it, but instead of incising signs he shaped and contoured the piece so that its geometry (a combination of moulding, incision, colouration) was informed by them instead.

The "PO KO KO WO" motif is also common in earlier "Minoan" cult art. There it has been taken as a pose of adoration. That may or may not be true as well. Thus in this extract from the Palace of Minos, (figure 320 page 459, see Annex 2), frontal pigs are suggested in the thighs above the knees (red), but a lot else is going on in terms of sinuous bodies (e.g. purple) and another frontal face (turquoise). See also O KO KO WO, ὅ (σ)κωψ κοων in Section 6.

Although image and word play occur in the "obvious" rotation of the object (see Section 5), it is more interesting to explore rotated 90 degrees right.

The seated left-profiled figure (highlighted black below) is the main part of related art work suggestive of the basic motif O KO KO WO. I am not going to show that in detail, but among other things he (like the Cyclops) appears to be holding one or more human dolls, κορος, KO WO (yellow). Now in Linear art the basic motif is usually followed by at least a suggestion of the deity to whom a pig is being brought, commonly KE MA, Γη Μα. The related sounds may well be suggested by Linear signs here, but the image of a left-profiled female, white, emptying a vessel (brown, blue for contents) is strongly suggestive of KE MA, χευμα, kheuma, a pouring from a vessel. Another strong correlation between an image and the sound KE MA will emerge shortly.

The piece also suggests the formulaic expression PE RA KO KO WO, as a man (blue) emerges from the right edge in a "window", moving in the opposite direction, carrying vessels, περαν άγων
χο(φ)ους, peran agwn kho(w)ous, bringing vessels contrariwise, and a left-profiled dolphin (green) moves in the same direction. πελαγος χωρων, pelagos khwrwn, going [over] the sea.

But the heavy moulding in the middle of the piece seems designed on the template of Linear signs TA and RI. As often (probably because it serves in more than one formulaic phrase) O or U and WA then seems to be suggested numerous times. The dolphin and its fin (green) perhaps evoke Linear "O", and the trace lines of a large "WA" are visible to the fin's right. But a succession of figures variously profiled within the dolphin (purple, red, turquoise, black) suggest "O" or "U", particularly in combination with the apparent framework at the bottom right corner (purple) which itself seems designed to express not only WA, but also U.

The result would be Ο ΚΟ ΚΟ ΗΟ ΚΕ ΜΑ ΤΑ ΡΙ Ο(U) WA plus PE RA KO KO WO.

Associated image and word play, as highlighted in the third image at left, includes:

οἰγον χοιρον κερμα Θαλης ὤραι, oigon
khoiron kerma Thalhs horai. Thales (black) is depicted in a "classical" philosopher pose. We see
the back left of his head as he contemplates one or more spheres, the suggestion of which is
nearest in the original photograph above. But in addition the great natural philosopher is looking
on the side of a huge coin (red) as it opens the genital area (khoiros) of the open legs above him
(turquoise). PE RA KO KO WO, πελαγος κουν, whilst observing the sea, for he looks onto water
and waves (green), for him the originating and primal element;
όλκου χοροι όρχηματα ἄριων ὀραι πτελαγος χωρων, holkou khorou orkhhmata Ariwn horai
pelagos kwnwn, Arion, going the sea, sees the movements of an alluring dance, or πτελαγον
χορο, of the crane dance (see PE RA KO KO WO in Section 6). There may be more than one
suggestion of Arion. In one, the seated left-profiled musician (purple) looks onto much the same
erotic sight as Thales. In another he is right-profiled, forming the back of the head of Thales
pointing the other way holding a lyre (yellow), but probably looks onto an equally erotic vista;
όγκωι κορωι σχηματα ἁλης ὁραι, onkwi korwi skhhmata halhs horai, with enlarged eye formations
of the brine see. The dolphin (blue) is made up of numerous enlarged eyes (highlighted various
colours), either looking at marine life forms or being such forms themselves.

There are different ways of matching images and words to the sounds, and many other quite
different plays. It is likely that other formulaic phrases such as TE RE O WA and SI MA O WA are
reflected in the imagery. The artist well may have intended TE RE to be read or understood so that
the full phrase would be O KO KO WO KE MA TA RI TE RE O WA PE RA KO KO WO. But the
addition is difficult to show with available space and angle of photograph, and it would make little
difference to the correlations identified above, which are unlikely to be accidental. The only
conclusion can be that the artist designed his piece, in this orientation, cognisant of Linear signage,
and highlighted signs - in particular TA RI - that would not be obvious from the formulaic phrases.

Conclusions

On Linear and later cult objects, the initial indications are that images can be repeatedly and
reliably correlated to formulaic phrases, along the lines proposed in Section 6. Linear signs, also
expressive of the sounds of those phrases, may be more or less visible, whether as approximants
to standard sign forms or more pictorially. The formulae may also be expanded by additional
sounds, the Linear signage for which is more clearly expressed, as it would be more difficult to
deduce them otherwise from the imagery alone. Such signage provides a prompt or clue.

Longer texts may be repetitive, especially of the basic motif, its expression concentrated variously
into a suggestive related image or complex sign group, then enhanced with additional signage.
One example is probably the Phaistos disk, another PY Ta 641, the tripod tablet, where the motif
seems to be repeated at intervals throughout the piece, its presence mistaken by the
Administrative Model as, for example, the signs for "di pa" (see Section 3). Many of the so-called
sheep tablets from Knossos are, similarly, unlikely to have anything specifically to do with sheep.
The incisions that have been so taken are more likely to be constituents of some representation of
the basic motif (hence the common occurrence) or accompanying art work or, in some cases, a
Linear syllabogram such as, though not necessarily only, QI4, forming part of some larger sound
group.

Fundamentally, each Linear and later cult object is a work of art. Although they share similarities,
each is different, essentially unique. It is important to approach each one afresh.

It is currently impossible to "read" some longer Linear texts, not only because of the condition of
the object or nature of the photograph, but because it is impossible, for whatever reason, to
identify smaller images around putative signs that might - as the enactment or visualisation of their
meanings - aid their accurate and complete identification.

In some cases that may not matter. What looks like signage may "only" be calligraphic, akin to
"vain repetition". But it might also be hasty to conclude that the apparent signage of a tablet like
MY Ge 604 has no meaning or meanings. Much may yet prove to be densely complex or pictorial
signage. Some might be a non-Linear script. Sections 8 and 9 contain examples of extensive,
non-Linear script with independent, intelligible meanings alongside Linear art.

4 The shape of which is similar to the Administrative Model's presumed sheep "ideogram".
Nor should the possibility be excluded that texts and images, especially on larger tablets, might convey other additional meanings beyond conventional variants of formulaic phrases, other possibly arcane meanings, probably cult related, or at least cult contextualised. The kinds of thing that that might entail are briefly addressed in Section 10.

Working out images, signs, and their correlations seems to be difficult not only because of the condition of Linear and cult objects. It also appears to be a deliberate contrivance of the art. It is nearly always possible to identify a few images relatively easy, sometimes also a few signs. But honing the correlations between the two, as well as their relationship to the underlying formulaic phrases, is more like a puzzle or exercise, with more than one stage of insight or revelation. Such process seems entirely appropriate to the art of a mystery cult.

Linear and some cult objects also seem to carry not just multiple images and signs, but multiple layers of the things. Now Linear art is inherently complex. For example, the same sign can be suggested more than once in different ways, even though the sound itself is not intended to be repeated, except in so far as it may also form part of some other formulaic phrase. An image can correlate to more than one formulaic phrase, probably regarded as a bit of an artistic tour de force if it does so. Artists use foregrounding and backgrounding techniques created by incision (different levels of relief) and probably also slip and colouration. All of which adds, considerably, to the difficulty today of identifying images, signs and the order in which to take them. But the sheer accumulation of images, in particular, may be difficult to explain entirely in terms of a single moment of creation. It sometimes looks more like accretion over time, the Thersites stone being potentially a good example. A later "gloss" does not necessarily conflict with a previous version. It might restore or enhance, as well as occasionally strike out anew.

Finally, in this connection, there is the insistent and persistent problem of "anachronism". It is now clear that Linear art works happily alongside what we commonly assume to be the later Greek alphabet (CMS XI 325). KN Dk 1073 appears to convey the image of a (top-hatted) chimney sweep (as does KN Vc 74) and smoke from an ocean vessel. Whether or not the tablet also suggests carminium, other apparent images would be even more remarkable.

The receding outline (red) of something like a warship with superstructure seems to head towards us, probably more than one. But its superstructure is apparently conflated with the left-profiled image of a propeller-driven aeroplane (turquoise), with additionally an apparently jet-propelled craft (green), though the suggestion might also be some kind of speed boat.
Normally, of course, it would be routine to dismiss such images as absurd, accidental, faces in clouds. But in this case, because of the signage KA MI NI JO, καμινιος, of a furnace (boiler, engine), that would be wholly irrational. Besides, many other Linear tablets seem to suggest very similar scenes.

Thus an extract from MY Ge 604 in 180 degree rotation (below). The suggested left-profiled outlines of a propeller-driven aeroplane at top (turquoise), with pilot (red), and a jet (green) below. The “Linear” signs on this tablet, whether or not rotated, are particularly enigmatic (some highlighted white). Similar images may also be found on PY Xn 1391.

Whilst the perplexing imagery of KN Dk 1073 is arguably made more likely by the accompanying signage, the same may be even more and more routinely true of balloons. It is possible that they appear on Linear tablets, but from the photographs and condition of the object, and intrinsic nature of a balloon, they are almost impossible to demonstrate. The common formulaic phrases would strengthen the likelihood: O KO KO WO TE RE O WA, ογκων κοιλον τηλε ὁραι, onkwn koilon thle horai, inflating a hollow thing (balloon) he sees afar [from it]. So too KI MA, variant of KE MA, still suggesting Gh Ma, Mother Earth, σχημα, skhhma, with its many meanings, but also σχισμα.

5 Candidates include Pylos PY Xn 1391, Thera THE Zb 1, Phaistos PH 1, Knossos KN DI 47 recto rotated.
skhisma, rent or tear. But, unlike powered craft, balloons are not technologically advanced, either conceptually or in practice. A pig’s bladder will do for the small scale version. The more challenging images, highlighted above, may turn out not be "real", but it would be wholly wrong - on at least two evidential counts - to ignore or dismiss them out of hand. If they are real, then one inference would be that KN Dk 1073 must be even more obviously "late". But one problem with that facile conclusion is that the tablet was discovered in the earlier part of the 20th century, when such futuristic images might also be thought equally inappropriate and anachronistic. It may be worth observing in passing that the most common formulaic phrases O KO KO WO and TE RE O WA might suggest, among other homonymic variants, ὀχος χωρου or κοιλου ὑστερης ὡρας, okhos khwrou, or, koilou husterhs hwras, a vehicle of space or the void (air or ocean) of a later time, or τελει ὡραν, telei hwran, makes time, that is speed. Again, I discuss related issues of dating and chronology further in Section 10. The conclusions of this section apply also to seals and "sealings" and the figurines of later cult art. But given that they do, how do we know that that really is their final limit or boundary? Is it possible that Linear and cult art needs to be viewed within some yet wider context in order to begin to be understood fully? That question forms the subject of the next two sections.
Section 8: analogues of Linear and cult art

Introduction

The presence of imagery on Linear and "later" cult objects that has been either totally or very largely unrecognised raises the question whether the same oversight of the same art may have occurred in relation to both other tablets or scripts and other objects in the Minoan-Mycenaean and Greco-Roman world, including its earlier prehistory.

Amidst the many methodological issues at stake in pursuing the questions, it seems important to bear in mind at least three inter-related but different criteria, namely the evidence for:
- complex, suggestive art involving multiple images, perspectives, rotations and so forth;
- common motifs, such as the basic motif (see Section 6);
- knowledge of the Linear signs.

Examples of just the first, in particular, might not prove a real continuum, a common tradition, as the techniques could stem from different artistic impulses. However, they would still be of considerable significance in the case of objects where no such art has been detected before.

The further enquiry proposed would ideally entail a wholesale examination of all art and tablets, if not all kinds of artefacts over many centuries. I can only offer a very few potentially indicative examples, and also only have space to identify just sufficient features per object to begin to make the point. But in all cases, I believe that other images are present. As they are on other objects of the same location or period, though how many must remain an open question for now.

I cite the commonly accepted dating of objects. Some may regard its occasionally apparent mismatch with the nature of the imagery as somehow disproving the existence of the latter. But in reality the evidence for the imagery is often stronger than the attributed date, current understanding of the content or meaning of the object, and opinion about its wider historical context, much of which is based on conjecture. I discuss the dating of objects in Section 10.

Greenstone axe, 5300-2000BC, Magasa, Crete (photo © The Trustees of the British Museum, see Annex 2)

Above, a left-profiled child or boy (red) looks into and onto a bosom, nipple, hem (turquoise), but also a worm or strap (purple), and buttocks and "tail" (white) or phallus or his own fingers (yellow). Above him a frontal sheep face (green). The imagery reflects play with the commonest formulaic phrases, O KO KO WO and TE RE O WA (Section 6). It is based on natural formation and colouration of the stone, as well as multiple indents or incisions.

In rotation (below), a frontal probably female visage (white) with a larger right-profiled male (turquoise), smaller frontal (black). In between, again, the suggestion of a frontal sheep or goat face (red). On a larger scale, more than one perspective of a duck or goose head (green), the perspective partly determined by where the viewer sees the bird's eye or eyes.

The art of this cracked egg object does not necessarily preclude its one-time use as a tool. It appears to have been reworked constantly to project multiple layers of imagery, far more than I can illustrate. For similar treatment of stones in the UK, see the section on cognate objects in Annex 1.
Sherd, 5300-3200BC, Magasa, Crete (photo © The Trustees of the British Museum as above)

b) In b) a right-profiled, bearded male figure (green), plus the billowing short skirt of a female torso (blue). In c), the left-profiled girl's figure merges into a larger projection of similar, a frontal possibly shepherd (turquoise), and a right-profiled female (red) with children (purple).

c) d) In d), a bird (turquoise) above a left-profiled rabbit (red), plus another behatted frontal figure riding a horse that merges into other images, including a frontal girl's face (green.) See also the discussion of a "later" sherd further below.
Female clay figurine, 5300-4500BC, Knossos, (photo © The Trustees of the British Museum as above)

Seemingly typical of "Venus" figurines from Greece and elsewhere, the piece contains many suggestions of pigs (frontal head green), plus a wide-eyed but porcine female visage (purple), and man, maybe with helmet or quiver (or leg of ham) on his head, thrusting forward a phallic sword (red). But the overall shape, moulding and colouration suggest a frontal possibly woman's torso, head thrust back with spilling hair, arms in front, presumably held from behind (turquoise). Again, on a different scale and perspective, the suggestion appears to be of probably one or more cranes (red) with upturned and fanned tail. I have also highlighted (turquoise) a frontal visage and shoulders that may be male or female, adding to the complexity of erotic and other interpretations. The British Museum has photographs of several sides of the piece, where the imagery continues. The side shown here may contain Linear signage (e.g. the arrows in the quiver, Linear TE RE).

Vasiliki ware, 2500-2200BC, Palaikastro, Crete (photo © The Trustees of the British Museum as above)

Below in b) a behatted right-profiled figure (purple) struggles to carry the entire vessel. Another (red) carries a long-necked pouring plus other vessel (green). A left-profiled seated woman looks aghast on a small and large right-profiled rodent (yellow), the latter partly conveyed by handle moulding and paint. The colouration in particular helps to suggest a frontal owl's face and body
(white, eyes only). Another behatted frontal human profile (blue), again heavily reliant on the handle moulding.

b)

In c) more than one suggestion of a right-profiled hare or rabbit, with diagnostic ear hollow (red). Above a corvid head burst from the vessel, the effect reliant on 3-d moulding and colouration (red). A smaller left-profiled bird, head down (turquoise). A right-profiled woman's face (yellows) reads the bird's tail. A woman bends over to reveal buttocks and thighs, the hair on the back of her head also suggested (green); she may share some facial features with the bibliophile. Another skilfully suggested facial outline further below (white). That is only a "first cut" at complex imagery fully in line with Linear and cult art in terms of both techniques and motifs (O KO KO WO, TE RE O WA, PE RA KO KO WO, and SI MA O WA discussed in Section 6). It is possible that the images are also designed to reflect related Linear signs.

Early Minoan III (2300-2000BC ) cup, Knossos (photo © The Trustees of the British Museum as above)

Only one aspect of the previous vessel is currently available, but plainly any pot or cup is amenable to various rotations, and therefore open to continuous decorative effect. The facility is something which Linear and cult art seems intrinsically intended to exploit. Unfortunately, it is difficult to demonstrate, and I shall continue to focus on just one perspective, even though several are available for this particular vessel.
b) In b), a right-profiled probably shepherd (red) carries a pot (green) containing frontal micro pigs or rabbits (turquoise). The frontal face of a child (purple) is suggested in the probably deliberate abrasion above, above that a large frontal sheep head (yellow). A left-profiled visage (white). One or more right-profiled standing figures merge into the handle (blue), suggestive of Linear "WO", particularly if the handle is a "repair", not genuine. But it seems to carry incised pattern or signs (white arrow).

c) In c) one or more suggestions of a right-profiled hare or rabbit (red). The black (green ring) appears intended to suggest a huge, threatening eye, typical of a corvid, though I cannot currently see a smaller representation of the bird. See the PE RA KO KO WO motif in Section 6. Top right another frontal animal face (turquoise), possibly with paw, though again I cannot see what from the angle of shot, probably more than one being suggested by the art work.
Early Kamares ware tumbler, 2000-1850BC, Mirabello, Crete (photo © the Trustees of the British Museum as above)

b) In b) white banding helps suggest the lacing or similar of a large boot (blue), but contains several intimations of eyes, one in turn reinforcing the right frontal face of a woman (yellow). Over her right ear, the left profile of pig or bear (green). From the left edge, a right-profiled figure (red) carrying a large vessel. Some of the images rely on "cracks", seemingly a common technique.

c) In c), the suggestion of frontal mainly left thigh and genitalia moving forward (turquoise), whilst another eroticised view of prone or fleeing right-profiled buttocks, thighs and bent knees is suggested on a smaller scale (red). The whole piece is designed to suggest multiple erotic views. Above, the frontal face of a man (green), and a wreathed perhaps bride (yellow).
A common phenomenon or problem relating to the periods covered so far as well as others that follow, are decorated pottery fragments that may, indeed, look fragmentary, but which on closer scrutiny and with the evidence of contrived fragmentation, or similar, in the case of Linear tablets, roundels, noduli etc may be self-contained Linear or cult art works. The likelihood is greater where the find comes from a plausible cult site, but it is often impossible to be certain.

Thus with a less than 3cm sherd from Palaikastro dated to the Early Minoan III period, 2300-2000BC (© The Trustees of The British Museum).
Large eyes are often an indication of Linear and cult art, and a signal to look more closely. A bear (red) looks at the mouth of a large pot or nipple (yellow). A right-profiled older woman (green) minds children (blue, turquoise), a right-profiled striding figure (purple) has a clock face to his right, "Arabic" numbers on a larger face (white).

It would be misleading to convey the impression that the techniques and motifs of Linear and cult art are the only formative elements of these various items. Plainly that is not true. There is a lot else going on as well in terms of other artistic techniques, motifs and developments.

The selection thus far has also covered only clay objects, potentially misleading as the same art may also be found in other materials such as stone and metal from the neolithic onwards. There just isn't room to show it. But there is one medium which is too large and important to omit.

The "fisherman", Akrotiri, Thera, before circa 1600BC (photo www.greek-islands.us, see Annex 2) (my extracts)

One difficulty with wall paintings is that their relatively large scale and fixed position multiplies potential perspectives and "views", particularly from a distance, but these are hard to replicate at all or concisely in print or on screen.

The fisherman's posture is a close pictorial representation of a composite Linear "SA", viewed top down, but then also, viewed bottom up, a Linear "MA". Indeed, its artificiality - for it is not an entirely natural pose - appears to be caused by or based on awareness of the shape of those signs.

But the formation of the image also suggest awareness of the formulaic phrases of Linear art (Section 6):
- O KO KO WO, the basic motif, ὀχων κορος, okhwn koros, the lad is carrying not vessels, but the two catch of fish. The two loops protruding from his hands substitute for the more normal vessels, and help to intimate "KO", his own body frontal perspectives of "O" and "WO";
- PE RA KO KO WO, περαν ἀγων κορος, peran agwn koros, a lad acting in the contrary direction since he is, very obviously, pointing in the opposite direction from the normal basic motif;
- TE RE O WA, τελει αἰωραν, telei aiwran, he makes a balancing of the two loads.
It is an art work, and the order may not matter, but, for example, ὁλκος κορος ἐξ ἁλμας τελει αἰωραν πειραρ ἀγχων κοιλων, an attractive lad from the brine makes a balance squeezing the end of the loops, or coils. Not perfect - the fish may well have a common or proper name - but an accurate correlation.

Also a rather boring one. But the white infill of the fresco is deliberately speckled and lined to suggest multiple additional images in a way typical of Linear art. Towards the base and crossing the lad's body, the grey lines suggest pebbles, sand, and tide marks. Much of the image and word play revolves around homonyms of SA MA:

- (ek)s ha(l)ma(s) or (e)s ha(l)ma(n), ἐξ ἁλμας or ἐς ἁλμαν, "out of the brine" or "for brine". For the treatment of the prepositions, see Section 6;
- (p)sama, ψαμα, a thing worn, a fragment, describing the fresco itself (not just the wear but the gypsum, see LSJ), or shingle;
- (p)sa(m)ma(i), ψαμμα(ι), sand or sands (compare ἀμμος, ἀμμη in LSJ).

The lad sees various suggested images in the white infill, but there are many other things going on in it too. I cannot here explore the images or their correlations with the formulaic phrases (Section 6), but will simply illustrate the presence of such latent imagery.

The frontal hanging acrobats in the fish tails are minutely observed (red), and enact one of the meanings of TE RE O WA, the balance of which they form part, but no less precise are the suggestions of a right profile (red) and frontal (turquoise, but a lower face in the neck of the higher), and also another frontal (green) who appears to be reading. It is possible that the Linear art and its latent imagery continued in surrounding plaster from which the fisherman has been extracted or which has not survived at all.

Other wall paintings (such as the Theran boxing boys, see Annex 2) may reflect Linear signs (the boy left Linear WO), Linear art techniques (the space between the boy's distorted bodies suggests various female forms (turquoise)), whilst others contain latent imagery redolent of the formulaic phrases proposed in Section 6 - so La Parisiennne (Knossos) is full of image and word play based on RI MA KO WA, the boxing boys (Thera) PE RA KO KO WO. Potentially, then "Minoan" wall paintings suggest awareness of Linear signs and their meanings in forming and informing art; indicate the use of infill, shading, faint lines, points or dots to suggest additional imagery, a technique fully concordant with the suggestive nature of Linear art as expressed in Linear tablets; may be more securely dated, particularly at Akrotiri, than is the case for many other Linear objects.
Usually associated with funerary rites, "Minoan" and "Mycenaean" larnakes also illustrate awareness of the techniques and motifs of Linear and cult art, and in some cases probably also Linear signs. Here, among the other suggested images, the eyes and outline of a male frontal visage (red) provide a frame, along with eroticised images of female torsos left and right (green, turquoise). He carries items (not shown), including perhaps the chubby frontal babe (black). The effects rely largely on colouration. Erotic insinuation continues in a view of the top of the hair and head of a woman bending towards us (blue), whose features merge into a far larger frontal female visage, eyes along the bottom edge also looking towards us (brown). But the whole piece is full of other erotic suggestions, and probably other images (such as the delicate visage, yellow), the huge eyes (white). A particularly good set of larnax images may be seen at https://www.flickr.com/photos/kiminoa/albums/72157628549902967.
Argos geometric kantharos with horses, Argos (Archaeological Museum C33), 800-750BC (photo by Dan Diffendale, see Annex 2, my enlarged extracts)

Whilst the decoration may rightly appear to be some kind of train of horses and riders, dots, lines and colour have also been used to suggest other and naturalistic images, particularly exploiting infill between the "horses" as well as probably in the area crossed by intense banding. Some of the decorative paint or slip has possibly been lost.

The clearest demonstration is the way piercing eyes have been suggested (turquoise in (b)) to help suggest in turn a face whose mouth is accurately positioned by concentration of dots. The band lines and adjacent dots seem to be used to suggest, among other things, multiple visages (blue, red, green).

Each "horse" is actually a complex picture, for example of a figure carrying one or more vessels rightwards as well as what looks like an uncoiled hose pipe towards the right, reflecting the basic motif O KO KO WO (see Section 6). But looked at from right to left, at least the central figure appears to be engaged in sex (purple in (c)), the figure in front of him (to our left) bent over (green).
The rear of a pantomime horse, so to speak, occurs in other cult art, possibly punning on TE RE O WA, τελει οὐραν, he or she makes the tail.

But the posture of the bent-over figures is one of the things that also helps to suggest a - bottoms up - crane dance, PE RA KO KO WO, πελαργών χορός, pelargwn khoros (see Section 6). In line with homonyms of the formulaic expression, the imagery suggests more than one hare (right-profiled turquoise in (c)) and superimposed bird or corvid (similarly right-profiled red in (c) where the brow or beak line is still just visible). And in (d) the suggestion of a left-profiled crane or heron (red) clashing beaks with another right-profiled bird (turquoise), or maybe taking a pygmy.

The presence of Linear and cult art thus helps explain the composition of the piece in terms of techniques and motifs. Again, it comes as a surprise that "geometric" pottery can contain such naturalistic - and brilliantly executed - art forms. I believe similar "hidden art", similar multiple and complex images, may be found in the cavalcade of the Elgin marbles' Parthenon frieze.

Black figure amphora - Kore (Persephone) and Sisyphus, Vulci circa 530BC (photo Bibi Saint-Pol, see Annex 2, my enlarged extracts)

Kore in the middle is configured pictorially on Linear "O" and Sisyphus to our right Linear "WO".

It is necessary to enlarge an extract to begin to see at least some of the larger implications of Linear and cult art.

The figures of Kore and Sisyphus reflect image and word play based on an enlarged basic motif. So the overall setting, perhaps, is O KO KO WO, Ὁρκου χωρός, Horkou khwros, Horkos's place, the Underworld.
Sisyphus is for example
- ὀχων κοιλον or κώλον χευμα, okhwn koilon, or, kwlon kheuma, carrying (as) abdomen a pouring vessel (turquoise, right-profiled forming and beneath his chin) O KO KO WO KE MA;
- τελει αἰωραν, telei aiwran, oscillating or moving his boulder up and down TE RE O WA.

The potential image and word play is multiple, complex, and witty. For example, O KO KO WO KE MA TE RE O WA, ὀγκον κωλον γημαν τελει οὐλας, a swollen "member", having ejaculated, produces oats. Sisyphus or the right-profiled figure delineated by incision within his body (green) has ejaculated the large white boulder-sized seed.

The imagery is probably enough to suggest the Linear signs, and vice versa, but the signs KE to WA may be suggested in the white boulder Sisyphus carries either as signage or as further more detailed suggestive imagery (possible traces in green and purple in the further extract below). In addition, the other side of the vase shows relevant images and probably signs 1.

In Kore's case the suggestion seems to be O KO KO WO WA and TE RE O WA. For example - her upper torso clad with clothing that looks like eggs (turquoise arrow): ὀχω κοιλον ωία τελη ὡρας, okhw koilon wia telh hwras, I have an abdomen (of) eggs, the dues of spring. But her upper torso also appears to harbour a large incised right-profiled rodent head (green) - ὀχω κοιλον οὐλαν, τηρει ὡια, okhw koilon oulan, threi wia, I have (as) an abdomen a rodent, it's looking at (my) eggs (or θηλην ὄραι, thhlhn horai, it is looking at my nipple, as it is);
- she discreetly carries a child in her left arm (top of head purple), but, logically, only by its left ear: ὀχω κορου ωίας, okhw korou ouas, I hold a child's ear. The child should be looking at her nipple, but may rather be looking (the first -O WA, ὴρα, horai) at the "Three Hours" (TE RE O WA, τρεις Ὡρας, treis Hwras), three other faces in her face, or signs of time and climate like the crescent moon that covers her hair (blue);
- she looks at Sisyphus's bottom, a left-profiled bear (red), τηρει οὐλαν, threi oulan, TE RE O WA. Perhaps the most extraordinary image is within Sisyphus's body: O KO KO WO KE MA TE RE O WA, οἰκων χωρον χειμα τηρει ωία, one who lives on land in winter watches eggs. The delineation by incision of the right-profiled standing bird (red) nestling an egg (blue) between his feet (unless he aspires to Sisyphus's white boulder instead) looks very like a penguin (Emperor), but it could be some other bird, and the homonym differently cast if to similar effect.

1 See Annex 2. So O KO KO WO, ὀχω κοιλον, okhw koilon, I carry a shield, plus one of the shield symbols suggests Linear signs and sounds KE MA, the other "OO" (Greek alphabetical "oo!") WA.
The figure pointing the other way and moving away on the left seems to reflect another formulaic expression of Linear and cult art, PE RA KO KO WO (see Section 6). Above his left shoulder is the suggestion of a corvid eye (red in a) and possibly beak, beneath hare or rabbit ears (purple): ὑπερ λαγω κορος, huper lagw koros, over a hare an eye (or black bird). The suggestion he is moving his phallus in the opposite direction, περαν θαγων κωλον, peran agwn kwlon, is, for whatever reason, equally faint though still evident (black in a).

Again, the image and word play is complex as each figure probably shares in images primarily suggested by the sounds associated with another. So Kore’s right arm (red in a) and maybe neck line (turquoise) are vessel-shaped - Ο ΚΟ ΚΟ ΒΟ KE MA, όχω κωλον χευμα, okhw kwlon kheuma, I have a limb a pouring vessel.

Parthenon, acropolis, Athens, later 5th century BC (photo by WKnight94 see Annex 2, my extract)

It is unusual to see images of the Parthenon taken in muted light. The otherwise ubiquitous excess light, as with over-illumination of Linear tablets, bleaches surface interventions and
colouration that create a world of complex imagery and art rarely if ever seen. Restoration, like "cleaning" of the Phaistos disk, now poses a further threat to its continued existence. The interventions seem designed to suggest related images more than once, either from different perspectives or to different effect, and rely on the eye's suggestibility to connect features on adjacent columns, including the "natural" contours of the column rock and its segmentation.

The techniques are thus used across different structures to suggest an emergent rabbit head and muzzle (turquoise above) or pig (yellow, beady eye plus nostrils). A right-profiled hare or rabbit eye (green, arrowed) at the base of one column (body probably suggested by incision in others) is capped by a large left-profiled corvid eye and beak (red). Similarly below (my extract), the right profile of corvid eye and beak (red) plus frontal standing hare or rabbit (green), plus frontal fox (turquoise). See the PE RA KO KO WO motif in Section 6. Human agents may also be suggested (white above), but are very difficult to isolate.

The likelihood that such observations are "false positives" is reduced not only by the motif, but by the same techniques on the other side of the building (photo Emory University see Annex 2, my extract). As with the rabbit (green) in the first extract above, the precise continuation of geometric curved lines between separate columns (turquoise) is a strong indicator of some deliberate intent. A frontal horse's head (red) with a possible rider's above (purple), with many equine images suggested on the rear right column, such as probably a frontal donkey head (green).

This "hidden" art of the Parthenon appears to be part of the Linear or cult art tradition. It is particularly important not only for its skill, but because it seems unlikely that the art work, given the way it is built into the structure, can date from any other period than close to the original construction. It may, however, have been restored or enhanced in later times.
Thasos tetradrachm (photo École Française d’Athènes, see Annex 2)

Use of Linear art includes coinage, such as a four drachma piece from Thasos dating to the 4th century BC showing Herakles the archer. He is a good pictorial approximation to Linear "WO", but probably embodies the whole basic motif (O KO KO WO in Section 6) as he also appears to be holding vessels (e.g. yellow). Other Linear signage is likely to be present, or suggested by imagery, such as SI MA O WA, σημα ὁραι, he sees the mark. The coin is full of multiple smaller complex images. The validity of the wide-eyed girl's face (red) behind Herakles is partly guaranteed by the precision with which her eyes are framed, particularly by the sideways "A" of θΑΣΙΟΙ, as well as hair locks. The larger frame of the coin (green) helps define her face. In a different perspective, the suggestion is of curving, probably female buttocks and genitalia (turquoise), draped or otherwise by suggestively rising hem lines (turquoise, green). That image puts a different complexion on the shape and position of Herakles's vessels.

Other tablets

If purportedly later artists were so familiar with the the techniques and motifs of Linear art, one question that arises immediately is why did the tradition of Linear tablet art, as exemplified by the existing Linear A and B corpus, apparently disappear from the pages of history. The simple answer is that it didn't. The best evidence is the Linear corpus itself whose dating I will discuss in later sections. In the meantime, additional evidence that the tradition did not die out at all comes, for example, from a surprising and distant quarter.

The Roman fort at Vindolanda on Hadrian's Wall in the UK is famous, among other things, for the discovery of many hundred, wood veneer tablets on which are purportedly inscribed glimpses into the daily life of the fort occupants, both military and civilian. They date, and it may be a reasonably
secure date, to around the end of the first century AD. In some respects, they are inevitably - primarily because of damp and oxygenation - in no better condition than the Linear corpus.

With the benefit of hindsight, there are some remarkable, and remarkably suspect features about much of this trove (one can not say categorically all of it, for some may be genuinely workaday):

(a) the discovery of so many tablets is similar in quantitative terms to the discovery of concentrated deposits of Linear tablets at the Linear sites and figurines at the "later" cult sanctuaries;

(b) the nature of many of these particular tablets, very thin wood, almost like shavings, to which ink is applied is highly unusual, and, pace received wisdom, cannot have been anything but relatively difficult and expensive to produce when wax and more basic wood block cannot have been rare. Their deposition in layers of bracken on the floor is not expected either. Cold "Romans" in Northumberland would burn any waste wood or tinder;

(c) the name of one of the leading characters is Flavius Cerealis. Now whether he was real or not, "the golden-haired one of Ceres" (another or the Roman name for Demeter) is remarkable coincidence in more senses than one. Only slightly less so another character, Flavius Genialis;

(d) the often illusory fragmentary nature of the tablets. These are wood veneer. One would expect accidental breakage either to follow the line of the wood, or to cause a savage break; for that is how wood behaves. Occasionally we see such fractures, but in many other instances the wood is shaped into curves which are hard to explain as anything but deliberate formation. In which case, they are unlikely to be everyday tablets;

(e) the researchers have properly acknowledged the subjectivity involved in deciding what marks to read as writing. I am not competent to query their selection or translation of what I understand is difficult Roman script or scripts. What I can observe is that the results are notably jejune, lacking in substance. That is partly because they are "fragmentary" and, yes, often damaged and faded. In other cases, including the famous birthday letter from Claudia Severa to Sulpicia Lepidina, the hollowness may be genuine - one cannot ever prove that someone isn't as vapid as they appear to be from their writing - but it may also (though in itself an equally unverifiable assertion) reflect deliberate contrivance, that is that the meaning of the text did not matter, the art form of the lettering perhaps did.

But the overwhelming, prime and direct evidence as to their nature comes from the tablets themselves. The infra-red photographs indicate that many conform to the same artistic techniques and, probably, motifs as Linear and cult art, in other words multiple, complex images suggested often in different rotations and revolving around similar motifs.

Vindolanda 120 (photo © The Trustees of the British Museum, see Annex 2)
by the suggested images in front of it, including a sheep (turquoise shown separately in the second highlighting further below). He also has the suggestion of a clock face in his cap (red). Another frontal, almost cartoon (black) sheep face is visible on the centre bottom edge (green).

Heavy shading or colouration is used to suggest an advancing left foot (purple); we see the toe or front sole. But an even larger swollen limb is suggested moving away from us (white); we see the lower right ankle and heel of shoe (white arrow), but there may be more than one perspective.

The imagery thus reflects the basic motif O KO KO WO not only in the figure carrying a vessel, but the swollen limb or limbs, whilst the shepherd and his sheep and his "clock" reflect TE RE O WA. See Section 6 for an account of the homonymic word and image play.

On a different scale and with a different perspective, the "fragment" is designed to suggest the top half of a powerful domestic animal, such as cow, bull or maybe pig (red). The eyes, particularly the staring left eye ball, are brilliantly suggested, as is one ear.

The tablets are a treasure trove of Linear and cult art. For example, they contain (Vindolanda 142 below, photo © The Trustees of The British Museum, as above) one of the clearest images of a common motif - a partly right-profiled figure (turquoise) magnifies an erotic target (the rear of a skimpily clad, inclining woman's torso, purple) with an optical device (red) plus a suggestion of the enlarged image (green).
Other Vindolanda finds are also pregnant with the techniques and motifs of Linear and cult art, including the altar of Mogons and the "Aemiliorum et ?Cassiorum" amphora fragment.

Bloomberg London tablets

Over four hundred superficially normal waxed wooden tablets were discovered at the Bloomberg London site in 2012-13. Most, again, seem securely dated to the latter half of the first century or early second century AD. But as with Vindolanda and with the benefit of hindsight it is remarkable that:

(a) such a large number was found in such a concentrated area. The obvious and normal fate for all such tablets past their shelf-life would be the fire, for example to heat hypocausts;

(b) some of the tablet names are as suspect as they are at Vindolanda. Certainly, slaves and freedmen can have "media" names, but the coincidence of "Tibullus" (name of Latin love poet) freedman of "Venustus" (the charmer, or one of Venus) owing money to "Gratus" (the graceful one, deserving thanks) freedman of "Spurius" (which needs no translation) beggars belief (WT 44);

(c) many of the translated texts - with difficulty for other considerations aside, the tablets are bleached by water-logging, otherwise damaged, and written in very challenging hands - are as content-free as those at Vindolanda. They lack the specificity and "bite" of real-world transactions;

(d) a stylus certainly can penetrate wax to mark the wood beneath, but it is surprising that it did so to the extent or pattern shown on these tablets, without contrivance;

(e) reported adjoining discoveries in and around the site suggest the presence of cult activity related to Demeter and Persephone or similar chthonic deities. For example, two pieces of (incomplete) well or excavation gear may have once had working lives, but to find them buried
close beside one another, one inside a barrel (compare the Knossos and Thera bath tubs in Section 6), is extraordinary behaviour, but perfectly comprehensible in the context of the cult's basic motif, Ο ΚΟ ΚΟ ΒΟ, okhw khowan, ὀχῳ χο(f)ον, I hold a thing that digs. For that is what the barrel does, and the devices possibly did too, as well as ὀχος or ὀλκος χων, okhos or holkos khown, container or belt of pourings, that is a mining conveyor belt. Perhaps one device for Kore, let us say, and one for her mother or Demeter. Excavations also unearthed a very large, but solitary bronze forearm. Such orphan finds are always puzzling. What happened to the rest and why didn't this piece share the same fate? But in the context of the cult, its presence is as comprehensible as all the other "limbs" (many enlarged) that are found at cult sites from all periods: Ο ΚΟ ΚΟ ΒΟ, okhw or onkon kwlon, ὀχῳ or ὀγκον κ wlan, I hold, or a massive limb. The tablets are badly bleached and not widely available as on-line photographs. For that reason and because of constraints of space I pass them by here with just one example of the multiple, complex art work that lies within many if not all of them.

WT 12 extract rotated (photo Culture24 and MOLA, see Annex 2)

The swallow (here right-profiled seated, turquoise) is a common motif in Linear art. Compare CMS 1-006 in Section 7. The two faces (black, red) are conveyed with great precision and economy, but as ever conflated with other imagery, for example, I think, the down-pointing frontal head of a digging dog (purple) and maybe frontal snout of a pig (green).

Conclusions

Many if not all the Vindolanda and Bloomberg tablets exemplify the techniques and motifs of Linear art. Once its presence is recognised, the images are often considerably more comprehensible and convincing than the (skilful) translation of "fragmentary" and jejune text. What appears to distinguish them from the "earlier" Linear tablets is their script. Whilst it may often form part of the art work, whilst I think it highly likely that some, possibly all the tablets also contain representations or suggestions of the Linear syllabary or equivalent Greek alphabetic letters and maybe also "Arabic" numerals, nonetheless in many cases the today most immediately visible script also appears intended to suggest the illusion of a workaday Latin text and a workaday Roman world.

Such guise or disguise is fully in keeping with a tradition of Linear and cult art that embraces the "broken" or "worn", also things that look utilitarian or ephemeral when, to those who can see, they have another signification.
Potentially, that might be important; for it might suggest that the "earlier" Linear script is also intended to lend a workaday veneer to the Linear tablets. That wouldn’t mean the Linear tablets are genuinely administrative or that the existing "translations" of the Administrative Model are accurate or complete, but it might add a further layer of complexity to the nature of Linear art. It might. The problem remains that, unlike Latin or alphabetic Greek, there appear, as yet, to be no examples of Linear script used in a purely workaday - even literary - context, that is without the concurrent presence of multiple, complex images.

More generally, it is slightly frustrating to have been able to offer, because of space constraints, only so few illustrations when the influence of Linear and cult art looks like having such great explicative potential in relation not just to tablets but to so many works of art from the Greco-Roman world.

The reasons why it has been overlooked appear to be similar to its oversight in the case of the Linear tablets, namely:
- assumptions about what, if any, art is perceived as appropriate at certain (not always robust) dates and in certain presumed contexts;
- failure to perceive or explain all the marks on an object’s surface, or the choice of subject and its treatment;
- photographs and drawings that omit evidence or select only evidence perceived as relevant;
- the difficulties of reproducing images, including copyright constraints (see the selection of evidence in Annex 1).

However, the presence of Linear and cult art does not negate the validity of other artistic or cultural developments and influences, or, say, the translation of Vindolanda or Bloomberg texts, or the apparent purpose for which at least some objects may have been made. Quite what it might mean I leave for Section 10.

Its presence in the wider Greco-Roman world does, however, raise a further obvious question. If it has been missed there, in the way that it has, has it been missed elsewhere also, yet further afield in space and time?
Section 9: further analogues of Linear and cul art

Introduction

The previous section offered examples to indicate that Linear and cult art has been neglected in the archaeology, history and art history of the broader Greco-Roman world. Has the same oversight occurred much more widely in relation to other cultures, both in time and space? The same caveats apply as in the introduction to the earlier section, and I can only offer even fewer examples to indicate the topic may be worth exploring further. But I will start with one that merits coverage because of its clear overlap with the Greco-Roman world and the Linear scripts.

Cyprus

The "Cypro-Minoan" objects of the 2nd millennium BC (undeciphered) and Cypriot syllabary of the 1st millennium share tell-tale characteristics with Linear and cult art:
(a) they are found in far too small numbers, smaller in terms of total signs and objects than Linear A and B combined, to constitute an every-day writing system (lasting many centuries too) whether only in a putative "palace" or in a wider economy and society;
(b) at least some of the later Cypriot texts that are translatable are either enigmatic or vacuous, in the same way as tablets in the Linear corpus, at Vindolanda, or in Mesopotamia (see on). The best example is the Idalion Tablet, a purported 5th century BC agreement between king, city and doctors for treating wounded in a Persian siege. One signal peculiarity is that the ring from which the item was purportedly intended to be hung means that the script is the wrong way round to read. Despite its detailed terms, the text is totally obscure (and hence totally useless) as to the most important point. Were the medical services actually rendered? The names are equally suspect - doctors called Onasilos and Onasikupros, the beneficial one and the beneficial one of the Cyprians, a king called Stasikupros, whimsically the one who provides stability or the one who causes "stasis" for the Cyprians, and an "archon" or similar, Philokupros, lover of or beloved of the Cyprians. The names are as contrived as some of those at Vindolanda and Bloomberg London.

Enkomi clay ball, Louvre AM 2335, 1600-1050BC (photo by Jastrow, see Annex 2)

The ball probably is worn, colour faded. The incisions may be intended as signs, but the photograph (rotated further below 180 degrees from its published orientation) may not show all of them. Some signs may be on the "dark side". Others may be effected by moulding and colouration. Nor do heavy incisions necessarily indicate sign formation as opposed to imagery. Even so, the overall composition of the ball already begins to suggest that it may owe its conception to the image and word play of Linear art's formulaic phrases. The ball looks like the fruit of the sorbus or service tree (pictured below, the rowan being another type), or ὀα, οα in Greek, O WA in the Linear script. It is an ochre mass - ὀγκος ὠχρος, onkos wkros, written as O KO KO WO in the Linear script. It looks like at least some of the image and word play of the piece may revolve around O KO KO WO TE RE O WA. So ὀγκος ὠχρος τελει ὀα, onkos wkros telei oan, an ochre mass makes a sorbus. ὁ ογκον χοιρον τελει ὀα, onkon khoiron telei oa, the service tree makes a pig fat. The sorbus entries in Wikipedia contain some relevant information. The detailed imagery suggests, for example, a pig (turquoise) with spring (birds) on his snout (green, yellow), or being ridden at speed by the man above and behind him (red). A clay ball also plays on the formulaic phrase (Section 6) PE RA KO KO WO, σφαιρα ὀγγος ὠχρον or κοιλον, the sphere [is] a hollow or ochre vessel.

(photo Trees Planet, see Annex 2)
The smooth curvature makes it highly unlikely that the surviving formation of the piece is accidental or fragmentary. The moulding is combined with exactingly minute and precise incision, the impressed signs, to suggest multiple images. Thus the profile of a woman from over her right shoulder (red below right), with the "damage" portraying her bare neck and right shoulder. She may hold a pig opposite (yellow). But the shoulder area is probably also intended to suggest a swollen slippered foot (ὀγκὸν κωλὸν, onkon kwlon, see O KO KO WO in Section 6).
Enkomi tablet, the Louvre, AM 2336, 1230-1050BC (photo by Jastrow, see Annex 2)

Moulding, colouration and incisions combine to suggest the outline of a girl (green) with a figure, probably male, behind (red). The indents for her eyes and other facial features are precise. There may be more than one suggestion of the rest of her body outline. It is difficult to see what else she holds, but there is at least one possible frontal pig face (purple) and child figure (black), a peeping one top right (turquoise).

In rotation of 180 degrees, moulding, colouration and incisions are again combined to suggest a standing girl (red) looking left, and a walking figure (green) right. But the left edge also contains almost sublime suggestions of faces (not highlighted).

Cypriot syllabary - Idalion Tablet (ICS 217) (photo Bibliothèque Nationale de France, see Annex 2)

A replica is apparently on display in the local Idalion museum and photographs thereof are common on the internet. From the surviving condition of the original (in the Louvre) and related photographs it looks at first sight as though it is difficult to tell exactly how and what art work is conveyed, but it relies both on the indents of the signs to suggest key features (eyes, chins) as well
as colouration or changes in shade. It is almost impossible to see the latter if there is too much light on a PC or tablet screen.

In terms of the basic motif (see Section 6), a central figure (green), seated with knees below towards us, holds a standing child (turquoise) on her lap and probably another on her left side profiled (purple). Vessels are hard to see, but one or more pigs (red) just discernible.

Although other imagery is present, I find it difficult to illustrate without compromising its visibility; much depends on subtle colour or shade shift, intractable for highlighting. I suggest a partially right-profiled, behatted, probably male face (red at right, my extract).

It took me considerably longer to see the large frontal shepherd’s face (red), his mouth partially obscured by the erotic image of a
girl looking back at us (turquoise) probably over her buttocks and genitalia, variously suggested. Immediately adjoining, more than one suggestion of the frontal face of a sheep or sheep dog (green). See TE RE O WA in Section 6.

Scrutiny of both the Cypro-Minoan and later Cypriot objects thus suggests that they too are art works along almost exactly the same lines as Linear and cult art, showing the same techniques of multiple, complex imagery and probably the same motifs, including the basic motif. Whether and how far the earlier Cypro-Minoan signs, as and when fully and correctly identified, differ from the Linear ones I cannot pursue here. But there is at least one difference. In Cyprus unmistakably scribal or scribal-looking signs are used in great concentration to suggest imagery. We shall see shortly that a similar technique was also used in Mesopotamia, so its presence in Cyprus, ever a bridge between Greece and the Middle East, is understandable.

Mesopotamia

Clay was apparently used in Mesopotamia from Sumerian times onwards for many different record purposes, including libraries. Unlike Linear A and B tablets, where they are used for "administration", such tablets can seem clear and precise about what they concern, for example contracts, with names of parties concerned, sometimes including scribe. They can also appear to form part of definite "archives" of various types. Unlike Linear tablets, the translations often appear as accurate and as complete as can reasonably be expected allowing for the passage of time and cultural difference.
However, John Chadwick pointed out that not all apparently administrative tablets fully square with such functionalism (page 113 of *Documents*, RS 11.799):

"The merchandise to Ybnn: 4200 measures of oil, 600 of perfumed oil, 2 talents of iron, 100 tesrm trees, 30 almuggim trees, 50 talends of reeds, 2 talents of brr, 2 talents of perfume, 20 olive trees, 40 shekels of oil of myrrh."

He goes on to quote Virolleaud's comment that "L'ordre suivant lequel sont énumérés ces différents produits paraît assez surprenant..." Quite so. With tablets or other "records" from Cyprus, Vindolanda, Bloomberg London, and the Linear corpus itself, it is the vacuity, peculiarity or random nature of entries that can give grounds for suspicion that the tablet may not be "administrative" at all, prompting closer visual scrutiny. Unfortunately I have seen no picture of that one.

Nor is it only administrative vacuity or similar that may be at issue. Some Mesopotamian texts, for example, concern the most minute regulation of religious affairs. Whilst some may be "real", their punctiliousness may sometimes have another explanation. And some texts which appear properly administrative may, on scrutiny, not be that at all, or at least only partly that.

Clay tablet, Sumerian, British Museum (140852), Late Uruk 3300-3100BC (photo © The Trustees of the British Museum, see Annex 2)

The British Museum website notes on the reverse "Clay tablet; symbol of a human head with a triangular object in front of it; typical of texts dealing with rations; in later Sumerian it is the verb to eat; the triangular object is the regular symbol for bread; three different types of numerical symbol are used." For the head and triangle, see the top left of the reverse, pictured further below. But, in sum, the tablet is not really translated. In addition, its surface bears many lighter incisions that the "text" incisions do not explain.
Rotated 90 degrees right (above), the obverse suggests, thanks to the overall formation and trace collar lines, the headless upper torso (red) familiar from Linear art. There are several suggestions of babies, conveyed by eye incisions and moulding (turquoise, purple), and at least one frontal pig head (green). Some of the "text" incisions are notably pictorial (white), but other interventions, including colouration, help suggest additional imagery, including a frontal lower torso (blue).

On the reverse, incisions, colouration and moulding suggest a right-profiled goat (red), but also more than one right-profiled bird head (e.g. green). Techniques and motifs are, again, typical of Linear and cult art. On the far right edge the suggestion of a frontal bear’s head (turquoise) conveyed by colouration, moulding, and precise marks for the nostrils, plus frontal mouse or baby bear (purple).

Above the goat is an incised triangular vessel (PE RA KO KO WO, ὑπερ αἰγος χο(ϝ)ος, huper aigos kho(w)os) or above the vessel another one upturned for pouring (ὑπερ ἀγγους χοος, huper angous khoos). In the top left panel "3" plus a grain, τρεις οὐλαι, treis oulai, TE RE O WA. For the formulae see Section 6.

The piece is saturated with Linear and cult imagery on both sides, including the erotic. As in the case of Linear objects, its art work has been overlooked thanks to focus on the "script" even though the latter, and its interpretation, are impoverished by comparison with the complex and skilful imagery.

Clay literary tablet, Sumerian, British Museum (120001), Old Babylonian 2000-1600BC (photo © The Trustees of the British Museum see Annex 2)

The moulding but more obviously pattern of incisions are used to suggest probably more than one left profile; as often it is difficult to pinpoint eyes as there is more than one deliberate option. Unfortunately, the over-illumination also makes it difficult to discern other images, and similarly on the reverse which, like similar Linear counterparts, is probably not really damaged, but so moulded in order to facilitate the suggestion of multiple images.
An account of various rations for messengers. But the suggestion of a wide-eyed frontal woman's face (red), eyes, right ear, hairline delineated by incisions and colouration, whilst the brown at her lower right denotes her neck and shoulder. She carries vessels (green, purple), with the suggestion of at least one (left-profiled) pig (black) and child head (turquoise). As often in Linear and cult art, there is the suggestion of more than one visage behind and in front of hers.

Chinese oracle bones

Chinese oracle shells and bones reportedly contain precursors to later and modern Chinese scripts, and mainly date to much the same period as the Knossos finds, the Shang dynasty, very roughly 1200BC. They share certain other characteristics with the Linear tablets and cult objects examined in earlier sections:

- their concentration and quantity. A few that have come to light are apparently widely accepted as fraudulent, but most are not, and they number perhaps 50,000;
- the temporal proximity of their first "discovery", only ten or so years before Sir Arthur Evans unearthed the first Linear tablets, and a discovery occasioned in a similar manner in that oracle bones came to light via the "market", much as Sir Arthur found hieroglyphic seals for sale in Greece;
- an almost total concentration of interest ever since upon the respective scripts rather than any other features of the objects on which they are found;
- whilst, so far as I know, the text of the bones and shells has been translated or interpreted with reasonable success (unlike the Linear tablets), enabling further understanding of the early history of the Chinese language and people, the texts are also vacuous, by which I mean that, reportedly in most cases, the bones and shells do not record the oracle itself, but "metadata" such as the diviner and topic of divination. Thus what one would assume to be the prime focus of interest is neglected entirely, an oddity, in the light of experience elsewhere, that should prompt the question whether the "oracle bones" are all that they are purported to be. Closer scrutiny suggests that
oracles bones are not concerned only or probably even at all with divination and its record. Some are demonstrably and repeatedly art works with, by now, familiar features.

Ox scapula, Shang dynasty (photo by BabelStone, see Annex 2)

First above, a right-profiled woman (blue) carries left-profiled piglet (purple). A right-profiled man (red) rides a horse (the ears on the right edge). A larger pig (yellow); the back of probably a woman's legs (green) with hem; a frontal beaked heron or crane (also green); a right-profiled bear (black); and female visages (turquoise, white). Enlarged, a variously profiled receding rabbit (red, purple); two frontal visages (turquoise, green); and possibly a clock face (blue). These and many other images, including in rotation, are as dense and complex as Linear and cult art, based on the same mixture of form, colouration and incisions, both signs and other, and, in part, motifs.
Oracle bone, Shang dynasty, Shanghai Museum (photo by Herr Klugbeisser, see Annex 2)

Above, the right-frontal face of a woman (yellow) looks onto a tottering frontal child (blue). Below her, a left-profiled rabbit (turquoise), large frontal pig (red), and erotic torso curves (black). Enlarged at left, a right-profiled child (blue) held by seated woman (purple), frontal "nun" (red) and "society" woman (green) visage, all only a small part of complex imagery. Further examples of the same artistic techniques and motifs, may be viewed at The Institute of History and Philology (IHP), Taipei http://oraclememory.ihp.sinica.edu.tw/e-collection.htm.

Stonehenge 3000-2000BC

It has long been recognised that the stones carry some carvings, including later "graffiti". However, there has been little if any academic appreciation of the extent to which stones were originally selected for the potential of their natural shapes and colouration as well as subsequently carved, in varying degrees of relief, to achieve the suggestion of multiple, complex images.

The "Heel stone" lies outside the main circles, but there is no reason to think it any less old. In the first highlighted image below (a)), a right-profiled standing male figure (turquoise), a left-profiled female (red), and on the back of the man, a smaller apparently seated right-profiled figure (purple). The proportions of the figures are well observed.

In the second extract of the same perspective (b) below), the female figure again (blue), another partly left-profiled below (black, the eye sockets look entirely deliberate) an apparently older and seated frontal female (red), and a frontal boy carrying something (green, white). The two deeper indentations appear to be shaped to suggest a swallow and possibly a mouse hanging by its tail (yellow), possibly against the backdrop of a "Big Ben" framed clockface (at c), red, green).

The longer one looks, the more images are suggested. Some might be figments caused by lichen and similar. However, on objects that are as old as the Stonehenge stones are generally thought to be, it seems highly likely that different generations have added their own interpretations - a hole here, more abrasion there, maybe even added colour - with little regard for the fact that such interventions might compromise the effect of earlier art. Indeed, the gradual accumulation of received images was perhaps always part of the intent.
photo Ewen Roberts, see Annex 2, my extracts
Linear and cult motifs are clearer on a different side of the stone (photo Heikki Immonen see Annex 2). Whilst there is imagery on the left side suggestive of the basic motif, O KO KO WO, it is easier to see homonymic image and word play on TE RE O WA, such as the shepherd with typical hat and probably crook (red) watching his sheep, small and large (turquoise) - τηρεῖ ὀας, terei oas.

In the top half (my extract), the suggestion of more than one left-profiled bear (turquoise). The overall shape of the piece may be intended to suggest a left-profiled bearded human figure (the left side of his head red) carrying a pig head (green).
In the lower half, a woman's bending body heads towards us (green), man behind (yellow), with several suggestions of hare or rabbit (red, blue in b)). But the same area is full of suggestions of a crane or heron (red, turquoise in c)), homonymic word and image play on the formulaic expression PE RA KO KO WO, plus I think a right-profiled wild cat (green) distracted by a tail (purple). (The purple arrow in b) points to an area rich in play on the O KO KO WO and TE RE O WA motifs.)

So far all monoliths and similar that I have looked at in the UK appear to embody the techniques and motifs of Linear and cult art, as do many smaller stone objects (see Annex 1).

Maeshowe, chambered cairn (photo by Sigurd Towrie, see Annex 2)

Dating is difficult, but a prevailing estimate is late neolithic, around 2800BC. Maeshowe also contains the largest collection of runic inscriptions in the world, was "accessed" by Vikings in around the 12th century AD (so the saga), the external wall probably rebuilt in the 9th century AD. "Some archaeologists see this [last] as evidence that the tomb may have been reused by the Norse people (Wikipedia with sources)." There are other examples of reuse of neolithic sites in Orkney and elsewhere in the British Isles, that is to say reuse in both neolithic and much later periods.

Although the older Orkney sites are a treasure trove of Linear and cult art, I want to focus only on the runes. They are plainly intended to read like brief, ephemeral, sometimes obscene graffiti. But it is odd that even the most brazen Norseman chose to incise them in a site which otherwise seems always to have been revered, odder still to incise them with such effort and care. Like the Vindolanda tablets and many other caches, they have all the indicators of actually being part of something very different, and they do not disappoint.
In the first highlighted version at b), the frontal image of probably a shepherd (turquoise) with typical hat. Facing him on our right a sheep (purple), front legs akimbo, frontal heads and faces of other flock members along the bottom edge (purple, green). Another is suggested over his left shoulder (purple in c) below. Bottom right (black) a faint clock face. A girl's frontal face on the left (yellow) with suggestions of another clock face within (red). The profiled torso (blue) probably of a girl on a trapeze, maybe another clock (X) over her genitals. The images relate to the TE RE O WA motif discussed in Section 6.

In the second highlight at c), the figure (red) is perhaps a priest, maybe reading, one of several such outline figures suggested in the same area. The tiny figure (turquoise) above his brow is perhaps one of several acrobats. The figure with his or her back to us (green) may have erotic connotations. The combined incisions (yellow, green) suggest a posterior whose hem line is being pulled up by one or more creatures above (purple).
The importance of the rune-related art work is that (a) it begins to indicate how Linear and cult art continued as a tradition wherein later generations added to earlier, and (b) it is at least first millennium AD.

The Voynich Manuscript, 15th century AD (photos Beinecke Rare Book and Manuscript Library, Yale University, see Annex 2) (my extracts and enlargements)

The vellum manuscript contains undeciphered text plus images. The vellum has been radiocarbon-dated to the first half of the 15th century AD. Even if text and imagery are copies of some earlier version, the demands of the process would seem to suggest considerable awareness on the part of any copier of what they were dealing with.

The areas of undeciphered text function in much the same way as cuneiform on some Mesopotamian tablets or the Latin of the Vindolanda tablets. The "letters" and related markings are configured and deployed - for example by minute deviations - to help suggest images, including images in different rotations. It is possible, though not certain, that that is their sole purpose. The overt art work contains "hidden art", particularly in the green infill, like the use of areas of slip on pottery. The vellum is also cut, moulded, and marked by stains, like water marks, to contribute to the imagery, either in isolation or in conjunction with the text or explicit imagery.

The selection of images, the motifs, appear to reflect awareness of the signs and sounds of the formulaic phrases of Linear and cult art (Section 6). So in this extract from page 135, the large eye (blue) on the left, a right-profiled bird (green, one of several suggested outlines), a right-profiled man staring into a vessel he holds (red, yellow, maybe containing frontal rabbit in white), a frontal
sheep or goat head (black), and a left-profiled "busty" female, faintly but carefully delineated (purple).

One or more faces and fingers of hand in the stained "margin" (turquoise); the face may be reading.

On page 119, my coloured highlights show images suggested primarily by the configuration of the text. The purpose is only to show some of the effects. The eye needs some time dwelling on the page in order to see them. They are easier to see enlarged, more than I can spare.

The bottom of the page is moulded, coloured and text configured to suggest a frontal figure at prayer. That image is repeated here and elsewhere in the manuscript, and perhaps suggests a Book of Hours, though the "Hours", judging by the art work, are the Ὡραι, Ὡραὶ, O WA of Linear art (see Section 6).

On the manuscript's page 3 (below), some of the techniques combine precisely to suggest a frontal face (red in b)). Whilst vellum can deform or stain naturally to project approximations to such images (and modern scanners can also create ghosts), the likelihood of such random effect is reduced by the minute manipulation helping also to suggest the figures in c) (red, green), whilst staining, moulding and cut of more than one page are used to suggest (swollen) legs, feet and shoes on the right edge (turquoise), plus possibly the frontal face of a bear in the bottom right
corner (yellow). The tree (brown, right edge) is shedding very green leaves, possibly onto accumulated snow at bottom, suggesting Three Seasons (TE RE O WA, treis ὡραι, τρεις ὡραι).

b)

Whilst it is highly unlikely, probably impossible that the Voynich manuscript's author (or authors) was not aware of the techniques and motifs of Linear and cult art, to what extent will require considerably more study. But as the manuscript dates almost as irrefutably as irrefutable can get to the 15th century AD, that suggests awareness of the techniques and motifs of Linear and cult art as late as at least that date. Early medieval maps - Maximus Planoudes and Piri Reis - incorporate the same techniques and motifs.

But Linear and cult art may be found in many other Byzantine artefacts of all kinds and materials. I have no room to illustrate it here.

Possibly the Voynich manuscript represents the last great collection of such art, only this time on sheets of vellum, rather than clay tablets or figurines or standing stones or any other of the more plastic media on which it is elsewhere and earlier found aggregated.

Whether it is the last example of the creation of such art, the last such Linear or cult artefact, is less likely. See the discussion of dating and chronology in Section 10.

But it would be misleading to leave the impression that Linear and cult art extends only into the future from its apparent Minoan or Mycenaean origins.
"Chinese horse", the Axial or Painted Gallery, Lascaux, France (photo donsmaps.com, see Annex 2)

The Lascaux cave paintings are generally estimated to be some 17,000 years old. Like much other cave art, they demonstrate features in common with Linear and cult art, most obviously in terms of multiple, complex images of different scales, perspectives and rotations, often superimposed as well as juxtaposed. It has also been recognised that some incorporate some kind of signage. But in some cases the analogy with later Linear and cult art may go far further. Many images of Lascaux paintings now show facsimiles. In this particular case the level of detail may not be crucial, but I believe it is an image of the original or real art work.

First, several examples of images whose credibility should be assured by the precise use of line and colour. Firstly a right-profiled girl (turquoise), open-mouthed. She appears about to consume a large left-profiled shoe or boot (purple). A boy or girl looks over their shoulder at us (black). Plus several more schematic or cartoon images, such as the right-profiled standing or tumbling figures (red arrows). Finally, albeit difficult to appreciate as it presumably forms part of a far larger suggested image, an exactingly definitioned large right eye; plus possibly related nose and nostrils (bottom green).
In the second highlighted version below, probably more than one right-profiled body inside, as it were, the horse or unicorn (blue, green heads). One of them appears to be blowing up a balloon that looks like a breast and nipple (purple).

Some may claim that such images are unreal because inappropriate to the purported age of the Lascaux drawings. But on any normal visual criteria, they are every bit as real, probably more so than many of the cave drawings that are deemed appropriate.

Moreover, the images are concordant not only with the techniques of Linear art, but the motifs. In addition, it is possible that Linear signs survive on the cave wall. The most convincing is the probable combination of O or U and WA (green, red). I think the location of TE RE (yellow) is plausible and still just traceable.

Maybe the feature I have circled (turquoise) is another sign. But even without the signage, the images represent homonymic play with the TE RE O WA motif (Section 6). Thus:
- the red-arrowed cartoon standing figure behind the "unicorn" (green horn in the first highlight) is looking at its (or the inside human's) tail;
- the "unicorn" is looking at a nipple but also ears of grain (οὐλαι, yellow in the first highlight). It also seems to be grappling with or killing one or more bears, one on its "horn", one on its back trampled beneath its feet (both bears blue in the first highlight above);
- one of the men or women inside the unicorn is "making the tail". For the pantomime horse, compare the Argos kantharos in Section 8:

In addition, either unicorn or human has a bloated stomach, containing more imagery (white). That plus the large eye, large shoe, and maybe left-profiled girl apparently eating it all correlate to the basic motif, O KO KO WO.

There is much more verbal and image play, some now hard to discern because of fading colour and other attrition. The same techniques and motifs may be observed elsewhere at Lascaux and in other caves, such as the cave of Marsoulas (see Scripta Minoa I page 6).

As with the Maeshowe runes, they suggest that the caves may have been used for repeated projections of Linear and cult art over extended periods of time.

Blombos cave, South Africa, Middle Stone Age, +70,000BC (photos Chris. S. Henshilwood, see Annex 2) (my extracts and enlargements)

Several dating techniques are reported to have been used. Discoveries include red ochre lumps and sea snail shells perforated, abraded (attributed to wear), and sometimes coloured red. It may be a (remarkable) coincidence to find artefacts that relate conceptually to word play on the basic motif of Linear and cult art: O KO KO WO, ὀγκος ὠχρος, onkos wkhros, ochre mass; ὁ κοχλος, ho kokhlos, the shell (a special shell) or ὁικος χωρων, oikos khwrwn, moving house.
Attention has focused on the abstract or geometric patterning of the ochre, apparently because it is felt to be appropriate to the putative creativity of human kind at this reportedly early date. But the perception is replete with assumptions. From a different perspective, both the ochre mass and the shells demonstrate mastery of the techniques and motifs of Linear and cult art.

The suggested animal visages (green, purple) on the upper surface and corner may be pig, lion or bear depending partly on the angle of view. The right-profiled face (white) is detailed, but perhaps not as definitive as the one further right (red), marked by incisions for the right eye brow, left eye socket, and careful curvature of the side of the face and chin.

Although more Linear-related images are apparent from a slightly different angle of view, it is in rotation that the evidence is clearest. A left-profiled standing figure (green) holding lambs (white), presumably a shepherd. But other interventions are deployed to shift perspective to a frontal female (turquoise) carrying a frowning child (white), its lower face obscured. Linear art commonly depicts figures at the edge of pieces (see TE RE O WA in Section 6).
The precision is no less in the case of the shells. First, above, minutely detailed delineation of the eyes, brows and hair of the left-profiled female (green); ochre apparently used to suggest the larger right-profiled face (blue); and the perforation and incisions to suggest a right-profiled figure carrying a vessel (red), her head area shared by, but facing the other way from the other female (green).

Whilst in the second shell the perforation is again used to help suggest a left-profiled probably female (red). The detailing for the side of face and eye line are particularly remarkable.

The artists appear to have used the shells' natural features to help suggest images, but enhanced the effects with their own interventions, methods typical of Linear and cult art on pottery and stone. If the presence of such art is corroborated, it may look tempting to attribute the artefacts to a later date - roughly the last two millennia - when the cave was apparently next inhabited after long interruption. But, given the nature of the "cult", the difficulties with dating related art (see Section 10), and how little we know about early humanity, I would not rush to that conclusion.

Conclusions

From this necessarily brief survey, it appears that other tablets and other art works beyond the immediate Greco-Roman world demonstrate the techniques and motifs of Linear and cult art. One inference would, again, be that such occurrence lends support to the existence of the art on Linear objects themselves. Its presence on other objects, previously assumed to be "administrative", as in Mesopotamia, also undermines one of the more tacit assumptions of the Administrative Model, namely that the putative Linear " palace archive" paralleled other, probably pre-existing archival models in the ancient world. For the genuinely scribal or archival nature of at least some of their clay material now appears to be in considerable doubt.

Plainly, one issue is whether the wider evidence I have adduced is not, somehow, exceptional. I can only reiterate that the examples I have selected are illustrative of traits that I see in similar artefacts of the same areas and periods. In addition, the indications are that the same features may be found much more widely in regions and times that I simply cannot cover\(^1\). I leave it to others to validate these observations, or not as the case may be.

It may be premature, however, to conclude that apparently shared techniques and motifs really are shared or common. And for the same reason, if shared they were, it is difficult as yet to determine whether there was, say, a common origin or borrowing or mutual interaction or some or all of those, whether at only one time or repeatedly.

Whilst the techniques and motifs of Linear and cult may occur more widely, it seems that knowledge of Linear signs was not necessary or necessarily widespread. But if they are rarely found outside their apparent homeland, the art forms elsewhere nonetheless suggest awareness of the formulaic phrases that seem to underlie Linear and cult art, as proposed in Section 6.

That would be, on the face of it, hugely surprising. For, as it seems, the image and word play relies on knowledge of Greek, the images being representations of playing with the sounds in that language. The inference would be that, say, ancient Britons at Stonehenge knew Greek. Now a knee-jerk reaction is to say how utterly ridiculous. If it is agreed the art forms exist, one alternative explanation might be that the images that recur in art elsewhere, outside the Greco-Roman world, reflect homonyms in different languages; for plainly all languages can have word play involving words that sound alike.

\(^1\) The most distant being, thus far, Easter Island (statues, tablets, glyphs), among the more recent Rembrandt's The Slaughtered Ox and Isaac Oliver's miniature of Edward Herbert. But see Section 10.
But the widespread commonality of techniques and motifs might still or also be explicable on the basis that far-flung peoples did indeed, at some point, have an awareness of at least some Greek, to the extent necessitated by the formulaic phrases. The diaspora would be akin to the dissemination of Greek and Latin phrases - as well as accompanying iconography and symbolism - in the Christian church.

Nor is some such diaspora self-evidently implausible. It is one reason why I have prefaced this book with a remarkable if easily overlooked observation in Cicero's *De Natura Deorum*. It is unfortunate, perhaps, that "gentes" is imprecise in Latin. But taken at face value, the statement means what it says, that peoples of the world were initiated in the Eleusinian mysteries. Knowledge of Greek appears to have been an important element of those mysteries.

The Eleusinian, and maybe related cults appear to have been partly driven by a kind of cosmic scope or dynamic. The Homeric and Callimachean hymns to Demeter highlight the goddess's migration over the wider earth, but also the relationship of the earth to the underworld, moon and sun. A similarly cosmic perspective might have been reflected not only in the imagery (and maybe signage) of related cult art, but also in the propagation and dissemination of the cult itself. The judgement of boundaries in space and time is often subjective, and related observation can become trite or vacuous, but there may be something in the perception that at least some of the concentrations of what appear to be cult-related art are located at such boundaries or limits. An additional implication might be that Linear and cult art itself, as found in the Greco-Roman world, sometimes reflects art forms (in the design) and languages (in the signage) found elsewhere in the world.

I do not propose exploring the pros and cons of the argument any further here, but I must flag one potential qualification. A Greco-centric view of the cult may itself be an assumption or false inference. To my eyes, the artistry of Linear and cult art, as evidenced in Greece, does not exceed that found, say, in the British Isles. If anything, I would rate the latter higher.

An observation of a different kind can only be that a failure to see such "hidden" art (hidden, at least, to us) may have been far from limited to Linear objects. That previously apparently localised failing can now be better understood as symptomatic of and occasioned by a more general weakness that may have left other and similar casualties in its wake. So the fate of "Linear A" to be first created and then marginalised as an "unknown language" may have been shared by "Etruscan". For much of the evidence for that similarly and purportedly enigmatic language appears to have been based on "readings" focused solely on the presumed and overtly visible text, ignoring the larger art work in which it is embedded. It is impossible for any understanding of the language to be soundly based until such oversight is rectified because any number of putative word forms may turn out to be no such thing at all but phenomena akin to "vain repetitions" (see Section 1 and Section 3 note 3) or maybe Linear signs or Greek alphabeticals or various numeral types. Plainly, the putative "code" of the Voynich manuscript may be another example of a similar condition.

Mainstream research may dismiss the evidence for the "hidden" art, but I can only say that if it does so it will be as utterly and profoundly wrong as it has been in the case of Linear objects. For its existence is based no less firmly on
- an objective and rounded view of the formation, incision and colouration of the objects in question;
- the recurrence of techniques and motifs.

The neglect of some, or in many cases all of those interventions is no more scientific or evidence-based that it has been with the Linear objects. It is even less so to persist in such oversight whilst pursuing alternative theories that may or may not have some basis, but which are less secure than the evidence, difficult as it may be, for artistic interventions in the objects themselves.

The wider presence of Linear and cult art does not mean that different places and different periods did not also have, develop or change their own and other art forms. Those are still distinct and important.

Another of the features of Linear and cult art is its explicative power. It can begin to help explain the characteristics, the meaning of individual as well as collective objects where it has been only partly understood or not understood at all. It is notable that, by contrast, almost as a last resort, mainstream thought has had a tendency to query the authenticity of some "misfit" historic objects
or otherwise regard them as being somehow suspect. Examples might include not only the Voynich manuscript, but some of the European "Venuses" or the Tartaria tablets or the Kensington stone. Remarkably, the same fate has sometimes befallen objects from the Minoan-Mycenaean and Greco-Roman world itself, such as the Phaistos disk and Ring of Nestor. Hoaxes and forgeries do occur, but if one thing should be clear by now it is that Linear and cult art may or may not be difficult to create, but it has certainly been difficult for us, the post-renaissance generations, to appreciate. I think it will be found, over time, that many of the often suspect goods are outstanding examples of Linear and cult art, that their authenticity, as such, cannot conceivably be in doubt.

Their date, though, is quite another matter, and to that I now turn in the final section.
Section 10: conclusions

The evidence from the earliest modern discovery of so-called Linear tablets at Knossos indicates that they cannot be genuinely administrative documents. The prior assumption that they were - the Administrative Model - has distorted the treatment and viewing of all Linear objects ever since. On an objective and rounded view, one that tries to take account of all their surface features, they are full of multiple, complex, suggested and suggestive images, conveyed by internally coherent formation, colouration, incision and other indentations.

The reason why I have taken time and space to illustrate such art is not only because it is an essential part of the rationale of Linear objects, but because it has been so much overlooked (nor only in their case) when in reality it merits at least as much if not far more attention than any signs or script.

Until the evidence for and nature of the art work are more fully analysed and understood, further inferences and conclusions must remain provisional. However, it might be inferred that
- the graphic nature of Linear art and the apparently often complex inter-relationship of image and signage mean that the full and correct identification of individual Linear signs is considerably more difficult than the Administrative Model has ever conceived. If Linear objects are works of art, it remains a distinct possibility that on at least some objects what we see as signs may be art work or non-sense signs used as calligraphic devices;
- nonetheless, the meaning of Linear signs is capable of correlation with imagery - sometimes in a unique way (such as the Thersites stones in Section 4) - suggesting that the basic decipherment is correct, if incomplete;
- Linear art is also consistent with a larger tradition exemplified in particular by the as yet incompletely understood cult art of Demeter and Persephone and related mystery cults;
- such Linear and cult art deploys consistent techniques and cult-related imagery. The latter can be understood as representations of homonymic variants of formulaic phrases. A leading example of such word and image play is a basic motif O KO KO WO, correlating to - among many other things - a seated or standing figure carrying vessels, pigs and children. Additional formulae or additional Linear signs may provide the basis for further sounds and for further homonymic play and related imagery;
- Linear and related cult art is found across a range of objects, extends forward and back in time, and occurs in different geographical areas. That wider context not only helps validate the case for its existence, it may also be important for understanding its origins and nature. In so far as it has been rarely if ever perceived, it also points to a wider systemic failing when it comes to seeing what has been to us "hidden" art.

The analysis has already raised some difficult questions. The rest of this final section puts forward some further ideas and related discussion on both those and other issues arising. I can offer no resolution, only suggest some possibilities. Much depends on the dating and chronology of Linear objects, but I leave that until later as in many ways it represents the greatest challenge. A challenge not to the interpretation of Linear and cult art as summarised above - for that remains internally and externally coherent and consistent, for Linear and other objects individually and collectively - but a challenge, rather, for much else that has been taken for granted in understanding aspects of the ancient and not-so-ancient world.

Some outstanding issues relating to Linear signs

A fundamental problem remains that, to date, there is not one single example, so far as I am aware, of a Linear text that is not also accompanied by intense Linear art. There is no evidence whatsoever of the signs or script being used solely for mundane or secular purposes, so for example a text that is only a bare record "Sheep 3" or similar, with no accompanying imagery. Nor is there any strong internal evidence that the Linear signs were ever so used, not in "Minoan" or "Mycenaean" or later times, and not even "ideograms". Even when one has identified the signs on an object fully and correctly, the results are sounds which generate homonyms, and even if one

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1 Nor any external evidence, except perhaps the story of Bellerophon (Iliad 6.155ff), though the allusion may not be to Linear signs, and similarly Agesilaus's tablet and the Chronicles of Dictys (Section 3 note 4).
of those reads "administratively", it is in reality utterly useless for book-keeping. It doesn't even enable differentiation of proper names, one of the most basic of administrative functions, so that Aia and Aiias or Philos and Philon or Gorgo and Kolkhos would be indistinguishable. Yes, on occasion one of the homonyms or translations might, for example, suggest some kind of list (typically pigs brought for a goddess), but a list does not prove or indicate systematic accounts, it will be only one of the available meanings, and it will be accompanied by rich and diverse imagery. Nor do I doubt that Linear seals and signets could be used as they have always been used throughout history, namely to seal. The fact that they could doesn't disprove the presence of Linear and cult art upon them.

Far from invalidating the nature of the art as I have proposed, interpretation might be considerably easier if Linear signs really were also found with purely utilitarian purposes. It might provide a possible origin for the signs and script. It may be that there are as yet unidentified Linear signs on mundane objects that have not yet been recognised. Maybe the "Minoans" and "Mycenaeans" just never used clay for transactions, always perishable wood, vellum, paper, slate, wax and so forth. A related problem is the archaeological record. In general, in the case of most sites and finds all over the world, we see only "the best". In the context of Minoan and Mycenaean sites, the best includes objects with evident Linear signs. But how much else is stored in museum vaults, or was never recorded, or in particular was discarded or otherwise lost during excavation? Some research has been undertaken along such lines at Pylos. Of course, much may also remain to be discovered, if it ever can be discovered beneath later or modern development.

In any event, for the time being at least, the bottom line is that Linear signs are always inextricably linked with Linear art. They have no separate existence, nor do they ever appear to have had. The implication is that both they and their associated art belong and always did belong to a parallel world, not secular but sacred. That may seem a rash inference, but it is supported by the internal evidence of each object, and it also helps explain the incidence of their occurrence, as we shall see below. But then how did the script originate? Some of it may have formed by reduction or abstraction from repeated images. The basic motif (O KO KO WO) might be a starting point (see Section 6). The process of reduction involved in originally creating signs would in some respects correspond to the process of modern scholarship identifying the same ones.

I discuss other reasons below why the use of Linear signs for secular purposes may for ever be unlikely.

Particularly in "later" periods, it is possible that Linear and cult art could be informed, in various ways, by signs other than or as well as Linear ones, principally the Greek or Roman alphabetic characters, just like Linear signs often artistically distorted or arranged. It is also likely that any underlying verbal play remained primarily though later perhaps not exclusively based on Greek. Similar image and word play - whether or not based on Greek - may occur where similar art appears to be manifested in other cultures, such as Sumerian and Chinese. It is certain that Linear and cult art did not always need to carry explicit Linear signage. The images can be correlated directly to taken-as-read formulaic phrases and any scarcely less formulaic additions (Sections 6 and 7).

The formation of Linear objects, particularly as regards their signage, may have changed over time. One hypothesis might be that artefacts tend to get bigger and more elaborate as the years go by. On that basis, the earliest Linear objects would be small with few signs (seals and seal rings, "roundels", "nodules" and so forth). Larger tablets would be late, and perhaps based on visual analogy with records kept for trade and many other purposes in alphabetic Greek. For that is arguably what some of them look like. There may be some validity in such an argument, but I think it is unlikely to be wholly true.

The Linear script

The script itself, if it exists at all as I concur it does, has some highly challenging features, regardless of whether one adheres to the Administrative Model or acknowledges the existence of Linear art.

How old is it? I am inclined to agree "very old" because I am also inclined to accept that it incorporates signs for so-called "labio-velar" sounds (kʷ, gʷ etc) that in later Greek disappeared as
separate sounds, but came to be variously pronounced as "p" or "t" or "k" or their voiced equivalents. The strongest example is probably the Linear sign QA or QE for βα, ba, or βη, be.

How old is "very old"? I think at least predating the earliest formation of what became the Homeric poems, so before 1000BC.

The use of what might be inherited spelling does not guarantee the age of any individual object, but to be inherited it has to be inherited from something earlier, and there is no a fortiori reason why that something too, if and as an object, may not have survived even down until today.

Other features, however, suggest quite the contrary, that the script may be "late", for example: - the dropping of final consonants (-r, -n, -s), broadly as in modern Greek; - as I propose, the use of "i" and "u" as equivalents to the development of Greek alphabetic η (eta) and ω (omega), and some of the other features discussed in the conclusions to Section 6.

It also seems likely that it became acceptable to use the labio-velar signs like QE not only for words that etymologically contained such labio-velars, but also for words that didn't but shared the sound into which labio-velars evolved ("t" etc). Ultimately too, words which should have been spelled with a labio-velar were instead spelled with a sign for the sound into which that had, by now, evolved. A context of homonyms and word play aided and abetted the churn.

Then the treatment of "s" is puzzling. I agree with received wisdom that the Linear script or "spelling rules" normally drop "s" before other consonants. Now there is certainly a trend in ancient Greek, as we know it, to change an initial "s plus vowel" inherited from "Indo-European" (lesser so an intervocalic "s") to an aspirate "h-", which might in turn have been barely sounded at all. That shift might suggest that "s" before consonants was also, at one time, vulnerable, the Linear script reflecting that. But so far as I know, there is little evidence of such routine vulnerability in written records of ancient Greek from any period. If there is any real trace of it, I would venture that it may be in some more recent Greek pronunciation.

One possibility is that the Linear script reflects Greek as it was commonly and actually spoken - some of which spelling became fossilised, some not - whilst alphabetic Greek reflected how it should be pronounced. As the Linear script does appear to be old, that would suggest something like the bifurcation between "demotic" and "pure" Greek could go back a long way, that when we base our understanding of Greek language development solely on alphabetic records we are seeing only half, or less, of the story. The Greek behind the Linear signs also appears to be what we might consider a standard Greek, almost a κοινη, common tongue, as some have already proposed. Certainly, with few exceptions, it doesn't suggest adherence to or even awareness of marked dialect forms.

But appearances may be misleading. For example, the Linear script may have evolved over time. It may be reflected differently on different objects from different periods. But given that the objects themselves are intrinsically difficult to date (see on), that is no great help, either way.

The fundamental difficulty may be that the script is inseparable from the idiosyncratic context of cult art in which it is found, with its own received as well as evolving practice, its own rules or (very liberal) licences. At present I am doubtful that it can ever be used as a dating tool or as reliable evidence for language development or language variation, such as dialect.

Making of objects

My assumption had long been that the Linear clay tablets were normally fired, as I mistakenly thought only fired clay would preserve the original moulding and incisions and maybe some colouration, and Linear art seems to be something its makers and users would have thought worth preserving. But I no longer think deliberate firing is necessarily the sole or even most plausible scenario. Chadwick and Bennett experimented with seeing how long clay could dry or cure before being remoistened, reworked and reincised. The minimum was reportedly six years. In addition,

2 So Greek "τε", te, "and" is probably spelled with the Linear sign QE and TE.
3 There are one-offs, like κωψ σκωψ, kwps and skwps, owl for which see O KO KO WO in Section 6.
4 See page xxxix of DRAFT VERSION, NOT DEFINITIVE: Bennett, Melena, Olivier, Firth, Palaima, The Palace of Nestor at Pylos in Western Messenia, Volume IV: The Inscribed Documents, uploaded by J Melena to https://www.academia.edu/5788888/DRAFT_VERSION_NOT_DEFINITIVE_Bennett_Melena_Olivier_Firth_
both the Pylos and Knossos excavators reported that some tablets were "soggy" - and therefore presumably reworkable - and yet subsequently evidently hardened without impairing whatever legibility was already possible. Whatever or whichever the case, any later accidental fire exposure might therefore have damaged rather than preserved the original colouring, possibly slip, incisions and abrasions. In addition, the assumption that Linear clay objects survived only because of accidental firing in palace conflagrations is not only unverifiable and unfalsifiable, but, on the evidence of both the attested "sogginess" and the reworking experiment, highly questionable.

It may also be that some Linear clay objects, fired or otherwise, were encased in gypsum or other material, such as wood, the frame of which might have provided structure and stability as well as additional artistic potential. It would be wrong to assume that Linear artists were averse to dealing with or creating "cracks" in their clay. For they too can be exploited to suggest imagery.

Another possibility is that Linear objects, perhaps all such objects, were modified over time, perhaps year on year, with interventions to add to the complexity. Initially I was reluctant to countenance the idea because, to my eyes, there were no examples of non-complex Linear objects, ones in early genesis or evolution as it were. I now think I was wrong. They are all complex from first inception, but some evidently become more complex than others, some showing a bewildering layering of imagery. So I increasingly find the notion plausible, in line with the reuse of sites and objects attested elsewhere and at other times (see further below). Certainly, Linear artists were not concerned about over-writing other images, whether or not all made at the same time. Indeed such effect seems to be a main feature of the art and related cult or culture. Linear objects may not have been completed at any speed. The non-clay ones in particular could have been refined over many years, conceivably seriously long period of time, by different artists.

How were the Linear clay objects made technically? How difficult were they to make? Important questions to which I can offer little by way of answer. The number of full-blown Linear and cult objects that have survived at individual sites from a period spanning not just many hundred but many thousands of years is proportionally small, even tiny.

One remarkable feature of much Linear art is its small, even microscopic scale. In many cases, it is only possible to appreciate by enlarging an image of it, for example on screen. Holding the object closer to the eye goes some way towards achieving the same effect, but not all nor in all instances nor is the phenomenon confined solely to Linear art, but it extends, for example, to some Anglo-Saxon or Viking artefacts.

Finally, it is likely that, particularly in the case of the clay objects, more than one technique of design and manufacture was employed, and that techniques changed over time. The skills may also have been many hundreds or thousands of years old by the time Linear objects were produced in Greece and Crete, even pre-dating the use of clay for domestic utensils.

The condition of Linear objects

Linear art and culture evidently wanted to produce objects that looked broken, incomplete and worn, physically, visually, semantically. We know that is true for two reasons. Firstly, the visual evidence of objects, where apparent breaks and similar interventions (often, on reflection, hard to explain as natural or random occurrence) contribute to or coincide with imagery. Secondly, the frequency with which Linear signs denote or images correlate to RI MA or SI MA (ῥηγμα and ψημα, "thing broken", "thing worn" see Section 6). It is probably no accident that many Linear and cult objects, in Greece and elsewhere, are found in refuse or "tidied away" in caches. Such behaviour might reflect decent retirement, like old hymn books and bibles that no-one has the sang froid to destroy. But there are probably deeper concepts at play, for example the awareness that there is a temporal cycle, that old mother Rhea is replaced by her younger daughter, but also that what is apparently insignificant may turn out to have hidden meaning, above all that things broken can be recycled to continue life, tokens of a life after death.

Linear and cult objects are never complete or "perfect". The observation or the concept applies to the whole object, but also the individual images, signs and sounds it conveys. As a result, multiplicity, complexity, suggestiveness are pervasive, inextricably linked to both sight and sound. Just as parts of images are incomplete (missing limbs and so forth), so the identity of individual
signs can be imprecise, and signs and their related sounds are routinely and deliberately omitted (the Linear "spelling rules").

Quite why the art and culture took such form is an interesting and important question. One obvious, almost practical consideration is that such techniques make for more art, both visual and semantic. A piece moulded to suggest a headless and not a perfect torso is so much easier to envisage as conveying other shapes as well. It is not an exact analogy, but script with signs omitted is as suggestive as, say, B*O*D.

The purpose of Linear and cult objects

It is natural to ask what the individual objects on which Linear art is found were for. Natural, but not as straightforward as it may sound.

At times, the strongly erotic, even teasing content of many if not all Linear and cult objects can suggest that they are not "cult" or "religion" or even "art" at all. Some days they can seem more like the pornographic library of an over-sexed Greek or Roman aristocrat, or a Vindolanda soldier. But that would be a distortion. The fact is that the erotica can often be the easiest imagery to see because the human form has not changed (undressed), nor how it "idealises" or idolises sexual activities. Viewed from one perspective, the Persephone myth - the heart of the fertility cycle - is about rape. It is hardly surprising if related images are explicit. That does not necessarily tell us anything concrete about either real-life attitudes or behaviours. Those who made and viewed what may seem to us highly charged and ambiguous erotic scenes would probably have been puzzled, even horrified by Christian imagery of the crucifixion. Nor of course is it true that Linear art is only erotic. The erotic motifs are important, persistent and pervasive, but still only one among many, many others in Linear and cult art. In some respects, like the images of the basic motif (the figure seated or carrying, the vessels, the pig, the child) they are not, in themselves, particularly hard to suggest. Finally, the sheer complexity of Linear and cult art, together with the distribution of related finds over time and space, make the pornographic library thesis not just unlikely but impossible. Which is not to say that some objects might not be deliberately more eroticised than others, but overall the Kama Sutra or eroticism of Hindu temple art might be a better analogy. The motives behind erotic art or cult can also be complex, and surprising.

It might be easier to say what Linear objects were for if we could be more certain about the nature of the sites where they are found en masse. I think now we can. There have always been solid negative reasons why at least some of the purported "palace" sites on Crete are not palaces. There have also been grounds for canvassing the idea of sacred sites instead; for example the "throne room" at Knossos provides an exact "real-life" parallel to the throne on which a seated goddess (Kore) is depicted on seals and other objects, guarded or accosted by various manifestations of her abductor. However, the Administrative Model appeared to provide the evidence for a palace economy, and vice versa.

Not only is the model demonstrably wrong, it is now possible to put in its place a valid alternative, namely that the sites are cult sites along the lines of the later sites of Demeter and Persephone and other chthonic deities. The analogy is born out by the cumulative numbers of objects found, their patterns of distribution as well, of course, as the continuity of their content in terms of artistic techniques and motifs. The designation also fits the architectural lay-out and development:

"The first six centuries of its architectural development display a gradual accumulation of separate parts - outer walls, terraces, gateways, steps and access doorways, "storage" rooms and other miscellaneous but all too frequently unidentifiable utilitarian structures, water works, and, above all, individual independent shrine houses, whose collective appearance appears to be the consequence of practical requirements present from the outset of the cult."

That reads exactly like a description of the palace of Knossos. In fact it is a description of the extra-mural sanctuary of Demeter and Persephone in the Wadi bel Gadir, Cyrene.

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5 The Court Compounds of Minoan Crete: Royal Palaces or Ceremonial Centres? Jan Driessen, Athena Review Volume 3 Number 3, 2003, on line at http://athenapub.com/11court.htm. I would extend the question to mainland Mycenaean sites.

Another reason to accept the analogy with later cult sites is the strong possibility that at Phaistos and Knossos a temple of the goddess Rhea "later" occupied a part of the earlier "palace" site. Until now, perhaps, it has been easy to dismiss any such presence as a vaguely defined later adjunct when it points instead to a real continuity.

In principle, therefore, and on multiple grounds, it makes excellent sense to see the larger "palace" sites, on Crete (and possibly some or parts of those on the mainland), as akin to later cathedrals or abbeys with chapels, private or otherwise, and used for a range of ritual purposes including, as later at Corinth, feasting or dining, and to see some smaller sites as akin to churches, chapels, shrines (as is already the case for some of the mountain sanctuary sites). But things are rarely quite that neat, and there are cross-cutting considerations:

- Linear art, like later cult art and art forms, is also found elsewhere on what are not at all or not obviously or explicitly cult objects or cult sites. In such cases, the concentration is less intense in terms of both the representation on the object and the numbers of objects, but it is no longer difficult to explain the occurrence of Linear objects in such "non-palace" (now non-cult site) contexts. It may reflect various personal observances in a domestic setting (see on), or the persistent and pervasive influence of Linear and cult art on art works generally;
- the cult, both in Greece and elsewhere in Western Europe, appears to have long had a close relationship with the house, maybe in some cases an "ideal" or "ancestral" house, as a sacred area, or its foundations or renovation. In addition, the common practice, of laying down new floor levels, especially, and in origin, "earth" floors, may have suggested the obvious parallel that the old (earth) level equals the old (Mother) Earth, the new one the new Earth (her daughter). Hence the burial of related artefacts in one or both layers; see above on RI MA and SI MA. In short, there will still and always be difficulties about when is a house a palace and when is a house or part of a house sacred;
- larger cult sites, just like abbeys and cathedrals, probably had all manner of adjacent and incorporated facilities, food preparation, building maintenance, manufacture, and residence whose nature is not primarily religious;
- boundaries between sacred and secular areas (perhaps not the best terms, but they will do) change over time as areas come into or out of use for different purposes.

So whilst the basic premise, the analogy between sites where many Linear objects are found and later cult sites, looks right, there is still much to sort out both in general and in individual cases.

Moreover, whilst historical records and archaeology have given a reasonable, if far from complete idea of the general nature and purpose of the later cult sites, that does not, after all, much help to explain the purpose of individual objects. At later cult sites, the figurines are often described as "dedications", but it is not clear to me what a "dedication" is, particularly when the object carries no dedication as such and particularly in the context of a mystery cult.

When, in the days before the Knossos excavations, Sir Arthur Evans was in quest of seals and seal rings with "hieroglyphic" or linear signs, he recorded that:

"My search for perforated seal-stones and gems was greatly helped by a piece of modern Cretan superstition, shared by other islanders of the Aegean. Such conveniently bored stones are known to Cretan women as γαλοπετραις or 'milk-stones', or sometimes γαλουσαις or 'milk-producers', and are worn round their necks, especially in times of child-bearing, as charms of great virtue (Scripta Minoa I page 10)."

The implication is that Sir Arthur regarded the association of the objects and their signs with fertility as a much later invention, a "superstition", though it is not clear to me how the "superstition" could have arisen or how he thought that it did. It seems to me far more likely that the superstition preserved until at least the late 19th century a "folk" memory of the origins of both objects and signs in the much earlier fertility cult. However, I think it less likely that the objects were fertility charms at the time of their manufacture. Their pattern of distribution, or rather the lack of it and instead their heavy concentration at certain sites argues against such a hypothesis.

One alternative is that many Linear and later cult objects (particularly the tablets and figurines) played some part in cult "mysteries", a role which might fit the intensity of their imagery and semantics, the difficulty (as I can only assume) of their making, and, judged against the periods of

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7 It is also interesting that Evans chose to use a quasi "pure Greek", hybrid plural "αις", where modern Greek uses "ε(ς)". For Linear "E" as also representing "ai" see the conclusions of Section 6.
time involved, their relative rarity. *Par excellence*, such Linear objects fulfil the commonly assumed "mystery" functions of deiknymena, δεικνυμένα, things shown, images, and legomena, λεγόμενα, things said, script, and conceivably in some cases even drwmena, δρωμένα, things enacted, where one of the meanings of the object perhaps corresponds to a charade or dance. The objects are intrinsically and inherently revelatory, perhaps even more so viewed in different light, for example an intense light to reflect images from their surface (compare the GORILA ghosts mentioned in Annex 1) or viewed through a magnification device or, perhaps especially, in the twilight or firelight.

However, I still cannot quite see what their function would have been. I think it unlikely, for example, that they were brought out for solemn group discussion at festivals. Shown to individual initiates as some kind of exercise or test, or sources of hilarity, ribaldry and perceptual and intellectual acumen, maybe. Or perhaps they are far more like some of our own purely religious art works, as inaccessible as some literally high art in cathedrals, only in this case hidden away or too small to see. Or different objects may have had different purposes in different places at different times.

But it may be a fundamental mistake to try to fit Linear and cult objects into our preconceptions of purpose and function at all, to presume that they must conform to what are, in fact, quite literally later social constructs. An alternative view would be that Linear and cult art simply predates all that follows. It is larger, more fundamental, more basic than anything else. That doesn't mean that it is the only thing that mattered either then (whenever "then" was) or that matters now (as we reconstruct the past). Plainly, its importance relative to other factors changed or was diluted as time went on and human life became (as we are prone to think) more complex. But Linear and cult art is so basic that it has its own rules, it doesn't need to conform to later patterns, and it is both persistent and pervasive. A kind of folk lore art.

On that assumption, it may be a more valid approach to understand Linear and cult art at a higher, more abstract level than it is to invent specific but extraneous and anachronistic functional purposes for the individual objects on which it is found. That is tantamount to saying that it really is better to understand its root purpose, wherever it is found, on the basis of its fundamental and distinguishing characteristics, namely its artistic technique and its content, its motifs. So I shall try to do so.

What both seem to be about is something at once simple and profound, namely humankind's relationship to the world, how you make sense of that world, as mediated by the artistic techniques, and how that world works, as mediated by the motifs or content.

Thus the artistry asks "Can you see all the sense in the images I make?" Perhaps the origin was cave or rock art, and the multiplicity of forms and images that may be projected, then enhanced in the features of rock. But the artistry isn't confined to image. For it also asks "Can you hear all the sense in the sounds that I make?" Linear and cult art is full, deliberately so, of different perspectives, both visual and semantic; so for example bears are both an infernal nuisance, but also adorably cute; Kore is both benighted and a bitch; even Mother Earth is both matron and old hag (or worse). If there was one adjective that sums up what it is all about, it would be the adjective Homer uses to describe the wily Odysseus, namely polutropos, πολυτροπος, "of many ways or turns", exactly describing the way in which one needs to rotate a Linear object to appreciate its images (and sometimes signs), but also "of many tropes", descriptive of the way in which one needs to turn over the sounds in one's mind to appreciate the homonyms. The old idea, as it now is, that some of the Linear tablets might be "school texts" has some merit, though, if true, I doubt that the "texts" were aimed at any one age group.  

Nor do I think it in any way fanciful to propose the mental gymnastics involved in "reading" Linear and cult art as a starting point for or parallel to the contemplation of natural philosophy. For example homonyms of the basic motif can prompt abstract contemplation of mass and space (Ο ΚΟ ΚΟ ΒΟ, okhw khwron, or, κοιλόν, ὄχω χωρὸν or κοιλόν, I occupy space or a hollow, or onkos...
koilos, ὀγκος κοιλος, hollow mass, and so on). But the same mental processes may also have prompted or abetted more practical applications.

In terms of motifs or content, Linear and cult art is not about spirits or ancestors or the afterlife. It would be wrong to say that individuals don't matter as individual beings plainly do feature in its art. But they are most definitely not its focus, hence they are very, very rarely named. For Linear and cult art revolves repeatedly and almost entirely around the fertility cycle, in all its simplicity and all its complexity, with a relatively small number of themes repeated with a probably infinite variety of image. As a result, Linear and cult art, the cult or culture itself, comes across as rational and materialist. It is also cold and impersonal. Sex is (almost) the only guarantee of immortality because it is the only way of perpetuating life.

But that is not quite the end of the story. For there is also the Linear art itself, in whatever context it may be. Perhaps part of its cult or cultural significance is, after all, its own overwhelming artistry; for it conveys an intense, uncontrollable albeit impersonal vitality. In its own way, enhanced by its frequent appearance of antiquity (maybe also occasionally futurity), it too seems to guarantee not personal immortality, but a glimpse of a kind of eternal life.

Against this background, the higher level "purpose" of Linear and cult art, it becomes slightly easier, I think, to see how it is then reflected in different contexts. The deceptively basic art and its homespun beliefs can find a place in intense religious art or as piece of jewellery, just as today profound religious or other sentiments also find expression as "body art". In such contexts the art plainly has more than one purpose or function, as do the objects on which it is found.

That still leaves a good deal to answer, and the answers, if they ever come at all, will only follow from fuller and closer study of the images and scripts.

Dating and chronology

The conclusions to Section 1 already flagged that the proposed images of Linear objects were likely to challenge either the putative date of the objects or our understanding of what is appropriate to that date. From the accumulated evidence since, a by now obvious inference may seem to be that Linear and cult objects, wherever found and howsoever currently dated, may actually date from a time after that which is currently opined, maybe considerably so.

So, if Linear and cult objects seem to show "anachronistic" images of technologies (clocks or lenses or maps or money) or dress or physiognomy, then those become comprehensible if the art work on the object (not always the same as the material of the object itself) dates from later than currently thought.

At present I think it is difficult to clarify the issue further. There are many unknowns and variables. Certainly, a common feature of sacred sites is that they are home to depositions later than their own structure or other artefacts in them, and that they themselves undergo renovation. An older object - charcoal or ochre or bone say - might be dug up, decorated, then reburied at a (considerably) later date. Such practices would seem to be particularly congenial to a cyclical fertility cult. Unless one is lucky enough to have some independent means of dating (such as church or temple records, datable inscriptions, datable construction materials or methods) it can be difficult, if not impossible, to determine the true age of the different parts or their inter-relationship.

From the relatively few excavation records that are readily available, it is clear that many Linear objects were not found in glorious isolation, in some kind of virgin or discrete layer, but mixed up with artefacts from other, often later periods. Thus

- "Pernier was openly sincere when describing the material found together with the [Phaistos] disk, deliberately noting Mycenaean and Hellenistic finds that accompanied it (page 60);"
- at Petras "the preservation of the palatial building... was less than perfect. It was very close to the surface... Furthermore, the construction of 33 Byzantine graves had caused serious damage to the Neopalatial walls... The finding of the first Linear A tablet, just below

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10 Notes on the authenticity of the Phaistos disk, Pavol Hnila, Anodos 9, 2009, pages 59-66. I agree with his conclusions. See also SM I page 273.
the surface in a disturbed layer containing many Byzantine sherds... (page 8)."

Nor is it clear that the "hieroglyphic archive" was much if any less compromised;11:
- "The initial cataloguing of 1,240 bags of pottery sherds [at Volos] produced... two fragments of Linear B tablets; both tablets were found in pottery crates (page 60)."

The footnotes explain that the contents of the crates included variously Mycenaean, Minyan, Geometric, Classical-Hellenistic, Late Roman, and Byzantine;12
- at Knossos and Pylos it is, I think, well known that Linear tablets were discovered by Evans and Blegen almost as soon as they started digging and very near the surface. Evans also recorded that "In 1895 I was shown part of a burnt clay slip... presenting some incised linear signs... It had been apparently a surface find, and there was nothing by which to determine its age."13

In addition, at many sites, for one reason or another, levels above those in which Linear and cult objects were found have been removed or so seriously damaged that it is impossible to tell what, if anything, was there and - crucially - what its relationship was to those lower levels:
- at Phaistos "Important remains in fact survived from the later Greek and Roman periods over the palace, but they had to be removed to enable the excavation to take place";14
- at Malia, "Minoan characters" were reportedly already visible above ground level before excavations began in 1915.15

At Knossos, on current evidence, the town outlasted the "palace" by at least a millennium, and excavations began at the "palace" twenty two years before Evans. His own excavations of the main palace were largely completed in just three years. So how do we know, for example, that there wasn't a "later" temple of Rhea at Knossos which continued to have privileged access to "lower" levels ("the labyrinth") for decades, even centuries after the "Minoan" period or whatever time it was when those lower levels had ceased to be commonly accessed from the surface, and not just perhaps for depictions, but for other active, including festive purposes?

Dating cult objects at sanctuaries like those of Demeter and Persephone at Corinth and Cyrene is similarly notoriously difficult, for all the reasons already set out, including the collation and deposition of figurines, rebuilding, and the intractability of stylistics. The continued use, reuse and renovation of ancient sites and, to some extent, associated finds by later - often very considerably later - generations has become increasingly, if not yet fully, understood in the British Isles. The same phenomenon occurs, for example, at Göbekli Tepe. In that latter case, however, I do not believe that we know how long the site continued in use because the top of the tell has again been "disturbed", possibly as late as or even later than the Byzantine period. Much remains to be excavated.

Similar considerations might apply to stone age and early bronze age finds in southern and central Europe, including Greece itself, and elsewhere in the far wider world. Whilst there may be dating evidence for the great antiquity of a given site, that doesn't mean that all its structures and objects, even if found in equivalent levels, are necessarily as early. These things are hugely difficult to determine, even with - or maybe partly because of - modern dating technologies.

The repeated restructuring that assuredly did take place over many centuries, possibly even millennia, at British and other sites suggests a further hypothesis. For the restructuring does not always appear to have been gentle, but rather sometimes quite radical. If at least some of the "Minoan palace" sites are wholly or partly cult sites, then maybe what we assume to have been natural or hostile damage may rather have been, in some instances, quite deliberate restructuring. It would represent, on a large scale, the same mentality, discussed above, which resulted in the jettisoning of figurines or tablets as "rubbish" or their interment in floors and walls.

11 The hieroglyphic archive at Petras. See Annex 2. I intend no criticism. Metaxia Tsipopoulou well describes the finds and the difficulties.
12 Two new Linear B tablets from the site of Kastro-Palaia in Volos, E Skaﬁda, A Karnava, J-P Olivier, Études Myceniennes 2010, Biblioteca di Pasiphae X (Pisa Roma 2012), pages 55-73, on line via www.academia.edu
13 SM I page 17 and note 1.
15 A guide to the Minoan Palaces, as above page 101.
16 Where there is also no shortage of Linear or cult art. I have no room to show it here.
So how late could Linear and cult objects be? It may be difficult or impossible to rule out their continued production right down to the present day. There are several grounds for so thinking.

Linear and cult art seems to be very old in origin and also very widespread. As a result, one may postulate that both the artistic techniques and to some extent the cult beliefs became absorbed in popular culture, as a kind of folk art, for example Evans’s "γιολοτετράις" (whether prized "antiques" or "reproductions"). Artistic and cultural traditions may have been perpetuated long after, say, the Theodosian decrees. The tension or conflict between the fertility cult and Christianity is not - at least on the surface - as immediate or as great as is the case with the "state", Olympian and many other more personal cult deities of the Greco-Roman world. The Christian calendar appears to embrace the annual fertility cycle. Perhaps the two "world views" continued to co-exist. Even if relations were not always so benign, there is no reason why the cult should not have been perpetuated, diluted or otherwise, by "secret" societies long after the rise of the established Christian church or churches. It would hardly have been in their interests to broadcast their continued existence. It still wouldn't. But there may be stronger, intrinsic reasons for their silence, which I shall discuss shortly.

Contemporary scholars and artists must also have been aware that the artistic techniques and fertility cult continued among "pagan" peoples, such as the Norse, well into the first millennium AD. But knowledge of the techniques and motifs could also have been transmitted, albeit perhaps gradually disassociated from the originating cult, via guilds or apprenticeships. In art schools very little may have been written down over the centuries or even millennia, but a body of knowledge nonetheless regularly transmitted, perhaps not to all, and perhaps increasingly rudimentary - the formulaic phrases and the most common images associated therewith - as compared with the full-blown expertise and versatility of cult art in earlier generations.

Over the course of time, those still deploying such art, howsoever derived, may have become increasingly unaware of its origin, or its presence in objects from the ancient world.

Yet reasonable as that observation might initially seem, the evidence does not entirely support it. By its nature, Linear art would appear to be particularly relevant to what we now might loosely term collage. Lucian Freud produced a work entitled Man’s head (Self Portrait III) in 1963, now in the National Portrait Gallery in London, though under restrictive copyright. It is a painting packed with Linear art's techniques - multiple, complex, suggested images - and its main "fertility" motifs, as those relate to the underlying formulaic phrases (see Section 6). One may observe, for example, the right-profiled corvid that forms the hair at the top of the head, or the left-profiled swan neck framing the left eye or the pig snout bursting into the left cheek, its ears and face in the right.

It is a masterpiece of its kind, comparable to KN Cn 911 in Section 1. As a result, I would conclude that Freud was painting with considerable awareness of the tradition to which his painting so graphically contributes.

Exceptionally talented it may be, the painting may also be only one of a kind. Nor need such art be always "highbrow". It is possible that it has been perpetuated, one way or another, not only in art schools, but in folk lore or folk art. Chilbolton in the UK is famous or infamous for, among other things, crop circles. It would be hard to conceive an art form more suited to the kind of earth-dominated fertility cult illustrated in this book. I have no intention of entering debate about who, why or how, nor need all such manifestations enjoy the same origin. But one such crop circle (photo below) can only have been devised by those somehow familiar with the techniques, motifs and formulaic phrases of Linear and cult art. The ground formation, crop or photograph have been manipulated with great precision to suggest a frontal pig (red), a child maybe two, one being swung and kicking the sphere (turquoise), a face looking from behind, maybe holding the child (brown), and a clock face with hands (blue), whilst a small eye may be associated with several other images (green). The overall design suggests a simple cart on a large wheel (ὀχος χωρουν or χωρου, okhos khwrwn, or, khwrou, cart going or of the country), whilst the alleged alien is staring at a belt of three stars (τρεις ὁραι, treis horai, he looks at three).

Of its kind, it is a work (whether of the crop or photo or both) of immense skill, laden with additional suggested imagery. I will pass over, for example, the erotic potentialities, only to observe that modern focus on the supposedly immediately obvious image of an alien and on


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decoding the alleged digital code or text in the clock face constitutes an exact parallel to historic concentration on Linear text at the expense of Linear art.

Chilbolton crop circle, Crabwood formation (photo source see Annex 2)

There must therefore be a strong possibility that there are people alive today, maybe in many different countries, familiar - for one reason of another, to a greater or lesser extent - with Linear and cult art. If they choose to continue the tradition in their own ways, it cannot properly be called forgery or hoax, though their productions - and those of any in preceding centuries - would certainly and hugely complicate what we think of as the archaeological record.

A radical option would be to conclude that that same record is now so fragile, so difficult that current datings and chronology of artefacts are either unreliable or plain wrong. I cannot address that further here. But even if the observation were partly true, eventually it becomes self-defeating to argue that later generations were perpetuating artistic techniques and a related cult if there was no basis for their antiquity, if all objects of antiquity have been redefined as more modern.

And there remains another, completely different though not mutually exclusive option, namely that it is our understanding of the technological competence, life style and so forth of earlier ages that is wrong, that they were more advanced than we think, as now reflected in the imagery of - let us for a moment assume accurately dated - Linear objects. The additional hard evidence in favour of that view might be things like the discovery of ancient lenses, the Antikythera mechanism, and a scattering of references in the ancient literature. A particular difficulty is our relative, arguably gross ignorance of the technological and other sophistication of Byzantium and the wider Byzantine world. The obvious countervailing view, and received wisdom, is that "the ancients" cannot have been so advanced because the generality of their written and material historical record, its silence, appears to suggest quite evidently that they were not.

It is worth approaching the issues indirectly through a wider set of related problems.

The problems of silence

Sir Arthur Evans was largely driven to pursue his initial explorations because he believed it impossible that a "civilisation" as sophisticated as the Mycenaean could have flourished without a writing system. With hindsight, it was a disastrous assumption that distorted his own and later generations' objective analysis of the items he went on to discover. It was even more unfortunate

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18 Third to first millennium BC crystal and glass lenses have reportedly been found, for example, on Crete, at Troy, and Nimrud - http://www.ancient-wisdom.com/optics.htm. See also https://www.college-optometrists.org/the-college/museum/online-exhibitions/virtual-microscopy-gallery/proto-microscopes.html

19 The inventions and treatises by Archimedes of Syracuse, Philon of Byzantium, and Ktesibios and Heron of Alexandria, dating from the mid third to first centuries BC, concerning clocks, pneumatics, and other ingenious devices and theorems, can only be following precedents. The unknown is how far back the science and technology go.
The Problem with Linear B

as the early chapters of Scripta Minoa I, tracing the course of human signage from cave art, are enlightened and enlightening, and suggest that things might have taken a very different course. But his assumption was also a natural one to make, and, on the face of it a very reasonable one.

The question may still validly, now even more validly be put. Assuming that they really existed, that current dating is broadly correct, is it credible that "civilisations" as sophisticated as the "Mycenaean" and "Minoan" flourished without writing and record systems? As the existence of Linear and cult art indicates (thus far) that Linear objects are not evidence of that writing system, where and what is it? Images on Linear objects of individuals reading and even writing might suggest that some such system must have existed.

The options appear to include:
- the Linear script was also used for other purposes. I have already discussed the absence of any evidence to that effect to date;
- the "civilisations" concerned used some other writing system. Perhaps they were using Egyptian or Sumerian, rather like the use of French or English as an international language in recent times;
- all Linear images of reading and writing date to after the introduction of the Greek alphabet. That would suggest that such images and objects date to after the late 9th-8th centuries BC. However, another hypothesis (which is assuredly not new) might be that the Greek alphabet developed earlier, conceivably much earlier than we currently think, and that what we assume are its early or primitive forms are in fact variants, for one reason or another, from already developed "standard forms".

I do not intend discussing the arguments and elaborations further here. For if there is an answer, it may partly be wrapped up in arguably a far better evidenced and far more baffling set of related silences.

The Administrative Model assumes that Linear scribes formed such a secretive guild that knowledge of Linear script died with their elimination in some catastrophe. As assumptions go, it is rather like a nuclear bomb, and takes the argument "the scribe alone knows" to an ultimate, rather dismal conclusion. But even in its own terms the Administrative Model's assumptions are, for once, falsifiable. "Linear A" was not confined to what it sees as palace archives. The AM's immediate answer is that not just scribes, but everybody else "in the know" was wiped out too. Now that, too, may appear impregnably unverifiable and unfalsifiable. A hydrogen bomb. But there is an awkward fact. Knowledge of signs closely akin to Linear script very patently did not die out; for it is found in the later Cypriot syllabary. Yet, so far as I know, the syllabary is rarely, if ever mentioned in Greek alphabetic sources.

Similarly, we hear nothing in Greek alphabetic sources about Linear tablets or other Linear objects20. It is a strange silence. The ancient Greeks were perfectly familiar with digging up antiquities, and curious about them. Many of the tablets at Knossos and Pylos were found very close to the surface (see also note 13 above). It seems likely that other objects with Linear inscriptions survived near to or even above the surface, as reportedly at Malia (also above).

I hope I have shown that "later" Greek culture was well aware of Linear art, including its formulaic phrases and probably the related Linear signs, otherwise it couldn't or wouldn't have produced the art that it did. Yet there is no mention of them either, so far as I know, in Greek alphabetic sources. There may be many reasons why Linear art and Linear signs are not so mentioned. For example
- possibly they really were; it's just that the references haven't survived. As assumptions go, it too is unverifiable, unless new sources come to light;
- their existence was just taken for granted. It happens. Wrist watches, for example, are rarely mentioned in modern literature, or anything else for that matter, except perhaps advertising and detective stories, yet they play a large part in most people's daily lives.

However, the most obvious, and I think cogent reason for the silences stares us full in the face now that a relationship, thus far I think invariable relationship, between Linear (and probably Cypriot) signs and cult has been established. For if we know one other thing about the ancient mystery cults, at Eleusis and elsewhere, it is that they were genuinely mysteries. Initiates, and non-initiates, kept their silence. The result is that today we really do not know what the mysteries

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20 See note 1 above.
The Problem with Linear B

were. But whatever they were, it now seems plausible to propose that they were thought to encompass Linear signs, Linear and cult art, and the objects on which they are found.

The signs thus formed a sacred writing, separate from the apparently later, secular alphabetic script. Among other things, that might help explain
- why the every-day Greek numbering system was based, so very inconveniently, on alphabetic characters when the Linear system would have provided a much more user-friendly alternative, if only it had not been appropriated for other purposes;
- why some apparently common words appear rarely in classical alphabetic Greek, but frequently in Linear texts21.

By extension, similar reticence might have prevailed, though not I think quite so effectively, over "anachronistic technologies" like clocks, maps, and magnification, each one so close to a facet of the earth cult. As we don't know what the mysteries were, it is even conceivable that all these things together, art, signs, technologies, were if not the totality, then a serious part of the mysteries, part of the recurrent revelation or revelations.

In the post-renaissance Western world I think it fair to say that we tend to assume religion is concerned only with cultivating the past. But belief systems may often be equally or more concerned with cultivating, contemplating, representing and, in so far as possible, anticipating or realising a perceived future. Celebration of sacred technologies in Linear art might well include representation of some that had not been realised, like science fiction, or perhaps only very rarely realised. It is one thing to imagine a plausible-looking pendulum clock, a hot air balloon or even an aeroplane, another to build one, yet another to repeat that construction.

I left the origin of alphabetic Greek hanging in the air. One possibility is that it too was at one time within the "hidden" or mystery ambit of Linear and cult art, but became divorced, acceptably used for the secular and mundane. The boundaries of the sacred and secular can shift over time. Money and coinage might conceivably be another example. On some such thesis it might still be possible to maintain that Linear objects bearing apparent Greek alphabetic signs are not necessarily "late". Indeed, it is possible that at least some of them are, by definition, relatively early because they predate the secularisation of the alphabetic script22.

Our surviving ancient written sources tell us relatively very little about the attitude of their contemporaries or more immediate forebears to more ancient remains. A (for us) rare author such as Pausanias may describe those remains along with surviving rituals, but he doesn't often say anything about conservation or heritage. As a result, I think we just do not know whether or not renovation and replacement took place in relation to objects small or large. Nor, if it did, what kind of renovation it was. It is possible that many ancient sites had an unfinished or broken appearance, carefully contrived and maintained, just like many smaller Linear objects, or romantic ruins today.

The island of Thera might fit into the same category. One of the most astonishing silences of ancient alphabetic Greek and Roman sources is the explosion of the volcano, the ash deposits, and the settlements it buried. It is incredible that the biggest (or arguably second biggest) "bang" that human civilisations have experienced directly over the last 5,000 years or more should not have loomed large in the cultural memory, but even more that none of the later historians or geographers (so far as I know) draws attention to the physical debris, that the fate of the buried ruins passes unremarked, even though later generations must have known, either by tradition or by tangible evidence as items were washed out or dug up.

21 So the rather ordinary ὀχος, okhos, "holder", almost ubiquitous in Linear texts, is rare in alphabetic Greek. The other way about, some words common in alphabetic Greek, like μετά, meta, "with", seem rare in Linear texts, possibly because their sound - Me (A)ta, Mother Perdition (or Herself) - was for some reason taboo.

22 The relationship between the Catholic church and emergent technologies, its control of them, is not the same, but the comparison is still instructive. So too perhaps the adherence to Latin (Greek in the mysteries), and only gradual emergence of sacred texts in secular tongues. But ancient Egypt, with hieroglyphic, hieratic and demotic scripts may provide the most relevant analogy. Linear and cult art is found there too, the Deir el Medine ostraka may be among the finest examples anywhere. See https://dem-online.gwi.uni-muenchen.de/
But there is, now, another plausible explanation for the silence, namely that it is not a silence at all in Linear and cult art. There "Thera" may feature repeatedly, and it seems a most suitable topic. Not only because it was such an "Earth-shattering" event - a challenge or epiphany - but because the name of the island itself suggests it may have enjoyed close connection with the fertility cult. Thera, "the hunt or thing hunted" aptly and frequently describes the several activities and fates of Kore, the god of the Underworld, and Mother Earth. In Linear signage TI RA (though not TE RA) might perhaps equate to Thea (Ἀ)λλα, Θεα (Ἀ)λλα, the Other Goddess (for "i" as "ea" see the conclusions in Section 6). The island's other name in antiquity, Kallisth Καλλιστή, Fairest One, is typical of the euphemisms of Kore. Cyrene, one of the greatest of the Demeter and Persephone cult sites, was founded directly from Thera.

So, in short, the reason why Thera's dramatic "pre-history" is never mentioned in ancient alphabetic sources may be that it, too, was off-limits, part of the mysteries, part of Linear and cult art. But that raises the, perhaps to some, disturbing possibility that not all the finds from pre-historic Thera may necessarily be as old as we assume.

A related issue is how many knew about or understood Linear and cult art. Its origins, persistence and pervasiveness would suggest many or most did, but it may be that there were degrees of awareness and change over time. In medieval and later Europe, at least until the Reformation, religious art was widespread, but the literacy to accompany it was not. Art and artistic techniques can also become detached from their sacred or secular content.

If it still seems incredible that relatively large numbers of people could keep a secret, then perhaps one might look to what seems to be comparable experience in World War II. But it may be difficult to find a comparison because we may be dealing with a world or cosmic view fundamentally different from our own. What we see as "secret" or "hidden" art, I'm not sure they did exactly. "Mystery" may be indeed be a better or the only approximation.

And, as such, they certainly respected it profoundly, and the implications for our understanding of the ancient world may be no less profound. For example, it may no longer be safe to assume they didn't know about clocks, lenses, maps, maybe other (such as magnetic) technologies, didn't develop them or use them to a greater or lesser extent in different cases. But if they did, it would have been a ring-fenced use, within the confines of the cult world view, maybe cult activity, and as such you didn't talk about it or describe it much outside the permitted media of that same constraint.

Which is the second reason why I have prefaced this book with the quotation from Cicero's De Natura Deorum. For what the text says - besides the universality of the Eleusinian mysteries23 - is really very remarkable, namely that those same mysteries properly form part of natural philosophy (what we would think of as "science"), but that to talk about them is taboo.

I cannot better summarise what may be at issue. But I should add that if Linear art is or was the permitted, the accepted way to express the mysteries and things associated with them, then it is possible that some of its artefacts, maybe many, contain considerably more by way of mystery knowledge than the "simple" cult, its formulaic expressions, its pictorial motifs.

Some final thoughts

None of which helps much with the issue of dating and chronology. Overall, my current judgement would be that a few Linear and cult objects may be older, possibly considerably older than currently dated, some more or less as currently dated, some later, a few possibly a lot later, some a mixture of dates. But it is a judgement made without any great conviction, no confidence as to relative proportions or even, in most cases, whether an individual object is "early" or "late".

Resolution of the issues will only come from considerably more work on individual objects and the context in which they have been found, both in the Greco-Roman world and elsewhere.

From one perspective, and it is arguably the most important one, namely the artistic and cult tradition itself, the dating and chronology of its items do not greatly matter. It is all about a fertility cycle, and like all cycles, it goes round and round, and so do the same underlying artistic and other techniques, motifs, and, where relevant, signs and phrases. Things may come into or out of fashion. Some "earth-shattering" events, such as possibly the Thera eruption, may even be

23 See the conclusions to Section 9.
remembered and depicted long afterwards. One might conserve items, because they are sacred, because they are brilliant. One might renovate or enhance them, appropriately. One might deliberately discard them, though rarely, I think, destroy them absolutely. One might, I suspect, even create them with the intention that future generations would not only find them, but wonder at their depictions, real or imaginary, historic or futuristic. It may be that some of the technological and stylistic incongruities of Linear art are deliberately so, a little like the modern fantasy genre.

Essentially, Linear and cult art is timeless and boundless. Which is why it is so hard to date its artefacts, and it always will be.

For the same reason, although its recognition is important for understanding the cultures in which it is found, its discovery does not necessarily suddenly change all the main lines of history as we currently know it. For example:

- on the evidence of Linear objects - and if our current dating is broadly correct - "Minoan" culture now appears to have been overwhelmingly Greek, as Greek as any other Greek culture ever has been, but that doesn't mean that "Minoan" culture was not also distinct from Greek culture on the mainland or Greek culture that followed after it. So far as I know, there continues to be no evidence for the later full-house of Olympian gods in "Minoan" Crete. For that and for other differences, so long as they remain true, there may be all sorts of reasons, but the particular focus of Linear and cult art is unlikely to help illuminate the issues, though the bare fact of its existence well might;
- with the same dating proviso, something or some things significant happened to end both "Minoan" and Mycenaean civilisations, though I think "cultures" would be a far better term. Linear and cult art, the cult itself, may have been involved to a greater or lesser extent in such change, but the tradition evidently continued, more or less undisturbed and unperturbed, into later periods;
- thus while its presence in Geometric and later art forms has not been recognised, its persistence does not necessarily affect the reality of those later developments, nor any other of the main political, societal and cultural movements that mark the course of Greco-Roman and Byzantine history. It may add a dimension, but that does not mean it changes or affects others, though, again, it might.

With pre-history, history before written records as we currently understand both it and them, in Greece and elsewhere, the implications may be different, possibly more profound. Ironically, not only would life be simpler if the Linear texts really were "administrative", they would also, perhaps, be so much more interesting. However "hard-headed" it may have appeared to be, interpreting those "fragments" as the palace accounts of the lords of Knossos, Pylos, Mycenae and Thebes was, in truth, a wonderfully romantic vision. But it was built on sand. This is not the time or place to explore any further the reasons for any general failure to see the art of Linear and other objects, nor the implications nor the remedies. But the issues are serious, particularly for the conduct and dissemination of further research, and not only in the ancient world. If there have been failings in scientific and evidential method, then the experience may not be uniquely confined to language, history and art; it should, rather, provide an alert to other areas of science, including the natural and physical sciences.

By way of compensation, as an historical tool, whether "history" or "pre-history", Linear and cult art may offer unparalleled insight into how, especially Greek-speaking people lived and thought. It will just require a great deal of care interpreting those insights. Potentially, it may also provide similar insight into more remote areas of time and space. But that may not be its most important contribution. To my mind that remains two closely inter-related things. Firstly, it provides a window into a deceptively simple yet powerful and profound ideology. Folk or commonplace it may be, but it is one that is still relevant today. Secondly, it offers endlessly fascinating objects of wonder, contemplation, and inspiration.
Annex 1: the evidence base

The originals

I discuss the wider context in which Linear objects have been found in Section 10. The vast majority of Linear A and Linear B texts are on clay "supports". Sizes vary but most of them, even the "tablets", are small, a few centimetres or inches. Again, the vast majority are stored in museum vaults in Greece. It is not always clear that what is on public display is the original and not a facsimile. Judging by photographs and the few I have seen myself, the condition varies, but most show their presumed age, worn, abraded, faded. Neither in museums nor in corpora and other reference works is it always clear whether, when and how perceived fragments have been joined together. In many cases, joins look correct, but a significant proportion of such collocations may be speculative or wrong, and in any event the repair work can affect the reading of signs and art work. The more serious problem is "cleaning" as it may have totally distorted the appearance and significance of the object to which it has been applied. I say more about that in relation to the Phaistos disk in Section 1.

Similar observations apply not only to Minoan or Mycenaean seals and "sealings", but the wider range of objects from other periods and locations discussed particularly in later sections of this book.

Photographs

Scrutiny of the primary evidence essentially has to fall back on photographs. I shall put the "case against" such evidence first:
- the photographic record routinely photographs only the face (recto or obverse) on which a Linear inscription appears, on the assumption that that is all that matters. As a result, photographs of the back (verso or reverse) and sides are very rare. Yet, as it transpires, the assumption is probably wrong and the other sides may, in many if not all cases, be of considerable importance, sometimes perhaps equal to or greater than the surface on which the Linear signs appear;
- on the same assumption, photographs have often been flooded with light and over-exposed. Certainly, that has the advantage of highlighting some incisions, but at the cost of obliterating the "irregularities" or moulding of the surface, colour (or shades, as it is in black and white), fainter incisions or abrasions, and in particular the edges of tablets, which may often be the most important parts for understanding them. It can also project excess surface shadows. In the case of the photographs in GORILA (see Annex 2) an unintended consequence is the occasional projection of white or reflected "ghosts" around the outside of the object. Those are not reflections of people in the room, but projections from the object itself, and a serendipitous indication that there is more at play than administrative signage;
- modern, mostly digital photographs taken by museum visitors provide colour and sometimes high resolution. Inevitably, the photographs are sometimes poorly lit and taken from distorting angles. In addition, digital technology often appears to neutralise reflected light. As a result, whilst digital photographs of Linear objects¹ may look sharp, they may not reflect as much detail as older black and white "analogue" photographs;
- in some respects the best available photographic record to date was the sample of some forty "RTI" images of Knossos Linear B objects previously made available on the internet through the Ashmolean Museum². Using RTI remotely requires a good to very good internet connection and reasonable computing power. Although the technology also makes good use of reflected light (the effect is like tilting an object in the light) it does not capture all the detail that can be obtained from some of the (over) illuminated older photographs, and the images it projects (in addition to the

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1 I use this term for anything on which a Linear A or Linear B inscription appears.
2 http://sirarthurrevans.ashmus.ox.ac.uk/collection/linearb/index.php - no longer live at time of writing, but viewable via the Internet Archive, https://web.archive.org/
incisions) may lead some to conclude that they are merely epiphenomena. Despite a snapshot facility, it is not easy to share (recreate) perceived views of RTI images. I illustrate some of the above points with four different shots of the famous “tripod” tablet from Pylos (PY Ta 641).

(a) (photo University of Cambridge, see Annex 2)

(b) (photo National Archaeological Museum, Athens, see Annex 2)

(c) (photo Matthew Scarborough, see Annex 2)

(d) (photo John Sie Yuen Lee, see Annex 2)

The fact that the photographs differ as to the visibility of images they convey does not invalidate the presence of the same; rather it indicates the effect of different lighting and angles of vision. It is easy to execrate not only some photographs but the scholars who either had access to the original objects or commissioned or studied the early pictures. Easy and unfair. The Linear objects are intrinsically difficult to view because of their small size and condition, and maybe for other reasons that emerge in the course of this book. In addition, unlike previous generations, ours is the first which is able to view photographs digitally, with the enormous boon that it is easy to magnify them. That is not an artificial aid that distorts fair “reading”. Its effect is similar to holding

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3 It is disquieting that an update on progress with the Pylos RTI project refers to capability for “removing color data from the surface texture to eliminate noise” (http://sites.utexas.edu/scripts/2016/07/29/imaging-the-tablets-from-pylos/).
an object closer to the eye, something open to the original creators and users, but which neither we nor many of the early researchers were able to do, certainly not repeatedly.

Eventually one has to recognise that some photographs really are poor quality. But even the worst generally has some value if it can be compared with another of the same object. In terms of the collections, for the most part, the photographs in Scripta Minoa, GORILA, LIBER, CaLiBRA and Minos (see Annex 2) are usable, but, partly because of frequent over-illumination, it can take many, many hours before one begins to make visual sense of them. Photographs taken by individuals, despite the difficulties, can be outstandingly good and useful.

The selection of evidence

Photographs of objects in hard copies of rare and expensive corpora or library archives are unhelpful. Even if a reader has access to them, it is almost impossible to share observations about them. Photographs made available on the internet - whether of Linear or other objects discussed in this book - are therefore, in principle, an advance. There are now often several such photographs of the same object. I have chosen the one that seemed most fit for my purpose, not necessarily the latest or the highest resolution.

However, any observation in respect of any image of any object, any claim to knowledge, is only as good as the ability of others to review and criticise it, and share such comments in turn. Essentially, all such research - however delayed in time - is equivalent to a review of the original publication. What are we looking at? In the case of photographs, such critique is only feasible if others can also - in all senses - freely reproduce the relevant photographs with their analysis.

Some national intellectual property regimes appear to recognise that basic fact or evidential principle. But it is not clear that they all do, or have yet fully realised its implications - which extend well beyond the ancient world. Whilst some institutions have pioneered open access for research with various Creative Commons licenses, or equivalents, others have not, continuing to publicise restrictions on use, including by default use for research, review and criticism, which in some cases are not always obviously in line with more flexible national legislative frameworks or for that matter the basic advancement of knowledge.

Against that background, I have decided, so far as possible, to reproduce only photographs that are freely reproducible, subject to Creative Commons licensing and equivalents. That therefore excludes several of the major corpora and collections currently viewable on line.

Fortunately, the repetitive nature of Linear and cult art, as proposed in this book, means that such exclusion is not deleterious, arguably it is even helpful as it provides focus. But the selection should not be taken as indicating that the proposals do not apply to the wider evidence base. In many cases, equivalent or better examples may be found there.

The difficulty of reproducing images, including photographs, whether because of technology or copyright constraint, has exercised a major distortion on research into and understanding of the ancient world (nor it alone). Whilst ancient texts are freely quoted and reused, and subject to the most intense scrutiny and widespread discussion, the same has not been true of images, even though it has long been surmised that that world was an intensely visual one. Until such failings are rectified, until appropriate pictorial free use is not merely tolerated, but actively encouraged, what we think we know is highly unlikely to be any such thing.

Viewing Linear objects

Ability to see the images in Linear and other objects depends greatly on the parameters within which the viewer views them. I have viewed most Linear objects on a "notebook", that is a "tablet" sized personal computer with a relatively small, though "A5 landscape" screen. Setting the screen to maximum light normally works best. Recognition of images changes with the changing daylight or other lighting in the room. Excess light falling on the screen will markedly reduce visibility, but viewing in the dark can produce too much glare. Distance and angle of vision (perspective) also

4 The freedom does not diminish a responsibility fairly to attribute sources, nor does it apply if research is commercialised in any way. Nor is the position the same where individuals have made relevant photographs public.
alter what is seen. But it is wrong to infer that such variability necessarily invalidates it. Sometimes it might (one has to check with repeated viewings), but it may also point to the complex nature of the art. Rotation and enlargement are essential tools, but the limitations of enlargement need to be recognised. Eventually, of course, it leads to blur and distortion.

Applying other digital enhancements is less warranted and less successful. Whilst adjusting a photograph's brightness (not the same as the screen setting) or contrast or even colour balance certainly can illuminate some features, it obliterates or distorts others. Viewing on-screen Linear objects from a distance (for example approaching as you re-enter a room) can be instructive; not all their imagery is intended to be seen close to.

Printing pages to view is unlikely to preserve the detail of the on-screen experience.

Highlighting images in Linear objects

The deliberately incomplete and suggestive nature of Linear art (Sections 1 and 2) means that it is necessary to "highlight" potential images. Such examples should be based on interventions of moulding, incision, abrasion, colouration which make coincidence impossible or unlikely. However, it is still difficult to know how best to represent such images.

An extracted outline - a detached tracing - has the merit of clarity, but never succeeds in reflecting or capturing the detail or completeness of the original image so that it can end up making an image less obvious or certain than the original warrants. It also implies, albeit unintentionally, that the tracing is the only image that "matters". It isn't. Linear art images appear to be always multiple and complex.

I have therefore generally pursued an alternative, namely to show the original object (or extract) and then the original with suggested image outlined with highlighting in a colour. That has the advantage of preserving original artistic details which enhance the image and which would otherwise certainly defeat my powers of representation. For the details are always of great artistic precision, down to the smallest dots, indentations, lines, fluctuations of moulding and so forth, all of which I find only properly visible in the original art.

The disadvantage of such an approach is that it can still partially obliterate some of the artistic details which generate the original image in the first place. The only remedy I can offer is to suggest comparing my attempt to represent an image with the original itself (even better for those with the time and resource, the original web page), wherein the small, but often important contributory details that I have failed to represent or covered over may be better viewed.

Cognate objects

I have been fortunate to have had access to a private collection in the UK comprising small stones of mainly local shale and sandstone of a size comparable to many Linear "fragments". Although it was evident from the outset that the incisions, in particular, and maybe other features were unlikely to be natural or accidental, it was the better part of two years before I began to see the images and art work in them, and to realise that they were, in most respects, identical to the Linear objects in terms of the artistic techniques, the motifs, and maybe the presence or influence of Linear signs. Unlike many Linear clay objects, but like many non-clay "Linear A" items, the art work exploits and enhances natural features of the rock to suggest its imagery.

Apart from being a salutary reminder as to the difficulty of seeing art, the objects have been of great value to me as I have been able to handle them and to photograph them, repeatedly, in ways that plainly are not available for the scrutiny of Linear objects. I have thus been able to assess the effects of different lighting, angle of view and so forth, in considerable detail, as well as the faithfulness or otherwise of photographic reproduction.

The results have been, to me at least, surprising, although on reflection they probably should not have been. One main one is that viewing such objects in strong light, natural or artificial, is rarely

5 It is also difficult to know whether photographs "on line" or in books have been digitally or otherwise enhanced. If they have, it is unlikely to create wholly false images. Again, it makes some sharper at the cost of reducing the visibility of others.

6 By "original" I mean a photograph that I have copied, often in slightly lower resolution, from the internet.
of any use whatsoever in helping to discern images. It is about as sensible as looking at an old master under a blazing sky, or for that matter a modern PC or tablet screen.

Different images are more visible in different light, but also from different distances and angles of view and in different rotations, including on the sides and "back". That does not mean any of them is not intentional art.

The camera never lies. It has been possible to check photographs against the originals. In fact, images can often be easier to see from photographs. I think the reason why is technical and complex, relating largely to the camera colour sensors, to a lesser extent to the processing "software". However, there is a cost, namely that photographs rarely reveal all the potential imagery of a piece. Or rather, they can, but it requires multiple photographs from numerous angles and distances under different lighting.

For those same technical reasons, it is not always the case that a camera with higher resolution (more pixels) produces more usable photographs with more visible images. And for similar reasons, I now appreciate slightly better why some old black and white or colour "analogue" (film) photographs can reveal more than some modern digital images. To reiterate, some digital cameras in particular seem routinely to reduce or correct the luminance of objects, which is not helpful when perception of the images, in this particular context, depends in part, sometimes in large part, on reflection and also sometimes shadow.

I will try to illustrate some of these points with an example.

a)

b)

The original is about 160mm X 80mm X 30mm. I have had to reduce the file size of both images. The photograph in a) was taken with a higher resolution digital camera. Probably most people's immediate reaction is to think that it is a "better" image, clearer, sharper, more detailed. But in fact, it is the photograph at b) which is far closer to how the eye naturally sees the real object, and which contains the better evidence of deliberated imagery. I do not intend exploring that imagery in this case, although it is a fine example (the overall shape is a starting point). What appears to have happened is that the higher resolution camera's sensors and software have increased colour and other contrast, partly perhaps because of the patterned background and different lighting.
The photograph at a) is still useful, however, because it provides a check or control for the plausibility or veracity of any images identified in b). And in a few cases it really does enable identification of some that are harder to see in b).

It is also instructive to compare both photographs with an arbitrary viewing of some modern artefact, such as a plain brick or plain carpet. In those latter cases, the eye may begin to detect images, particularly human faces or forms (the faces-in-clouds phenomenon), but they are unlikely to be as convincing or complex as the images that emerge from the stone illustrated above, which are created by various but deliberated interventions, albeit also exploiting natural features of the rock. A modern flecked carpet is likely to generate even more "faces" and similar - the patterning implies some imagistic potential, however abstract - but the same principle will apply.

The stones I have been able to study conform to the tradition of cult art outlined in Sections 5 and 9, as if miniature equivalents of the art works presented by larger standing stones. Without them, I would not have appreciated, certainly not so soon, the presence of the "TE RE O WA" motif and related images on Linear objects (see Section 6). Their find locations are of considerable interest and relevance, but I am not currently able to disclose them. Nor do I do know their age, for the reasons set out in Section 10. At this stage, rather than offer multiple examples, which can be unhelpfully overwhelming as it can take many hours to begin to see the imagery, I will give only a couple of illustrations of one side of typical objects.

Thus in the photographs of one such, I have first highlighted, in yellow, marks whose formation - for example lines joining at right angles - and positioning - for example on the sides rather than larger surfaces - are hard to explain naturally, so they are more likely to be "incisions" made by man or woman than "striations".

approx. 140 X 80 X 25mm
Further below, the suggestion of a probably woman's face (red) is detailed particularly by the eyes (whites, pupils, brows), but also hair line, apparently smothered by a hand and arm. The suggestion is that the hand and arm belong to a larger torso whose outline is suggested by the piece as a whole (blue). Another frontal face (green) is conveyed by incisions and colouration. Other images include a right-profiled standing pig (turquoise), and a larger right-profiled hare or rabbit (purple).  

As with the art of Linear objects, the images are multiple, complex (overlapping etc), never "complete", suggested and suggestive. In other words, they are never found as "simple" images. But once identified as fully and accurately as possible, they look to be unmistakably "art".  

So part of the same area in which is the woman's face may also be seen differently, suggesting a different image, a right-profiled cat's head (red, though possibly more than one on different scales and perspectives) probably looking at more than one suggestion of tiny mice (turquoise).  

The animal features are betrayed or suggested by the in some cases minute detail of eyes and ears, though in the cat's case the formation and colouration of the stone has enhanced the effect considerably, as have trace lines for whiskers. Note also the suggestion of the cat's paw, also viewable as a human hand with delineated fingers and nails (red).  

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7 Compare, for example, Cyrene 73-304 (turquoise, purple highlighting) in Section 5 for the apparent rape, CMS II,7-17 Pla3 in Section 2 for the hare or rabbit.
The comparability with Linear objects can be marked. The carefully tooled stone below suggests by its overall shape a right-profiled visage, but compare the delineations of Africa in Section 2. In this case, further artistic detail suggests more than one figure on the left for Atlas or Hercules (red, green) holding one or more pillars (purple) in the correct part of the continent. The strange partially left-profiled figure lower right (turquoise) may be growing ears or holding his hands over his ears because the left-profiled elephant behind and above him (black) is trumpeting, with a smaller frontal baby elephant (blue), and maybe more suggestions of the same. The image seems to be one of the plays on the formulaic expression ΡΙ ΜΑ ΚΟ ΒΑ, ῥηγμα ἄκουας, rhhgma akouas, breach of hearing (see Section 6).
Annex 2: sources, references and additional acknowledgements

Commonly used or cited resources include:
  https://archive.org/stream/scriptaminoawrit02evanuoft#page/n291/mode/2up
  All black and white photographs of Linear B objects from Knossos are taken from Scripta Minoa unless otherwise indicated.
- **CMS** = Corpus der minoischen und mykenischen Siegel, Prof. Dr. Reinhard Förtsch, Prof. Dr. Henner von Hesberg, Prof. Dr. Walter Müller, Prof. Dr. Ingo Pini, various volumes and dates since 1958, on line at http://arachne.uni-koeln.de/browser/index.php?view[layer]=siegel
  The material is made available under the Creative Commons license https://creativecommons.org/licenses/by-nc-nd/3.0/de/
- **The British Museum's Collections Online**, on line at http://www.britishmuseum.org/research/collection_online/search.aspx? All images are © The Trustees of the British Museum, and, unless otherwise indicated, licensed as per http://creativecommons.org/licenses/by-nc-sa/4.0/
  page=Risorse&id=19#Collezioni_di_testi_e_biblioteche_elettroniche linking to the publishing body as above http://cefael.efa.gr/detail.php?
  nocache=2232oxwta3md&site_id=1&actionID=page&prevpos=0&serie_id=EtCret&volume_number =21&issue_number=1&cefael=8e74eb5234b3e3c1cdfc09942a7085a&sp=5 and related pages
- **Documents** = Documents in Mycenaean Greek, Michael Ventris and John Chadwick, Cambridge University Press, 1956, 1973, 2015
  - The Decipherment of Linear B, John Chadwick, Cambridge University Press, 1958 and 1960
  - **DAMOS** = Aurora, F; Nesøen, A; Nedić, D; Løken, H; Bersi, A, Database of Mycenaean at Oslo, University of Oslo, Oslo 2013
  - **John Younger** = Linear A texts in phonetic transcription and commentary, inaugurated 30 November 2000, on line at http://people.ku.edu/~jyounger/LinearA/
  - **COMiK** = Corpus of Mycenaean Inscriptions from Knossos, volumes 1-IV, several editorial contributors and dates of publication, Cambridge University Press; Volume 1 is partly and variably on line at https://books.google.co.uk/books?id=fdyxXfeX6gIC&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false
  - CaLiBRA, Cambridge Linear B Research Archive, currently a searchable database of black and white Pylos tablet photographs, on line at http://www.linearb.org/
  - LiBER (Linear B Electronic Resources), a CNR-ISMA project aimed at producing an integrated database of Linear B documents, on line at http://liber.isma.cnr.it/cgi-bin/home.cgi, currently covering Mycenae, Tiryns, and Midea
Additional acknowledgements by Section

Section 1

Phaistos disk colour photograph, public domain, see https://commons.wikimedia.org/wiki/File:Disque_de_Phaistos_A.jpg (François Collard)

Hippodrome, Constantinople, circa 16th century AD view, by Onofrio Panvinio, De Ludis Circensibus, public domain, see https://commons.wikimedia.org/wiki/File:Hipodrom.jpg

Reconstruction of Hippodrome photograph at http://www.istanbullife.org/la_citerne_aux_mille.htm

Gladiator photograph, Zliten mosaic, Lepcis Magna, Libya, 2nd century AD, public domain, see https://commons.wikimedia.org/wiki/File:Gladiators_from_the_Zliten_mosaic_3.JPG source Livius.org

Psykhro PS Za 2, libation table, in The Palace of Minos: a comparative account of the successive stages of the early Cretan civilization as illustrated by the discoveries at Knossos, Volume 1, The Neolithic and Early and Middle Minoan Ages, Sir Arthur Evans, London 1921, page 625ff, on line at http://digi.unib.uni-heidelberg.de/diglit/evans1921bd1/0671

Clay bull hoof, Knossos, The Palace of Minos: a comparative account of the successive stages of the early Cretan civilization as illustrated by the discoveries at Knossos, Volume 3, The great transitional age in the northern and eastern sections of the Palace, Sir Arthur Evans, London 1930, page 175 figure 119, on line at http://digi.unib.uni-heidelberg.de/diglit/evans1930/0218

Section 2

Thebes TH Ug 13, originally in "Linear B Tablets from Thebes", John Chadwick, Minos 10 1970:115-37, on line version CHADWICK J. Linear B Tablets from Thebes. Minos: Revista de Filologia Egea [Internet]. 4 Nov 2009; 10(1), available at: http://campus.usal.es/~revistas_trabajo/index.php/0544-3733/article/view/2283 , licensed as Creative Commons Attribution 3.0 http://creativecommons.org/licenses/by-nc-nd/3.0/es/

Knossos KN Vc(1) 74 from COMiK Volume I (see above)


Picture of common lizard, by Phil Gates, http://cabinetofcuriosities-greenfingers.blogspot.com/2012/05/wildlife-on-walls-3-viviparous-lizard.html

Thera THE Tablet 6 (John Younger) Museum of Prehistoric Thera 8366 (Linear A), extracted from the image on Wikipedia under "Linear A", CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=848401, also on line at https://en.wikipedia.org/wiki/Linear_A#/media/File:Linear_A_tablets_filt.jpg


THE Tablet 4 (John Younger) Thera Museum of Prehistoric Thera 8368, see THE 6 above.

Mycenae MY V 659, colour photograph, flickr, ArchaeoinAction, Dennis Jarvis, DSCN0428BB on line at https://www.flickr.com/photos/archaeoinaction/galleries/72157627656341396 and https://www.flickr.com/photos/archer10/5692813531/in/gallery-archaeoinaction-72157627656341396/ , licensed as at https://creativecommons.org/licenses/by-sa/2.0/

Knossos KN Fp13, by vintagedept (Flickr: Clay Tablet inscribed with Linear B script) [CC BY 2.0 (https://creativecommons.org/licenses/by/2.0)], via Wikimedia Commons, https://commons.wikimedia.org/w/index.php?curid=17430575 also on line under "Linear B" https://en.wikipedia.org/wiki/Linear_B#/media/File:Clay_Tablet_inscribed_with_Linear_B_script.jpg

THE Zb 1, https://commons.wikimedia.org/wiki/File:Pr%C3%A4historisches_Museum_Thira_Linearschrift_A_04.jpg
Section 3


Pylos TY Ta 641 photographs see Annex 1 below. KN Co 906 in The Decipherment Process, University of Cambridge, Faculty of Classics, see PY Ta 641 in Annex 1 below.

Hagia Triada HT 92 GORILA (see above) Volume I page 144. The photograph was taken by the authors. On line at http://cefael.efa.gr/detail.php?nocache=2232oxwta3md&site_id=1&actionID=page&prevpos=0&serie_id=EtCret&volume_number=21&issue_number=1&cefael=8e74ecb5234b3e3c1cfc09942a7085a&max_image_size=971&x=8&y=10&ce=toklsuk3olgjbp5q3buh69pk98ijp9&sp=180 Pylos TY Cn 608, extracted from Scribes, scribal hands and palaeography, T G Palaima, Companion II, page 101, Fig 12.39 (photo from PASP archives, Program in Aegean Scripts and Prehistory, University of Texas). Also now available to view on CaLiBRA (see above and Annex 1). There is at least one colour photograph on line, but it does not capture the same level of detail. Knossos KN So(1) 4430 on line at http://nam.culture.gr/portal/page/portal/deam/virtual_exhibitions/AMH/AMHPN1350, not shown in my text.

Phaistos PH 11 GORILA (see above) Volume I page 299 (http://cefael.efa.gr/detail.php?nocache=2232oxwta3md&site_id=1&actionID=page&prevpos=0&serie_id=EtCret&volume_number=21&issue_number=1&cefael=8e74ecb5234b3e3c1cfc09942a7085a&max_image_size=974&ce=uakgmvt50v4u26dqun83j5c1thr4obu&sp=335). The photograph was taken by the authors. Knossos KN Fp 13, see Section 2.

Thera THE Tablet 5, see THE Tablet 6 in Section 2.

Knossos KN Co 906 see above.

Section 4

MA Ze 11 GORILA (see above) Volume IV page 140 (http://cefael.efa.gr/detail.php?nocache=4udy3067gvfy&site_id=1&actionID=page&prevpos=3&serie_id=EtCret&volume_number=21&issue_number=4&cefael=8e74ecb5234b3e3c1cfc09942a7085a&x=13&y=8&max_image_size=974&ce=uaaigmvt50v4u26dqun83j5c1thr4obu&sp=182). The colour photograph is extracted from a larger photograph taken and kindly made available by Timothy Heath. On line at http://historicalfictionresearch.blogspot.com/2015/04/

Section 5

Terracotta figurine of a pregnant girl from the comic stage is the cover of Demeter and Persephone in Ancient Corinth, Nancy Bookidis and Ronald S Stroud, American School of Classical Studies at Athens, Princeton 1987. Still readily and reasonably available in hard copy, a reminder that utility does not depend on digitisation or databases. A digital image and details at http://corinth.ascsa.net/id/corinth/image/digital%202014%2011154

Cyrene 73-304, Cyrenaica Terracottas at
More information about the history of the project is at http://www.cyrenaica.org/

Emory 66.0054, the American Excavations Samothrace, on line at https://samothrace.emory.edu/terracotta-figurines/ with links to further information about the project.

Head of Demeter, taken from the American School of Classical Studies at Athens Lesson Plans, Interpreting Ancient Mysteries of Demeter, on line at http://www.ascsa.edu.gr/index.php/ExcavationCorinth/lesson-plans

Section 7


Seals, see CMS above. For CMS XI-325, see also http://www.uni-heidelberg.de/fakultaeten/philosophie/zaw/cms/monthlySeal/monthlySealOlder.html (November 2015)

Terracotta figurine of a pregnant girl from the comic stage, Corinth, see Section 5.

Murex ramosus shell, my extract from colour photograph, by H. Zell - Own work, https://commons.wikimedia.org/w/index.php?curid=11672085 [GFDL (http://www.gnu.org/copyleft/fdl.html) or CC BY-SA 3.0 (https://creativecommons.org/licenses/by-sa/3.0)]

Bronze adorant, The Palace of Minos, see Section 1.

Cyrenaica 73-304 see Section 5.

Section 8

Greenstone axe, Magasa, Crete (museum number: 2013,5022.26); sherd, Magasa (2017,5008.64); clay figurine, Knossos (1934, 0115.2); Vasiliki ware (1907,0119.479), early Minoan cup (1906,1112.62); early Kamares ware tumbler (1921,0515.40); sherd (1907,0119.518) are all © The Trustees of the British Museum, use licensed as per http://creativecommons.org/licenses/by-nc-sa/4.0/ and findable through the British Museum's Collections Online, http://www.britishmuseum.org/research/collection_online/search.aspx?

Akrotiri, the fisherman wall painting, http://www.greek-islands.us/greek-villages/santorini/akrotiri/santorini-wall-paintings.jpg, licensed as per https://creativecommons.org/licenses/by/3.0/


Late Minoan IIIb larnax, © The Trustees of the British Museum as above, museum number 1906,1112.96

Argos geometric kantharos by Dan Diffendale on line at https://www.flickr.com/photos/dandiffendale/6898852643/in/photostream/, licensed as https://creativecommons.org/licenses/by-nc-sa/2.0/


The other side of the vase showing the shields on line at http://www.beazley.ox.ac.uk/record/91CB30B9-C1A1-40B3-80D4-2FD73DC53DDF

Parthenon views, extracted from (a) https://commons.wikimedia.org/wiki/File:Parthenon_in_the_rain_2.jpg or https://upload.wikimedia.org/wikipedia/commons/c/cd/Parthenon_in_the_rain_2.jpg, By Wknight94 talk [GFDL (http://www.gnu.org/copyleft/fdl.html) or CC BY-SA 3.0 (https://creativecommons.org/licenses/by-sa/3.0)], from Wikimedia Commons, and


but also, for example, through http://www.jstor.org/stable/23541204


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Mesopotamia tablet photographs are from the British Museum, and findable through Collections Online, http://www.britishmuseum.org/research/collection_online/search.aspx? BM140852 (reverse), BM120001, BM18058, © The Trustees of the British Museum, use licensed as per http://creativecommons.org/licenses/by-nc-sa/4.0/


Ox scapula photo by BabelStone, CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=16189953


Stonehenge Heel stone pictures, by Ewen Roberts, https://www.flickr.com/photos/donabelandewen/240161541/, https://creativecommons.org/licenses/by/2.0/ and by Heikki Immonen, 2016, CC BY 3.0,
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https://commons.wikimedia.org/wiki/File:Stonehenge_Heel_Stone_-_panoramio_(2).jpg
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http://www.orkneyjar.com/history/maeshowe/maeshrunes.htm
Voynich manuscript, Beinecke Rare Book and Manuscript Library, Yale University, Beinecke MS 408, searchable page finder of images at https://brbl-dl.library.yale.edu/vufind/Record/3519597
Similar but not quite identical photographs on the relevant Wikipedia entry.
Lascaux, Chinese horse, http://donsmaps.com/lascaux.html, but no longer at
http://coursecontent.westhillscollege.com/Art%20Images/CD_01/DU2500/index.htm. Also at
https://klimtlover.wordpress.com/art-before-history/paleolithic-art/ . Photo author unknown?
ochre block by Chris. S. Henshilwood -
https://commons.wikimedia.org/wiki/File:Blombos_Cave_engrave_ochre.jpg, CC BY-SA 3.0,
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Section 10

The Hieroglyphic Archive at Petras, see Section 2.
Lucian Freud, Man's head (Self Portrait III), National Portrait Gallery, London, NPG 5205, on line
at https://collectionimages.npg.org.uk/large/mw02345/mw02345.jpg or
https://www.npg.org.uk/collections/search/portraitZoom/mw02345/Lucian-Freud?
search=sp&sText=lucian+freud&rNo=2 © the Lucian Freud archive/ Bridgeman Images
Crabwood formation, Chilbolton crop circle, 2002. For a set of photographs see
at http://collectivelyconscious.net/articles/the-arecibo-message-and-the-chilbolton-reply/, written
by Rob Schwarz of www.strangerdimensions.com, though the image is taken from another site with
a now broken link. The photo may originally have been taken by Steve Alexander at
www.temporarytemples.co.uk.

Annex 1

Pylos PY Ta 641, National Archaeological Museum, Athens. The Museum's own photograph of
the tablet (b) is on line at
http://nam.culture.gr/portal/page/portal/deam/virtual_exhibitions/EAMP/EAMTa641
NOT at http://nam.culture.gr/portal/page/portal/deam/virtual_exhibitions/EAMP/EAMTa641 which
at the time of my writing shows PY Ta 709+712
(a) = The Decipherment of Linear B, University of Cambridge, Faculty of Classics,
http://www.classics.cam.ac.uk/seminars/projects/mycep/decipherment/introduction
(c) = Matthew Scarborough, on line at
https://resgerendae.wordpress.com/2013/04/16/bsa-postgraduate-epigraphy-course-2013/ and at
https://resgerendae.files.wordpress.com/2013/04/106_3357.jpg.
(d) = John Sie Yuen Lee, on line at https://www.flickr.com/photos/johnsylee/tags/tripodtablet/