



## The Minoan libation formulas

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Submitted February 18, 2007

### Abstract

The Minoan libation formulas are religious inscriptions on cups, ladles and tables that were used in the offerings of oil and other powerful drinks at dawn. The Vedic interpretation of the formulas shows that the god to which the libations are presented is addressed as *Ruk* or *Luk*, i.e., the name of the European Sun god *Lugh*.

### Introduction

In the past century, various authors reported evidence for a link between the Harappan and Vedic civilizations of the Indus Valley and the Minoan culture of Crete (L.C. Fabri 1935; H. Mode 1944; S. Alexiou; R. Kamm 1967). In 1999, V. Sarianidi provided a plausible explanation for the observed similarities by reconstructing a migration route of Near Eastern Aryans into the Indian subcontinent. The present authors observed that Sarianidi's theory implies the possibility that the Minoan language is close to Vedic and tested this hypothesis on the two best documented Linear A words from the Minoan language, KU-LO and PO-TO. It was found that both words are indeed meaningful and grammatically correct Vedic in their Minoan context. This paper analyses the religious inscriptions on cups, ladles and tables that are known as the Minoan libation formulas in order to identify elements of Minoan religion.

### The Vedic libation ritual

The Vedic gods have the important responsibility to keep the world in good order. However, they cannot achieve this without the power and strength delivered by libations and song. It is the task of man to supply these essential ingredients at the break of day, when "Night and Dawn" present themselves together. At that moment, according to Vedic religion, the Celestial Doors open and the gods come to accept the songs and the offerings of milk, butter and oil that are poured into the ritual fire. Food and drinks are the gifts of the Vedic mother goddesses; the only self-supporting entities of the Vedic world. One of her is the libation goddess Ida. Her name means *refreshing drink* or *libation*.

### Reading Linear A

The Linear A script consists of some sixty regular signs and a greater number that are used more rarely. It is generally assumed that the script is at the origin of the later scripts from Cyprus and the Mycenaean Linear B script (Chadwick 1987). These later scripts are primarily syllabic and therefore it is believed that the regular symbols of Linear A must also represent syllables. An important question is whether the symbols that are common to the scripts also have the same pronunciation. The decipherment of the Linear B script by A. Kober and M. Ventris in the late forties and early fifties demonstrated that signs of Linear B that are similar to signs of the earlier deciphered classical Cypriot script generally have the same pronunciation. This gave some confidence that the many signs that are shared by the Linear A and Linear B scripts have the same value as well (see Figure 1).

	A	I	U	E	O
	⌘ ⌘ *	Ψ Ψ da-i-pi-ta, etc	Α Β		⊔ ⊔
K	⊕ ⊕	⊗ ⊗ ki-ki-na, etc	⤴ ⤵	✱ ✱	⊖ ⊖
Q	⊗ ⊗	⤴ ⤵		⊕ ⊕	
J/Y	⊔ ⊔ i-ta-ja, etc			λ λ	
T	⊔ ⊔ su-ki-ri-ta, etc	Λ Α ↑	⊔ ⊔	⊗ ⊗ ↓	⊔ ⊔ ⊔ pa-i-to, etc
D	⤴ ⤴ ⤴ da-i-pi-ta, ki-da-ro	⊔ ⊔	⊗ ⊗	⊗ ⊗	⊗ ⊔
N	⤴ ⤴ ⤴ ki-ki-na	✱ ✱	⊔ ⊔	⊗ ⊗	
P	⊔ ⊔ ⊔ pa-i-to	⊔ ⊔ da-i-pi-ta	⤴ ⤴		⤴ ⤴ ⤴
M	⊗ ⊗	⤴ ⤴ ⤴	⊔ ⊔	⊗ ⊗	
R/L	⤴ ⊔	⤴ ⤴ su-ki-ri-ta	⤴ ⤴	⤴ ⤴	⊔ ⊔ ⊔ ki-da-ro
V/W	⊔ ⊔	⊔ ⊔		⤴ ⤴ I	
Z	⤴ ⤴				
S	⤴ ⤴ ⤴	⤴ ⊔ si-to	⊔ ⊔ su-ki-ri-ta	⊔ ⊔ ⊔ se-to-i-ja	

Figure 1: Corresponding symbols in Linear A, Linear B, and classical Cypriot, arranged according to the values of the Linear B and classical Cypriot symbols.

In 1974, Packard published a statistical analysis that supported this conclusion. His work showed that the number of identically spelled four-syllable words found in Linear A and Linear B texts is too large to be accidental and so these words must reflect Linear A and Linear B versions of the same issues, e.g. names of towns or persons. The implication of Packard's result is that the values of most of the common signs must be similar.

Despite the fact that the syllabic scripts from Cyprus, Crete and the Greek mainland are similar and that most of the similar signs have the same value, there are also structural differences. In Linear B, dashes are used to separate words, in the same way that spaces divide words in English texts. However, the classical Cypriot script uses the same dashes to separate entities rather than single words, as illustrated by the following transcription (the Cypriot syllable signs have been replaced by their English equivalent):

... ' TO NO NA SI KU PO RO NE TO NI JA TE RA NE ' ...

... τον Ονασικυπρον τον ιατρον ...

... Onasikupros the physician ...

This stringing of words has the peculiar effect that a syllable may be part of two different words. Another difference between Linear B and the classical Cypriot script is in the representation of trailing consonants. Linear B doesn't write trailing –s, –n, whereas the Cypriot script writes –SE and –NE. The signs of the Linear A script are closer to the Linear B script than to the classical Cypriot script, but Linear A is more like the classical Cypriot script in its use of dashes. The stringing of words obviously complicates the interpretation of texts, but there is way around this problem, as is illustrated by the following fragments taken from three different libation formulas:

(PS Za 2) TA-NA-I-\*301-TI

(IO Za 6) TA-NA-I-\*301-U-TI-NU

(IO Za 2) TA-NA-RA-TE-U-TI-NU I-DA-

The correspondence between the three terms starting with TA-NA- suggests that we are looking at entities consisting of three words: TA-NA, then either I-\*301 or RA-TE and finally –TI or U-TI-NU. This split conveniently puts the vowel syllables I and U at the start of a word, which is the most likely position for vowel syllables.

The third fragment ends with the name of the libation goddess Ida, implying that the term in front may be an epithet. The Vedic interpretation confirms this hypothesis. The adjective *tana* means *endless* and expresses the everlasting character of gods and sacrifices in the Rig Veda. Both *Rāti* (gift) and *ūti* (refreshment) often refer to libations and are also used in combination with each other in the Rig Veda (V 10,6). The final *-nu* is probably not a separate word but simply the suffix *-nu* that is also known from the Vedic language. Ida is feminine, of course, and so are *rāti* and *ūti*. Therefore we should read the feminine form *tanā* of the adjective. The first two fragments are then correct Vedic nominatives. The final fragment has RA-TE, which is the vocative of *rāti*. This implies that *tanā* and *idā* are also vocatives in Minoan, i.e., they are inflected according to a Vedic root stem on *ā* and not as Vedic derivative stems on *ā*.

Accidentally, the comparison of the three texts gives a hint of the value of the Linear A sign \*301, which is not known from either Linear B or the classical Cypriot script. Note that if \*301 ends on –u, the final word in the first fragment would be *ūti*, which is a very attractive possibility. Then the only real differences between the three fragments are the replacement of I-\*301 by RA-TE and the name of Ida.

### The Minoan libation formulas

The priestesses that carried out the Minoan libation ritual used all kinds of utensils, and they often inscribed their sacred formulas onto these objects. Some thirty of these texts have survived (whole or in part) on libation tables, ladles and vases, written in various kinds of handwriting, and with interesting variations in terminology and spelling. They vary in length from a single term to a maximum of about ten terms. Transcripts are available from Consani et al. 1999, and from the GORILA website. Both sources are useful for statistical studies or to get an impression of the text. Neither is sufficiently reliable for deciphering a particular text, however, so that photographs or accurate renderings of the inscription remain indispensable.

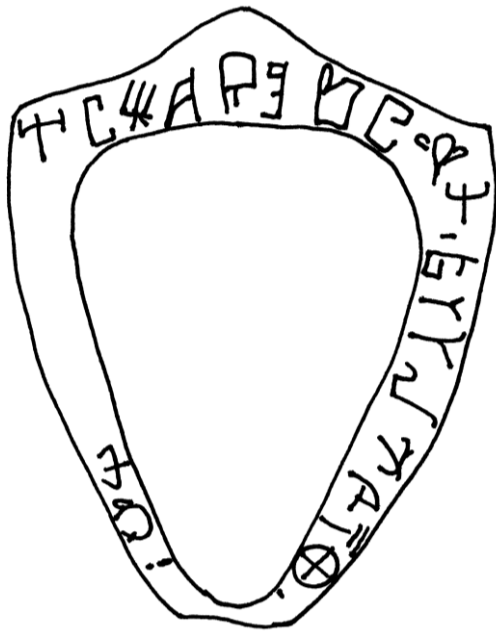


Figure 2: Inscription on a ladle from Troullos (Buchholz and Karageorghis 1973).

A typical inscription is shown in Figure 2. Part of the text is difficult to read. However, the full text can be reconstructed by comparing with other libation formulas:

A-TA-I-\*301-WA-JA O-SU-QA-RE  
 JA-SA-SA-RA-ME U-NA-KA-NA-SI I-PI-NA-MA SI-RU-TE (TL Za 1)

The Minoan libation formulas have a fixed structure with variable elements (Duhoux 1989). This is illustrated by comparing (TL Za 1) with two other formulas:

A-TA-I-\*301-WA-JA TU-RU-SA DU-\*314-RE  
 I-DA-A U-NA-KA-NA-SI I-PI-NA-MA SI-RU-TE (KO Za 1)

A-TA-I-\*301-WA-JA JA-SU-MA-TU  
**OLIV** U-NA-KA-NA-SI **OLE** A-JA (SY Za 2)

The last formula, with the two ideograms **OLIV** and **OLE**, shows that the Minoans used olive oil as a libation. The middle formula has the alternative I-DA-A (Vedic *idās*: libations) instead of the **OLIV** ideogram. *Idā*, as a libation offering, is the milk or butter that is offered to the gods. The text writes I-DA-A with an extra –A, probably because the original form was *idās* (acc. pl): the euphonic rules of the Vedic language prescribe that the final –s must drop before the initial U of the following word, but this leaves an audible hiatus. The top formula (TL Za 1) replaces the **OLIV** ideogram by JA-SA-SA-RA-ME. Since JA-SA-SA-RA-ME replaces *idās* and **OLIV**, it is likely to be an offering too. Indeed, *yaçastaram* occurs also in the Rig Veda (VIII 2,22) where it refers to an offering of soma (a Vedic libation). The ending –ME approximates the Vedic acc.sing. ending –m, showing the Cypriot treatment of trailing consonants.

Each of the three formulas shows the term U-NA-KA-NA-SI, which Owens identified as a verb because of the Indo-European ending –SI. Indeed, Vedic has the verb *kan*, which means *enjoy* or *accept with joy*. KA-NA-SI then means *may you accept with joy*. It seems then that

the term U-NA-KA-NA-SI consists of two words, U-NA and KA-NA-SI. A third libation formula (PK Za 11) confirms this conclusion: it contains the term U-NA-RU-KA-NA-TI, which shows the word RU or RUK placed in between U-NA and KA-NA-TI. KA-NA-TI is then also from *kan* but with the third person ending –TI: *may he/she enjoy*. The subject of the verb is the divinity for whom the libation is meant: he or she is called U-NA or U-NA RU(K): *incomplete one* or *incomplete light*. These expressions touch the essence of the religion that we know from the Vedic literature. The Vedic *ūna* and *ūna-varcas* are used in connection to the gods Indra and Agni (Fire). After the libation, these gods will be *ánūna*, *ánūna-varcas*: *complete, glowing with full strength*. *Ruc* is a synonym of *varcas*. Both are usually translated as *light* or *glow*. They mean primarily the glow of the fire (Agni), or of the Sun, which is sometimes identified with Agni.

The remainders of the second lines of the formulas give some information on how the ritual was performed. The end of the first formula probably reads: *it pinvamnā srute*: “the swelling milk must flow”, and the second, simply: OLE *ayāt*: “let the oil go”. Milk was believed to have the inherent capacity to swell, and to make the libation swell as well (e.g. RV IX 97,14). The libations were brought into the fire in a large spoon, the *sruva*, or in a ladle, the *sruc*. Both words are related to the verb *sru* (*srute*: *shall flow*). It is likely that the milk would start to boil, and seemingly flow into the fire by its own expansion (*pinvamnā*). The oil would catch fire and shoot a bright flame: a sign of the god’s pleasure. The libation formula PK Za 11 adds another interesting qualification of the libation: I-NA-JA-PA-QA (*ināya pakvā*: prepared for the mighty).

The formulas show that many libation formulas start with the same term:

A-TA-I-\*301-WA-JA

A-TA-I is probably the dative or locative of *ātā*: *towards/at the door*. In the Vedas, *ātā* is the door to the sky, i.e., *ātā divās*, and many libation hymns (e.g. RV I 13,9) mention that the Celestial Doors are thrown wide open before *Ida* is called upon. The picture of the Sun-god and his fiery horses starting their journey through the sky is known also from other sources:

“The Sun saw Venus setting, the world turning red of Dawn, the horns of the Moon fading, and he told the swift Horas to yoke his horses ... Thetys, ... , pulled the door-bars away, and there was the immensely wide sky.”

Ovid, *Metamorphoseon* II 116-156

The first line of (TL Za 1) is then:

ātāi ... , o çukva-re                    “To the Door ..., O shining treasure.”

A variant formula is (PK Za 11):

A-TA-I-\*301-WA-E    A-DI-KI-TE-TE-[.]

ātāi ... , adiksite                    “To the Door ..., ... showed itself.”

The opening line of the Minoan libation formulas has a remarkable resemblance with the opening line of another famous song to the Sun god:

“Beautifully you appear from the horizon of heaven”    (Pharaoh Akhenaton, about 1350 BC)

Akhenaton was strongly influenced by Minoan art and was considered a religious heretic by contemporary Egyptians for his worship of Sun god Aton. So the resemblance may actually reflect a Minoan element in his religion.

## **Conclusion**

The Minoan libation formulas introduce the Sun appearing at the door of the sky and the everlasting libation goddess Ida. The formulas are simpler than the songs of the Rig Veda and focus more on the proceedings of the ritual. There is evidence for offerings of milk and oil, and indirectly for a drink that is called *yaçastaram* (the noblest).

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