

11 Linear A Texts, Part 3

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Summary

This is the last of three translations of Minoan Linear A, texts from Haghia Triada, Khania and Zakros. Many of these were written with a dialect that requires a simple conversion into classic Finnish: for any two-syllable word, switch A with E, and O with U.

Each scribe skillfully found short words of one or two syllables to compress the text. Not every translation is perfect, as I limited myself to words in Kalevala, but the vast majority read fluidly.

HT 117 describes an afternoon wedding party, including the names of six songs for dancing.

HT 123 estimates the cost of a marriage and apportions the cost into four unequal pieces.

HT 128 describes the miserable condition of sheep collected for taxes.

HT Wc 3020 observes that a woman has dyed her hair.

HT Zd 155 laments the terrible pain she suffers from an abscessed eye.

HT Zd 156 calculates a mathematical sequence that increases by $1 \frac{1}{2}$.

KH 5 presents managerial progress towards upgrading each field on a farm.

ZA 8 collects weaving supplies for a shipment.

ZA 10 inventories miscellaneous parts of horizontal looms.

ZA Zb 3 on a pithos predicts how its wizard's drink will be scattered across the fens.

ZA Zb 34 on a pithos announces all is ready for wizards' jaws to float to the top.

HT 117 Tablet: 'Little stable for the sled'

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HT 117 (HM 1364) (GORILA I:196-199) is a tablet from Haghia Triada in classic Finnish that contains two lists on both sides, dated LM IB (1628-1536 BC). The word *tulos* meaning 'result, total' is one of the few known words in Linear A.

This tablet outlines wedding day activities that end with singing and dancing, very much like today. It begins by announcing that a little stable for the sled will host food and drink for the pleasure of all. First a swim, then time to relax and meditate, followed by freshening up and the first round of food and drink. Then a second swim, gifts of bone money thrown up on the roof of the stable, and a wedding feast. After the feast, everyone is invited to sing and dance. The program includes four easy pieces for everyone to enjoy and two fast ones for those who are not lame. The names of these pieces are particularly interesting as they refer to Minoan customs and mythology.

Translation

Table 1: HT 117 tablet translation

Line	Linear A	Finnish	English	Qty
a.1	VĀ TA-LI RE •	Vähä talli re'en	Little stable for the sled,	
a.1	TI-LO • U-VI KA-KE •	tiloa • huvi kaiken	room for pleasure of all.	
a.2	U-NU	Uinu	Swim	1
a.2	VI-RU	Viru	Lie [around]	1
a.2-3	TU-LA-TA	Tuhlata	Squander [time]	1
a.3	VA-LU	Valu	Flow	1
a.3	TU-RE-SA	Tuoressa	Refresh	1
a.3-4	RU JU-VA	Ruoan juovat	Food and drink	1
a.4	U-PI VI	Uipi vie	Take a swim	1
a.4-5	VI LU RA LA-LE	Vie luu raha laelle	Take bone money onto roof	1
a.5	RE HĀ-LE	Rehu häille	Wedding feed	1
a.5	KA-PA-LE	Kappale	Pieces	1
a.6	TU-LO	Tulos	Comes to	10
a.7	NA-RA TU-TU PA-LA	Naaras tuttu palat	Female familiar pieces	
a.7	PĀ NA KO-RI	Pään nauha kori	Head ribbon basket	1
a.7-8	PA VI-SĀ	Paja viisiä	It is hard in a way	1
a.8	PA-JO TU-RI	Pajoa Tuurin	The forge of Thor	1
a.9	TI PA-LO	Tie palon	The way of fire	1
b.1	E RU-JO •	Ei rujon •	Not for the lame •	
b.1	TU-LE JU	Tule juoa	Come to drink	1
b.2	PI TI-NE	Piiat tehnehen	Maidens who made it	1

Image

Figure 1: HT 117 tablet image. Source GORILA.



Transcription

Figure 2: HT 117 tablet transcription. Source GORILA.

[illegible]

Notes on translation

- VÄ** = *vähä* 'small, little'; K3.123 'A man's youth is a **small** (*vähä*) matter'
TA-LI = *talli* 'stable, shed'; K24.174 'led to the **stable** (*tallihin*)'
RE = *re'en* 'for the sled'; K 25.728 'the brown horse in front of **the sled** (*re'en*)'
TI-LO = *tiloa* 'room, place'; K29.107 'There is **room** (*tiloa*) on the island'
U-VI = *huvi* 'pleasure'; K1.101 'or to **delight** (*huviksi*) the morrow'
KA-KE = *kaiken* 'all, whole'; K3.502 'high-peaked hat **all** (*kaiken*) askew'
U-NU = *uinu* 'swim'; K7.249 'I have long been **swimming** (*uinut*) the seas'
VI-RU = *viru* 'lie'; K14.453 '**Lie** (*viru*) there fore ever'
TU-LA-TA = *tuhlata* 'spend, waste, squander'; not in K.
VA-LU = *valu* 'flow, run'; K9.416 '**run** (*valu*) onto my poor clothes'
TU-RE-SA = *tuoressa* 'refresh'; K23.236 'or the **fresh** (*tuore*) crown of a chokecherry'
RU = *ruo'a* 'food'; K32.399 'when the need **for food** (*ruoan*) comes'.
JU-VA = *juova* 'drink'; K29.175 'from which brothers **drink** (*jouvat*) water'
U-PI = *uipi* 'swim'; K7.2 '**swims** (*uipi*) the deep waves'
VI = *vie* 'take, bring, carry'; K37.225 'or **take** (*vie*) her to Russia'
LU = *luu* 'bone'; K15.359 "Join **bone** (*luu*) to tissue"
RA = *raha* 'money, coin, cash'; K18.406 'a servant bought with **money** (*rahat*)'
LA-LE = *laelle* 'on/onto the roof'; K19.384 'then it settled down **on the roof** (*laelle*)'
RE = *rehu* 'food, feed, forage, fodder'; not in K.
HA-LE = *haille* 'for the wedding'; K20.13 '**for the wedding** (*haille*) which is being arranged for'
KA-PA-LE = *kappale* 'piece'; K1.232 '**the pieces** (*kappalehet*) into beautiful things'. 'Piece' refers to the next section of songs and dances.
TU-LO = *tulos* 'comes to'; K46.202 'been looking forward as **to the coming** (*tuloa*) of summer'
NA-RA = *naaras* 'female'; K12.42 '**the woman** (*nainen*) first hastens to say'
TU-TU = *tuttu* 'familiar'; K23.173 'until a **familiar** (*tuttu*) person comes'
PA-LA = *palat* 'pieces'; K13.57 'you will get a **piece** (*pala*) of rotten wood'
PÄ = *pään* 'head, of he head'; K11.234 "to claim the girl's **head** (*pään*)"
NA = *nauha* 'ribbon, lace'; K09.152 "as the tips of women's **laces** (*nauhan*)"
KO-RI = *kori* 'basket, plait'; not in K.
PA = *paha* 'bad, evil; it is hard'; K19.487 '**it is hard** (*paja*) to hide a maiden'
VI-SÄ = *viisiä* 'in a way, in some way'; not in K.
PA-JO = *pajoa* 'forge, smithy'; K10.286 'no **forge** (*pajoa*), no bellows'
TU-RI = *tuuri* 'luck; Thor'; K15.427 '**to Thor's** (*tuurin*) new house'
TI = *tie* 'way, road'; K10.10 'the sled went on, **the way** (*tie*) grew short'
PA-LO = *palon* 'of fire, ardor'; K31.161 '**It burned** (*paloi*) one day, then a second'
E = *ei* 'not'; K01.287 'Väinämöinen is **not** (*ei*) yet born'
RU-JO = *rujon* 'for the lame'; K20.570 "bring **the lame** (*rujot*) on sleds"
TU-LE = *tule* 'come'; K08.035 "**Come** (*Tule*), maiden, into my sleigh"
JU = *juoa* 'to drink'; K27.028 "beer for a man **to drink** (*juoa*)?"
PI = *piiat* 'maidens', fr. *piika* 'maiden'; K20.589 'violated pure **maidens** (*piiat*)'
TE-NE = *tehnehen* 'who made it'; K40.331 'to the hands of the man **who made it** (*tehnehen*)'

Way of Fire, Road of Ardor

This song may come from the Gilgamesh epic of the seduction of Enkidu by the harlot.

They took the road, going straight on their way. For three days they waited, then Enkidu appeared, and the lass beheld him, the savage-man. The hunter cried: "There he is, O lass! Free thy breasts, bare thy bosom

HT 117 Tablet: 'Little stable for the sled'

that he may possess thy ripeness! Be not bashful! Welcome his ardor!" For six days and seven nights Enkidu came forth, mating with the lass.

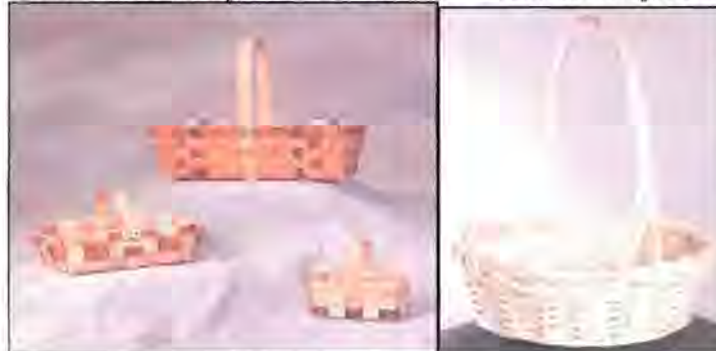
Wedding Baskets

In Finland, the Museum of Halikko has a delicate wooden bowl inscribed 'Ribbon of ours to marry'; the bride wore a special ribbon in her hair.

In Crete, wedding celebrations begin on the eve of the wedding, when relations gather at the houses of the parents-in-law and celebrate through the night until morning. They also bring the **kaniski**, which is a basket full of wedding bread rolls, meat, macaroni etc.

In Slovakia at Drahovce, on Sunday evening following the last ban, family and friends of the bride-to-be and groom meet at their respective homes to finalize arrangements for the wedding to be held the next day. The Godmothers are at these gatherings. Traditionally each Godmother brings a braided basket neatly covered with a pretty tablecloth. Carefully placed within the basket are 30 each of poppy seed, walnut and plum kolace. The basket is carried on their backs and in their hands they carry a live rooster for the soup to be served at the reception. The bride-to-be's Godmother also brings her an embroidered cap and scarf and the groom's Godmother gives him a white shirt. *Weddings in Drahovce*, by Richard Mihalek.

Figure 3: Braided birchbark baskets from Finland and braided wicker flower basket from Crete.



Wedding Basket of Europa

It was early morning. Disturbed by a dream, Europa did not go back to sleep. She summoned her companions, who were all daughters of nobility and of her age. It was a beautiful day and they went off gathering flowers by the sea.

Zeus noticed this charming group dancing in a meadow of flowers, particularly the princess Europa, the prettiest of the maidens, who was carrying a lovely **golden basket** that she filled with flowers. Thor sent his son Hermes to drive Aegenor's cattle down to the seashore. At the waterside, Europa spotted the bull of Taurus, Taurus more beautiful than any other, Taurus who smelled of flowers and lowed musically, Taurus so obviously gentle that all the maidens rushed to stroke and pet him. Europa was struck by his beauty, and on finding him gentle as a lamb, mastered her fear and began to play with him, putting flowers in his mouth and hanging garlands on his horns. In the end, she climbed upon his shoulders, and let him amble down with her to the edge of the sea. Then Taurus plunged into the sea, and began to swim rapidly from the shore [to the waiting fleet].

When she looked back at the receding shore, one of her hands clung to his right horn, the other still held a **flower basket**. Europa saw that a procession had joined them, Nereids riding dolphins, Triton blowing his horn, even Poseidon. From this she realized that Taurus must be a god. She pleaded with him to pity her. Taurus spoke to her and explained his love. He took her to Crete, and promised that she would bear him many famous sons.

Forge of Thor

Tuuri, meaning 'luck', was an epithet for Thor. Rune 2 of the *Kalevala* contains a very old saga about a copper-clad giant called **Tursas** 'octopus' who comes from the sea and saves the world by chopping down a huge oak that was shading Earth from the sun and moon. "Whoever took a branch from it **took everlasting good fortune**." The giant Thrym was called *Thursa dróttin* in Old Norse, which came from **Tursas turri ottin* meaning 'Tursas luck I took'.

Sindri and Brock, sons of the giant smith Mimir, forged Thor's throwing hammer Mjolnir. As described in the Lay of Thrym, a silver pendant shaped like this hammer was placed in the lap of the bride to symbolize protection and fertility. These pendants have a short handle and two blades. Many such pendants have been found in and around Sweden. In Crete, miniature double-bladed axes served the same purpose, with the necklace cord passing through the shaft hole.

Figure 4: Thor's hammer pendant has a short handle and two equal squared blades.

Three hammers from Sweden: left - Romersdal Hammer from the island of Borholm; center - Horda Hammer now in Småland; right - front and back of Odeshog Hammer. A miniature gold labrys from 2nd millennium, and a modern silver labrys pendant.



HT 123 Tablet: 'Account of marriage expenses'

HT 123 Tablet: 'Account of marriage expenses'

HT 123 (HM 1367 & 1371) (GORILA 1.210-213) is a complicated tablet from Haghia Triada by scribe 6, dated LM 1B (1628-1536 BC). It contains two tables that enumerate marriage expenses, then divides the total among four parties. Summations help to establish the value of fractions.

Total expenditure of 25 1/12 from side (b) carry over to side (a) as 25 1/12, which in turn divides into four parts: 1/6 down payment, 1/3 cash, 1/3 wine and 1/6 marriage created. Current expenses sum to only 27% of plan, while current withdrawal amount is only a quarter of expenses.

A much different view of a wedding reception with a program of swimming and games, eating and resting, singing and dancing appears on Tablet HT 117.

Translation of side (b)

Side (b) lists projected wedding expenses that total 25 1/12. These carry over to side (a) in the middle column called Expenses of 25 1/12.

The unit of monetary value is unknown but might be a shekel worth \$140. This would make the smallest fraction of 1/24 equal to a carat, worth \$5, battle ribbons \$560, room rental \$700 and mead \$1540. The total plan of 93 from side (a) amounts to \$13,000.

Eheys, the wedding ceremony, was a mystical word meaning 'harmony, integrity, perfection, unity, one'. This Minoan mantra survives in Greek numeral *eiz* '1', and appears in both written form and a number on the inside of white cup KN Zc 7.

Mead will cost the most, financed partly by 'clan's wine' on side (a) and supplemented by table beer. Rental of the wedding room is next, followed by battle ribbons, whatever those may be. In addition to wedding food there is evening food and stews. Other costs include the bride's blouse and transportation of the wedding party.

Table 2: HT 123, side b details of marriage expenses.

Line	Linear A	Finnish	English	Value
.1	E ME	Ehon me'et	Fine mead	11
.1	RU	Ruoan	Food	1 18/24
.2	RI PA-RA • SO NA	Riian, parahin soan nauhat	To marry, the very finest battle ribbons	4
.2-.3	E	Eheys	Unity	1
.3	E-TO • RU	Ehtoo ruoan	Evening food	4/24
.3-.4	PI PA	Piian paian	Maiden's blouse	13/24
.4	TA KA	Taian ka'ja	Wizard's table beer	[1]
.4-.5	KE-TO	Keitot	Stews	4/24
.5	TO VÄ KO KA	Toit väen kohen kai	Bring people to all	9/24
.6	TU-LO	Tulos	Comes to	20
.6	TI-LO	Tiloa	Room	5 [1/12]

Image of side (b)

Figure 5: HT 123b table image. Source GORILA.



Transcription of side (b)

Figure 6: HT 123b tablet transcription. Source GORILA.

HT 123 b	HT 123 b	
1 田 田 - 1 4 1/2	1 田 田	11
2 田 田 · 田 Y 田	1 田	1 1/2
3 1 田 田 · 田 田 田	2 田 田 · 田 Y	3/4
4 田 田 · 田 田 田	2-3 田	1
5 田 田 · 田 田 田	3 田 田 · 田	1/6
6 田 田 · 田 田 田	3-4 田 田	1/2 1/24
7 田 田	4 田 田	[1]
1-7 sur []:	4-5 田 田	1/6
1 Moins vraisemblablement 田 田	5 田 田 · 田 田	7 7
6 田 田 sur nouveau [], unités?	6 田 田	1/4 1/8
	6 田 田	20
	6 田 田	5 [1/2]

HT 123 Tablet: 'Account of marriage expenses'

Notes on side (b)

- .3 There is a punctuation mark in the middle of the phrase, not a count of 10.
- .4 The value of sign 709 is 1/24.
- .4 The missing number is 1.
- .5 The sound of the third letter is SO, not VA.
- .6 If a fraction is missing, it would be 1/12 in order to match 25 1/12 on the obverse.

E = *ehon* 'fine'; K14.071 "into the ear of your **fine** (*ehon*) mistress"

ME = *me 'et* 'mead'; K27.090 'the **mead** (*me 'et*) measured out to the men'

RU = *ruoan* 'food'; K26.036 "quickly put out **food** (*ruoan*)"

RI = *riian* 'to marry'; K37.227 'for rich men to fight **to marry** (*riian*)'

PA-RA = *parahin* 'the best, finest'; K11.011 'He got to be the **very finest** (*parahin*) man'

SO = *soan* 'war, battle, of war'; K12.064 "taste the mead **of war** (*soan*)"

NA = *nauhat* 'ribbons, laces'; 09.152 "as the tips **of** women's **laces** (*nauhan*)."

E = *Eheys* 'harmony, integrity, perfection, unity'; K11.024 'grew up to be **very lovely** (*ehossa*)'

E-TO = *ehtoo* 'evening'; not in K.

RU = *ruoan* 'food'; K26.036 "quickly put out **food** (*ruoan*)"

PI = *piian* 'maiden's'; K11.124 'have not tolerated a **maiden's** (*piian*) scorn'

PA = *paian* 'blouse'; K25.646 'when the collar **of** her blouse (*paian*) shone'

TA = *taian* 'wizardry, wizard's'; K02.194 'broke off everlasting **wizardry** (*taian*)'

KA = *ka'ja* 'table beer', from *kalja*; K20.502 'the fine **table beer** (*kalja*) made ready'

KE-TO = *keitot* 'stews'; K20.508 'had **stews** (*keitot*) cooked'

TO = *toit* 'you did bring' from *tuoda*; K37.215 "Why did **you bring** (*toit*) me that?"

VÄ = *väen* 'people'; K15.231 'exhausted **the people** (*väen*) of the Abode of the Dead'

KO = *kohen* 'to, toward'; K20.152 'climbed **to** (*kohen*) the crown'

KA = *kai* 'all', from *kaikki*; K02.261 'He felled **all** (*kaikki*) the pretty trees'

TU-LO = *tulos* 'comes to, total'; K05.137 "please do **come** (*tullos*) again!"

TI-LO = *tiloa* 'room'; K29.107 "There is **room** (*tiloa*) on the island"

Translation of side (a)

Table 3: HT 123, side 'a', which allocates expenses to four parties.

Linear A

Line	Entry	Col. 1	Col. 2	Col. 3
.1	TI	PU	ME	TI-LO
.1-.2	RA KO	31	8 $\frac{1}{4}$	1 $\frac{4}{3}$
.3-.4	SU VINI	31 $\frac{1}{2}$	8 $\frac{1}{4}$	1 $\frac{4}{3}$
.4-.5	NA LU	16	4 $\frac{1}{3}$	$\frac{3}{4}$
.6-.7	PA RU	<u>15</u>	<u>4 $\frac{1}{4}$</u>	<u>$\frac{3}{4}$</u>
.7-.9	TU-LO	93 $\frac{1}{2}$	25 $\frac{1}{12}$	6 $\frac{1}{6}$

Finnish

Line	Entry	Col. 1	Col. 2	Col. 3
.1	Tili	Puuha	Menot	Tilitäotto
.1-.2	Raha kolmas	31	8 $\frac{1}{4}$	1 $\frac{4}{3}$
.3-.4	Su'un viini	31 $\frac{1}{2}$	8 $\frac{1}{4}$	1 $\frac{4}{3}$
.4-.5	Nai'a luo'u	16	4 $\frac{1}{3}$	$\frac{3}{4}$
.6-.7	Panna ruveta	<u>15</u>	<u>4 $\frac{1}{4}$</u>	<u>$\frac{3}{4}$</u>
.7-.9	Tulos	93 $\frac{1}{2}$	25 $\frac{1}{12}$	6 $\frac{1}{6}$

English

Line	Entry	Col. 1	Col. 2	Col. 3
.1	Account	Plan	Expenses	Withdrawal
.1-.2	Money third	31	8 $\frac{1}{4}$	1 $\frac{4}{3}$
.3-.4	Clan's wine	31 $\frac{1}{2}$	8 $\frac{1}{4}$	1 $\frac{4}{3}$
.4-.5	Marriage created	16	4 $\frac{1}{3}$	$\frac{3}{4}$
.6-.7	Put down to begin	<u>15</u>	<u>4 $\frac{1}{4}$</u>	<u>$\frac{3}{4}$</u>
.7-.9	Comes to	93 $\frac{1}{2}$	25 $\frac{1}{12}$	6 $\frac{1}{6}$

Image of side (a)

Figure 7: HT HC 3020 image. Source GORILA.



Transcription of side (a)

HT 425a

1. $\text{白} \square \text{白} \cdot \text{白} : \text{白}$

2. $\text{白} \text{||||} \text{?} \text{白} + \text{白} \#$

3. $\text{白} \text{南} \text{白} : \text{白} \text{白} \text{白} \text{白} \text{白}$

4. $\text{白} + \text{白} \# \text{白} \text{白} \text{白} \text{白}$

5. $\text{白} \text{白} \text{白} \text{白} \text{白} + \text{白}$

6. $\text{白} \text{白} \text{白} \text{白} \text{白} \text{白} \text{白}$

7. $\text{白} + \text{白} \text{白} + \text{白}$

8. $\text{白} : \text{白} \text{白} \text{白} \text{白} \text{白} \text{白}$

9. $\text{白} \text{白} \text{白} \text{白} \text{白} \text{白}$

1. 9 sur palimpseste, section II II aux ll. 2-2, début 4 et 7-8.

2. 白 sur [II].

4. $\text{白} + \text{白}$ ou $\text{白} + \text{白}$; traces en bas à droite de -III, [II].

5. Peut-être traces entre 白 et 白 , dans le cas $\text{白} \text{白} \text{白} \text{白}$?

8. Après 白 effacement des "supérieur d'un"; le "inférieur" pouvait avoir été laissé comme interponction.

9. $\text{白} + \text{白}$ et fraction ou $\text{白} + \text{白}$.

HT 123 a			
1-2			
	TI RA KO	PU	ME 1/4
3-4			
	SU VINI	PU 1/2	ME 1/4
4-5			
	NA LU	PU	ME 1/6 1/6
6-7			
	PA RU	PU	ME 1/4
7-9			
	TU LO	PU 1/2	ME 1/12
$31+31.5+16+15=93.5$ $8.25+8.25+4.333+4.25=25.083$ $1.333+1.333+.75+.75=6.166$			

Notes on side (a)

There are no vowel changes, and nearly every word is abbreviated.

.1 The pound sign represents 4 of $1/3$ (a cross) = $4/3$.

.3 Quantity of ME is $8 \frac{1}{4}$, not $8 \frac{1}{2}$

.4 Quantity of TI-LO is $1 \frac{4}{3}$ in order to match the first line.

.5 Quantity of ME is $4 \frac{1}{6} + \frac{1}{6} = 4 \frac{1}{3}$

.7-.9 'Comes to' correctly sums the column entries.

.8-.9 Total expenses of $25 \frac{1}{12}$ equals total wedding expenditures of $25 \frac{1}{12}$ on the reverse side.

These expenses of $25 \frac{1}{12}$ are allocated in the ratio $1/3, 1/3, 1/6, 1/6$.

.9 Quantity of ME is $25 \frac{1}{12}$, establishing the value of lambda as $1/12$.

.9 Quantity of TI-LO is $6 \frac{1}{6}$.

TI = *Tili* 'Account', the title, not in K.

PU = *puuha* 'plan, project, work'; K42.140 'kneeling on the ground **he worked away** (*puuhaeli*),

ME = *menot* 'expenses'; not in K.

TI-LO = *tililtäotto* 'withdrawal'; not in K.

RA = *raha* 'money'; K35.176 '**the money** (*raha*) brought about a change in the girl'

KO = *kolmas* 'third'; K09.059 '**the third** (*kolmas*), the youngest of the maidens'

SU = *su'u* 'clan, family' from *suku*; K24.182 "has a big **clan** (*suku*), many relatives"

VINI = the sign for wine, pronunciation unknown, not in K, possibly *rypäs* 'grape'.

NA = *nai'a* 'marriage from *naida*'; K19.505 '**to marry** (*naia*) at a youthful age'

LU = *luo'u* 'created' from *luotu*; K21.359 "Since I was **created** (*luotu*) a singer"

PA = *panna* 'put down'; K22.486 '**you will be put in a situation** (*pannahan*)'

RU = *ruveta* 'to start, begin'; K46.418 '**begin** (*ruveta*) no bad deeds'

TU-LO = *tulos* 'comes to'; K05.137 "please do **come** (*tullos*) again!"

HT 128 Tablet: 'Sheep I received'

HT 128 Tablet: 'Sheep I received'

HT 128 (HM --) (GORILA 1.220-221) is a tablet inscribed on both sides from the palace of Haghia Triada, broken in several pieces, dated LM IB (1628-1536 BC), from scribe 6. The characters U (female) and URO (male) occur on numerous lists. The scribe wrote with a dialect.

Daniel Was interpreted HT 128 as harvest from or seed required for plots previously sown with barley.¹

Translation

Tablet HT 128 lists a motley assortment of sheep received at the palace for taxes, mostly sick, unsound, nursing or bony. TU abbreviates tuoma 'offspring'.

Table 4: HT 128a tablet translation.

Side	Dialect	Classic	Finnish	English	Qty
a.1	U • SA	U • SA	Uuhen sain	Sheep I received	
a.1	LA TA LU-SÄ	LA TA LU-SE	Laihat tahi luisen	Scrawny or bony	
	KO-VE	KO-VA	kova	severe	
a.2	URO	URO	uros	male	10
a.3	JÄ RU VÄ-LE	JÄ RU VÄ-LÄ	Jäi ruoan vähällä	Left for a little food	
a.3	URO TU	URO TU	uros tuoma	male offspring	12
a.3	[VI-RE] VI-RA	[VI-RA] VI-RE	[Vieras] viere	[Strange] walk	
a.3	URO	URO	uros	male	10
a.3	URO TU	URO TU	uros tuoma	male offspring	6
a.3	PI [NI KI-TE]	PI [NI KI-TA]	Pie[ni kita]	Small [jaw]	
a.4	URO TU	URO TU	uros tuoma	male offspring	4
a.4	VA-LI	VA-LI	Vaali	Nursing	
b.1	URO TU	URO TU	uros tuoma	male offspring	6
b.1	MI PA	MI PA	Min paha	As much as bad	
b.1	URO TU	URO TU	uros tuoma	male offspring	1
b.2	LU-[SA MU]	LU-[SE MU]	Luisen [muu]	Bony [the rest]	
b.2	U TU	U TU	uuhi tuoma	ewe offspring	6

Dialect change in vowel sound of second syllable.

Minoan Classic, EM IIA	Begin 2400 BC	A	E	I	O	U
Minoan Dialect, LM 1A and later	After 1700 BC	E	A	I	U	O

¹ Daniel A Was, The land-tenure texts from Hagia Triada, 1981, Kadmos V.20, Issue 1-2, pp 7-25.

Image

Figure 10: HT 128 tablet. Source GORILA.



Figure 11: HT 128 tablet with inscription highlighted. Source GORILA.

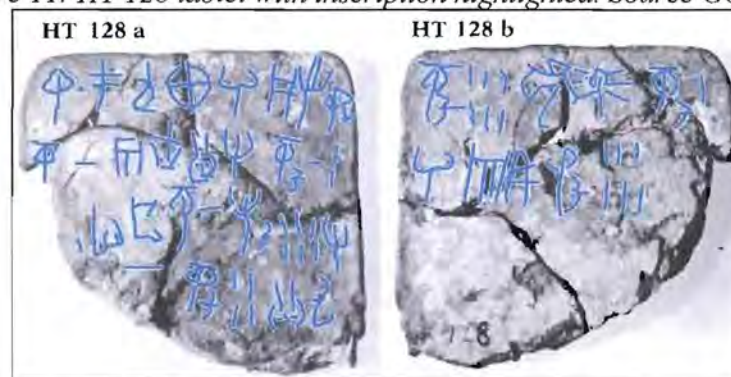
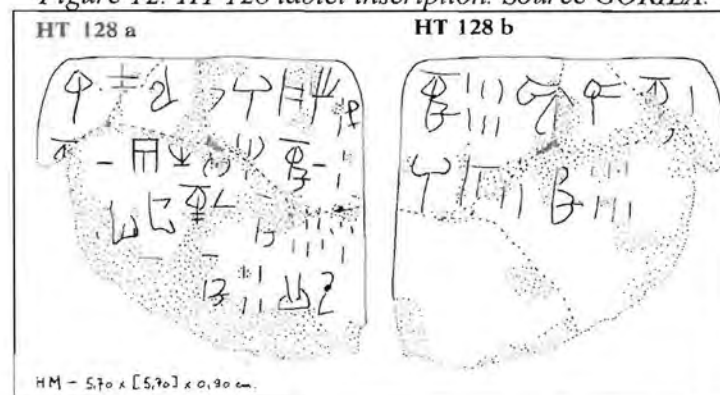


Figure 12: HT 128 tablet inscription. Source GORILA.



HT 128 Tablet: 'Sheep I received' Transcription

Figure 13: HT 128 tablet transcription. Source GORILA.

HT 128a		HT 128a	
1	Φ Φ 21 Φ Φ Φ Φ Φ Φ	1	Φ Φ Φ Φ
2	Φ - Φ Φ Φ Φ Φ Φ - 1	2	Φ Φ Φ Φ
3	Φ Φ Φ Φ Φ Φ Φ Φ Φ Φ	3	Φ Φ Φ Φ
4	Φ Φ Φ Φ Φ Φ Φ Φ	4	Φ Φ Φ Φ
HT 128b		HT 128b	
1	Φ Φ Φ Φ Φ Φ Φ Φ	1	Φ Φ Φ Φ
2	Φ Φ Φ Φ Φ Φ Φ Φ	2	Φ Φ Φ Φ
inf. muc.		inf. muc.	
2. Pent-êta Φ Φ Φ Φ Φ Φ Φ Φ		2. Pent-êta Φ Φ Φ Φ Φ Φ Φ Φ	

Notes on translation

- a.1 The horizontal bar above character U means RO: URO = *uros* 'male', male symbol.
 a.1 The fourth character is TA, not RU.
 a.3 The character following RA has no double cross marks on the stem.
 a.3 The first number should be 10 not ½.
 a.3 The missing characters after PI could be [NI KI TE] giving *pieni kita* 'small jaw', a genetic defect of sheep that leads to starvation.
 b.1 The third character is PĀ, a candle shaped like a flame with radiation right.
 b.2 The two missing characters may be SA and MU.
 b.2 The last character lacks the top horizontal bar; it is U = *uuhi* 'ewe', female symbol.

U = *uuhen* 'sheep'; K07.348 "from the fleece of one **sheep** (*uuhen*)"

SA = *sain* 'I got, received'; K11.357 "**I got** (*sain*) the best one into my basket sleigh"

LA = *laiha* 'scrawny, thin, weak'; K03.022 'a **scrawny** (*laiha*) Lappish lad'

TA = *tahi* 'or'; K27.345 '**or** (*tahi*) a neck is broken'

LU-SĀ < LU-SE = *luisen* 'bony'; K01.321 'suddenly turned the **bony** (*luisen*) lock'

KO-VE < KO-VA = *kova* 'hard, severe'; K43.422 "**severe** (*kovan*) weather not touch us"

URO = *uros* 'male'; K02.068 'a **male** (*uros*) rose up from the waves'

JĀ = *jāi* 'left'; K29.303 '**He left** (*jāi*) the girls unembraced'

RU = *ruoan* 'for food'; K32.399 'When the need **for food** () comes'

VĀ-LE < VĀ-LĀ = *vähällä* 'a little'; K26.684 'nor yield a **little** (*vähällä*)'

TU = *tuoma* 'offspring'; K10.449 'the mother's **offspring** (*tuoma*) get lost'

[VI-RE] < VI-RA = *vieras* 'strange'; K22.255 "the **strange** (*vieras*) mother not like your mother"

VI-RA < VI-RE = *viere* 'walk'; K32.365 '**walk** (*viere*) like a tuft of wool'

PI [NI] = *pieni* 'small'; K09.278 'neither big nor **small** (*pieni*)'

[KI-TA] = *kita* 'jaw'; K19.229 '**the jaw** (*kita*) equal to three rapids'

VA-LI = *vaali* 'nursing'; K47.098 '**tended** (*vaali*) the flame with her hands'

MI = *min* 'by as much as'; K06.159 "**By as much as** (*min*) my hand goes down"

PA = *paha* 'bad'; K02.108 'to cause this **bad** (*paja*) tree to vanish'

LU-[SA] < LU-SE = *luisen* 'bony'; K01.321 'suddenly turned the **bony** (*luisen*) lock'

[MU] = *muu* 'the rest'; K24.349 "or **the rest** (*muu*) of my big clan"

HT Wc 3020 Roundel: 'The hair on her head'

HT Wc 3020 Roundel: 'The hair on her head'

HT Wc 3020 (HM 1348) (GORILA 2.78) is a small nodule 2 cm across in excellent condition from scribe 111 in Hagia Triada, dated LM 1B (1628-1536 BC). This scribe observed that a Minoan woman dyed her hair.

Translation

Dialect: E TO, HI-SA PÄ-SE

Classic: E TO, HI-SE PÄ-SÄ

Finnish: Ei toet, hiukset päänsä.

English: Not true, the hair on her head.

Dialect change in vowel sound of second syllable.

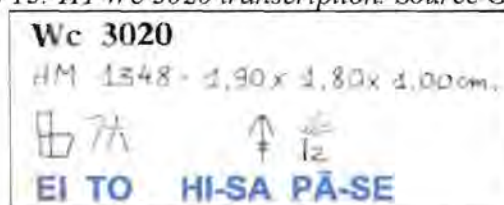
Minoan Classic, EM IIA	Begin 2400 BC	A	E	I	O	U
Minoan Dialect, LM 1A and later	After 1700 BC	E	A	I	U	O

Image and Transcription

Figure 14: HT Wc 3020 image. Source GORILA.



Figure 15: HT Wc 3020 transcription. Source GORILA.



Notes on translation

EI = *ei* 'not'; K03.011 'which **not** (*ei*) all children sing'

TO = *toet* 'true'; K49.099 "bring here a **true** (*toet*) report"

HI-SA < **HI-SE** = *hiukset* 'hair'; K36.100 '**hair** (*hiukset*) of withered grass'

PÄ-SE < **PÄ-SÄ** = *päänsä* 'on her head'; K23.791 'an ell of fluffy ash **on his head** (*päänsä*)'

HT Zd 155 Graffito: 'Abscess, for a long time open'

Two scraps of clay **HT Zd 155** and **HT Zd 157** (HM 52-4) (GORILA 4:130-5) go together, written by the same woman from Haghia Triada over a short period of time. They date to MR I B by context (LM IB, 1628-1522 BC). She had a painful abscess that provoked constant weeping. Over the course of a moon, her health did not improve, she had no deep sleep, and her painful abscess continued to cause weeping. She was also a mathematician (see tablet HT Zd 156), and uses number 1 as part of this inscription.

Her condition appears contrary to other evidence of advanced medicinal skills and specialized surgical equipment. The loss of an eye on the second animal of tablet 155 suggests an eye abscess, exceedingly painful and not readily treatable.

Translation

Finnish: 155: Ajos. Kauan aava, varin ritva. 157: Yksi kuun ei hauan nu'ua, varin ritva.

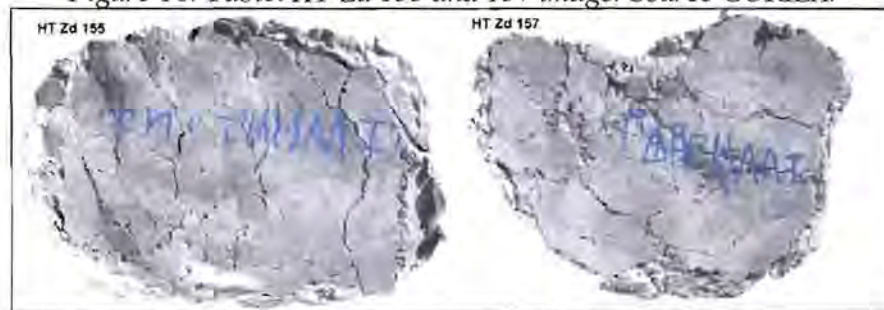
English: 155: An abscess. For a long time its been open, painful and weeping. 157: For one moon I've had no deep sleep, painful and weeping.

Table 5: HT Zd 155 and 157 translation.

Side	Dialect	Classic	Finnish	English
155.1	A-JU •	A-JO •	Ajos:	An abscess:
.2	KA VA	KA VA	Kauan aava	For a long time open
.3	VA-RI RI-VE	VA-RI RI-VA	varin ritva.	painful and weeping.
157.1	1 KU	1 KU	Yksi kuun	For one moon
.2	E HA NU	E HA NU	ei hauan nu'ua	no deep sleep
.3	VA-RI RI-VE	VA-RI RI-VA	varin ritva	painful and weeping

Image

Figure 16: Tablet HT Zd 155 and 157 image. Source GORILA.



Transcription

Figure 17: Tablet HT Zd 155 and 157 transcription. Source GORILA.

 A JU • KA VA VA RI RI VE	 1 KU • E HA NU VA RI RI VE
------------------------------	--------------------------------

HT Zd 155 Graffito: 'Abscess, for a long time open'

Minoan dialect, vowel changes to 2nd syllable.

Minoan Classic, EM IIA	Begin 2400 BC	A	E	I	O	U
Minoan Dialect, LM IA and later	After 1700 BC	E	A	I	U	O

Notes on translation

155.2-3 The second face has one eye instead of two, a strong indication of an abscessed eye.

155.3 'Weeping' applies to both the woman and her abscess.

A-JU < **A-JO** = *ajos* 'abscess'; not in K.

KA < *kauan* 'for a long time'; K47.002 played the harp **for a long time** (*kauan*),

VA < **A-VA** = *aava* 'open'; K29.438 'on the waves **of the open** (*aavan*) sea'

VA-RI = *varin* 'painful'; K3.197 'boiling hot water **painful** (*varin*)'

RI-VE < **RI-VA** = *ritva* 'weeping'; not in K.

157.1 A crescent moon follows numeral 1. As a general rule for lists of items, numbers always follow text, but here the sequence conforms to natural speech.

1 moon = *yksi kuun* 'for one moon'; K20.031 'A summer-born squirrel ran **for a moon** (*kuun*)'

E = *ei* 'no, not'; K03.237 '**No** (*ei*) one saw you'

HA = *hauan* 'deep'; K49.011 'The pike knew the **deep** (*hauan*) places'

NU = *nu'ua* 'sleep, fall asleep', fr. *nukkua*; K42.077 'all the listeners **fell asleep** (*nukkui*)'

VA-RI = *varin* 'painful'; K3.197 'boiling hot water **painful** (*varin*)'

RI-VE < **RI-VA** = *ritva* 'weeping'; not in K.

HT Zd 156 Graffito: 'If I start with 1 and multiply by 1½'

HT Zd 156 (HM 53) (GORILA 4:132-3) is a graffito from Haghia Triada written on one side, dated to MR I B from context (LM IB) (1628-1522/1491 BC). The scribe was a female mathematician, who also wrote graffitos 155 and 157, which describes the pain from losing an eye. The dialect may have suppressed T in joutun and K in rakennan, or made these letters TH and GH.

Oliver brilliantly deduced the written word for 'five'. This tablet contains a progressive arithmetic sequence – 1, 1½, 2¼, 3 3/8, 5 1/16 – where each term is 1½ times larger than the previous term. Oliver proposed that in order to complete this sequence, the last word or letter had to be 5, which it is. The sequence also confirms fractional sign values.

Translation

Table 6: HT Zd 156 translation.

Line	Linear A	Finnish	English	Number
.1	JO	Jos	If	1
.2	JO	joutun	I get to	1 ½
.3	VE	veä	carry	2 ¼
.4	VE	veä	carry	3 3/8
.5	RA VI	rakennan viisi	I make five	1/16

Image and Transcription

Figure 18: HT Zd 156 image and transcription. Source GORILA.

**Notes on translation**

1.5 The last character VI should be ; its name is 'five'.

JO < *jos* 'if'; K3.355 "If (*jos*) I reverse my magic charm"

JO < *joutun* 'I get to'; K32.297 "get to (*joutua*) each smudge fire"

VE < *veä* 'carry'; K09.009 'they do not **carry** (*veä*) even a little bit'

VE < *veä* 'carry'; K09.009 'they do not **carry** (*veä*) even a little bit'

RA < *rakennan* 'I make'; K18.250 "In the winter **you make** (*rakennat*) horseshoes"

VI < *vissi* 'five'; K29.317 'five (*viisi*) little bits of a distaff'

KH 5 Tablet: 'Father-in-law knows the setting I want'

KH 5 Tablet: 'Father-in-law knows the setting I want'

KH 5 (GORILA 3.24-25, Khania M.5) is a nearly complete, one-sided tablet from the archives of Khania that dates to the end of LM IB (~1500 BC). The scribe describes the condition of eight areas of a farm that once herded cattle that new management has planted with trees, most likely olive trees.

Translation

Translation in Finnish

Appehen tieä kehä'an tahon:
 1 ahollen uuen paaet
 1 ennen nau'an, jo päin puut
 2 lomat ehon
 2 ei kauan toie
 1 tahon kauas
 1 tuho, saapu päin puut
 3 saaen kia
 2 puoli loi

Translation in English

Father-in-law knows the setting I want:
 1 a clearing, newly cleared of rocks
 1 formerly in cattle, now toward trees
 2 fine spaces
 2 not long you brought
 1 from a direction far away
 1 a ruin, getting ready toward trees
 3 reaching the settlement
 2 half formed

Table 7: KH 5 tablet translation.

Line	Qty	Dialect	Classic	Finnish	English
.1		A-PA TI KE TA	A-PE TI KE TA	Appehen tieä kehä'an tahon	Father-in-law knows the setting I want
.1-2	1	A-LA U PA	A-LE U PA	Ahollen, uuen paaet	a clearing, newly cleared of rocks
.2	1	E-NA NA JO PÄ PU	E-NE NA JO PÄ PU	ennen nau'an, jo päin puut	before in cattle, now toward trees
.2	2	LO-ME E	LO-MA E	lomat ehon	fine spaces
.2-3	2	E KA TO	E KA TO	ei kauan toit	not long you brought
.3	1	TA KA	TA KA	tahon kauas	from a direction far away
.3-4	1	TU SA-PO PÄ PU	TU SA-PU PÄ PU	tuho, saapu päin puut	a ruin, getting ready toward trees
.4	3	SA KI	SA KI	saaen kia	reaching the settlement
.4	2	1/2 LO	1/2 LO	puoli loi	half formed

Minoan dialect: change in vowel sound of second syllable.

Minoan Classic, EM IIA	Begin 2400 BC	A	E	I	O	U
Minoan Dialect, LM 1A and later	After 1700 BC	E	A	I	U	O

Image and Transcription

Figure 19: KH 5 tablet image.

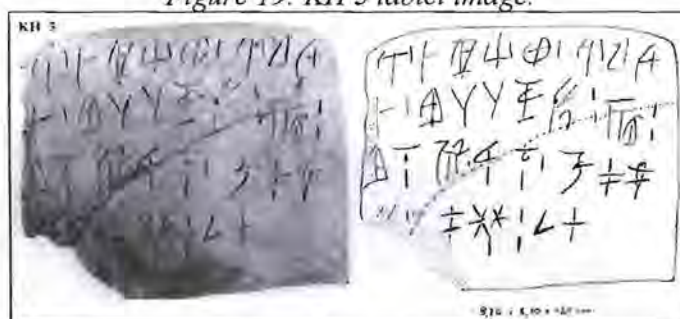


Figure 20: KH 5 tablet transcription.

KH 5		KH 5
1. 𐎶 𐎶 𐎶 𐎶 𐎶	1.	𐎶 𐎶 𐎶 𐎶 𐎶
2. 𐎶 𐎶 𐎶 𐎶 𐎶	2.	𐎶 𐎶 𐎶 𐎶 𐎶
3. 𐎶 𐎶 𐎶 𐎶 𐎶	3.	𐎶 𐎶 𐎶 𐎶 𐎶
4. 𐎶 𐎶 𐎶 𐎶 𐎶	4.	𐎶 𐎶 𐎶 𐎶 𐎶
5. 𐎶 𐎶 𐎶 𐎶 𐎶	5.	𐎶 𐎶 𐎶 𐎶 𐎶
6. 𐎶 𐎶 𐎶 𐎶 𐎶	6.	𐎶 𐎶 𐎶 𐎶 𐎶
7. 𐎶 𐎶 𐎶 𐎶 𐎶	7.	𐎶 𐎶 𐎶 𐎶 𐎶
8. 𐎶 𐎶 𐎶 𐎶 𐎶	8.	𐎶 𐎶 𐎶 𐎶 𐎶
9. 𐎶 𐎶 𐎶 𐎶 𐎶	9.	𐎶 𐎶 𐎶 𐎶 𐎶
10. 𐎶 𐎶 𐎶 𐎶 𐎶	10.	𐎶 𐎶 𐎶 𐎶 𐎶
11. 𐎶 𐎶 𐎶 𐎶 𐎶	11.	𐎶 𐎶 𐎶 𐎶 𐎶
12. 𐎶 𐎶 𐎶 𐎶 𐎶	12.	𐎶 𐎶 𐎶 𐎶 𐎶
13. 𐎶 𐎶 𐎶 𐎶 𐎶	13.	𐎶 𐎶 𐎶 𐎶 𐎶
14. 𐎶 𐎶 𐎶 𐎶 𐎶	14.	𐎶 𐎶 𐎶 𐎶 𐎶
15. 𐎶 𐎶 𐎶 𐎶 𐎶	15.	𐎶 𐎶 𐎶 𐎶 𐎶
16. 𐎶 𐎶 𐎶 𐎶 𐎶	16.	𐎶 𐎶 𐎶 𐎶 𐎶
17. 𐎶 𐎶 𐎶 𐎶 𐎶	17.	𐎶 𐎶 𐎶 𐎶 𐎶
18. 𐎶 𐎶 𐎶 𐎶 𐎶	18.	𐎶 𐎶 𐎶 𐎶 𐎶
19. 𐎶 𐎶 𐎶 𐎶 𐎶	19.	𐎶 𐎶 𐎶 𐎶 𐎶
20. 𐎶 𐎶 𐎶 𐎶 𐎶	20.	𐎶 𐎶 𐎶 𐎶 𐎶
21. 𐎶 𐎶 𐎶 𐎶 𐎶	21.	𐎶 𐎶 𐎶 𐎶 𐎶
22. 𐎶 𐎶 𐎶 𐎶 𐎶	22.	𐎶 𐎶 𐎶 𐎶 𐎶
23. 𐎶 𐎶 𐎶 𐎶 𐎶	23.	𐎶 𐎶 𐎶 𐎶 𐎶
24. 𐎶 𐎶 𐎶 𐎶 𐎶	24.	𐎶 𐎶 𐎶 𐎶 𐎶
25. 𐎶 𐎶 𐎶 𐎶 𐎶	25.	𐎶 𐎶 𐎶 𐎶 𐎶
26. 𐎶 𐎶 𐎶 𐎶 𐎶	26.	𐎶 𐎶 𐎶 𐎶 𐎶
27. 𐎶 𐎶 𐎶 𐎶 𐎶	27.	𐎶 𐎶 𐎶 𐎶 𐎶
28. 𐎶 𐎶 𐎶 𐎶 𐎶	28.	𐎶 𐎶 𐎶 𐎶 𐎶
29. 𐎶 𐎶 𐎶 𐎶 𐎶	29.	𐎶 𐎶 𐎶 𐎶 𐎶
30. 𐎶 𐎶 𐎶 𐎶 𐎶	30.	𐎶 𐎶 𐎶 𐎶 𐎶
31. 𐎶 𐎶 𐎶 𐎶 𐎶	31.	𐎶 𐎶 𐎶 𐎶 𐎶
32. 𐎶 𐎶 𐎶 𐎶 𐎶	32.	𐎶 𐎶 𐎶 𐎶 𐎶
33. 𐎶 𐎶 𐎶 𐎶 𐎶	33.	𐎶 𐎶 𐎶 𐎶 𐎶
34. 𐎶 𐎶 𐎶 𐎶 𐎶	34.	𐎶 𐎶 𐎶 𐎶 𐎶
35. 𐎶 𐎶 𐎶 𐎶 𐎶	35.	𐎶 𐎶 𐎶 𐎶 𐎶
36. 𐎶 𐎶 𐎶 𐎶 𐎶	36.	𐎶 𐎶 𐎶 𐎶 𐎶
37. 𐎶 𐎶 𐎶 𐎶 𐎶	37.	𐎶 𐎶 𐎶 𐎶 𐎶
38. 𐎶 𐎶 𐎶 𐎶 𐎶	38.	𐎶 𐎶 𐎶 𐎶 𐎶
39. 𐎶 𐎶 𐎶 𐎶 𐎶	39.	𐎶 𐎶 𐎶 𐎶 𐎶
40. 𐎶 𐎶 𐎶 𐎶 𐎶	40.	𐎶 𐎶 𐎶 𐎶 𐎶
41. 𐎶 𐎶 𐎶 𐎶 𐎶	41.	𐎶 𐎶 𐎶 𐎶 𐎶
42. 𐎶 𐎶 𐎶 𐎶 𐎶	42.	𐎶 𐎶 𐎶 𐎶 𐎶
43. 𐎶 𐎶 𐎶 𐎶 𐎶	43.	𐎶 𐎶 𐎶 𐎶 𐎶
44. 𐎶 𐎶 𐎶 𐎶 𐎶	44.	𐎶 𐎶 𐎶 𐎶 𐎶
45. 𐎶 𐎶 𐎶 𐎶 𐎶	45.	𐎶 𐎶 𐎶 𐎶 𐎶
46. 𐎶 𐎶 𐎶 𐎶 𐎶	46.	𐎶 𐎶 𐎶 𐎶 𐎶
47. 𐎶 𐎶 𐎶 𐎶 𐎶	47.	𐎶 𐎶 𐎶 𐎶 𐎶
48. 𐎶 𐎶 𐎶 𐎶 𐎶	48.	𐎶 𐎶 𐎶 𐎶 𐎶
49. 𐎶 𐎶 𐎶 𐎶 𐎶	49.	𐎶 𐎶 𐎶 𐎶 𐎶
50. 𐎶 𐎶 𐎶 𐎶 𐎶	50.	𐎶 𐎶 𐎶 𐎶 𐎶

Notes on translation

- 1 Unlike typical lists, numbers precede the description.
- 1 Second syllable TĀ remains unchanged.
- 2 Unit of land could be something like a hectare.
- 3 Soap beans might be olives to make olive-oil soap.

A-PA < **A-PE** = *appehen* 'father-in-law'; K24.202 'or the **father-in-law** (*appehen*) scold'

TI = *tieä* 'knows'; K15.007 'The poor mother **does** not **know** (*tieä*)'

KE = *kehä'an* 'the setting'; K47.078 'in a silver **setting** (*kehä'an*)'

TA = *tahon* 'I want'; K11.181 "**I want** (*tahon*) a sturdy body"

A-LA < **A-LE** = *ahollen* 'clearing'; K 02.300 'this growing **clearing** (*ahollen*)'

U = *uen* 'newly cleared'; K10.054 'at the head of the **newly cleared** (*uen*) Osmo field'

PA = *paaet* 'of rocks'; K03.298 'solid slabs **of rock** (*paaet*) split'

E-NA < **E-NE** = *ennen* 'formerly, before'; K07.147 '**before** (*ennen*) the sun rose'

NA = *nau'an* 'cattle' from *nauta*; K *navetta*

JO = *jo* 'now'; K05.147 '**Now** (*Jo*) he wove a silken net'

PÄ = *päin* 'toward'; K27.374 'toward (*päin*) his own neck'

PU = *puut* 'trees'; K03.171 "I know **the trees** (*puut*) of Pisa's Hill"

LO-ME < **LO-MA** = *loma* 'space, gap'; K15.361 '**to the gap** (*lomahan*) in the silver bone'

E = *ehon* 'fine'; K14.071 'into the ear of your **fine** (*ehon*) mistress'

KH 5 Tablet: 'Father-in-law knows the setting I want'

E = *ei* 'not'; common word

KA = *kauan* 'long, long time'; K48.312 "not cause pain for a very **long time** (*kauan*)?"

TO = *toit* 'you brought'; K25.237 "You brought () the cuckoo when you came"

TA = *tahon* 'from a direction, quarter'; K23.261 "then **find out** (*taho*) from the mistress"

KA = *kauas* 'far away'; K03.015 'Far away (*kauas*) the news is heard'

TU = *tuho* 'a ruin'; K 12.193 '**the ruin** (*tuho*) of a splendid youth'

SA-**PO** < SA-**PU** = *saapu* 'getting ready'; K26.040 '**getting** a sauna **ready** (*saapuessä*)'

PÄ = *päin* 'toward'; K27.374 '**toward** (*päin*) his own neck'

PU = *puut* 'trees'; K03.171 "I know **the trees** (*puut*) of Pisa's Hill"

SA = *saaen* 'reaching'; K43.427 '**reaching** (*saaen*) from earth to heaven'

KI = *kia* 'the settlement'; precursor to *kylä*, community that is not a farm

1/2 = *puoli* 'half'; K11.188 'barely **half** (*puoli*) a month elapsed'

LO = *loi* 'formed'; K01.272 'there **she formed** (*loi*) places to seine for salmon'

ZA 8 Tablet: 'For the Road'

ZA 8 (GORILA 3.165) is a tablet inscribed on one side from the palace of Zakros on the east coast of Crete, dated 1628 BC. On that date Thera erupted, incinerated the palace and flooded the ruined palace with a tsunami, never to be rebuilt. The tablet lists weaving items for shipment.

Yarn was measured by double minas (DD) and double skeins (BB). 'Fish-trap head start' could be a special apparatus to start the initial warp threads of a double-beam loom away from the loom. 'Plow jaw' might be a shuttle. 'Shirt-tent battle bench' might apply to a double-beam loom where the weaver sits and manipulates multiple battens, where 'tent' or 'shed' is the technical term for the region where the shuttle passes through. 'Left handed' describes the twist of the yarn.

Translation

Table 8: ZA 8 tablet translation.

L.	Dialect	Classic	Finnish	English	Qty
.1	TI-LA •	TI-LE •	Tielle:	For the road:	
.1	A-RA-LE • KI	A-RA-LA • KI	auralla ki'a	plow jaw	½
.2	TU-RU	TU-RO	turo	fish-trap	1 DD
	PÄ-LE	PÄ-LÄ	päälähe	head-start	
.2	A-LI KI-RA	A-LI KI-RE	alli kiire	old-woman thread	1 BB
.3	RA-KO KU	RA-KA KU	rakas ku'o,	lovely weave,	½ BB
	VA-SA	VA-SE	vasen	left-handed	
.4	VÄ TA	VA TA	vähä taian	little magic	2 ¾
	KO NE	KO NE	koan neion	tent of a maiden	
.5	PA KO	PA KO	paian koan	shirt tent	2 ½
	SO RA	SO RA	soan rahi	battle bench	
.6	TA-KO LO	TA-KU LO	takku loi	tangle cast	4 BB

Minoan dialect: change in vowel sound of second syllable.

Minoan Classic, EM IIA	Begin 2400 BC	A	E	I	O	U
Minoan Dialect, LM 1A and later	After 1700 BC	E	A	I	U	O

Evaluation of line items.

English	Qty	Measure	Value
For the road			
plow • jaw	½	drachma	\$35
fish-trap head start	1 DD	double mina	2 ½ lbs
old-woman thread	1 BB	double skein	
lovely weave, left handed	½ BB	double skein	
little magic tent of a maiden	2 ¾	drachma	\$195
shirt tent battle bench	2 ½	drachma	\$175
tangle cast	4 BB	double skein	

BB = 'double skeins', with three examples of skeins of thread.

DD = 'double mina', used to measure wool and other dry commodities.

ZA 8 Tablet: 'For the Road'

John Younger deduced from Hieroglyphic document **CHIC #089.b** that 1 lana = 3 double minas, which allows the weight of a double mina to be calculated:

1 talent = 75.6 lbs = 10 lanas,

1 lana = 7.56 lbs = 3 double minas

1 double mina = 2.52 lbs

English measures for wool began with a **clove** that weighed 7 lbs, about the same as a **lana**.

Image and Transcription

Figure 21: ZA 8 tablet image. Source GORILA.



Figure 22: ZA 8 tablet transcription. Source GORILA

ZA 8	ZA 8
1. 𐎶 𐎵. 𐎶 𐎶 𐎶. 𐎶 𐎶	1. 𐎶 𐎵.
2. 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	𐎶 𐎵 𐎶. 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶
3. 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	𐎶 𐎵 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶
4. 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	𐎶 𐎵 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶
5. 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	𐎶 𐎵 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶
6. 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	𐎶 𐎵 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶
	TI LA +
	𐎶 𐎵 𐎶. 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶
	A RA LE + KI 1/2
	𐎶 𐎵 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶
	TU RU PA LE DD
	𐎶 𐎵 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶
	A LI KI RA 4 [] +
	𐎶 𐎵 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶
	RA KO KU VA SA BB
	𐎶 𐎵 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶
	VA TA KO NE 1/2
	𐎶 𐎵 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶
	PA KO SO RA 3/4
	𐎶 𐎵 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶
	TA KO LO 2
	𐎶 𐎵 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶
	PA KO SO RA 1/2
	𐎶 𐎵 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶
	TA KO LO 4 +
	BB

Notes on translation

.2 'Old woman thread' would be weft thread dyed black.

.4 'Clothes to repair' does not make sense

.5 'battle bench' could also be 'rowing bench'

.6 'tangle fashioned' describes a very loose yarn.

TI-LA < **TI-LE** = *tielle* 'for-on the road'; K26.432 'grouse-feathers **on the road** (*tielle*)'

A-RA-LE < **A-RA-LA** = *auralla* = 'plow'; K19.30 "with a very sharp **plow** (*auralla*)"

KI = *ki* 'a 'jaw' fr. *kita*; K19.229 '**the jaw** (*kita*) equal to three rapids'

TU-RU < **TU-RO** = *turo* 'fish-trap'; not in K.

PÄ-LE < **PÄ-LÄ** = *päälähe* 'head-start'

pää 'head'; K37.107 'the mane of gold, **the head** (*pää*) of silver'

lähe 'start'; K43.214 "I will not **start** (*lähe*) to share the Sampo"

A-LI = *alli* 'old woman'; K 22.411 "I am like an **old squaw** (*alli*) on the surge of the sea'

KI-RA < **KI-RE** = *kierre* 'thread, twist'; K23.380 "**the warp threads** (*kierempäiset*) always rather tight";

RA-KO < **RA-KA** = *rakas* 'lovely, desirous'; K25.380 "**lovely** (*rakas*) water on the shore"

KU = *ku'o* 'weave' from *kuoite*; K23.387 '**weave** (*ku'o*) homespun jackets'

VA-SA < **VA-SE** = *vasen* 'left, left-handed'; K17.096 'the **left** (*vasen*) foot slid'

VA-TA < **VA-TE** = *vaate* 'clothes'; K16.334 'the man slept, the **clothes** (*vaate*) kept watch'

VÄ = *vähä* 'little, small, few, minor'

TA = *taian* 'magic, wizardry'; K02.194 'broke off everlasting **wizardry** (*taian*)'

KO = *koan* 'tent'; K40.075 'past a magician's **Lappish tent** (*koan*)'

NE = *neion* 'of a maiden'

PA = *paian* 'shirt'; K18.340 she brought **the** linen **shirt** (*paian*)'

KO = *koan* 'tent'; K40.075 'past a magician's **Lappish tent** (*koan*)'

SO = *soan* 'battle'; K30.047 'to help Ahti **in battle** (*soan*)'

RA = *rahi* 'bench'; K18.217 'was forging a long iron **bench** (*rahi*)'

TA-KO < **TA-KU** = *takku* 'tangle, be twisted, snarled, matted'; not in K

LO = *loi* 'fashioned, cast, formed'; K15.378 'she **fashioned** (*loi*) the man, shaped the fellow'

Warp Thread

Maggie Forest and Silvia Ravinet of New Zealand researched wool for warp threads.² They found that the only sheep whose wool produces perfect warp threads is the Gute Sheep.

The Gute sheep is in fact the original sheep from Gotland, unchanged pretty much from the Bronze Age. The wool from the Gute sheep is absolutely a delight to work with. It is almost completely straight, very hairy, yet it holds together very firmly. It's like butter to spin - we found we didn't even have to comb it, just teasing the ends apart and pulling into a natural 'sliver' was sufficient to spin a strong worsted thread.

Loom

Minoans employed two different loom designs:

- warp-weighted looms, where the weaver stood and beat the weft upward;

- double-beam looms with 4-6 heddles, where the weaver sat and beat the weft downward.

Modern looms follow the double beam, multiple heddle design that easily creates complicated patterns. In high-volume factories, two assistants would set up warp threads away from the loom, then transfer the new warp to the loom when the weaver finished. One weaver could complete a wide cloth faster and with less effort than two women on a vertical loom. The complex array of clothing patterns on frescos from Thera and Egypt required double-beam looms. For more on double beam looms, see ZA-10, an inventory of two-beam loom supplies.

Figure 23: Two Greek women weaving on a warp-weighted loom.³



² Maggie Forest and Silvia Ravinet; 2000, "Recreating period fabric production", <http://www.forest.gen.nz/Medieval/articles/Warp/WARP.HTML>.

³ Attic black-figured jug, c. 550 BC, Metropolitan Museum of Art.

ZA 10 Tablet: 'Straps for the Sled'

ZA 10 (GORILA 3.168-171) (HM 1621) is an unbroken two-sided tablet from the archives of Kato Zakros, dated 1628 BC, the eruption of Thera.

This important tablet inventories parts for a two-beam loom. Historians debate the existence of two-beam looms at Crete, archaeologists demur saying anything wood burned away, and weavers insist that materials shown in frescos required multiple heddles. This inventory supports the existence of two-beam looms as it includes a battle bench to manipulate the heddles, path for the linen and linen cloth, and a crank handle to roll up the finished cloth.

Translation

Table 9: ZA 10 tablet translation.

L.	Dialect	Classic	Finnish	English	Qty
a.1	RA- KA RE	RA- KE RE	rahkeet re'in	straps for the sled	2
a.1	NE SA	NE SA	neien saajan	maiden's crook	1
a.1-2	A- TU VI KA	A- TO VI KA	aitoa vieä, kai	fence transport, whole	1
a.2	A RA- KA RE SI	A RA- KE RE SI	aian raheet re'in sio	fence straps for the sled tie-up	1
a.3	A VI PA U	A VI PA U	aian vieä paian, uuen	fence transport shirt, new	1
a.3-4	A TO TU VI KA	A TO TU VI KA	aian tohi tuhat vieä, kai	fence to hold a thousand thickets, whole	1
a.4-5	PA KO SO RA	PA KO SO RA		Shirt tent battle bench	1
a.5	TO- LE LI- NE	TO- LA LI- NA	tola liinan	path for linen	2
b.1	JA- KO -SA	JA- KU -SA	jakkunsa	her stool	2
b.1-2	TO- LE LI- NE LOME	TO- LA LI- NA LOME	tola liinan loime	path for linen cloth	5
b.2	U- HU	U- HO	urho	hero	6
b.2-3	VA-LI	VA-LI	vaali	handle	5
b.3	VA-TI- PE - RE	VA-TI PE - RÄ	vartti perä	handle rear-end	5
b.3-4	NA- VA	NA- VE	nave	shed	5
b.4	A- PE	A- PÄ	aianpää	fence crown	4
b.4-5	A VI RA	A VI RA	aian viian rahe	fence thicket strap	3
b.5	LY LO-LE	LY LO-LE	lyöä loille	strike into shape	2
b.5-6	SA HA U	SA HA U	saajan hauin uuen	jaw of a pike, new	2
b.6	TA- TU JO RE	TA- TO JO RE	taito jouhen re'en	broken horse-hair sled	1/2
b.6-7	RA	RA	rahia	bench	2
b.7	TO	[A]-TO	aitoa	fence	1

ZA 10 Tablet: 'Straps for the Sled'

Minoan dialect: change in vowel sound of second syllable.

Minoan Classic, EM IIA	Begin 2400 BC	A	E	I	O	U
Minoan Dialect, LM 1A and later	After 1700 BC	E	A	I	U	O

'fence' = raddle, 'strike into shape' = batten, 'jaw of a pike' = comb, 'thicket' = reed

Image and Transcription of side A

Figure 24: Tablet ZA 10a image. Source GORILA.



Figure 25: Tablet ZA 10a transcription. Source GORILA.

ZA 10a	ZA 10 a	
1 [] [] [] [] []	1 [] [] []	2
2 [] [] [] [] []	1 [] [] []	1
3 [] [] [] [] []	1-2 [] [] [] []	1
4 [] [] [] [] []	2 [] [] [] []	1
5 [] [] [] [] []	3 [] [] [] []	1
	3-4 [] [] [] [] []	1
	4-5 [] [] [] [] []	1
	5 [] [] [] [] []	2

Notes on side A

a.2 By borrowing A from the previous word, the vowel on the second syllable need not change.

RA-KA < **RA-KE** = *rahkeet* 'straps, traces' fr. *rahje*; K03.094 '**trace** (*rahe*) got tangled'
RE = *re* 'in' 'on-of-for sled'; K20.570 'bring the lame **on sleds** (*re* 'in)'

NE = *neien* 'maiden's'; K04.375 '**to the maiden's** () fine home'
SA = *saaajan* 'jaw, crook, catcher'; K22.490 '**in the crook** (*saaajan*) of the fisherman's arm'

A-TU < **A-TO** = *aitoa* fence'; K31.327 'that **fence** (*aitoa*) of Kalervo's son'
VI = *vieä* 'transport'; K10.167 'into your boat **to transport** (*vieä*) him'
KA = *kai* 'all, whole' from *kaikki*; K12.260 "the **whole** (*kai*) backwoods with your people"

A = *aian* 'fence, in-of the fence'; K07.158 'to the opening **in the fence** (*aian*) farther down'
RA-KA < **RA-KE** = *rahkeet* 'straps' fr. *rahje*; K03.094 '**trace** (*rahe*) got tangled in trace'
RE = *re* 'in' 'on-of-for the sled'; K20.570 'bring the lame **on sleds** (*re* 'in)'
SI = *sio* 'tie up'; K04.020 "**tie up** (*sio*) your hair with silk ribbons"

A = *aian* 'fence'; K07.158 'to the opening **in the fence** (*aian*) farther down'
VI = *vieä* 'transport'; K10.167 'into your boat **to transport** (*vieä*) him'
PA = *paian* 'shirt'; K18.340 she brought **the** linen **shirt** (*paian*)'
U = *uen* 'new'; K1.247 'while the **new** (*uen*) sun is glowing'

A = *aian* 'fence'; K07.158 'to the opening **in the fence** (*aian*) farther down'
TO = *tohi* 'to hold'; K26.628 'does not dare **to lay hold** (*tohi*)'
TU = *tuhat* 'a thousand'; K07.122 '**a thousand** (*tuhat*) lashes from the wind'
VI = *viiat* 'thickets'; K32.288 'blue-coated boy **of the thicket!** (*viian*)'
KA = *kai* 'all, whole' from *kaikki*; K12.260 "the **whole** (*kai*) backwoods with your people"

PA = *paian* 'shirt'; K18.340 she brought **the** linen **shirt** (*paian*)'
KO = *koan* 'tent'; K40.075 'past a magician's **Lappish tent** (*koan*)'
SO = *soan* 'battle'; K30.047 'to help Ahti **in battle** (*soan*)'
RA = *rahi* 'bench'; K18.217 'was forging a long iron **bench** (*rahi*)'

TO-LE < **TO-LA** = *tola* 'path, track'; K30.500 'put it **on** another **tack** (*tolalle*)'
LI-NE < **LI-NA** = *liinan* 'of/for linen, flax'; K22.311 'your **linen** (*liina*) coif excessive sorrows'

ZA 10 Tablet: 'Straps for the Sled'

Image and transcription of side B

Figure 26: Tablet ZA 10b image. Source GORILA.

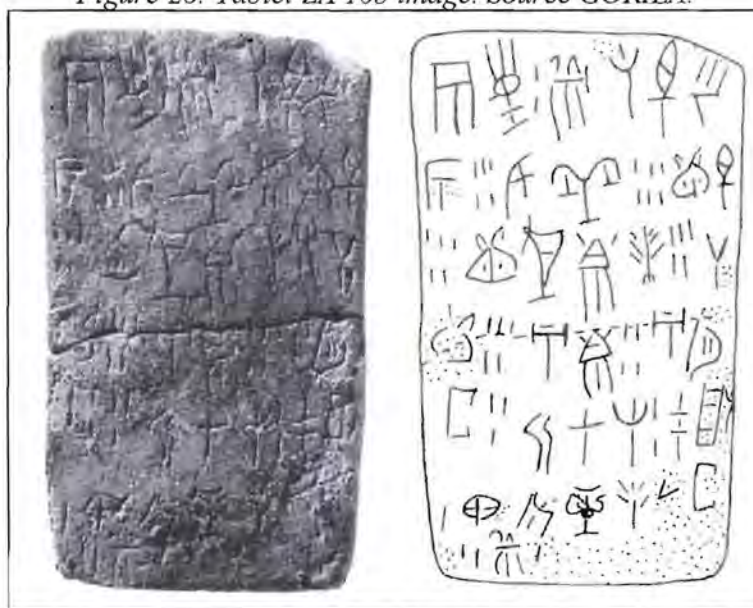


Figure 27: Tablet ZA 10b transcription. Source GORILA.

ZA 10b	ZA 10b	ZA 10b
1 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	1 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	2
2 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	1.2 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	5
3 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	2 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	6
4 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	2.3 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	5
5 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	3 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	5
6 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	3.4 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	5
7 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	4 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	4
	4.5 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	3
	5 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	2
	5.6 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	1
	6 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	1/2
	6.7 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	2
	7 𐎶 𐎶 𐎶 𐎶 𐎶 𐎶	1/2

Notes on side B

b.2 The letter LO-ME looks like a horizontal loom frame and has the sound LOOM.

b.5 The letter to the right of HA has very little room; U fits in better than LE.

b.7 *Aitoo* picks up its leading 'A' from the previous word *rahia*.

JA-KO-SA < **JA-KU-SA** *jakkunsa* 'her stool'; *jakku* not in K., *-nsa* 'her'

TO-LE < **TO-LA** = *tola* 'path, track'; K30.500 'put it **on** another **tack** (*tolalle*)'

LI-NE < **LI-NA** = *liinan* 'of-for linen'; K22.311 'your **linen** (*liina*) coif excessive sorrows'

LOME = *loime* 'cloth'; K12.167 'with copper **cloth** (*loimella*); *loime* also means 'magic'

U-HU < **U-HO** = *urho* 'champion, hero'; K25.704 'so **brave** (*urheata*) a man'

VA-LI = *vaali* 'handle'; K24.48 'make a good **handle** (*vaali*), too'

VA-TI = *vartti* 'handle'; 15.207 'put **a handle** (*vartti*) on a copper rake'

PE-RE < **PE-RÄ** = *perä* 'rear, stern, end'; K39.323 **the stern** (*perä*) croaked like a raven'

NA-VA < **NA-VE** = *nave* 'shed'; K17.342 'horned cattle **from the cowshed** (*navetasta*)'

A-PE < **A-PÄ** = *aiapää* = 'fence crown'

aia 'fence, fence rail'; K7.158 'the opening **in the fence** (*aian*) further down'

-pää 'crown, tip, peak'; K10.152 'the broad-**crowned** (*kakkapää*) pine gave utterance'

A = *aian* 'fence'; K07.158 'to the opening **in the fence** (*aian*) farther down'

VI = *viian* 'thicket'; K32.288 'blue-coated boy **of the thicket!** (*viian*)'

RA = *rahe* 'trace, strap'; K03.094 'trace (*rahe*) got tangled in trace'

LY = *lyöä* 'strike, pound'; K24.201 "Do not let the mother-in-law **strike** (*lyöä*)"

LO-LE = *loille* 'into shape'

LO = *loi* 'shape, form'; K1.272 'There she **formed** (*loi*) places to seine for salmon'

-LE = *-lle* 'into'; common suffix

SA = *saajan* 'jaw'; K22.489 'by the breadwinner's **jaw** (*saajan*)'

HA = *hauin* 'pike, of a pike'; K 19.256 'into the shoulders **of the dreadful pike** (*hauin*)'

U = *uuen* 'new'; K01.102 'to begin a **new** (*uuen*) morn'

TA-TU < **TA-TO** = *taito* 'broken'; K04.005 'She broke off (*taitoi*) a whisk for her father'

JO = *jouhen* 'horse-hair'; K40.308 '**the horsehairs** (*jouhet*) squeaked badly'

RE = *re'en* 'sled'; K 25.726 'to make a new **sled** (*re'en*)'

RA = *rahia* 'bench'; K18.217 'was forging a long iron **bench** (*rahia*)'

[A]-TO = *aitoo* = 'fence'; K31.310 'now makes a **fence** (*aitoo*)'

ZA 10 Tablet: 'Straps for the Sled'

Two Beam Looms

Warp-weighted looms go back to at least 10,000 BC. In 7000 BC, impressions in baked clay at Jarmo in northeastern Iraq and Çatal Tepesi in Turkey capture a fine basket weave. In 6000 BC, linen weavers at Çatal Hüyük in Turkey used a heddle to separate the warp.

In 2400 BC, weavers in Syria employed a vertical loom with two rotating beams, multiple heddles and a fly shuttle to weave elaborate tapestry. These sophisticated looms and their textiles likely had a long development. The two-beam loom conveyed many advantages:

The weaver sat and beat the weft downward, rather than stand and beat the weft upward.

Cloth length was independent of loom height; it could be wound around rotating beams.

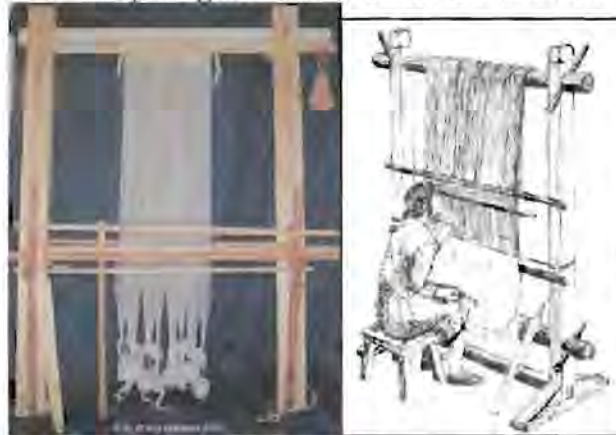
Multiple heddles greatly expanded the range of patterns.

Weaving was faster, less tiring and took only one weaver, not two.

Assistants set up a new warp off the loom without disturbing the weaver.

Two-beam looms required precision parts such as rotating beams with pawls and handles, pedal-operated heddles, and bobbin winders.

Figure 28: Warp weighted loom and vertical two-beam loom.



Cretan Looms

The ruins at Akrotiri on Thera contain 950 loom weights of which 450 were inside the West House. The weaving room at West House was large enough for 4-5 looms with one loom requiring 20-30 matched weights, so matched loom-weights outnumbered looms by 4:1.

The ruins at Zakros, Knossos and Myrtos contained hundreds of loom weights that had fallen from upper floors, accounting for perhaps 4 looms each. Ayia Irini in Kea had 185 weights, enough for two looms, but Phaistos and Kommos had only 14 loom weights. Where were the other loom weights? Or were these weights relics from the past, no longer used?

According to a number of weavers who examined the intricate cloth patterns captured in Minoan frescos, Cretans wove on two-beam looms with four or more heddles, not on warp-weighted looms. Two sources support this conclusion:

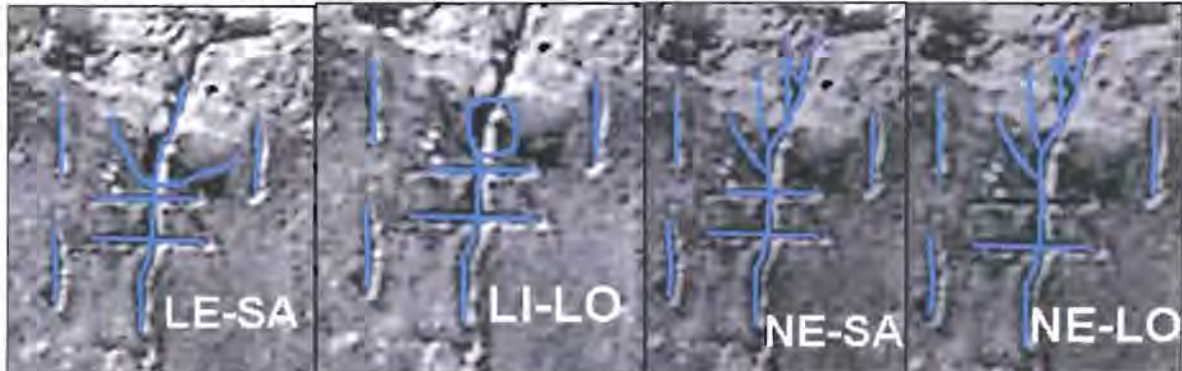
- Tablet ZA 10 inventories supplies for two-beam looms with no mention of loom weights.
- *Kalevala* weavers used two-beam looms with four heddles. K19.480.

Spinning Wheels

High volume cloth production taxed the spinning process, which likely made similar advances. Crete mysteriously lacks hand spindles to match the great quantities of wool in storage. Destructive fires would have preserved spindle weights, but very few were found. The simple solution is that Cretans employed spinning wheels, whose origin remains completely unknown.

Reconstruction of line a.1.4 NE-LO

Compound letter a.1 requires some detective work. The best reconstruction, NE SA, means 'maiden's crook' or 'maiden's catcher'.



- Reconstruction 1: LE  crossed with two bars SA  gives LE SA 'jaw catcher'.
- Reconstruction 2: LI  crossed with one bar LO  gives LI LO 'flesh of salmon'
- Reconstruction 3: NE  crossed with two bars SA  gives NE SA 'maiden's crook'
- Reconstruction 4: NE  crossed with one bar LO  gives NE LO 'maiden formed'

Identification of symbol 131b LOME in line b.1-2

Godart and Olivier considered symbol 131b  to be distinct from 131a  VINA meaning 'wine'. VINA represents a grape trellis, not the wine itself, while 131b looks like most of a warp-weighted loom. Symbol 131b occurs once with the modifier *-pää* meaning 'head'. The word for 'loom' *kangaspuut* is too long, but something woven on the loom could be *pellava*, *kutovi*, *liina*, *aivin* or *loime*. Of these, *loime* 'cloth' sounds like LOOM. Substituting *loime* for 131b gives two phrases that could mean the same thing:

loimepää 'head cloth' from KH 5

tuaille liina loime 'begin linen cloth' from ZA 10

ZA Zb 3 Pithos: 'Thirty-two quarter-barrels of wine'

ZA Zb 3 Pithos: 'Thirty-two quarter-barrels of wine'

ZA Zb 3 (GORILA 4.112) is a large pithos in good condition with two eared handles. Below a rope decoration encircling the top, a long inscription in Linear A occupies one side. It dates to 1628 BC, from the Palace of Zakros. The inscription calls wine 'wizard's drink', a term often used in Minoan writing. It further specifies the pithos as holding 32 ponies or quarter-barrels of wine.

Translation

Finnish: Viini 32 (¼ tynnyri). Piipi täynnä äänen taiajuoman.

Annan aarre ko'a tarpepetekon alla soila kauas. Siksi istun.

English: 32 (quarter barrels) of wine. The pithos is full of the voice of wizard drink.

I will give treasure soon and I will relieve myself, under fens far and wide. This is why I sit.

Table 10: ZA Zb 3 pithos translation.

L.	Dialect	Classic	Finnish	English
1.1	NO 32	NO 32	Viini 32 (¼ tynnyri)	Wine 32 (1/4 barrels)
1.2	PI-PI TÄ-NE •	PI-PI TÄ-NA •	Piipi täynnä •	Pithos is full
1.3	Ä-NA TA-JO •	Ä-NE TA-JU •	äänen taiajuoman •	of voice of wizard drink.
1.4	A-NE •	A-NA •	Annan •	I will give
2.1	A-RA KO	A-RE KO	Aarre ko'a	treasure soon and
2.1	TA-PE-TÄ •	TA-PE-TE •	tarpepetekon •	I will relieve myself
2.2	A-LE SO-LE KA •	A-LA SO-LA KA •	alla soila kauas •	under fens far and wide.
2.3	SI-SI TU	SI-SI [I]-TU	Siksi istun.	This is why I sit.

Minoan dialect: change in vowel sound of second syllable.

Minoan Classic, EM IIA	Begin 2400 BC	A	E	I	O	U
Minoan Dialect, LM 1A and later	After 1700 BC	E	A	I	U	O

Image and Transcription

Figure 29: ZA Zb 3 image. Source GORILA.

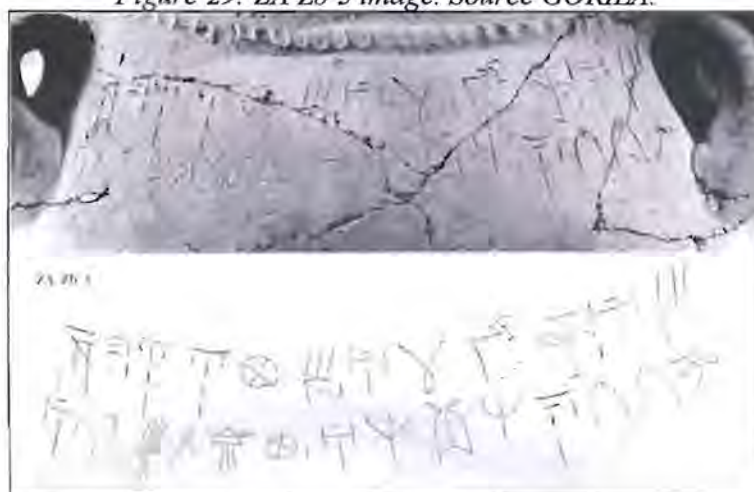


Figure 30: ZA Zb 3 pithos transcription. Source GORILA.



Notes on translation

1.1 Liquid measure is *neljäs tynnyri* (¼ barrel = 1 pony); 32 ponies = 1 pithos (1003 liters)

1.2, 2.1 Rotating TA changes the vowel sound to TÄ.

2.1 In English, two phrases require 'and' to join them, while Finnish does not.

2.3 Both arches have a dot at the peak, letter SI.

PI-PI = *piipi* 'pithoi'; not in K.

TÄ-NE < TÄ-NA = *täynnä* 'is full'; K04.413 'The sauna **is full** (*täynnä*) of girls'

Ä-NA < Ä-NE = *äänen* 'of voice, sound'; K05.200 'What now suppressed the great **voice** (*äänen*)'

TA-JO < TA-JU = *taiajuoman* 'of wizard drink';

K02.194 'broke off everlasting **wizardry** (*taian*)'

K20.548 'the young **drink** (*juoma*) began practicing magic

A-NE < A-NA = *annan* 'I will give'; K03.411 '**I will give** (*Annan*) a high-peaked hat full of gold pieces'

A-RA < A-RE = *aarre* 'treasure'; K18.620 '**treasures** (*aartehia*) in his craft'

KO = *ko'a* 'soon' from *kohta*; K08.217 'Now **soon** (*kohta*) there comes a settlement'

TA-PE-TÄ < TA-PE-TE = *tarpeentekon* 'I relieve myself'; K49.311 'forged what **the man** needed (*tarpehia*)'

A-LE < A-LA = *alla* 'under'; K05.027 '**under** (*alla*) the deep waves'

SO-LE < SO-LA = *soila* 'fens, marshland'; K17.402 'frozen **fens** (*soille*)'

KA = *kauas* 'far and wide'; K11.027 Long she flourished, was famed **far and wide** (*kauas*).

SI-SI = *siksi* 'therefore; this is why'; K28.153 '**This is why** (*siksi*) they are whetting the swords'

TU < I-TU = *istun* 'I sit'; K37.016 'Whether **I sit** (*istun*) at night or lie down'

ZA Zb 34 Pithos: 'Wizards' jaws float lightly'

ZA Zb 34 Pithos: 'Wizards' jaws float lightly'

ZA Zb34 (G 4.114) comprises two fragments of a broken pithos from the Palace of Zakros. The conflagration in 1628 BC preserved Linear A writing on the upper surface.

Translation

Linear A: TA LE HA PÄ TÄ LU PI

Finnish: Taian leuat haihaos päähän tähän luo'o piioin.

English: Wizards' jaws float lightly to the top of this, created by girls.

Image and Transcription

Figure 31: ZA Zb34 pithos image. Source GORILA.



Figure 32: ZA Zb34 pithos transcription. Source GORILA.



Notes on translation

TA = *taian* 'wizard's'; K02.194 "whoever broke off everlasting **wizardry** (*taian*)"

LE = *leuat* 'jaws'; K20.535 'the salmon's **jaws** (*leuat*) were crooked'

HA = *haihaos* 'float lightly'; K46.143 'then **float** along **lightly** (*haihaos*) on the evergreen branch drag'

PÄ = *päähän* 'to the top'; K12.358 "to the top (*päähän*) of your sister's stairs"

TÄ = *tähän* 'of this'; K22.379 "when you come **to this** (*tähän*) farm"

LU = *luo'o* 'created' from *luoda*; K42.363 "**Create** (*luo*) a wind, send a wave"

PI = *piioin* 'by maidens, girls'; K28.118 "or mocked **by girls** (*piioin*)?"

You are invited to contact Stuart Harris about these or any other inscriptions at
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