THE PURPOSE AND THE FORMULAE OF THE MINOAN TABLETS FROM HAGIA TRIADA

The frequent numerals which follow sign-groups in these tablets make it certain that these are business documents referring to transactions in various commodities between persons, or perhaps contributory places, not excluding unitary contributions which may be the personal services of such individuals or communities.

Many of the numerals follow a single sign, or a ligature of two or more signs, and these seem to be abbreviations, as they are nearly all signs which occur frequently in phonetic groups: a few which do not so occur —for example 𐄐, or are very rare in groups, e. g. 𐄑 —may be pictorial 'ideograms'; but the notion of frequent ideograms in Minoan writing has been pressed too far, on the analogy of Egyptian, Babylonian, and Hittite practices. Occasionally a ligature is written on one tablet, and its component signs are written out in full on another. The system of reckoning was clearly expounded by Sundwall[1] in a few typical examples.

Many tablets begin with a single sign-group (occasionally two groups) followed, after punctuation, by a single punctuated sign. This leading group is hereafter called the 'principal', probably representing one party to the transaction. The sign which follows it clearly denotes the character of the business, and may be called the 'transaction-sign'. The sign-groups followed by the 'unit-sign' 𐄇, or by another numeral, must be either commodities within a single consignment, or contributors —individuals or places— namely the other parties to the transaction; they may be described as 'subsidiaries'. Sometimes several subsidiaries in the same list have their respective commodity-items. Some lists are closed by a 'total-sign', usually 𐄂 +, followed by a numeral, which is the sum of the numerical items when these are preserved in full.

On some tablets there is more than one account, not always

[1] J. Sundwall, *Zur Deutung kretischer Tontäfelchen*, I *(Acta Academiae Aboensis*, Humaniora II), Åbo 1920.

clearly separated, even on the same face, nor referring to the same affairs.

The principal formulae may be summarily classified as follows:

Formulae of Inscriptions on Tablets from Hagia Triada.

I. Principal; transaction-sign; sign-groups each followed by commodity-sign with numeral.

HT 6. 10. 26a. 28. 35. 40. 44b. 49(1). 52. 85a. 90. 91. 92? 97. 102. 104. 116. 117. 122b. 128a.

Transaction-sign usually 𐄷 , 𐄷𐄷 or 𐄷𐄷𐄷 ; but 𐄷 𐄷 9; 𐄷 128a; 𐄷𐄷 ; 𐄷𐄷𐄷 but no principal 92. 35. 91.

Two principals: 6, 85; but perhaps the second group is a 'transaction'-word written in full.

Totals: + 85. 102. 104. 110a. 116b. + 93b.

II. Principal; transaction-sign; [no sign-groups]; commodity-signs with numerals.

HT 12. 14. 17. 19. 21. 23a. 27a. 32. 33. 36. 40(1). 44a. 58. 62. 89. 92. 93. 106. 133.

Transaction-sign usually 𐄷 , 𐄷𐄷 or 𐄷𐄷𐄷 ; but 𐄷𐄷 62. 40. 93. 44b. 23a. 115a. 27a. 36. 89.

Two principals: 20b. 42. 62.

Two entries on the same tablet: 17. 19.

Totals: 42. 89.

Fractions: 13. 21. 32.

III. Principal; transaction-sign; sign-groups with numerals; [no commodity-signs, but some sign-groups may be commodities written in full].

HT 7. 16. 24a. 27b. 34. 63. 108. 115a. 126a.

Transaction-sign 𐄷 16(3). 24a (before the principal). 34. 63. 𐄷𐄷 117a.

Total-sign: + 117a. + (after the transaction-sign) 117a.

IV. Principal; [no transaction-sign]; sign-groups with numerals as in III; [no commodity-signs].

HT 15. 26b. 37. 85b. 114. 115b. 120. 121.

V-VIII. *No principal or transaction-sign: damaged or continued from another tablet.*

V. Sign-groups, followed by commodity-signs with numerals.

HT 2. 18. 20. 31. 41. 59. 61. 101. 109. 110a. 118. 121. 123a. 125. 127a. 128b. 129. 131. 132. 134.

Two sign groups together: 33.

Total-sign: 102. 109. 110. 118.

Fractions: 20. 59. 110.

VI. Sign-groups followed by numerals [but no commodity-signs].

HT 3. 4. 5. 8. 11 (two entries). 16(1). 24(1). 29(1). 39. 47. 48. 51. 53. 73. 86. 88. 95. 98. 99b. 103. 109. 111. 119. 122a. 123b. 135.

Fractions: 10. 39. 51. 98. 99; so these entries may be commodities written in full.

Totals: 𒐐 + 11. 48. 88. 109. 119. 122a.

VII. Sign-groups followed by numeral 1 or punctuation only.

HT 25a. 82. 88(2). 94a.

VIII. Commodity-signs followed by numerals [but no sign-groups]. Some of them may be parts of tablets in formulae I, II, or V.

HT 22. 25b. 30. 38. 45. 46. 48. 49. 50. 85b. 100. 105. 107. 109. 110b. 124. 126b. 127b. 130.

Total-sign: 𒐐 + 25b. 46. 48. 100. 109. 𒐖 + 88.

Fractions: 8. 30. 48. 50.

Fragments without clear indication of formulae.

HT 54. 55. 56. 57. 60. 64-68. 75-82. 112. 113. 126. 152.

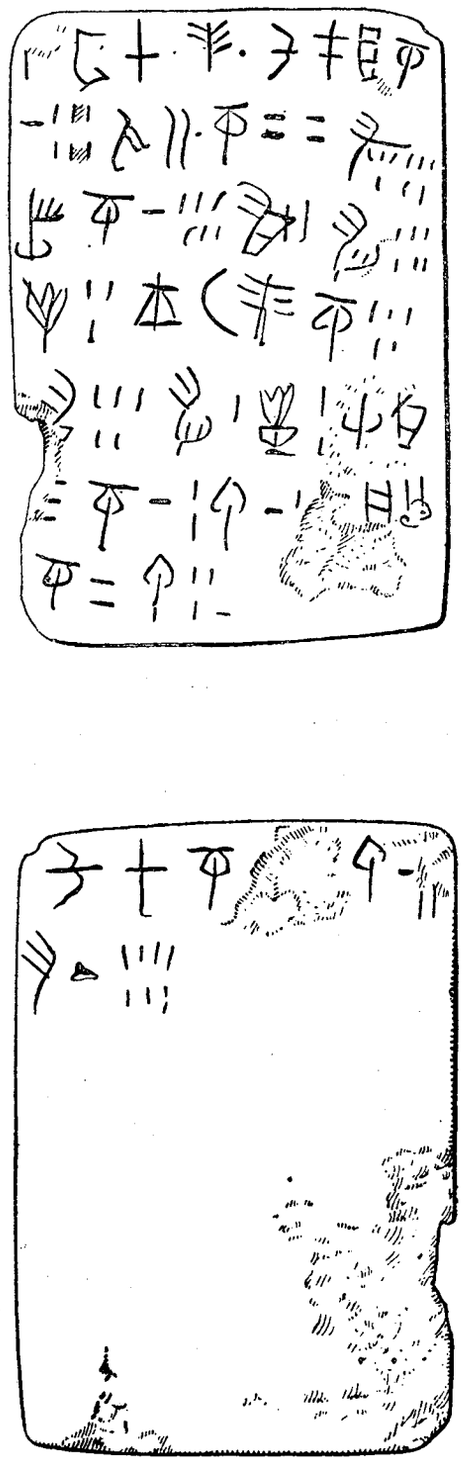
Some of these may be eventually recognized as parts of tablets classified above.

For the general purpose of these accounts, Babylonian tablets recording wages, paid in kind, supply material for comparison. For example:

»3 *qa* of meal, 1 measure of oil, Lu-maganna the soldier.

»10 *qa* of drink, 5 *qa* of meal, 1 measure of oil. Dada, the messenger of *šag.giš*, gone with the *kin.ti*.

»3 *qa* of drink, 2 *qa* of meal, 1 measure of oil. *En-u-ni.nini*, gone to the wooden ship.



The tablet HT 116 *a-b* (from G. Pugliese Carratelli, *Le iscrizioni preelleniche di H. Triada* etc., fig. 9-10).

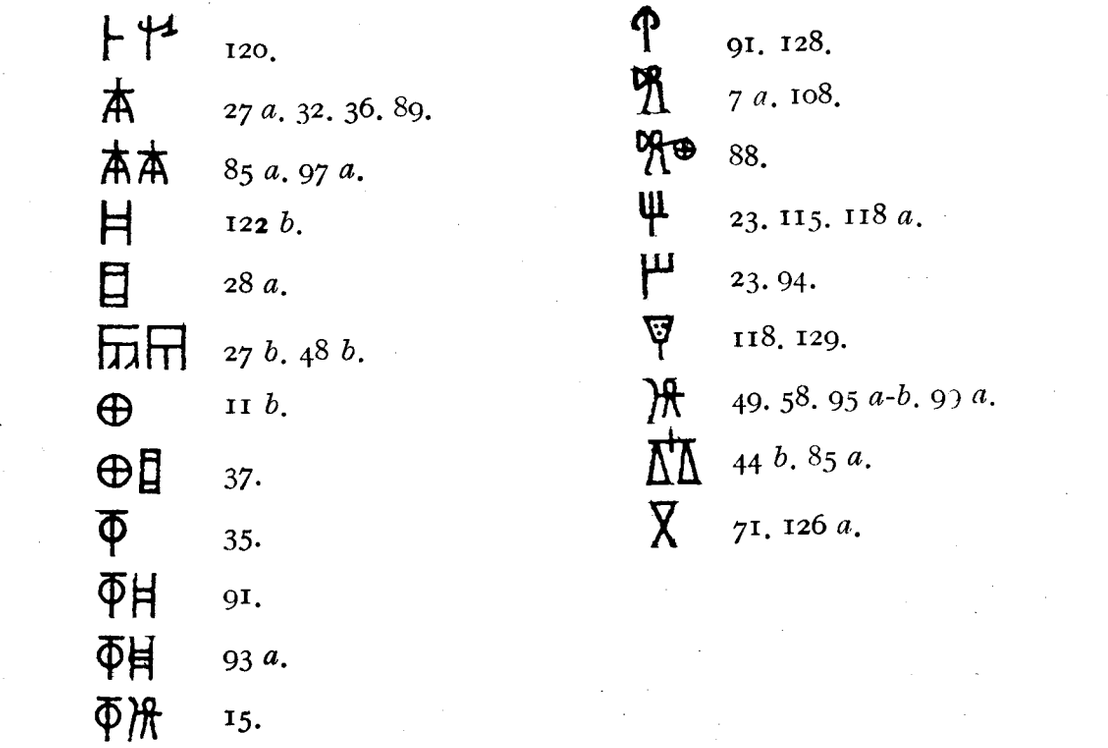

120.
27 a. 32. 36. 89.
85 a. 97 a.
122 b.
28 a.
27 b. 48 b.
11 b.
37.
35.
91.
93 a.
15.
91. 128.
7 a. 108.
88.
23. 115. 118 a.
23. 94.
118. 129.
49. 58. 95 a-b. 99 a.
44 b. 85 a.
71. 126 a.

Fig. 1

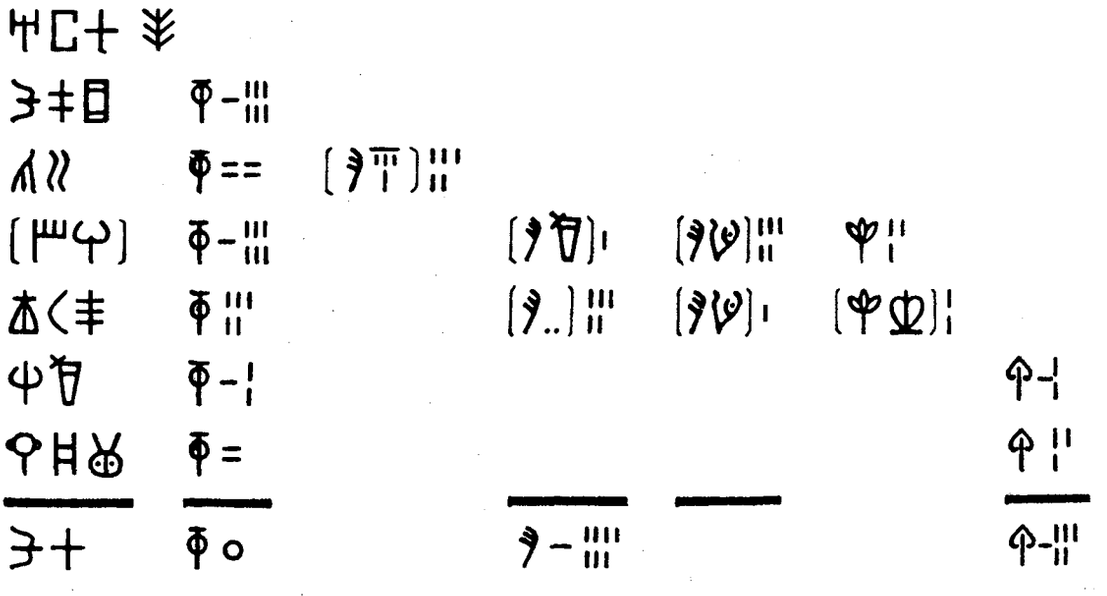


Fig. 2

»3 *qa* of drink, 2 *qa* of meal, 1 measure of oil. Sirisiḫ (?) the agent.

»25 *qa* of sweet royal drink, 100 *qa* of standard drink, 30 *qa* of *zu* meal: the wife of the viceroy of Susa *Lu-min-girsu* the banker agent.

»3 *qa* of drink, 2 *qa* of meal, 1 measure of oil: Hununu, gone to the wife of the viceroy of Susa.

»removed the twelfth day, month of the festival of Dungi [1].

Note the subdivision of drinks into 'sweet royal' and 'standard', the collocation of principal and agent, and the supplementary record of destination, which may explain some of the qualified sign-groups on the commodity-tablets of Script A and B.

The most complete and elaborate form of account is shown on HT 116, which is set out in tabular form in our fig. 1 ([ ] indicates a ligature of two signs).

Here the principal person 𐄁 𐄀 + is engaged in a transaction 𐄇 with six subsidiary persons (or places) involving six commodities in varying amounts: three of the commodities have some quality in common, and are included in one total amount. Separate totals 𐄃 + are given for this class and for two other commodities. There are small inaccuracies in the totals: perhaps the two saffron items were reckoned instead of [𐄂 𐄐] to make the total 𐄂 −𐄑. Such composite totals were only possible if the units of all the commodities were the same — bushels, quarts, or pounds, or of equivalent value, as in the Babylonian account given above.

There is nothing to show whether the transactions were payments inward as tribute or rent, or outward as maintenance or pay like the Babylonian example.

The 𐄇 type of transaction is not the only one, though it is much the most frequent. Others are classified in our fig. 2.

As 𐄉, 𐄊, 𐄋 are frequent as commodity-signs, their occurrence as transaction-signs indicates that the whole accounts

[1] T. G. Pinches, *Liverpool Annals of Archaeology and Art*, II (1909), p. 78-79.

to which they are prefixed were transactions in the same commodity.

Perhaps the transaction-groups consisting of two signs indicate that the payments (or contributions) were in the two commodities to (or from) each subsidiary, as in HT 116 above; but they may only be commodity names written more at length; and it will be remembered that 𐄁 is a frequent supplement or terminal sign in groups.

The reason for the use of two 'total-signs' is not obvious: the total-sign 𐄂 + may stand at the beginning of an account; but 𐄃 + only stands at the end.

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