HIERATIC INSCRIPTIONS FROM TEL SERA' IN SOUTHERN CANAAN

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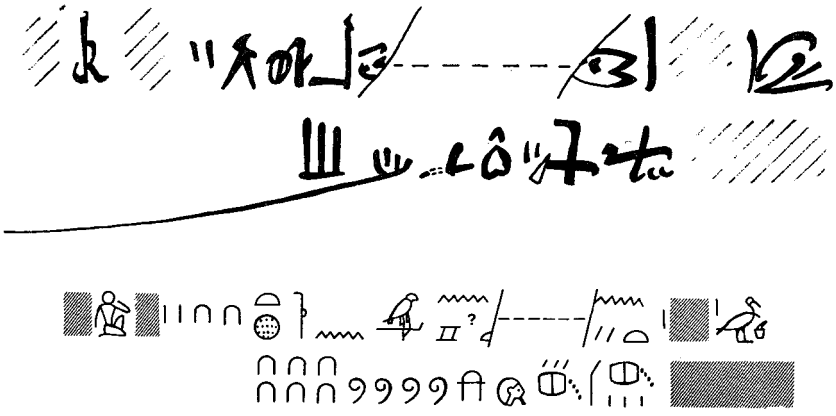
Hieratic inscriptions are exceedingly rare in the land of Canaan. Up till now only one inscribed bowl and three smaller bowl fragments have come to light, all from the mound of Lachish (*Lachish IV*:131–133; Gilula 1976). Recently, however, about a dozen or so inscribed sherds were discovered in the final Late Bronze Age stratum of Tel Sera', in the excavations conducted by Prof. Eliezer D. Oren of the Archaeological Division of the Ben-Gurion University of the Negev (Oren 1978).[1] Some of these sherds could be joined together to form partially complete bowls inscribed on the exterior (Nos. 1–4 below). There was also one ostracon (No. 7) and two other small sherds (Nos. 5–6), which may be either ostraca or parts of similar bowls that were inscribed before they were broken. The rest of the sherds were not sufficiently legible to enable decipherment (Pl. 7:3).

1. THE RECONSTRUCTED BOWLS

Bowl No. 1 (Fig. 1; Pls. 4; 5:1; Inv. No. 780; Locus 197; dimensions 6 x 26 cm.).

One line of inscription runs around the exterior of the bowl. About one-third of its perimeter (and apparently part of the inscription) is missing.

Text



Translation

b3[(a)]...which [---(southern)][(b)] of regnal year 22 (+x)...
record[(c)] ...grain[(d)] measured in the first (?) quadruple *ḥḳ3t*[(e)] making 460 sacks.

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1 I am indebted to Prof. Oren for his permission to publish the inscriptions. I must also thank Prof. Sara Groll for her valuable advice and encouragement in my interpretation of the texts. The hieratic and hieroglyphic inscriptions were drawn by Rodica Penchas.

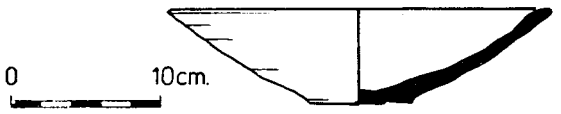

Fig. 1. Bowl No. 1.

Commentary

(a) The *b3* ligature (Möller 1965: No. 209)[2] appears in our texts twice, opening the inscriptions of both Bowl No. 1 and No. 2 (for the latter, see below). Since this ligature is very rare in the Ramesside ostraca, it is rather surprising to find it once again on the Lachish hieratic bowl (*Lachish IV*:131–133), where it also apparently opens the inscription. In addition to being used for the word 'soul', the *b3* ligature is found in various combinations of the syllabic writing (see Ward 1978). In both Bowl No. 1 and 2 from Tel Sera' the signs following the ligature are illegible; however, the word *nty* (which) clearly appears in both cases following a space of the same size. The same phenomenon — namely, the *b3* ligature, *nty* and a space of similar length (*b3...nty*) — may be observed on the Lachish bowl.[3]

The rarity of the sign and its repetitive appearance on the very few hieratic bowls so far discovered in Canaan suggests that we are dealing here with a noun[4] written in the syllabic orthography that is undoubtedly connected with some Canaanite product, most likely grain (for the assumption of grain, see Part 3 below). However, I have found no suitable reconstruction in the Egyptian vocabulary. Although there was a rare cereal called *b3y* that was known during the Ramesside period (*Wb I*:417,8; Caminos 1954:207; Ward 1978:135–137), it seems to me that on neither of the Tel Sera' bowl inscriptions is the space large enough for this reconstruction. In addition, the final stroke clearly seen in both the Tel Sera' and Lachish examples is unlike the usual grain determinative (Gardiner 1969:516: U9). The sole example for *b3y* presented by the Amenemope onamasticon (*AEO II* 223*) should be rejected on the same grounds. Other reconstructions would be even more theoretical.

A second possible approach to the problem is to consider whether we are confronted here with a Canaanite word that was well known to the Egyptian scribes residing in Canaan but one that did not — to the best of our knowledge — penetrate into the Egyptian vocabulary. It is quite tempting to propose a reconstruction such as *b3r,* since the Hebrew word בר (grain), which appears in early biblical literature (Brown, Driver and Briggs 1979:141), fits in here easily. Nevertheless, the problem of the missing grain determinative would still remain unsolved, since the Egyptians usually applied determinatives to foreign words as well (Helck 1971:507–527; Albright 1934:33 ff.; see also Giveon 1978a:15–17). Our space appears to be too small for an *r* plus a determinative.

Palaeographically, our *b3* ligatures are very similar to the  and  ligatures as they appear in the 20th and later dynasties and to the *b3* sign from Lachish dated by Černý to the 20th dynasty (see Fig. 3:12).

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2 The small frontal stroke represents the incense bowl with smoke rising (Gardiner 1969:501:R7; see also Gardiner, citing Černý in *LEM*:14).

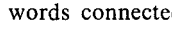
3 It should be noted that certain doubtful strokes are discernible in this inscription (*Lachish IV*: Pls. 44:3; 47:1).

4 At the beginning of lists, nouns appear without the article; see Černý and Gardiner 1957: Pl. LVII,1, rto 1; *RAD*:59,4.

(b) For a similar writing of  , see Möller 1965: No. 683. A suitable — but totally theoretical — reconstruction is the word *ḫnty* (southern), which appears in several combinations in the names of temples (see, e.g., *p Wilbour Index*:55–56). Many of the names of temples take the deity determinative.

(c) On the use of *sḫ3* (which should be carefully differentiated from *sḫ3.n)* in accounts, see Megally 1977:63; Fitzpatrick 1983.

(d) All words related to grain can receive the grain determinative. However, there are several other words connected with agriculture that also take this determinative; a good example is *bnr*, 'dates' (*AEO II* 225* ff.). On the Lachish bowl, the word *šmw* appears with the grain determinative, and this is our preferred reconstruction here also (see Part 3 below).

(e) For the meaning of the combination  , see the appendix below. Palaeographically, this is the most significant group appearing in our texts since, owing to the mention of the regnal year 22 (+ ×), it enables us to date inscriptions to the reign of Ramesses III with a fair degree of certainty. (This conclusion is also supported by the *b3* ligature.) The group appears twice in our texts — here and on Bowl No. 3.

From a survey of the palaeographic history of the sign, the following picture emerges. The purpose of the original writing was to stress the fact that the unit being dealt with was a quadruple *ḥḳ3t* rather than the single or double *ḥḳ3t* (see Griffith 1892:429). It is found in the hieratic examples of the 18th dynasty with four oblique strokes (cf. Fig. 4:1 and *pBerlin III*:Pl. XXXI,5) and in Gardiner's (1969:198, n. 12) very accurate transcription as  The sole example existing in hieroglyphics retains this principle (*Urk IV*:667, 14).

The first cursive development is already found in the 18th dynasty *pLouvre 3226,* where the scribe connects the rightmost of the four small strokes with the horizontal sign underneath (see Fig. 4:2). Since three additional strokes are visible on the left, the general impression is still that of four strokes.

At the beginning of the 19th dynasty the situation remains more or less the same[5] (Fig. 4:3–7), whereas towards the end of this dynasty a certain "degeneration" can be discerned. The principle was somehow forgotten or changed, and we find only *three* strokes above the lower sign. This was done either by adding only two strokes to the rightmost connected stroke or by writing three small strokes above and not connecting the rightmost stroke to the lower sign (Fig. 4:8–11).[6] It was Möller (later followed by Gardiner) who first observed this change, transcribing it as  but dating it to the 20th dynasty (Möller 1965:62; Gardiner 1969:198, n. 13).[7]

The next development occurred in the second half of the 20th dynasty (Fig. 4:12–16), when the third sign from the right was shortened or eliminated completely. Only two small strokes are clearly visible above the lower sign, thereby giving the impression of only two strokes.

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5 Although at this time the sign was almost consistently written with three strokes, there are a few exceptional cases of two strokes only (see Spiegelberg 1896: Pl. VIII, 9).

6 *oDeM* 417 (Fig. 4:10) is dated by Černý to the 20th dynasty, but it should be noted that line 3 of the verso contains a grammatical construction (*iḫ n s nb m ỉm.sn*) which is quite unusual for this dynasty and more typical of the 19th . I am indebted to Professor Groll for this observation.

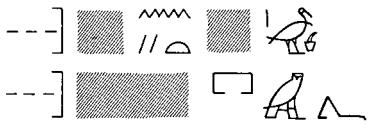
7 Möller (1965: Pl. III,7) brings an example from Papyrus Berlin 9784 (Amenophis IV) as the first occurrence of this writing, but the papryus is broken exactly in this spot.

The final development can be seen in one of the handwritings of *pHarris I* (Fig. 4:17) in which the strokes and the horizontal line below become one united ligature with little reminiscence of the four clear strokes of the 18th dynasty.

It appears that the Tel Sera' examples (Fig. 4:15–16) most closely resemble the *pHarris* examples (Fig. 4:12–14).

Bowl No. 2 (Fig. 2; Pl. 5:2; Inv. No. 313; Locus 2600; dimensions 6 x 21 cm.). Approximately one-third of the bowl was retrieved in the excavations. Two lines of inscription are discernible.

Text



Translation

b3[(a)]...which...[— —

Arrived [(b)] at the temple[(c)] ...[— —

Commentary

(a) For the *b3* ligature, see 'a' in commentary for bowl No. 1.

(b) For  as 'arrived', see Gardiner 1941: 36, No. 5; Koenig 1979:202, n. 1; see also Groll (1973b) for the reading of this line.

(c) For the word *pr* (house, temple), see Part 3 below. In the Ramesside administrative texts, the word *pr* in reference to temples usually appears without an article; see Černý and Groll 1975: Sec. 3.1.1.

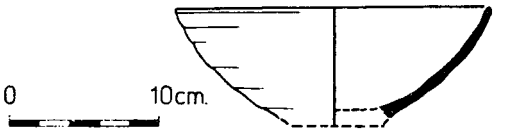
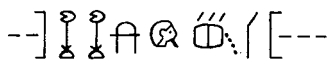


Fig. 2. Bowl No. 2.

Bowl No. 3 (Pl. 6:1 Inv. No. 10147; Locus 2594; dimensions 4.5 x 7 cm.). Although only a small part of the rim of this bowl is preserved, the complete bowl was most likely similar in shape and dimensions to bowls Nos. 1 and 2.

Text



Translation

——] the first (?) quadruple *ḥḳ3t*[(a)] making 2000 (+ ×) ? sacks...[——

Commentary

(a) On the quadruple *ḥḳ3t*, see discussion for Bowl 2 and appendix below.

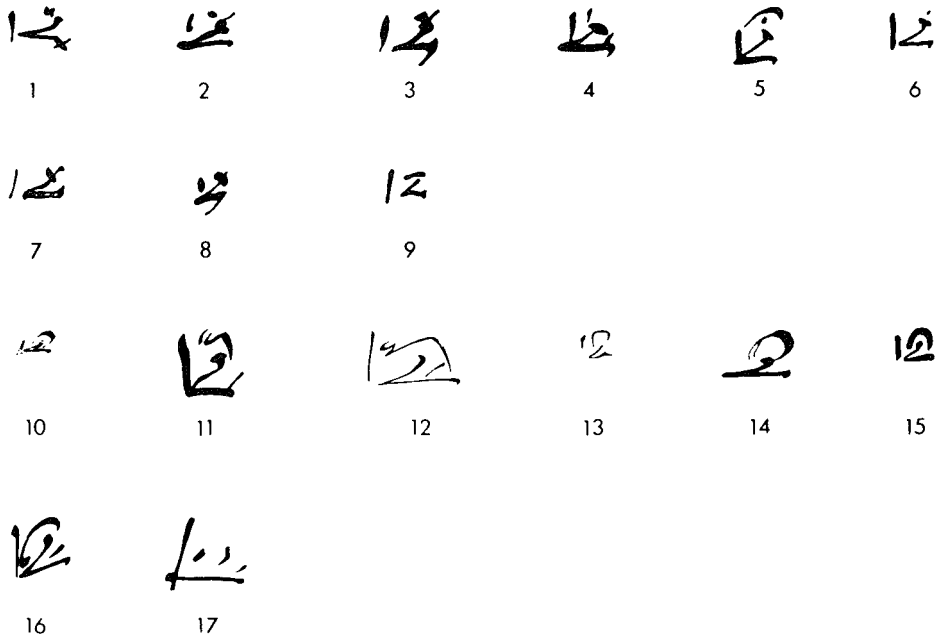
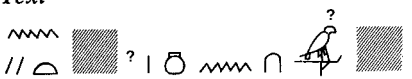


Fig. 3. *b3* ligatures of the 19th dynasty (1–9) and 20th and later dynasties (10–17). Sources: (1) Möller 1965: No. 209 (Seti I); (2–3) Černý and Gardiner 1957: Pl. LXIIA, 1 vso 12; Pl. LX, 1 rto 5 (early 19th dynasty); (4–6) Möller 1965: Nos. 208–209 (late 19th dynasty; (7) *oDeM* 60,8; (8–9) *CG* 25506,3: *CG* 25596,2; (10) Gardiner 1941: Pl. VIII,22 (20th dynasty); (11) Möller 1965: No. 209 (*pHarris I*); (12) *Lachish IV* :Pl.44; (13) Möller 1961:29,9 (Wenamun); (14) Hayes 1948: Pl. XIV (21st(?) dynasty); (15) *AEO III:* Pl. XIII,2; (16–17) Tel Sera' bowls Nos. 1–2; Pls.4:5 (20th dynasty).

Bowl No. 4 (Pl. 6:3; Inv. No. 312; Locus 2607–8; dimensions 6 x 30 cm.). Approximately one-third of the bowl was retrieved in the excavations. Two lines of inscription are visible, but line No.2 was almost totally blurred.

Text



Translation

——] ...ten vessels...which(?)...[——

2. THE OTHER INSCRIPTIONS

Sherd No. 5 (Pl. 6:2; Inv. No. 10234; Locus 2608; dimensions 5.2 x 8.5 cm.). This rim presumably also came from a bowl.

Text

Translation

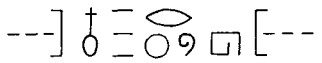
In regnal year $7^{(a)}$...(?)

Commentary

(a) This formula may be compared to those on the Hebrew ostraca from Lachish and Samaria (e.g. *Lachish III*:339; Gibson 1971:11).

Sherd No. 6 (Pl. 7:1; Inv. No. 307; Locus 2015; dimensions 4.5 x 6.5 cm.). This sherd most likely came from a bowl.

Text



Translation

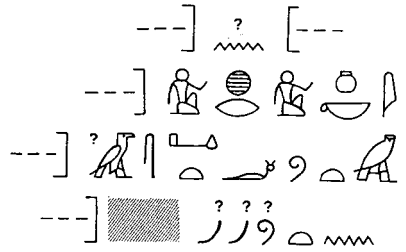
——] festivities[(a)] [——

Commentary

(a) For *hrw nfr* as 'holiday', festivity', see *Wb II*:409. Palaeographically, the handwriting can be assigned to the end of the 19th dynasty or the beginning of the 20th (Möller 1965:70).

Sherd No. 7 (Pl. 7:2; Inv. 304; Locus 2015; dimensions 5.5×9.2 cm.). This is an ostracon, apparently a fragment from a large storage jar.

Text



Translation

1. ——]...[——
2. as to me, I say[(a)]...
3. and he will cause that...
4. of (?)...

Commentary

(a) During the 19th dynasty, the verb *ḫr* (to say) was still in free use (Černý and Gardiner 1957: Pl. XLVI vso 8,15; for a discussion of this ostracon, see Groll 1973a). However, in the Late Egyptian of the 20th dynasty, this verb is used only in quotations (Černý and Groll 1975: Secs. 10.3.5, 30.3.1).

The Tel Sera' ostracon has been dated by Groll (1973b) to the end of the 19th dynasty.

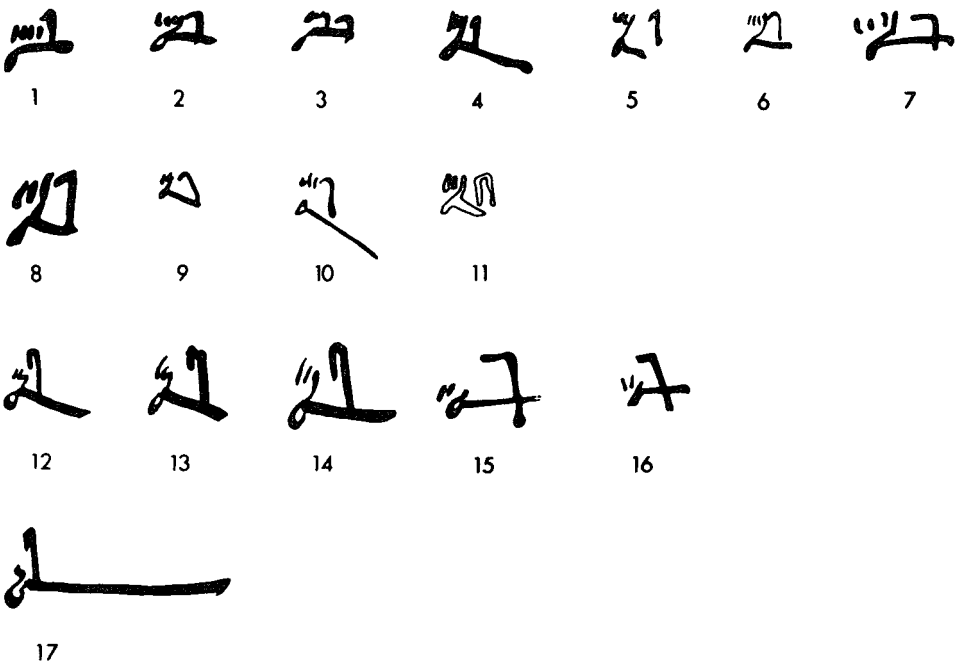


Fig. 4. Evolution of the quadruple *ḥḳ3t* ligature. Sources: (1–2) *pLouvre 3226* B vso IV,9; A rto III,4; (3) Möller 1965:62 (Papyrus Rollin); (4) Barns 1948: Pl. XI,4; (5–6) *oDeM* 10,3; 30,5; (7–8) Černý and Gardiner 1957: Pl. LXXXVA vso 2; Pl. LXXXA,3; (9) *oDeM* 50, vso 1; (10) *oDeM* 417 rto; (11) Goedicke and Wente 1962: No. 90 rto; (12–14) *pHarris I* 12b,3; 37b,12; 54a,11; (15–16) Tel Sera' bowls Nos. 1 and 3 (Pls. 4; 5:1; 6:1); (17) *pHarris I* 62a,11.

3. DISCUSSION

There are very few traces left by the Egyptian administration in the archaeological data of the Late Bronze Age in Canaan. Without our historical sources it would be virtually impossible to reconstruct the suzerain-vassal relation between occupied Canaan and the Egyptian empire. The majority of the Egyptian finds, whether inscribed (even with a royal name) or uninscribed, have so far not been able to do much more than point to strong contacts between Egypt and Canaan, but they are entirely incapable of defining the exact character of this relationship. Although the Egyptian steles found at various ancient sites in the country testify to Egyptian military campaigns to Canaan, they do not shed much light on the situation in the intervals between these campaigns.

Most of the finds reflecting a settled Egyptian administration come from the Egyptian garrison cities. These include the architectural relics from Beth-shan, the longstanding Egyptian stronghold in northern Canaan, and the Egyptian architectural elements recently excavated in Jaffa (Kaplan and Kaplan 1976). From Aphek more and more evidence is accumulating to show that this important city standing on the crossroads of the Via Maris may have been a seat of Egyptian government in the latter part of the 13th century. In addition to the Egyptian vessels found in the "governor's residence" in the final Late Bronze Age stratum, inscriptions in most of the languages of the time were retrieved from the site (Kochavi a.o.

1978); most important is the Akkadian letter sent by the governor of Ugarit to Ḫaya, a high Egyptian official who very likely was residing in Canaan and perhaps at Aphek itself (Owen 1981; Singer 1983).

A fragment of a very large storage jar from Tell el-Far'ah (S) bearing the double cartouche of Seti II suggests that the contents of this vessel were the property of the local Egyptian administration (Porter and Moss 1962:370). The recent discovery of a nearly identical jar, likewise inscribed with the names of Seti II in one of the Egyptian strongholds on the coastal road of northern Sinai supports this assumption (Golswasser 1980). An Egyptian anthropoid cemetery and settlement were recently excavated at Deir el-Balaḥ near the Egyptian border of that period (Dothan 1979:97–104 and *passim*). At Tel Lachish, Level VI of the renewed excavations was a flourishing Late Bronze Age city with numerous signs of Egyptian influence. A bronze object discovered there bearing a cartouche of Ramesses III (Ussishkin 1983:123–124; 168–169) is suspected to have been of the accessories of the city gate itself (Giveon 1983).

But beyond helping to localize the Egyptian centres of authority, the above-mentioned finds reveal to us very little of the actual conduct of Egyptian administration in Canaan. From the historical sources, it is evident that the occupation of Canaan meant, among other considerations, exploitation of the country's resources (see Na'aman 1981), but until just recently we have had very little concrete evidence from the archaeological finds in Canaan itself confirming such exploitation nor its extent. Neither do we know which specific Egyptian institutions enjoyed the incomes from Canaan. In Egypt itself the taxed lands were subject to the "land-owning institutions" in various and complex ways, each category of land having a different tax obligation (*pWilbour Comm.: passim*;Menu 1970), but textual references to the legal status of the occupied Asian territories are very rare. In the annals there is but a single hint regarding their status and obligations, namely that the three cities Yeno'am, Ḥlnkr and Ngs brought their tributes to the *pr nsw*, 'king's palace' (*Urk IV*:667, 10–12) and that subsequently the system may have been altered, since the king seems to have transferred the incomes of these cities to Amon (*Urk IV*:744, 3–8).

Evidence for the existence of Egyptian religious institutions in Canaan during the reign of Ramesses III is increasing year by year.[8] Previous evidence includes the ivory box from Megiddo mentioning the "Songstress of Ptah, of Ascalon" and *pHarris I,* which reports the construction of a temple in Gaza and refers to nine cities in Ḫ3rw belonging to Amon (*pHarris I*: 9,1–3;68a, 2; Porter and Moss 1962:380–381).

Obviously, the interests of an Egyptian temple in Canaan were not purely (if at all) religious but must have involved the transference of the city's taxes (or part of them) to the religious institution. The control of the temples in Canaan over secular lands during the Ramesside period seems to have been similar to that in Egypt itself. The hieratic-inscribed bowls from Tel Sera' support this assumption. On the one hand, the texts are administrative in nature, but the fact that several of them were inscribed on *complete* bowls is undoubtedly significant. Inscrip-

8 For the possible existence of an Egyptian temple of Isis at Aphek during the reign of Ramesses II, see Giveon 1978b.

tions on complete bowls appear on the model offering bowls from Amenophis III's temple (Hayes 1951:103–104) and on those from Tut-ankh-Amun's cache (Winlock 1941:143; Pls. IV, VI). These tiny bowls bearing very short inscriptions such as *ỉwf w3d* (fresh meat) or *ỉrp m3'w* (wine for offering) are all votive in nature. As Gardiner and Sethe (1928:27) have emphasized: "Whenever a text is written not merely on a potsherd but on an entire pot, there is *ipso facto* presumptive evidence of its votive character." In Canaan inscriptions of any kind are rare in the Late Bronze Age and beginning of the Iron Age, but from the scarce material that does exist, we may assume that the practice of writing on complete bowls was likewise limited to votive purposes. We may include in this category the *bšlšt* bowl from Lachish (*Lachish IV*:Pl. 43) and (from a slightly later period) the inscribed bowls from Arad (Aharoni 1981:114–119). Consequently, we may assume that the Tel Sera' bowls, although different in content and style, are also votive in nature.

In the recent excavations at Lachish a new Canaanite temple with distinct Egyptian influences and dating to the first part of the 12th century B.C.E. (Level VI) has been unearthed on the mound. Its excavator emphasized the large number of bowls found on the temple floor (Ussishkin 1978:19). Although it is suspected that the Fosse Temple III may be somewhat earlier (Ussishkin 1983:169), the same phenomenon was observed there. Indeed, in the report on the latter (*Lachish II*:78) it is stated that "it was found impossible to keep count of the number of bowl bases from Structure III, so overwhelming were they".

The bowls from the Lachish Level VI temple are very similar in shape to ours but none of them were inscribed. Unfortunately the famous bowl with the hieratic inscription (Lachish Bowl No. 3) and the other two inscribed fragments (Lachish Bowls Nos. 4 and 5) were not found in a stratigraphic context nor even very near to the temple, although they seem to have been part of the "mass of dumped rubbish" underlying Palace B–C that was "cut from some region to the north" (*Lachish IV*:132). The hieratic-inscribed bowl fragment mentioning "regnal year 10 + x" (Gilula 1976) that was found in the recent excavations came from a fill that may also have originated in the final Canaanite level. All these bowls undoubtedly played an important role in the rituals of the temples, most likely as containers for the offerings presented to the temple god or gods.

Thus, since the hieratic bowls from Tel Sera' have no exact parallels in Egypt, they must represent a Canaanite-Egyptian tradition of writing an inscription on complete bowls of local manufacture in good hieratic script. By "good", we mean that the inscription was written by a trained hand, it includes Egypian measures and uses the Egyptian dating system. In our case, a token amount of grain was probably placed inside the bowl, while the quantity and purpose of the "offering" were recorded on its exterior wall. This hypothesis may explain the presence of a large concentration of wheat found on the floor of the main hall of the Lachish Level VI temple (Ussishkin 1978:21).

The contents of our inscriptions also seem to support this assumption. Bowl No. 1 mentions regnal year 22 (+ x), which was most likely a year in the reign of Ramesses III, and a large amount of grain (about 33,500 litres). Bowl No. 2 bears the phrase "that which arrived at the house," the house (*pr*) in this period being a religious or secular institution possessing its own land and incomes (for a discussion of the word *pr*, see Menu 1970:19–25; also *pWilbour Comm.*:14 and *passim*). The inscription on bowl No. 3 was probably similar in content to that

of bowl No. 1, although all that is preserved is the recording of a very large quantity (about 145,000 litres) of some material, most likely grain.[9]

This appears to constitute the documentation of the *šmw* (harvest tax)[10] paid by one of the city-states in the Negev to an Egyptian religious institution, and it may provide the explanation for the mixed character of our finds, namely texts of an *administrative* nature written on *votive* bowls. This religious "institution" may have been merely a cult object, a statue or a tabernacle, housed in a local temple. All these objects, from the Egyptian point of view, are religious "institutions" that were accustomed to assess and collect regular taxes (e.g., *pWilbour Comm.*:16–17; *RAD*:59). Hence the fact that a "proper" Egyptian temple structure has not yet been found in Canaan should not disturb us, since such cult objects could have stood in any Canaanite temple, thereby converting it into an Egyptian religious institution.

On the Lachish hieratic bowl, the word *šmw* is unquestionably written. This was translated by Černý as 'harvest tax' (*Lachish IV*:133). The *swt* (wheat) that is also mentioned on this bowl appears in the Annals of Tuthmose III as well (*Urk IV*:694, 3–4) in references to one of the cereal species paid as *šmw* in Canaan.

The Tel Sera' and Lachish bowls therefore constitute the first documentation from Egyptian sources in Canaan itself concerning administrative practices connected whith grain. Moreover, the amounts recorded on these bowls are close to those mentioned in the annals — unfortunately only once, in reference to Megiddo: 273,000 (+ x) sacks (*Urk IV*:667.14). This large quantity is not too surprising, since much of this taxed grain may have remained in Canaan, where it was transferred to the *Stützpunkte* and used there for the sustenance of the Egyptian troops and all those belonging to the administrative network (Helck 1963:632; Schulman 1964:63–64; Redford 1972:155; Aḥituv 1978:96–97). Although the administrative status of the taxed territories is unknown to us,[11] we may assume that the different city-states of Canaan had different statuses and obligations to the Egyptian authorities and the institutions representing them (see Na'aman 1977:168–177).

In contrast to the votive character of the complete bowls, the ostraca provide clear evidence of secular Egyptian scribal activities at Tel Sera'. Very typical of this kind of data is the ostracon (No. 7) that bears part of a legal text.

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9 For an inscription referring to large quantities of grain from this region appearing on an Iron Age ostracon, see Naveh 1971:186.

10 In the Ramesside period *šmw* usually designated 'harvest tax,' and as such it is used in the annals for the harvest tax of Canaan (*pWilbour Comm.*:26, n. 6). However, in the description of the reaping of the entire harvest of the cities Yeno'am, Ngs and Ḫlnkr, the term *'w3y šmw* refers to the actual harvesting and not to the tax (*Urk IV*:667, 10–12; *Wb I*:171). In the next line (*Urk IV*:667,13) we find the beginning of a list introduced by *rḫt* describing the *šmw* taken from Megiddo; here the translation 'harvest tax' is again applicable.

11 The Megiddo lands are called *iḫwt* lands in the annals (*Urk IV*:667,13); in the preceding lines (*ibid.*:10–12), we find a reference to other *iḫwt* lands: "The fields (*3ḫwt*) were made into *iḫwt* measured by the controllers of the palace (l.p.h.) to reap their harvest." Although the precise meaning of the word *iḫwt* is not known, we may assume that lands that were "made into *iḫwt*" had undergone a change in legal status and were being measured or reassessed for tax purposes on behalf of a certain Egyptian institution. The same term is used for Egyptian lands, probably also in connection with a change in their status; see *Urk IV*:746, 2–5; Kitchen 1971:333, 2–4; for the *iḫwt* in Papyrus Wilbour, which is translated by Gardiner as 'cultivated land'; see *pWilbour Comm.*:55, 68–69.

Summing up, this small corpus of hieratic inscriptions could cover a time-span of several dozen years, since regnal year 7 (of an unidentified pharaoh) is mentioned on sherd No. 5, and bowl No. 1 bears regnal year 22 (+ x), very likely that of Ramesses III (see commentary 'e' to bowl No. 1). This indicates the existence of a very strong Egyptian presence around the end of the 19th and beginning of the 20th dynasties in city-states such as Tell el-Far'ah, Tel Sera' and Lachish, which were situated far from the Egyptian centre of authority. This presence most probably stemmed from Egypt's economic interest in the northern Negev, which seems to have been a major granary at the time, as well as from her attempts to hold back the growing forces of the nomads who threatened the stability and economic order of southern Canaan.

As opposed to the assumption that the Egyptian occupation of Canaan was on the decline at this time, her control over the region was perhaps even stronger than previously. The hieratic inscriptions discovered at Tel Sera' are important evidence in support of this hypothesis.

APPENDIX

ON THE COMBINATION  AND ITS CLOSE VARIATIONS

Almost a century ago, F.L. Griffith (1892:430) writing of the *swt* corn appearing in *Urk IV*:667, 14, noted that "the quadruple unit, written  with a new multiple of it by *four* written  ...is of course equal to 16 ."

At first glance the combination (as written in hieratic), appears to be simply impossible, since (*ḫ3r*, 'sack') is the four-multiple of the quadruple *ḥeḳat*, and the use of both measuring units for the same quantity is very much like expressing a total amount in both quarts and gallons (or perhaps to put it more aptly, in gallons and barrels). Megally (1977:101–108) in his comprehensive analysis of the two elements making up this combination, arrived at the conclusion (with which I agree completely) that the is a notation indicating the precise capacity of the measuring vessel that precedes the total sum, which is expressed in sacks. Thus we are dealing with two different units of capacity, and the is by no means a determinative to the antecedent quadruple *ḥeḳat* (contra Möller 1965:62).

Megally's interpretation is basically similar to that of Gardiner (1969:199), who refers to the same group appearing in Papyrus Louvre 3226. He states that the example is "a somewhat strange way of expressing (4 × 20) + 2 =82 quadruple *ḥeḳat*,"[12] meaning that he understood that the total sum is expressed in quadruple *ḥeḳats* and not in sacks.

Gardiner's interpretation of the group may explain the underlying idea of the Ramesside writing and the related examples. The measure is the *oipe*, the total is given in *ḫ3r*, but at least on several occasions it was comprehended in *oipe* (e.g.); for these examples, see *pWilbour Comm.*:63–64; Wente 1961:257).

Summing up, both Megally and Gardiner observe *two* measuring units in the group , while they differ in their understanding of the unit used to express the total sum:

12 In *RAD*:11a, 15b–c, Gardiner omits the transcription even though he apparently recognizes it as the quadruple *ḫḳ3t*, since he cites Möller 1965:62. The transcription was also omitted by Barns (1948:42), citing B. Gunn.

Megally understands it in sacks while Gardiner conveys the same sum in quadruple *ḥekats.*

In contrast to both Megally and Gardiner, Helck (1973:96; 1974:136–137),[13] considers the  to be a "Sack zu vier *oipe*," as opposed to the five quadruple *ḥekats* that the sack is believed to have contained in the Middle Kingdom. However, the four strokes above the  originally meant that the single *ḥekat* was quadrupled here — if, of course, the basic assumptions of Griffith (1892:429) are to be accepted.

To supplement Megally's comprehensive discussion, I would like to add several other occurrences of the  and its close variations, with and without intervening signs (although I do not presume to present here a complete list of all the variations). The dates of the following, which range from the 18th to 20th dynasties, are according to those appearing in the relative publications unless otherwise stated.[14]

(1) Material + + numerals: *pLouvre 3226,* B vso IV,9 and *passim; Urk IV*:667, 14; *RAD* 17,10, 17,15 (Seti II); *pHarris I* 54a,11; 62a,11; 65a,11 *RAD* 11,15 (Ramesses III–IV).

(2) Material +  + numerals: *oDeM* 31,5 (Ramesses II).

(3) Material +  +numerals: Černý and Gardiner 1957: Pl. LXXV vso 2 (Ramesses II)[15].

(4a) Material +  [16] + numerals: *pBerlin III*: Pl.XXXI,4 (18th dynasty); Spiegelberg 1896:37–40; Barns 1948: Pl.XI,4, 5, 7 (Seti I); *CG* 25582,4 (19th dynasty); Goedicke and Wente 1962 :91 rto (20th dynasty); bowls Nos. 1 and 3 from Tel Sera' (20th dynasty; see Pls. 1; 2:1; 3:1).

(4b) Material +  + numerals: *pBerlin III*: Pl.XXXI,5 (18th dynasty).

(5) Material +  [17] + numerals: Spiegelberg 1896:37–40; *oDeM* 10,8; 12,5; 15,5;

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13 In his translation of Papyrus Northumberland II, Helck (1964:750) renders the group  once as *ḫ3r* and once as *oipe* according to the form of the numerals themselves, following the method introduced by Gardiner in *pWilbour Comm.*:63–64; see also Helck 1980:1202–1205.

14 Some of the materials included in our list: **Cereals and flour**: numerous examples; **dates:** *pLouvre 3226* 4, 9 and passim; **beans**: *oDeM* 31,5; see also Janssen 1975:355; **dung**: *oDeM* 10,8; Černý 1955: 36 ff.; Osing 1978:189; **plaster**: *CG* 25168 (*ḳ3d3*);Hayes 1942:21; **water**: *oDeM* 50 vso 1; ***tpw* fish**: *CG* 25582, 2–4; *RAD*: 17,6; 17,15 (for this kind of fish, see Gamer-Wallert 1970:21; Helck 1964:836; Helck rightly presumes that it should be a very small fish). All of the above-mentioned products can be measured by *ḫ3r* or *oipe* — regarding water measured in *ḫ3r*, see Helck 1964:845 and Jannsen 1979:9–15; for the *tpw* fish, see *pBerlin III*: Pl. XXI,4.

15 I have dated this to Ramesses II. In addition to the mention of his name, the text contains grammatical elements that are not typical of the administrative texts of the 20th dynasty, e.g., *bw sdm.f* (vso 8), *n3.n* (vso 12,19). The third future and the *iw.f ḥr sdm* are fully written. Nevertheless, it should be noted that although administrative in content, the text contains verse points; see Allam 1973:20–24.

16 Griffith (1892:432) writes about this combination: "The Rollin Papyri of the Bibliothèque Nationale ...gives a unit written (unless be a separate word), its quarter (presumably the , not the) denoted by dots and the symbols of the fractions."

17 From Černý's (1955:36) interpretation of the same group, it seems that he had a different opinion regarding the appearing at the end. In a discussion of the material called *ḫyrt* (dung), he writes that "the material which it denotes is always measured in *ḫḳ3t* or *ḫ3r* ."

16,6; 17,5; 22,8; (19th dynasty); Černý and Gardiner 1957: Pl. LXXXII,3 (Ramesses II);[18] *oDeM* 50, vso 1 (end of 19th dynasty).

(6) Material +  + separating phrases +  + numerals: *pHarris I* 12b,3; 66a,1; 74,11.

(7) Material +  (without numerals): *LEM* 20,2 (Ramesses II; *RAD* 12,10. [?]

The above examples appear to support Megally's basic conclusions. Since the and the  represent different measures, there is no difficulty involved in explaining those cases in which a single sign or a whole phrase separate the quadruple *ḥḳ3t* and the *ḫ3r*.[19] Moreover, the rare examples of the quadruple *ḥḳ3t* used alone without the *ḫ3r* (example 3 above) can also easily be explained by the use of the quadruple *ḥḳ3t* in the framework of the normal notation of capacity measures, namely, the material, the unit of measurement and the quantity.

Thus the and the  that follow the in examples 3–5 would be the determinatives of the quadruple *ḥeḳat*, the  perhaps indicating a round measuring vessel and the , meaning 'first' or 'best'. I must admit that these explanations of the determinatives are not totally convincing, but I can find no better ones.[20]

Our example No. 2 is somewhat problematical and it too evokes the question of the relationship between the quadruple *ḥeḳat* and the *oipe*.[21] If we do not assume that this example is a scribal error, the only way to remain faithful to our line of reasoning is to presume that while the quadruple *ḥeḳat* and the *oipe* are identical in capacity, they are different in shape. Thus the writing could indicate that the measuring was done by means of the quadruple *ḥeḳat* while the total was given in the customary *oipe* measure (unless, of course,this is the only instance known to us where the *oipe* appears as a determinative to the quadruple *ḥeḳat*.

Another related example appears in *oDeM* 242 (dated by Černý to the 19th dynasty), which bears the notation  . Here (if we are to continue our hypothesis), the measuring was done according to the double *ḥeḳat* (a very rare measure in the ostraca of the Ramesside period), while the total was conveyed in the customary *oipe* measure.

The reason that the scribes included the measuring vessel in these examples escapes me, although I venture to suggest that whenever the quadruple *ḥḳ3t* and the *ḫ3r* appear together, the purpose was to indicate both the capacity of the measuring vessel and the total quantity in its packed form.

Although no specimens of the *ḥeḳat* have survived (Reineke 1963:159), there are several

18 Considered by Gardiner (1924:92) as "Early Ramesside". Regnal year 24 is mentioned,and the text contains elements that are not typical of the administrative language of the 20th dynasty, e.g., the definite article appears as *n3.n* and the preposition *ḥr* is used consistently.

19 The existence of such combinations was first observed by Spiegelberg (1896:38–39), who mentioned, *inter alia*, the example from *pAnastasi II* (see our example 7 above) and reached the conclusion that the *ḫ3r* is not the determinative of the and the .

20 The terms *tp n šmw* and *tp n ỉhwt* were used in the Middle Kingdom for the "first fruit" custom (Gilula 1974). The word *tpy* also has the connotation of 'legitimate' (Faulkner 1962:297–298). On the standardization of capacity measurements by the state, see Janssen 1975:549.

21 The quadruple *ḥeḳat* and the *oipe* are paralleled in a very obscure paragraph in *pAnastasi I* 6, 7–8.

drawings that depict its use. For example, in a measuring scene of the First Intermediate period, we see the *ḥekat* — which looks like a rectangular box in the drawing — being used to measure and transfer the grain from the pile to the sack (Blackman 1920:Pl.XIX). In the 18th dynasty similar scenes depict the *ḥekat* measuring container being used to move the material from the unmeasured heap to the measured one (Deir el Bahari III:Pl.79; Davies 1943:33–34; *Atlas Wreszinski I*:Taf. 177, 261). Once the material was ready to be transported, it was packed in a sack of standard capacity *(ḫ3r)* that had special carrying handles (Davies 1943: Pls. 50–51; *Atlas Wreszinski I*:Taf. 63, 279). For loading the sacks on ships, see *Atlas Wreszinski II*: Taf. 186 (Ramesses II, Abydos).[22]

From the above, we see that while the *ḥekat* measures are strictly measuring vessels, the sack is also a "packing measure," and therefore, when both measuring and packing were involved, the use of both notations becomes less obscure.[23]

It seems that by the time of the 20th dynasty at least, the quadruple *ḥḳ3t* notation was already devoid of its concrete meaning. Parallel paragraphs in *pHarris I* offer examples with or without the quadruple *ḥḳ3t*,[24] and it appears that the mention of this measuring unit at this time (and perhaps even earlier) was due merely to scribal habits or tradition.

22 Regarding the *oipe* for measuring and the *ḫ3r* for transportation, see *pWilbour Comm.*:64 and *LRL*: 57,8 to 58,2.

23 For such combinations of measuring units found in abnormal hieratic, see Černý and Parker 1977:129.

24 *pHarris I*: Pls. 16b,13; 34b,6; 53b,12, without the quadruple *ḥḳ3t* versus 66a,1; 74,11 with the quadruple *ḥḳ3t*; upon examining the original of the last-mentioned example (Birch 1876: Pl. 74,11), I have noted that it does not have the *n* that separates the  and the  in Erichsen's transcription. See also *pHarris I* 32b,6; 51b,11; 69,5, versus 12b,3. The  should be added after the word *sšr* in Erichsen's transcription of *pHarris I* 37b,12;see Birch 1876: Pl. 37b,12 and Möller 1965:62.

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