

The administration of Mycenaean sheep rearing (flocks, shepherds, “collectors”)

by

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Abstract:

The Mycenaean Greek archives found both at Knossos in Crete and Pylos in Messenia give us detailed information about flocks of sheep, which are reared for their wool. The aim of this paper will be to provide the (non-specialist) reader with an overview of the extant documentation, and to study some problems and characteristics linked with the administration of sheep rearing (organization of the flocks, relationships between palatial administration, shepherds and “collectors”). Differences between these two archives are underlined (e.g. tablet format used by the scribes, presence / absence of “deficit” entries, presence / absence of flocks intended for reproduction, presence/absence of targets for wool production) and some possible explanations are suggested.

The Linear B clay tablets found at Knossos (Crete) and Pylos (Messenia) provide us with detailed information about the breeding of sheep, pigs, and goats at different stages of the Late Bronze Age. The Knossos texts register ca. 100000 sheep, the Pylos Cn tablets ca. 10000. The other LB archives (especially at Thebes¹ and Mycenae) do not yet document sheep breeding (this lack of information is probably due to the lesser number of texts found), but wool and textiles are well attested, which means that the lack of tablets registering flocks depends only on the preservation of documents. Sheep are reared mostly for their wool. The majority of the flocks are made up of wethers, because they produce more wool, and of better quality.² However some flocks also include ewes and lambs; they were probably intended for the reproduction and restocking of the wool flocks, though it can be demonstrated that the reproduction flocks as attested in the present state of the corpus would not suffice to replace the old animals of the wool flocks.³ The palatial administrations set uniform targets, which the shepherds were supposed to fulfill. The deficits were carefully recorded.⁴ We also have information about the fattening and, later, the consumption of different species of animals (sheep, goats, pigs, etc.) on the occasion of banquets, which probably took place after sacrifices.⁵ This paper will focus on the administration of sheep flocks, and especially on the relationship between flocks’ organisation, shepherds and ‘collectors’: what are the differences between the Pylos and the Knossos

archives, and how are they to be analysed? What does it mean when a shepherd’s name appears many times in a documentation supposed to be from the same year? Are there some cases where two documents refer to the same flock, which means there may be a chronological difference, even small, between them? What can be said about the geographical organisation of sheep rearing? How are we to interpret the involvement of the so-called “collectors”? The aim of this paper is to present the extant data as clearly as possible for the non-specialists; to confront systematically — keeping in mind the different questions asked above — the Knossian and the Pylian documentations, which are in most cases studied apart;⁶ to give an idea of the problems and to suggest some elements for an answer, as well as to present some elements of my current research on those topics.

I. Description of the Mycenaean documentation about sheep

In a single deposit or *bureau*, all documents are from the same and short period of time (a few weeks or months). The sheep tablets are never dated.⁷ The information provided by the scribes are the following: place-name, shepherd’s name, ideogram (occasionally some descriptive elements about the animals), numbers, and, in 30% of the texts, the collector’s name.⁸ The first personal name written by the scribe on a sheep register is interpreted with relative, but not absolute, certainty, as the shepherd’s name.⁹ In the only occurrence of the word *po-me*, ποιμήν, “shepherd”, on Dd 1376 there is no way to determine if it is a professional designation or a personal name.¹⁰ This is no surprise since, in epigraphical *corpora* where the shepherds are much better known than in our documentation, like the roughly contemporary Nuzi texts, the different professional designations for the shepherds are mostly known from contexts like legal or military texts, or documents where the profession of the individuals matters, but is not directly apparent through the context.¹¹ In our texts we find no trace

Table 1			
Tablets	Place Name	a3-mi-re-we	e-ka-ra-e-we
KN Dm 1174	ri-jo-no	2	20
KN Dm 1175	ra-su-to	4	10
KN Dm 1176	ku-ta-to	5	61[
KN Dm 1177	ru-ki-to	3	24
KN Dm 1178	?	?	?
KN Dm 1179	ku-]ta-to	5	67
KN Dm 1180	pa-i-to	4	20
KN Dm 1181	do-ti-ja	?	?
KN Dm 1182	∅	∅	21
KN Dm 1183	ku-ta-to	∅?	?
KN Dm 1184	pa-i-[-]to	∅	15 (o-we-to o-pa)
KN Dm 5181	*56-ko-we-i	∅?	?
KN Dm 5226	e-ko-so	∅	10
KN Dm 5237	ra-to	3	24
KN Dm 5323	?	2	15

Table 1. The data in the Dm series.

of a hierarchy among the shepherds¹² nor of any kind of contract between them and the palace.¹³

1. At Knossos

Both the number — 984 texts in the Knossian D- series, in the 5th edition of the corpus (below *KT V*) — and the variety of sheep documents preserved is much more important than at Pylos.

• **The Knossian sheep tablets are leaf-shaped and each register one flock.** See for example Da 1108.

KN Da 1108 (117)

.A OVIS^m 200

.B ki-ta-ne-to , / su-ri-mo

The documents record only a few basic pieces of information: *ki-ta-ne-to* is the name of the shepherd, *su-ri-mo* is the place name ; the flock is made up of 200 wethers. This is the standard type of sheep tablet at Knossos, which represents 70% of the sheep records. On 30% of the records, there is also an additional personal name, conventionally called “collector” ; see for example the following document :

Da 1321 + 5101 + 5773 (117)

.A OVIS^m 200 [

.B su-ta-no , / ra-to , pe-ri-qo-te-jo , [

Here, the shepherd’s name is *su-ta-no*, the place name *ra-to*, the “collector’s” name *pe-ri-qo-te-jo*.¹⁴

• **Ca. 15,5% of the Knossian sheep tablets mention a “deficit”,¹⁵ indicated on the documents by an o-pe-ro entry**

KN De 1112 (117)

.A OVIS^m 57 OVIS^f 23

.B a-ko-mo-ni-jo , / ku-ta-to o OVIS^m 20

The shepherd’s name is *a-ko-mo-ni-jo*, the place name is *ku-ta-to* ; the flock is made up of both wethers and ewes, and the scribe has added an *o(-pe-ro)* entry, indicating that 20 wethers are still due by the shepherd to the palatial administration. The abbreviation *o*, or the complete word *o-pe-ro* corresponds to the alphabetical greek / ophelos / and can be translated as “debt”.¹⁶ The interpretation of these *o-pe-ro* entries is a disputed issue. The animals are missing at the time when the tablets were written. It has been suggested that they were temporarily missing,¹⁷ and would be replaced later on the shepherd’s private flocks. Different objections can be made to this theory.¹⁸

• **Two main sorts of flocks can be distinguished at Knossos : flocks for wool production, and flocks for reproduction.**

However, the reproduction flocks (with ewes and lambs) are also registered with wool quantities, thought of lesser importance, which means that wool production was always one of the main scopes.¹⁹ The Da-Dg series record wool flocks,²⁰ made up of wethers, with occasionally some old animals, or some ewes, and we

also have the corresponding Dk records with targets for wool production. The D1 and D0 series record ewes and lambs, with also wool quantities. There are also deficits proving that there were targets both for lambing and shearing.²¹ One of the questions which arises is to know if the lambs were also shorn (or better, plucked), and, if it was the case, how much wool they were meant to produce. No definitive answer can be given, since our texts do not provide us with any indication about lamb's wool (a quality usually specified, when it is the case, because much finer, warmer and appreciated). Since precisions are often added to the ideograms of the Linear B script (hereafter LB),²² we could expect some kind of precision to be given and lambswool to be recorded separately. So two possibilities exist: the ewes were plucked, but produced less wool, because of the lambing (and also of the milk production) ; or the lambs were also plucked (but we have no way to prove it, nor to give any quantitative evaluation : any suggestion on this subject remains a mere speculation).²³

• **The Knossos archives also contain totalling records, either per place name or per “collector’s” name, in the Dn series.**

Compare for instance the two following documents:

KN Dn 5318 + 8388 (117)

- .1 ru-ki-to OVIS^m 4080[
 .2 pu-ṣo OVIS^m 1034 a-ka OVIS^m[

KN Dn 5668+ fr. (117)

]qo-te-jo OVIS^m 3300[

Dn 5318 registers totals for the place names *ru-ki-to*, *pu-so* and *a-ka*. **Dn 5668**, with the commonly admitted restitution *pe-ri-]qo-te-jo*, registers the total of sheep for the “collector” *pe-ri-qo-te-jo*.

• **Matches can be observed between Dk²⁴ targets for wool production and Da-Dg flocks.**²⁵ See for example Df 1121 and Dk (2) 1076.

KN Df 1121 + 7689 (117)

- .A da-mi-ni-jo , OVIS^m 143 OVIS^f 36
 .B ti-mi-za / ku-ta-to , pe OVIS^m 21

KN Dk(2) 1076 + 8052 (119)

- .A X OVIS^m 200 LANA 33
 .B ti-mi-za / da-mi-ni-jo o LANA 17

In the above documents, the flock is entrusted to the shepherd *ti-mi-za*, with the place name *ku-ta-to* and the collector's name *da-mi-ni-jo*; it is made up of 143 wethers + 36 ewes + 21 sheep born last year = 200 animals (Df 1121, by scribe 117) and is also registered on Dk (2) 1076 (scribe 119), with a wool delivery of 33 units (99 kg) and a deficit of 17 units (51 kg). It can be remarked that the target for wool production is a standard one: 200 (animals) : 4 = 50 units of wool (33+17). The two documents show another example of collaboration between scribes working in the same sphere of administrative and economic activity.

• **The Dm series records small numbers of sheep kept in enclosures (a3-mi-re-we), and animals being fattened (e-ka-ra-e-we) for consumption.** See for instance

Dm 1174 :

KN Dm 1174 + 5265 (117)

- .A a3-mi-re-we OVIS^m 2
 .B ri-jo-no / e-ka-ra-e-we , OVIS^m 20

The document records, for the locality of *ri-jo-no*, 2 animals kept in an enclosure, and 20 animals being fattened, presumably for consumption. Throughout the series, the numbers of animals kept in enclosure are systematically smaller than those of animals being fattened ; in a few cases, there is no entry for animals kept in enclosures. The main data are summarised in table 1 (all Dm tablets are by hand 117, the main scribe who has recorded sheep flocks at Knossos).

2. At Pylos

The Pylos sheep records as a whole are much more difficult to analyse than the Knossian ones. Much has been written about the organization of sheep rearing in Mycenaean Crete, but the extant bibliography on the same subject for the Pylian kingdom is less important. There are some studies which aim at a comparison of the two archives, but they are quite few in comparison. In the limited frame of this article my aim will be to provide the reader with a short description of the Pylian documentary evidence, and to pinpoint some of the problems which arise from it.

• **The Pylian documents about sheep are page-shaped tablets, recapitulating each ten or more leaf-shaped tablets which are not preserved.**²⁶

The animals registered can be classified in different groups or categories: those with shepherd's name (sometimes preceded by the preposition *pa-ro*), those of different species (sheep, goats, pigs) ; those recorded with a given place-name ;²⁷ those with a “collector's” name, and those with qualifying adjectives (*pa-ra-jo*, /*palaios*/, “old”, being the best documented). These categories are of course not mutually exclusive.

On Pylos Cn 40, written by Hand 21 we have fourteen rubrics, each registering one flock, ten of which also have a “collector's” name.²⁸ The total number of sheep registered on this tablet is of 1185. It should be noted, first, that all flocks are not of the same type: 11 are made up exclusively of wethers, and 3 exclusively of ewes. 3 are made up of old animals. There seems to be some kind of classification or at least traces of a rearrangement of some kind in the flock composition. One could ask, for example, if each rubric corresponds to a real flock, or to some kind of inventory of all the sheep belonging to the same type (by sex, species and/or age) and placed under the responsibility of the same shepherd, and attached to the same place-name. The beginning of the tablet seems to show a tendency to register together, or one following the other, the flocks connected to the same place name: *wa-no-jo wo-wo* for the 4 first flocks, then *e-ko-me-no*, *a-ne-u-te* and *ma-ro(-pi)*. On lines 11-14, it looks like the scribe added some more flocks, with toponyms also registered in the first rubrics: *ma-ro* on line 12, *a-ne-u-te* on line 13.

PY Cn 40

(S4/H21)

- .1 wa-no-jo , wo-wo , pa-ro , ne-ti-ja -no-re , pa-ra-jo OVIS^m 140
- .2 wa-no-jo , wo-wo , pa-ro , po-so-pe-re-i , wo-ne-we OVIS^m 75
- .3 wa-no-jo , wo-wo , pa-ro , zo-wi-jo , a-ko-so-ta-o OVIS^m 70
- .4 wa-no-jo , wo-wo , p̄a-r̄o , po-ru-qa-ta , we-da-ne-wo OVIS^m 60
- .5 e-ko-me-no , pa-ro , pa-ta , pa-ra-jo OVIS^m 80
- .6 e-ko-me-no , pa-ro , [•]ma-te-we , we-da-ne-wo OVIS^m 70
- .7 a-ne-u-te , pa-ro , ma-ri-ti-wi-jo , a-ko-so-ta-o OVIS^m 83
- .8 ma-ro-pi , pa-ro , ro-ko , pa-ra-jo OVIS^m 150
- .9 ma-ro-pi , pa-ro , ka-da-ro , we-da-ne-wo OVIS^m 85
- .10 ma-ro , pa-ro , tu-ri-ta , a-ke-o-jo OVIS^m 80
- .11 re-pe-u-ri-jo , pa-ro , e-zo-wo , a[-ko-so-]t̄a-o OVIS^m 82
- .12 ma-ro , pa-ro , ma-u-ti-jo , a-ko-ṣo-ta-o OVIS^f 60
- .13 a-ne-u-te pa-ro , ka-ta-wa , a-ko-so-ta OVIS^f 80
- .14 a-te-re-wi-ja , pa-ro , e-wi-te-we , a-ke-o-jo OVIS^f 70
- .15 vacat

• **On Cn 4 and 595 the scribe records small groups of sheep (1 to 16) kept in stables (OVIS+TA).**

First it is necessary to propose some kind of explanation for the introduction of both tablets: *ta-to-mo o-pe-ro*. *Ta-to-mo* is usually interpreted as /*stathmos*/, “stable”, and *o-pe-ro* /*ophelos*/, as the indication of a debt, a quantity of goods, a number of animals still due to the palatial administration.²⁹ Are these animals to be brought to stables belonging to the palace? Is there any link between the Knossian *a3-mi-re-we* or *e-ka-ra-e-we* sheep and the Pylian OVIS+TA? The nature of the documentation does not allow these questions to be answered with certainty. After the introduction, each rubric is made up of the same elements: place name, personal name (shepherd), ideogram and numbers; nonetheless, some rubrics on Cn 595 differ slightly from this pattern (cf. *infra*).

PY Cn 4

(S4/H21)

- .1 a-si-ja-ti-ja , ta-to-mo , o-pe-ro
- .2 mu-ta-pi , ku-ri-sa-to OVIS+TA 22
- .3 qe-re-me-ti-re , sa-ṇi-ḷo OVIS+TA 16
- .4 ta-to , a-ka-re-u-te , t̄u-ni-jo OVIS+TA 7
- .5 e-ri-no-wo-te , ti-ri-jo OVIS+TA 7
- .6 ne-do-wo-te , tu-ti-je-u OVIS+TA 4
- .7 e-ri-to-ti-no , ne-me-ta-wo OVIS+TA 10
- .8 wo-tu-wa-ne , e-ke-si-jo OVIS+TA 9
- .9 ma-ta , a-ka-re-u-te , ke-ro-we OVIS+TA 7
- .10 si-jo-wo-te , o-qe , e-ra-se OVIS+TA 10

PY Cn 595

(S4/H21)

- .1 e-ra-te-re-wa-pi , ta-to-mo , o-pe-ro ,
- .2 me-ta-pa , a-we-ke-se-u VIR 1 OVIS+TA 5
- .3 ne-de-we-e OVIS+TA 9
- .4 u-de-wi-ne VIR 2 OVIS+TA 8
- .5 ma-to-ro-pu-ro OVIS+TA 1
- .6]i-pi[VIR]1 OVIS+TA 5
- .7]-ko-[]QVİŞ [+TA]]5[

The syllable *TA*, added to the ideogram, is (cf. *supra*) an abbreviation for *ta-to-mo*,³⁰/stathmos/, “stables”. It is interesting to note that on Cn 595.2 and .4, there is also a VIR ideogram ; on line 2, one man is registered with the 5 animals kept in a stable. This man may be the person responsible for them. On line 4, there are two men, for 8 sheep. Finally on line 6, there is also one man recorded besides the 5 animals. The problem is that these VIR entries are not systematic, as one could expect if the men

were the individuals in charge of the animals/responsible of them towards the palatial administration.³¹ And if we look at the number of sheep involved in two rubrics, it seems hardly plausible that the two men on line 4 were necessary to take care of only eight sheep. They could have been the individuals responsible for the transfer of the animals (to the stables), but in this case one would expect their proper names to be quoted (and again their number would seem strange). There is also another document with a mention which could be analogous : C (1) 901.³² In this case, the animals concerned are bovids. For the interpretation of *ta* on this tablet, two possibilities have been suggested : *tauros*, indicating a bull (but in this case we would expect a BOS^m ideogram, not simply BOS) ; or *ta-to-mo*, as in the Pylos Cn tablets studied above.³³

• **At Pylos, the sheep numbers are less often round,**

but the addition of the animals attested with identical shepherd names often comes down to round numbers.³⁴ This would perhaps be an argument to say that the different groups of animals registered on different documents (or different lines on the same document) with the same shepherd’s name were to be added to form the total number of animals entrusted to the shepherd (and not that the different groups made up the flocks entrusted to the same man for different years or seasons).

• **There are no o-pe-ro (“deficit”) entries in the Pylian sheep records.**

The absence of deficit indications would induce us to think that the problem, if it had emerged, had been solved at a stage of the management prior to the redaction of the extant tablets.³⁵ This is one of the elements, combined with the other differences already described above, which brings to mind the idea that the Knossian and Pylian sheep tablets reflect two different (successive?) stages of the administrative livestock management. The fact would fit nicely, in particular, with the recapitulative character of the Pylian tablets, especially if we take into account the possibility of a more or less important chronological difference between the two *corpora*.³⁶

Table 2							
Tablet	Shepherd's name	Animals	Place Name	Tablet	Animals	Place Name	CN
Cn 131.2	o-ku-ka	OVISm 130	pi-*82	Cn 719.5	OVISm 70	pi-*82	a-ke-o
Cn 131.3	ku-pi-ri-jo	OVISm 50	pi-*82	Cn 719.7	OVISm 60	pi-*82	a-ke-o
Cn 131.4	ko-ru-no	OVISm 100	pi-*82	Cn 719.9	pa-ra-jo OVISm 66	wi-ja-we- ra2	∅
Cn 131.3	a-ka-ma-wo	OVISm 120	pi-*82	Cn 719.11	OVISm 96	wi-ja-we- ra2	a-ko-so-ta
Cn 131.6	to-ro-wi	OVISm 130	pi-*82	Cn 655.2	pa-ra-jo OVISm 133[ma-ro-pi	∅
Cn 131.7	ke-ro-wo	OVISm 130	pi-*82	Cn 655.3	OVISm 85	ma-ro-pi	∅
Cn 131.7	ra-pa-sa-ko	OVISm 91	pi-*82	Cn 655.4	OVISm 69	ma-ro-pi	∅
Cn 131.14	pu-wi-no	CAPf 55	pi-*82	Cn 655.5	OVISm 190	ma-ro-pi	a-pi-me- de-o a-ko- ra
Cn 131.10	e-ti-ra-wo	OVISm 100	pi-*82	Cn 655.9	pa-ra-jo OVISm 70	ma-ro-pi	∅
Cn 131.10	a-ta-ma- ne-u	OVISm 140	pi-*82	Cn 655.10	pa-ra-jo OVISm 60	ma-ro-pi	∅
Cn 131.8	a-ri-wo	OVISm 100	pi-82	Cn 655.12	OVISm]4	ma-ro-pi	a-ke-o-jo a-ko-ra
Cn 131.11	se-no	OVISf 44	pi-*82	Cn 655.19	OVISf 40	ma-ro-pi	we-da-ne- wo

Table 2. Correspondences between Cn 131 et Cn 655+719.

• **We know nothing about flocks intended for reproduction at Pylos**, and we have no mention at all of *ki* OVIS^m (lambs). Since there is no reason why they would not be registered, as they are at Knossos, this is one more argument to think that the Pylian documents do represent another stage or period of the recording/managing process of the flocks (or that we have at Pylos a different part of the documentation).

• **Nothing like targets for wool production are attested.**³⁷ The absence of wool quantities clearly related to the flocks is probably to be put in relation with the very small quantities of textile tablets at Pylos, in comparison with what is preserved in the Knossian archives.³⁸

II. Some oddities in the sheep tablets

• **At Knossos, a few tablets do not register a toponym:**³⁹ Da 1445, Dc 1419 and Dd 1425, all three by scribe 117. Since they are also without deficit entry,

they may be interpreted as records of flocks about to be trusted to the shepherd for the next season, or as records of flocks given back by the shepherd to the palatial administration after one season.⁴⁰

• **Some shepherd names are mentioned on more than one tablet, both at Pylos and Knossos.**

The meaning of these recurrences in relation with the administration of sheep flocks is problematic. At Knossos, we have 2 to 5 attestations at the most for the same shepherd's name,⁴¹ sometimes with the same place name, sometimes with different ones. 11 shepherd names recurring on more than one tablet are associated with the same place name at least on two documents.⁴² 10 shepherds are mentioned both in at least one sheep register and one shearing record.⁴³

The Pylian case is more complex, since the hypothesis of a double recording for some flocks has been formulated.⁴⁴ The shepherds registered on Cn 655+ 719

would be the same as those registered on Cn 131, but with animals corresponding to a new allocation for a new season.⁴⁵ This would mean an identity of persons, with two different flocks, and documents relating to two different years, although they bear no chronological indication ; it seems to me that some doubts can be expressed about these correspondences, especially in the case of Cn 131.14 (55 she-goats, at *pi*-*82, without “collector’s” name) and Cn 655.5 (190 whethers, at *ma-ro-pi*, with the “collector” *a-pi-me-de*). The data are summarized in table 2, with some additional information.

It is interesting to note that in the left part of the table (Cn 131) there are no “collector’s” names, but that these individuals do appear six times in the right part (Cn 655+719) : *a-ke-o* on Cn 719.5, Cn 655.12 (in this later document, also with the word *a-ko-ra*) ; *a-ko-so-ta* on Cn 719.11, *a-pi-me-de* on Cn 655.5, and **we-da-ne-u* on Cn 655.19. All the ‘collectors’ known in the Pylian archive do appear in the second set of documents. The question is how this can fit in the different theories elaborated to explain the presence of these individuals in the sheep records.⁴⁶ It has been suggested that the word *a-ko-ra* and the adjectives *a-ko-ra-jo/-ja* were linked with the individuals known as “collectors”, and even that the *a-ko-ra* operation (some kind of “gathering” of animals) would be a definition of their activities. The first link was made by Ventris and Chadwick after the decipherment,⁴⁷ because of the Pylos Cn tablets,⁴⁸ and gave their modern name of “collectors” to these individuals. The idea has been developed later by other scholars,⁴⁹ and it was suggested that even in cases where only the adjective, *a-ko-ra-jo/-ja*, was mentioned by the scribes (in the Knossos Co series, by scribe 107), the “collectors” were also involved. From this suggestion comes the widespread but, in my opinion, questionable, idea of a special link between “collectors” and the western part of Crete.⁵⁰

To sum up : different kinds of problems arise from the Pylian sheep records tabulated above. 1° the *pa-ra-jo* or old sheep are a kind of mention that should be situated on a different administrative level as the OVIS without more precision, since they are probably to be taken from the flocks (or the groups of old sheep are recorded separately and intended for culling). 2° the *a-ko-ra* management operation, maybe some kind of collection of animals, would be also on another level. 3° This table shows that there are repetitions in the records (especially of shepherd’s names and toponyms), but the documents reflect different stages both of animal management and administrative information processing, so that the situation is probably much more complicated than it seems at first sight. Moreover, since the tablets bear no chronological indication, it is impossible to prove any kind of time difference between the records (difference which would be necessary if we suppose that the double recording corresponds to two successive series of operations on the flocks).

III. Questions and problems

• **A few Knossian sheep tablets are looking almost identical: two tablets about one flock?** This seems to be the case for Da 1134 and 1135.

Da 1134 (117)

.a u-ta-jo []
.b ke-to , / *56-ko-we OVIS^m100[]

Da 1135 + 7182 (117)

.A u-ta-jo-jo OVIS^m 100
.B ke-to , / *56-ko-we ,

Both tablets are identical, and it seems not very plausible that the broken part on the right side of 1134 would make a difference, if one considers the format of the document and the disposition of the information. This maybe also the case of the two next documents, De 1361 and 1371:

De 1361 + 8240 (117)

.A te-]ra-po-si-jo , OVIS^m 80 OVIS^f 8
.B]d̄q-w̄q̄ o OVIS^m 12

De 1371 + 1480 + 7115 + 8741 (117)

.A te-ra-po-si-jo , OVIS^m 80 OVIS^f 8
.B o-to-ro-qa , / da-wo o OVIS^m 12

The question, that cannot be answered with certainty, is to know if they are related to the same flock or not. The identical toponym, “collector’s” name, and the exact coincidence of the numbers in each sheep category registered is quite striking. The broken shepherd’s name on De 1361 does not allow us to draw more conclusions.⁵¹

• **Does a place name correspond to an administrative centre managing the flock, or to a grazing place?**

The hypothesis of a grazing place does not seem very plausible for a number of toponyms, since flocks are usually not kept in settlement areas, and some of the toponyms are also attested with craft activities, etc. The toponyms may indicate administrative connection, or perhaps a place where the plucking of the wool took place. It should be remembered here that our ignorance of many practical details in the managing of Mycenaean flocks is great: we have no idea about the guiding system of the animals, though it seems plausible, both on the basis of ethnological comparisons⁵² and historical studies,⁵³ that the shepherds used, as guides, animals of the same species as those of the flocks (sheep or goats). They may have used dogs, and these animals would not necessarily be registered by the palace (belonging to the shepherds?), but the shepherd’s dog as a guide, and not only as a big animal supposed to protect the sheep from the predators, is a very recent phenomenon in Europe, as shown by the study of De Planhol 1969. As a consequence, if Mycenaean shepherds did use dogs, this was probably not as guides. We also have very little information about the movements of the flocks (transhumance), which were not very likely to be kept all the time at the same place, especially if the place in question was also a settlement area, like *pa-i-to* (Phaistos) for example. The idea of the place names representing administrative location or a shearing place seems more plausible, in my

opinion. The only cases where we have an indication of movement for animals is on the nodules, with toponyms in the allative form.⁵⁴ In each case it is a nodule and a single animal is concerned. We have no such indication for whole flocks which would be moving towards summer pastures. This does not mean of course that there was no such organisation in the Mycenaean period, but only that, for some reason, the palace did not register this, or the documents are lost to us.

• How can we interpret the recurrence of identical shepherd names?

It seems plausible that we do have, in our records, individual shepherds appearing many times. This fact could reflect different situations (not exclusive): shepherds taking in charge more than one flock; shepherds registered with their flock for the past season, and with a new allocation, or the tablets registering first the allocation at the beginning of the season, and then the state of the flock after the season, may be preserved in some cases. But the possibility of homonyms or homographs cannot be entirely ruled out.⁵⁶

Conclusion

Despite the number of documents in LB and of detailed studies devoted to the topic, we are far from understanding all the details of the administration and organization of sheep rearing in the Mycenaean period. The Pylian and the Knossian data seem at first sight quite different; this may be due to the fact that they represent different stages of the recording and managing process. There are some striking similarities (presence of “collector’s”, with the same kind of problems and the same characteristics), but there are also significant discrepancies which could be due to the chronological difference between the two archives (if we date the bulk of the Knossian texts circa 1375, to take a “medium” chronology, and the Pylian ones ca. 1200). To build an interpretation of the fragmentary data still available to us, we must try to find some help in ethnological studies, or in *corpora* from the — more or less — contemporary Near East. These *comparanda* are to be taken into account with great care, since they are only able to enlight some characteristics of our texts, never to prove or to ascertain a theory that would not be based on the Mycenaean data. The picture of the relations between men — administrators, shepherds, collectors — and animals, in this general framework, is that of an organization of which only small parts emerge in our tablets.

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* The paper by H. Landenius Enegren, in the same volume, deals with the same kind of subject, but focuses more on a different species (bovid). On the prosopographical issues concerning shepherds, see also Landenius-Enegren (PhD). I thank her for reading a provisional draft of this paper and discussing in depth the topics dealt with here. My thanks also go to M. Del Frio and M.-L. Nosch for reading and criticizing earlier drafts. I would of course be responsible for any remaining error or omission.

¹ In the new Thebes tablets, a single text, Uo 121, registers one sheep, in a list of commodities (*153, wine, a goat, and *190), probably intended for consumption. The case is entirely different from the sheep register referring to the wool production or lambing targets.

TH Uo 121 (-)

.a *153 1 VIN S 1[
.b OVIS 1 CAP 1 *190[

Among the recent changes in the sheep and wool tablets, see the new classification proposed by M.-L. Nosch.

² Killen 1964, 1-15.

³ Detailed bibliographical references in Killen 1985, 241-305.

⁴ Rougemont forthcoming 2 ; Killen 1993.

⁵ Killen 1968, 636-643. Killen 1994, 67-84. Killen 1996, 71-82. On the sacrifices see also Isaakidou *et alii* 2002.

⁶ On the Knossos texts: Killen 1964a and Killen 1964b ; Godart 1972 ; Olivier 1988 ; Nosch 2000 ; Halstead 1996-1997, Halstead 1999. Rougemont forthcoming, 2. On the Pylos texts : Godart 1975. General studies: Godart 1971, Killen 1993, Godart 1992, Halstead 1981, Halstead 1994, Halstead 1996, Halstead 1998-1999, Halstead 2001. Rougemont 2003. This short bibliography is of course not entirely exhaustive.

⁷ The Linear B tablets never bear the year’s indications, but we know at least 7 month’s names, mainly from offering lists, see Melena 1974, 77-102 ; Trümpy 1989, 191-234, and Rougemont forthcoming 3, with a table of the different month’s names known in the LB documents.

⁸ About the issue of the “collectors”, see *Documents* 1, 200 ff ; Bennet 1992, 65-101 ; Carlier 1992, 159-166 ; Driessen 1992, 197-214 ; Godart 1992, 257-283. Killen 1995, 213-224 ; Killen 1976, 117-125. Rougemont 2001, 129-138 ; Rougemont forthcoming, 1 ; Rougemont forthcoming, 2.

⁹ Olivier 1988.

¹⁰ Somewhere else, on Am 821, there is a mention of a “*i-je-re-u po-me*”, who could be a “Priest-Shepherd”, a priest called Shepherd or a shepherd called Priest, which does not help to solve our problem.

¹¹ Morrison 1981, 258 : Lú^{SIPA}, “shepherd”, Lú^{SIPA}, UDU^{Mes}, “shepherd for sheep” (?), Lú^{SIPA}.GU^{Meš}, “oxherd”, LU^{LU}, kuzallu, “chief shepherd”, etc.

¹² Morrison 1981, 260. There are two other Mycenaean words in relation with the care given animals (this time, oxen) : *qo-u-ko-ro* (TI Ef 2, PY Nn 831.5; PY An 18.9.PY An 830.10.11.12.13 ; PY An 852.1. PY Ea 781), interpreted as *γ^Wουκόλος, βουκόλος, “herdsman”. For this word, the high number of attestations brought to the idea of a more general meaning, like “shepherd” or “peasant”. And *qo-qo-ta-o* (PY Ea 270 ; Ea 350.a ; Ea 757.a ; Ea 802.a) interpreted as *γ^Wο(υ)γ^Wotas, cf. βουβότας. The existence of the two terms *qo-u-ko-ro* and *qo-qo-ta-o* brings questions about the precise meaning of both, and the link between *qo-qo-ta-o* and the land tenures suggests an interpretation as persons taking care of the oxen and their fodder. However *qo-u-ko-ro* is also attested in contexts related to land tenures. For detailed bibliography, see *Dic. Mic. s. v. qo-u-ko-ro* and *qo-qo-ta*. The existence of the two terms suggests some kind of specialisation and is not in itself surprising. Godart & alii (1975) suggest the possibility of

a hierarchical difference between the two terms, see esp. 47-49 for detailed arguments. On these terms, see also Landenius-Enegren, in the same volume.

¹³ Morrison 1981, 260-261 : "Consignment texts and *muddū* documents indicate that the herdsmen contracted with livestock owners to care for the flocks and herds and to repay any deficits that occurred. Furthermore, at least one herdsman contracted with another to pasture his livestock [HSS 9 31]".

¹⁴ There is no room here for an exhaustive bibliography on the debated issue of the "collector's". See Rougemont forthcoming, 1 and 2 with detailed references.

¹⁵ Rougemont, forthcoming 2.

¹⁶ Another technical term in the same field is *qe-te-o*, verbal adjective meaning "to be paid" (in our texts, by the palace). Lejeune 1964, 77-109.

¹⁷ Halstead 1999.

¹⁸ Rougemont forthcoming 2, with detailed argumentation and tables.

¹⁹ Targets for wool production in flocks with ewes and lambs: LANA 1 : 10 animals. See Killen 1964a, 11. To be compared with the usual target for wool flocks: LANA 1 = 4 whethers. For the lambing targets, see the information provided in Rougemont forthcoming 2, especially in the tables.

²⁰ See J.-P. Olivier, "KN : Da-Dg", in J.-P. Olivier & Th. G. Palaima (eds), *Studies in Mycenaean Epigraphy and Economy offered to Emmett L. Bennett, Jr., Suplementos a Minos* 10, Salamanca, 1988, 219-267.

²¹ It should be remembered here that "shearing" is often used for the Mycenaean period but that the wool was in fact plucked. The quantities obtained, according to the specialists, do not vary much between shearing and plucking.

²² By the means of adjuncts, or endograms like TELA+PU or TELA+TE for the textiles, *ki* OVIS^m for the lambs, *ku* LANA (on the Theban Of tablets) ; or by the means of words added before the ideograms, like *pa-ra-jo* (old) for the sheep.

²³ Lambs cannot be shorn at an early age, because of the stress provoked by the cold.

²⁴ The Dk tablets are now to be reconsidered with the addition of the new documents for which M.-L. Nosch has suggested a new classification.

²⁵ Olivier 1969, 88 ff.

²⁶ The basic study on the formatting and organisation of these Pylos sheep tablets see also the article by Godart 1975, 405-415, esp. 411.

²⁷ On the page shaped tablets we often find sequences of flocks registered with the same place name, though it is not a systematic case.

²⁸ Cf. *supra*.

²⁹ Lejeune 1964.

³⁰ The complete word is attested on KN Ws 1703 b.; on PY Cn 41.1, we have the formula *a-si-ja-ti-ja ta-to-mo o-pe-ro*, where *a-si-ja-ti-ja* is a place name, *ta-to-mo* for */stathmos/*, "stable", and *o-pe-ro*, */ophelos/*, "debt". See also Cn 595, and Vn 46.11.

³¹ On the problem of the organization and hierarchy of responsibilities in the Mycenaean palatial economies, see Rougemont 2003.

³² KN C(1)901 + 7661 + 8049 (107)
e-wo-ta-de BOS^f20 ta BOS 1

³³ On this subject, see Palaima 1992, 470-471.

³⁴ Killen 1993.

³⁵ The random preservation of the tablets in the destruction by fire of the palace being another hypothesis, that can never be entirely ruled out. But in the case of sheep rearing, which is quite well documented both at Pylos and Knossos, we can be more confident and believe that the extant tablets are representative of what existed in the palace just before the destruction.

³⁶ I will not discuss here the debated issue of the dating of the archives at Knossos. It is clear that the differences stated above between the two "sheep archives" become more striking if the low date is admitted for the Knossian corpus. In the case of a higher or middle chronology, the time factor could also be invoked as an explanation for some differences in the processing of the information.

³⁷ On wool and textile production in general, see Nosch & Rougemont forthcoming.

³⁸ On the textile production at Pylos, see Killen 1984, Nosch 2001.

³⁹ Rougemont 2000, 275.

⁴⁰ One document should be added to this list, KN D 411. On this tablet, see Nosch 2000, 214-215, with the hypothesis of a localisation at *e-ko-so*, for contextual reasons.

D 411 + 511 OVIS^f 60 WE 30 (-)
di-ko-to / e-ma-a2-o

⁴¹ The most attested shepherd's name is *wi-na-jo*.

⁴² *a-ko-mo-ni-jo*, *ate-i-ja-ta*, *da-to-ro*, *]de-a-ta*, *ka-da-no*, *ke-to*, *ku-ta-si-jo*, *pa-ja-so*, *qa-si-da-ro*, *u-ra-jo* (4 documents, twice the same place name), and *wo-wo*.

⁴³ *a-ko-mo-ni-jo*, *a-te-i-ja-ta*, *da-to-ro*, *i-ke-se-ra*, *ka-da-no*, *ka-mi-ni-to*, *ka-ta-wo*, *ti-mi-za*, *wo-wo*, *]a-ra-ro*.

⁴⁴ Killen 1964, Killen 1969, Killen 1993 ; see also Godart 1977 and 1992.

⁴⁵ See especially Killen 1964, 1969 and 1993.

⁴⁶ On this point, see also Rougemont 2003.

⁴⁷ *Documents* 1, 200. They suggested, because of the meaning of this word, in relation with *ἀγείρω*, "to gather", that these individuals were collecting taxes in kind for the palatial administration. The hypothesis has been abandoned since, but the designation "collector" is still used, no better word being generally accepted by the Linear B scholars. For a review of other interpretations and recent discussions, see Rougemont forthcoming 1.

⁴⁸ For detailed explanations, see Rougemont forthcoming 1.

⁴⁹ See Godart 1992, Bennet 1992.

⁵⁰ I have discussed this question in details in Rougemont (PhD).

⁵¹ For a detailed study of these two tablets, with all the prosopographical comparisons, see Rougemont 2000, 275 ff.

⁵² Ravis Giordani 1983; D'Hont 1994.

⁵³ De Planhol 1969.

⁵⁴ For instance 1 ewe on TH Wu 65.a, with on the side b. the indication *te-qa-de*, "to Thebes", and on the third side of the sealing, the indication *qe-te-a2*. Or for a she-goat, inscribed as an ideogram on TH Wu 93.a, with the indication *a2-pa-a2-de* on the side .b, and nothing on the third side of the nodule. A SUS^f, also on a Thebes nodule, Wu 96.a, with the toponyme *te-qa-de* on the second site, and again *qe-te-a2* on the third. This list is not exhaustive.

⁵⁵ On this subject, see also Landenius-Enegren in this volume.

⁵⁶ For the prosopographical issues, see Lindgren 1973, Landenius-Enegren (PhD) and Landenius-Enegren 1999.

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