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WORK AND WAGES IN THE CODE OF HAMMURABI

ANNUNZIATA ROSITANI

Abstract

This article presents a comparative analysis of wage specifications for different types of worker in the Code of Hammurabi (1772-1750 BC) and in administrative documents. The analysis focuses primarily on the paragraphs of the Code that relate to different occupations or professions and their respective wages (especially paragraphs 215-277), without neglecting the information to be found in other paragraphs of the Code. Different aspects of Mesopotamian economic organization during the Old Babylonian period -especially agriculture and livestock farming- are investigated on the basis of data from both the Code and the economic documents, with special reference to the wages of different kinds of worker: agricultural labourers, shepherds, hired labourers, gardeners, artisans, weavers, builders, boatmen (and other workers), and finally doctors and veterinarians who were paid on the basis of the difficulty of the treatment and the category of patient. In the conclusions the author provides a reconstruction of the economic landscape of the Old Babylonian period.

Introduction

The structure, wording, and organization of the Code of Hammurabi, both from a general and a more detailed point of view, have been at the centre of many important studies. Here, my aim is not to dwell on general considerations of the nature of the Code, on its formation, on its use in the time of Hammurabi and of his successors; instead, I intend to concentrate on analysing in detail some of the paragraphs dealing with different professions or occupations and their corresponding wages, making comparisons wherever possible with other economic documents and collections of laws from the same period.

Not only is the Code the longest known collection of laws from Mesopotamia, it is also the most complete and the only one to have reached us in monumental shape¹. The Code was inscribed on an imposing stela of black stone discovered at Susa and now on display in the Louvre Museum. The stela was probably originally located at Sippar in the temple of Šamaš, and other monumental stelae of the Code were almost certainly to be found in all the principal

1 See BOTTÉRO 1982; CHARPIN 2010, pp. 71-82; ROTH 1995, pp. 71-142; SAPORETTI 1998, pp. 47-61, 159-211.

temples of the Babylonian kingdom². The Code consists of a prologue, at least 275 “laws”, and an epilogue. However, given that part of the bottom of the stela has been obliterated, it is impossible to ascertain how many lines have been lost. Nevertheless, we can suppose that there were between 275 and 300 “laws”, with most scholars typically estimating 282 sections or paragraphs³.

Without dwelling further on the more general aspects of the Code, it is enough to remember here that several studies exist on the functions of the Code, its formation, composition, and the ways in which it was used during the last years of Hammurabi’s reign⁴ as well as after his death. Primarily, it is a generalised and anonymous formulation of laws based on the King’s judicial activities⁵, but at the same time it can be seen as a commemorative inscription for all posterity, showing Hammurabi to be a good and wise king to his people, respectful of the deities, and his *dīn mātim* “judgments of the land” and *purussē mātim* “verdicts of the land”, as inscribed on his stela, as *awāt mīšarim*, “pronouncements of justice”, which, as we can read in the Epilogue, he exhorts the future kings of Babylon to uphold.

The overall structure of the Code is difficult to understand, as is the organization of the subjects covered in the different paragraphs. Single paragraphs or groups of laws are often placed in other sections which, in turn, leads to digressions and the association of ideas that have nothing to do with the subjects either immediately preceding or following the paragraph⁶.

Here the focus is not only on those paragraphs relating to different occupations and/or professions and their respective wages, especially paragraphs 215-277⁷, but also on information that can be found elsewhere in the Code, since the topic of work and wages is cross-referenced in other “sections”.

1. The primary sector: agriculture and livestock farming

1. 1. Hiring labourers and animals for agriculture

This analysis focuses primarily on agriculture and livestock farming, the cornerstones of the Mesopotamian economy⁸, both for food production (including barley, milk, butter,

2 See CHARPIN 2010, p. 71.

3 See CHARPIN 2010, p. 72 (who suggests “about 275 laws”); ROTH 1995, p. 71 (“between 275 and 300 law provisions”, see also pp. 71-76); SAPORETTI 1998, p. 54 (282 “articoli”).

4 In fact, it should be remembered here that the Code can be dated to the last years of the reign of Hammurabi (1792-1750 BC according to the middle chronology) in about 1755 BC.

5 See CHARPIN 2010, pp. 72-77.

6 Nevertheless, it is possible to present here an overview of the 282 paragraphs (according to ROTH 1995, 71-142), divided on the basis of the subjects covered: paragraphs 1-5, administration of justice (false testimony); paragraphs 6-14, theft; paragraphs 15-20, laws regarding slaves; paragraphs 21-25, theft; paragraphs 26-41, laws regarding *rēdūm*- and *bā’irum*-soldiers, state tenants (*nāši biltim*), captains and sergeants (*haṭṭātum* and *laputtūm*); paragraphs 42-65 up to fragment H: renting agricultural land and agricultural issues; paragraphs L-126, silver; paragraphs 127-194, family law; paragraphs 195-214, beatings and injuries; paragraphs 215-277, laws regarding work and wages; paragraphs 278-282, slaves.

7 According to the organization of the “laws” in ROTH 1995, pp. 71-142.

8 I have also had the chance to study unpublished administrative documents relating to both production sectors. With respect to agriculture, I was directly involved with the publication and comparative study of contracts, lists

cheese, dates and meat) and as a source of raw materials for manufacture, such as weaving, to which they contributed cotton, linen, and more particularly wool⁹. Livestock farming and agriculture are therefore closely linked: in general in the Old Babylonian economic system, and more specifically in the Code of Hammurabi, which often connects the laws regarding these two types of farming. The relationship between the two sectors is also evident in the succession of paragraphs 257-258, in which the annual wages for an agricultural labourer and an ox driver are established:

Šumma awīlum ikkaram īgur 8 kur šeʿam ina šattim ištīat inaddiššum (paragraph 257)¹⁰.

An identical wage of 8 gur of barley per year, is also paid to shepherds (see below), which corresponds to 2 400 sila of barley a year. Therefore, if we consider that a year was made up of 12 30-day months, excluding any intercalary months, the wages amount to 200 sila per month, or 6.66 sila of barley per day. In the subsequent paragraph, we read:

Šumma awīlum kullizam īgur 6 kur šeʿam ina šattim ištīat inaddiššum (paragraph 258)¹¹

which, as will be seen further on, is identical to the sum paid for the hire of a boatman. If we use the previous calculation, this amounts to 150 sila of barley per month (i.e. ½ gur), or 5 sila per day. An ox driver was ostensibly hired to work in the fields, and his wages would certainly not have been very high, especially if we consider that hiring an ox for this type of work meant paying the owner 4 gur of barley per year:

Šumma awīlum ana šattim ištīat īgur idī alpim ša warka 4 kur šeʿam idī alpim ša qabla 3 kur šeʿam ana bēlīšu inaddin (paragraphs 242/243)¹².

Again, this refers to oxen hired to work in the fields, probably for ploughing since threshing is treated separately¹³.

Paragraphs 253-256 of the Code are of great interest as they deal with the sanctions meted out for the misconduct of a man hired by another to oversee his field, including the farm buildings and oxen. This is a more complex working situation than that of a simple ox driver or agricultural labourer, as the hired man is not only responsible for the field, but also the

receipts and dockets related to harvesting, in particular the hiring of harvesters and the organization of agricultural work, see ROSITANI 2008, ROSITANI 2011, ROSITANI 2012, ROSITANI 2017. As far as livestock farming is concerned, I am continuing my study of dockets or tags which register the assignment of sheep and goats to a single shepherd. See ROSITANI 2014, and ROSITANI 2015.

9 See STOL 1993; STOL 1995; VAN DE MIEROOP 2002.

10 “If a man hires an agricultural labourer (*ikkarum*), he shall give him 8 gur (=2 400 sila) of barley per year”. See ROTH 1995, p. 129, XLIV 101-XLV 4.

11 “If a man hires an ox driver (*kullizum*), he shall give him 6 gur (=1 800 sila) of barley per year”. See ROTH 1995, p. 129, XLV 5-9.

12 “If a man rents it (an ox) for one year, he shall give to its owner 4 gur (=1 200 sila) of barley as the hire of an ox for the rear (of the team), and 3 gur (=900 sila) of barley as the hire of an ox for the middle (of the team)”. See ROTH 1995, p. 127, XLIII 85-91.

13 Paragraphs 268-270; see below, note 34.

means for working it. This case probably refers to a share-cropper or tenant farmer, for whom the Code does not indicate any sort of wage, but only the sanctions to be incurred for the theft of seed¹⁴ and, more specifically, in paragraph 255, for any damage to crops caused by the hiring out of oxen, which were vitally important for most agricultural work. In this case, the share-cropper would have to pay 60 gur of barley per b̄ur of land for the damage caused, which amounts to 18 000 sila of barley per 6.48 hectares of land¹⁵. This group of paragraphs clearly shows the close relationship between animals and agriculture, in particular the use of oxen either for ploughing or threshing, and donkeys and sheep for threshing¹⁶.

1. 2. Livestock farming in the Code of Hammurabi

For Mesopotamian society, livestock farming was not only an important means for supplying draft animals, but was also a fundamental economic activity for the production of food, and more specifically, wool, essential for the manufacture of textiles, both for internal needs, and particularly for exportation. The important economic role of livestock farming is evident from the Code, which carefully regulates both the hiring of herdsmen as well as the various problems relating to livestock farming, in particular the responsibility of the herdsman towards the owner of the livestock and for any damage caused by the animals in his care. Paragraph 261 specifically shows the terms for the annual hire of a herdsman, which is fixed at 8 gur of barley:

Šumma awīlum nāqidam ana liātīm u šēnim re’īm īgur 8 kur še’am ina šattim ištiat inaddiššum
(paragraph 261)¹⁷

that is, 2 400 sila per year, which is the same amount seen in paragraph 257 for the annual hire of an agricultural worker (we will return to these figures further on). It should also be noted that no distinction is made between cattle herdsmen and shepherds, despite the fact that these two forms of farming are completely different, the former being sedentary and the latter, semi-nomadic. In both cases, the wages are 8 gur of barley per year, or 200 sila a month, excluding any intercalary months, or 6.66 sila a day, which is the same amount paid to for agricultural workers.

1. 3. Livestock farming in economic documents from the Old Babylonian period

Shepherds’ wages as set out in the Code can be compared to data obtained from administrative documents of the Old Babylonian period. In fact, some of the contracts for the hiring of shepherds also contain indications as to their terms of employment, as in the text SIGRIST 2003, No. 154 (25.VI.Samsuiluna ?), where the annual remuneration for shepherds is only

14 The theft of seed or animal feed was dealt with using physical punishment (paragraph 253: “they shall cut off his hand”), while the removal of barley from the storehouse was punished by claiming financial recompense (paragraph 254: “he shall replace twofold the barley which he received”). See ROTH 1995, p. 128.

15 A b̄ur of land corresponds to 18 iku, or 6.48 hectares, equal to 64 800 m². Thus the sanction is for 1 000 sila of barley per iku of land.

16 See below note 34.

17 “If a man hires a herdsman to herd the cattle and the sheep and goats, he shall give him 8 gur of barley per year”. See ROTH 1995, p. 129, XLV 21-27.

2 gur of barley. Sometimes, a share of the product, in other words wool¹⁸, was added to the wages paid in barley: in the contract SIGRIST 2003, No. 177 (not dated) “Nidnuša entrusted to the shepherd Adad-bēl-ilī” 159 sheep and goats (male and female)¹⁹, of which “41 ewes and sheep [belonged] to Bēliatum and Ibni-Šamaš”. In the contract we read:

“His (the shepherd’s) wages are 6 kors (i.e. gur) of barley, 5 minas of wool for his clothing” (*Rev. 6-7*)

This shows that the wages of less than the 8 gur of barley indicated in the Hammurabi Code, are partially counterbalanced by the 5 minas of wool. The value of wool, which was calculated in silver, changed during the Old Babylonian period. In the period of Ammiditana and Ammišaduqa it fluctuated between 5 or 6 minas of wool per shekel of silver. In fact, while some texts, for example KLENGEL, KLENGEL, BRANDT 2002, No. 70, indicate the value of 5 minas of wool for 1 shekel of silver: *ki.lam 5 ma.na ana 1 gín*, in other Old Babylonian texts it was calculated as 6 minas of wool per shekel of silver, as shown in PINCHES 1899, No. 11c. The latter was the value of wool during the last years of the reign of Ammiditana (1683-1647 BC), from the 26th year of his reign (1657 BC), and during the reign of his successor, Ammišaduqa (1646-1626 BC)²⁰, and the same value of 6 minas of wool per shekel of silver is also found in the Laws of Ešnunna A i 12: “6 *mana šipātum ana 1 šiqil kaspim*”.

In VAN LERBERGHE, VOET 2009, No. 41 (3rd.I.Ammišaduqa 7) “Enlil-mansum entrusted 28 ewes, rams and goats” to Bēlšunu, who will receive as his wages only 2 gur, 2 nigida and 2 bán²¹ of barley equivalent to 600+120+20 sila, i.e. 740 sila of barley (*Obv. 15-16*). There is no indication of how long the employment would last, the text states only that the animals are assigned to the shepherd “for herding” (*a-na re-ú-tim, Obv. 10*). We can suppose that the employment was annual, even though the wages are much lower than those indicated in the Code.

In the following text VAN LERBERGHE, VOET 2009, No. 42 (6th.VIII.Ammišaduqa 8) the wages are calculated by the number of animals assigned. Iluni entrusted to Warad-Gula, the shepherd, 60 head of sheep and goats “for herding”. The latter:

“will receive 3 bán (= 30 sila) of barley per sheep as his wages” (*Rev. 16-17*)

for a total of 1 800 sila of barley, equivalent to 6 gur, as can also be seen in SIGRIST 2003, No. 177.

The same amount, 30 sila per head of sheep, is also indicated in VAN LERBERGHE, VOET 2009, No. 43 (2nd.V.Ammišaduqa 10), although the number of animals assigned to the shepherd is much higher: 104 sheep and goats, for a total remuneration of 10 gur and 120 sila. If we consider the same amount per sheep in text No. 41, where 28 head of sheep are assigned, the total would be 840 sila instead of the 740 shown in the text as the standard payment

18 See POSTGATE, PAYNE 1975; RYDER 1993.

19 For the terminology used to distinguish sheep see STEINKELLER 1995.

20 See CHARPIN 1982; DE GRAEF 2014; VAN DE MIEROOP 2002.

21 A nigida corresponds to 60 sila or litres, whereas a bán corresponds to 10 litres.

for a shepherd. Even though this way of calculating wages, in proportion to the number of livestock assigned, may seem more rational, it is not used in the Code. However, it is worth pointing out that these last texts are much more recent than the Hammurabi period²².

1. 4. The shepherd's responsibilities

The Code does not simply establish the amount to be paid to the shepherd, but also indicates some of his duties, and includes his liability to the livestock owner for any damage or loss to the flock or herd assigned to him. Paragraphs 262-266 deal with different cases, and establish any damages due to the livestock owner in each case. If the herdsman causes the loss of an ox or sheep assigned to him, he must pay a recompense to the owner, as set out in paragraph 263:

Šumma [alpam] ū lū [immeram] ša innadnušum uḫtalliḡ alpam kīma [alpim] immeram kīma [immerim] ana bēlī[šu] iriab²³.

Furthermore, if, after receiving full payment for the work he allows the number of oxen, sheep or goats, or the number of their offspring to decrease, then he will have to pay the owner for this and the subsequent loss of by-products, as stated in the contract (paragraph 264):

Šumma [rē'ūm] ša liātum ū lū šēnum ana rē'īm innadnušum idīšu gamrātīm maḫir libbāšu ṭāb liātīm ušṣaḫḫir šēnam ušṣaḫḫir tālittam umtaṭṭi ana pī rikṣātīšu tālittam u biltam inaddin²⁴.

If he steals livestock, changes the brand mark and sells them, the Code states that he must pay the owner 10 times the value of the animals stolen:

Šumma rē'ūm ša liātum ū lū šēnum ana rē'īm innadnušum usarrirma šimtam uttakir u ana kaspim ittadin ukannušuma adi 10-šu ša išriḡu liātīm u šēnam ana bēlīšunu iriab (paragraph 265)²⁵.

22 All three are dated during the first half of the reign of Ammišaduqa, who held power between 1646 and 1626 B.C, thus over 100 years later than the supposed date of the composition of the Code of Hammurabi (1755 BC, as we have seen above).

23 “If he [the herdsman] should cause the loss of the ox or sheep which were given to him, he shall replace the ox with an ox of comparable value or the sheep with a sheep of comparable value for its owner”, while paragraph 262 is incomplete: *šumma awīlum alpam ū lū immeram ana [nāqidim ...]*, “If a man [gives] an ox or a sheep to a [herdsman ...]”. See ROTH 1995, p. 129, XLV 28-42.

24 “If a shepherd, to whom cattle or sheep and goats were given for shepherding, is in receipt of his complete hire to his satisfaction, then allows the number of cattle to decrease, or the number of sheep and goats to decrease, or the number of offspring to diminish, he shall give for the [loss of] offspring and by-products in accordance with the terms of his contract”. See ROTH 1995, pp. 129-130, XLV 44-60.

25 “If a shepherd, to whom cattle or sheep and goats were given for shepherding, acts criminally and alters the brand and sells them, they shall charge and convict him and he shall replace for their owner cattle or sheep and goats tenfold that which he stole”. See ROTH 1995, p. 130, XLV 61-75. Compensation calculated at 10 times the value of what is taken is also found in the Laws of Ešnunna which in par. 9 states: *awīlum 1 šiqil kaspam ana ešēdim ana agrim* (lú. hun.gá) *[id/li]dinma šumma rēssu lā ukīlma [e]šēdam ešēdam lā ēšissum 10 šiqil kaspam išaqqal* (A i 30-33), see ROTH 1995, p. 60 and YARON 1988, pp. 24-25. The latter prefers the reconstruction *[li]-di-in-ma* “Should a man give 1 shekel silver for harvesting to?/for? a hired man – if he (the worker) was not ready for him, and did not *at all* harvest for him the harvesting – he shall weigh out 10 shekels of silver”. On the other hand, ROTH 1995, p. 60 with n. 3, suggests the reconstruction *[id]-di-in-ma*, in accordance with GOETZE 1956, p. 9:30-32 (also accepted in CAD E, p. 339, s.v. *ešēdu*: “A man gave 1 shekel of silver to a workman for harvesting – if he (the workman) does not keep himself available to

If the shepherd is guilty of negligence and allows disease to spread through the flock, then he must compensate the owner for the loss, payable in oxen or sheep and goats:

Šumma rē'um īgūma ina tarbašim pišsatam uštabši rē'um hiīt pišsatim ša ina tarbašim ušabšū liātīm u šēnam ušallamma ana bēlišunu inaddin (paragraph 267)²⁶.

However, if an epidemic or a lion get into the enclosure, but the shepherd clarifies his position before the god, then he is not considered responsible, and the responsibility falls on the owner of the enclosure:

Šumma ina tarbašim lipit ilim ittabši ū lū nēšum iddūk rē'um maḥar ilim ubbamma miqitti tarbašim bēl tarbašim imahḥaršū (paragraph 266)²⁷.

The difference between the two situations lies in the fact that since the animals are protected in an enclosure, we can assume that the shepherd is taking good care of the flock entrusted to him, that he is not guilty of negligence, but simply the victim of an unfortunate and unpredictable event. His good faith must therefore be clarified before the gods, especially since the literal translation is not “epidemic” but “a plague (or touch) of the god”²⁸.

Shepherds were also responsible for any damage caused by the flock in their care, for example if they carelessly allowed them to graze in a field without the permission of the owner. This responsibility is regulated in paragraphs 57 and 58 of the Code, which respectively accord compensation of 20 gur per bür of land, corresponding to 6 000 sila of barley per 6.48 hectares, and 60 gur of barley per bür of land, corresponding to 18 000 sila of barley per 6.48 hectares, therefore 1 000 sila of barley per 1 iku of land²⁹.

1. 5. *The shepherd's responsibilities in Old Babylonian economic documents*

In some contracts the shepherd's responsibilities are stated explicitly, particularly their

work and does not harvest for him, he shall weigh and deliver 10 shekels of silver”.

26 “If the shepherd is negligent and allows mange(?) to spread in the enclosure, the shepherd shall make restitution – in cattle or in sheep and goats – for the damage caused by the mange(?) which he allowed to spread in the enclosure, and give it to their owner”. See ROTH 1995, p. 130, XLV 82-89.

27 “If, in the enclosure, an epidemic should break out or a lion make a kill, the shepherd shall clear himself before the god, and the owner of the enclosure shall accept responsibility for him for the loss sustained in the enclosure”. See ROTH 1995, p. 130, XLV 76-81.

28 ROTH 1995, p. 142, n. 46.

29 A bür of field is equivalent to 18 iku, i.e. 6.48 hectares, or rather 64 800 m² where 1 hectare is equivalent to 10000 m², whereas 1 iku of field is equal to 3 600 m². Paragraphs 57-58 read as follows:

“If a shepherd does not make an agreement with the owner of the field to graze sheep and goats, and without the permission of the owner of the field grazes sheep and goats on the field, the owner of the field shall harvest his field and the shepherd who grazed sheep and goats on the field without the permission of the owner of the field shall give in addition 20 gur (= 6 000 sila) of barley per 1 bür (of field) to the owner of the field” (paragraph 57);

“If, after the sheep and goats come up from the common irrigated area when the pennants announcing the termination of pasturing are wound around the main city-gate, the shepherd releases the sheep and goats into a field and allows the sheep and goats to graze in the field – the shepherd shall guard the field in which he allowed them to graze and at the harvest he shall measure and deliver to the owner of the field 60 gur (=18 000 sila) of barley per 1 bür (of field)” (paragraph 58).

duty to return the flock in good condition, such as those analysed by VAN LERBERGHE, VOET 2009, No. 42: *Rev. 18-19*, where we can read:

“He (the shepherd) will bring the cattle in good condition to the plucking gate (*ana ká buqūmi*)”³⁰

and No. 43: *Rev. 19-20*:

“He (the shepherd) will bring the cattle in good condition for the plucking (*ana buqūmi*)”³¹

In the case of disease or loss the responsibilities are indicated, for example, in SIGRIST 1990, No. 92: *Rev. 14-16* (XII.Abī-ešuh 18) where it is stated:

“He (the shepherd) will be responsible for loss and for the *pissatum* disease (*ana ḥaliqtim ù pissatim izzaz*)”³².

An analogous situation can be found in the above-mentioned VAN LERBERGHE, VOET 2009, No. 41: *Obv. 12-14* where we can read:

“He (the shepherd) will be responsible for loss and for the *pissatum* disease”³³ (*ana piḥat ḥaliqtim u passatim izzaz*).

Elsewhere, we can find indications for more general responsibilities, as in SIGRIST 2003, No. 177: *Obv. 13-14* (not dated):

“He (the shepherd) will assume his responsibilities, he will replace what he loses” (*ana piḥassu izzaz ḥaliqtam iriab*).

1.6. Hiring an ox driver

After a series of paragraphs dealing with the various responsibilities of shepherds, paragraphs 268-270 of the Code deal with the hiring of animals for threshing, once again demonstrating the close relationship between agriculture and livestock farming for the Mesopotamian economy. The amount to be paid for the hire of an ox, a donkey or a goat for threshing is established in paragraphs 268, 269 and 270 as 20 sila of barley per day for an ox, 10 for a donkey, and 1 for a goat³⁴.

30 LERBERGHE, VOET 2009, pp. 92-93, No. 42: ¹⁸u₈.udu^{hi.a} ša-al-ma-tim a-na ká bu-qú-mi / ¹⁹ú-ub-ba-lam.

31 LERBERGHE, VOET 2009, pp. 94-95, No. 43: ¹⁹u₈.udu^{hi.a} ša-al-ma-tim / ²⁰a-na bu-qú-mi ub-ba-lam. Regarding the location of the plucking gate or the place where the herd had to be brought for the plucking see CHARPIN 1982, pp. 27-30; DE GRAEF 2014, p. 203, with nn. 4-7; VAN DE MIEROOP 2002, p. 165. For an overview of this matter see ROSITANI 2015, p. 6.

32 See CAD P, pp. 425-426, s.v. *pissatu* A: “(*passatum*) s.; (a cattle disease); OB. [...] Possibly to be connected with *pessû* and indicating an affliction such as “staggers,” although a contagious disease (e.g. mange) is more likely”. SIGRIST 1990, 128 translates “damage caused by mange”.

33 See previous note.

34 Paragraphs 268-270: “If a man rents an ox for threshing, 20 sila of barley is its hire” (paragraph 268); “If he

The Code then returns to the hire of workers, in particular ox drivers who were considered as one with the tools of their trade. In fact, paragraph 271 states:

*Šumma awīlum liātīm ereqqam u murteddīša īgur ina ūmim ištēn 3 parsikat (nigida) še'am inad-din*³⁵

If we compare this combined cost with that indicated in paragraph 268 for the hire of one ox (20 sila per day), and take into consideration the fact that a traditional draft team was made up of 4 oxen, we reach a total of 80 sila. Add to this the cost of hiring a wagon alone, which is established in paragraph 272 as costing 40 sila of barley per day³⁶, and it is possible to calculate the cost of the driver alone at 60 sila per day.

1.7. Hiring labourers by the day

Paragraph 273 is particularly significant, as it establishes the wages for a labourer *agrum*:

*Šumma awīlum agrum īgur ištu rēš šattim adi ḥamšim warḥim 6 uṭtet kaspam ina ūmim ištēn inad-din ištu šiššim warḥim adi taqtīt šattim 5 uṭtet kaspam ina ūmim ištēn inaddin*³⁷.

There are some important differences in the wages established by the Code for hired labourers (*agrum* = lú.hun.gá) on the one hand, and agricultural labourers (*ikkarum* = lú.engar) and shepherds (*rē'ūm* = sipa) on the other. As seen above, the Code states in paragraph 257: "If a man hires an agricultural labourer (*ikkarum*), he shall give him 8 gur (= 2 400 sila) of barley per year" and in paragraph 261: "If a man hires a herdsman to herd the cattle and the sheep and goats, he shall give him 8 gur (=2 400 sila) of barley per year". Indeed, while hired day labourers are paid in silver, agricultural labourers and shepherds are paid in barley, and while the latter are paid for one year, the former are paid for each day of work and their wages are lower in the second half of the year.

It should be remembered here that one še corresponds to about 1/20 of a gram, and that 180 še make up a shekel or gín, or about 8.3 grams, and also, that 1 gín (=180 še) of silver corresponds in value to 1 gur of barley. Therefore, if we make a comparison between wages paid in silver and those paid in barley we can see that the 8 gur of barley per year paid to agricultural labourers and shepherds corresponds to 8 shekels (gín) of silver per year, or 1 440 še, which would amount to 120 še per month (excluding intercalary months) and therefore to 4 še of silver per day. This is less than the 6 še (barleycorns) of silver a day paid to a labourer from the beginning of the year up to (the end of) the fifth month, and slightly less than the 5 še (barleycorns) of silver a day for the second half of the year, from the sixth month onwards.

rents a donkey for threshing, 10 sila of barley is its hire" (paragraph 269); "If he rents a goat for threshing, 1 sila of barley is its hire" (paragraph 270). See ROTH 1995, p. 130.

35 "If a man rents cattle, a wagon, and its driver, he shall give 3 *pānū* (= 180 sila) of barley per day". See ROTH 1995, p. 131, XLV 99-XLVI 2.

36 Paragraph 272: "If a man rents only the wagon, he shall give 40 sila of barley per day". See ROTH 1995, p. 131.

37 "If a man hires a labourer (*agrum* = lú.hun.gá), he shall give 6 barleycorns (*uṭtet* = še) of silver per day from the beginning of the year until (the end of) the fifth month, and 5 barleycorns of silver per day from the sixth month until the end of the year". See ROTH 1995, p. 131, XLVI 8-19.

Furthermore, 4 še of silver per day is equal to 6.66 sila of barley per day, a figure obtained by dividing 200 sila of barley per month by 30, derived from 2 400 sila a year (=8 gur). However, in order to make a comparison between annual wages paid in barley and daily wages paid in silver, we can see that the 6 še per day, established in paragraph 273 as the wages to be paid up to the end of the 5th month, correspond to 180 še per month, or 1 shekel, which is equivalent to 1 gur (=300 sila) of barley per month, while the 5 še (barleycorns) of silver per day paid for the rest of the year, would total 168 še of silver per month, which is equivalent to 280 sila of barley a month. Therefore, for one year's work the total paid would be 11 shekels and 96 še of silver, or 11 gur and 160 sila of barley.

To sum up, we can deduce from the Code that the wages paid to a hired labourer by the day are decidedly higher than those of an agricultural labourer or shepherd. In fact, the 6 še per day paid to the hired labourer correspond to 10 sila of barley a day, while the 5 še paid during the second half of the year equate to 8.33 sila of barley, while the 8 gur per year indicated as wages for the agricultural labourer and shepherd would equate to more or less 6.66 sila a day, if we consider that a year is made up of 12 months (without intercalary months) of 30 days each. The difference in wages is probably due to the fact that during the year there were periods when the agricultural labourer or shepherd had less work to do, while the *lú.hun.gá*-labourer was probably hired only for a limited number of days during the first or second half of the year, so that although employment was more uncertain it was better paid, while the annual employment of the shepherd and agricultural labourer was more secure, in that it lasted for a whole working year, but was consequently less well-paid. By necessity, the wages paid for irregular work also had to cover periods of inactivity.

1. 8. Hiring labourers by the day in Old Babylonian documents

The figures indicated in the Code or which can be calculated from it, can be compared to data from administrative documents pertaining to the Old Babylonian period, in particular those more or less contemporary to the reign of Hammurabi.

At this point, it is important to remember the important study carried out by FARBER³⁸ into workers and their wages during the Old Babylonian period. He analysed data from 73 texts³⁹ and reached the conclusion that wages were not fixed, but underwent considerable changes due to a series of variables, such as time, the availability of water etc., and other more predictable elements, such as the length of the job, the *status* of the workers, the type of work, and last, but no less important, the form of payment, or rather, whether they were paid in barley or silver. FARBER concluded that, during the period of Samsuiluna wages varied between 60 and 180 še (barleycorns) of silver a month, that during the reign of Abi-ešuh they were about 240 še, during Ammi-ditana's reign around 120 še, while in the period of Ammi-šaduqa wages were, on average, 180 še⁴⁰, which is equivalent to 1 shekel of silver. According to FARBER, therefore, it is the earliest period, the reign of Samsuiluna, Hammurabi's son and successor, who reigned between 1749 and 1712 BC, that shows the widest pay gap of between 60 and 180 še of silver per month. This figure is similar to the maximum wages indicated in the

38 See FARBER 1978, pp. 30-35, 38-40.

39 For a list of the texts studied see FARBER 1978, pp. 49-51.

40 See FARBER 1978, p. 32 Table 3.

Code, but is half the minimum value mentioned, which, as we have seen, ranges from between 120 and 180 še of silver per month. Obviously, it would be easy to suggest that the ruler's aim in declaring a higher minimum wage was for reasons of propaganda, both because higher workers' wages are generally a sign of the solidity and strength of a kingdom, as well as a sign that social equity is both desired and effectively supported.

Other points of comparison between the wages of agricultural workers and day labourers can be found in specific contracts, lists, and docketts. One such example is a contract for the hire of harvesters, ROSITANI 2011, No. 10 (BM 97566) dated to the 13th.VI.Hammurabi 39⁴¹:

(Obv. 1-6) 36 sila of barley (for) Šin-i-...; (36 sila of barley for) Iddin-Ea; (36 sila of barley for) Mār-eršetim; (36 sila of barley for) Warad-Šin; (36 sila of barley for) Ipiq-Bēlētum; (36 sila of barley for) Šamaš-muballit.

(Obv. 7-Lo.E. 9) 216 sila of barley (as) wage for 6 harvesters for 3 days.

(Lo.E. 10-Rev. 11) 144 (=24x6) sila (of barley) wage for 6 harvesters for 2 days.

(Rev. 12-13) 40 sila (of barley) wage for 2 harvesters of Ali-bānišu.

(Rev. 14-15) 40 sila (of barley) wage for 2 harvesters (of) Šumi-eršetim.

(Rev. 16-17) 60 sila of barley wage for 3 harvesters who will perform the service for Kār-Šamaš.

(Rev. 18-U.E. 20) (Total) 500 sila of barley⁴², which were given in the house of Ilšu-muballit

The first lines of the text (*Obv. 1-6*) show that each worker received 36 sila of barley, and in the lines that follow (*Obv. 7-Lo.E. 9*) we can see the total amount of wages paid were 216 (i.e. 36 x 6) sila of barley, paid to 6 harvesters for 3 days' work. This information about the time period and the type of work is fundamental, as it allows us to calculate the daily payment for each harvester at 12 sila of barley. The same amount can also be calculated from the data indicated in the lines that follow (*Lo.E. 10-Rev. 11*) where we can read that the wages for 2 days' work for 6 harvesters were 144 sila, or 24 sila x 6 harvesters x 2 days' work; here too, we can see that each harvester was paid 12 sila per day.

In the first six lines, the names of each worker and their respective wages are shown, and it is possible to calculate from the figures that follow that they were harvesters. The fact that 6 harvesters are mentioned coincides perfectly with data taken from other contracts in which groups of 6 harvesters are shown, for example in ROSITANI 2011, Nos. 13-14 (10th.XII.Ha 39), 15-16 (Ha 39), or in multiples of 6, as in ROSITANI 2011, Nos. 17-18 (22nd.XII.Ha 40) and 19 (22nd.X[?].Ha 41) which records 12 harvesters, and No. 22 (Ha[?]) which records 18 harvesters. There is an analogous situation in other docketts, for example in WEITEMEYER 1962, Nos. 108 (4th.I.?), 110 (3th.I.?), 111 (14th.I.?), in which groups of 6 harvesters are recorded, and also in ROSITANI 2011, Nos. 87 (29th.I.Ha 35) and 92 (4th.II.Ha 35); 12 harvesters are documented in ROSITANI 2011, No. 89 (29th.I.Ha 35) and perhaps also in 111 (4th.II.Si 3), while 24 harvesters are documented in VAN LERBERGHE 1989, No. 9 (28th.I.Si 7) in a note about the work of har-

41 *(U.E. 21-Le.E. 22)* 13th day, month VI. "The year: (Hammurabi, the king, by the mighty power which An and Enlil gave him, slaughtered) all the enemies (of the Subartu mountains)". For the complete year-name see HORSNELL 1999, pp. 159-160: mu *ha-am-mu-ra-pi* lugal.e usu kala.ga an ^den.lil mu.un.na.(an).sum.ma.ta kilib gú.dà.a.bi kur su.bir,^{ki}ke₄.ne sag.giš bí.in.ra.a "The year: Hammurabi, the king, by the mighty power which An and Enlil gave him, slaughtered all the enemies of the Subartu mountains".

42 The line is damaged but still readable: "r1(gur) 3 (nigida) 2 (bán) še.gur", equivalent to 300+180+20 sila.

vesting. All these documents are dated or can be dated⁴³ between the reigns of Hammurabi and Samsuiluna.

In the next two sections of text ROSITANI 2011, No. 10 (*Rev. 12-13* and *Rev. 14-15*) we can see the wages paid to two people who worked as harvesters, although there are no indications as to how many days they worked: 40 sila of barley for 2 harvesters, respectively named Ali-bānīšu and Šumi-eršetim. The two lines that follow (*Rev. 16-17*) document the payment of 60 sila for 3 harvesters, showing that each harvester received 20 sila of barley, although here too, there is no mention of the number of days worked. It is also possible to see that the final sum of 500 sila of barley corresponds exactly to 216 + 144 + 40 + 40 + 60.

The text's omission in mentioning the length of time worked would seem to indicate that this was a daily payment, and that a single worker received 20 sila per day. However, there might also be a different hypothesis, that the '144 sila (of barley) for 6 harvesters' indication for two days' work, is also valid for the subsequent workers, making each harvester's daily payment 10 sila. This corresponds perfectly to the 6 še of silver for each day of work indicated in paragraph 273 of the Code "from the beginning of the year until (the end of) the fifth month". We should not forget that the harvest usually took place during the first two months of the year⁴⁴.

However, we can also find a payment of 20 sila of barley in another text: ROSITANI 2011, No. 23. BM 81557 (12th.I.Samsuiluna 3):

(*Obv. 1-Lo.E. 5*) On 12th day, month I, Bēlti-rēmēni entered the service as harvester.
(*Rev. 6-7*) (He) will give 20 litres of barley.

In the absence of any indication as to the number of days worked, it seems likely that the 20 sila are a daily payment. Similar figures can also be seen in another collection of laws, the Laws of Ešnunna, which, in paragraph 7, establish:

2 (*sūt*) še 'um idū (á.e) ēšidim (še.ku₅.gur₁₀)⁴⁵ šumma kaspum 12 uṭṭeti (še) idūšu (á.bi)⁴⁶.

This undoubtedly refers to a daily wage. It is noticeable that the amounts prescribed in the Laws of Ešnunna are exactly double those indicated in the Code of Hammurabi, which, however, deals with annual hire. If we assume that the payment for a harvester is 20 sila per day, even in the last three sections of ROSITANI 2011, No. 10 (*Rev. 12-13, 14-15, and 16-17*) we might prefer a simpler reading, in other words, 40 and 60 sila per day as payment for 2 and 3

43 See WEITEMEYER 1962, pp. 56-57, 61-63.

44 For the date of the harvest during the months of *Nisannu* and *Ayaru* (first and second month of the year respectively) see WEITEMEYER 1962, pp. 61-62; FINKELSTEIN 1969, pp. 57-58; SKAIST 1994, pp. 152-153, with reference to the previous bibliography. The exact timing of the harvest over the years played a fundamental role in the economy of Mesopotamia. An unfortunate example of this is the harvest that took place in the first month of the seventh year of the reign of Samsuiluna with disastrous results. See NEUMANN, SIGRIST 1978, pp. 239-252; CHARPIN 2000, p. 199 with n. 49; CHARPIN 2005b, p. 159 with n. 114.

45 Written še.ku₅.gur₁₀ instead of the usual še.gur₁₀.ku₅, see *AHW* 253a; *CAD* E, p. 349a, s.v. *ēšidu*; GOETZE 1956, p. 219.

46 "20 sila of barley is the hire of a harvester (*ēšidim*); if (paid in) silver, 12 barleycorns (*uṭṭet* = še) is his hire" «A i 28-29». See YARON 1988, pp. 22-23 and ROTH 1995, p. 60 with n. 2.

harvesters respectively. Moreover, paragraph 11 of the Laws of Ešnunna states that:

idū agrim (lú.hun.gá) 1 šiqil kaspum 1 (pān) še'um ukullēšu (ša.gal.bi) warḥam ištēn (itu 1.kam) illak⁴⁷.

This indication can be seen in relation to paragraph 273 of the Hammurabi Code, where 6 barleycorns (še) of silver per day is the fixed wage paid to a “hired labourer” [*agrum* = lú.hun.gá] working up to the end of the fifth month. As mentioned above, this corresponds to 1 shekel of silver per month, the same amount indicated in the Laws of Ešnunna, while the Code of Hammurabi indicates payment which decreases to 168 barleycorns (še) of silver per month during the second half of the year. Here, the differences between the two collections of laws are evident: the absence of payment variations for the different months in the Laws of Ešnunna, which indicate a monthly payment rather than the daily payment indicated in the Hammurabi Code, and the addition of 60 sila of barley per month (i.e. 2 sila per day) in the Laws of Ešnunna as provision for the hired labourer.

There is mention of extra barley allocations in some of the hiring contracts for harvesters in the Hammurabi and Samsuiluna periods: in the text ROSITANI 2011, No. 7 (BM 97840A: 23rd.X.Hammurabi 36) we can read that the harvesters will work *balum akalim* “without food rations” (*Rev. 10*); while the text ROSITANI 2011, No. 17 (BM 17077), dated to the 22nd.XII.Hammurabi 40, records the hiring of 12 harvesters “for the harvesting” adding: *itti agirīšu ikalu išatu* “they shall eat (and) drink at the expense of his hirer” (*Rev. 10-11*)⁴⁸.

Likewise, we can see in the text SIGRIST 2003, 208 No. 129, that the hirer, Sîn-imaguranni, undertakes to provide for a labourer he hires for a year. The labourer is probably very young seeing that he is brought to Sîn-imaguranni by his mother, but he is to be paid $\frac{5}{6}$ of a shekel (=150 barleycorns, *uṭtet* or še) of silver and the hirer “will feed him and clothe him”, *ikal u iltabaš* (*Obv. 9-Rev. 10*). In the lines that follow it is stated that “if he does not serve it (completely) silver and garment he will return” (*Rev. 12-14*).

In the two texts that follow, however, SIGRIST 2003, 209-210, Nos. 130 and 131, we can see that annual hire does not include food and clothing: in the first (No. 130), the labourer is hired for a year and his annual payment is 2 gur of barley, of which he receives $1\frac{1}{2}$ gur (= 360 sila) at the time of drawing up the contract; in the second text (No. 131), the annual hire is indicated as $1\frac{1}{2}$ shekel (= 240 še) of silver, which includes everything:

“for the yearly hire the full payment is $1\frac{1}{2}$ shekel of silver; and (with that sum) he can do whatever he wants, and with his own means he will clothe himself” (*Obv. 6-Rev. 12*).

Indications for the payment of hired labourers can be found in other texts, including, for example, a list of payments, UNGNAD 1909, No. 102 (VAT 1128: 6th.IX.Ha 42):

47 “The hire of a labourer (*agrum*) is 1 shekel of silver, 60 sila of barley is his provender (*ukullēšu*); he shall serve for one month” «A i 36-37», see YARON 1988, pp. 24-25; ROTH 1995, p. 60.

48 In the case, ROSITANI 2011, No. 18 (BM 17077A), the indication is slightly different: the 12 harvesters *itti agirīšu ikalu* “they shall eat at the expense of his hirer” (*Lo.E. 9-10*).

“175 sila of barley ^dNIN.ŠUBUR-*andullī*
 175 sila ^{ld}Šamaš-*damiq*
 175 sila ^{ld}Šamaš-*tappē*
 1 gur 225 sila of barley
 which three hired labourers (lú.hun.gá) (received) for 10 days”.

On the basis of the information contained in the text, the daily wages for each labourer can easily be calculated as 17.5 sila⁴⁹, which is very close to the 20 sila per day documented in ROSITANI 2011, No. 23, in the last 3 payments in ROSITANI 2011, No. 10, and in the Laws of Ešnunna. It should be noted that the text is dated to the 42nd year of the reign of Hammurabi (1750 BC), that is, only a few years before the Code was probably written.

2. Other wages

2. 1. *Special cases: allocations linked to the ilkum*

In addition, there are also some particular cases in which livestock (oxen, sheep and goats) was allocated to certain “workers” by the sovereign. In paragraph 35 of the Code of Hammurabi we read:

*Šumma awīlum liātim ū šēnī ša šarrum ana rēdīm iddinu ina qāti rēdīm ištām ina kaspīšu itellī*⁵⁰.

The Code reserved special treatment and protection for *rēdūm*-soldiers, *bā’irum*-soldiers, and state tenants (*nāši biltim*), and defined the flocks, houses, vegetable gardens and fields allocated to them as an inalienable right that they could neither sell nor give in dowry to their daughters because they were linked to the *ilkum*, which meant that the recipient had rendered some sort of service, usually military, to the crown.

Although these benefits were not recognised as wages, they were given to the recipients in exchange for the service rendered, and can therefore be considered as payment. Broadly speaking, these endowments can be seen as a *do ut facias* payment linked to the service and the person who supplied it. As mentioned previously, this not only took the form of livestock, but also land owned by the crown, which was divided into two categories: “fields for the use of the palace”, to be cultivated by entrepreneurs who paid an annual fee of part silver and a portion of their produce; and what are described in texts as “food fields”, allocated to individuals by the king in exchange for *ilkum*. As we have just seen, the land, vegetable gardens, houses and livestock were specifically linked to the service rendered, and as they were inseparable from this service, they were also inalienable.

⁴⁹ See WEITMEYER 1962, pp. 45-47. Also of interest is information that can be taken from a list of workers, UNGNAD 1909, No. 92 (VAT 1476). The text documents the salaries of a series of workers, many of whom receive 1 gur 195 sila: assuming that this is for one month, the daily amount can be calculated as 16.5 sila. See also WEITMEYER 1962, p. 46.

⁵⁰ “If a man should purchase from a soldier either the cattle or the sheep and goats which the king gave to the soldier, he shall forfeit his silver”. See ROTH 1995, p. 88, XI 65-XII 4.

2. 2. *Special cases: gardeners*

A further series of provisions set out in the Code, paragraphs 60-65, are also of interest in that they concern other forms of agriculture, such as gardening (*nukaribbum*). Paragraph 60 states that, if a gardener has rented an orchard for a period of four years and has taken appropriate care of the fruit trees, in the fifth year the fruit produced in the orchard will be divided into equal parts with the owner, but that the owner has the right to take first choice:

*Šumma awīlum eqlam ana kirīm zaqāpim ana nukaribbim iddin nukaribbum kiriam izqup erbe šanātim kiriam urabba ina ḥamuštīm šattim bēl kirīm u nukaribbum mithāriš izuzzu bēl kirīm zit-tāšu inassaqma ileqqe*⁵¹.

This paragraph is significant because it can be interpreted as an expression of the king's intention to "redistribute" land ownership to growers, particularly valuable lands such as palm groves. The economic importance of palm groves becomes evident when we read the preceding paragraph in the Code (paragraph 59), which states that 30 shekels of silver must be paid to the owner of a palm grove if a man cuts down one of his trees without permission⁵². Also, paragraphs 61-65 establish that a fine is payable to the owner of a palm grove if the gardener who has hired the land deviates from the original contract or is guilty of partial or total negligence⁵³.

2. 3. *Artisans, weavers, builders, boatmen, and other workers*

If we return to the particular section dealing with wages analysed in paragraphs 215-277, it is possible to note that the wages paid to a hired labourer during the second half of the year, *agrūm* = lú.hun.gá (paragraph 273) are identical to those paid to certain artisans, as shown in the subsequent paragraph (274). Unfortunately, the paragraph is fragmentary, but provides a series of indications regarding the wages for various types of work. The only legible indications relate to a woven-textile worker (*kāmidum*), to be paid 5 barleycorns (*uṭṭet* = še) of silver per day, and a carpenter (*naggārum*) who should receive 4(?) barleycorns (*uṭṭet* = še) of silver per day. The indications for the wages payable to, amongst others, to a *kitūm* (possibly a linen-worker), *purkullum* (stone-cutter), *sasinnum* (bow-maker), *nappāḥum* (smith), *aškāpum* (leatherworker), *atkuppum* (reedworker), *itinnum* (builder), in part been lost:

*Šumma awīlum mār ummānim iggar idī lú.[x] 5 uṭṭet kaspam idī kāmidim 5 uṭṭet kaspam [idī] ša kitīm(?) [x uṭṭet] kaspam [idī] purkullim [x uṭṭet ka]spam [idī] sasinnim(?) [x uṭṭet kas]pam [idī] nappāḥim [x uṭṭet kas]pam [idī] naggārim 4(?) uṭṭet kaspam idī aškāpim [x] uṭṭet kaspam idī atkuppim [x uṭṭet] kaspam [idī] itinnim [x uṭṭet kas]pam [ina ūmim] ištēn [inadd]in (paragraph 274)*⁵⁴.

51 "If a man gives a field to a gardener to plant as a date orchard and the gardener plants the orchard, he shall cultivate the orchard for four years; in the fifth year, the owner of the orchard and the gardener shall divide the yield in equal shares; the owner of the orchard shall select and take his share first". See ROTH 1995, p. 93, XVI 10-26.

52 Code of Hammurabi paragraph 59: "If a man cuts down a tree in another man's date orchard without the permission of the owner of the orchard, he shall weigh and deliver 30 shekels of silver". See ROTH 1995, p. 93.

53 See ROTH 1995, pp. 93-94.

54 "If a man intends to hire a craftsman, he shall give, per [day]: as the hire of a ..., 5 barleycorns of silver; as the hire of a woven-textile worker, 5 barleycorns of silver; as the hire of a linen-worker(?), [x barleycorns] of silver; as

Due to the fragmentary nature of the document, we do not know how much a man employed as a bricklayer would have been paid, but we do know how much a house builder would have earned:

Šumma itinum bītam ana awīlim īpušma ušaklilšum ana 1 musar (sar)⁵⁵ bītim 2 šiqil kaspam ana qīštīšu inaddiššum (paragraph 228)⁵⁶.

Comparatively, the wages earned by a builder, per *sar* of house, correspond to the wages paid to a hired labourer for a period of two months (6 barleycorns of silver per day) during the first five months of the year, and a period of two months and five days' work for a day labourer from the 6th month to the end of the year. The wages are the same for a weaver (5 barleycorns of silver per day), and for an agricultural labourer for three months' work, or a shepherd (8 gur of barley per year) or carpenter (if the 4 barleycorns of silver per day is a correct reading), and to four months' work for an ox driver (6 gur of barley per year) or a boatman (see below Table 1).

The wages stipulated in paragraphs 234 and 239 of the Code for work to be carried out by a boatman or for his hire, refer in the first case to a specific task, the caulking of a boat, while in the second, to annual hire:

Šumma malāḥum elip 60 kur ana awīlim ipḥi 2 šiqil kaspam ana qīštīšu inaddiššum (paragraph 234)⁵⁷

Šumma awīlum malāḥam [īgur] 6 [kur še'am] ina šan[at] inaddiš[šum] (paragraph 239)⁵⁸.

It is apparent that the wages paid to a boatman hired on an annual basis are the same as the wages paid to an ox driver, and that they are the lowest of all the wages paid to all those workers considered thus far: hired workers, weavers, agricultural labourers, shepherds and carpenters. The caulker, however, is paid on the basis of the work carried out, which is calculated according to the volume, and thus the size, of the boat.

2. 4. Doctors' wages

The situation is completely different in the specific case of doctors and the payment for their services, as can be seen in paragraphs 215-217, 221-223:

the hire of a stone-cutter, [x barleycorns] of silver; as the hire of a bow-maker, [x barleycorns] of silver; as the hire of a smith, [x barleycorns of] silver; as the hire of a carpenter, 4(?) barleycorns of silver; as the hire of a leatherworker, [x] barleycorns of silver; as the hire of a reedworker, [x] barleycorns of silver; as the hire of a builder, [x barleycorns] of silver". See ROTH 1995, p. 131, XLVI 20-44.

55 A *sar* or *musarum* is the smallest unit of measurement for surface area, and corresponds to about 36 m².

56 "If a builder constructs a house for a man to his satisfaction, he shall give him 2 shekels of silver for each *musar* (sar) of house as his compensation (*ana qīštīšu*)". See ROTH 1995, p. 125, XLII 56-63.

57 "If a boatman caulks a boat of 60-gur capacity for a man, he shall give him 2 shekels as his compensation". See ROTH 1995, p. 125, XLIII 4-9.

58 "If a man hires a boatman, he shall give him 6 gur (=1 800 sila) of barley per year". See ROTH 1995, p. 126, XLIII 62-66.

Šumma asûm awīlam simmam kabtam ina karzilli siparrim īpušma awīlam ubtalliṭ ū lū nakkapti awīlim ina karzilli siparrim iptēma īn awīlim ubtalliṭ 10 šiqil kaspam ileqqe (paragraph 215)⁵⁹
Šumma mār muškēnim 5 šiqil kaspam ileqqe (paragraph 216)⁶⁰
Šumma warad awīlim bēl wardim ana asīm 2 šiqil kaspam inaddin (paragraph 217)⁶¹
Šumma asûm ešemti awīlim šerbitam uštallim ū lū šer²ānam maršam ubtalliṭ bēl simmim ana asīm 5 šiqil kaspam inaddin (paragraph 221)⁶²
Šumma mār muškēnim 3 šiqil kaspam inaddin (paragraph 222)⁶³
Šumma warad awīlim bēl wardim ana asīm 2 šiqil kaspam inaddin (paragraph 223)⁶⁴.

Services provided by doctors can be divided into two different categories: surgical operations as opposed to bone settings or other minor treatments. The cost of surgery was very high, 10 shekels of silver for treating an *awīlum* and exactly half that for a *muškenum*⁶⁵, dropping to 2 shekels for a slave. For re-setting a bone or treating a muscle injury in an *awīlum* patient, the cost was 5 shekels, decreasing to 3 shekels for a *muškenum* and to 2 for a slave. It should be noted that the rate is quite schematic, so that payment for the second surgical category is exactly half that of the first category in the case of an *awīlum*, a little less than half for a *muškenum* patient, while there is no difference in cost for the treatment of a slave. This can probably be explained by the fact that a broken bone or damaged muscle would prevent a slave from working and therefore detract from their value in the same way as other health problems requiring more major surgery, so that the efficiency and value of the slave was considered more important than the type of intervention.

Moreover, the paragraph concerning the surgeon's responsibility in the case of the death of a slave belonging to a *muškenum*, paragraph 219⁶⁶, calls for the substitution of the dead slave by one of equal value, while in the case of the slave (also belonging to a *muškenum*) who is left blind in one eye, the surgeon must compensate by giving the owner half the value of the slave in silver, paragraph 220⁶⁷. However, for causing the death of an *awīlum*, or the loss of an eye, the penalty was much more severe and was punished by cutting off the doctor's hand

59 "If a physician performs major surgery with a bronze lancet upon an *awīlum* and thus heals the *awīlum*, or opens an *awīlum*'s temple with a bronze lancet and thus heals the *awīlum*'s eye, he shall take 10 shekels of silver (as his fee)". See ROTH 1995, p. 123, XLI 55-66.

60 "If he (the patient) is a *muškenum*'s son, he shall take 5 shekels of silver (as his fee)". See ROTH 1995, p. 123, XLI 67-69.

61 "If he (the patient) is a *awīlum*'s slave (*wardum*), the slave's master shall give to the physician 2 shekels of silver". See ROTH 1995, p. 123, XLI 70-73.

62 "If a physician should set an *awīlum*'s broken bone or heal an injured muscle, the patient shall give the physician 5 shekels of silver". See ROTH 1995, p. 124, XLI 95-XLII 9.

63 "If he (the patient) is a *muškenum*'s son, he shall give 3 shekels of silver". See ROTH 1995, p. 124, XLII 10-12.

64 "If he (the patient) is an *awīlum*'s slave (*wardum*), the slave's master shall give the physician 2 shekels of silver". See ROTH 1995, p. 124, XLII 13-17.

65 In the Code people are categorised as: *awīlum* "free man", *muškenum* "depedant, bondsman of the palace", or *wardum* "slave".

66 *Šumma asûm simmam kabtam warad muškēnim ina karzilli siparrim īpušma uštāmīt wardam kīma wardim iriab*. See ROTH 1995, p. 123, XLI 84-88.

67 *Šumma nakkaptāšu ina karzilli siparrim iptēma īnšu uḫtappid kaspam mišil šīmīšu išaqqal*. See ROTH 1995, p. 123, XLI 89-94.

(paragraph 218)⁶⁸. Curiously, that there was no law concerning surgical operations that resulted in the death of, or permanent damage to, the slave of an *awīlum*.

The final category to be analysed here is that of the veterinarian, in particular those who carried out major surgery on animals, and the corresponding fees they received for such work and the compensation to be paid in the case of failure:

Šumma asī alpim ū lū imērim lu alpam ū lū imēram simmam kabtam īpušma ubtalliṭ bēl alpim ū lū imērim igi.6.gál kaspam ana asīm idīšu inaddin (paragraph 224)⁶⁹.

First of all, it should be noted that the only animals considered here are oxen and donkeys, as they were evidently the only animals worth the necessary expenditure of a surgical operation, which cost 30 še of silver, equivalent to about 1.4 grams. Probably this was due to the value of these animals and their importance as draft animals for agricultural work, and in the case of the latter, as beasts of burden that were vital to trade, especially for long distance commercial consignments.

In addition, there are strong similarities to the paragraph regarding the fees to be paid to the doctor by the owner for major surgery performed on a slave, although in this case the law refers to an animal. Likewise, the indications for paying compensation to the owner if the animal dies, in paragraph 225:

Šumma alpam ū lū imēram simmam kabtam īpušma uštamīt IGI.4(?)GÁL⁷⁰ šīmīšu ana bēl alpim ū lū imērim inaddin⁷¹

are very similar to those connected with the death of a slave, fixed at half the slave's value. That said, paragraph 220 specifies "the value in silver", while here this indication is missing. This comparison, as well as the previously mentioned details regarding the doctor's fees for surgical operations carried out on a slave, help to highlight the fact that slaves were considered on a par with animals, both in monetary value and because of the work they did. Furthermore, like animals, slaves belonged to owners who paid for their medical assistance and were compensated for any economic loss if an operation was not successful.

3. Concluding remarks: a general overview of economic organization

In order to gain a full understanding of the real nature and relevance of the indications given in the Codes, and in particular the Code of Hammurabi, it is important to see them as being a part of the socio-economic context of the Old Babylonian period. From our overall

68 *Šumma asūm awīlam simmam kabtam ina karzilli siparrim īpušma awīlam uštamūt ū lū nakkapti awīlim ina karzilli siparrim iptēma in awīlim uḫtappid riitāšu inakkisu*. See ROTH 1995, p. 123, XLI 74-83.

69 "If a veterinarian performs major surgery upon an ox or a donkey and thus heals it, the owner of the ox or of the donkey shall give the physician as his fee one sixth (of a shekel = 30 barleycorns) of silver". See ROTH 1995, p. 124, XLII 18-28.

70 Otherwise it could be read: IGI.5(?)GÁL. See ROTH 1995, p. 124 with n. 41.

71 "If he (the veterinarian) performs major surgery upon an ox or a donkey and thus causes its death, he shall give one quarter(?) of its value to the owner of the ox or donkey". See ROTH 1995, p. 124, XLII 29-35.

analysis of the wages and payments outlined in the Code, it is possible to see how the various economic sectors were closely linked; that there was a clear prevalence for agriculture and livestock farming; and that each specific case is regulated in a highly ordered way.

Together, the Code and other administrative documents provide us with sufficient information to reconstruct the economic landscape of the Old Babylonian period. This was characterized by a change in previous economic relations, which included different forms of product taxation and royal management. There was an increase in private economic activities, often on behalf of the Palace, in the agriculture sector, livestock farming, and artisanal work. The Palace allocated increasingly larger amounts of its land to private overseers to manage more or less freely, in exchange for a monthly rent, often paid in silver, and a share of the produce. The reason behind this “liberalisation” lay in the fact that the Palace was increasingly uninterested in directly producing and managing huge amounts of consumer goods, such as those derived from agriculture and livestock farming, preferring instead their equivalent in silver, which was easier to store and to use for trade, and to which they could add small quantities of goods to satisfy the daily needs of the Palace and its numerous staff.

The private citizens to whom the land was allocated were obliged to convert their produce into silver to be paid to the Palace⁷². This was especially true of livestock farming, and we know from various administrative texts that often, herds of cattle and flocks of sheep and goats belonging to the Palace were allocated these citizens, who sometimes assigned the flocks to subordinate shepherds. The shepherds therefore managed the livestock for the Palace, to whom they paid an annual fee in silver as well as a certain number of animals. Among some of the most interesting documents are contracts (some of which are analysed above); lists of the names of shepherds, preceded by the number and type of livestock assigned to them (sheep, goats or oxen); as well as contracts and dockets which were, in all likelihood, tied to the horns or hung around the necks of the animals, and often contained only information concerning the type of animal and the name of the shepherd.

Unfortunately, these documents are often extremely brief and cannot give us precise answers as to the identity of the shepherds responsible for managing the flocks. Even though they appear to be free entrepreneurs, that is, private citizens who independently oversaw the management of the flocks and often hired others to do the work, we cannot rule out the possibility that they were palace employees. It seems most likely, however, that these shepherds were private managers, a theory also supported by numerous scholars, including CHARPIN, RENGER and STOL⁷³. Even VAN DE MIEROOP⁷⁴ believes that the shepherds of the Nanna-Ningal temple in Ur were private citizens who were responsible for both the flocks belonging to the Palace as well as their own. Assigning the flocks to private entrepreneurs produced a number of advantages: it helped the palace to streamline the administration of its land, and to gain both silver and raw materials from it without needing to have direct dealings with the people involved in rearing the livestock and processing the animal products. A good example of this was butchery: slaughtered animals created work for butchers, and for every animal they

72 See STOL 1982 and VAN DE MIEROOP 1993.

73 See CHARPIN 2005a, in particular pp. 211-212; RENGER 2002, in particular p. 157; STOL 1982. See also the more recent DE GRAEF 2014 with reference to previous bibliography.

74 See VAN DE MIEROOP 1992 and VAN DE MIEROOP 1993, in particular pp. 166-167.

butchered a certain amount of silver was paid to the Palace along with a share of the raw materials (wool, skin and tendons)⁷⁵.

Usually, the shepherds responsible for the flock were obliged to provide an annual report of their work, in that they were supposed to increase the flock by a certain number of young (lambs, kids or calves), as well as providing the correct quantity of silver and goods to supply to the palace, but were also allowed to keep part of what they had produced⁷⁶. If they were unable to increase the flock by the amount required, they had to compensate for the difference from their own flock, supplying animals to the same value, as established both in the Code and in some of the contracts analysed. The accounts were scrupulously kept by the Palace, both the numbers of animals and a list of any that had been lost⁷⁷, as well as the amount of wool produced and its subsequent consignment to intermediaries who sold it, and paid the Palace its value in silver⁷⁸.

It is possible to reconstruct the way in which lands belonging to the crown were managed⁷⁹. They were divided into two categories: “fields for the use of the Palace” and “subsistence fields”. In the former case, entrepreneurs paid the Palace an annual fee, both for the land and the tools necessary for cultivation. The fee was made up partly of silver and partly of a share of the produce. The “subsistence fields” were assigned by the sovereign to private individuals in return for *ilkum*: some kind of service, military or otherwise, to the king. As has already been mentioned, the land, gardens, houses and flocks were linked to this service, could not be separated from it, and were inalienable. We know that during the period of Larsa, “subsistence fields” were also assigned as payment to many artisans⁸⁰. Private lands also existed and although there has been a great deal of discussion about the existence of private property in Babylon, the most recent studies agree that during the reign of Hammurabi and his son, Samsuiluna, houses, orchards and fields were among some of the private property in existence, as can be seen in various private documents⁸¹.

75 An interesting document related to butchery shows (AO 7486), amongst the livestock delivered to the butchery, there were some that were already dead: “a ram – the shepherd is Ribam-ilī – which died from the cold” (1 udu nita₂ / na.gada / ri-ba-am-i-li / ša i-na ku-uš-ši-im / i-mu-tu). The first copy of this docket was published by NOUGAYROL 1979, p. 75, later it was re-published in CHARPIN, DURAND 1981, pp. 18-19.

76 See CHARPIN 1980, CHARPIN 1986a, CHARPIN 2005a, in particular p. 210; DE J. ELLIS 1976, STOL 1982; VAN DE MIEROOP 1993.

77 See for example VAN DE MIEROOP 1993, pp. 165 and 180 with Table 2.

78 See BRENIQUET, MICHEL 2014; CHARPIN 1982; VAN DE MIEROOP 2002 and the more recent DE GRAEF 2014 and MICHEL 2014, with reference to previous bibliography.

79 See CHARPIN 1980, CHARPIN 1986b, CHARPIN 2005a; DE J. ELLIS 1976; KRAUS 1966; RINGER 2000; RINGER 2002; ROBERTSON 1989; STOL 1982; VAN DE MIEROOP 2002.

80 As far as the system of craftsmanship was concerned, we know less for the Hammurabi period, a little more for the periods immediately preceding this, i.e. the period of Larsa (XX century BC) and the period of Isin (XIX century BC). The registers for Isin show that craftsmen worked half days. See CHARPIN 2005a, pp. 212-213; KRAUS 1966.

81 On the question of private property for the Old Babylonian period see CHARPIN 1980, CHARPIN 1986a, CHARPIN 1986b, CHARPIN 2001, CHARPIN 2005a, especially pp. 214-215 and CHARPIN 2014.

Table 1⁸²

PROFESSION	WORK	OBJECT	PRICE	PARAGRAPHS
Doctor	Surgical operation	<i>Awīlum</i>	10 shekels of silver	215
Doctor	Surgical operation	<i>Muškenum</i>	5 shekels of silver	216
Doctor	Surgical operation	<i>Wardum</i>	2 shekels of silver	217
Doctor	Healing a bone or muscle	<i>Awīlum</i>	5 shekels of silver	221
Doctor	Healing a bone or muscle	<i>Muškenum</i>	3 shekels of silver	222
Doctor	Healing a bone or muscle	<i>Wardum</i>	2 shekels of silver	223
Veterinarian	Surgical operation	Oxen or ass	1/6 of a shekels of silver (30 še)	224
Builder	Building a house	<i>ana awīlim</i>	2 shekels of silver per 1 <i>mūšar</i> of house (1 sar / 1 <i>mūšarum</i> = 12x12 cubits = ca. 36m ²)	228
Boatman	Caulking a boat of 60 gur (=18 000 sila)	<i>ana awīlim</i>	2 shekels of silver	234
Boatman	Annual hire		6 gur of barley (1 800 sila = ca.150 sila per month)	239
Agricultural Labourer (<i>ikkarum</i>)	Annual hire		8 gur of barley (1 800 sila = 200 sila per month)	257
Ox driver	Annual hire		6 gur of barley (1 800 sila = 150 sila per month)	258
Shepherd	Annual hire	Oxen, sheep, goats	8 gur of barley (1 800 sila = 200 sila per month)	261
Ox-cart driver	Hire of oxen, cart and driver		3 nigida (= 180 sila) of barley per day, total (=60 sila, only for the driver?)	271

82 Table showing the wages stipulated for various types of work.

Labourer (<i>agrūm</i> = LÚ.HUN.GÁ)	Annual hire		6 še (barleycorns) of silver per day up to the V month; 5 še (barleycorns) of silver per day from the VI month	273
Weaver/ loom worker (<i>kāmidum</i>)			5 še of silver (a day)	274
Carpenter (<i>naggārum</i>)			4(?) še of silver	274
Gardener (<i>nukaribbum</i>)	Rent of an orchard/ field (<i>eqlum</i>) for 4 years	Planting a palm grove (<i>kirūm</i>)	In the fifth year, the garden is shared in equal parts with the owner (who maintains the right to take first choice)	60

Index of the Code of Hammurabi paragraphs mentioned in the article:

35, 57, 58, 60, 215, 216, 217, 221, 222, 223, 224, 228, 234, 239, 242, 243, 257, 258, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 273, 274

Abbreviations

<i>BSA</i>	<i>Bulletin on Sumerian Agriculture</i>
<i>Ha</i>	<i>Hammurabi (king)</i>
<i>JCS</i>	<i>Journal of Cuneiform Studies</i>
<i>JESHO</i>	<i>Journal of the Economic and Social History of the Orient</i>
<i>Lo. E.</i>	<i>Lower Edge</i>
<i>No.</i>	<i>Number</i>
<i>Obv.</i>	<i>Obverse</i>
<i>OA</i>	<i>Oriens Antiquus</i>
<i>R. E.</i>	<i>Right Edge</i>
<i>Rev.</i>	<i>Reverse</i>
<i>RA</i>	<i>Revue d'Assyriologie et d'Archéologie Orientale</i>
<i>Si</i>	<i>Samsuiluna (king)</i>
<i>U. E.</i>	<i>Upper Edge</i>

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