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THE ANCIENT MESOPOTAMIAN RATION SYSTEM

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IN HIS well-known study of the pre-Sargonic texts of the “temple of Bau” at Lagash-Girshu, P. Anton Deimel, *Sumerische Tempelwirtschaft zur Zeit Urukaginas und seiner Nachfolger* (*AnOr* II [Roma, 1931]), 1 ff., translated the Sumerian term *še-ba* as “Gersten-Lohn,” and similarly *ziz-ba*, *ninda-ba*, and *sig-ba* as “Weizen-, Brot-, and Woll-Lohn (or -Lohnung),” respectively. He had used the same terms previously in *Fara* III, 15* (for the Fara texts) and in *Orient.* XXXIV f. and XLIII f. (for the Lagash-Girshu texts).

The translation of *še-ba* and of other types of *-ba* as “Lohn, wages, salaire,” etc. is now fully dominating the field of Assyriology. Very few of the scholars who translate *še-ba* as “(barley-) rations” are aware of the weighty implications of the term “rations” versus “wages.”

The fact is that there is as much difference in meaning between rations and wages as there is between *še-ba* and *á*, and between the semi-free class of workers, forced to perform labor for which they receive rations, and the free class of workers offering their services in hire. And the fact is that the only system dominating the picture of early Mesopotamian economic history is that of a semi-free class of laborers receiving *še-ba* “rations,” and it was not until the later stage of the Ur III period, but mainly from the Old Babylonian on, that the rise of free laborers, offering their services as *lú-ḫun-gá*, “hirelings,” brought about a radical change in the economic and social system of the country, and with it the institution of *á*, “wages.”

The object of this study is first to straighten out the meaning of *še-ba* and of related terms for rations and then to place the ration system within the framework of the ancient Mesopotamian society.

The time covered in this study is the second half of the third millennium B.C., with its four main epigraphic subdivisions, Fara, pre-Sargonic, Sargonic, and Ur III. The emphasis on the Sargonic and Ur III periods is justified by the fact that our best documentation for the ration system comes from that time.

The old Mesopotamian ration system involves regular distribution of three basic commodities: barley, oil, and wool. These three kinds of regular rations are discussed in the following three sections.

Še-ba, “BARLEY RATION”

Word for word, the Sumerian compound *še-ba* consists of *še*, “barley,” and *ba*, “distribution, division, allotment,” and means “distribution of barley.” The Sumerian verb *ba* corresponds to the Akkadian *zāzum*, both meaning “to distribute, to divide, to allot.” Cf. *CAD* under *zāzu*, p. 76. Nothing in these basic meanings of Sumerian *ba* and Akkadian *zāzum* leads easily to a secondary meaning “wages.” The compound ŠE.BA is used as a Sumerogram in Akkadian texts.

That *še-ba* or ŠE.BA cannot mean “wages” but only “rations” in all the early Mesopotamian periods before the Old Babylonian period can be proved by the following evidence:

(1) ŠE.BA is issued for animals in a number of Sargonic texts of Tell Asmar (e.g., *MAD* I 154; 292; 306), of Susa (*MDP* XIV 71), and of unknown origin (*BIN* VIII 122; 131); also rarely in the Ur III texts (*CT* I 6–7).

(2) ŠE.BA is issued for infants or nursing babies, called DUMU.GA in the texts of Gasur (*HSS* X 184; 187; 188), and GABA in the texts of Susa (*MDP* XIV 11; 51; 61; 71).

(3) ŠE.BA is issued for divinities (^a*A-ba*₄ and ^a*Šu-nir*) in the Sargonic texts of Susa (*MDP* XIV 51; 71).

(4) *Še-ba nam-ra-ag* (*TCL* V 6039 end) corresponds to *šà-gal nam-ra-a-ag* (*Dok.* II 329 end) in two parallel Ur III texts from Umma, listing barley issued to captive women and children. The use of *šà-gal*, which normally denotes barley rations issued to animals, means that *še-ba* is here considered as rations on the level of fodder for animals, and certainly not as wages.

(5) In contrast to the term *še-ba*, “rations,” used regularly in all the periods from Fara to Ur III, both the terms *á*, “wages” (originally, the amount of work done in x days), and *lú-ḥun-gá*, “hireling,” are exceedingly rare in early periods, from Fara to Sargonic. In the Ur III period, when the institution of wages develops to a fuller extent, the total amounts received by hirelings add up to much more than the standard rations. See e.g., *PDTI* 368; *TMH* n.F. I/II 121; and *Kraft* 7 (unpublished), according to which the total received by hirelings includes 150 quarts as wages plus 60 quarts as rations, thus amounting to 210 quarts of barley per one man in one month. On the standard ration of 60 quarts see below p. 233.

By extension, the word *še-ba* or ŠE.BA involves the distribution of both ŠE, “barley,” and GIG, “wheat,” in a Sargonic text (*HSS* X 66), which is not surprising considering that ŠE also has the meaning of “grain” in general (*MAD* III 256). In fact, the meaning of ŠE.BA was further extended to cover not only barley and grain in general but also the two other commodities which were regularly distributed as rations, namely ì, “oil, fat,” and SÍG, “wool.” Cf. DUB ŠE.BA ì, “the tablet of the rations of oil” (*MAD* I 49), and quantities of ŠE, SÍG, and ì given for ŠE.BA of PN’s (*MAD* I 291). Since barley is by far the most common commodity distributed in the old Mesopotamian ration lists, *še-ba* or ŠE.BA in the greatest number of occurrences means simply “barley ration.”

The greatest extension of the meaning of *še-ba* is found in the Ur III texts from Ur (*UET* III), where the term *še-ba* stands for the distribution of *še*, “barley,” *ninda*, “bread,” ì, “oil,” *ku*₆, “fish,” *zú-lum* and *ù-ḥu-in*, “dates,” and *gú-tur*, “peas,” singly or in any combination of the different commodities, as in the following examples:

še alone (passim)

še and ì (1025; 1049; 1066 = ì-*giš*; 1377)

še and *ku*₆ (1070)

še, ì, and *ku*₆ (1032)

še, ì, *ku*₆, and *zú-lum* (1047)

še and *zú-lum* (1033; 1039; 1415)

ì alone (1053; 1054; 1063; 1144)

ì-*giš* alone (1041; 1046; 1146; 1149; 1151; 1182)

ì and *ku*₆ (1040)

ì and *zú-lum* (1062; 1091)
 ì, *zú-lum*, and *ninda* (1048; 1072)
*ku*₆(-ìzì) alone (1046; 1182; 1185)
zú-lum alone (1070; 1090; 1092; 1093)
ù-lu-in alone (1105)
gú-tur sumun alone (1002)

One interesting point about the use of *še-ba* in *UET* III texts is that the term *še-ba* includes all kinds of food, but not, e.g., wool, in contrast to *MAD* I 291, referred to just above. It is surprising that the use of *še-ba* for rations of different kinds of food is not known in the Ur III period outside of Ur.

A strange hybrid in the form ì-*še-ba* for “rations of oil,” and not “rations of oil and barley,” was used by an Ur scribe in *UET* III 1181 (and 170).

While *še-ba* is the all-purpose term for barley rations, no matter whether distributed to human beings, animals, or divinities, other terms are used in the lists at times in opposition to *še-ba*, at times replacing it. These terms are: *šà-gal*, used for barley rations for animals but also for captives and for the *erín* class of workers/soldiers; *še-kur*₆-*ra* (or *kur*₆), used for barley issued as subsistence for free persons; *sá-dug*₄, used mainly for distributions to divinities; *nig-kú-a* (mainly in *UET* III texts), used for food issued to individuals on special occasions; and *nig-dáb* (mainly in *UET* III texts), used for food and wool issued to divinities and for cultic purposes. Cf., e.g., *še-kur*₆-*ra* for *engar* “peasants” (Reisner, *TUT* 94 ii 34), in contrast to *še-ba* for semi-free persons (*op. cit. passim*, and commonly in Ur III); also *še-kur*₆ parallel to *sá-dug*₄ (*UET* III 156; 974; 1377), *še-ba* parallel to *sá-dug*₄ (*UET* III 94; 961; 1031), *še-ba* parallel to *šà-gal* (*TCL* V 6039; *Dok.* II 329, discussed above p. 231), and *nig-kú(-a)* parallel to *nig-dáb* (Oppenheim, *CCTE* F 4 and I 9). For the Old Babylonian period, note that one text uses ŠE.BA as barley rations for (semi-free) female weavers, ŠÀ.GAL for birds, and KUR₆ for free individuals (*CT* VIII 21d, translated by Kohler and Ungnad, *HG* III No. 773, and Harris in *JESHO* VI [1963], 143 f.).

The amount of rations received by individuals depended in the first place, on the sex and age of the recipient and, in the second place, on his status and the type of work he performed. The terms for sex and age differentiations are discussed below on pp. 238ff.

The barley ration system of the Sargonic period can be best reconstructed from the Gasur and Susa texts. The amounts are given in *silà*, “quarts” per month.

MEN (GURUŠ)	WOMEN (GEMÉ)	CHILDREN			SOURCE
		Sons (DUMU. NITA)	Daughters (DUMU. SAL)	Infants (DUMU. GA) (GABA)	
60	30	30	30, 20		<i>HSS</i> X 183
60		30?, 20?, 15			<i>HSS</i> X 184
60	30	20	20	10	<i>HSS</i> X 187
60	30	30, 20	20	10	<i>HSS</i> X 188
120, 60	30	30, 20	20		<i>HSS</i> X 190
	30	20		10	<i>MDP</i> XIV 11
60, 40, 30	30	20	20	10	<i>MDP</i> XIV 51
	30		20	10	<i>MDP</i> XIV 61
60, 40, 30	30	30, 20	30, 20	10	<i>MDP</i> XIV 71

The ration system is very much standardized all through the Sargonic and Ur III periods, although deviations of different types are found occasionally.

In the *MDP* XIV 71 Sargonic text the great majority of *GURUŠ*, "men," receive 60 quarts of barley per month, others 40 or 30 quarts; several hundred *GEMÉ*, "women," receive 30 quarts, but 5 *GEMÉ.ŠU.GI₄*, "old women," only 20 quarts; a larger number of *DUMU.NITA*, "boys," receive 30 quarts, a smaller number only 20 quarts; and while *DUMU.SAL*, "girls," receive normally 20 quarts, a small number of them receive 30 quarts.

In the Ur III text, Fish, *CST* No. 263 (Pls. XLVII f.) probably from Drehem, *guruš*, "men," receive 125, 75, 60, 50, 40, or 30 quarts; among them the ration of 125 quarts is assigned to the *guruš-engar*, "farmers," and 50 quarts to *guruš-šu-gi₄*, "old men;" *gemé*, "women," receive the standard ration of 30 quarts, but the rations of *dumu-nita*, "boys," vary from 25 to 20 to 15 to 10 quarts, and those of *dumu-sal*, "girls," from 15 to 10 quarts. The *dumu-nita* and *dumu-sal* who receive 10 quarts must obviously correspond to the *DUMU.GA* or *GABA*, "infants," of the Sargonic period.

In the *CT* III 9 f. Ur III text from Lagash, the male workshop foremen called *guruš ugula-uru* receive 60 quarts, most of the other *guruš*, "men," also 60 quarts, although a few receive 50, 40, or 30 quarts; the *gemé ugula-uru*, "female workshop foremen," get 40 quarts, other *gemé*, "women," usually 35 quarts, some 25 or 20 quarts; *dumu*, "children," without distinction as to sex, receive 20, 15, or 10 quarts. Here, too, *dumu* who receive 10 quarts must correspond to the older term *DUMU.GA* or *GABA*.

For sources pertaining to the barley ration system in the Fara texts, see Deimel, *Fara* III p. 13* and Nos. 61–91, especially No. 91, also Jestin, *TSS* 150. While the figure of 96 quarts of barley per man dominates in the lists, no clear picture of standard rations can be reconstructed for this period.

Texts pertaining to the barley rations in the pre-Sargonic period at Lagash-Girshu have been collected by Deimel in *Orient*. XXXIV f. and XLIII f. The rations of barley average out to 72, 48, and 36 quarts per man, 36 and 24 quarts per woman, and 18 and 12 quarts per child, thus approximating the standard rations of barley in the Sargonic and Ur III periods. The exact amounts differ from class to class and require a more minute examination than can be given here.

Under normal circumstances, barley rations were issued once a month. Cf. *lu iti-da-ke₄* "persons (receiving rations once) a month," (*DP* 154; *HSS* III 3; etc.) in pre-Sargonic; *še.BA (šu) 1 ITI* (*HSS* X 108; 190; *BIN* VIII 122; 123; 130) or *še.BA ITI 1* (*MDP* XIV 71) in Sargonic; and *še . . . iti-da* (*CT* IX 50 b; *Orient*. XLVII 382; Barton, *HLC* III 114 xv; BM 23581, unpublished) or *še-ba iti-da* (*CT* III 7 x) in Ur III.

ì-ba, "OIL RATION"

The information about oil rations is much less satisfactory than that about barley rations, both in terms of quantity and quality.

The term for "oil rations" in the *UET* III texts is normally *še-ba* (see p. 231, but also *ì-ba* (*UET* III p. 103), and even *ì-še-ba* (*UET* III 1181, discussed above on p. 232). Elsewhere, the term *ì-ba* occurs very rarely, as in *HSS* IV 3 and Oppenheim, *CCTE* p. 4.

The meaning of *ì* as "animal fat" or "vegetable oil" cannot be discussed here. Let it suffice to note that the most common oil was *ì-šab*, "lard," from the Fara to the Sargonic

period, but *ì-giš*, "sesame," in the Ur III period. Neither can we enter here into the discussion of the extent to which oil was used as food and/or as ointment.

The amounts of oil listed in the Sargonic texts from Tell Asmar are normally 3 quarts per woman and 6 quarts per woman with a child (*MAD* I 7; 11). An unpublished Sargonic text of Adab yields 1/2 quart of oil per man, in addition to 60 quarts of barley and 1 shekel of silver, all paid as wages (A 663). A Susa text lists the distribution of 1 quart of sesame oil each to different individuals (*MDP* XIV 50).

In the Ur III period the following information is available: According to Reisner, *TUT* 164¹⁹ and BM 17807 (unpublished), several hundred women receive each 10 *gin*, i.e., 1/6 of a quart of oil. The same amount, namely 10 shekels of oil, in addition to 60 quarts of bread, is received by each Elamite worker in a month (*ITT* III 6175). According to *HSS* IV 3 iii, 6466 women receive each one quart of oil; as can be deduced from the verb *ba-ab-še_x* (ERIN) in cols. v, vi, rev. iv and v, some quantities of oil were issued for the purpose of anointing, not consumption.

The main problem that we face in connection with the oil rations concerns the time they were issued: were oil rations issued once a month, once a year, or several times a year at some regular or irregular intervals? Unfortunately, in the case of oil rations, we have no parallels to the *še-ba sig-ba* texts (p. 236), which deal with the distribution of both barley and wool in the year, and furnish clear evidence that barley rations were issued once a month and wool rations once a year (pp. 233 and 235). Apparently oil was not distributed as regularly as barley and wool. This comes out also from the fact that the expression for "upkeep" is not only *še-ba ì-ba sig-ba* in the Ur III *ditillas* (Falkenstein, *NSGU* III pp. 161 f.), but also *še-ba sig-ba* alone (Falkenstein, *NSGU* III pp. 161 f., and below, p. 236).

Good evidence concerning the period for which oil rations were issued is to be found in *ITT* III 6175, referred to above, which reads as follows: (1) 3 *guruš* Elam 1(*pi*) *ninda-ta* (2) 10 *gin* ì-*ta iti l-kam* (3) *iti 2-šè* (4) *iti Gán-maš-ta* (5) *iti Še-ìl-la-šè* (6) *Elam nam-ra-ag-me*. The meaning is quite clear: 12 captive Elamites received 10 shekels of oil and 60 quarts of bread in a month, to be issued in 12 months. Since 60 quarts of bread (or grain) is the standard monthly ration of a *guruš* worker, we must assume that 10 shekels of oil also represent the standard monthly ration. No safe conclusions can be drawn from a Diyala Sargonic tag from the Diyala Region (*MAD* I 49), reading *DUB ŠE.BA ì šu 1 MU*, "the tablet of oil rations for 1 year," since it is not known whether the tablet concerned dealt with oil rations issued once a year or with the composite issues of 12 months in the year.

The best picture of oil rations can be obtained from the Ur III texts found at Ur and published in *UET* III; the amounts given below refer to *silà*, "quarts."

MEN	WOMEN	CHILDREN	SOURCE
	4, 2	2, 1½, 1	1040
	4, 3	4 (once)	1041
5, 3, 2½		1	1047
4, 3	5	1½, 1	1048
5, 4, 3, 2½	5, 3	1½, 1	1049
5			1053; 1054; 1063, etc.
5, 4, 3	3		1066
5, 4, 3	4		1431

The information based on *ITT* III 6175 and other texts, according to which a man or a woman received 10 shekels (or 1/6 of a quart) of oil in a month, or 2 quarts in a year, can be adjusted with that derived from the *UET* III texts, according to which a man or a woman received from 2 to 5 quarts of oil, by assuming that the *UET* III texts represent yearly, not monthly, rations. This conclusion is favored by the fact that over one-half of the *UET* III texts concerned with the distribution of oil rations are dated to the twelfth and eleventh months of the year.

In one respect the rationing of oil differs from that of wool. While wool rationing normally takes place once a year (see below p. 235), oil rationing can take place either once a year or twelve times a year, with variations depending on local conditions.

Sig-ba, "WOOL RATION"

More information is available about the rationing of wool than about that of oil.

According to one Sargonic text from Lagash (*ITT* I 1065), 46 *GURUŠ* receive each 10 *ma-na sig*, while their *ugula*, "foreman," gets 20 *ma-na*. In two Sargonic texts of unknown origin, *BIN* VIII 148 and 152, *GURUŠ* receive amounts of wool varying from 5 to 10 pounds, while *GEMÉ* get 4 pounds, and children get 3 or 2 pounds.

Among the many Ur III wool ration texts we can quote the following, with the amounts of wool given in *ma-na* "pounds" per year:

MEN	WOMEN	CHILDREN	SOURCE
4		1½, 1	<i>CT</i> VII 50b
4, 3	3	1½, 1	<i>CT</i> XXXII 34 f.
	3	2, 1½, 1	Chiera, <i>STA</i> 4
	3	3, 2, 1½, 1	Chiera, <i>STA</i> 6
4	3	1½, 1, ½	<i>RTC</i> 399
4, 3		2, 1½, 1	<i>HSS</i> IV 2
4, 3, 2		1½, 1	<i>YOS</i> IV 211 iv
	3	2, 1½, 1	Reisner, <i>TUT</i> 156
	4, 3	2, 1½, 1	Barton, <i>HLC</i> III 113 f.
4	3	2, 1½, 1, ½	4 NT 208, unpublished
	3	2, 1½, 1	BM 15283, unpublished
	3	1	BM 15902, unpublished
4		2, 1½, 1	BM 23581, unpublished

The usual wool rations of the pre-Sargonic texts of Lagash amount to 4 or 3 *ma-na* (also less), but no safe conclusions can be drawn because of the lack of information about the period or periods during which wool was rationed and about the exact weight of the *na₄-sig*, with which the wool was weighed in pre-Sargonic times (see Deimel, *AnOr* II, 49–70, especially pp. 68 a, 69 a, and 69 b). For discussion cf. *AnOr* II, 68 b and 70 b.

Many pre-Sargonic and Ur III wool ration lists record the issues of one garment (*túg*) in place of the required wool ration. See *AnOr* II 70 b; *RTC* 399; *HSS* IV 2; BM 23581, unpublished.

The evidence in the Ur III period shows clearly that wool was rationed once a year. Cf. *sig* . . . *mu-a ba-dam* (**ba-(e)d-am*) in contrast to *še* . . . *iti-da ba-dam* (Barton, *HLC* III 114 xv end, collated; BM 23851, unpublished, *passim*) and *sig* . . . *mu-a pi-dam* (**b(a)-ed-am*) in contrast to *še* . . . *iti-da pi-dam* (*CT* VII 50 b twice; *Orient.* XLVII 382 end). On the monthly rationing of barley see above p. 232.

GENERAL DISCUSSION OF RATIONS AND ISSUES

Presented in the following chart is a reconstruction of the standard rations of barley, oil, and wool, as deduced from charts on pp. 232, 234, and 235, and from hundreds of other ration texts, gathered but not cited here.

KIND	TIME	AMOUNT			MEASURE
		MEN	WOMEN	CHILDREN	
barley	once a month	60	30	25, 20, 15, 10	quarts
oil	once a year	4	4	2, 1½, 1	quarts
wool	once a year	4	3	2, 1½, 1	pounds

The three kinds of standard rations recognized in the ancient Mesopotamian system, either in their Sumerian forms *še-ba*, *ì-ba*, *sig-ba*, or in their corresponding Akkadian forms *iprum*, *piššatum*, *lubuštum*, become in the course of time, in the Ur III *ditilla*'s and the adoption texts of later periods (cf. Falkenstein, *NSGU* II 10 n. 9, and above p. 234), general expressions for the maintenance or upkeep of persons to be taken care of in privately owned households.

The three kinds of rations are regularly listed separately whenever issued to large personnel of a palace or temple household.

Only in the case of the temple households of Lagash in the Ur III period do we regularly find the so-called "*še-ba sig-ba* lists" dealing with two kinds of rations, namely barley and wool. Cf., e.g., Reisner, *TUT* 151; 162; Barton, *HLC* III 113 f.; Thureau-Dangin, *RTC* 399; *HSS* IV 2; and others.

All three terms appear in an Ur III text (*YOS* IV 101) dealing with the issue of rations, not with rationing proper.

Besides *še-ba*, *ì-ba*, and *sig-ba*, that is, rations of barley, oil, and wool, several other kinds of rations occur in the texts, the most important of which are *ziz-ba*, *ninda-ba*, *zid-ba*, and *túg-ba*, that is, rations of emmer, bread, flour, and cloth, respectively. Emmer rations are found mainly in the pre-Sargonic texts of Lagash (Deimel, *AmOr* II 3–24). Bread rations occur in two Fara texts (Deimel, *Fara* III 93 and 101) and at Lagash (Deimel, *AnOr* II 24–40). Flour rations occur in three Fara texts (Nos. 92, 98, and 99). The occurrences of *túg-ba* in place of *sig-ba* were noted above on p. 235 for the pre-Sargonic and Ur III texts.

Outside of rations called *še-ba*, *ì-ba*, *sig-ba*, *ziz-ba*, *ninda-ba*, *zid-ba*, and *túg-ba*, the only other terms for *ba*-distributions known to me are *ku₆-ba*, *nig-sa-ḥa-ba*, and *ga-kug-munu_x-kug-ba*.

The term *ku₆-ba* occurs apparently only in the Ur III text *ITT* II 4203, but many more texts dealing with the distribution of fish exist without using the term.

The terms *nig-sa-ḥa-ba* and *ga-kug-munu_x-kug-ba*, are found only in the pre-Sargonic texts of Lagash, treated by Deimel in *AnOr* II 15–19 and 40–47, and denote distribution of various commodities such as dates, oil, cheese, milk, etc., on special occasions and to a special kind of personnel.

Many more texts, from Fara to Ur III, deal with rations of commodities listed above without using any terms for rations. The most common of these are distributions of *ku₆*, "fish," *zú-lum*, "dates," and *ninda*, "bread," best attested in the Ur III texts from Ur

(see *UET* III index under the terms). For the distribution of onions see my article, "The Philadelphia Onion Archive," soon to appear in Landsberger's *Festschrift*.

Still more commodities are distributed in a haphazard way, sometimes at festivals or on other special occasions, sometimes as replacements for commodities regularly rationed. Among these are: meat of sheep and cattle; milk, cheese, butter, and other dairy products; onions, legumes, cucumbers, and other vegetables; dates, figs, apples, and other fruit; condiments; and beer and wine.

We may safely assume that certain rations were replaced by others during periods of overabundance or shortage of one commodity or another normally given as rations.

Clear evidence in favor of replacing commodities in the ration system is to be found in the Ur III texts from Ur (*UET* III). These are the sources:

5 <i>silà</i> ì- <i>giš</i> mu 10(<i>silà</i>) še-šè	1045; 1046; 1182; 1185
10(<i>silà</i>) ì- <i>giš</i> mu 20(<i>silà</i>) še-šè	1046
2½ <i>silà</i> ì- <i>giš</i> mu 5 <i>silà</i> še-šè	1046; 1187
4 <i>silà</i> ì- <i>giš</i> mu 20(<i>silà</i>) <i>ku₆-izi-šè</i>	1046; 1182; 1185

From these ration texts, called *še-ba* (see above p. 231), we learn that rations of sesame oil were issued in place of the barley or fish rations. For the use of the term *mu* . . . (-šè) cf., e.g., 1 UDU.ŠE *sá-dug₄ lugal mu šA₆.ŠE*, "1 grain-fed sheep, the royal offering, in place of 1 grain-fed pig" (*UET* III 153).

If we compare the replacement rates of the three commodities listed above in the chart with their actual prices in the Ur III texts, we find discrepancies which require some discussion.

In the case of the replacement of barley by oil we find that 1 quart of oil was issued in place of 2 quarts of barley. Since the price of barley was stabilized at Ur, and in the Ur III period generally, and even in all the periods from Fara to Ur III, at about 1 shekel of silver for 300 quarts of barley, we find that if 1 quart of oil corresponds to 2 quarts of barley, then 150 quarts of oil correspond in price to 300 quarts of barley. The resulting price of 1 shekel of silver for 150 quarts of oil is much less than the prices for this commodity known from other Ur III texts, according to which only about 10 quarts of sesame oil can be obtained for 1 shekel of silver (see, e.g., Curtis and Hallo, *HUCA* XXX [1959], 127). Thus we must reach the conclusion that either the oil issued as rations was much spoiled or adulterated or that the oil became very cheap or, contrariwise, the barley became very rare and expensive during the year named "Ibbi-Sin 10" at Ur, in which the *UET* III texts with which we are concerned are dated.

There are no problems with the prices of fish in the three Ur texts cited above. By positing the price of 1 shekel of silver for 150 quarts of oil or 300 quarts of barley, we find that if 4 quarts of oil or 8 quarts of barley correspond to 20 quarts of fish, then 750 quarts of fish cost 1 shekel of silver. This price corresponds closely to the price of 1 shekel of silver for 600 quarts of *ku₆-izi* fish, known from three other Ur III texts (Curtis and Hallo, *op. cit.*, p. 130).

Two more Ur III texts from Ur should be discussed in connection with the replacement of barley by oil, namely *UET* III 1025 and 1377. In the actual listing of the amounts of commodities being rationed and of the persons receiving them only barley rations are given; but in the totals both barley and oil are listed at the rate of 1 quart of oil corresponding to 10 quarts of barley (1025; 1377) or 1 quart of oil corresponding to 15 quarts

of barley (1025). This yields 30 or 20 quarts of oil for 1 shekel of silver, a price which differs considerably from the price of 150 quarts of oil for 1 shekel of silver obtained from texts listed in the chart on p. 234. The two texts have a date marked as "Ibbi-Sin 8," and may therefore testify to an economic situation which was different from that of "Ibbi-Sin 10." It should be remembered that the sequence of dates noted as "Ibbi-Sin 8" and "Ibbi-Sin 10" cannot be established at present, and that the reign of Ibbi-Sin was full of social and economic unrest which might have resulted in great shortages of certain commodities in certain periods.

The evidence in favor of special rations offered on the occasion of festivals is quite extensive. Cf., e.g., fish or carcasses of sheep distributed on the New Year's festival (*zag-mu*, *UET* III 88; 89; 1303) or large amounts of barley distributed on the occasion of *nig-ezem-ma dingir-ri-ne* (*CT* III 5-8 viii 9 + x 19 = xv 23) and as *še-ba zag-mu-ka* (x 17 = xv 21).

Thus, the distribution of different commodities may be analyzed under three headings.

(1) Standard rations: *še-ba*, *i-ba*, and *sig-ba*, distributed at regular periods in the year:

(2) Replacements for standard rations: *túg-ba* distributed in place of *sig-ba*; and occasionally *ziz-ba*, *ninda-ba*, *zid-ba* and other commodities, distributed in place of *še-ba*. Some of these replacements may have become standard; others may have been issued only in periods of shortage or overabundance of certain commodities.

(3) Supplementary issues: fish, dairy products, vegetables, fruits, and beverages, distributed over and above the standard rations during festivals and on special occasions.

PERSONNEL RECEIVING RATIONS

The following picture of personnel, classified by age and sex, emerges from the ration lists:

OLD PERSONS:	<i>šu-gi₄</i>	(not distinguished by sex)
	<i>guruš-šu-gi₄</i>	"old man"
	<i>gemé-šu-gi₄</i>	"old woman"
	<i>um-ma</i>	
GROWN PERSONS:	<i>guruš</i>	"man" (Latin "vir," not "homo")
	<i>gemé</i>	"woman"
IMMATURE CHILDREN:	<i>dumu</i>	(not distinguished by sex)
	<i>ša-dùg</i>	
	<i>dumu-nita</i>	"boy" ("son")
	<i>ša-dùg-nita</i>	
	<i>dumu-SAL</i>	"girl" ("daughter")
	<i>ša-dùg-SAL</i>	
INFANTS:	DUMU.GA	"nursing babies" (not distinguished by sex)
	GABA	
	AMAR.GABA	
	<i>dumu-nita-gaba</i>	"boy infant"
	<i>dumu-SAL-gaba</i>	"girl infant"

The following should be said in commentary to the table presented above:

Old persons, called *šu-gi₄*, *guruš-šu-gi₄*, and *gemé-šu-gi₄*, occur relatively rarely in the ration lists because, depending on their age, they are normally listed either with grown persons or with children. For the latter case note 7 *šu-gi₄*, "seven old (women)," who

receive each 2! (wrongly copied as 3) pounds of wool, are listed under *dumu-ne*, "children," at the end of the text (Chiera, *STA* 4 vii 4 and viii 1). In another Ur III text (*UET* III 1040 rev. 6) 2 *gemé-šu-gi₄* receive as rations 1 quart of oil which is the minimum rate for children, in contrast to 4 and 2 quarts, received by the *gemé*. Also in two unpublished texts from Lagash (BM 17749 and similarly BM 23581) 2 *gemé-šu-gi₄* receive only 20 quarts of barley, the same as children, in contrast to the ration of 60 quarts for the men, and 30 quarts for the women. By contrast, in other cases, old people are treated as well as full-working men and women. Cf., e.g., Fish, *CST* No. 263 (Pls. XLVII f.), *CT* I 6-7, etc. According to *UET* III 1431 1 *gemé-šu-gi₄* receives as much as 5 quarts of oil, which is 1 quart more than the ration of 4 quarts received by the 2 *gemé-sag-dub*. The corresponding Akkadian words for old persons are *šibum*, "old man," and *šibtum*, "old woman."

Guruš and *gemé* denote grown persons, those able to perform a full man's or woman's work. The available information does not permit us to circumscribe their age, but as an educated guess I should propose it to be between thirteen and forty. There is no evidence known to me, from Fara to Ur III, that *GURUŠ eflum* ever denoted "a young man in the age group between the full-grown man and the adolescent male," as proposed in the *CAD* under *eflum*, pp. 407 f., or that it meant a "(junger) Mann," as proposed in Von Soden, *AHW*, pp. 265 f.

The Sumerian term *gemé*, Akkadian *amtum*, represents full-grown women, corresponding more or less to the age group of the male *guruš* or *eflum*. The term is used irrespectively of whether or not the women are known to be the wives of the *guruš*. The word *GEMÉ* or *amtum* apparently has the meaning "wife" in the Mari text *ARMT* IX 291, and not "servant-woman" as taken in *ARM* IX pp. 228-37. For the meaning of *amtum* as "the (second) wife" in the Cappadocian texts, see J. Lewy, *HUCA* XXVII (1956) 3 f., and Garelli, *Les Assyriens en Cappadoce* (Paris, 1963), p. 164. Whenever the term *gemé*, like the corresponding *guruš*, occurs in the ration lists and parallel lists of the personnel of large palace and temple households, it does not represent the slave-class.

The terms *um-ma* (*TMH* V 34 iv; 39 iv; 190 vi; N 467, unpublished), *um-ma-gemé* (Phila. N 459, unpublished), and *gemé-um-ma* (CBS 6136, unpublished) occur only in the ration lists of the Sargonic period from Nippur.

The boys and girls are regularly listed in the ration texts with the *gemé* and *guruš*, whose children they represent. Children are listed much more commonly with the *gemé* than with the *guruš*, and whenever they are listed with their fathers they usually represent the boys.

The assumption of an interchange in meaning between "son" or "daughter" and "boy" or "girl" results from texts such as *Orient.* XLVII 382, Ur III, in which the same children are denoted as *dumu*, "sons" or "daughters," in the body of the text, but as *dumu-nita*, "boys," and *dumu-SAL*, "girls," in the final resumé of the text.

The well-known use of the term *ša-dùg* for young sheep and goats in the Ur III period has been noted by Deimel, *ŠL* 384, 177. Although doubtless also known to Deimel, he has failed to note in his *ŠL* the use of *ša-dùg* for children in the pre-Sargonic texts of Lagash, as in the following examples: *ša-dùg-nita* and *ša-dùg-SAL*, interchanging with *dumu-nita* and *dumu-SAL*, are listed together with their mothers in the barley ration texts (*Orient.* XXXIV 43 ff.; XLIII 1 ff.); *ša-dùg-nita* = *dumu-nita* and *ša-dùg-SAL* = *dumu-SAL*, all occur in the important "family text" *Dok.* I 19 (= *Orient.* XXVI

31 ff. No. 1); the totals of 174 *gemé* and 68 *ša-dùg* in *DP* 159 (= *AnOr* II 33 No. 12) testify to the small proportion of children listed with their mothers.

Word for word, the term *ša-dùg* means "sweet heart." The exact age of the *ša-dùg* children is as indefinable as that of the corresponding *dumu*.

There is not much doubt that children listed with their parents in the ration lists are immature children. This conclusion is based on the observation that both the number of parents listed with children, and the number of children listed with their parents is too small in relation to the expected average of two children per family. This leads to the conclusion that only immature children were listed in the ration texts, while the mature children were considered to be on the same level as their parents. To be sure, the terms "mature" and "immature" may not be taken in their literal sense, as children who get rations comparable in amount to those of their parents may be those on the border-line between childhood and maturity or those who performed strenuous work requiring higher rations.

Occasionally there is a certain amount of leeway in the classification of children. We note, for instance, that according to the Sargonic text *MDP* XIV 71, the *DUMU.NITA* receiving the maximum amount for boys, namely thirty quarts of barley, are listed in the totals together with the *GURUŠ* receiving thirty quarts, which represents the minimum rate for men; similarly, the *DUMU.SAL* receiving thirty quarts are listed in the totals together with the *GEMÉ* receiving the same amount of rations.

The term *DUMU.GA*, "infant," is found mainly in the Sargonic texts from Gasur (*HSS* X 184; 185; 187; 188; 197). Outside of Gasur, I know only of *DUMU.GA* in *ITT* I p. 15, 1231; *BIN* VIII 245 ii, both Sargonic; and *CT* X 25 iii 12, Ur III. The term *DUMU.GA.NITA* occurs in *BIN* VIII 144, Sargonic.

The term *GABA* is standard in the Sargonic texts from Susa (*MDP* XIV 11; 51; 61; 71). Outside of Susa, the term occurs in *MAD* I 255; *UET* II Pl. L No. 49; and *ITT* I p. 10, 1151.

The term *amar-gaba* occurs only in the ration lists of the Sargonic period from Nippur (*TMH* V 39 iv; 44 vi; 186 vi). According to unpublished texts from the same archive the *amar-gaba* are listed together with *dumu* (Phila. 29-13-738; N 358).

The terms *dumu-nita-gaba* and *dumu-SAL-gaba* are found only in the Ur III period (*UET* III 1033; 1040; *BE* III 107).

Because of the very small number of occurrences of the terms denoting infants in the ration texts, we have no hesitation in assuming that infants were generally included under the terms *dumu*, *dumu-nita*, and *dumu-SAL* in all cases when the latter receive the lowest rations for children, namely ten quarts of barley.

A term used in the ration lists which denotes neither age nor profession is *nu-sig*, "orphan," found in the pre-Sargonic texts from Lagash and the Sargonic texts from Nippur. The terms *nu-sig-nita* and *nu-sig-SAL* are used in the former (*Orient.* XXIV 99 ff.) and *dumu-nu-sig* in the latter (*TMH* V 36 iv; 39 i, iv, 186).

It is impossible to go into details concerning the differentiations in the rationing system due to differentiations in professions and types of work performed, because this would involve a full discussion of matters of social stratification which cannot be taken up here.

Standard rations were issued mainly to a social class which I have called "serfs" for a number of years, but prefer now to call "the *guruš* class." The term "serfs" should be avoided because of its definite connotation in connection with medieval feudal systems.

However we would define the social and economic system of most ancient Mesopotamia, it certainly was not feudal. The word *guruš* has two main meanings. Its first meaning is simply “man,” Latin “vir” (see above p. 239). In its derived meaning it denotes a social class of semi-free status, to be contrasted with the free and the slave classes. This is clear from such evidence as the Sargonic text published in *MDP XIV 71*, which lists barley rations for the GURUŠ, GEMÉ, and DUMU (*passim*) separately from those for the ARÁD É (rev. iv). Note also the occurrences of *ugula guruš* (Jestin, *TSS* 368 ii, Fara; *OIP LVIII 297* No. 10, pre-Sargonic), which can only mean “the foreman of the *guruš* (-personnel),” and not “the foreman of men.” The difference between the semi-free *guruš* class and the free class of the *engar*, “peasants,” is indicated by an unpublished Ur III text from Nippur (4 NT 208), which lists wool rations for *guruš*, *gemé*, and *dumu* separately from those for the *engar* and *dumu-engar*. In my usage, the term *guruš* for a social class, naturally, includes not only *guruš* but also *gemé* and *dumu*. All through the early periods of Mesopotamian history the *guruš* class formed the major labor force. The *arád* (and *gemé*) performed minor tasks as household slaves, they were much fewer in number than the *guruš* class, and their effective role in the economy of most ancient Mesopotamia was insignificant in comparison with that of the *guruš* class of workers.

All through the periods, from Fara to Ur III, we have great difficulty distinguishing personnel living permanently in a household and working for that household all year around from personnel working for the household only during certain parts of the year. The former obviously would have received rations all through the year, the latter only during the months spent working for the household.

The clearest evidence for distinguishing the two types of personnel is to be found in the pre-Sargonic texts of Lagash-Girshu.

Certain kinds of personnel, including the male *igi-nu-du*₆ and *il* and the *gemé-dumu*, “women (and their) children,” received rations each month, twelve times a year. This can be proved by the texts collected by Deimel in *Orient. XXIV 43–116* and *XLIII 1–80*, with monthly ration periods from one to twelve (*1 ba-am*₆ to *12 ba-am*₆).

By contrast, the ration texts for the *lú-kur*₆-*dab*₅-*ba* personnel, collected by Deimel in *Orient. XXIV 1–31*, list only four monthly ration periods (*1 ba-am*₆ to *4 ba-am*₆), and we must assume that the *lú-kur*₆-*dab*₅-*ba* personnel received rations for only four months in a year. Only from the sixth year of Urukagina do we have evidence (*Orient. XXXIV 27–31*) that the *lú-kur*₆-*dab*₅-*ba* personnel received rations up to eleven times a year. This is in the year of great political upheavals at Lagash-Girshu, forcing the household of Bau to take care of the non-permanent personnel in time of need and stress. The *lú-kur*₆-*dab*₅-*ba* personnel represents individuals who received land on prebend (*kur*₆) from the household of Bau, in return for which they owed taxes and service for about four months a year.

Parallel conclusions in respect to the permanent and non-permanent personnel of the household of Bau can be drawn from the texts dealing with the issue of grain for rationing purposes, collected by Deimel in *Orient. XXXIV 35–41*. Two classes of personnel are distinguished: the *lú-kur*₆-*dab*₅-*ba* with monthly ration periods from one to five (*1 ba-am*₆ to *5 ba-am*₆), and the *lú-kur*₆-*nu-dab*₅-*ba*, “persons not receiving *kur*₆,” also noted as *gemé-dumu*, “women (and their) children,” or as *lú-iti-da*, “persons (receiving rations each) month,” with monthly ration periods from one to twelve (*1 ba-am*₆ to *12 ba-am*₆).

The work performed by the *guruš* class of people is of two kinds: (1) agriculture and

animal husbandry and (2) manufacturing. The term "agriculture" is used here in the widest sense and includes field agriculture proper, work in gardens and orchards, milling, oil-pressing, and beer-brewing; under animal husbandry we can include shepherding, fattening of animals, butchering, and preparation of animal food products. Under manufacturing we can include work on products made of wool, linen, leather, wood, metal, stone, clay, etc.

Individuals of the *guruš* class formed personnel, called *gìr-sè-ga* (= Akkadian *girsegûm*) in the Ur III period, who worked in a household, called *é* in Sumerian or *bîtum* in Akkadian. These households belonged to the palace (king, state), temples, and to private individuals. Certain households specialized in the production of a certain commodity, such as *é gemé*, "gynoikeia," which specialized in weaving, or *é kìn-kìn*, "mill," which was involved mainly in milling flour. Here are some examples of households:

ŠE.BA É	MAD I 163
É GEMÉ	MAD I 290
še-ba <i>gìr-sè-ga</i> šà Ba-ba-az ^{KI}	Fish, <i>CST</i> No. 263
še-ba <i>gìr-sè-ga</i> é kìn-kìn <i>gibil</i>	Reisner, <i>TUT</i> 154
še-ba šà é kìn-kìn	<i>CT</i> III 9 f.
še-ba <i>gemé uš-bar-e-ne</i> é Kar-zi-da	<i>UET</i> III 1040
še-ba <i>gìr-sè-ga</i> é <i>dìngir-ri-ne</i>	<i>CT</i> III 6 vii, viii
<i>gìr-sè-ga</i> é <i>dìngir-me</i> šà NINA ^{KI}	<i>CT</i> IX 36
<i>gìr-sè-ga</i> é-gal é-kas ₄	<i>CT</i> III 6 viii
é Urú ^{KI}	<i>ITT</i> II/1, 3536
é Ba-gár	<i>ITT</i> II/1, 907
é ^a <i>Ig-alìm</i>	<i>ITT</i> II/1, 4192
é ^a <i>Ba-ù</i>	pre-Sargonic Lagash, <i>passim</i>
IGL.GAR-ag <i>gìr-sè-ga</i> ANŠE.BAR.AN <i>du(n)-ùr-ra</i>	
^a <i>Nin-gìr-su</i> ù ^a <i>En-sig-nun</i>	<i>CT</i> I 6 f.

Part of the household personnel specializing in crafts is called *giš-kin-ti* (= Akkadian *kiškattûm*) in the pre-Sargonic, Sargonic, and rarely in the Ur III periods. In the pre-Sargonic ration texts (*Orientalis* XXXIV 1–31; *AnOr* II 3–67) the following professions are listed under the *giš-kin-ti*, more or less in the following order: *simug*, "smith," *nagar*, "carpenter," *ašgab*, "leather-worker," *ad-kub_x* "reed-mat maker," TÚG.DU₈, "upholsterer(?)," *zadim*, "stone-cutter," *baḥar* (= "EDIN"), "potter," GIŠ.TÚG.PI.KAR.DU, "fuller," má-laḥ₄, "boat-maker" (not "sailor"), and three or four professions with unknown or uncertain meanings.

In households dedicated to the production of finished goods rather than to agriculture, large numbers of the *giš-kin-ti*, "craftsmen," worked in shops called *é simug*, "smithy," *é nagar*, "carpenters' shop," etc. The best examples of such *ergasteria* are to be found in an Ur III text from Ur, *UET* III 1498, which lists seven workshops with their products: *é dub-nagar*, "sculptors' shop," *é kug-dim*, "silversmiths' and goldsmiths' shop," *é zadim*, "stone-cutters' shop," *é nagar*, "carpenters' shop," *é simug*, "smithy," *é ašgab*, "leather-workers' shop," *é TÚG.DU₈*, "upholsterers' (?) shop," and *é ad-kub_x*, "reed-mat makers' shop."

The semi-free class of the *guruš* workers and the ration system dominated the socio-economic life of early Mesopotamia all through the periods from Fara through pre-Sargonic and Sargonic to Ur III. Beginning with the Old Babylonian period, the term

guruš for the semi-free class disappeared completely and was replaced by others. At the same time the ration system was slowly dying out in Babylonia proper, although it continued strongly in outlying regions, such as Mari and Chagar Bazar. After a brief revival in the Kassite period, the ration system seems to have died out in Mesopotamia by the end of the second millennium B.C.

These changes are the result of the radical evolution of the Mesopotamian socio-economic system, which began at the end of the Ur III period and reached a full form in Old Babylonian times. The growing urbanization of the country brought about a rise of industry and an increased number of artisans who were free to work for wages; and the redistribution of land as a result of Amorite invasions created a new class of small peasants who paid taxes and owed service to the palace. While in the older periods major productive forces were concentrated and controlled by the state (palace, king), temples, and large landholders, by the Old Babylonian period the major production seems to have been achieved by the small landholders and artisans.