

Ledgers and Prices

Early Mesopotamian Merchant Accounts

DANIEL C. SNELL

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In memory of
Iva Hawkins Snell
and Clair John Snell
my first and best teachers

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II	2	11	AS3Pd obverse
III	2	11	AS3Pd reverse
IV	3	13	AS4UrDZ obverse (F. J Stephens)+
V	3	13	AS4UrDZ reverse (F. J Stephens)+
VI	4	17	AS5PdA obverse
VII	4	17	AS5PdA reverse
VIII	5	19	AS5PdB
IX	6	20	AS5SesA obverse
X	6	20	AS5SesA reverse
XI	7	23	AS5LIn obverse
XII	7	23	AS5LIn reverse
XIII	8	24	AS6iiKd obverse
XIV	8	24	AS6iiKd reverse
XV	9	26	AS6xiUrDZ obverse
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XIX	11	29	AS7ixPd obverse
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XXI	12	40	SS5Pd obverse
XXII	12	40	SS5Pd reverse
XXIII	13	41	SS5Lkl obverse
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XXVIII	15	44	SS7Aak reverse
XXIX	16	—	NBC 253 (S36)
XXX	17	—	NBC 228 (S44) obverse

Plate*	Copy Number	Sequence Number	Text Code (Copyist) or Museum Number
XXXI	17	—	NBC 228 (S44) reverse
XXXII	18	—	MLC 1978 (AS4) obverse
XXXIII	18	—	MLC 1978 (AS4) reverse
XXXIV	19	—	NBC 244 (AS6) obverse
XXXV	19	—	NBC 244 (AS6) reverse
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XXXIX	22	—	NBC 237 (SS5)
XL	23	—	NBC 6653 (SS8)
XL I	24	—	YBC 1397 (n.d.) obverse
XL II	24	—	YBC 1397 (n.d.) reverse

* All copies except as indicated are by DCS. For measurements and descriptions of accounts see Table 5.

+ Another copy of the text produced earlier by Carl H. Lager was used in this study: when it was made, the text was in somewhat better condition than when Stephens copied it. The Lager copy will be published in a volume in the *Yale Oriental Series, Babylonian Texts*.

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It should be noted that I was unable to incorporate material that appeared after the spring of 1979.

D. C. S.

Abbreviations

Bibliographic abbreviations are according to R. Borger, *Handbuch der Keilschriftliteratur* 1-2 (Berlin, 1967, 1975) with the following additions, deviations, and clarifications:

AV	Anniversary Volume
CBS	Museum number for text in NATN
CHEU	See Borger under Contenau, <i>Contribution</i>
Grégoire	<i>Archives administratives sumériennes</i> . Paris, 1970.
KWU	See Borger under Schneider, <i>Keilschriftzeichen Ur III</i> .
LAK	See Borger under Deimel.
MVN	<i>Materiali per il Vocabolario Neo-Sumerico</i> . Rome, 1974-.
N	Museum number for text in NATN
NATN	D. Owen. <i>Neo-Sumerian Archival Texts Primarily From Nippur</i> (forthcoming).
NCT	N. Forde. <i>Nebraska Cuneiform Texts</i> . Lawrence, Kansas, 1967.
Nik	See Borger under Nikol'skij, <i>DV</i> 5.
NRVN	M. Cığ and H. Kizilyay. <i>Neusumerische Rechts- und Verwaltungsurkunden aus Nippur I</i> . Istanbul, 1965.
NSG	See Borger under Falkenstein, <i>NSGU</i> .
SACT	S. Kang. <i>Sumerian and Akkadian Cuneiform Texts</i> 1, 2. Urbana, Illinois, 1972, 1973.
Smith	See under C. Gordon.
STA	See under Chiera.
ŠA	See under Jean, <i>Šumer et Akkad</i> .
TMHC	See Borger under Pohl, <i>TMH NF</i> 1-2.
TRU	See under Legrain.
UDU	See under Contenau, <i>Umma sous la dynastie d'Ur</i> .
UM	Museum number for text in NATN
WMAH	See Borger 2 under Sauren.

All text citations are given in abbreviated form and give usually only the first line of the entry discussed.

In addition to bibliographic abbreviations the use of many tables has necessitated several abbreviations throughout this study. They fall under the following rubrics and are grouped together in the list below:

1. Dates. Regnal eras are abbreviated S for Šulgi, AS for Amar-Suen, SS for Šu-Sin, and IS for Ib-bi-Sin.

2. Measures. The abbreviation m stands for mana, g for gín, š for še, and s for síla. The values of the weights are approximately established by

preserved Ur III weights; they tend to weigh around 500 grams per mana, and the gín may weigh about 8.33 grams.¹

The volume of the sila measure is still not known though it approximates a quart. Thureau-Dangin, *RA* 9 (1912): 24f., reconstructed a Neo-Babylonian sila container from Susa and found it held .81 l; his calculations for a passage of Entemena had shown the sila held only .47 l, and another Susa example held .38 l. Working from an Old Babylonian mathematics text, he found that there the sila must be equivalent to .97 l, *RA* 34 (1937): 80-86. Salonen's confident equation of the sila to .84 l, *Hausgeräte* 1, p. 291, is premature.² The kùš "ell, cubit" in the Old Babylonian period is equivalent to about 50 cm (*CAD* A2 75a). For the weights and capacity measures that occur in the texts studied here see the Metrological Tables below.

3. Names. Personal names of the subscribers of silver balanced accounts are abbreviated in the tables and appendices as are some common accounting terms. Transliteration of personal names is inconsistent because of space requirements in tables. In the text personal names are hyphenated between major elements, but in the tables theophoric elements are capitalized without hyphens. For simplicity vowel length in Akkadian names has not been indicated.

4. Quantities. All quantities have been reduced to mana, sila, or še to facilitate price calculation and other arithmetic operations. The notation suggested by Sollberger, *TCS* 1, p. 7b, is a useful standard in that it reflects in transliteration the cuneiform notation. It should be used for initial presentation of texts in transliteration. But it is cumbersome when price calculations are to be made.³

1. The problem of the varying standards of weights has been discussed at length by Marvin A. Powell, Jr. in his "Sumerian Numeration and Metrology" (PhD diss., University of Minnesota, 1971), pp. 167-236; values for preserved inscribed weights are given in his Table 8, pp. 205-07. The weight system used in the Ur III texts is Powell's "System One," discussed pp. 212-26.

The Ur III weights are presented by W. W. Hallo, *HUCA* 33 (1962): 34, 38, 42.

M. Lambert's suggestion that the gín in Ur III had only 60 še as opposed to the normal assumption that it had 180 še, "L'Usage de l'argent-métal à Lagash au temps de la 3^e Dynastie d'Ur," *RA* 57 (1963): 82 n. 1, is to be rejected in light of the notation used even in Ur III Lagash accounts. This study's S43xGdl:3:16, for example, writes .5 m igi-6-gál 23 š kù-babbar, i.e. 5453š; in Lambert's system igi-6-gál would equal only 108. It would therefore be incomprehensible why the composer of S43xGdl had not written simply .5 g 3 š, i.e. 33 š in Lambert's system, if that is what he had meant. Lambert's quotation of prices derived from this incorrect assumption is therefore to be revised.

2. For recent criticism of Thureau-Dangin's procedure see Powell, pp. 192-94.

3. Compare Chapter 3 for an example that may show how the Mesopotamians thought of their measures.

By exception silver values in Table 1 have been given in gín and še to ease comparison with earlier studies. Table 4, derived from Table 1, is presented only in gín.

Transliteration is according to R. Labat, *Manuel d'Épigraphie akkadienne*, 3rd edition (Paris, 1959), except that ḥ has usually been replaced with h, for typographic simplicity.

LIST OF NON-BIBLIOGRAPHIC ABBREVIATIONS

A	account reconstructed	m	mana, weight measure
Aak	A-a-kal-la	MB	Middle Babylonian Period
Ab	Ab-ba-gi-na	n.	number
Ach	Achaemenid and Seleucid Periods	N	Nippur
Ag	A-gu	NB	Neo-Babylonian Period
AS	^d Amar- ^d Suen	ndb	níg-dab ₅ "thing taken"
b	balance carried forward	OAK	Old Akkadian Period
-bi	"its (value in) . . ."	OB	Old Babylonian Period
C	capital	P	Puzrish-Dagan
c	circa	Pd	Pàd-da
^d	dingir . . . "the god . . ."	PM	previous median
d.	dumu "son of"	PN	personal name
Dg	Dùg-ga	R	reading of name or word
dg	dam-gàr "merchant"	r	remainder
dgn	dam-gàr-ne "merchants"	S	^d Šul-gi
Esh	Eshnunna	S	site as column heading in price lists
F	form	s	sila, volume measure
G	courtesy I. J. Gelb	sbt	šu ba-ti "took"
Gdl	Gál-dùl	Ses	Šeš-kal-la
Inm	Inim-ma-ni-zi	Sgk	Sag-ku ₅
Irm	Ir ₁₁ -mu	Sinid	Sin-iddinam
IS	^d I-bi- ^d Sin	Siniq	Sin-iqišam
k.	kišib "received by"	Sinka	Sin-kašid
kb	kù-babbar "silver"	snga	sanga
kbn	kù-babbar níg-sám-bi "silver, its purchase value (is) . . ."	SS	^d Šu- ^d Sin
Kd	Ku ₅ -da	ssc	subscript(s)
L	Lagash	š	še, weight measure of silver
Lgh	Lugal-hé-gál	-š	-šè "for (so much silver)"
LIn	Lú- ^d Inanna	Šamš	Šamši-Adad
Lkl	Lú-kal-la	šn	šu-nigin "total"
		-ta	"at so much silver each"

Y	year	Urs	Ur-šu-ga-lam-ma
U	Umma	UrSPE	Ur- ^d Šul-pa-è
Ur	Ur III in Table 38 only	UrT	Ur-TAR.LUH
UrDZ	Ur- ^d Dumu-zi-da	xn	(a product) níg-sám-bi
Ure	Ur-e ₁₁ -e		"its purchase value (is)..."
Urg	Ur-gú-en-na	//	double ruling precedes
Ur M	Ur III account median		entry

Metrological Tables

WEIGHTS

Sumerian	Rough translation	Abbreviation in this work	Metric equivalent	Counting sign for one unit	še	gín	ma-na	gú
še	"grain"	š	c.046 grams	𐎶	1	1/180	1 10800	1 648.000
gín	"shekel"	g	c.8.33 grams	𐎶	180	1	1 60	1 36000
ma-na	"pound"	m	c.500 grams (.5 kg)	𐎶	10800	60	1	1 60
gú	"talent"	—	c.30,000 grams (30 kg)	𐎶	648.000	3600	60	1

WEIGHTS, FRACTIONS

of gín	of ma-na
igi-3-gál etc. = $\frac{1}{3}$ gín	𐎶 ma-na = $\frac{1}{2}$ ma-na
𐎶 gín = $\frac{1}{2}$ gín	𐎶 ma-na = $\frac{1}{3}$ ma-na
SÁM+1 = $\frac{1}{3}$ gín	𐎶 ma-na = $\frac{2}{3}$ ma-na
SÁM+2 = $\frac{2}{3}$ gín	𐎶 ma-na = $\frac{1}{6}$ ma-na

LENGTH

Sumerian	Rough translation	Abbreviation	Metric equivalent	Counting sign for one unit
kùš	"ell," "cubit"	—	about .5 m	𐎶

DRY CAPACITY*

Sumerian	Rough translation	Abbreviation in this work	Metric equivalent	Counting sign for one unit	gin	sila	bán	PI	gur	gur ₇
gin	"shekel"	— ?	—	𒀭	1	1/60	1/600	1/3600	1/18,000	1/64,800,000
sila	"quart"	s ?	—	𒀭	60	1	1/10	1/60	1/300	1/1,080,000
bán	—	— ?	—	𒀭	600	10	1	1/6	1/30	1/108,000
PI	"bushel"	— ?	—	𒀭	3600	60	6	1	1/5	1/18,000
gur	—	— ?	—	𒀭	18,000	300	30	5	1	1/3600
gur ₇	—	— ?	—	𒀭	64,800,000	1,080,000	108,000	18,000	3,600	1

*Note that products which are defined lexically as oils or fats appear to be measured by the dry measure system and not by the liquid measure system, which uses gin, á-ga-m, sila and so on.

Introduction

The Ur III period, dated by the Middle Chronology to 2112 through 2004 B.C.E., is revealed by a mass of documents rivaled in number in cuneiform only by those from the Neo-Babylonian period.¹ These texts are the remains of a complex bureaucracy which recorded meticulously many of its activities.

Wolff has placed the beginning of the "statistical era" in Europe in the sixteenth century A.D.² If a statistical era is one which can boast vast numbers of documents recording numerical data for several areas of economic life, we are justified in speaking of the Ur III period as a statistical era in spite of the gaps in documentation. It is not clear that this penchant for keeping numerical data actually produced any changes in state or personal psychological structures, as Wolff suggests.³ Some aspects of life, politics, for example, usually were not directly reflected in the texts.⁴

Though the data are abundant, they do not usually form patterns that can be quantified. This led the late A. L. Oppenheim, referring to the similar nature of all cuneiform data, to complain: "No picture of trade, let alone of any other aspect of economic life, can be considered of real informative value without quantitative data. The qualitative presentation with which we are forced to deal, not only with Mesopotamian economic matters but

1. According to D. O. Edzard and G. Farber, *Répertoire Géographique* 2 (Wiesbaden, 1974), p. xi, there are about 21,000 published Ur III non-literary texts.

2. P. Wolff, "L'Étude des économies et des sociétés avant l'ère statistique," pp. 847-92 in C. Samaran, ed., *L'Histoire et ses méthodes* (Paris: L'Encyclopédie de la Pléiade 11, 1961), p. 853.

3. Ibid., p. 853. Compare W. W. Hallo and W. Kelly Simpson, *The Ancient Near East: a History* (New York, 1971), pp. 53f. and M. Lambert, "La guerre entre Urukagina et Lugal-zaggessi," *RSO* 41 (1966): 57ff. on the psychology of record keeping at Pre-Sargonic Lagash.

4. I. J. Gelb, "Approaches to the study of ancient society," *JAOS* 87 (1967): 1-8, esp. 3-6, presents an outline of the methodology on which all fruitful study of Mesopotamian economic and social history must be based.

E. Sollberger, "Ur III society: some unanswered questions," *CRR* 18 (1972): 185-89, stresses our ignorance about society and especially about the roles of officials.

For a lively survey of the history of the study of Ur III archival texts and of some new avenues of investigation see Tom B. Jones, "Sumerian administrative documents, an essay," *AS* 20 (Chicago, 1976), pp. 41-61.

also with the social structure of that civilization, has to be recognized as basically incomplete and misleading."⁵ The information available from Ur III is not usually of the sort that medievalists use, for example, to reconstruct population figures.⁶ But C. Fossey showed that many larger texts were actually directly composed from smaller ones and thus allow one to trace the progress of goods through at least two stages in their distribution.⁷ Such attention to quantities may help elucidate systems, which in turn may eventually be susceptible to quantitative analysis.⁸

The present study investigates the Ur III silver balanced accounts, texts which touch on aspects of trade and economic life and the data from which are to some extent quantifiable.⁹

The silver accounts have been studied as a group only comparatively recently, but they bear on two subjects long of interest to ancient Near East scholars, the role of merchants and the meaning of prices. Most of the accounts are subscribed by merchants, and all give commodity prices.

5. A. L. Oppenheim, "Trade in the Ancient Near East," in *Fifth International Congress of Economic History* (Moscow, 1970), p. 3.

6. Compare for example the various studies in D. Rowney and J. Grahah, eds., *Quantitative History: Selective Readings in the Quantitative Analysis of Historical Data* (Homewood, Illinois, 1969) and G. Kurgan and P. Moureaux, eds., *La Quantification en histoire* (Bruxelles, 1973). The controversy over R. W. Fogel and S. L. Engerman's *Time on the Cross*, summarized usefully by H. Scheiber, *American Scholar* 44 4 (1975):656-73, shows some of the limitations of the quantitative approach in failing to deal with the human dimensions of slavery.

7. C. Fossey, "Livres journaliers et grands livres dans la comptabilité de la troisième Dynastie d'Ur," *JSOR* 15 (1931):50-52.

8. It does not seem likely, however, that a modern list of personal names occurring in Ur III texts would actually allow one to make estimates of the population of the various cities, as H. Limet, *L'Anthroponymie sumérienne* (Paris, 1968), p. 22 no. 2, has suggested. Such a list, replacing Schneider's outdated *Or* 23-24 (1927), would be valuable for tracing the activities of individuals, but the bureaucracy probably was not interested in recording the actions of every household. Only certain persons involved in certain activities were of concern, and demographic estimates based on records of those activities would inevitably be too low.

Fruitful use of quantification in Mesopotamian studies has recently been made by I. J. Gelb, "Quantitative evaluation of slavery and serfdom," *AOAT* 25 (1976), pp. 195-207, and K. Maekawa, "Agricultural production in ancient Sumer," *Zinbun* 13 (1974):1-60.

9. It should be noted at the outset that the inclusion in this study of texts from both Umma and Lagash appears to violate what Gelb has called "the archival approach" to the study of ancient society. *JAOS* 87 (1967):3f. Gelb wrote, "The archival approach is based on an intensive study of texts of one period and one site, and within them, if possible, of one archive." There are many more relevant texts from Umma than from Lagash, and the Lagash material might reasonably have been excluded altogether. But the existence of similar types of texts at both sites and the apparently similar content and goals of the operations they represent has led to the inclusion of the Lagash texts even though they may not constitute an archive in quite the sense that the Umma texts do. See Chapter 2 on this problem.

STUDY OF MERCHANTS

The close relation of the persons titled *dam-gàr* "merchant" to trade was first studied systematically by T. Fish in *BJRL* 22 (1938):160-74 and *JRAS* (1939):29-39. He presented a list of persons who bore that title and edited a representative silver balanced account, our AS6xiSes.¹⁰ Fish was the first to call attention to the close relation between merchants and silver money.¹¹ He might have studied more systematically the nine texts available to him,¹² but his work alerted scholars to the merchant texts and established the view that merchants were a distinct social class.¹³

Oppenheim in *AOS* 32, pp. 137f., called attention to the relation of silver accounts to texts like his S23 and *YOS* 4:295 which appeared to deal with merchant importing activities.¹⁴

In Leemans' study of the Old Babylonian merchant he included a short chapter on merchants in earlier periods. Leemans emphasized the probably official nature of the silver balanced accounts (p. 44) though he showed that Ur III merchants did sometimes control private wealth (pp. 45ff.). He found no evidence for any organization of merchants (pp. 47f.).¹⁵

Curtis and Hallo studied the sixteen texts available to them with a view toward the important questions about the vitality of the Ur III economy¹⁶ and presented comprehensive price tables for all the priced products in the accounts. They did not consider the prosopographic links among the silver

10. T. Fish, "The Dam-Qar (trader?) in Ancient Mesopotamia," *BJRL* 22 (1938):163f. For some reason he included the Old Akkadian sources in Luckenbill, *Inscriptions from Adab*, OIP 14. Forde in his Minnesota dissertation, "The Sumerian *DAM-KAR-E-NE*," (1964) repeats the Adab names in his list, thereby causing unnecessary confusion. The names are *Seš-šaga*, *Ur-Ninazu*, and *Ur-mes*, but note there is an Ur III merchant named *Ur-mes* from Lagash, Forde, p. 13. The Old Akkadian merchants have been deleted from Forde's MS list.

11. Fish, "Dam-qar," p. 172; the relation was emphasized later by Curtis and Hallo, "Money and merchants in Ur III," *HUCA* 30 (1959):103-39, esp. p. 107.

12. Fish, "Some Sumerian tablets of the third Ur Dynasty," *JRAS* 1939, p. 33; *SA* 76 is a related account but not a silver balanced account. Fish failed to mention *CT* 5:38, our S43xGdl, which had been studied by Langdon, *Babyloniaca* 6 (1912):41-45, as noted by W. Leemans, *The Old Babylonian Merchant: His Business and Social Position* (Studia et Documenta III. Leiden, 1950), p. 43 n. 128. Fish also missed *TCL* 5:6045.

13. Fish, "Dam-qar," p. 162.

14. Oppenheim does not mention Fish's studies, nor does he allude to all the silver accounts then available.

15. He revised Fish's list of Ur III merchants, p. 48 n. 140; compare also his remarks in *Foreign Trade in the Old Babylonian Period* (Studia et Documenta VI. Leiden, 1960), p. 142, and Hallo's review, *JCS* 17 (1963):59f.

16. "Money," pp. 103ff., esp. pp. 104-06.

accounts, but they did stress the apparently close relation between silver and merchants. Their reconstruction of silver account activities was slightly different from that suggested by Leemans since they believed that staple goods were exchanged directly for the purchased goods instead of being sold for silver.¹⁷

Forde in his unpublished 1963 University of Minnesota dissertation revised the list of Ur III merchants and attempted to find regularities in the texts in which titled merchants appear.¹⁸ He was convinced that there was an organization of merchants and was able more fully to document their apparently private dealings (pp. 73ff.). But he did not venture to study texts in which merchants appear without title. This would have increased the number of texts with which he had to deal tremendously, but it seems that only thus can a clear picture of the activities of some of the persons be obtained.¹⁹

Several contributions to the twenty-fifth Rencontre Assyriologique Internationale have broadened the understanding of the roles of merchants. For our purposes the articles by Leemans and Powell are most significant. Leemans, summarizing the results of the rencontre, pointed out that foreign trade was never very important to the Mesopotamian economy, which drew its strength from its marvelously efficient agricultural production.²⁰ Powell argues that Ur III merchants were private persons who contracted with the government in order to make profits.²¹ As will be clear below, the texts considered here do not support his view though they are not inconsis-

tent with it; merchants in these texts do not make profits, but they may have conducted private business for profit of which we have no record.

The etymology of the word for merchant, *dam-gār* = *tamkāru*, continues to elude explanation. It is possible that the etymology may reflect the close relation between merchants and money if, as Deimel in *ŠL* 333: 1a suggested, the second sign was originally a picture of a filled (silver?) sack, *LAK*: 160. The first element remains a problem since it seems to stand for words for spouse and partner, *ŠL* 557:30b = *tappû*. Perhaps *dam-gār* reflects a fanciful etymology, "spouse of the purse," for an Akkadian original. But if *tamkāru* is of Semitic origin, the verb *makārum* to which it might be related is not widely attested.²² Landsberger concluded in light of the strange reflexes of the word in other languages, like Arabic *tājir*, that the word is a substrate word and its origin beyond recovery.²³

All the studies discussed above represent advances in the understanding of the merchants' roles, but all have been limited by the uneven distribution of the available documentation.²⁴

merchant texts. My own article, "The activities of some merchants of Umma," *Iraq* 39 (1977): 45-50, briefly summarizes some of the results of the present work, but the discussion of domestic and foreign origins, p. 48, must be revised in light of further study incorporated in the glossary below.

22. Von Soden has only a few late references under *makāru* II, though he lists *tamkāru* as a derived form, *AHW*: 588b. He admits the possibility, *AHW*: 1314b, that the Akkadian verb may be derived from the Sumerian noun. Oppenheim, "Old Assyrian *magāru* or *makāru*?", in Güterbock *AV*, K. Bittel et al. eds. (Nederlands Historisch-Archaeologisch Instituut, Istanbul, 1974), pp. 229-37, isolated instances of *makāru* in the Old Assyrian period though he was unable to determine its exact meaning; it refers to "a specific type of business transaction," p. 236.

23. Baumgartner *AV* (Leiden, 1967), pp. 177ff. Note that A. Salonen, *Die Fussbekleidung der alten Mesopotamier* (Helsinki, 1969), pp. 108f., 115, believes that the word for silver, which he reconstructs as **kubār*, comes from the same late Neolithic substrate as *dam-gār*.

Other words for merchant may have less to do with silver but are just as hard to explain. Oppenheim, *JAOS* 74 (1974): 6-17, pp. 14f. and n. 22, wanted to connect *ga-eš* = *kaeššu* with the town Gaeš, but Landsberger saw *ga-* as a prefix and *eš* as a verbal element meaning "to travel." Baumgartner *AV*, pp. 177f. n. 3. Like *dam-gār*, *tibirā ibira* = *tamkāru* may also be a substrate word, i.e. one which we cannot explain, *ibid.*, p. 178. Neither *ga-eš* nor *tibirā* is used in connection with Ur III account merchants; the milieu of these words are to be sought elsewhere.

Compare Hallo, *JCS* 17 (1963): 60, for differences in usage of the title merchant between Ur III and Old Babylonian. Note however that account merchants appear outside the accounts without their title.

The close relation between silver as money and traders is attested also in first millennium India, as noted by R. Thapar, *Daedalus* (Spring 1975): 121.

24. For other periods Oppenheim's study of the Old Babylonian "Seafaring merchants of Ur," *JAOS* 74 (1959): 6-17, retains its importance. R. Harris, *Ancient Sippar* (Nederlands Historisch-Archaeologisch Instituut, Istanbul, 1975), pp. 257-61, presented the evidence

17. *Ibid.*, pp. 111f. versus Leemans, *Merchant*, pp. 44f.

18. Add to the list in his dissertation the merchants adduced by Falkenstein, *Die neusumerischen Gerichtsurkunden* II (München, 1956), pp. 11f. and the correction noted above, n. 10, all included in Forde's MS.

19. J. Jordon, "Studies in Sumerian prosopography: Sheshkalla" (PhD diss. University of Minnesota, 1971) has taken up where Forde left off by studying (in a prosopography of all persons named Šeš-kala) the activities of the merchant of that name.

20. W. F. Leemans, "The importance of trade: some introductory remarks," *Iraq* 39 (1977): 1-10.

21. M. A. Powell, "Sumerian merchants and the problem of profit," *Iraq* 39 (1977): 23-29. *YOS* 4:37, which Powell cites p. 27 to show that the balance carried forward of a balanced account could appear in a private loan, does not definitively show that the balanced account operation we shall study here was a private operation. Only one of the personal names appears in preserved accounts, Lugal-hé-gál the merchant, and the text is dated IS 2, later than any of the preserved accounts. Powell's article "Götter, Könige, und 'Kapitalisten', in Mesopotamien des 3. Jahrtausends v.u.Z.," *Oikumene* (Budapest, 1977?), mentioned p. 23, n. 2, was unavailable to me.

B. R. Foster, "Commercial activity in Sargonic Mesopotamia," *Iraq* 39 (1977): 31-43, contributes a number of useful observations on the activities of merchants in the period preceding the Ur III period and finds that his business agents buy goods both for private individuals and state organizations. H. Limet, "Les schemas du commerce néo-Sumérien," *Iraq* 39 (1977): 51-58, makes a number of comments on the origins of the products found in

STUDY OF PRICES

Observations on the price of gold were made by Weissbach, Thureau-Dangin, Ungnad, and Poebel, the last in connection with publishing a small part of our AS9Lkl.²⁵ But Schwenzner was the first to try to assemble prices for all kinds of products from ancient Mesopotamia, in *MVAG* 19/3 (1914).²⁶ He brought together material mostly from the Old Babylonian

for merchant activity in Sippar noting that links to the palace organization are hard to define, and that there are none to the cloister and temple. Also she found that the individual and partnership trading documents from the city do not seem to involve merchants, pp. 262–65.

A. L. Oppenheim, "Essay on overland trade in the first millennium B.C.," *JCS* 21 (1967): 236–54, studied texts on international trade from Neo-Babylonian Uruk. M. Dandamajev recently considered the role of the merchant in the first millennium and showed merchant involvement with many of the typical products known from Ur III merchant sources including fish, figs, gold, garlic, dates, and livestock, *Beiträge zur sozialen Struktur des alten Vorderasien* 1 (1971): 69–78, esp. 72–76. In spite of continuities in the products dealt with, Dandamajev points out that the Persian peace of the sixth century probably gave much greater impetus to foreign trade than anything previous in Mesopotamian history, p. 78.

Several studies have been done on merchants at Ugarit, including A. Rainey, *IEJ* 13 (1963): 313–21; M. Heltzer, *VDT* 2 (88) (1964): 3–16; *Palestinikij Shornik* 19 (1969): 7–31 (but see n. 1 in following); *Iraq* 39 (1977): 203–11; *Goods, Prices, and Organization of Trade in Ugarit* (Wiesbaden, 1978); R. Yaron, *Israel Law Review* 4 (1969): 70–79; and M. Astour, *CRR* 18 (1972): 11–26.

I. Nakata has tried to see in the Šamaš hymn reflections of a merchant ethic, *JANES* 3 (1970–71): 90–101; the hymn is edited by W. Lambert in his *BWL*, pp. 121ff., and though all copies come from Neo-Assyrian or Late Babylonian times, he believes the milieu of the hymn may indicate it goes back to the Old Babylonian period, p. 122. Lambert has also found in the incantation literature references to oppressive merchants, *JNES* 33 (1974): 299; compare there H. Güterbock, *JNES* 33 (1974): 324, and the proverb cited below, Ch. 2 n. 15. M. Civil has called attention to a Sumerian literary work in which the god Enlil is called a merchant, *JCS* 28:2 (1976): 72–81, and adduced another proverb indicating the unpopularity of merchants. H. Hoffner, *JCS* 22 (1968–69): 34–45, edited a Hittite text in "epic style" about merchants.

For possible archaeological trace of mercantile activity in the late fourth millennium see H. Weiss and T. C. Young, *Iran* 13 (1975): 1–17, esp. p. 15.

M. Rodinson, "Le Marchand méditerranéen à travers les âges," C. A. O. van Nieuwenhuijze, ed., *Markets and Marketing as Factors of Development in the Mediterranean Basin* (The Hague, 1963), pp. 71–92, presented a broad and amusing portrait of the role of merchants in the pre-modern Near East.

25. F. Weissbach, *ZDMG* 61 (1907): 392ff. (Neo-Babylonian); F. Thureau-Dangin, *OLZ* 1909, cols. 382–84 (Old Babylonian); A. Ungnad, *OLZ* 1911, col. 106 (Old Babylonian); A. Poebel, *OLZ* 1914, cols. 241–45 (Ur III). Compare also Thureau-Dangin, *RA* 8 (1916): 92ff. (Old Akkadian).

26. *Zum altbabylonischen Wirtschaftsleben*, presented for a popular audience in *AO* 16: 1 (1916) without text citations. Compare also V. Scheil, "Sur le marché aux poissons de Larsa," *RA* 15 (1918): 183–94.

period (2004–1595 in the Middle Chronology) and material concerning all sorts of products and presented it in tabular form. He failed to differentiate adequately the diverse nature of the evidence, and he did not limit himself to a single geographic area. His data thus have little significance, but his work was a worthy pioneer effort.²⁷

Schwenzer's teacher, Meissner, in 1936 supplemented his efforts but did not present the data in tabular form.²⁸ Again Meissner failed to study geographic and temporal units as wholes, and his study is quite fragmented.²⁹

Lutz's survey of the topic is so general as to be of no use since it quotes no sources.³⁰

Dubberstein's 1939 study of prices in Neo-Babylonian and later times avoids the mistakes of earlier scholars by concentrating on a narrow geographic area in a fairly limited period.³¹ His conclusions as to the reasons for the inflation he observed were somewhat limited, but his sources may have allowed no fuller explanation.

Sweet's unpublished Chicago dissertation (1958) is a valuable consideration of Old Babylonian prices, though Sweet himself was apparently unhappy with the results of his researches. He failed to find any trends in the prices he analyzed³² and turned to an analysis of the role of silver as money in Old Babylonian times. He showed that it did function in the various roles of modern money, though it shared those roles with other staple commodities, especially grain and oil.

In their 1959 study of money and merchants in Ur III Curtis and Hallo presented price tables for the sixteen silver balanced accounts they had. They found no trends in the material but did suggest that the staple items of the merchants' capital had stable prices, perhaps as the result of state efforts to control them (*HUCA* 30, pp. 111ff.).³³

27. See Sweet's detailed criticisms of his methodology, "On prices, moneys, and money uses in the Old Babylonian period" (PhD diss. University of Chicago, 1958) pp. 6ff., esp. p. 50.

28. *Warenpreise in Babylonien*. Abhandlungen der preuss. Ak. der Wiss., Phil.-Hist., 1936:1, supplemented in *Sitzungsberichte* (1937), pp. 5–7.

29. Cf. also his remarks in *Babylonien und Assyrien* I (Heidelberg, 1920), pp. 336–70 on prices and trade.

30. H. Lutz, "Price fluctuations in Ancient Babylonia," *Journal of Economic and Business History* 4 (1931–32): 335–55. R. Forbes, *Studies in Ancient Technology* 1–IX (Leiden, 1954–64) is entirely derived from secondary Assyriological sources and thus is of no independent value for prices.

31. W. Dubberstein, "Comparative prices in later Babylonia (625–400 B.C.)," *AJS* 56 (1939): 20–43 and the short note in *JAOS* 52 (1932): 304f.

32. "On prices," pp. 50, 75.

33. Falkenstein compiled slave prices for the period in *NSG* 1: 88ff. and observed grain prices *ibid.* 11: 12. H. Limet, *Le travail du métal au pays de Sumer au temps de la III^e dynastie d'Ur*

Limet in *JESHO* 15 (1972): 31–34 assembled some Old Akkadian prices in the context of a study on metalwork in that period. Gelb in *MAD* 3 helpfully compiled references to Old Akkadian prices in his entries for products.³⁴

Farber in his 1974 MA thesis³⁵ returned to the problem of Old Babylonian prices and believes that the ratio of gold to silver varies because the value of gold varies. This problem had seemed insoluble to Sweet (p. 10) and severely limited the meaning of the silver prices he assembled. Farber's conclusions about the correlation between price fluctuations and political events especially at the end of the First Dynasty of Babylon remain to be tested. But his findings are more likely to be significant than those of earlier studies because they are based on texts from a limited geographic and political area and from a fairly limited time.³⁶

These studies have shown that price data from all periods are sparse, and only rarely do they appear to group into trends. The meaning of prices and the value of price study are in this light open to question. But prices can serve a number of functions in the reconstruction of Mesopotamian his-

(Paris, 1960), pp. 99–104, and H. Waetzoldt, *Untersuchungen zur neusumerischen Textilindustrie* (Roma, 1972), pp. 73–76, assemble prices for Ur III metals and wools respectively.

34. See Chapter 3 for his planned price index. Note also Edzard's compilation of pre-Ur III slave prices, *Sumerische Rechtsurkunden des III. Jahrtausends* (München, 1968), p. 87 and add to Limet's list A. Westenholz, *JCS* 26 (1974): 76:8.

35. "A price and wage study for northern Babylonia during the Old Babylonian period," *JESHO* 21:1 (1978): 1–51.

36. Edzard has discussed Old Babylonian prices in *Altbabylonische Rechts- und Wirtschafts-urkunden aus Tell ed-Der* (München, 1970), pp. 40f. Compare also his discussion of Middle Babylonian gold prices, *JESHO* 3 (1960): 40f. W. Leemans, *JESHO* 11 (1968): 197 discusses Old Babylonian metal prices, and R. Harris, *Sippar*, p. 269, lists the prices found in her texts. H. Sauren, *AION* 21 (1971): 182, does the same for the Ur III texts which he published in *WMAH*. V. Jakobson has studied land prices in the Old Babylonian period in *Beiträge zur sozialen Struktur des alten Vorderasien* 1 (1971): 33–37.

P. Garelli has surveyed Old Assyrian prices in *Les Assyriens en Cappadoce* (Paris, 1963), pp. 284–94.

For Old Babylonian Mari A. Finet in his study of the wine trade deduced prices for wine from the rate of taxation, *Afo* 25 (1974–77): 122–31, esp. pp. 127–29 and 131 n. 70. O. Rouault, who studied wool at Mari, gives price data, *Iraq* 39 (1977): 147–53, p. 148 n. 5.

For Middle Babylonian Nuzi some prices have been discussed by D. Cross, *AOS* 10 (1937), pp. 30f., 35, 40, 42, and in general, pp. 38–47. Compare also B. Eichler, *YNER* 5 (1973), pp. 30f., 42, and 121.

Seleucid astronomical diaries record commodity prices on a monthly basis; see A. Sachs, *JCS* 2 (1948): 286. The chronicles also sometimes note prices; see A. K. Grayson, *Assyrian and Babylonian chronicles*, *TCS* 5 (1975), pp. 178f. and 118f. M. Heltzer surveyed metal prices at Ugarit in *Iraq* 39 (1977): 203–11, esp. 203–05, and R. Stieglitz studied prices at Ugarit in *JAOS* 99 (1979): 15–23.

tory. Most simply, price study can show the scholar who is confronted with a new text that gives a price whether the new price is comparatively low or high. This may be important in establishing the context and meaning of the document.

Also, prices may serve as a quantitative check on qualitative conclusions. Notably this has been possible in the consideration of the various royal tariffs. In general one might assume that royal statements would be likely to reflect the goal rather than the result of royal policy, and it does seem that the prices quoted in them are usually lower than those attested in roughly contemporary archival sources.³⁷

The mere existence of pricing appears to be an important datum for evaluating the quality of economic life.³⁸ But the correlation of prices and price trends with social or political events is subject to many uncertainties. Even in modern times when quantitative data are abundant, such correlations are not always clear or are subject to various interpretations.³⁹ It would seem in general that prices are more indicative of economic than social and political realities, of the ways economic life was lived rather than of the actions of particular rulers.

This study owes a great deal to the works cited above, especially to Sweet's methodological strictures and to Curtis and Hallo's groundbreaking work on the Ur III material. I have tried to build on the foundations earlier scholars have laid and to make beginnings in the following tasks:

- (1) To define the subgenre of the silver balanced account. These texts usually show a similar form, and this form usually can be related directly to a particular group of persons working in a particular bureaucratic system. The union of form and function is not so complete as, for example, it is in the *di-til-la* "completed judgments" studied by Falkenstein.⁴⁰ But function is directly related to form in the majority of the texts. With the subgenre adequately defined, scholars should find it easier to identify other examples of the genre which might relate to the same acquisition system.
- (2) To investigate the bureaucratic system behind the accounts.
- (3) To analyze the prices contained in the silver balanced accounts.
- (4) To clarify the nature of the products and to attempt to assemble the available data on their origins.
- (5) To make the published and unpublished accounts available in comprehensible form in indices.

37. Cf. E. Sollberger, *UET* 8 (1965), pp. 15f.

38. See Chapter 4.

39. See Chapter 4.

40. See *NSG* 1, pp. 7–18, esp. pp. 14–16.

Especially in Chapter 2, where I attempt to reconstruct the system behind a large group of the silver balanced accounts, I make hypothetical proposals that will be modified as more texts become available. Those proposals are not the final word on the system, and the models I suggest may not conform to the reality that once existed. But, as John Habakkuk observed in connection with economic model-building, "By definition a model contains assumptions which depart from reality. This is precisely what models are for; they are attempts to understand reality by simplifying it."⁴¹ It is wise also to remember the motto that Benno Landsberger once quoted, "Without taking some risk, we can go nowhere."⁴²

CHAPTER 1

The Forms of the Silver Accounts

The first task is to try to scrutinize the texts to define what constitutes a silver balanced account. A subsidiary goal is to make a beginning on the systematic study of Mesopotamian accounting techniques. Jones and Snyder illuminated the system of bureaucracy at work at Ur III Puzrish-Dagan,¹ but as Sweet complained in his earlier thesis, there remains a lack of work on actual accounting procedures for any period.²

A basic guide to the native classification is the subscript of any text. The texts here studied all share the same subscript or can be demonstrated otherwise to be closely related to texts with that subscript.

C. Fossey, who did the basic study laying the groundwork for understanding all sorts of Ur III balanced accounts, read the subscript with prudent doubt as NIG. ŠITA.AG = *nikkassu epšu* "made or balanced account."³ Subsequent lexical discoveries have shown that it is to be read *nig-ka₉-a k*.⁴ In Assyriological literature, however, there persists the read-

1. Jones and Snyder, *SET*, pp. 212ff.

2. Sweet, "On prices," p. 78. Accounting terms have of course been discussed for various periods, most helpfully for Old Babylonian by F. Kraus, *Ein Edikt des Königs Ammišaduqa* (Leiden, 1958), pp. 88-94, and *Staatliche Viehhaltung im altbabylonischen Lande Larsa* (Amsterdam, 1966), pp. 124-26. Compare also the discussion of text types by K. Butz, "Konzentrationen wirtschaftlicher Macht im Königreich Larsa: der Nanna-Ningal-Tempelkomplex in Ur," *WZKM* (65-66 (1973-74): 1-58, and for the rather different Old Assyrian terms see K. R. Veenhof, *Aspects of Old Assyrian Trade and Its Terminology* (Leiden, 1972).

3. C. Fossey, "Les NIG-ŠITA-AG," *JSOR* 14 (1930): 51-89, esp. p. 51.

4. *MSL* 5:64:168. The *ka₉* may well be intended to be read *ka₅*, in view of the Akkadian equivalent. To avoid confusion the shorter *ka₉* will be used throughout this study. Note also Landsberger, *JCS* 13 (1959): 129:193, *ka-a* = *ŠID ša NIG.ŠID ni-ka-as-su* "ka is the reading of the sign ŠID in the word NIG.ŠID meaning account." This word has a long subsequent history. It appears in Akkadian as "accounting, account," but in Neo-Babylonian it is used to mean "riches, possessions," *AHW*:789a-b. In this latter meaning *nks* appears in Imperial Aramaic, C. Jean and J. Hoftijzer *Dictionnaire des inscriptions sémitiques de l'Ouest* (Leiden, 1965), p. 179. With this meaning the cognates *nekāsim* and *niksin* appear in the Hebrew and Aramaic parts of the Bible; see L. Koehler and W. Baumgartner, *Lexicon in Veteris Testamenti Libros* (Leiden and Grand Rapids, 1958), pp. 617b, 1100a. Later Hebrew and Aramaic continue the meaning, M. Jastrow, *A Dictionary of the Targumim, the Talmud . . .* (Brooklyn, 1967), p. 911b, as does Syriac *neksin*, J. Payne Smith, *A Compendious Syriac Dictionary* (Oxford, 1903), p. 340a.

41. "Economic history and economic theory," pp. 27-44 in *Historical Studies Today*, F. Gilbert and S. Granbard, eds. (New York, 1972), p. 34.

42. *JNES* 24 (1965): 285.

ing *uttuku* for *NĠG.ŠID* (= *ŠITA_s*).⁵ This reading refers only to a sort of garment or measuring stick, the Akkadian equivalents of which are *mahiṣ-tu* and *upaqqu*.⁶ The reading has nothing to do with the texts under consideration here and should not be used.⁷

ACCOUNTS HERE STUDIED

Marginal and deviant texts have usually not been included in the list in Table 1, since analysis shows some to be barely examples of the subgenre of silver balanced accounts. The basic criteria are that the text gives prices in silver in the form *kù-bi* "its silver (value)" and that the text is subscribed as a balanced account or closely related to such texts.

A word may be said about the exclusion from the following table of those texts that deal in silver but offer no prices in silver, like *ŠA 96* or *EAH 11*.⁸ Such texts list amounts of silver from various origins, total them, and sometimes list expenditures of silver, occasionally priced in grain.

Table 1 includes all general information about each account, but the relations among preserved accounts will not be considered until Chapter 2.

AOS 32:E34, adduced by Leemans, *Merchant*, p. 43 n. 128, is not included since it appears not to deal with silver. *UET 3:337*, adduced by Curtis and Hallo, "Money," p. 106 n. 10, is not included because only the subscript is preserved; it is probably not a balanced account, however, since the copy shows only one line is missing, a silver amount which is labeled *diri mu-du, nīg-ka₉-ak dam-gār, é^dUtu Uri^{ki}-ke₄* "overdraft of the delivery of the balanced account of the merchant of the house of the god Utu of Ur." *TCL 5:6166*, a list of priced worker-days is not included because it is not subscribed as a balanced account and has only one sum. *YBC 11087*, a balanced account of land sections which are priced in silver, is not included since it does not deal in commodities.

Three texts which were included in the dissertation on which this study is based have been eliminated from the list of accounts: *MLC 670* (Lagash *S44v*), *UET 9:882* (Ur *IS6ix*), and *UET 3:1165* (Ur *IS7x*). The reason for this is that they diverge in significant ways from the standard form known from texts at Umma. *MLC 670* evaluates goods in copper, and is subscribed by a smith. The two Ur texts are subscribed by merchants and have at least one price each in silver, but *UET 9:882* has several separate totals of

5. Used most recently by Forde, "DAM-KAR-E-NE," pp. 16ff. though corrected in his MS. pp. 7ff. Note that Oppenheim, *AOS 32*, p. 7 n. 15a, wrote, "In spite of the well-established reading *uttuku* for *NĠG.ŠID*, I prefer to retain *NĠG.ŠID.AG* 'to settle accounts'."

6. *MSL 5:151:17ff.*, *AHW:584a*, and Salonen, *Hausgeräte 1*, pp. 274f.; see also *SI 536:329*.

7. Cf. Sollberger, *Afo 21* (1966):91, noting Oppenheim's doubt.

8. Radau, *History*, p. 324; published now as *MVN 9:11*.

goods acquired. *UET 3:1165* is quite short but unusual in that it regards *i-giš* "sesame oil" as a capital product and acquires only sheep.⁹ The Ur texts are clearly related to the role of merchants at that site, and will be considered in the section studying systems at other sites analogous to the Umma system. But they seem especially dissimilar to the Umma texts because of their acquisition of sheep. Among the Umma texts only *SS6Lkl* acquires livestock, and this acquisition appears to be an acquisition extraneous to the main business of the account. Eliminating these texts involves a value judgment on what constitutes the genre under consideration, and such judgments are bound to be circular, as Wellek and Warren point out in their discussion of the isolation of genres.¹⁰ But in trying to ferret out the native criteria for a genre, such judgments must be made.

The following texts were studied by Curtis and Hallo: *S29Urs*, *S40?*, *S43xGdl*, *AS3Ses*, *AS4iUrDZ*, *AS4Sgk*, *AS4dgn*, *AS5Inm*, *AS5SesB*, *AS6xiSes*, *AS6xiPd*, *AS8viiUrDZ*, *ASxiiUre*, *SS2UrDZ*, *SS6Lkl*. They also studied *UET 3:1165*, which has been eliminated here.

S. Langdon studied *S43xGdl* in *Babyloniaca 6* (1912):41ff. T. Fish studied *AS6xiSes* in *BJRL 22* (1938):160ff. H. Limet in *Le Travail du Métal*, p. 79 and n. 3, identified *AS9Irm* as a silver balanced account; he also transliterated *S48snga*, pp. 80f. N. Forde identified *AS4Lgh* as an account in "DAM-KAR-E-NE," pp. 15f. G. Pettinato and L. Cagni have offered collations to *S29Urs*, *S40?*, and *S47Dg* in *Oriens Antiquus 13/3* (1974):199-210.¹¹

In Table 1 sequence numbers have been assigned to the texts for reference, but text code numbers have been given to show both the date and subscriber for ease of reference in the present study. In this list texts that have the same date are ordered alphabetically by place of publication or museum; texts dated to a year and a month precede those dated only to the year in any given year except *AS5Pd* which can be demonstrated to precede *AS5xiPd*.

9. Note that Jordan, "Sheshkalla," p. 31, considers the subscriber of this text to be the same as the Umma merchant entirely on the basis of the use of the same subscript at Umma and in this text. I prefer to keep the question open.

10. R. Wellek and A. Warren, *Theory of Literature* (New York, 1970), p. 260.

11. The following scholars permitted quotation of texts which they studied or are to publish: I. J. Gelb for *AS5xiPd*; Tom Jones for *AS9xPd* and *SS6Ab*; Baruch Levine for *AS4UrDZ* and *AS9UrDZ*; Darlene Loding and David Owen for *UET 9:882*; Piotr Michalowski and David Owen for *S44iUrSPE* and *AS3Urg* and William Moran for permission to quote them; David Owen and Gordon Young for *AS3iUrDZ*; and Piotr Michalowski for *AS2xiiiUrT*. W. W. Hallo's permission to study *AS3Ses*, *AS3Pd*, *AS5PdA*, *AS5PdB*, *AS5SesA*, *ASLIn*, *AS6iiKd*, *AS6xiUrDZ*, *AS7viiUrDZ*, *AS7ixPd*, *SS5Pd*, *SS5Lkl*, and *SS7Aak* is especially appreciated. Also I owe the frustrating reference to *AS9Lkl* to Benjamin Foster.

The system of text code numbers is based on the premise, so far not contradicted by the evidence, that in any one month subscribers do not have more than one text. A subscriber may have two texts in one year neither of which has month dates; in that case A and B is added to the date and the subscriber's name abbreviation.¹²

Dates refer to regnal years of the Ur III kings as conveniently compiled in K. Sykes' MA paper, "The Year Names of the Ur III Period," University of Chicago, 1973, which builds on Sollberger, *A/O* 17 (1954-56): 10-48 and Goetze, *Iraq* 22 (1960): 151-56.

Subscribers are persons whose names appear after the subscription. There is some variety in the information given about the subscribers and probably in their relations to the accounting process. See for example S48snga, AS8Ag, and AS9Lkl. Here as elsewhere the names of subscribers are abbreviated.

For the method of assigning ambiguous texts to sites see note 87, Chapter 2. The accounts come from two different sites, but the exact find spots are not known.

The general area is known wherein a similar Ur text was found, but it may have been part of a large cache found in secondary use as fill.¹³ The Lagash texts come from the French excavations at Tello, and imprecise records do not allow find spot identification.¹⁴ The tablets from Umma are all the results of clandestine digging. The site has been visited by scholars but never legally excavated.¹⁵

Unless otherwise noted, the texts' subscripts are in the form níg-ka₉-a k PN (+ title) or níg-ka₉-a k (title). AS4dgn and SS5viUrSPE are not labeled níg-ka₉-a k, but are included here because of their formal resemblances and prosopographic links to other accounts.

The following remarks attempt to clarify the data available from some of the more difficult texts: S47Dg. The date of the text is broken, but a si-i-tum "balance carried forward" of the year S46 is mentioned in 1:7, and the text has been assigned here to the following year.

AS2xiiiUrT. The tablet was originally published by J. Bromski in RO 5

12. The numbering system used in my dissertation should be abandoned in favor of this system. Though assigning arbitrary numbers has the advantage of simplicity, it does not convey precise chronological or prosopographic identification and makes insertion of new texts quite clumsy.

13. See T. Jacobsen, *AJA* 57 (1953): 126 and 128 n. 1.

14. See in general A. Parrot, *Tello: vingt campagnes de fouilles* (Paris, 1948).

15. See the short description of Umma by W. Andrae, *MDOG* 16 (1902-03): 20f. and the summary of early visits by G. Contenau, *CHEU* (1915): i-viii, to be supplemented now by R. Adams and H. Nissen, *The Uruk Countryside* (Chicago, 1972), p. 227b and the listing in R. Ellis, *A Bibliography of Mesopotamian Archaeology* (Wiesbaden, 1972), p. 41.

(1927): 9 as number VIII, but P. Michalowski's copy of the tablet published here as Copy 2 is much clearer and more accurate. On the subscriber's name see Sollberger, *TCS* 1, pp. 178f. item 705.

AS5SesA. The date of the text is broken, but it has been assigned to AS5 on the basis of the appearance of its remainder as the balance carried forward in AS5SesB; AS5SesA cannot be from AS4 since the year AS5 is mentioned in 2:9.

AS9UrDZ. The tablet, Lager 1, is in the Yale Babylonian Collection and will be published in a *YOS* volume.

AS9Lkl. Poebel quoted only nine lines including the date; the two prices came from the fifth column, so this was probably at least a six-column tablet. It duplicates none of the other accounts in those quoted lines, and I have been unable to trace it further. Since it was for sale in New York when Poebel saw it, it is presumably now in a private collection in America.

Table 1. Silver Balanced Accounts

Sequence Number	Text Code Date Subscriber	Text Site	Balance Carried Forward	Capital Sum	Expenditure Sum	Remainder + or -	Subscript
1	S29Urs	TUT 121	L	520g	?	+517g 114	Ur-šu-ga-lam-ma šabra
2	S40?	TUT 122	L	?	?	?	?
3	S43xGdl	CT5 pl. 38f	L	5g 120	42g 174	30g 53	+12g 121
4	S44iUrSPE	HSM 6445	L		39g 18	39g 1	+18g
5	S47Dg	TUT 131	L		?	?	+5g 135
6	S48snga	CT7:46a	L?		(606g 150)	606g 150	(-)
7	AS2xiiiUrT	Varsovie 42786 Copy 1	U?		71g[5]0	68g 90	+2g 140
8	AS3iUrDZ	AOAT 203: 216f	U	211g 56	927g 83	655g 128	+271g 135
9	AS3Urg	HSM 6457	L?	X+60?g 70x	X+60?g 70x	?	?
10	AS3Ses	HUCA 30: 113f	U?		42g 101	42g 104	(-38)
11	AS3Pd	MLC 1980 Copy 2	U		112g 64	110g 112	+1g 132
12	AS4iUrDZ	STA 22	U	145g 74	163g 8	145g 62.5	+17g 125.5
13	AS4UrDZ	Colgate 2 Copy 3	U	17g 125	412g 125	398g 68	+14g 57
14	AS4Lgh	Nikolski 402	U?		(13g 60)	12g 173.5	+66.5

Sequence Number	Text Code	Text Date	Text Subscriber	Site	Balance Carried Forward	Capital Sum	Expenditure Sum	Remainder + or -	Subscript
15	AS4Sgk	TCL 5: 6162	U		50g	50g (+erasure)	(+erasure) 6.58	(6.58)	Sag-kus dam-gār
16	AS4dgn	TCL 5: 6046	U		846g 28	171g 38	(674g 170)		sag-nig-ga-ra dam-gār-ne Pād-da
17	AS5PdA	NBC 11453 Copy 4	U		155g 116	72g 55	+83g 61		Pād-da
18	AS5xiPd	Ashmolean 1924, 667	U	83g 60	267g 1	170g 94	+96g 87		Pād-da dam-gār
19	AS5PdB	YBC 16487 Copy 5	(U)	96g 87	96g 87	48g 160	+47g 107		Pād-da dam-gār
20	AS5SesA	NBC 10801 Copy 6	U		76g 94	71g 172	+4g 102		Šeš-[kal-la]
21	AS5SesB	TCL 5: 6056	U	4g 102	201g 76	140g 34	+61g 32		Šeš-kal-la dam-gār (sic)
22	AS5Inm	TCL 5: 6052	U		208g 58	86g 86	+120g 152		Inim-ma-ni-zi dam-gār (sic)
23	AS5Lin	YBC 16569 Copy 7	(U)	3g 88	40g 33	27g 23	+13g 10		Lú- ^d Inanna dam-gār
24	AS6iiKd	YBC 15333 Copy 8	U		[23]3g 68.5	155g 40	+78g 28		Kud-da dam-gār (sic)
25	AS6xiSes	JRAS 1939 32f	U	61g 32	196g 132	127g 61.5	+69g 70.5		Šeš-kal-la dam-gār
26	AS6xiUrDZ	MIC 2602 Copy 9	U	52g 150	418g 80	[3]38g 163	+79g 97		Ur- ^d Dumu-zi-da
27	AS6xiPd	STA 23	U	47g 117	271g 12	123g 40	+147g 152		Pād-da dam-gār
28	AS7viiUrDZ	NBC 11448 Copy 10	U	79g 97	265g 88	130g 43.5	+135g 44.5		Ur- ^d Dumu-zi-da dam-gār
29	AS7ixPd	MIC 2600 Copy 11	U	31g 4	251g [148]	173g 77.5	+78g 70.5		Pād-da
30	AS8viiUrDZ	STA 1	U	68g 60	302g 120	158g 6	+144g 114		Ur- ^d Dumu-zi-da dam-gār
31	AS8xiiUrDZ	MVN 1:240	U		310g	211g 150	+98g 30		Ur- ^d Dumu-zi-da
32	AS8xiiUre	TCL 5:6045	U		167g 10	155g 81	+11g 110		kū-ga Ur-e ¹¹ -e (sic)
33	AS8Ag	Grégoire 65	U		[6g 152]	6g 152			dam-gār ša bala-a gir A-gu
34	AS9xPd	Mississippi 3	U	64g 20	166g 140	87g 107.5	+79g 32.5		Pād-da nig-sa,
35	AS9UrDZ	Lager 1	U		869g 70	869g 70.5	(.58)		(NINDA ⁵ ŠI)-ma Ur- ^d Dumu-zi-da dam-gār
36	AS9Irm	Nikolski 403	U?		(22g 120)	22g 120			dam-gār ša bala-a gir Ir ¹¹ -mu ū Ur- ^d Nu-muš-da
37	AS9 Lkl	OLZ 1914, 241 2	U?		?	?	?		kū-ga Lú-kal-la
38	SS2U ¹ DZ	TCL 5: 5680	U		335g 114.5	350g 97.5	14g 163		Ur- ^d Dumu-zi-da dam-gār
39	SS5viUrSPE	MVN 1: 251	U		450g	223g	+22[7]g		Šn ...-zi-ga-ām, ... gir Ur- ^d Su[pa-e?]

Sequence Number	Text Code	Text Date	Text Subscriber	Site	Balance Carried Forward	Capital Sum	Expenditure Sum	Remainder + or -	Subscript
40	SS5Pd	YBC 16562 Copy 12	(U)		13g 6[3]	13g 63		-	Pād-da dam-gār
41	SS5Lkl	YBC 16607 Copy 13	(U)		(417g 74.5)	(284 g 120)	133g (sic)		kū ensi-ka gir Lú-kal-la
42	SS6Ab	Michigan 310 Copy 14	U		(27g 107.5)	27g 107.5		-	dam-gār-ne Ab-ba-gi-na
43	SS6Lkl	TCL 5: 6037	U		1173g 21.5	1173g 34	(-12.58)		dam-gār-ne Lú-kal-la
44	SS7Aak	YBC 16570 Copy 15	(U)		urudu 91g 130 ¹¹	urudu 91g 172.5 ¹		-	kū A-a-kal-la[] Ur- ^d Dumu-zi[]

A REPRESENTATIVE TEXT

It will help to define the subgenre of silver balanced accounts if we present a new concrete example which contains most of the problems of the type. It is probably superfluous to edit the whole corpus of the silver balanced accounts since an exposition of the composition system given here linked to a study of the basic vocabulary presented in the glossary in Chapter 5 will permit others to survey the material.¹⁶ Personal names occurring in the accounts are indexed along with professional and institutional names in Appendix 1, and the price tables of Chapter 3 are an exhaustive catalogue of prices occurring in the accounts.

AS7viiUrDZ (copy 10) is a tablet of reddish clay measuring 15.2 by 10.2 cm. It has six columns well preserved and elegantly inscribed. The text is edited below in the form originated by Curtis and Hallo.¹⁷ Though none of the silver balanced accounts of Ur III is actually set up in ledger form, it is clear that the compositors did conceive of the entries in more or less this form since they seldom deviate from the layout of information used here. The amount and the name of the commodity is followed by its silver value, which may be followed by remarks about origin or destination. Very rarely the remarks precede the silver value, as in this text, column 4: 13-15. An addition has been made here to the ledger form to include the price in še of silver per unit-measure or unit of the commodity; all these prices are modern calculations, but their usual roundness shows that they were also probably in the minds of the compositors. These persons were doubtless

16. Forde has transliterated all texts available to him in his MS, pp. A1ff.

17. "Money," pp. 115-16; cf. also Hallo, "Contributions to Neo-Sumerian," *HUCA* 29 (1958): 69.

good at sexagesimal mathematics or had tables of reciprocals at hand, and the added price information was unnecessary for them;¹⁸ such is not the case with most modern students.

AS7viiUrDZ = NBC 11448

Column, Line	Ledger Heading	Quantity	Commodity	Cost	Unit Price	Remarks
1: 1-2		kù-babbar		79g 97 = 14317		si-i-tum mu Ša-aš-ru ^{ki} ba-hul (AS6)
3		630m	sig	11340	18	
4-6		580m	sig	10440	18	a-rá-l-kam
7		(erased: l[m? g]in)				
8-10		300m	sig-KU.GI	5400	18	i-bi-za-bi 1800 še
11		(erased; possibly two lines)				
12						gir Lú- ^d En-lil-la
13-14		9000s	zú-lum	4500	.5	
15-16	šu-nigin	kù-babbar		265g 88 = 47788		sag-nig-GA-ra-kam
17	ša-bi-ta					
18-19		69m	sig.ÜZ	1240	c18	
20-21		29.33m	za-ba-lum	440	15	
22-23		9.33m	šu-úr-me	140	15	
24-2: 1		3.33m	mun	75	c22.5	
2: 2-3		2m	gi	18	9	
4-5		5.67m	šim	340	60	
6-7		5m	šim-IM	45	9	
8-9		4m	šim-dùg	36	9	
10-11		2m	tám-še-lum	12	6	
12-13		11.67m	ar-ga-nùm	105	9	
14-15		3m	en-mur	9	3	
16-17		6.67m	ni-gia-tum	200	30	
18-19		15.33s	še-li	920	60	
20-21		12s	šim-GĀN	180	15	
22-23		16s	šim-gam-gam-ma	96	6	
24-25		16s	gu ₄ -ku-ru	28.67	c1.79	
26-27		10s	pa-li	30	3	
28-29		4s	sag-X-na	2.5	c.62	
30-3: 1		4s	i-dùg-nun-na	720	180	
3: 2-3		105s	esir-é-a	189	1.8	
4-5		5	á-dār	75	15	
6-7		780s	naga-si-è	90	c.12	
8-9		480m	im-babbar	50	c.1	
10-11		12s	ni-ik-tum	180	15	

18. It is very rarely added as x gin-ta: AS3iUrDZ:2:30ff. and SS5viUrSPE:1:1ff.

Column, Line	Ledger Heading	Quantity	Commodity	Cost	Unit Price	Remarks
12-13		40s	i-giš	660	16.5	
14-18		60s	i-giš	1020	17	dam BA ₁₁ .BA ₁₁ kišib nu ra-a kišib Ur- ^d Sul-pa-è
19-20		120s	naga-si-è	14	c.12	
21-23		120m	im-babbar	14	c.12	kišib Lú- ^d Nin-šubur
24-26		190s	esir-é-a	340	c1.79	kišib A-gu
27-28		40s	im-KU.GI	90	2.25	
29		180s	naga	21.5	c.12	
30-31		8s	al-la-ha-ru	90	11.25	
4: 1		20s	i-udu	180	9	
2-4		8m	zi-ba-tum	90	11.25	kišib A-kal-la ašgab
5-6		40s	naga	5	c.12	kišib Lú- ^d Nagar-pa-è
7-8		60s	naga	7	c.12	kišib Igi-si ₄
9-12		360s	esir-é-a	648	1.8	má ^d Lama ^d Amar- ^d Suen-ka-še kišib Lugal-nir-gál
13-15		80s	esir-é-a	144	1.8	má-a X-še kišib NÍG.BA-c
16-18		1800m	im-babbar	216	.12	kišib Ī-kal-la
19-20		131.63m	urudu	14217	108	
21-23		2.31m	su-GAN	415.5	c180	kišib Lú- ^d En-lil-lá
24-27		26s	esir-é-a	46.5	c1.79	giš-me-dím giš-mi-rí- za, má-gur ₈ lugal-ka- ke ₄ ba-ab-su-ub kišib Da-da-ga
28-5: 1		15s	esir-é-a	27	1.8	giš-kak é-a-ni é ^d Amar- ^d Suen-ka-ke ₄ ba-ab-su- ub kišib Uš-mu
5: 2-3		3s	esir-é-a	5	1.67	giš-LAGABxSA? giš- gigir-ke ₄ ba-ab-su-ub a-tu ₅ -a ^d Amar- ^d Suen
4-5		3s	naga	(blank)		
6-7		65s	naga-si-è	7	c.11	
8-10		10m	im-babbar	1	.1	kišib Lú-kal-la
11-14		180s	esir-é-a	324	1.8	é Ga-eš ^{ki} -še kišib Da-a- gi
6: 1-2	šu-nigin	kù-babbar		130g 43.5 = 23443.5		zi-ga-àm
3	lá-i	kù-babbar		135g 44.5 = 24344.5		
4			nig-ka ₉ -ak Ur- ^d Dumu-zi-da dam-gār			
5			iti min-èš			
6			mu Hu-uh-nu-ri ^{ki} ba-hul			

AS7viiUrDZ Translation

Column, Line	Ledger Heading	Quantity	Commodity	Cost	Unit Price	Remarks
1:1-2			silver	79g 97 =14317		Balance carried forward of the year AS 6
3		630m	wool	11340	18	
4-6		580m	wool	10440	18	The first time
7		(erased: 1m ? xg)				
8-10		300m	KÜGI-wool?	5400	18	Its loss is 1800 grains.
11		(erased; possibly two lines)				
12						Via LuEnlila
13-14		9000s	dates	4500	.5	
15-16 Total			silver	265g 88 =47788		It is the capital.
17	(Expended)					
	From within it:					
18-19		69m	(a resin)	1240	c18	
20-21		29.33m	(a resin)	440	15	
22-23		9.33m	(a resin)	140	15	
24-2:1		3.33m	salt	75	c22.5	
2:2-3		2m	reed	18	9	
4-5		5.67m	resin	340	60	
6-7		5m	1M-resin	45	9	
8-9		4m	sweet? resin	36	9	
10-11		2m	(a resin)	12	6	
12-13		11.67m	(a resin)	105	9	
14-15		3m	(a resin)	9	3	
16-17		6.67m	(a resin)	200	30	
18-19		15.33s	pine or juniper seeds	920	60	
20-21		12s	GAN-resin	180	15	
22-23		16s	(a resin)	96	6	
24-25		16s	(a resin)	28.67	c1.79	
26-27		10s	juniper boughs?	30	3	
28-29		4s	bulb of a plant	2.5	c.62	
30-3:1		4s	(an oil)	720	180	
3:2-3		105s	refined bitumen	189	1.8	
4-5		5	ibex-like horns	75	15	
6-7		780s	sprouted alkali	90	c.12	
8-9		480m	gypsum	50	c.1	
10-11		12s	(a resin)	180	15	
12-13		40s	sesame oil	660	16.5	
14-18		60s	sesame oil	1020	17	(for) BA ₁₁ .BA ₁₁ 's wife not (yet) received; (to be) received by UrŠulpac

Column, Line	Ledger Heading	Quantity	Commodity	Cost	Unit Price	Remarks
19-20		120s	sprouted alkali	14	c.12	
21-23		120s	gypsum	14	c.12	Received by LuNinšubur
24-26		190s	refined bitumen	340	c1.79	Received by Agu
27-28		40s	(a yellow mineral)	90	2.25	
29		180s	alkaline plant	21.5	c.12	
30-31		8s	(a mineral dye)	90	11.25	
4:1		20s	sheep fat	180	9	
2-4		8m	(a resin)	90	11.25	Received by Akalla the leather worker
5-6		40s	alkaline plant	5	c.12	Received by Lunagarpae
7-8		60s	alkaline plant	7	c.12	Received by Igisi
9-12		360s	refined bitumen	648	1.8	For the boat of the protective deity of the divine AmarSuen; received by Lugalnirgal
13-15		80s	refined bitumen	144	1.8	For ? on a boat; received by NIGBA-e
16-18		1800m	gypsum	216	.12	Received by Ikalla
19-20		131.63m	copper	14217	108	
21-23		2.31m	(a metal)	415.5	c180	Received by LuEnlila
24-27		26s	refined bitumen	46.5	c1.79	(For) caulking the railing and rudder pole of the king's ceremonial boat; received by Dadaga
28-5:1		15s	refined bitumen	27	1.8	(For) caulking the nails of his house (that is,) the house of the divine AmarSuen; received by Ušmu
5:2-3		3s	refined bitumen	5	1.67	(For) caulking the wooden ... ? of a chariot
4-5		3s	alkaline plant	(blank)		(For) the lustration of the divine AmarSuen
6-7		65s	sprouted alkaline plant	7	c.11	
8-10		10m	gypsum	1	.1	Received by Lukala
11-14		180s	refined bitumen	324	1.8	For the house of Gaeš; received by Daagi
6:1-2	Total		silver	130g 43.5 =23443.5		It is what was expended.

Column, Line	Ledger Heading	Quantity	Commodity	Cost	Unit Price	Remarks
3	Remainder		silver	135g 44.5 =24344.5		
4	Balanced account of UrDumuzida, the merchant					
5	(Umma Month vii)					
6	Year Huhnuri was raided (AmarSuen year 7)					

Notes to AS7viiUrDZ

The translations of the product names can be regarded only as tentative. They are discussed in the glossary. Comments here will be limited to characteristics of AS7viiUrDZ:

1:1. The balance carried forward is here identical to the remainder of AS6xiUrDZ, which is, however, partially broken. Both these texts are from the same subscriber and are dated only eight months apart. This linking indicates that the texts from this subscriber at least record an ongoing activity.

1:3. Compare the same amount of wool given to Šeš-kala in UM 43-3-3, courtesy David Owen, 1:5-6, also dated AS7. This may be the same wool, but the UM text has no prices. Lu-Enlila, who occurs in 1:8, also appears in the UM text 1:9 but receives only 36m of wool as against 300 here.

1:4. "The first time" sometimes occurs in these texts followed by "the second time," e.g. AS2xiiiUrT: 1:4 (grain).

1:7, 11. The erasures affect the totals; see below in regard to 6:1.

1:8. Šig-KÜ.GI is attested in the accounts only here and in AS7ixPd: 1:16. It seems to be otherwise unknown. The notice of "its loss" is found with metal objects and may be related to izi-kû-bi, a weight loss incurred in metal fabrication.¹⁹ The reference in AS7ixPd is broken but also seems to be followed by a "loss." Perhaps this entry is to be interpreted as "wool of gold," that is, wool for buying gold. See the discussion in the Glossary.

1:11. Leaving Lu-Enlila's name after the erasure implies what might otherwise be expected, namely that he was responsible for the preceding entry as well as the erased one. It is not clear, however, whether the long list of commodities starting in 1:18 can really be meant for BA₁₁.BA₁₁'s wife, the first person to occur in the listing, in 3:14-18. The name BA₁₁.BA₁₁ occurs as that of a šagina "military commander" in RA 12, p. 147:13, an undated text that mentions Umma. The name might be read Pu₄-Pu₄ or Bu₆-Bu₆,

19. Limet, *Métal*, pp. 138f. Compare also the obscure remark in connection with a quantity of silver in the capital section, SSPd:6 i-zu- 'bi?' PN, but this may mean something like "the one who knows about it is PN"; the person in question is Pād-da, who also is the subscriber of the account.

but a Lagash text, *MVN* 9:129:15, reads BA₁₁-BA₁₁.A aga₂-uš gal "PN, chief constable," indicating perhaps that the name ends in an *a*-vowel. Grégoire, pp. 80-83, updates Goetze's discussion of the office of šagina and its holders at Umma.

1:15. The sum is too big for the amounts totaled; see in regard to 6:1.

1:18. ŠfG.ÜZ is in small capitals because its reading remains unknown though the sign resembles that for "goat wool," šig-üz, cf. Glossary. The resin list of which this entry is the beginning, is discussed below, but here it may be noted that items that are measured in the same way usually are grouped together with the recurring exception of im-babbar measured in mana, among commodities measured in sila, as in 3:8-21. Column 4:16-23 also has two other commodities measured by weight. In these cases the grouping principle must be similarity of use to the bitumen near which the gypsum is entered. Compare also zi-ba-tum, 4:2, a commodity measured by weight that occurs among commodities measured by volume. There seems to be no consistent principle of grouping by actual measured volume or weight, or by price, though some of this does occur, as in 3:30 and 4:2.

3:14. "not (yet) received," literally "seal not struck." This expression finds its opposite in SS2UrDZ:5:23 where al-la-ha-ru, a tanning agent, is received for an obscure purpose having to do with the god Šara, and the following remark is added: kišib ra-ra Lú-⁴Nin-Šubur "seal (actually) struck (by) PN."

3:27. One may assume that these possible tanning agents were all receipted by the leatherworker. The translation of zi-ba-tum in this context is dubious.

4:24. Dadaga occurs only here in these accounts but is otherwise known as a wheeler-dealer frequently involved with silver, as in *OrSP* 47:253, *BIN* 5:147, *MVN* 1:246, and *SAKF*:50.

5:2. giš-LAGABxSA is epigraphically dubious; a pick mark appears to mar the center of the sign. Salonen's *Die Landfahrzeuge des alten Mesopotamien* (Helsinki, 1951) presents no clear analogues.

5:4. For lustration see J. Laessøe, *Studies on the Assyrian Ritual and Series Bit Rimki* (Copenhagen, 1955), p. 16. The silver sum might be omitted here because it was the same as that of the bitumen above, but in 3:30 and 4:2 identical sums are repeated although the calculations are the same in both cases. Since the sum is not given, it seems likely that this is the record of a planned purchase that was never made.

AS9UrDZ:4:17 has a quantity of nig-kéš "bound (reeds)" for the lustration of the divine Šulgi, by then (AS9) quite dead. J. van Dijk has suggested that offerings for the dead have something to do with lustrations in *Heidelberger Studien* (1966):242f. and n. 44, and compare the Middle

Babylonian phrase *kispu u rimku* "offering for the dead and bath" in two Nippur texts quoted in *AHW* 985b. J. Börker-Klähn has examined the bathing motif in art, *ZA* 64 (1975): 235–40. Funeral connections are probably out of place in regard to AS7viiUrDZ's entry since Amar-Suen had perhaps two years of rule left when it was composed.

5:11. Gaeš is a place near Ur which alternates with Karzida in the date formula for AS9.²⁰

6:1. The relation of the totals and the remainder are as follows:

Capital Sum (1:15)	47788
Expenditure Sum (6:1)	<u>-23443.5</u>
Remainder (6:3)	24344.5

Thus the account balances, and, as usual in these texts, the balance is positive. But the sums do not precisely reflect the amounts now recorded in the account. In 1:15 the 47788 is 1881 too big, probably because of the two erasures in the capital section, lines 7 and 11. Column 6:1's 23443.5 is 360.17 too small. The reason for that error is unclear. When fully preserved these accounts usually reflect the sums of the costs of the items recorded correctly. Some of the entries must have been left out of the figuring for the second sum. A possible place for these entries must center on 2:24–5 and 28–29, the addition of which would give the needed 1/6 missing, i.e. .17š. But the sums do not seem to add up to the required amount. A scribal lapse is most probably to be blamed.

6:4. Ur-Dumuzida the merchant subscribed nine (or possibly ten, if one includes SS7Aak) of the silver accounts, more than any other person.

PARTS OF THE ACCOUNTS

The silver balanced accounts usually have four parts according to Fossey.²¹ The first gives the amounts of commodities or animals on hand ("l'avoir"). The second gives the output from that amount on hand ("dépenses"). The third gives the balance left over or the debt incurred ("balance"). The last part is the subscript ("formule final") which uniformly includes the word *níg-ka₉-ak*. We shall consider these four components as they appear in the silver balanced accounts.

Capital

The label of the first section of the typical account is *sag-níg-GA-ra*; the

20. *RLA* 3:132 and *YNER* 3, p. 8 n. 56.

21. Fossey, "Les NIG-SITA-AG," pp. 54ff.

term may be translated "capital" because the mathematics involved shows that it was the deposit from which subsequent withdrawals were made. Etymologically *sag-níg-GA-ra* is probably "the head of what has been deposited."²² The reading *sag-gar-ga-ra* is also possible.

The actual inclusion of the notation *sag-níg-GA-ra-kam* "it is the capital" is apparently optional.²³ The following texts lack the notation because of breaks or incomplete publication: S40? and AK9Lkl. The following give a total and then proceed immediately to list expenditures: S47Dg, S48snga, AS2xiiiUrT, AS3iUrDZ, AS3Ses, AS4Lgh, AS4Sgk, AS4dgn (but whole text is so termed; see below), AS5PdB, AS5SesA, AS5Inm, AS5LIn, AS8xiiUre, AS8Ag, AS9Irm, SS6Ab, SS7Ak, or 17 of the total of 44. At present there seems to be no generalization to be made about these accounts, and the best conclusion is that the notation is included at the compositor's discretion; texts subscribed by Pada and Ur-Dumuzida always include it, except AS5PdB.

Even the total of the capital is optional, though less frequently omitted than the expression discussed above. The following texts lack a total of capital perhaps because of breaks or incomplete publication: S40?, AS6iiKd (restorable), and AS9Lkl. The following lack it clearly: S44iUrSPE, S47Dg, AS3Urg, AS4Lgh, AS5PdB, AS8Ag, AS9Irm, SS5viUrSPE, and SS5Lkl. All these latter texts with the exception of the poorly preserved S47Dg and of SS5Lkl have only one item in the capital section anyway; to repeat it as a total would be superfluous.

Curtis and Hallo's characterization of the goods appearing in the capital sections stands—they are generally non-perishable commodities and exchangeable staples produced apparently in Mesopotamia.²⁴ The following are commodities which occur only as capital: *síg* "wool" (one exception: SS6Lkl:9:39), *síg-gi* "gi-wool", (various fish), (leather items with two exceptions: S43xGdl:3:14 and AS5LIn:29), *i-ku₆* "fish oil," *gig* "wheat," *giš-URxEŠ₅* ("?"), *giš-pěš-durus* "fresh figs" (only in AS6iiKd:1:19).²⁵ The following commodities appear at one time or another as both capital and expenditure: *síg* "wool" (expenditure in text cited above and SS7Aak), *še* "grain," *zú-lum* "dates," *giš-pěš še-er-gu* "strings of figs" (as capital only in AS2xiiiUrT:1:7), *kù-huš* (a metal), and, of course, silver. These items also seem to be relatively non-perishable commodities.²⁵

The notations about the origins of the commodities in the capital section

22. Cf. Glossary, s.v. Note also the parallel to Latin *capitalis*, *OED* C, p. 93a, also based on the root for head.

23. As Fossey observed, "Les NIG-SITA-AG," p. 62.

24. "Money," pp. 111f.; Hallo, *JCS* 17 (1963): 59, and *JAOS* 87 (1967): 66 (22) on fish.

25. For discussions of them see the Glossary.

can be divided into three categories. First, they may indicate from what person or institution the commodity came and take the form *ki PN/Institution N-ta* "from PN/institution." Or origin can be expressed as *kù PN* "silver of PN," as in *AS3iUrDZ*. A somewhat different relation is occasionally expressed by saying that the commodity arrived *gir* "via" someone, as in *AS3iUrDZ* and *AS4Sgk*. Once the commodity is said to have been issued (*AS4dgn*: 1: 12 . . . *ib-ta-zi*).

Second, the remarks may indicate that the commodity was the result of a process characterized as *a-rá 1-*, *2-kam* "the first/second time or installment."²⁶ The expression occurs in the capital sections of *AS2xiiiUrT*, *AS3iUrDZ*, *AS3Ses*, *AS4UrDZ*, *AS5xiPd*, *AS6iiKd*, *AS7viiUrDZ*, and *AS9xPd*. Though in other genres there may be a very high number of "installments," in the silver accounts there are so far never more than two; the meaning of this term is obscure and must be elucidated by comparison with other genres, but apparently it has nothing to do with specifically mercantile activities.

Third, the *si-i-tum*, to be translated "balance carried forward," is specifically noted in *S43xGdl*, *S47Dg*, *AS3iUrDZ*, *AS3Urg*, *AS4iUrDZ*, *AS4UrDZ*, *AS5xiPd*, *AS5PdB*, *AS5SesB*, *AS5LIn*, *AS6xiSes*, *AS6xiUrDZ*, *AS6xiPd*, *AS7viiUrDZ*, *AS7ixPd*, *AS8viiUrDZ*, and *AS9xPd*. Sometimes it is said to be the *si-i-tum* of a preceding year, as in *S47Dg*, *AS4UrDZ*, *AS6xiSes*, *AS6xiUrDZ*, *AS6xiPd*, *AS7viiUrDZ*, *AS7ixPd*, *AS8viiUrDZ*, and *AS9xPd*. The translation "balance carried forward" recommends itself in view of the fact that there are now several instances wherein the *lá-i* or remainder of one text appears precisely as the *si-i-tum* of another.²⁷

Forde suggested ingeniously that *si-i-tum* ought to be translated "investment,"²⁸ and that the one link between *lá-i* and *si-i-tum* of which he knew ought to be regarded as an aberration, representing a year in which no new investment was garnered. In view of the new links, however, this idea must be rejected. Not all the merchant silver balanced accounts note a *si-i-tum*, but for all that do, one must posit the existence of others that link directly to them. The *si-i-tum* is always an amount of silver, except in the broken text *S47Dg*.

There are in addition notations that the commodity came from a preceding year in *S48snga* (wool), *AS3Pd* (dates), *AS5SesA* (dates), *AS5Inm* (dates), *AS5SesB* (dates), *AS6xiPd* (wool), *AS8xiiUre* (silver), *SS5Lkl*

26. Compare *MSL* 1:66:28: *a-rá I a-rá II = adi išētu adi šinišu* "for the first [time], for the second [time]."

27. See Table 31 below. The link between *AS5SesB* and *AS6xiSes* was recognized by Fish, *JRAS* 1939, pp. 33f.

28. Forde, "DAM-KAR-E-NE," pp. 136ff.; *MS*, pp. 15ff.

(grain), *SS7Aak* (grain), and from a month in *SS2UrDZ* (grain). These noted amounts do not seem to relate to other amounts in preserved accounts.

The capital section may have in addition other remarks about the origins of commodities. An exhaustive listing of these remarks would not be too helpful, but some are worth noting. *AS5SesB* 1:7 notes that a quantity of wool was *ša dub-ba* "(from) on the [other account?] tablet."

Several texts note that a commodity, usually silver, is (*nig-*)*sám* . . . "(for) the purchase price of (another commodity)." Thus *AS6xiSes* (*ku-mul* "cumin"), *AS6xiUrDZ* and *AS8xiiUrDZ* (*kù-huš-a* "a metal"), *AS9UrDZ* (*urudu* "copper"), *SS2UrDZ* (*síg* "wool," *urudu* "copper"), *SS6Lkl* (*urudu* "copper," *síg* "wool," *esír* "bitumen").

Two texts, *AS4Lgh* and *SS6Ab*, have no remarks at all in the capital section and have just one item as capital.

Capital products are priced using the formula *kù-bi* "its silver value."

The silver quantity indicated as the *si-i-tum* is always first except in *S47Dg*. Otherwise there seems to be no special order for the commodities listed as capital.

Expenditure

The second section of the silver balanced accounts is characterized by the expression *ša-bi-ta . . . zi-ga-àm* "from inside it (the sum of capital immediately preceding) (this) is what has been expended." The products in the expenditure section can be defined as including a wide variety of materials, frequently best termed raw materials. Like the medieval merchants of the Geniza documents, the dealers of these accounts handled "an almost bizarre diversity of goods."²⁹ Normally all are priced using the *kù-bi* formula.

The expenditure section of the accounts should not be considered a final summation of transactions, for several texts note that silver quantities entered in this section actually are for the purpose of buying, literally *sám* "(for) the purchase of" other commodities in amounts not specified. Thus we find silver for bitumen *AS8xiiUre*: 2: 13, bronze *AS3Ses*: 2: 12, bronze and copper *SS5Lkl*: 16, gold *AS4iUrDZ*: 3: 28 and *AS4dgn*: 4: 10, *kù-huš-a* ("a metal") *AS3Ses*: 2: 10, *AS6xiUrDZ*: 6: 26, and *AS9UrDZ*: 4: 29, reed *AS4Sgk*: 3: 1, *giš-a-ra* ("a wood") *AS8xiiUre*: 2: 14, *giš-nak-kul* ("a wood") *AS5xiPd*: 4: 17, *giš-ù-suh* ("a wood") *AS6xiUrDZ*: 6: 28 and *SS7Aak*: 12, and the like.

There are also less explicit remarks that may indicate the same purposes

29. S. Goitein, *A Mediterranean Society* I (Berkeley and Los Angeles, 1967), p. 153.

which mention a quantity of silver presumably "of" another commodity. Thus we find silver of bitumen AS5SesA:2:10 and of copper AS5SesB:2:19, AS6iiKd:2:13.

The notation a-rá N-kam "nth time" occurs in the expenditure sections too, in connection with silver amounts in AS3iUrDZ:2:34, 36, AS5Inm:3:3, 5, AS5Lin:14, SS5viUrSPE:1:5, 7, and kù-huša ("a metal") in AS9UrDZ:4:29, 31.

The remarks showing the eventual disposition of products in the expenditure section of AS7viiUrDZ, edited above, have only two forms. A name or institution is simply noted, as in 3:14, sometimes with a post-position -še "to or for" in the case of a non-personal indirect object; or kišib PN "received by PN," literally "seal of PN," is entered. None of the balanced accounts has any sealings; they are *Sammeltafeln* recording many transactions the individual texts for which were presumably sealed.³⁰

The other terms which other texts use include níg-dab_s (institution), "thing taken by (an institution)"; PN šu ba-ti, "PN took"; occasionally gir PN, "via PN" and mu-ḍu "delivery." The expression ugú PN ba-a-gar, "placed at the disposition of PN," also occurs. The relations among these expressions can occasionally be elucidated from the silver accounts.

Níg-dab_s seems to indicate the ultimate destination of goods, and the other expressions can be subsidiary to it. For example in SS2UrDZ:4:25 one finds silver as a "thing taken" of the Dukuga receipted by a person (nig-dab_s du₆-kù-ga kišib PN). Frequently níg-dab_s occurs without any receiver, e.g. in AS6xiPd:2:22, bitumen níg-dab_s túg nin "thing taken by the queen's wardrobe." This expression usually occurs with institution names and only rarely with personal names. AS9UrDz:2:3 has a professional name: še-li . . . níg-dab_s lú-šim-nag lugal "thing taken (by) the king's (?)." ³¹

The expression šu ba-ti "he took" ³² occurs widely in the expenditure section, usually with quantities of silver. ³³ Used exclusively for persons

30. Compare for example MCS 2:69.

31. Compare MSL 12:158:2, lú-šim = *sirāšū* "brewer," AHw:1050a. Note however that the following references occurring with níg-dab_s may be personal names: Tu-ru-hu-um AS6xiSes:2:3, which Gelb interprets as a personal name in MAD 3:299; Šu-še-ē-a AS5xiPd:2:31, and A-da-ga AS6xiUrDZ:2:5. Nig-dab_s occurs in the following texts: AS3Ses, AS4iUrDZ, AS4Sgk, AS5xiPd, AS6xiSes, AS6xiUrDZ, AS6xiPd, AS7ixPd, AS9UrDZ, and SS2UrDZ, i.e. some of those composed for Šeš-kala, Ur-Dumuzida, Sagku, and Pada.

On use of dib (i.e. dab_s) at pre-Sargonic Lagash compare Y. Rosengarten, *Le Concept sumérien de consommation* (Paris, 1960), pp. 391-95.

32. Compare Glossary s.v.; literally, "he approached the hand."

33. Exceptions: AS5SesA:2:4, AS5Inm:3:11, urudu "copper"; AS4UrDZ:3:20, zú-lum "dates"; AS5SesA:1:11, i-šah "lard"; AS5Inm:3:8 and AS6iiKd:2:3, i-giš "sesame oil."

obtaining goods, it occurs twice in contexts that help show its relation to the other terms considered here. AS4iUrDZ:3:24 reads 5400š kù-babbar, Lú-kal-la šu ba-ti, gir Ur-Šul-pa-è kù-dím, kišib nu ra-a, "5400š silver, Lu-kala took, via Ur-Šulpae the silversmith; unreceipted." Thus Lu-kala's receipt probably does not involve his physical presence, nor does it involve usual receipting. AS6xiSes:4:2 reads 7200š kù-babbar, Lú-kal-la šu ba-ti, 3600š kù-babbar, kišib nu ra-a, Lú-kal-la, "7200š silver Lu-kala took; 3600š silver, unreceipted, Lu-kala." This too may show that šu ba-ti does not necessarily imply physical presence, as kišib may. ³⁴

The relation between kišib "receipt of/received by," and gir "via," is slightly clarified by AS5SesA:1:14: 60 ù-suh, apin-gal-giš-ig-še, kù-bi 1980, na-kab-tum Ur^{ki}-ma ku₄-ra, gir Dan-i-lí lú-kin-gi₄-a lugal, kišib ensi-ka, "60 boards plough? wood for the door, its value 1980, entered into the cattle pen (?) of Ur, via Dan-ili, messenger of the king, received by the governor." Dan-ili's name is clearly scratched in after all the rest of the tablet had been inscribed and had dried slightly. The ultimate destination of the boards was known when the tablet was first inscribed, as was the receiver. It was also known that the boards would be taken to Ur by some messenger of the king, and his name was written in when he arrived. It is not likely that the late addition of the name was made necessary by a temporary loss of a tablet containing a record of the delivery since in that case the precise figures in the delivery would not be available either. This entry may show that the relation of gir "via" does imply physical presence.

The expression ugú PN ba-a-gar or ugú-a gá-gá "placed at PN's disposition," is rare in the silver balanced accounts and does not occur in suggestive contexts. SS6Ab:2:2 is a superscript indicating that the following lumber is credited to Aba-gina (ugú PN ba-gar), but in 2:5 the same person is said to have received some lumber. This may show that though in general all of the lumber was to his credit, he actually picked up only part of it.

Remarks about recipients are meant to refer not merely to the last item but to several of the preceding items too. For example, in AS5SesA:1:9 Ur-Šulpae takes lard but probably also the preceding sesame oil. In AS5SesA all other expenditures have remarks except for the oil, which appears at the beginning of the expenditure section. ³⁵

34. The equivalent expression i-dab_s is very rare in the accounts, occurring in connection with receipt of animals in SS6Lk:8:14, 17. It is also used for receipt of a resin in AS6xiUrDZ:3:2 i₆-dab_s. This usage contrasts with the situation at Puzrish-Dagan where the forms of dab_s are reserved for receipt of animate objects, as Hallo suggested, "Contributions," p. 80.

35. Some broken remarks in SS7Aak:19ff. are quite anomalous. Broken commodities are

There are also texts that have no remarks at all in the expenditure sections: S44iUrSPE, AS4Lgh, and AS8Ag.

The Resin List

The general principle of composition seems to be to group products according to who received them, since the same personal and institutional names only rarely occur in the same account (see Chapter 2). This principle of organization is not so different from modern accounting procedures and does not lead to the confusion which Lambert, for example, observed in some grain accounts.³⁶

The ordering of the commodities within the lists of things received by individuals and institutions seems based on the way in which they are measured, those measured by weight are grouped together and those measured by volume together. Those merely counted are rarer but seem to group together also.

It has long been observed that there is a definite order in lists of the resinous commodities that occur in Ur III texts.³⁷ This order, which may be called the resin list, occurs perhaps twelve times in the silver balanced accounts. Not every time one of the products is mentioned is it necessarily accompanied by others of this list. But if more than two are found in the same text, they seem frequently to be grouped in the same order. This order is not always uniform, and some variation and insertion of other goods is possible. Table 2 presents the apparent instances of this list and its variations in these texts. Entries in Table 2 represent actual ordinal position in each instance of the list. An apostrophe indicates the order is uncertain because of breaks.

Longer lists provide better evidence for the usual ordering, though they may also have insertions of more infrequent products. Table 2's order breaks down around the eighth position since there seems to be no regularity as to which commodity actually appears there. The order of products expected at the end of the list is rather unclear; though Table 2's sixteenth and seventeenth items seem to be a coda to the list, several other commodi-

apparently referred to as coming from the year SS8, and a balanced account of the year SS6 is mentioned. Though the text is dated in SS7, it must have been composed in SS8. The odd subscript in which two persons are mentioned may have something to do with this anomaly, but the subscript is broken too.

36. M. Lambert, "Les finances de Lagash sous la III^e dynastie d'Ur," *RA* 56 (1962): 147-52, esp. p. 148.

37. See N. Schneider, *OrNS* 4 (1935):180; Leemans, *Trade*, pp. 14ff. lists several items as common trade goods but notes no special order of the items. Limet, *RA* 62 (1968):1-3, discusses some of the products.

ties also appear several times. These include ku-mul "cumin," á-dàr "ibex-like horns," even naga (alkaline plant), ni-ik-tum (a resin), gi-dùg-ga "good or sweet reed," šim-hi-a, šim-dùg, šim-ba₅-KU-LUM, šim-gig, šim-ligidba, šim-gi (various resins)—products of the same generally resinous type except for á-dàr and naga. Not all of them, however, are measured by weight, as many of the list commodities are.

The reason for such a list is simple convenience. It was easier to keep track of all these more or less similar commodities in the accounts if they occurred in roughly the same place each time.

The list occurs outside the silver balanced accounts, for example in *MVN* 3:160 SS5, courtesy Gelb, NBC 228 S44 (Copy 17), *OrSP* 15:55f., edited *OrNS* 4:183 S43, *TMHC NF* 1/11 307 n.d., *YOS* 4:295 S44, Brooklyn

Table 2. The Resin List

Products	Texts	S40? : 5: 1ff.	S40? : 7: 2ff.	S47Dg : 1: 9ff.	AS4iUrDZ : 2: 17ff.	AS4UrDZ : 2: 9ff.	AS4Sgk : 3: 16ff.	AS6xiUrDZ : 3: 28ff.	AS6xiUrDZ : 4: 27ff.	AS6xiPd : 2: 7	AS7viiUrDZ : 1: 18ff.	AS7ixPd : 2: 5	AS7ixPd : 4: 23ff.	AS8viiUrDZ : 1: 18ff.	AS9UrDZ : 4: 34ff.	AS9UrDZ : 6: 3ff.	AS9UrDZ : 7: 3ff.	SS2UrDZ : 1: 21ff.	SS2UrDZ : 5: 27ff.	SS6Lki : 4: 11ff.	SS6Lki : 9: 6ff.
1. sfg.ùz		1			1	1	1	1	1		7	1	1			1	1	1	1	1	
2. za-ba-lum					2	2	2	2	2		2	2	2			2	3	3	3	2	
3. šu-úr-me		2					3	3	3		3	3	3			3	2	3	2	2	
4. mun					3			4	4		4	4	4			4	4	4	4	4	
5. gi					2	4	2			1	5		5				5	5	5	5	
6. šim	1 5'	1				7'	5	6			5		5			5	6	6	6	6	
7. šim-IM		7					6	7		10	11		6	9	7					5	
8. ni-gi-tum					9				12		6		8	11	8						
8. tám-še-lum					5				9	5	11	9	11	12	9			8	3		
8. šim-dùg		6	7						8		10	7	14	10						7	
9. ar-ga-nùm								7	10		7	7	9	15	11						
10. en-mur					6	6'			11		8	8	10	12	19						
11. šim-GAN					3	10	3		14	4	13	13	13	8	13						
12. še-li					12	4	8'		3	13	1	12	12, 21	12	7	14				7	
13. šim-gam-gam	5				4	11	8	9'	10'	4	15	3	2	14	15	14	10	16	14	8	
14. gu ₄ -ku-ru	3 2				5	7	10'		2	16	2	1	15	14	15	13	17			9	
15. pa-li					13'	5	11'		17		17	16	16	15							
16. sag-X-na								11'	18		16	19	17	18							
17. i-dùg-nun-na									19		21	20	19	19	21						

Museum 74.71.5 AS9 (courtesy of David Owen), *JCS* 26:93f.:2 and 4 SS1, SS2.³⁸

Balance

The silver accounts are normally balanced by comparing the total of expenditure with the total of capital and recording the difference in silver. That difference is usually positive, and is labeled lá-i "remainder."³⁹ AS3Ses apparently has a negative value for the lá-i; the term simply means "balance" whether it is positive or negative.⁴⁰

Negative balances may be unnoted if quite small, as in AS9UrDZ, where there is an overdraft of 0.5 še "grains" of silver, and SS5Pd, where 3 grains more than the capital amount was spent. A negative balance is sometimes simply ignored for no clear reason, as in AS4Sgk, where the silver value of the lá-i has been erased though by calculation an overdraft of 1170š exists; see the discussion below. If expenditure equals capital, no special balance need be noted, as in S48snga.

The practices of a couple of texts remain anomalous and will be a factor in the consideration below of how to define the subgenre of the silver balanced accounts.

In S43xGdl:3:18 the whole of the expenditure section is labeled mu-*du* "delivery." The expression occurs as a remark to silver amounts in the expenditure sections of AS2xiiiUrT:2:4, AS5PdB:4, and AS8xiiUre:2:11.⁴¹

The broken S29Urs is difficult to characterize. Column 10:1' seems to total all goods in expenses, then to itemize all goods in the lá-i in 11:4. Column 14:16 gives the total and the diri "overdraft" with goods itemized. Only 12:1, which may still be part of the lá-i, has prices. The motives for this arrangement are not easy to guess, and the unusual products in the text and its poor state of preservation hamper evaluation of it.

Subscript

As noted in Table 1, most texts are subscribed níg-ka₉-ak followed by a

38. Its first products are also found in Gudea, Cylinder A XII 5 and XV 19 21, 27-35, and in Lugal-e IX 25, quoted in *CAD* E:274a, as well as in the Curse of Agade, quoted by Pettinato, "Commercio," 136f. Cf. also below, p. 51.

39. Cf. Glossary s.v. SS2UrDZ labels its negative remainder diri "overdraft."

40. Curtis and Hallo, "Money," p. 109 n. 30, wished to interpret this as a way of expressing "zero." F. Stephens in a letter to Hallo, July 14, 1960, suggested that the 1/3 preceding the gin sign might be an odd nu and that we should translate "no gin minus 3 še," but in Hallo's opinion the reading nu is definitely ruled out by the similar sign for 1/3 in AS3Ses:2:13. The 1/3 gin in 2:19 appears on collation to be the remains of an incomplete erasure; the capital sum minus the expended sum equals -38 only.

41. Cf. also *UET* 3:337 diri mu-*du*; see p. 12 above.

personal or professional name and the date. Otherwise normal texts, however, sometimes have additional remarks inserted before or after this subscript; the use of unformulaic remarks in these otherwise formulaic texts may offer hints about their purposes, time, and manner of composition. These and unusual subscripts are catalogued and discussed here. Unless otherwise noted the subscripts and notations are immediately preceded by the final total and balance and are followed by the date.

S29Urs:16:1. níg-ka₉-ak Ur-š_u-ga-lam-ma šabra, Lugal-an-dùl⁴² ensi, [] Ur-^dBa-ú "balanced account of Ur-šugalama the šabra; Lugal-andul (is?) governor . . . Ur-Bau." The problem here is what to restore before the last name. If, by analogy to S48snga, one restores gir "via," then the mention of the governor may not be a part of the date indicating in whose governorship the account was composed. One may have to understand the governor's name as standing in the genitive and translate "balanced account of PN, the šabra of PN, the governor . . . Ur-Bau." Compare however S44iUrSPE below, where mention of the governor is an indication of time. Like the rest of S29Urs the subscript remains difficult.

Ss44iUrSPE:2:11. níg-ka₉-ak Ur-^dŠul-pa-è dam-gàr, ša Uri^{ki}-ma, iti (Lagash xii) iti (Lagash i), iti 2-kam, bala-bi 1-àm, Ur-^dLama ensi, "balanced account of Ur-Šulpae the merchant; in Ur; Month xii (and) Month i, two months; their turn of office is one; Ur-Lama (is) city governor." Since the text refers to Lagash months, it is not composed in Ur in spite of the remark. That many mean that the merchant was in Ur but responsible to Lagash authorities. The note about the city governor here does seem to be part of the date. For the "turn of office" see Chapter 2.

S47Dg:3:9. diri lá-i íb-kú[] "the overdraft, the remainder, they used . . ." For the sense of the verb see Y. Rosengarten, *Consummation*. This remark occurs two cases before the actual subscript, between two "remainders." Perhaps it is only a remark on the amount of šim-gi preceding. It is included here because of its resemblance to the remarks in AS4UrDZ and AS6iiKd. The subscript itself, S47Dg:4:1, is unusually explicit: níg-ka₉-ak níg-sám Dùg-ga dam-gàr balanced account of purchase of Duga the merchant."

S48snga:2:12. níg-ka₉-ak urudu sa_x (NINDA_xŠE)-a gir sanga ^dNin-kimar "balanced account of bought copper, via the sanga-priest of the divine Ninkimar." The expenditure section consists only of two priced copper amounts; the expansion of the subscript merely makes that explicit. But no personal name is mentioned as the subscriber of the account, though all the copper probably was put at the disposal of the Lagash smith Ur-Ningizzida (2:9).

AS2xiiiUrT:2:9. níg-ka₉-ak Ur-TAR.LUH dam-gàr SIG₄ ba-TIL-ta

42. So Pettinato and Cagni, p. 203.

27A
b2 bala
D, 6A

níg-ka₉-bi ba-ak. This sentence may mean “[After] the sig₄ was finished, its account was balanced.” sig₄ usually is equated with *libittu* “brick” or *amaru* “brick pile” while sig₄.TIL, read urù, means “prop,” *imdu*, *dihu*, and *takširu*. But here sig₄ may possibly be an abbreviation for the Umma month name for the second month, iti sig₄ ⁸⁴i-šub-ba gar “month (in which) the brick is put in the brick mold.”⁴³ If this is an abbreviation, the remark would mean that though the account is dated to the thirteenth month of AS₂, it was not actually composed until the second month of the next year.

AS₃Urg:2:2. níg-ka₉-ak si-i-tum Ur-gú-en-na “balanced account of the balance carried forward of Ur-guenna.” The text, though broken, seems to be exactly that, since the whole of the capital is labeled “balance carried forward of the balanced account,” and there seems to be only one expenditure.

AS₄UrDZ:4:3. Ur-gi₆-pār Ur-^dNun-gal ù Kù-^dNin-ur₄-ra-ke₄ íb-ba, níg-ka₉-ak Ur-^dDumu-zi-da dam-gār “Ur-gipar, Ur-Nungal, and Ku-Ninura gave (or divided) (it), balanced account of Ur-Dumuzida the merchant.” The remark is written without rulings in the space between the balance and the subscript proper. The first and third persons do not otherwise occur in the available silver accounts; Ur-Nungal appears usually as a receiver of various goods for royal bureaus and once in another interesting subscript in AS₆iiKd. None of the persons appears otherwise in AS₄UrDZ. The sense of the verb ba is wide and constitutes the crux here. One might interpret ba here as “divide,” equivalent to Akkadian *zāzu* and see these persons in some way sharing the account’s remainder.

AS₄dgn:4:17. (blank) i-šāh gur, i-sa_x-sa_x (NINDA_xŠE), sag-níg-GA-ra dam-gār-ne “(blank) gur of lard (t)he(y) is (are) going to buy; capital of the merchants.” Lard is not otherwise mentioned in the text, and this may be a note to someone to buy some. It is unclear why it was not simply entered in the expenditure column with quantity and value left blank as elsewhere, e.g. AS₄UrDZ:3:3 (quantity and price erased), AS₈xiiUrDZ:2:1 (no commodity entered), SS₂UrDZ:6:11, 13 (prices blank). The note probably has nothing to do with the subscript, which shows that this text is not a balanced account, even though it does have a few expenditures, 4:6ff. Its compositor regarded it as part of a balanced account containing only the capital.

AS₆iiKd:2:16. Ur-^dNun-gal ù Ur-^dGu₄-ná-a-ke₄ níg-ka₉-bi íb-ba “Ur-Nungal and Ur-Guna’a balanced its account.” This remark occurs before the total and balance but in an unruled area after the expenditure list ends. It has been included here because it seems to refer to the whole

account, like that in AS₄UrDZ. AS₆iiKd’s actual subscript is normal: níg-ka₉-ak Kud-da dam-gār. As in AS₄UrDZ, the second person in the remark is not otherwise known in the available silver accounts, and Ur-Nungal is active as a royal agent. This remark and the one in AS₄UrDZ may refer to an unusual auditing process in which Ur-Nungal was involved.

AS₈xiiUre:4:4. níg-ka₉-ak kù-ga Ur-e₁₁-e “silver balanced account of Ur-e’e.” The only oddities here are that the account is explicitly said to be of silver and that Ur-e’e is not said to be a merchant. The implications of these facts will be considered presently. Compare AS₉Lkl and SS₇Aak below.

AS₈Ag:2:4. níg-ka₉-ak dam-gār šà bala-a gir A-gu “balanced account of the merchant within the turn of office; via Agu.” The oddity is the anonymity of the subscriber, as in S₄₈snga, AS₄dgn, AS₉lrm, and SS₆Ab. Agu occurs frequently in these texts usually receiving bitumen but also silver and other commodities.

AS₉lrm:2:5. níg-ka₉-ak dam-gār šà bala-a, gir Ir₁₁-mu ù Ur-^dNumuš-da “balanced account of the merchant within the turn of office; via Irmu and Ur-Numušda.” Irmu occurs elsewhere in the Umma accounts only in 1:7-9 of this same text, where he transports some chick peas; Ur-Numušda occurs in AS₆xiUrDZ:5:37 apparently as a representative of the nakabtum “cattle pen(?)”.

AS₉Lkl (column 241, n. 2). níg-ka₉-ak kù-ga Lú-kal-la “silver balanced account of Lu-kala.” Compare AS₈xiiUre above. Lu-kala also is not called a merchant.⁴⁴

SS₅viUSPE:2:8. There is no subscript other than the total of expenditure and the remainder followed by gir Ur-^dŠu[l-pa-è] “via Ur-Šulpae.”

SS₅Lkl:20. níg-ka₉-ak kù ensí-ka, gir Lú-kal-la “silver balanced account of the city governor, via Lu-kala.”

SS₆Ab:2:10. níg-ka₉-ak dam-gār-ne, Ab-ba-gi-na “balanced account of the merchants; (via) Aba-gina” or “merchants’ balanced account of Aba-gina.” Compare SS₆Lkl below.

SS₆Lkl:10:10. níg-ka₉-ak dam-gār-ne Lú-kal-la “balanced account of the merchants; (via) Lu-kala” or “merchants’ balanced account of Lu-kala,” following Curtis and Hallo, “Money,” p. 107 n. 16. The only parallel to this expression is SS₆Ab above. Perhaps it is significant that both are from the same year.

44. Note that Forde, “DAM-KAR-E-NE,” p. 9 and n. 41, argues that Lu-kala is a merchant because he subscribes SS₆Lkl, which explicitly is involved with merchants. In my view Lu-kala may be a supervisor of merchants but is not one himself since he is never given the title dam-gār. The same argument can be applied to Aba-gina of SS₆Ab, whom Forde, p. 6, claims as a merchant but who, like Lu-kala, nowhere has that title.

43. See provisionally N. Schneider, *AnOr* 13, pp. 80f.

SS7Aak:25. níg-ka₉-ak kù A-a-kal-la[], Ur-^dDumu-zi-[da]
 “silver balanced account of Aa-kala . . . Ur-Dumuzida . . .” Because there
 are no clear parallels to mentioning a merchant after another person, it is
 difficult to guess what, if anything, to restore. As in AS8xiiUre and AS9Lkl,
 one may assume that Aa-kalla is not a merchant; he may be identical to the
 person in the accounts connected to the leatherwork bureau, but there are
 no leather items or tanning agents mentioned in SS7Aak.

The subscripts and subscript remarks in the texts may be summarized as
 follows:

“via”	[via?] = “merchants”	
S48snga	AS4dgn	
AS8Ag	S29Urs SS6Ab	
AS9Irm	SS6Lkl	
SS5viUrSPE		
	division	
	or use of	
bala	account?	location
AS8Ag	S47Dg	S44iUrSPE
AS9Irm	AS4UrDZ	
	AS6iiKd	
“remainder”	“silver”	time
AS3Urg	AS8xiiUre	AS2xiiiUrT
	AS9Lkl	
	SS5Lkl	
	SS7Aak	

The bala texts AS8Ag and AS9Irm are quite similar in general. It will be
 suggested below that AS8xiiUre probably is not so closely linked to the
 Umma balanced account operation as AS9Lkl. But in sum, the meanings
 of these distinctions are not all clear, and it is not obvious that texts with
 similar remarks always serve similar functions. But the notations show that
 the subgenre could be adapted to serve various purposes and perhaps
 various institutions.

TOWARD A DEFINITION

All these texts may be called silver balanced accounts, but the aim here will
 be to define closely the most common type of silver account, previously

called the merchant's balanced account, and to contrast the accounts not
 completely similar to the most common type. Though it might be helpful to
 define these deviant accounts in their own terms, it is impossible to do so
 here since so few deviant forms are at hand.

The criteria of subscription, unitary sums, complete pricing, and con-
 nections with merchants or silver seem to define the standard form.

Subscription

Any text that uses silver as a unit of account and is subscribed níg-ka₉-ak
 is a silver balanced account. This criterion which helps define the most
 common account type eliminates AS4dgn and SS5viUrSPE. Both these
 texts are nonetheless related prosopographically as well as formally to the
 standard accounts. AS4dgn, subscribed sag-níg-GA-ra dam-gàr-ne
 “capital of the merchants,” is probably to be regarded as the first part of a
 balanced account operation since it records only a few expenses. SS5viUr
 SPE, which deals only in silver amounts save for its capital of priced kù-
 hu[š-a] (a metal), may also be closely related in function to a settling of
 accounts, and it has been included in the list of accounts because its form is
 standard except for the lack of subscript and because common account
 personal names occur in it.

Unitary Sums

The second criterion is that the common account type has just one total for
 the capital, one for output, and one balance. A parallel criterion is that the
 amounts of the goods that figure in the account are not totaled; only their
 costs in silver are totaled.

S29Urs seems to meet the criterion of having one section for each
 function, but it totals goods, giving silver values in the lengthy remainder
 section only. It also adds a long overdraft section without silver values.
 SS5Lkl gives no sums at all except for the lá-i. Lines 1 through 13 are
 apparently intended to be the capital section, for the sum of silver amounts
 there almost equals the expenditures plus the lá-i of lines 16 through 19;
 line 14 was probably inscribed after the text was balanced and does not
 seem to figure in the reconstructed totals. UET 9:882 which is from Ur in
 IS6ix and is subscribed as a balanced account of merchants, is not included
 in the list of accounts partially because it records three separate capital-
 output operations. The broken text YBC 11087 too has as many as nine
 separate capital-output operations involving priced pieces of land.

The standard account by contrast makes its intent clear and its meaning
 easily ascertainable without working through several subsidiary operations.

Complete Pricing

Closely connected is the criterion that the standard account always lists the values of its commodities completely. This criterion apparently exists to make immediately clear the allocation of resources in silver. A corollary of this criterion is that a standard account deals not only in silver but in other items too, which are then evaluated in silver.

S29Urs, S47Dg, and AS4Sgk do not meet the criterion of consistent evaluation of commodities. Neither does AS4dgn in the broken 2:17 though presumably these are the same commodities as those evaluated immediately above. S29Urs has been discussed above; S47Dg is badly broken.

AS4Sgk seems typical of the standard accounts except that it lists the expenditures without silver values but with occasional remarks (1:10ff.) and then repeats the expenditures as totals with silver values but in a different order (3:5ff.; note that 4:18's refined bitumen, apparently added after the clay had dried, has no analogue in the first listing). Forde wishes to see the key to this text in a remark scratched in after the rest of the tablet had been inscribed in 1:6, *kišib Sag-ku; nu-zi-ir* "the seal (or sealed document) of Sagku (is) not annulled/destroyed." Forde believes this to be a remark indicating that the posited merchant organization has disciplined Sagku by not permitting him to assign values to the commodities acquired but has not resorted to actually breaking his seal or, perhaps, his sealed tablet. Forde implies that the values recorded in standard accounts are actually set by merchants themselves; this implication is rather hypothetical.⁴⁵

It seems more prudent to explain this lack of silver values in the otherwise typical AS4Sgk as the result of the unfamiliarity of the scribe with the form of the silver balanced accounts. Accustomed to balanced accounts in which it was normal to list and then to total all the products separately, he failed to adapt himself to the usual form for the silver accounts.⁴⁶ Whatever the interpretation of the inserted remark about Sagku in 1:6, the scribe's

45. Forde, *ibid.*, pp. 145f., reads incorrectly *ba-zi-ir* and translates "the seal of PN is canceled"; in the MS, p. 20, he corrects the reading to *nu-zi-ir*. The relevant lexical equivalent is *pasāsu* "to erase, annul," and in the D-stem "to destroy," *AHW*:838.

M. Lambert kindly collated AS4Sgk: 1:6 and remarks, "Dans la ligne 1:6 *gir ens-si-ka* est écrit normalement; le scribe avait déjà écrit les lignes suivantes quand il s'est aperçu d'un oubli qu'il a réparé en écrivant dans la case 1:6 en caractères plus petits encore que ne les a faits H. de Genouillac, *kišib sag-kud nu-zi-ir*."

Perhaps the meaning is that Sagku did not destroy the sealed tablets in accord with the usual practice, and therefore they are still available for checking.

46. Cf. Fossey, "Les NIG-SITA-AG," pp. 61ff. on recapitulation of product amounts in sums.

incompetence is demonstrated by his failure to note the overdraft 6.5g or 1170š in 4:21, though this omission may be due to the confusion wrought by late additions to the account; the erasure of his original calculation which he called a "remainder" testifies to his confusion.

Though the accounts use the pricing formula *kù-bi* "its silver (value)," unit pricing using the formula *X-(units of the commodity) -ta* "so many units per (gín of silver)" is occasionally added to the *kù-bi* formula which gives the total amount of silver for the commodity. This occurs consistently in S29Urs (when prices are given at all), S40?, S44iUrSPE, S48snga. With the following exceptions this seems to be a Lagash phenomenon in which Umma does not partake. AS3iUrDZ, AS4UrDZ, AS9Lkl, and SS5viUrSPE, when they mention gold or the metal *kù-huš-a*, add a number followed by *-ta*. The unaccustomed explicitness of the Umma texts in such instances may be due to the high value of these metals. SS5Lkl, presumably from Umma, gives separate *-ta* values for two quantities of grain in the capital section which are then priced together in the *kù-bi* form. This practice makes it explicit that the first quantity of grain cost .51š/s and the second cost .53š/s, and overall it cost .52š/s.

Note that SS6Lkl once gives a price of wheat in copper, and that price figures as copper in the text's totals. This oddity adds to the somewhat unusual nature of the text, subscribed by "the merchants; (via?) Lu-kala"; but it should not disqualify it from being regarded as a standard account.

Merchants or Silver

A fourth criterion is the presence of a merchant in the subscript of the silver balanced accounts. Hallo and Curtis write, "The balanced accounts of priced commodities are all merchants' balanced accounts after Šulgi 40," i.e. starting with S40?.⁴⁷ S48snga brings that date down slightly, but the point is well taken that the overwhelming majority of these texts have merchants in their subscripts. As Curtis and Hallo saw, however, a facile equation is not possible. AS8xiiUre, AS9Lkl, and SS7Aak lack merchants but have *nig-ka; -ak kù-(ga) PN* "silver balanced account of PN," and the person is not known to be a merchant. Curtis and Hallo, observing this phenomenon in AS8xiiUre, suggested that only by exception could non-merchants compose silver balanced accounts because their composition was part of the posited right of the merchant to assign prices.⁴⁸

47. "Money," p. 107 and n. 15.

48. They say, *ibid.*, p. 107, "... it seems to imply that a balanced account could not be rendered in money terms by anyone other than a merchant ...". Forde seems to have misunderstood their point; the subscriber of AS8xiiUre, Ur-e'e, is not therefore supposed to

There seems to be some relation between the goods received in two of the smaller texts and goods noted in larger texts. In the first example presented in Table 3 it appears that the smaller text AS8Ag records a continuing balance of goods on hand; but it may be more likely, given the year that elapsed between the texts involved, that we are dealing with standing orders, repeated orders of the same amount of the same goods. Standing orders will be considered in detail in Chapter 2. It is at any rate clear that Agu receives similar material in several texts and that the smaller text records one such delivery. One must wonder what the difference is between the small texts and the texts to be considered in Chapter 2 which relate

[illegible]

<i>Capital in gín</i>	0	100	200	300	400	500	600	700	800	900	1000	1100	1200
<i>Texts</i>													
AS4dgn—										x			
AS5PdA			x										
AS5xiPd				x									
AS5PdB		x											
AS5SesA		x											
AS5SesB				x									
AS5Inm				x									
AS5LIn		x											
AS6iiKd				x									
AS6xiSes			x										
AS6xiUrDZ					x								
AS6xiPd				x									
AS7viiUrDZ				x									
AS7ixPd				x									
AS8viiUrDZ					x								
AS8xiiUrDZ					x								
AS8xiiUre			x										
AS8Ag		x											
AS9xPd			x										
AS9UrDZ										x			
AS9Irm		x											
[AS9Lkl]													
SS2UrDZ					x								
SS5viUrSPE —						x							
SS5Pd		x											
SS5Lkl					x								
SS6Ab		x											
SS6Lkl												x	
SS7Aak		x											

In Table 4 [] indicates that the text is broken (S40?, S47Dg, AS3Urg) or only partially available (AS9Lkl). — indicates that for reasons discussed above the account is not to be regarded as a standard silver balanced account.

Roughly, then there may be distinctions among small accounts, having from 0–100 gín as capital, medium-sized accounts having from 100 to about 400 gín, and large accounts with more than 400 gín. The majority are medium-sized, but there seems to be no chronologically significant distribution of the others.

Physically the tablets that I have been able to inspect are very similar. The Umma accounts AS3Ses, AS3Pd, AS5PdA, AS5PdB, AS5SesA, AS5LIn, AS6iiKd, AS6xiUrDZ, AS7viiUrDZ, AS7ixPd, AS9UrDZ, SS5Pd, and SS7Aak are all written on reddish or whitish clay in a very careful style. Ur-Dumuzida's large accounts, AS6xiUrDZ, AS7viiUrDZ, and AS9UrDZ, and Pada's AS5Pd and AS7ixPd are almost certainly from the same hand.

All the texts for which such information is available are baked, with the exception of the anomalous SS5Lkl, and this fact suggests that they may have been baked in antiquity. If so, that would argue for their importance in the eyes of their compositors, an estimation otherwise supported by their careful composition and perhaps also by their clear form.

Table 5 gives the physical descriptions of all accounts for which the information is available. The Louvre tablets, AS4Sgk, AS4dgn, AS5Inm, AS5SesB, AS8xiiUre, SS2UrDZ, and SS5Lkl were collated by M. Lambert, and C.B.F. Walker measured and described the British Museum tablets, S43xGdl, S48snga, and AS6xiSes. AS3Ses is now in W. W. Hallo's possession.

There seems in general to be a correspondence between volume of silver and physical size. Though sizes sometimes are very similar, the slight differences among them indicate that there was no mold for forming like-sized texts before inscription.

During the Ur III period there is thus no noticeable development in the subgenre. Formally related deviant texts are attested early and late. The standard accounts are attested from S40 through SS7.

COMPOSITION AND POINT OF VIEW

Earlier I mentioned that the accounts must be regarded as provisional summaries of the operations they record because of notices in expenditure sections that silver amounts are for the purpose of buying other products. This provisional nature is illustrated by Ur-Dumuzida's text AS6xiUrDZ (Copy 9). The text appears to have been inscribed and balanced at one time. Later all of the spaces between groups of entries and sums were remoistened, and new entries were added in the spaces. The account was again balanced. The entries thus added are quite diverse and do not all go to the same person or institution. One entry goes to the same person as others in the earlier inscribed parts of the account, 3:12 (newly inscribed) versus 2:1, 3:27, and 5:11, recording products received by Lu-kala. The addition of these newer entries is a tour de force accomplished at the expense of clarity since the writing is occasionally extremely small; the lines are about 2mm high instead of the usual 5mm or larger. Obviously at the time of the

Table 5. Physical Description of Accounts

<i>Text</i>	<i>No. of Columns</i>	<i>Length in cm</i>	<i>Width in cm</i>	<i>Clay Color</i>
S29Urs	16	20	13	reddish
S40?	10	15.4	8.8	red
S43xGdl	4	11.8	6.9	light red-brown (baked)
S44iUrSPE	2			
S47Dg	4	6.7	6	bright yellow
S48snga	2	8.4	4.9	off-white (baked)
AS2xiiiUrT	2	7.1	4.5	red (baked)
AS3iUrDZ	4	9.9	6.3	gray with black spots ⁵² (baked)
AS3Urg	2			
AS3Ses	2	8.6	4.3	dark brown (baked)
AS3Pd	2	9.9	4.8	reddish.brown (baked)
AS4iUrDZ	4	11.5	7.5	(baked)
AS4UrDZ	4	16.8	8.9	reddish brown (baked)
AS4l.gh	2			
AS4Sgk	4	10.6	7.1	"chamois" (baked)
AS4dgn	4	12.1	7.0	black (baked)
AS5PdA	4	10.3	6.5	reddish (baked)
AS5xiPd	4			
AS5PdB	2	4.7 (broken)	4.4	whitish-reddish (baked)
AS5SesA	2	10.2	5.2	reddish (baked)
AS5SesB	2	11.8	6.3	beige (baked)
AS5Inm	4	11.0	7.8	"chamois" (baked)
AS5LIn	2	9.5	4.8	whitish (baked)
AS6üiKd	2	11.2	4.9	obv = reddish rev = black (baked)
AS6xiSes	4	14.4	9.4	light red-brown (baked)
AS6xiUrDZ	6	15.7	10.2	reddish (baked)
AS6xiPd	6	14.5	9	(baked)
AS7viiUrDZ	6	15	10	reddish (baked)
AS7ixPd	6	14.6	9.2	reddish (baked)
AS8viiUrDZ	4	14.5	8	(baked)
AS8xiiUrDZ	4			
AS8xiiUre	4	13.6	7.1	"chamois" (baked)
AS8Ag	2	9.2	4.8	"beige rosé"
AS9xPd	4	12.6	6.5	brown (baked)
AS9UrDZ	10	19	16	reddish (baked)
AS9Irm	2			
AS9Lkl	6?			
SS2UrDZ	8	17.1	13.1	"chamois" (baked)

52. G. Young reports the text was rebaked recently and now is a pinkish buff color.

<i>Text</i>	<i>No. of Columns</i>	<i>Length in cm</i>	<i>Width in cm</i>	<i>Clay Color</i>
SS5viUrSPE	2			
SS5Pd	2	10.7	5.3	whitish (baked)
SS5Lkl	2	8.8	4.6	dark brown (unbaked?)
SS6Ab	2			
SS6Lkl	10	19.9	13.7	"chamois" with large parts black (baked)
SS7Aak	2	10.7	5.4	whitish-reddish (baked)

original composition the scribe was unaware that additions would be made, in contrast to the compositor(s) of the texts showing later additions or blanks noted above. The fact that the additions were made indicates that the integrity of the account was not to be respected; new transactions could be added if there were space and patience enough to do so. This practice is consistent with the flexible accounting period the accounts reflect; see Chapter 2.

It was suggested above that accounts subscribed by different persons were composed by the same scribe or accountant. This possibility raises the question of the point of view from which the accounts were composed. The subscribers themselves, as will be shown below, occur only rarely in each other's accounts and very rarely in the body of their own accounts. The representatives of various receiving bureaus, however, occur very frequently; the most frequent mentioned person is Lu-kala, who may be responsible for financing the Umma account operation and probably to some degree responsible for distributing the acquired products. These facts may imply that most if not all of the accounts are composed from the point of view of the recipients of the goods and not from the point of view of the individual subscribers. Perhaps the Umma accounts at least are composed for, if not by, Lu-kala.⁵³

This raises the question of the status of the merchants. In Chapter 2 I will discuss the view these texts give of the state and temple organization, but it must be emphasized that it is quite possible that the merchants and other

53. This seems also to be the best explanation of why there are three accounts from three different agents from AS6xi, and two from AS8xii; though AS8xiiUre is atypical, AS8xiiUrDZ is normal. Probably the records of goods from the agents were assembled in the same accounting by a central authority. It seems unlikely that each would individually decide to compose an account at the same time. Such a mass rendering of accounts is not apparent elsewhere, however, for example in AS7 when two accounts from different agents are composed two months apart; cf. Table 31. The continuity in use of the notation "it is the capital" in Pada's and Ur-Dumuzida's texts, noted above, may imply that those two agents used the same accountant or scribe and the others used other accountants. It is possible that this continuity means that these agents composed their own accounts, but I find that unlikely.

account compositors were private entrepreneurs.⁵⁴ Probably because the accounts are meant for the use of officials, there is little evidence of the merchants' status.

For the Old Akkadian period B. Foster has claimed that the merchant was a private entrepreneur whose clients for goods included both the various state agencies and private persons.⁵⁵ This would accord well with other aspects of private economic life apparent in third millennium Mesopotamia.⁵⁶ But it is difficult to prove that the persons with whom the Ur III merchants dealt were not in some official position.⁵⁷ The frequent occurrence of state and temple bureaus implies that many of the persons mentioned were officials, and it is easier to trace the movement of goods through the official structure, because of the state's domination of access to writing techniques. It is entirely possible that among the persons who appear in the accounts without official designation or connection with some bureau one may seek more or less private individuals who have ordered the merchants to acquire goods for private use. It is also possible that some of the official entries are really for the private use of officials. Of the 119 persons, except merchant subscribers, who are attested in the accounts, 52 occur only once without being linked explicitly to any bureau; 10 occur more than once without being linked to a bureau. Therefore 62, or about 52% of the persons who occur, are candidates for purely private status. This fact probably should not overshadow the obvious great interest of the accounts in goods for the bureaus. And it also seems clear that at Umma the city governor and Lu-kala, the apparent comptroller of the operation, whose official or private status is unknown, dominate contributions to capital. Thus even if the unidentified persons hold no office, they may be beneficiaries of state funding of the balanced account operation.

R. M. Adams has said that Assyriologists' views of the activities of the merchant in general have overly emphasized connections with the state. But he has also pinpointed the reason for this emphasis in the preserved texts which "surely do not depict the *dam-gàr*'s broader role, but record only those activities in which he maintained some relationship to the

54. But as will be seen in Chapter 2 and n. 6 there is no evidence that the merchants made any profit from their work or attempted to maximize return or money spent. This lack of evidence may, of course, be due to the accountants' lack of interest in such matters.

55. So in his "Merchants' capital in Sargonic Mesopotamia," read before the American Oriental Society in Philadelphia in March, 1976, and his analysis read before the 23rd Rencontre, *Iraq* 39 (1977):31-43.

56. As pointed out for trade by H.E.W. Crawford, "Mesopotamia's invisible exports in the third millennium B.C.," *World Archaeology* 5 (1973):232-41, esp. p. 238.

57. M. A. Powell, *Iraq* 39 (1977):23-29, attempts to demonstrate that Ur III merchants were private entrepreneurs.

central administrative apparatus."⁵⁸ The silver accounts generally appear to reflect this bias; because of the frequent occurrence of officially connected persons it is fair to suppose that it was to a large extent to meet their needs that the merchants' records were preserved.

SILVER ACCOUNTS FROM OTHER PERIODS

A study of the development of silver balanced accounts and related texts outside the Ur III period is beyond the scope of this work. Such a study would have to relate the silver texts to other texts, to the institutions and persons involved, and be a beginning toward an economic history of other periods in Mesopotamian history. But the formal aspects of some accounts can be surveyed here briefly.

Though Pre-Sargonic accounting systems are complex and may be expected to have felt the need for something like balanced accounts, there does not seem to be anything like the Ur III standard accounts. The idea of "balancing account," *ka₉-ak* is probably present, however, as may be seen for example in the Fara period text *WVDOG* 45: Plate 32 9131, in the last entry of which a remark is added to an amount of land indicating (its) account is not balanced: *ka₉ nu-a-k*. But, as Biggs has pointed out for this period, "... a major difficulty is that the texts are usually extremely concise so that even if every word is understood, one must often guess what the purpose of the text was."⁵⁹

Some Pre-Sargonic Lagash texts also use the phrase *níg-ka₉...ak* in the sense of balancing accounts.⁶⁰ But the texts that deal obviously both in merchant activity and in priced commodities lack the developed Ur III terminology.⁶¹

A late Sargonic example more like the Ur III accounts is *BIN* 8:286. The text lists clothes and comestibles and evaluates them in silver. The total, which is probably mathematically correct though two items' evaluations are broken, is said to be *kù túg síg i* "(total...) of silver, clothes, wool and oil." The subscript reads *níg-ka₉-ak Me-ság šabra i-da-gál* "balanced account of Mesag the šabra; he has on hand." This account is

58. "Anthropological reflections on ancient trade," *Current Anthropology* 15/3 (1974):239-58, p. 247. Compare however Chapter 2 and n. 6 for some texts that may reflect a private status for merchants.

59. R. Biggs, *Inscriptions from Tell Abu Salabikh* OIP 99 (Chicago, 1974), p. 43.

60. Cf. R. Jestin and M. Lambert, *Contribution au Thésaurus de la langue sumérienne* (Paris, 1955), p. 48.

61. Cf. those edited by M. Lambert, *RA* 47 (1953):57-69, 105-20; note the explicit mentions of going to Der for purchasing, pp. 58f. (DP 516) and 60f. (DP 513; priced resins, among other things), and 114f. (Nikolski 300; priced resin).

probably to be regarded as only the capital section of a balanced account operation. One need not assume, of course, that a record of expenditure existed separately. But the form is identical to that of AS4dgn which is not subscribed as a balanced account and does have a few expenditures. *BIN* 8:286 meets the criteria of being subscribed as a balanced account, of having just one total, and its commodities are completely evaluated in silver. It is not explicitly involved with merchants, but a personal name in it is that of a known merchant.⁶² Also, the account is that of a ša bra official like the earliest Ur III text, S29UrS.

After the demise of the Ur III state the first extensive archives that shed light on account procedures are those of the Assyrian traders in Cappadocia. Though one might expect that the standard account form would be quite useful to these persons, they seem actually not to have used it. This view may be skewed, however, by the dearth of texts that come from the city of Assur itself, which might have been the fiscal center of some of the trade.⁶³ In the Cappadocian letters there is much talk of *nikkassī šasā'um* "proclaiming or settling accounts,"⁶⁴ and Garelli implies that this means there were actual account tablets to be read aloud and settled. There are accounts preserved in letters that list expenses of caravans. Such texts list purchases evaluated in silver using the formula *kū-bi*, to be interpreted as a logogram for *kasapšu* "its silver (value)."⁶⁵ These accounts, Type 3 in Trolle Larsen's analysis, have the following ledger categories: Brought, Bought, Working Capital, Expenses, Total Spent. Most balance, but the balances are not explicitly noted. Also there is a tendency to ignore the integrity of individual lines and to insert, for example, a total on the same line as the last expenditure in the total. Functionally the caravan accounts are similar to the Ur III accounts, but formally they do not seem direct descendants of Ur III models. Veenhof claims that the Old Assyrians showed some creativity in devising new trade and accounting terms which were not always based on Sumerian practices.⁶⁶ Like Ur III accounts most

62. si-gur; see B. Foster, "Umma in the Sargonic Period" (PhD diss. Yale University, 1975), pp. 128 and 170, and W. Hallo, "Gutium," *RLA* 3:713b.

63. Cf. V. Donbaz, *JCS* 26 (1974): 81-87, for a few Old Assyrian texts from the city itself, and compare M. Trolle Larsen, *The Old Assyrian City-State and Its Colonies* (Copenhagen, 1976), especially p. 55.

64. Garelli, *Les Assyriens*, pp. 183ff.

65. Cf. *ibid.*, pp. 191f. and M. Trolle Larsen, *Old Assyrian Caravan Procedures* (Nederlands Historisch-Archaeologisch Instituut. Istanbul, 1967), pp. 97ff.; for the logogram see p. 14. A good example is H. Lewry, *RSO* 39 (1964): 184f.

66. K. Veenhof, *Aspects of Old Assyrian Trade and Its Terminology* (Leiden, 1972), p. 347. Note for example such new words for use in different circumstances as *be'ulātum* "working capital," *CAD* B:215f. and Trolle Larsen, *Procedures*, p. 145 n. 65, and *gamrum* "expenditures" for journeys, taxes, etc., *CAD* G:38.

texts from the Cappadocian trade do relate in one way or another to merchants.

Several texts from the Old Babylonian period appear to fulfill the function more or less of the standard accounts. But again none reflects completely the clear form of the Ur III texts. *UET* 5:665, adduced by Falkenstein, *ZA* 55 (1963):253, contains the first three items of the resin list, all evaluated in silver;⁶⁷ but the text is broken, and the reverse is erased. *YOS* 5:207, from Larsa in Rim-Sin 4, discussed by Leemans, *Merchant*, pp. 71f., may serve as a convenient example of accounts that seem to relate to standard forms. In lines 1-15 various quantities of oil, sheep, and wool are evaluated in silver and some of their origins are noted. The whole is called *šu-nigin til-la* "the complete total." Below a rule come a date and the silver total with a remark on origin, and then *sag-níg-GA-ra šà-bi-ta* "capital; from within it." A list of expenditures (*ba-zi* "expended" line 59) follows, all either evaluated in silver or made of silver, with remarks about destination. Clothing items seem to predominate. A total of expenditures is given in line 58, but again it is not labeled as a total; a silver sum labeled *si-i-tum* is then given. Leemans does not reconstruct the calculations involved, but it seems that they are as follows:

A. Capital	obv. l. 20:	217,310š (checks with capital items)
B. Expenditure	rev. l. 58:	187,920š (170,460 preserved in items)
C. si-i-tum	rev. l. 60:	<u>25,790š</u>
B + C		213,710š

There is thus an amount of 3600š or 20 gín missing from B+C. The number is a round one and may be simply an error in calculation. But it seems clear that the *si-i-tum* in this account functions as the *lā-i* of the standard Ur III accounts; it is the remainder of the operation. This change in terminology is easy to understand when it is remembered that in Ur III accounts the *lā-i* of one account occurs as the *si-i-tum* of the next. And this usage may have something to do with Leemans' problem⁶⁸ with the description of the last amount as *ki PN*, which he translates as "owed by PN." Perhaps it is better translated "fund of PN," and it may mean that the *si-i-tum* is deposited with him and not owed by him.

The Old Babylonian expression of the unit price, *KAR.BI* appears throughout this text and others like it in contrast to Ur III standard accounts

67. First comes *ERIN* for Ur III Umma's *šig.ūz*; cf. s.v. in Glossary.

68. Leemans, *Merchant*, p. 75.

without indication of unit price. This change may be viewed as an improvement in the direction of clarity, or it may merely be the sign of a decline in mathematical ability of the scribes. Though it has been observed that the Old Babylonian period saw a change from one-dimensional lists to two-dimensional graphs,⁶⁹ YOS 5:207 and texts like it do not appear to reflect this development.

YOS 5:207 fails to mark its totals as totals and uses *si-i-tum* for Ur III's *la-i*. But it does fulfill other criteria for the standard accounts. There is one clear summation of capital and expenditure, it gives values to all items in silver, and it is related to merchants. It is not subscribed as a balanced account. This detail is irrelevant for its function; it is shared by other similar texts in the Old Babylonian period, such as *TCL* 10:72 = *RA* 24, p. 66 = *Jean, Larsa*, n. 128, also from *Itti-Sin-milki* (*Rim-Sin* 27).⁷⁰

Other merchant accounts, though perhaps relevant to the functions of standard Ur III accounts, show few of the formal characteristics. Such texts include those noted by Falkenstein in *ZA* 55 (1963): 353, *UET* 5:367 and 253, and *UET* 5:796, translated into Dutch by Leemans in *JEOL* 15 (1957-58): 200. Others use some of the terms of the standard accounts but deal exclusively in silver or silver articles. *TCL* 10:100 = *RA* 24, pp. 61ff. = *Larsa*, n. 125 begins *nig-ka*, [] "Account: . . .," has the phrase *sag-nig-GA-ra ša-bi-ta*, has one capital and one output operation, and is subscribed on the side *nig-ka*, ⁴*SUEN*-[] "account of Sin-[]." Similar are *TCL* 10:17 = *RA* 24, pp. 64f. = *Larsa*, n. 127, which notes a *diri* "overdraft," and *TCL* 10:123 = *RA* 24, p. 61 = *Larsa*, n. 124, which lacks a total.

Thus for the periods immediately succeeding Ur III there are clear inheritors of the standard form, but the form is modified. Sums are seldom explicitly indicated, and the subscript is seldom used. The usual close relation to merchants continues.⁷¹

69. W. W. Hallo, "The Road to Emar," *JCS* 18 (1964): 61 n. 29.

70. Note this text has resins lumped together for pricing, of which *za-ba-al* and *šu-ur-min* have analogues in the Ur III accounts; cf. Ebeling, "Mittelassyrische Rezepte zur Bereitung von wohlriechenden Salben," *OrNS* 17 (1948): 130. *Itti-Sin-milki* is known from elsewhere as the *wakil tamkāri* "merchant supervisor" of the town of Zārbilum; see Leemans, *Merchant*, pp. 71ff.

71. Subsequent periods continued to need clear accounting forms, but again the Ur III terminology appears not to have been widely used. For example, J. N. Postgate, *Taxation and Conscription in the Assyrian Empire* (Rome, 1974) finds part of a text termed a *nikkassuepšu* "balanced account," p. 133 on *ADID993iii26*, and a superscript *NIG.SID.MES ša* (a year) "accounts of the year . . .," *ND* 2451, pp. 376-379, defining an account. He believes such accounts may have been rendered yearly, p. 236, or perhaps each six months, p. 379. These texts have no obvious connections with merchants. And Postgate notes, p. 235, "In fact in NA the true account is rather uncommon; . . ."

The texts studied by Oppenheim, "Essay on overland trade in the first millennium," *JCS* 21

PLACE IN THE HISTORY OF ACCOUNTING

Balanced accounts in general have been called "the Sumerian form of double-entry bookkeeping."⁷² But probably Jones and Snyder in making that designation did not mean to claim that the Ur III texts really are double-entry accounts. E. V. Morgan points out in his layman's introduction to the form, "The essential feature of double-entry is in the arrangement of the ledger; it must include a number of accounts, and each item must appear twice, on the debit side of one account and on the credit side of another."⁷³ That is definitely not the case in the accounts here; only rarely do the same products occur as both capital and expenditure and never in the same amounts.⁷⁴ The primacy of medieval Italy in the development of the double-entry account is thus apparently assured.⁷⁵

The Ur III accounts like some late accounts⁷⁶ are probably best defined in modern terms as "income and expense statements," wherein the net profit or loss is indicated.⁷⁷ The operations recorded in the Ur III accounts are not, however, necessarily less complex or far-reaching than those of medieval merchants.⁷⁸

In sum we can say that the Ur III silver balanced accounts in their standard form fill a need for explicit and easily understandable accounting.

(1969): 236-54, deal in some typical "merchant" goods as well as dyed cloth from the west, but again the texts lack the standard Ur III terminology.

72. Jones and Snyder, *SET*, p. 239.

73. E. V. Morgan, *A History of Money* (Baltimore, 1965), p. 39; an example is found *ibid.*, pp. 39ff.

74. Cf. above. The instance noted in the account of livestock, *SET* 130:64-68 (p. 80) = *SET* 130:364-69 (p. 86), mentioned by Jones and Snyder, p. 331 and n. 34, is exceptional.

75. Morgan, *Money*, p. 43. For a view of the "complicated and confused" nature of this development see R. de Roover, "The development of accounting prior to Luca Pacioli according to the account-books of medieval merchants," pp. 114-74 in A. Littleton and B. Yamey, eds., *Studies in the History of Accounting* (New York, 1956). Compare the accounts excerpted in R. S. Lopez and I. W. Raymond, *Medieval Trade in the Mediterranean World* (New York and London, 1955), pp. 100, 361-74.

76. E.g. those studied by G. Sainte Croix, "Greek and Roman accounting," pp. 17-74 in Littleton and Yamey, *Studies*. Note that he is adamant that gaining a clear view of profit and loss was the goal of no ancient accounting system; the aim was merely to prevent theft and dissipation, p. 32. His statement holds good for the Ur III silver account system since the agents are completely unconcerned with minimizing costs; see Chapter 4.

77. Cf. H. Finney and H. Miller, *Principles of Accounting, Introductory* (New York, 1953), p. 26.

78. Cf. the objections of Yamey in Littleton and Yamey, *Studies*, pp. 5ff., to explaining the invention of double-entry as a response to more complex business needs.

Their forms are reflected earlier and later, but never so consistently or widely as in Ur III times.

It is unknown why some segments of the economy should have continued to use accounts that were more complex and confusing, like that surveyed by Lambert, "Finances," *RA* 56 (1962): 147-52, concerning agricultural goods in Lagash. Perhaps this divergence in form has to do with a need by users of the silver accounts clearly to account for comparatively smaller amounts of more precious goods. The need for a clear accounting form is probably a universal phenomenon in urban societies, but one may speculate that the standard Ur III silver balanced account form grew out of the efforts to standardize scribal and economic procedures associated with the second king of the Ur dynasty, Šulgi.⁷⁹

CHAPTER 2

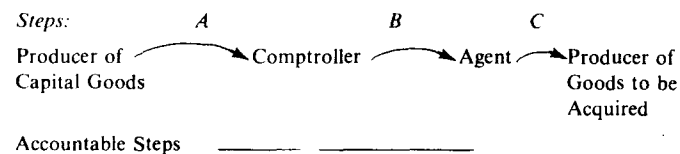
The Functions of the Silver Accounts

The silver balanced accounts are composed of individual transactions which earlier apparently were registered in groups on smaller tablets as they occurred. The processes of these transactions are not completely clear partly because only few of the smaller texts that relate directly to preserved accounts exist. Texts may have been destroyed deliberately, or certain steps in the transactions did not require composition of a document. The system of the transactions can be tentatively reconstructed, however, and I present a reconstruction below under the categories of the movement of capital goods and of the movement of acquired goods. The hypothetical nature of this reconstruction must be emphasized at the outset. The evidence is not as good as it might be, and new texts may change markedly the view presented here. But the evidence is occasionally astonishingly complete, especially for the movement of expended goods, and demands that hypotheses be put forward to explain it.

MOVEMENT OF CAPITAL GOODS

Table 6 presents a reconstruction of the movement of capital goods.

Table 6. Capital Goods Movement



The existence of capital goods in the hands of the financiers is easily demonstrated. For example, *BIN* 5:106 AS 1, shows the city governor receiving various leather goods from the leatherworker. And Lu-kala's numerous receipts of silver demonstrate his control over amounts of that important material.

The usual contributors to capital are the governor and Lu-kala, whose

79. For a brief survey of the innovations in Šulgi's reign see W. W. Hallo and W. Kelly Simpson, *The Ancient Near East, a History* (New York, 1971) 80-84.

activities are described more fully below. Other persons contribute to capital, but they seem not to be representative of the bureaus that eventually receive the products; Ur-Šulpae is perhaps an exception, though his role as go-between for many bureaus may mean he is a full member of none. His capital account, STA 11 AS 1, lists various agricultural goods as well as two quantities of silver labeled *mun-ga zi*. I take this to mean "of spices, e.g. salt and cassia," and not to represent any special manufacturing process.¹ In the movement of capital goods in Step A someone was probably accountable and had to make a document to record the transfer even though the transfer was within the same fiscal organization.²

Step B is also attested. The movement of individual contributions to capital might sometimes involve the presence of witnesses. YOS 4:47 SS11i is a witnessed document showing that Ur-Dumuzida and Ur-Šulpae received from Lu-kala 8.5m of silver, characterized as *kù zi-ga sa_x-sa_x-dè* "silver expended; for buying." Ur-Šulpae's role in the system as a whole is important but ambiguous; his silver account, SS5viUrSPE, is not a standard silver balanced account and is not so subscribed.³ But Ur-Dumuzida may be the active merchant of that name, and the witnesses include an Ur-gipar, perhaps the same man who appears in the subscribed remark about dividing up the proceeds of the account in AS4UrDZ.⁴ Similar documents from other sites may be the private documents their form suggests. Tulta the merchant receives silver at interest from Ur-Dumuzida in UET 3:330 AS5v; a certain Šeš-kala is among the witnesses, who may or may not be the same persons as the Umma merchants. The text may not concern capitalization for a balanced account since there is no mention of making purchases with the silver. A similar Nippur text, CBS 9031 IS2xi (courtesy Gelb) has Šeš-kala receiving the "balance carried forward of a balanced account" from Ur-Šulpae before witnesses otherwise unknown in the silver balanced accounts.⁵

I am not sure that the ostensibly private form of these texts should be used as an argument for the merchants' independence from the state

1. So Landsberger, *AFO* 18 (1957-58):337b, versus Oppenheim, *AOS* 32:7-8, and most recently Forde, "DAM-KAR-E-NE," p. 58 n. 186. Compare Vassar 5 IS1 (courtesy B. Foster) *nig-ka₉-ak mun-ga zi* "spice balanced account" of Lu-Haia, who occurs in the silver accounts.

2. Foster, "Umma," p. 13, discusses the concept of accountability at Umma in the preceding century. He informs me that in Chapter II Part 3 of the revised version of his study the matter is considered in some detail.

3. S44iUrSPE is subscribed by a like-named Lagash merchant, perhaps not the same person.

4. Cf. p. 34 above. Another witness is Šeš-kala, but because of his filiation it is unlikely that he is the same as the Umma merchant.

5. The text was also published in transliteration by Fish in *Iraq* 5:171:11.

organization. If the texts concern the same persons as the accounts, they show that these persons obtained capital goods, but might not be directly related to the silver account operation. If the texts are directly related, they mean that the merchant was not a full part of the state organization but rather someone under contract to perform the task of acquiring goods. This question cannot be solved at present, but its resolution is not essential for understanding the silver account system since our major view of the acquisition activities appears to be that of the state organization.⁶

Other texts may show that Step B need not be recorded in the form of a witnessed document. NBC 10802+3 SS4 (Copy 21) lists a number of silver entries received by Ur-Dumuzida and described as "silver for purchase of sesame oil, silver for purchase of copper, silver (for) miscellaneous purchases (*nig-sam dab₅ didli*), (and) silver of taking of silver of grain (*kù-dab₅ kù še*)." The last remark, considered below, is obscure, but the thrust is obvious. The source of this silver is not stated, and Lu-kala appears slightly later himself receiving a silver amount. ŠA 224 AS1 records only one operation; Ur-Dumuzida receives from Lu-kala grain priced in silver (*kù-bi*) and described as *še gù-ta sa₁₀*, which seems to mean "grain bought with (?)." ⁷

An unpublished text in the University Museum, UM 43-3-3 AS7 (courtesy David Owen) lists several quantities of wool, some of which are put at

6. See the discussion on the merchants' possible private status above. The Ur III merchants may have been private entrepreneurs, but their texts do not clearly show that aspect of their work.

Though from Lagash we have a few texts showing that merchants received *á* "(work-) rations," there is no hint in the Umma accounts of that or of any other benefit accruing to merchants for their work. Forde interprets SS2UrDZ: 1:16 in the capital section, 308 *kù pa-ga ki l.ù-kal-la-ta* as meaning that Ur-Dumuzida, the subscriber of the account, got 308 of silver for being supervisor of the merchants, reading *kù u-gu-la-kà* "silver of the supervisor," DAM-KAR-E-NE, p. 91. This use of GA as KÀ would be unusual, and the interpretation seems unlikely. Perhaps the remark has something to do with AS3Ses:2:10f's talk of "silver for purchase of (a metal) for?," PA.A-šè and AS6xiUrDZ:6:26's similar remark followed by PA-ga; cf. s.v. *kù-huš-a* in the Glossary.

Small discrepancies in account sums should probably be interpreted as rounding off and not as small payments to merchants, for example, AS6iiKd's ignoring of .5š of the capital sum in the other sums, and the 1š lost in the link between AS5PdA and AS5xiPd.

Note that the Neo-Babylonian traders studied by A. L. Oppenheim, "Essay on overland trade in the first millennium B.C.," *JCS* 21 (1967):236-54, did receive a share of the consignments, called *irbu* "income" and *ešrū* "tenth part," but Oppenheim believed that these shares were much too small to compensate the traders for their trouble and that they probably received goods from a central agency and could then sell them at a profit, p. 239.

7. By analogy for example to Smith 3 AS6 *esir-é-a kù-ta sa₁₀* "bought with silver," literally "from silver." Gù can be a sort of tax, but it does not occur elsewhere in the silver accounts or related texts.

the disposition of several persons who appear as merchants in the silver accounts. Other quantities which do not go to them but are labeled "(for) purchase of gold (and) (a kind of bitumen)" are also noted. The whole is subscribed "to be placed at the disposal of the account (nig-kaš) of the merchant." The source is not specified, but most of the wool in the silver accounts comes from the city governor, and this wool may too.

ŠA 76 AS5 presents Lu-kala's account of grain, much if not all of which is bound for inclusion in the silver account operation. The account's "capital" section does not record where the grain came from but rather records which persons received it. These receivers include several merchants active in the silver account operation though they are not given that title here. ŠA 76:4:17 states that all the grain presumably came from Ir, possibly the granary supervisor of that name. The expenditure section of the account lists amounts of grain most of which are sám X "(for) purchase of various products)." The allocations of grain do not correspond to amounts in preserved silver accounts, but they may represent the total allowance of grain for the whole year. Also some of it may have been sold for wool (4:5).

Along with the grant of capital may well have come some form of direction about what the agent was to buy. But there may have been no need to write this down for the agent to remember since there apparently was a system of standing orders.⁸ The agent had only to be told in general what to buy, and by experience he would know how much, since needs over time appear to have been very similar. It is even possible that the agents themselves, in spite of the fancy title of "scribe" on some of their seals,⁹ were illiterate, for there appears to be no step in the balanced account operation that makes it necessary for them to write or read. Their accounts seem to be reports to their superiors, perhaps composed by scribes in the employ of the authorities.

Step C is a problem. The agent, usually a titled merchant, proceeded to acquire from the assembled capital various goods. But whether he converted his capital goods to silver and then bought the desired products with the silver, or whether he exchanged the capital goods directly for the products is uncertain. Leemans, *Merchant*, pp. 44f., proposed the former view, while Curtis and Hallo, drawing on parallels from other cultures of non-silver items used as money have suggested the latter, "Money," pp. 11f.¹⁰

8. Cf. below, Standing Orders.

9. Chapter I and below The Circle of Šeš-kala.

10. Note however that Leemans and Hallo have since converged in their views. Leemans, *Trade*, pp. 130f., finds no evidence that silver was used in Ur III to finance foreign trade; this

There are as yet no texts to substantiate either view, probably because the agent was not accountable for his actions until he returned with the goods; only then was a document drawn up to show what he had done.¹¹

Outside the silver accounts there are many texts that give evaluations of products in grain, for example, and these imply that the capital could be exchanged directly for goods. But the goods so evaluated do not appear to be typical of silver balanced account purchases.¹² And such evaluations are of course foreign to the silver accounts themselves.

Theoretically it is no longer necessary to rely on Heichelheim's view that barter in staple goods was the usual practice before the Old Babylonian period.¹³ As M. Lambert has shown, silver was used at Lagash by many levels of society in all the uses of modern money in Ur III times.¹⁴ Exchanges for staple goods continued to occur, as Lambert (p. 87) shows, but they may be irrelevant to silver balanced account operations. Curtis and Hallo's working hypothesis was that "silver as money was primarily used by the merchants in the Neo-Sumerian period," "Money," p. 108; this view can be rejected in light of the many pricing texts that do not seem to involve account personal names or other merchant personal names.¹⁵

Leemans' view is formed doubtless by his study of the Old Babylonian period where sales for silver are widely attested.¹⁶ Curtis and Hallo are influenced by the correct observation that the silver accounts' capital goods are agricultural products which Mesopotamia produced in abundance in Ur III times. They imply that the purchasing agent's task was to transport these products abroad and to exchange them in less productive lands for

contradicts his earlier interpretation of the silver balanced accounts, though it is in the context of a discussion of industry in the city of Ur itself and thus may not refer to the Umma situation. Hallo has pointed out the continuity of the importers' interest in goods and the use of silver as part of the capital in the silver accounts, *JCS* 17 (1963):59f. Fish refused to decide on the matter, *BJRL* 22 (1938):170f.

11. This limited accountability appears to contrast with the situation at Sargonic Umma, where all stages of metal transactions required composition of a document; cf. Foster, "Umma," pp. 122-28.

12. See Chapter 4 for such texts.

13. F. Heichelheim, *An Ancient Economic History* I, J. Stevens, trans. (Leiden, 1957), pp. 106f.

14. "Argent-Métal," pp. 79-92, 193-200, esp. p. 81.

15. See Chapter 4. Note also that the interpretation of proverb 1:165 was modified in E. Gordon, *Sumerian Proverbs* (Philadelphia, 1959), pp. 128 and 513, quoted in Curtis and Hallo, "Money," p. 108 n. 24; compare however *Sumerian Proverbs* 1:73, pp. 77 and 504f., "The merchant has departed from the city (and so) trade values have become flexible." Whatever the meaning, a view of the merchant as supervisor of trading, as proposed there, p. 504, seems unnecessary and unlikely.

16. But cf. Sweet, "On Prices," pp. 149 and 168, who shows that grain also could be used in some of the uses of modern money.

goods of use to the Mesopotamian state. They do not deny that silver served as capital, and that agents carried some of that with them; but the silver sums in their view were secondary to the staple goods.

This conflict in hypotheses may be explored by examining the role silver plays in the capital sections of all the preserved accounts. Table 7 presents the results of this survey. The symbol [] means one or more of the amounts involved is broken or unknown; some can be restored. Table 7 shows a wide variation, even among the standard accounts and the most active agents. But it stresses the point that at times silver could play a very important role in the capital sections.

Table 7. Percentages of Silver in Capital Sections
(by total value of products)

<i>Text</i>	<i>Percentage</i>
S29Urs	[]
S40?	[]
S43xGdl	36
S44iUrSPE	0
S47Dg	[]
S48sga	0
AS2xiiiUrT	2.8
AS3iUrDZ	47.5
AS3Urg	100
AS3Ses	31.9
AS3Pd	52.5
AS4iUrDZ	87.6
AS4UrDZ	.4
AS4Lgh	100
AS4Sgk	100
AS4dgn	0
AS5PdA	0
AS5xiPd	53.6
AS5PdB	100
AS5SesA	15
AS5SesB	2.3
AS5Inm	0
AS5LIn	8.7
AS6iiKd	0
AS6xiSes	31
AS6xiUrDZ	[17.4]
AS6xiPd	17.5
AS7viiUrDZ	29.8
AS7ixPd	[20.3]
AS8viiUrDZ	22.4
AS8xiiUrDZ	67.7
AS8xiiUre	100

<i>Text</i>	<i>Percentage</i>
AS8Ag	100
AS9xPd	54
AS9UrDZ	13.7
AS9Irm	100
AS9Lkl	[]
SS2UrDZ	24.8
SS5viUrSPE	0
SS5Pd	87.5
SS5Lkl	7.9
SS6Ab	0
SS6Lkl	0
SS7Aak	0

AS8xiiUre casts some light on the problem of what happened to other kinds of capital. It is not a normal account, though its form is standard, first because it is subscribed by someone known not to be a merchant¹⁷ and second because it does not apparently participate in the system of standing orders which appears to be a mark of most of the standard accounts.¹⁸ Each of the ten silver accounts that constitute AS8xiiUre's capital is followed by a remark that appears to indicate the origin of the silver:

kù maš a-šà-ga	"silver of the produce ¹⁹ of a field"
pa-mušen (erasure)	"of bird feathers"
še lá-ì su-ga lá-ì su-ga	"grain: remainder returned"
sipa-dè-ne	remainder returned of the shepherds"
síg (silver amount blank)	"of wool"
zú-lum-ma mu (AS7)	"of dates; year AS7"
zú-lum-ma	"of dates"
giš-hašhur mu (AS8)	"of (fruit-tree wood); year AS8"
maš a-ša-ga mu (AS6)	"of the produce of a field; year AS6"
duš	"of (a grain)"

The bird feathers and the wood are known as acquired products in other silver accounts; the last mentioned grain is otherwise unknown in them, and the remark about field produce is paralleled only by S43xGdl: 1:8 from Lagash. Dates, wool, and grain are normal capital products. The complement -ma to zú-lum probably indicates the genitive zulum-ak is to be understood, and the other entries should probably be analyzed as genitives also. In this account no other bird feathers or fruit-tree wood

17. Discussed briefly in Chapter 1.

18. Cf. below. Standing Orders.

19. Cf. Landsberger, *MSL* 1:111f., "growth of a field."

appear in the expenditure section. It seems reasonable to conclude that all the silver sums are the result of selling the items noted.

Other accounts have similar remarks referring to goods generally regarded as capital goods, and they sometimes appear to reflect quite complex selling operations. Again they are probably to be interpreted as genitives. For example:

AS3iUrDZ: 1: 16 (grain) *sig še, še iti* (Umma xi) "grain of wool, grain of the eleventh month"

AS3iUrDZ: 2: 24 (silver) *zú-lum-ma* "silver of dates"

AS4iUrDZ: 1: 7 (silver) *gig* "silver of wheat"

AS4dgn: 3: 13 (sum of values of leather objects above, in silver) *kuš* "silver of leather"

AS5SesA: 1: 5 (silver) *kù dab₅ kù še-ka* "silver of taking of silver of grain," i.e. silver from the exchanging of grain for silver (?).²⁰

AS8viiUrDZ: 1: 9 (silver) *še* "silver of grain."

Other remarks refer explicitly to the use of the capital product to buy another product, like SS6Lkl: 1: 7 (grain) *sám urudu* "(for) purchase of copper." The remarks above seem to refer to goods usually regarded as capital and may imply that they were sold to get the grain or silver. Texts AS4iUrDZ, AS5SesA, and AS8viiUrDZ are typical accounts; AS3iUrDZ deals only in metals though it comes from the active merchant Ur-Dumuzida.

AS4dgn, subscribed "capital of the merchants," has mainly fish and leather items as capital goods and silver and copper amounts as expended goods. This text, and the related AS5PdA, AS5Inm, AS5SesB, and AS6iikd may record the selling of capital items for silver in preparation for further purchases.

Another possible bit of evidence for the sale of capital items for silver is the *si-i-tum* "balance carried forward." With the exception of broken S47Dg, it is always expressed in silver and never connected with any other commodity. If the remainder of the operation is only silver, it may stand to reason that all the capital goods were converted to silver, some of which was left over after purchases were made.

It is unclear where the goods that appear in the expenditure section were acquired. The many purchase contracts from the period do not seem to reflect the balanced account operation in spite of the presence of account personal names. Many of the products acquired in the balanced accounts

20. Cf. NBC 10802, p. 57 above. B. Foster suggests plausibly in personal communication that perhaps two sources of silver are indicated, one received directly as capital (*kù dab₅*) and the other derived from grain sales (*kù še*).

seem to be native to Mesopotamia and imply no travel on the part of purchasers. But others may be foreign and may imply travel, if not by the purchasers, at least by the persons from whom they bought.²¹

Several bits of evidence appear to suggest that the silver merchants themselves may have traveled. One ration text without year, *RTC*: 337, mentions an Ur-Dumuzi who is coming from Dilmun, i.e. Bahrain or Failaka.²² The dropping of the syllable *-da* from the name Ur-Dumuzida poses no problem since on the seal of a certain Ur-Dumuzi who is probably not the merchant the name is spelled without the *-da* though it appears in the text of the contract with the *-da*,²³ and Ur-Dumuzida appears without the final *-da* in *ŠA* 76: 1: 1 AS5, Lukalla's grain account which contains many merchants' names. The Ur-Dumuzi of *RTC*: 337 is called *lú kaš₄*, "courier," but it is conceivable that the title defines a function rather than a profession.²⁴ This evidence for merchant travel is fairly weak since there is no way to prove that the travelling Ur-Dumuzi is the same as the merchant Ur-Dumuzida.

More convincing as evidence of travel is *BM* 14:411 S47 in which bitumen from Madga is sent via Ur-Dumuzi, Tulta's brother. Madga is apparently an area east of Assyria which may not have been under the Ur III state's control.²⁵

One of the expenditure entries in Lukalla's grain account *ŠA* 76:4:8 is 2940s of grain *á má dam-gàr-ne* "hire of the merchants' boat," received by Lugale-banša, known as a representative of the boat bureau in the Umma silver accounts. The boat may not have been capable of leaving the rivers of Mesopotamia, but it may be significant that it is considered an expense item by Lu-kala, the apparent comptroller of silver account activities. *UET* 3: 1689 IS4i from Ur shows Lu-Enlila, possibly the representative of the metal bureau known from the Umma accounts, receiving garments and wool *níg-sa_x* (NINDÁxŠE)-ma *urudu Má-gan^{ki}* "(for) purchase of

21. See the introduction to Chapter 5. But the remark in SS2UrDZ: 1: 9, quoted in Appendix I s.v. *ka-gur₇* indicates that even clearly foreign goods could be bought within central Mesopotamia: "[grain, priced] (for) the purchase of wool rations of an oxdriver and purchase of copper from the harbor district/market (*kar*) from the granary supervisor."

22. For Dilmun see B. Buchanan, *AS* 16, pp. 207f. and n. 23.

23. *TMHC* NF 1/11 98 and seal 68.

24. Cf. Falkenstein, *NSG* 3, p. 122, reading *lú-im = lāsimu*, and *CAD* L: 106. Note that for the Old Assyrian period M. Trolle Larsen, *Iraq* 39 (1977): 119, says that in his view and against Garelli, *Iraq* 39 (1977): 99-107, *īamkārūm* "merchant" "denotes a contractually regulated capacity and thus . . . it is not a title."

25. Sauren published the text in *AION* 31 (1971): 171 and briefly discussed Madga, pp. 167f. For the fraternal connection see below.

Magan copper." He may not have had to go all the way to Magan to get the copper.²⁶

Finally, Sauren's interesting list of silver amounts reportedly found in situ in Northern Luristan near the Hamadan road includes as recipients two personal names that appear as merchants in Ur III and may be the same persons as in the silver accounts.²⁷

Forde is at pains to deny the idea that the Ur III merchants traveled, "DAM-KĀR-E-NE", pp. 21f. But the reason for lack of texts on this subject may lie in the lack of interest of the accountants in knowing about such matters. A study of the products in Chapter 5 shows that acquisition of some of them probably did require travel by someone. If the silver account agent did not travel, he was able to visit markets in which these foreign goods were available.

The meaning of Step C remains difficult. I am inclined to believe that the capital goods were sold for silver in Mesopotamia, and the silver was then taken to do the purchasing. The close relation between silver and merchants goes back at least to the Fara period, as shown for example in *CT* 50: 4, 5. This linking of silver to merchant activity, which Curtis and Hallo emphasized,²⁸ has practical motivations. If a merchant had some distance to travel, he would want some universally desired goods to trade that were light and easy to transport. The typical capital goods of the silver balanced accounts are not very easily moved, and therefore it seems reasonable that they were not moved very far. And perhaps they were not directly exchanged for the conglomeration of goods the merchants brought back from wherever they had gone.

26. M. Birot, *JESHO* 5 (1962): 91 and n. 4, notes that this may be the same Lu-Enlila who is called the ga-eš a-ab-ba "sea merchant" in the seal of *UET* 3:41, and he may not be the same as the person active at Umma.

For Magan see I. J. Gelb, "Makkan and Meluhha in early Mesopotamian sources," *RA* 64 (1970): 1-8 and the literature cited there. Compare also the unique Sumerian literary letter in an Old Babylonian copy, YBC 5011, from a merchant Ur-dun, otherwise apparently unknown as a merchant in Ur III except in F. Ali's text on the loss of his seal, *Sumer* 20 (1964): 66-68. Ur-dun writes that he made a trip to the east to buy šim giš-er-in-na "cedar resin." The text is edited in P. Michalowski, "The Royal Correspondence of Ur" (PhD diss. Yale University, 1976).

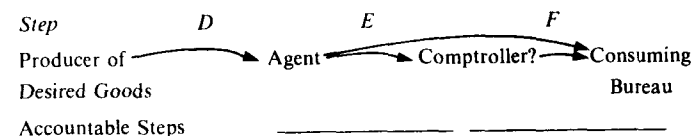
27. H. Sauren, "Une caravane sumérienne," *AIPHOS* 20 (1968-72): 389-94, p. 390 1: 18 180š kb Pū-ta, ... 270š kb Šeš-šeš. Šeš-šeš occurs in AS3Urg: 1: 6 from Lagash without title, but he is known elsewhere as a merchant, Forde "DAM-KĀR-E-NE," p. 11. Sauren is unsure if the text is late Old Akkadian or Ur III, and it is not dated. His remarks, pp. 393f., on the system of salaries which the text represents are based on the erroneous belief that the grain-silver ratio is fixed in Ur III, but it is still possible that the allotments represent money to buy supplies for a 50- or 60-day journey to or from central Mesopotamia. Note Foster's judicious doubts on the authenticity of the find spot reported for this text, *Iraq* 39 (1977): 38 n. 85.

28. "Money," p. 107.

MOVEMENT OF EXPENDED GOODS

The movement of the goods that appear in the expenditure section of the silver balanced accounts can be graphically represented as follows:

Table 8. Expended Goods Movement



The silver balanced accounts characterize the products that have been acquired as "expended"; the reasons for this terminology appear to be that the capital had been expended to acquire the goods and also that the goods were usually no longer available to the accountant but had moved on to the respective consuming bureau. Thus the silver balanced accounts, though they are essentially summaries of Step E, also serve to reflect the eventual distribution to the consuming bureaus, Step F. It seems likely that the posited accounting by the comptroller could occasionally be bypassed by the goods, though the recording of the goods could not be, i.e. the agent would occasionally deliver the goods acquired to the consuming bureau without actually taking them to the comptroller.

Step D requires usually no documentation on the agent's part, just as the other half of the exchange, Step C, requires no documentation. Part of AS5xiPd apparently supplies some of the information on how the agent got the products. The first part of the expenditure section, AS5xiPd: 1: 15ff. gives the usual information about what institution was to receive the goods and notes via whom the goods were to go; and in each remark it mentions another personal name preceded by ki "place or fund (of)" but not followed by -ta "from." This practice is also used for two entries in AS7ixPd: 2: 26ff. I doubt these persons were meant as the sellers of the goods. It is more likely that they were somehow involved with the receiving bureaus. The products acquired are bitumens, various types of onions, and chick pea flour, products that presumably were available within the area of control of the Mesopotamian state. These remarks end in AS5xiPd: 3: 12, and the rest of the text, which contains no resin list but does have a range of other usual products, seems normal.²⁹

29. Except for the two mentions of kišib-bi 4/ 3-ām kišib PN "its seal(ings?) are 4 or 3;

Some other texts may record Step D, though for lack of sufficient analogy, I am inclined to doubt it. *YOS* 4:295 S45 is a priced resin list subscribed *šim sám ki Lugal-PA.UD.DU-l-ta DU-a, KA-Lú-X-èl-ta* (erased), *kišib-bi Pád-da dam-gâr, šu ba-ti* "resins of purchase; from PN delivered; X PN-ta; its seal? (or sealed text) Pada the merchant took." In spite of collation the abraded and erased lines fail to yield much meaning. It seems possible that Pada did not receive the goods at this point, but rather the right to seal or sign for them or the various sealed documents recording the delivery.³⁰ The Nippur text *TMHC NF 1/II: 307* also shows a priced resin list received by a certain Lu-Enlila, Daga's son. Here no remarks precede the receiving phrase. Lu-Enlila is known in the silver accounts as a representative of the metal bureau, and he does not receive resins in the preserved Umma silver accounts. It is therefore rather unlikely that the same person is intended in the Nippur and in the Umma texts.

The usual procedure is to record only Steps E and F. Texts that record goods with prices and indicate that the goods came from a merchant or the putative comptroller may show Step F.

Step E is best illustrated by *MCS* 2:69, which is duplicated by a part of *AS4iUrDZ*.³¹ The following observations on Table 9 are of interest:

Table 9. *MCS* 2:69 = *AS4iUrDZ*:2:1ff.

Line Number	Quantity	Commodity	Cost	Unit Price	Remarks
<i>MCS</i> 2:69 BM 105442 (AS 3)					
1f.	115s	giš-pêš-hád			giš-pêš še-er-gu-bi 38.33
3f.	18	giš-pêš še-er-gu	780	c13.85	
5f.	71.67s	geštin-hád!	360	5	
7f.	2.5s	lâl	270	108	
8-13	225m	im-babbar	45	.2	nig-dab _s Du ₆ -kù-ga! ki Ur ^d Dumu-zi-da-ta

received by PN." These obscure remarks are paralleled in the silver accounts by *AS4UrDZ*:2:6, *AS7ixPd*:4:9, and perhaps *SS2UrDZ*:3:21. Cf. *AOS* 32, p. 63, for other examples. The two receivers in *AS5xiPd* are Lu-kala and Lu-Enlila, both involved with metal transactions. Lu-Enlila also receives the *AS7ixPd* entry. The receiver in *AS4UrDZ* is given simply as LÚ according to the unpublished copy. It is not indicated whether the name continues onto the side of the table, but it seems likely since the side is abraded. One may venture to restore Lu-Enlila's name since the commodity received is *su-GAN* "(a metal)." In *SS2UrDZ*:3:21 Agu, the crafts bureau representative, receives refined bitumen: *kišib* 12 A-gu. Perhaps this odd remark also has something to do with Lu-Enlila's presence in the entry immediately above, or perhaps, as Professor Hallo privately suggested, *kišib-bi* means "sealed texts on which this entry was based."

30. Cf. *AOS* 32, pp. 48h and 129b, for analogues from unrelated texts.

31. As seen by Curtis and Hallo, "Money," p. 117 n. a.

Line Number	Quantity	Commodity	Cost	Unit Price	Remarks
14 seal: mu kù gu-za ^d En-lil-lá ba-dím (AS 3) Ur- ^d Šul-pa-è, dub-sar, dumu Lugal-kù!-ga! AS4iUrDZ:2:1ff.					
2:1f.	115s	giš-pêš-hád			giš-pêš še-er-gu-bi 38.33
3f.	18	giš-hašhur še-er-gu	780	c13.85	
5f.	71.67s	geštin-hád	360	5	
7f.	2.5s	lâl	270	108	
9-11	225m	im-babbar	45	.2	nig-dab _s Du ₆ -kù-ga
12-16		kù-babbar	270		nig-sám-ma šuku ^d Inanna ù nisag ^d En-lil-lá mu-ús-sa (AS 3) kišib Lugal-gar-lagar-e
2:17-3:8 (priced resins, bitumen, lard)					
3:9 kišib Ur- ^d Šul-pa-è					

MCS 2:69:1-4 = *AS4iUrDZ*:2:1-4. Since no silver value is given for the first item, its equivalent in *giš-pêš še-er-gu* must be added to the quantity of the commodity in 3. The resultant price of 13.85 per piece is within the normal range for the product. The reading *hašhur* = *pêš-gunû* in *AS4iUrDZ*:2:3 is to be corrected to simply *pêš*; *giš-hašhur še-er-gu* is not attested elsewhere in the accounts.

MCS 2:69:5-6 = *AS4iUrDZ*:2:5-6. The former is also to be read *geštin-hád* according to Dr. Edmond Sollberger's collation, though Fish transliterated *im-par*. Sollberger confirms the reading of the figures as O.1.1.1 2/3 *silá* in his system of transliteration. He also notes the following, which have been incorporated into Table 9: line 8: *im-UD.UD* instead of Fish's *im-par*; line 10: final *-ga*, which Fish ignored; seal: *dumu Lugal-kù-ga*, which Fish ignored.

MCS 2:69:10-13 = *AS4iUrDZ*:2:11. The whole of the former is to be regarded as "the thing taken of the Dukuga" as is probably all of *AS4iUrDZ*:2:1-10.

AS4iUrDZ:2:12-16. The text adds a silver amount noted as "the thing bought of the food portion of the goddess Inanna and the first fruits offering of the god Enlil." For *šuku* = *kurummatu* "food portion" see *CAD* K 573 and note that it is probably to be read *šukûr*, W. von Soden, *Festschrift Eilers* (Wiesbaden, 1967), p. 126; for *nisag* see J. van Dijk, *JCS* 19 (1965): 18-24 with Akkadian equivalents *niqû* and *nisakku*, *MSL* 3:136:87 and variant. The added amount, though not part of the operation in *MCS* 2:69, was probably entered here because Lugal-garlagare received it also.

AS4iUrDZ:2:15. Though the whole of the text is dated to the first month

of the year following AS3 (mu-ús-sa kù gu-za . . .), the same year is given as the date for the silver amount. This distinguishes this single transaction from the transactions paralleled in MCS 2:69, which is dated to AS3 (mu kù gu-za . . .).

Standing orders apparently did exist which may cast doubt upon these texts' actually recording the same transactions, but the precise correlation of the several figures involved makes it likely that the same goods were described in both texts.

MCS 2:69 appears to be composed from the point of view of Ur-Šulpae and Lugal-garlagare. The latter may be a representative of the Dukuga and perhaps himself a merchant. The former is perhaps in this case the representative of the comptroller.³²

A similar relation is presented in Table 10. Here the VDI text duplicates some of the entries in AS4Sgk, but sometimes not exactly; it gives prices and adds three items not found in AS4Sgk. The VDI text presents the same anomalous scheme as AS4Sgk, giving the products and remarks, then giving the sums of the products with prices. The quantities of šim "(a resin)" in lines 1 and 5 do not add up to the total in 27, and the honey in 17 and the LI in 21 do not figure in the totals; further there is an error of 100š in the silver total in line 40. This sort of incompetence is reminiscent of that found in AS4Sgk itself, and may indicate that the same person composed both texts. It is again tempting to see the VDI text as the source for the larger AS4Sgk; the smaller text's remarks as to recipients are the same as those in AS4Sgk except for that in line 25. But the VDI text is unlike the MCS text studied above since it lacks sealings. Because of this lack and the incompetence of the scribe the VDI text may not be typical of those from which balanced accounts were composed; AS4Sgk is not subscribed as a balanced account, which also is atypical of large texts that summarize this sort of activity.

The similarity between MCS 2:69 and AS4iUrDZ shows that the silver accounts can probably be regarded as *Sammeltafeln* which collect information from several smaller texts and summarize them for a given fiscal period.³³ It shows that the integrity of such smaller texts is not preserved, but transactions are recorded according to the persons involved in them.

32. See Bureaus below for his activity. If MCS 2:69 was one delivery, as seems likely, it must have been carried on more than one ass. The 225m of gypsum may have weighed about 112.5 kg, and J. Lewy believed the average ass could carry about 90 kg, JAOS 64 (1944): 69 and n. 38. Compare H. Lewy, RSO 39 (1964): 181-97, esp. p. 183.

33. The designation of the silver accounts as ledgers is thus exact in light of one definition of the word: "a book containing accounts to which debits and credits are posted from books of original entry," *Websters's Seventh New Collegiate Dictionary* (1963), p. 481b.

This principle is not absolute since occasionally a person occurs twice in the same silver account in a similar function.³⁴

Table 10. VDI 1976 (3) 110f. = AS4Sgk

Line Number	Quantity	Commodity	Unit Cost	Price	Unit Cost	Price
		VDI 1976 (3) 110f.			AS4Sgk (See Table 12)	
26					= AS4Sgk: 3: 16	
27	31.5m	šim	1104	35	≠ AS4Sgk: 3: 14	32.5m 1170 36
28	21.17	še-li	762	36	≠ AS4Sgk: 4: 1	21.66s 780 36
29					= AS4Sgk: 4: 6	
31					= AS4Sgk: 3: 19	
32	12s	šim-gam-gam-ma	36	3	≠ AS4Sgk: 4: 8	12s 32 2.67
33					= AS4Sgk: 3: 17	
34	15s	lāl	1350	90	≠ AS4Sgk: 3: 6	19s 1350 71.05
35	12s	geštin-hád	46	3.83	≠ AS4Sgk: 3: 8	10s 30 3
36					= AS4Sgk: 4: 4	
37	5s	i-nun	90	18	= nothing	
38	10s	zú-lum	4	2.5	= nothing	
39	3s	ga-sag, (UD-gunû)	3	1	= nothing	

Analogous texts are consistent with these observations though as yet none parallels preserved silver accounts.³⁵

The fact that texts analogous to MCS 2:69 do not have duplicate silver balanced accounts may mean that none were composed in some years. One

34. For example AS6xiPd: 3: 20 and 5: 15, kišib Lu-kala, though the latter instance may show Lu-kala receives the whole of the products listed under "expended in the bala," 4: 23; cf. also AS9UrDZ: 3: 16 and 6: 44, kišib Ur-Šulpae. See Chapter I for AS6xiUrDZ, which may constitute a special case. It is significant that these instances concern persons who are connected with the comptroller and his accounting functions.

35. E.g., NBC 228 (Copy 17) S44 priced resin list from Pada received by Lugal-ezen and Ashmolean 1935, 527 S46 (courtesy Gelb) which is similar. Lugal-ezen occurs just once in the preserved silver accounts, but he is an important Umma functionary who seems frequently to be involved in transactions in which silver prices are given, e.g., NBC 253 (Copy 16) S36, receives silver; TCL 5: 6171: 2: 10 S 34, priced wool from his account; SAKF 67 S46, priced bitumen from him; NBC 246: 7-10 (Copy 20) AS6, gold from him; *Salesianum* 4: 174: 1 SS5xi, priced wool from him. Note also CHEU 51 n.d. where he is connected with priced wool, and OrSP 47: 202 S39 and MCS 8: 98 AO 19760 S40 where he is the source of bitumen perhaps for the boat bureau. I am inclined to see Lugal-ezen as part of the banking and distribution operation, transferred from a position analogous to Lu-kala's or Ur-Šulpae's before AS3. Note however that he is not the apparent predecessor to Lu-kala in money-receiving activities; Dadaga is, as SET, p. 247, shows. Lugal-ezen's basket label for S34-6, BRM 3: 175, and his seal on YOS 4: 292 S46/AS3 and MVN 3: 374 S38? call him ša bra, title of a high administrative official.

only produces a *Sammeltafel* when several similar operations need to be integrated and understood. If the operation that eventually became the silver balanced account system of the reigns of Amar-Suen and Šu-Sin were simpler in earlier times there would be no need to summarize it. The capital reports, absent from the early analogous merchant texts, might be kept elsewhere, on texts like NBC 10802, Copy 21. Such texts presumably continue to be the source of capital sections of the later accounts.³⁶ Below, pp. 106–08, I try to construct a picture of silver balanced account activity during the years for which most accounts are attested, but it is not necessary to extend the picture of heavy activity backward or forward in time until texts are discovered.

Another reason we do not have more texts that were sources for silver accounts may be that they were systematically destroyed after they were included in the accounts. This would explain the complementary distribution of account and non-account texts in the price tables for many products in the list of prices. Possibly the texts were used for fill in building projects, as archaeologically attested for Ur.³⁷

Step F also has texts duplicating parts of silver balanced accounts, notably AOS 32 S23 AS4 in Tables 11 and 12.³⁸

Tables 11 and 12 present a complex picture. It is likely that both these correspondences represent the same goods. AOS 32: S23 catalogues the goods received for three different bureaus. Those for the Ur bureau all come from AS3Ses, though there they are in different order, and 25m has been added to the im-babbar from elsewhere. Those for the TUN lugal come partly from AS4Sgk and partly from elsewhere. AS4Sgk is the slightly deviant account discussed on p. 38 above that gives the destinations of its expended items, then totals them and gives the prices.

36. They may have been stored in baskets labeled with labels like those noted below.

37. As suggested by Jacobsen. *AJA* 57 (1953): 126. This posited destruction may explain the remark in AS4Sgk: 1:6 discussed in Chapter I, kišib Sag-ku₅ nu-zi-ir “(by exception) PN’s sealed document has not (yet) been destroyed.” Since the remark occurs in the capital section it may not be directly relevant here. Note also *BRM* 3: 175, the label of the tablet basket of Lugal-ezen, mentioned n. 35 above, which says it contained dub zi-ri ugú-a gá-gar “tablet(s) to be canceled/destroyed, placed ? in the account,” literally perhaps, “on it.”

38. The correspondence with AS3Ses was observed by Forde, “DAM-KAR-ENE,” p. 96f.; that with AS4Sgk is a new discovery. Forde prefers to restore AOS 32: S23: 2: 12 as [šeš-ka]l-la and to use the text as evidence for that person’s activity in capitalization and for the imperial scope of his operations, that is, his relations with the city of Ur. I wonder how much the Ur bureau actually had to do with the city; cf. below. It is unlikely that Šeš-kala’s name would stand in opposition to the “merchants” of the preceding line since he is a merchant and the subscriber of the account duplicated by S23: 2: 5ff.

Table 11. AS3Ses: 1: 7ff. = AOS 32: S23: 2: 5ff.

Line Number	Ledger Heading	Quantity	Commodity	Cost	Unit Price	Remarks
AS3Ses: 1: 7-2: 9						
1: 7	ša-bi-ta					
8f.		18000	pa-mušen	1800	.1	
10f.		515s	naga-si-è	120	.23	
12f.		12.5s	sum-ha-din	75	6	
14f.		17s	sum-sikil	60	3.53	
16f.		17s	sum-gaz	60	3.53	
2: 1f.		250m	im-babbar	45	.18	
3f.		10s	esir-é-a	20	2	
5-9		20s	gazi	10	.5	nig -dab ₅ Uri ^{ki} -ma kišib Ur- ^d Nin-Kimar gir Lú- ^d Sarā dumu Lú-igi-ša ₆ -ša ₆
10ff.			(various silver amounts)			
AOS 32: S23: 2: 5-14 AS 4						
2: 5		17s	sum-sikil			
6		17s	sum-gaz			
7		12.5s	sum-ha-din			
8		515s	naga-si-è			
9		275m	im-babbar			
10						zi-ga Uri ^{ki} -ma
11						[ki da]m-gār-ne-ta
12						[Lú ² -ka]l-la
13						[šu ba-]ti
14						[]-an-na, []ba-hun

Table 12. AS4Sgk: 3: 6-4: 18 = AOS 32: 1: 1ff.

Line Number	Ledger Heading	Quantity	Commodity	Cost	Unit Price	Remarks
AS4Sgk: 3: 6-4: 18						
3: 6f.	šu-nigin	19s	lāl	1350	71.05	
8f.	šu-nigin	10s	geštin-hád	30	3	
10f.	šu-nigin	6	giš-pěš	90	15	
			še-er-gu			
12f.	šu-nigin	63s	ku-mul	756	12	
14f.	šu-nigin	32.5m	šim	1170	36	
16	šu-nigin	1m	šig. (z)	18	18	
17f.	šu-nigin	8m	gi	84	10.5	

Line Number	Ledger Heading	Quantity	Commodity	Cost	Unit Price	Remarks
AS4Sgk: 3: 6-4: 18						
19f.	šu-nigin	6s	šim-GAN	108	18	
4: 1f.	šu-nigin	21.67s	še-li	780	36	
3	šu-nigin	10s	pa-li	1.5	.15	
4f.	šu-nigin	12s	šim-hi-a	36	3	
6f.	šu-nigin	10.67s	gu ₄ -ku-ru	32	3	
8f.	šu-nigin	12s	šim-gam-gam-ma	32	2.67	
10f.	šu-nigin	108s	sum-ha-din	1296	12	
12ff.	šu-nigin	10s	naga-gaz			
	šu-nigin	560s	naga-si-è			
		(570s total)		85.5	.15	
15	šu-nigin	.17s	esir-é-a	(erased)		
16f.	šu-nigin	125m	im-babbar	90	.72	TUN lugal
18	šu-nigin	300s?	esir-é-a	450	1.5	
= AOS 32 S23: 1: 1 2: 4 AS4						
1: 1-3		1m	[]			
		8m	[]			
		6s	š[im?-GAN]			
4		22.17s	še[-li]			
5		12s	šim-IM			
6		10.67s	gu ₄ -ku-ru			
7		12s	šim-gam-gam-ma			
8		132.33s	sum-ha-din			
9		10s	naga-gaz			
10		2960s	naga-si-è			
11		770.17s	esir-é-a			
12		125m	im-babbar			
13						TUN lugal-še
2: 1		1800m	im-babbar			
2		1500s	esir-hád			
3		240	giš-a-ra má 60-gur			
4						zi-ga bala-a

Only the last item in AS4Sgk has no analogue in the list above, and it appears to have been scratched in after the clay had partially dried. AOS 32: S23's bala section has as yet no duplicate in the available silver accounts.

AOS 32: S23 is a part of Step F but not of Step E; Lu-kala's superiors do not care how he got the material. And thus they do not care how much was paid, or even by whom, to obtain it. It seems that Lu-kala at the time of composition of AOS 32: S23 did not have the material anyway, since AS3Ses shows that part of it was already taken by functionaries supposedly representing the Ur bureau. But Lu-kala was responsible for the total amount until it was entered in the accounts of the bureau, and AOS 32: S23 may be a report to the accountant for the three bureaus mentioned in it instructing him that responsibility for the goods was to be transferred to the receiving bureaus.

AOS 32: S23, dated AS4, is thus probably composed after both AS3Ses and AS4Sgk.

We can follow these specific products a step further to their inclusion in an inventory of "things brought to Ur." In YOS 4: 298 n.d., among many other products, lines 10-12, 16-17 and 27 reflect the same products in the same quantities as those in AS3Ses: 1: 8ff. Only the gazi and the im-babbar are missing.³⁹ YOS 4: 298 thus has the processed bitumen and the bird feathers that AOS 32: S23 lacks. Since YOS 4: 298 is undated, it is not certain where it stands in temporal relation to AOS 32: S23, but because it includes products that nowhere occur in the silver accounts while AOS 32: S23 does not, the YOS text may perhaps be regarded as a further step along the distribution system. Why all AS3Ses's relevant products are not included in AOS 32: S23 remains unclear, but YOS 4: 298's subscript shows that it is intended to be inclusive; it is called im-gu-la "Sammeltafel," and it rates that name as may be seen from the parallel texts.⁴⁰

39. Line 8 however has a smaller quantity of gazi-kum, confirmed by collation, and line 20 has a larger quantity of im-babbar, also collated. Line 11 has quite clearly sum-kum for AS3Ses: 1: 16's sum-gaz. The rest of the text, including the broken subscript, is well reflected in Keiser's copy.

40. Note that Oppenheim, who published AOS 32: S23, translates im-gu-la and even refers to YOS 4: 298 in his remarks on p. 164 of the same volume; it is regrettable that he missed the positive proof of his translation.

Probably Brooklyn Museum 74.71.5 AS9, courtesy of David Owen, may fulfil a function similar to these texts, though it is not called an im-gu-la. It records various resin list products as well as others, some of which do not occur in the amounts. Most products do not relate directly to products in preserved accounts, but the following do appear to:

Brooklyn line	Amount Product	Account Reference
7	8m tám-še-lum	AS8viiUrDZ: 2: 10
25	292.5s i-šah	AS9UrDZ: 7: 36 (probably k. UrSPE)
32	1560m esir-hád	AS9UrDZ: 4: 13+8: 21
34	3m im-babbar	AS9UrDZ: 7: 44 (probably k. UrSPE)
36	2 ba-sig ₄	AS9UrDZ: 8: 17 (sig ₄ -ba)

Other apparent correlations with preserved accounts relate to accounts in years too remote from AS9 to be likely to refer to the same commodity; 6 á-dār (SSLkl: 5: 23), 2s geštin-hád (AS5xiPd: 3: 18) and 12s ni-ik-tum (all entries for the product have exactly 12s).

Brooklyn 74.71.5 has an unfortunately obscure subscript:

kišib Ur- ^o Šul-pa-è	Seal of Ur-Šulpae
ki dam-gār-ne-ta	from merchants.
Ur- ^o Nun-gal ba-an-LAGAB ₁ BI?	Ur-Nungal . . .

The text is sealed with Ur-Nungal's seal as a ša₄-du-ba, for which see below under Royal Bureaus.

Within the distribution system the further movement of goods was usually closely documented. This can be seen in *OrSP* 47:333 AS4 and *BRM* 3:95 AS4, which record the movements of more or less the same goods. Four of the goods appear in silver accounts though the actual amounts do not match any entry in preserved accounts.⁴¹ The subscript of the Berlin text, which I take to be slightly earlier reads: *zi-ga bala-a, ugú Lú-kal-la ba-a-gar* "expended in the *bala*, placed at the disposal of *Lu-kala*." The Yale text reads on the same line as the last entry of sesame oil: *i-ba gir-sè-ga bala-a-ka, ki Ur-Šul-pa-è-ta, Lú-kal-la šu ba-ti* "oil ration of the dependent personnel of the *bala*, from *Ur-Šulpa*, *Lu-kala* took." Perhaps this notice refers to the whole text and shows its specific use in contrast to *OrSP* 47:333's more general notice.

From the above discussion it appears that products acquired could go directly to the consuming bureau but that a record of them probably first had to go to the accounting authority. However, the texts *JRAS* 1939:38 = *BM* 113129 = *MCS* 8:4:98 AS9 may show that goods sometimes first went to the comptroller:

2800s <i>esír-é-a</i>	2800s processed bitumen
6600m <i>esír-hád</i>	6600m (another bitumen)
<i>kù-ta sa,</i>	bought with silver;
<i>ki dam-gàr-ta</i>	from the merchant;
<i>mar-sa-aš</i>	for the boat bureau;
<i>kišib Lugal-e-ba-an-ša₆</i>	received by PN.
<i>mu</i> (AS9) ⁴²	

41. Collation of *BRM* 3:95 shows the text deals with exactly the same products as the better-preserved *OrSP* 47:333 but has sometimes slightly different figures for the amounts:

<i>BRM</i> 3:95	<i>Or</i> 47:333
1680s <i>tapin</i>	1380s
57s <i>zi-sig₆(KAL)</i>	57s
105 [7]s <i>dida gin</i>	1057s
1930s <i>nig-ur-ra gin</i>	1930s
5. 970s <i>munu₆(BULUG₃)-si-è</i>	970s
700s <i>šim-gin</i>	710s
6325s <i>zú-lum</i>	6325s
60s <i>giš-hašhur-(giš-UD erased) duru₆</i>	60s
[] <i>giš-gi₆-pàr-babbar</i>	1
10. 4380s <i>ku₆-izi</i>	4380s
60s <i>i-giš</i>	60s

42. Dr. E. Sollberger kindly collated the text and reports that the figures are clear as given in spite of Fish's doubts about the first line in *MCS* 8. *Hád* clearly is *UD.UD*, not just *UD* as Fish copied, and the *ba-hun* of the year name is on the same line as *Kar-zi-da*.

This roughly duplicates AS9UrDZ:8:24ff. subscribed by *Ur-Dumuzida*:

2800s *esír-é-a, kù-bi* 3720š
 6060m *esír-hád, kù-bi* 1512š
kišib Lugal-e-ba-an-ša₆

In spite of the difference of 540m of the latter product, this may be the same material. Even if it is not, the principle seems clear: *Lugale-banša* probably did not know from which merchant the products came because he had gotten them from the comptroller.

Such unpriced texts dealing with goods that appear in the silver balanced accounts are probably best understood as internal deliveries within the state fiscal organization.⁴³ Conversely the prices shown in the records of Step E may show that the dealings took place outside the structure of which the comptroller and perhaps merchants were a part. The delivery of goods from the producers was neither traditional nor obligatory; the producers had to be paid. But inside the organization only records of the amounts of the goods needed to be kept.

THE BUREAUS

Several important establishments in the Ur III economy of Umma appear within the silver balanced accounts: their representatives can be tentatively identified, and their functions broadly defined. We get from these texts only a partial view of parts of Umma's economy, and relevant non-account texts are not always available. But a partial view may supplement what is already known.⁴⁴

The principle in identifying bureaus has been to identify in the accounts persons who receive the same product several times and to see if references to institutions in the accounts and in non-account texts can elucidate this regularity; references to one-time receivers who are said to be related to an institution also help define the establishments. Persons who receive similar goods may not always be working for the same bureau, but for the sake of

43. Note also *Nik* 205 AS2 where *Ur-TAR.LUH*, perhaps the same person as the subscriber of AS2xiiiUrI, figures prominently in the distribution of wood some of which *Lu-kala* receives.

It would appear that the Neo-Babylonian texts studied by A. L. Oppenheim, "Essay on overland trade in the first millennium," *JCS* 21 (1967): 236-54, may also show two different stages of the distribution process since one has prices and the other, from a year and two days earlier, does not. Oppenheim believed the two texts represented a standing order for the same amount of the same goods, pp. 238-39. Observe also that he has a "draft or memorandum" on which the text with prices is based, p. 236 n. 1.

44. Waetzoldt has studied Umma's weaving establishment, esp. p. 102, and Limet, *Métal*, pp. 184-88, has studied metalwork at Umma.

simplicity here they are assumed to belong to the same organization and to fill similar functions. Sometimes these assumptions conflict with the possibility outlined earlier that sparsely attested persons may in fact be private individuals; and the evidence allows no clear statement as to the possibility that the establishments were not under state control. The hypothetical nature of this reconstruction is apparent. In individual cases my assumptions may be quite wrong. But the wealth of evidence requires at least a tentative reconstruction. Further research should be able to go beyond the schemes set up here.

I have chosen to call the establishments bureaus because in most cases it has been possible to catch a glimpse of the activities supported partly by goods received in the balanced account operations. Most of the establishments are therefore more than funds having no independent activity besides financing other establishments. I am inclined to believe that the bala is such a fund and not a bureau, but the distinction is an arbitrary one and open to modification.

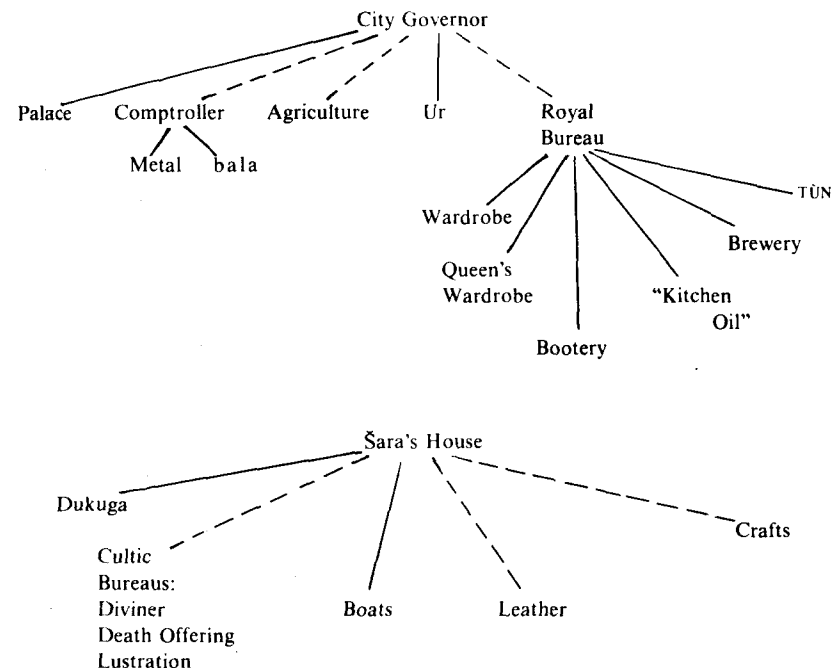
In the accompanying tables relevant sections of the silver accounts have been excerpted. It is clear that notations apply usually to the whole list of preceding entries, but only the last entry with the notation has been included in the tables here or in the indices in Appendix 1. Partly this abbreviation is to save space, but partly it is because it is not always clear how far up the column a notation of receiving really applies. The person in the Operatives column appears in the accounts in entries summarized in the second column, Products in the Accounts, and in texts summarized in the third column, Products in Non-Account Texts.

Table 13 gives a tentative composite view of some of the various bureaus which the balanced account operation touched. Others like the nakabtum and the giš-kin-ti might have been included here, but since the entries concerning them are comparatively simple, they have been relegated to Appendix 1. Lines of responsibility are justified in the discussion of each bureau though it is not possible to say that these connections necessarily imply control. Dotted lines indicate more doubt than solid lines. In the following discussion the bureaus are grouped according to whether they appear to be connected to the city governor or to Šara's House. An exception is made for the bala fund which constitutes a special problem and is discussed at the end of the section.

City Governor's Bureau and Palace

A frequent contributor to capital is the office of the ensi, the city governor. As Table 14 shows, this bureau also may have the function of taking care of the physical paraphernalia of the governor and in one instance at least of liaison with the empire's capital city, or the Ur bureau, if the two are not

Table 13. Composite View of Bureaus and Lines of Control



identical. The silver accounts do not make it clear whether the é-gal "palace" is fiscally identical to the bureau of the city governor, and they are here considered to be separate. If they are separate bureaus, it seems the palace is more concerned with food acquisition and the acquisition of other amenities while the city governor's bureau concerns itself with contributing wool and acquiring various materials.

The resin list items are only infrequently receipted, and they never go to the palace in the silver accounts. They do go to the House of Šara, but it is reasonable to conclude that they constitute luxurious amenities which any rich household would desire. In Table 15 Ikala is included under the palace because of his receipt of an amount of lard, but he seems generally to be involved in the wardrobe bureau, which may in turn be attached to the palace.

The Comptroller

Lu-kala both contributes to capital and receives from expenditure large

amounts of silver, frequently a *mana* or a multiple thereof. He is involved in getting supplies to other bureaus too, but his major function seems to be

Table 14. Governor's Bureau
Bureau Name: *ensí* Function: capitalization from wool;
household maintenance?

<i>Operatives</i>	<i>Products in Accounts</i>	<i>Products in Non-Account Texts</i>
?	To Capital: 600m sig—AS3iUrDZ: 1: 10 4050s kb—AS3Pd: 1: 1 2700m sig—AS4dgn: 3: 19 420m sig—AS6xiSes: 1: 4 1153m sig—AS8viiUrDZ: 1: 6 2160m sig-gi—AS9UrDZ: 1: 12 5915s kb ugula ara; sá-du ₁₁ ensí—SS5Lkl: 12 960s kb—AS4Sgk: 1: 5 37800s kb sám kù-huš— AS8xiiUrDZ: 1: 1 1800m sig—AS9UrDZ: 1: 16 From Expenditure: 300s esir-é-a—AS6xiPd: 5: 4 60m dA? []—AS6xiUrDZ: 6: 21 60 ù-suh; na-kab-tum Uri— AS5SesA: 1: 14 180s esir-é-a—AS6xiUrDZ: 5: 18 65s esir-é-a—AS9UrDZ: 8: 11 70s esir-é-a—SS2UrDZ: 4: 22 4m AN.NA kak-gal— AS8xiiUrDZ: 3: 10 1980s kb šu-nir—AS3iUrDZ: 2: 32 16s esir-é-a—SS2UrDZ: 5: 14 7740s kb—SS5viUrSPE: 1: 5 48.600s kb—SS5Lkl: 17	MCS 8: 94; BM105472—SS2xii wool for governor MCS 8: 95; BM 105584—SS8 wool from among governor's wool BIN 5: 203—AS2viii Ninmelam received shoes from Šeškalla; seal: "Ninmelam, sister of Ur[] gover[nor] of Um[ma]"
Sagku		
UrŠulpae kù-dím		
Ninmelam		
Ninmelam		
Basig sa[gi] aga ₂ -ús ensi		
Danili lú kin-gi ₄ -a lugal		
Dingirra		
Lukalla (relevant entry)		
?		

the responsibility for the flow of silver. He is further occasionally involved in the transfer of other metals and in supplying grain and leather stuffs for capital. Table 16 gives a view of his relevant activities (for the rest see Appendix 1 under his name).

This activity in silver is unparalleled in the accounts, and it appears that Lu-kala actually receives most of the silver for which there are records in

Table 15. Palace
Bureau Name: *é-gal* Function: household of governor?

<i>Operatives</i>	<i>Products in Accounts</i>	<i>Products in Non-Account Texts</i>
?		JCS 26: 93: 2—SS1 resin list for house of governor JCS 26: 94: 4—SS2 resin list received by governor's wife
UrŠulpae (relevant entries only)	390s i-šah é-gal-la ku ₄ -ra— AS5xiPd: 4: 9 é-gal not mentioned: 51s i-šah—AS3Ses: 2: 15 514s i-šah—AS4iUrDZ: 3: 7 173.5s i-šah—AS5SesA: 1: 11 466s i-šah—AS5SesB: 2: 10 912s i-šah—AS6xiSes: 3: 5 907.3s i-šah—AS6xiPd: 5: 9 530s i-šah—AS9xPd: 3: 65 (33.67s i-šah—AS6xiSes: 3: 4)	MLC 1978—AS4 (Copy 18) priced lard, sesame oil from account PNs UrŠulpae received
Ikala (see wardrobe, Table 20)		

Table 16. The Comptroller
Bureau Name: ? Function: capitalization, receipt of metals

<i>Operative</i>	<i>Products in Accounts</i>	<i>Products in Non-Account Texts</i>
Lu-kala (relevant entries only)	To Capital: 10800s kb—AS3iUrDZ: 1: 6 9000s še—AS3Ses: 1: 2 900s kb—AS3Pd: 1: 5 6300s kb—AS4Sgk: 1: 1 14040s kù kuš—AS4dgn: 3: 13 (erased) š kb sám kù-huš-a— AS6xiUrDZ: 1: 16 [1232]š kb—AS8Ag: 1: 1 (all capital) AS9xPd: 1: 10 21385s kb—AS9UrDZ: 1: 23 4080s kb—AS9Irm: 1: 1 30s kb—SS2UrDZ: 1: 14 1050s kb—SS5Pd: 1 From Expenditure: 10800s kb—AS2xiiiUrT: 2: 2 10800s kb—AS3iUrDZ: 3: 46 200s kb, 3660s kb—AS3Ses: 2: 12 5400s kb—AS4iUrDZ: 3: 24 21.75m urudu?—AS4UrDZ: 1: 17 1800s kb—AS5SesA: 2: 7	ŠA 76 AS5 grain account of Lu-kala; account PNs receive grain from capital RA 34: 76: 4—AS2/SS3? tablet basket containing: "its contents returned?; capital and expenditure; Lu-kala" ITT 3: 5494—AS9 tablet basket as above, also: grain received? Lu-kala granary supervisor; seal of the ša ₄ -dub-ba "Silver returned; copy of the tablet"; <i>MVN</i> 1: 248—AS9 G, <i>Nik</i> 400—SS1, 401—SS3, <i>YOS</i> 4: 221—SS2 "Silver; copy of the tablet"; Grégoire 159—SS5, <i>Nik</i> 442—

Operative	Products in Accounts	Products in Non-Account Texts
	9900\$ kb--AS5Inm:3:3	SSI, MVN 1:250—SS2, 263—
	38.5m urudu—AS5SesB:2:7	SSI G
	360\$ kù--AS5Lin:16	
	1710\$ kù urudu—AS6iiKd:2:13	
	7200\$ kb--AS6xiSes:4:2	
	21900\$ kb--AS6xiUrDZ:2:1	
	270\$ kb--AS8xiiUre:2:19	
	10800\$ kb--SS5viUrSPE:2:1	
	1800\$ kb--SS6Ab:2:7	

Umma during the reigns of Amar-Suen and Šu-Sin.⁴⁵ The meaning of this remarkable activity is not clear from the silver accounts themselves, but the numerous texts that are labeled gaba-ri dub Lú-kal-la “copy of the tablet of Lu-kala” imply that he had an accounting function, that he kept records of others’ activities and needed a copy of the relevant documents. Some of the “copies” say they are records of lá-i su-ga “remainder returned”; others do not. This would imply that he supervised the accounting of both expenditures and return of unspent monies.

Jones and Snyder assume that the Lu-kala of the silver accounts is identical with the person known as a junior partner in the dealings of the wide-ranging Ur-e'e.⁴⁶ In the view of those authors Lu-kala has an interest in accounting for rather than in producing leather and other items. The title given this “son of Ur-e'e” is sahar, usually an official dealing with animals.⁴⁷ But the personal name Lu-kala occurs with other titles. In the seal on *OrSP* 15:60:54 AS2 dealing in sheep skins the son of Ur-e'e is called ša-dub, a high official title.⁴⁸ In the Lagash text *ITT* 3:5494 AS9 someone of the name is called ka-gur, “granary supervisor.”⁴⁹ It is not clear that the same Lu-kala would appear at both Umma and Lagash, though it is

45. Jones and Snyder, *SET*, p. 247.

46. *Ibid.*, pp. 322, 331f.

47. *Ibid.*, pp. 323, 326. Perhaps sahar is to be read kuš, *CAD* K:478b; for a different etymology, cf. *NSG* 3, p. 155.

48. Cf. note 60 below.

49. The text is difficult:

pisan-dub-ba	Tablet basket containing:
ša-bi su-ga	“from within it” “returned”
še-sig-e šu-ti-a	“grain to dry?” “thing taken”;
Lú-kal-la ka-gur,	Lu-kala the granary supervisor;
r. kišib ša-dub-ba i-gál	seal of the šadubba
//mu en Nanna ba-hun	Year: AS9

The terms in the second line and following may be names of types of documents. Compare the similar usage in Lu-kala's other tablet basket label, *RA* 34:76:4, paraphrased in Table 15.

conceivable.⁵⁰ But the various titles associated with the name make it possible that at least two important persons of the name worked contemporaneously at Umma.⁵¹ It is perhaps significant that on none of the non-account texts in which Lu-kala deals in silver does the seal showing relation to Ur-e'e occur. Further, it will be shown below that Ur-e'e's silver account does not participate in the system of standing orders at Umma which Lu-kala may supervise. The title ka-gur, occurs only twice in the silver accounts, and in *SS2UrDZ*:1:9 it is clearly not associated with Lu-kala, who appears in a subsequent entry contributing to capital. Thus Lu-kala may not have been the most important granary supervisor at Umma, but he may have been one all the same.⁵²

Metal

Lu-Enlila's involvement with su-GAN “(a metal)”⁵³ and copper defines this bureau, but the apparently analogous functions of Lu-kala in collecting amounts of gypsum as well as his involvement with metals catalogued in Table 17 shows that the bureau is perhaps a part of his activities as comptroller. The name of the metalwork bureau may be é kù-dím, “metalwork house”; references to the é ba-dím have been included here because Lu-Enlila once receives a similar amount of gypsum. But this name may represent a separate institution.⁵⁴ The resin list from Nippur, *TMHC* 307, may not show the activities of the same Lu-Enlila.⁵⁵

50. Cf. below, The Problem of Lagash.

51. Jones and Snyder, *SET*, p. 332, assume that there is only one important Lu-kala at Umma and argue, “Although the seal impression specifying Lú-kal-la as the son or agent of Ur-e'e does not occur on these large [silver balanced account] tablets, their association together on so many of them indicates that the same person is involved.” Since the silver accounts are *Sammeltafeln*, one cannot expect any seals to appear on them. Ur-e'e occurs only in four of the silver accounts, including his own *AS8xiiUre*; cf. Appendix I under his name.

52. Jones and Snyder's failure to consider Lu-kala's other attested titles is understandable since they are concerned in their essay mainly with Ur-e'e activities, but it shows lack of methodological standards for cuneiform prosopography. In the case of rare personal names prosopography can be quite productive, but when the names are common ones like Lu-kala, extreme caution is necessary. The term comptroller is meant to imply his wide role in the accounts and his apparent interest in recordkeeping outside them. It is of course not always clear how deeply involved he may have been in any given transaction, whether it was for his personal benefit, for a bureau's, or for a private person's. But his frequent attestation in the accounts demands that we posit a central role for him.

53. See Chapter 5 s.v.

54. The name may be a sentence that has become a noun like mu-ḍu “delivery.”

55. In Limet, *Métal*, pp. 184–88, the sketch of the Umma metal establishment includes none of these persons, except Ur-Šulpae the smith or metalworker; note that Jones, *JCS* 15 (1961): 115, believes there are at least two metal organizations, one centering on Lu-Enlila and one on Halulu.

From ŠA 143 we see that Ur-Šulpae wields the authority of a ša tam. Gallery has found that this official, especially in the Old Babylonian period, was "a kind of inventory control agent who certified the transfers of goods between crown departments."⁵⁶ The title of šabra which he bears in *OrSP* 47:400 SS1xi may be a later promotion.

In the accounts Ur-Šulpae never has either of these titles. The silver-smith of the name is definitely another person though the merchant Ur-Šulpae of S44iUrSPE from Lagash may perhaps be the same person as the agriculture bureau representative. In the Umma accounts Ur-Šulpae appears with many kinds of goods, and limiting his concerns to the agriculture bureau may be incorrect. He may well be delivering and receiving on behalf of other authorities in his role as inventory control agent.

The Ur Bureau

AOS 32:S23, mentioned earlier, keeps this bureau distinct from the TUN lugal and the bala, but no cohesive function is apparent in the entries. The two entries noted in Table 19 for about 1700š of silver for copper may refer to a standing order rather than to the same amount of silver, though

Table 19. Ur Bureau
Bureau Name: Uri^{ki} Function: building, metalwork?

Operatives	Products in Accounts	Products in Non-Account Texts
?	20.33m kū-huš-a ezen-mah ša Uri—AS4UrDZ: 3:23	
UrNinKimar, LuŠara	20s gazi—AS3Ses: 2:5	AS3Ses: 1:14ff. = <i>AOS</i> 32:S23 = YOS 4:298 onions, alkali, bitumen
UrLama, Elubi DAG	1716š kū sām urudu— AS5xiPd: 4:23	
UrLama, Elubi BI	1530š kū urudu—AS5SesB: 2:19	
Lukalla, Elubi ZU	1710š kū urudu—AS6iiKd: 2:13	
Danili lú-kin-gi-a lugal (see under governor, king's bureau)	60 giš-ù-suh ₃ —AS5SesA: 1:14	

56. M. Gallery, "The Office of the *Šatammu* in the Old Babylonian Period" (PhD diss. Yale University, 1975), p. 190; cf. pp. 63ff. for discussion of Ur-Šulpae and Lugal-kugani's other sons.

they are separated by only three months.⁵⁷ Because of the city governor's involvement this office may be under the governor's local control. Its relation to the capital city of the empire remains moot, though the involvement of a lú-kin-gi-a lugal "royal messenger" may indicate the bureau's main activities were in Ur.

Royal Bureaus

Several sparsely attested bureaus are called royal and may be under the authority of the king at Ur; it seems likely that the city governor was actually in charge of day-to-day operations in these bureaus. The activities of the royal wardrobe, bootery, kitchen, beer, and TUN offices are presented in Table 20. The TUN lugal may include some of these miscellaneous royal bureaus as shown by the correspondences in AS4Sgk and *AOS* 32:S23; these include the kitchen, the é uz-ga, the brewery, and the nahištum. But since these bureaus usually are kept separate in the silver accounts, they have been separated here.⁵⁸

Table 20. Royal Bureaus

Bureau Names	Functions	Operatives	Products in Accounts
é a-gi-um lugal	royal wardrobe	?	360m im-babbar—AS6xiPd: 2:33 360m im-babbar—AS9UrDZ: 2:19 360m im-babbar—AS5xiPd: 2:14
		Sarrumili, Utuušumgal	
		Ušmu (see under king's bureau)	1500m im-babbar Ušmu lú-ašlag— SS2UrDZ: 4:2 42 udu bar-gál Ušmu i-dab ₃ k. UrNungal—SS61.kl: 8:15
		UrNungal	UrNungal . . . ib-ba—AS4UrDZ: 4:3 360š kū-huš-a—AS5xiPd: 1:9 UrNungal . . . nig-ka ₃ -bi ib-ak— AS6iiKd: 2:16 180š kū esir-é-a—AS7ixPd: 5:9 2100s naga ugú Ikala k. UrNungal— AS8viiUrDZ: 3:33

57. Cf. below for possible Lagash connections. The last element or title (?) of Elubi remains obscure. For another reflex cf. *RTC* 399 rev. 6:3=BALAG, KWU 320. The name is presumably short for É-a-lú-bi, Limet, *Anthroponymie*, p. 402.

58. The few entries for the é uz-ga and the na-hi-iš-tum have not been included in these tables; cf. Appendix I s.vv. for the related activities.

Bureau Names	Functions	Operatives	Products in Accounts
			120m giš-ma-nu—AS9xPd: 2: 28 (see also “kitchen oil” below)
			120m im-babbar—SS2UrDZ: 6: 17
		Ikala	360m im-babbar—AS4iUrDZ: 3: 13
			33.67s i-šah—AS6xiSes: 3: 4
			1800m im-babbar—AS7viiUrDZ: 4: 16
			900s naga-si-è—AS7ixPd: 4: 14
			3000s naga—AS9UrDZ: 8: 8
			2040m im-babbar—SS6Lkl: 7: 34
tùg-nin	queen's wardrobe	?	60m im-babbar—AS6xiPd: 2: 22
			60m im-babbar—AS6xiPd: 3: 9
kuš-šuhub _x (MUL) lugal	royal bootery	Addada, ŠuEšdar	10m im-babbar-kum—AS5xiPd: 2: 27
		?	10m im-babbar-kum—AS6xiPd: 2: 25
i-(muhaldim)	“(kitchen) oil”	?	63s ku-mul—AS4Sgk: 1: 19
	= ?		9.67s še-li—AS4Sgk: 2: 19
			.67m gi—AS5xiPd: 3: 25
			120m giš-ma-nu—AS6xiPd: 2: 17
			(120m giš-ma-nu—AS9xPd: 2: 28)
		UrNungal	.5 giš-pěš še-er-gu—AS6xiPd: 3: 16
		Lu-kala	11s še-li—AS4Sgk: 2: 9
nag lugal	beer preparation?	?	6.5s še-li—AS6xiUrDZ: 3: 2
			9.5s še-li—AS9UrDZ: 2: 3
TÜN lugal	?	?	450s naga-si-è kab-ušx lugal—AS4Sgk: 2: 6
			120s naga-si-è—AS6xiSes: 2: 5
			120s naga—AS9UrDZ: 2: 15
		UrDumuzida	9900š kù sám urudu—AS4dgn: 4: 10

Other entries labeled simply “royal” are presented in Table 21. These entries may not be so cohesive as those more fully defined, and the specificity of some of the entries may mean that they are one-time requisitions for one-time needs.

The relation of all these bureaus to the Ur Bureau is not clear, and its activities have been shown separately in Table 19 and relegated to the city governor's sphere of authority.

The proper connection of the persons involved in the royal wardrobe is especially difficult to ascertain. Only Table 20's first three entries are actually labeled *tùg lugal* or the like. Ušmu's activities are presented there because of his title, Ur-Nungal's because of his connection with Ušmu, and Ikala's because of his connection with Ur-Nungal. Ikala's receipt of 360m of gypsum and multiples thereof is an indication of his connection with a standing order for gypsum from some establishment, probably the wardrobe. Waetzoldt, p. 102, shows that Ikala is known as

dub-sar tùg-gada “linen and cloth scribe.” The possible bureau name occurs fully only in AS5xiPd: 2: 14; other entries have *tùg-a-gi₄-(a-)um lugal*.

The enigmatic entry in AS4 under TÜN lugal, the signs of which have been confirmed by M. Lambert's collation, perhaps for *kab-ús = kaparru* “shepherd of low rank,” has been placed there because of the similar product involved. This amount in AS4Sgk: 2: 6, reflected in the sum in AS4Sgk: 4: 12ff., may go to the TÜN lugal in AOS 32: S23: 1: 10, but in the latter text other amounts have been added to it.

Table 21. King's Bureau
Bureau Name: lugal Function: building and repair?

Operatives	Products in Accounts
UrDamu	450s naga-si-è é ur-lugal—AS5xiPd: 2: 18
Danili lù-kin-gi ₄ -a lugal	60 giš-ù-suh, na-kab-tum—AS5SesA: 1: 14
(see under Governor, Ur)	
Dadaga	26s esir-é-a má-gur ₈ —AS7viiUrDZ: 4: 24
Lugalnirgal	360s esir-é-a má ^d AS—AS7viiUrDZ: 4: 9
Ušmu (see under Wardrobe)	15s esir-é-a giš-kak é ^d AS—AS7viiUrDZ: 4: 29
?	.00417m guškin nig-pi ^d AS—AS6xiUrDZ: 6: 25
	80[] giš-gigir lugal—AS8xiiUrDZ: 2: 12
	97.5š kù sila sám lugal—AS9UrDZ: 5: 41
	.33m kù-huš-a maš-da-rá-a ^d ss—AS9Lkl
	4 sig ₄ -ba alam ^d ss—SS2UrDZ: 5: 16

It seems likely that Ur-Nungal's activities really are not limited to the two bureaus under which he appears. His seal, *OrNS* 15: 66 #393, shows this person may be a ša_x-dub-ba, a high administrative official. Probably he is a high royal officer supervising the king's business at Umma. It is significant that he is involved in both the interesting subscript notations in AS4 and AS6ii, discussed above, which show that in exceptional cases he is involved in the ultimate disposition of the silver balanced accounts. Salonen explains the *kuš-šuhub_x (MUL)* as a type of shoe, *Fussbekleidung*, pp. 46ff. The TÜN lugal seems neither synonymous with the crown as an economic authority as Jacobsen suggests, “The Reign of Ibbi-Sin”, *Tam-muz*, p. 174 n. 2, nor a royal weight, as Oppenheim said, *AOS* 32, p. 138. A few of the entries marked simply “royal” may relate to one of these bureaus, but most of them are concerned with other royal enterprises. The “kitchen oil” office never is involved with oil, and its real function may be quite different from its name.

Šara's House

Table 22 gives a picture of two of the house's high functionaries, the šabra and the šaduba. The šabra is the head of a temple's economic activities,⁵⁹ and the šaduba is another high administrative official.⁶⁰

Table 22. Šara's House
Bureau Name: é Šarā Function: ?

Operatives	Products in Accounts	Products in Non-Account Texts
Lugalnir	10s esir-é-a é Šarā—AS9UrDZ:8:39 596m im-babbar Šarā—SS6Lkl:7:19	<i>OrSP</i> 47:383—AS8i-xi tablet basket of deliveries of Šara via Lugalnir <i>Nik</i> 445—AS9 resin list, delivery of Šara, from Lugalnir, UrŠulpae received <i>OrSP</i> 47:438—SS6 workers for mar-sa; seal: Lugalnir ša ₄ -dub-ba
LuNinŠubur	4 giš-peš še-er-gu—AS5xiPd:4:7 360m esir-hád—AS6xiUrDZ:6:7 120m im-babbar—AS7viiUrDZ:3:21 27s geštin-hád—AS7ixPd:3:16 20s šim-hi-a—AS8xiiUrDZ:3:5 22s geštin-hád—AS9xPd:2:47 60s naga—SS2UrDZ:4:12 20s al-la-ha-ru Šarā—SS2UrDZ:5:23 10s šim-hi-a—SS2UrDZ:7:3	<i>SET</i> 281—AS1 resin list from LuNinŠubur UrŠul- pae received <i>TCL</i> 5:6036:9:8ff.—AS5 items for Šara's boat LuNinŠubur received <i>MVN</i> 1:250—SS2xii (cour- tesy Gelb) silver for LuNin- Šubur the šabra; copy for Lu-kala <i>SET</i> 282 n.d. resin list from šabra's storehouse
Lu-kala (relevant entries only) ?	(resin list) AS6xiUrDZ:3:27 8m za-ba-lum é Šarā—SS2UrDZ:5:31 []s sag X-na Šarā—AS6xiUrDZ:5:8 18m siġ.ūz Šarā—AS9UrDZ:4:8 1200m esir-hád Šarā—AS9UrDZ:4:13 690s esir-é-a Šarā—SS2UrDZ:3:29	

59. Cf. *NSG* 3, p. 159, and compare the present study's S29Urs; Grégoire, pp. 130f., gives a handy definition of the office's functions in Ur III. In the Old Babylonian period it seems not to have been so important; cf. now Gallery, p. 134 and n. 148. For etymology, cf. *MAD* 3:281.
60. = Akkadian *šandabakku*. Landsberger rejects "archivist" as an anachronism, *JCS* 9 (1955):125 n. 22 and 23rd *ICO* (1954):126. Edzard seems to edge back toward the old translation with *Rechnungsführer* "director of accounting," *ZA* 55 (1963):95 and n. 18. Falkenstein notes that the office entitled the holder to half the "salary" of a šabra or sanga in some Ur III texts, *NSG* 3, p. 159.

OrSP 47:438 seems to show that the marsa is under this šaduba's authority. The receipt of wine and "assorted spices" by Lu-Ninšubur may show that the "death offering" is also under the authority of Šara's House. The two *SET* texts show resins en route from Šara's House to other destinations.

Note that in Table 22 mention of Šara's House is indicated for each entry in which it occurs. Other entries are included because the same person is involved.

Dukuga

This bureau is probably a part of Šara's House, but it has its own operatives and receives some characteristic products. Table 23 presents the relevant entries. A relation between this bureau and that fund represented by the "food offering of Inanna and the first-fruit offering of Enlil" is suggested by the presence of Lugal-GAR.LAGAR.E in connection with both. *CST* 721

Table 23. Dukuga
Bureau Name: Du₆-kù-ga Function: ?

Operatives	Products in Accounts	Products in Non-Account Texts
Lugal-GAR.LAGAR.E	225m im-babbar—AS4iUrDZ:2:9 [] kb šuku Inanna, nisag Enlilla AS4iUrDZ:2:12 225m im-babbar—AS5xiPd:4:4 []s ku-mul—AS6xiSes:2:9 140s še-1.ū—AS7ixPd:3:11 24s gú-gal—AS9xPd:2:42 2.5s lâl—AS9xPd:3:54 1080s kb—SS2UrDZ:4:25 27s sum-za-ha-din—SS2UrDZ:7:8	<i>MCS</i> 2:69—AS3i priced goods received by Lugal- garlagare = AS4iUrDZ:2:1ff. <i>TCL</i> 5:6036:7:26—AS5 reed object for the bala re- ceived by Lugalgarlagare <i>Boson</i> 361—AS6 reed objects for Dukuga, nisag, received by Lugalgarlagare <i>CST</i> 741—SS5 similar to above <i>CST</i> 721—SS5viii priced grain sá-du ₁₁ of Šara re- ceived by Lugalgarlagare <i>ŠA</i> 75 n.d. woods and bitu- mens from three persons including Lugalgarlagare the merchant
UrŠulpae (relevant entry only) ?	.83s [] šuku Inanna, En[-lil]— AS9UrDZ:8:3 (16700 ku ₆ -gír-uš nisag-še— AS4dgn:1:12) (30s esir-é-a gú ne-sag-gá-še— AS6xiUrDZ:2:10)	

confirms the impression that he also worked for the House of Šara, of which the Dukuga may be a part. MCS 2:69's relation to AS4iUrDZ:2:1 was discussed earlier. Waetzoldt, p. 101 and n. 154, observes that a certain Lugal-GAR.LAGAR.E was supervisor of weavers from about S32 to AS2; perhaps he was transferred from the weaving establishment to the Dukuga post in AS3, or perhaps we are dealing with two different persons.

The two entries of 225m im-babbar may not represent the same gypsum twice but may be a standing order to buy that amount of gypsum. Other clearer examples of this practice are apparent in the bureau of the king's wardrobe and perhaps in the Ur bureau. The last entries under Account Products in Table 23 may not relate to the Dukuga but have been included because of the apparent references to the "first-fruit offering."

Cultic Bureaus

These bureaus, the activities of which are outlined in Table 24, may constitute small accounts within Šara's House since analogous products are received directly by that institution. The relations between the "death offering" and the "lustration" are quite close. Šulgi's lustration appears in a text dated AS9, well after his death.⁶¹ But the silver accounts differentiate the two, and different products are involved in each. The diviner's connec-

Table 24. Cultic Bureaus
Functions: Death Offering, Lustration, Divination

Bureau Names	Operatives	Products in Accounts
ki-a-nag	?	2s geštin-hád ki-a-nag Ur ^d Nammu—AS5xiPd:3:18 3s šim-hi-a ki-a-nag Ur ^d Nammu—AS6xiUrDZ:3:9 4 giš-pěš še-er-gu ki-a-nag Ur ^d Nammu zi-ga bala-a AS9UrDZ:3:37 3s šim-hi-a ki-a-nag Ur ^d Nammu—SS2UrDZ:7:11 (8s geštin-hád sá-du ₁₁ lugal—AS5SesB:2:13) (4 giš-pěš še-er-gu—AS5xiPd:4:7)
a-tu ₅	LuNinŠubur (see Šara's House) ?	10s pa-li a-tu ₅ lugal—AS6xiUrDZ:2:18 3s naga a-tu ₅ ^d Amar- ^d Suen—AS7viiUrDZ:5:4 .17m šim-GAN nig-dab ₅ a-tu ₅ —AS9UrDZ:2:32 .05m nig-kéš a-tu ₅ ^d Šul-gi-ra—AS9UrDZ:4:17
maš-šu-gid-gid	?	1m sig.ūz—AS4Sgk:2:21 1m sig.ūz—AS9UrDZ:2:7

61. See note to AS7viiUrDZ:5:4 in Chapter 1.

tion with resins may be reflected in the literary Sumerian term for diviner šim-mú, etymologically perhaps "resin kindler."⁶²

Note that the diviner may be connected with the TUN lugal since AS4Sgk:2:21, corresponding to AS4Sgk:3:16, may appear in broken context in AOS 32:S23, in the section that goes to that bureau.

Table 25. Boat Bureau
Bureau Name: mar-sa Function: ship repair

Operatives	Products in Accounts	Products in Non-Account Texts
Lušaizu	1225s esir-é-a AS6xiUrDZ:5:12	AOS 32:032—[S44] wood for the mar-sa from Ur-TAR.LUH, Lušaizu received OrSP 47:249—AS2 ship materials from Lugalebanša Lušaizu received
Lugalebanša	780m esir-hád AS5xiPd:4:19 6060m esir-hád AS9UrDZ:8:26 8020m esir-hád—SS2UrDZ:3:26 300m ū-NINNI ₅ —SS6Lkl:8:19	TCL 5:5673—AS2 boats, etc., for Lugalebanša, expended from the mar-sa, from Lušaizu MCS 8:98:113129—AS9 bitumen from the merchant, received by Lugalebanša OrSP 47:419—SS4 boat, delivery of Šara from Lugalnir for Lugalebanša
?	4200s esir-é-a . . . mar-sa AS3Urg:1:4 Lagash 78779s še nig-sám-ma bala-a ū esir mar-sa—SS6Lkl:1:9 (Capital) 600s esir-é-a mar-sa A-pi ₄ -sal ₄ ^{ki} —SS6Lkl:9:3	
Abagina (relevant entry only)	60 giš-ū suh ₅ mi-rí-za—SS6Ab:2:5	BRM 3:166—AS6 tablet basket containing a balanced account; Abagina YOS 4:256—AS7 list of woods, other materials for Abagina
LuSuen	5 giš-ū-suh ₅ gal—SS2UrDZ:6:26	
Lugalmagure	3600š kù má su-a—AS7ixPd:1:14	
Šarakam (relevant entry only)	mar-sa-aš 40 giš-ū-suh ₅ šu-dím má 20-gur—SS6Lkl:7:5	

62. Taking mú as equal to *napāhu*. AHw:732a; the term but not the etymology is discussed by Falkenstein. "Wahrsagung" in der sumerischen Überlieferung," *La Divination en Mésopotamie ancienne* (CRR 14. Paris, 1966), p. 52. W. Römer, *Sumerische 'Königshymnen' der Isin-Zeit* (Leiden, 1965), p. 258, however, prefers to explain an epithet šim-mú-mú as meaning "one who makes plants grow," taking mú as equal to *ašū*.

Boat Bureau

M. Lambert translates *mar-sa batellerie* "river transport center" (*RA* 55 [1961]: 135, concerning a Lagash institution of that name); the view gained from the silver accounts of this institution accords with the translation "boat bureau." It is not clear if the various woods in Table 25 are bound for this bureau. *Aba-gina*, *Lu-Suen*, *Lugal-magure*, and *Šara-kam*, otherwise unconnected persons who receive wood, may be involved in it. From the connection noted above and *OrSP* 47:419 involving *Lugal-nir*, the boat bureau appears to be connected to *Šara's House*. The only other received wood goes to the *Ur* bureau and to the crafts bureau.

TCL 5:5673 indicates that *Lugale-banša* is not identical with the *marša* administration while *Lu-šaizu* is. But the other texts show a closer identity between *Lugale-banša* and the *marša*; he may be the acquisitions agent for the establishment.

It is not clear if the *marša* of *Apisal* is the same as the *marša* with which *Lugale-banša* is connected.

Leather

A-kala the leatherworker receives tanning materials and other items, and his activities and analogues to them define this bureau. The bureau is also

Table 26. Leather Bureau
Bureau Name: ? Function: Leatherwork

Operatives	Products in Accounts	Products in Non-Account Texts
<i>A-kala ašgab</i> (relevant entry only)	10s al-la-ha-ru AS4UrDZ: 3: 14 15s al-la-ha-ru — AS5xiPd: 4: 21 [] al-la-ha-ru — AS6xiUrDZ: 5: 27 20s al-la-ha-ru — AS6xiPd: 5: 6 8m zi-ba-tum — AS7viiUrDZ: 4: 2 30s naga-si-è — AS8xiiUrDZ: 2: 15 120s naga — AS9UrDZ: 8: 29 30s naga k. LuNagarpae ugù <i>A-kala</i> — AS9UrDZ: 8: 31 5s al-la-ha-ru — SS2UrDZ: 4: 7 5s im-kù.GI — SS6Lkl: 8: 28 40s naga — AS7viiUrDZ: 4: 5 1000s naga-si-è — SS2UrDZ: 3: 13	<i>BIN</i> 5: 106 AS1 various containers, shoes, from <i>A-kala</i> received by governor <i>Nik</i> 447 — AS3xi leather? container, price blank; <i>A-kala's house</i> mentioned <i>BIN</i> 5: 64 — SS4 hides from <i>A-kala</i> , governor received
<i>LuNagarpae</i> <i>UrŠulpae</i> (relevant entry only)		
<i>LuNinŠubur</i> (relevant entry only)	20s al-la-ha-ru KU.IM.GAL "Šarà-šè — SS2UrDZ: 5: 23	

perhaps under the control of *Šara's House*; the ambiguous notice in the relevant passage concerning the *šabra* *Lu-Ninšubur* may conceal its name. The leather objects that appear as capital in the silver balanced accounts may originate here, but their origin is never indicated in the accounts. *Ur-Šulpae's* connection outlined in Table 26 may be tenuous since the amount of "sprouted alkali" he receives in *SS2* seems to be much bigger than the leather bureau usually needs. *Nik* 447 may refer to the city governor named *A-kala* and not the leatherworker of that name.

Crafts

Agu seems to be the only recipient of miscellaneous building materials who is not otherwise identified. His activities are shown in Appendix I, and no separate table has been constructed for his activities since he is not obviously aided by any other receivers. His mammoth balanced account *TCL* 5:6036 AS5 shows that he worked for a variety of persons, among whom are several persons who occur in the accounts, including *Lu-Ninšubur*, perhaps the *šabra* of *Šara* (9:8ff.). The crafts bureau may possibly therefore be assigned to *Šara's House*. The subscript of the *TCL* 5 text is broken, but *gašam* "craftsman" is mentioned in it. *Agu's* activities are not apparently related to those of the *giš-kin-ti* "craftsmen"; cf. Appendix I.

The Bala

In some cases the term *bala* "turn of office," "exchange" appears to stand for a bureau name. The various *Umma* references are collected in Table 27; for two *Lagash* references see Appendix I under *bala*.

Contributions are made to capital for the *bala*, and miscellaneous goods are expended from it to representatives of various bureaus. The *Dukuga* may get all of AS6xiSes's *bala* list, or at least the unreceipted portion, but it is not the only recipient. The *bala* is treated in *AOS* 32: S23 as if it were a separate bureau, but the diversity of products involved with it implies it is a fund for general purposes. The *bala* in these texts does not deal in animals and thus cannot be precisely synonymous with that isolated by *Hallo* dealing in animals for *Nippur*.⁶³ Since there are comparatively few references to it, the *bala* here is probably not the general fund of the city governor or of the king. It is possible that in the silver accounts the *bala* is the name for a fund perhaps under *Lu-kala's* direction, kept separate in the main from the other balanced account activities.

63. Cf. *Hallo*, "Amphictyony," pp. 88–114, but compare p. 91 n. 32 and *RTC* 305 for non-livestock contributions. See now R. M. Sigris, "Le trésor de Dréhem," *OrNS* 48 (1979): 26–53, for distribution of metal goods from the site.

Both the accounts subscribed by the merchant in the bala are short, and both go via someone else. The AS8 account includes some typical building

Table 27. The Bala
Name: bala Function: ?

Entries (in chronological order):

449.67s i-šah bala mu—AS2 AS3Pd:1:10
[] bala mu—AS3 AS3Pd:2:14
1838š kb níg-sám-ma bala-a—AS4dgn:4:8
600s i-giš bala-še má-a ba-a-*du*—AS4dgn:4:12
zi-ga bala-a: 33.67s i-šah k. Ikala
912s i-šah k. UrŠulpae
80s giš-pěš-hád
180s giš-hašhur-hád
72s geštin-hád
2.5s lál
40s gú-gal
225m im-babbar
//ndb *Du*₆-kù-ga k. Lugalgarlagare—AS6xiSes:3:3
zi-ga bala-a: []m eš-ku-ru-um
.05m níg-kés // —AS6xiUrDZ:3:22
zi-ga bala-a: 1200m im-babbar
1200s naga-si-è
...
210s esir-é-a k. Agu
300s esir-é-a k. Ninmelam
20s al-la-ha-ru k. A-kala ašgab
907.33s i-šah k. UrŠulpae
8100š kb
60s esir-é-a
// k. Lu-kala—AS6xiPd:4:23
nig-ka₉-ak dam-gār ša bala-a k. Agu—AS8Ag:2:4
zi-ga bala-a: 75s esir-é-a k. Agu
2.5s lál ndb *Du*₆-kù-ga k. Lugalgarlagare
17.95m urudu
.633m su-GAN k. Halulu
90š kù numun gaeš SAR sám-ág-bi k. Sagku
530s i-šah k. UrŠulpae // —AS9xPd:3:50
4 giš-pěš še-er-gu ki-a-nag Ur[Nammu], zi-ga bala-[a]—AS9UrDZ:3:37
20s naga ša bala-a—AS9UrDZ:4:5
nig-ka₉-ak dam-gār ša bala-a gir Ir₁₁-mu ù UrNumušda—AS9Irm:2:5
28500s še iti Umma vi níg-sám-ma bala-a-še Inim-ma-LU-ta—SS2UrDZ:1:5
4140š kù, 10800š[+X] kù ša bala-a, 30š kù PA-ga, ki Lukala-ta—SS2UrDZ:1:14
21s še bala-e-dè su-bu-dè k. Šeš-kala—SS2UrDZ:4:17
21s še bala-e-dè ba-ab-su-ub k. LuKU.PA.KA—SS2UrDZ:5:21
78779s še níg-sám-ma bala-a ù esir mar-sa—SS6Lkl:1:9

materials and goes via the representative of the craft bureau. The AS9 account goes via persons otherwise unknown within the accounts and includes onions, lentils, and coriander, some of which is said to be “carried forward to the salt and spice account” níg-ka₉ mun-gazi il-dam. The capital for both the accounts is a single silver amount from Lu-kala.

The notice in the subscript of the Lagash S44iUrSPE, quoted above, indicating that “its (the account’s?) bala is one” for the two-month period covered may not refer to the same or an analogous fund. It may relate more directly to the better known use of the term bala in Ur III referring to the monthly duty to deliver animals to Nippur; the bala of Girsu does fall in the last month of S43 and the first of S44.⁶⁴ But S44iUrSPE, like most of the other accounts, does not deal in live animals, the major product involved in the bala for Nippur.

The Nippur and Puzriš-Dagan bala may relate more directly to the silver accounts’ use of the term than is now apparent. UET 3:1777 AS9v is an unpriced resin list described as “a votive offering of Šu-Sin the king; delivery from Puzriš-Dagan” a-ru-a ^dŠu-^dSuen lugal, mu-*du* ki Puzur₄-iš-^dDa-gan-ta. Further, two of the resinous items are noted as being SID-ta, possibly ka₉-ta “from the accounting.” Perhaps Puzriš-Dagan was a clearinghouse for such contributions as well as for animals.⁶⁵ Compare also AOS 32:7* S46 where Naša receives bitumen for an obscure purpose from Šeš-kala “within the bala; in Puzriš-Dagan.”

The bala at Umma is a continuing problem, but part of its mechanism is clear. Like the city governor’s bureau and Lu-kala’s, contributions were made to capital from it, and the purchases credited to it were distributed among several bureaus.

I have presented a hypothetical outline of the parts of the provincial and imperial economy which the balanced accounts reveal. Others will be isolated as more texts appear, and the functions of sparsely attested persons and bureaus will become clearer.

The needs the system fills are varied, and they could have been filled separately in some other way. Probably an efficiency of bulk was obtained by dealing with the needs of all these bureaus together. The reasons for the system we find may elude us in spite of new texts.

It is not hard to guess who directed the system. Lu-kala’s silver dealings,

64. Compare Hallo, “Amphictyony,” p. 94f. and note Hallo’s discussion of a similar subscript, p. 90.

65. The text bears the seal of Ur-mes, son of an Ur-Dumuzida; Ur-mes does not occur in preserved silver accounts.

his large account, SS6Lkl with its frequent mention of yet other non-silver accounts, imply a role of master accountant.

STANDING ORDERS

On numerous occasions the same quantity of a product is to be found in more than one silver balanced account or in the same account in different sections. The meaning of this phenomenon is perhaps that there were certain standing orders which the purchasing agents were expected to fill. It is conceivable that some of these similar entries represent the same delivery, but that seems unlikely given the years that separate some of the texts.⁶⁶ We do not have enough texts to say with certainty where all these possible standing orders were bound, and some of them may merely show that the same round numbers were used in orders for unrelated bureaus. The list of possible orders to be found in Appendix 2 demonstrates, however, that many of them do appear to go to the same persons or to members of the same bureau. It may be possible as more texts become available to identify more persons with specific bureaus by means of standing orders and to isolate more bureaus.

For example, the obscure institution⁶⁷ *nahištum* apparently receives the two amounts of 10 sila of *naga-gaz*. If *naga-kum* is the same product, perhaps the *nahištum* is the same as the silversmith's house, which receives the only 10 sila entry of that commodity. In this case, that does not get us very far. But when other texts come to light that relate known persons to the amount of 10 sila of *naga-gaz* or *naga-kum*, we may be in a position to define this putative bureau or fund.⁶⁸

The use of standard quantities regardless of ultimate destination may

66. Cf. Trolle Larsen's similar problem in Old Assyrian texts, *Procedures*, p. 19. He concludes that similar entries do represent the same delivery but notes that at least one person deals several times with the same "standard amount." It is, I think, no coincidence that the Neo-Babylonian texts studied by Oppenheim, *JCS* 21 (1967): 236-54, also show that the same quantities of several products were acquired in two successive annual consignments, esp. pp. 237-39.

In the Ur III account system there is a tendency to obtain the same quantity of different products, as in the repeated 2.67m of resins in YBC 1397 (Copy 24) and similarly in *OrSP* 15: 55f.

67. Or person? Cf. Gelb, *MAD* 3:200 and compare Aba-gina's text *YOS* 4:256:60 AS7 [g]iṣ-na-iṣ-tum in a broken context.

68. Note that this bureau may be connected with the TUN lugal since AS4Sgk: 1:10, which corresponds to AS4Sgk: 4:12, appears to be the same commodity that appears in *AOS* 32: S23 going to the TUN lugal. Similarly cf. AS4Sgk: 1:12 = part of AS4Sgk: 4:16 = *AOS* 32: S23:1:12.

have simplified the purchasing agent's task and probably made it unnecessary for him to have a written list of what he was to buy.

The idea that standing orders existed is a hypothesis that may in time have to be rejected or modified. But this hypothesis does seem to explain the key text AS9UrDZ. Columns 4: 34ff. and 6: 1ff., presented in Table 28, appear to have the same commodities in the same quantities with slightly different prices. But all of the silver values given are included in the sums at the end. The remark at the end of the first group of entries is ambiguous, but the remark at the end of the second says that Lu-kala received it. In view of the many analogous instances of the same amounts of commodities appearing in different silver accounts one may conclude that each list in AS9UrDZ was purchased separately at slightly different times, and that the price differences represent changes in market conditions.

Table 28. Standing Orders Within AS9UrDZ

AS9UrDZ: 4: 34ff.					AS9UrDZ: 6: 1ff.				
Quantity	Commodity	Cost	Unit Price	Remarks	Quantity	Commodity	Cost	Unit Price	Remarks
19m	siġ.ūz	342	18		17m	siġ.ūz	300	17.65	zi-ga mu (AS 9)
8.67m	za-ba-lum	156	18		10.67m	za-ba-lum	192	18	
6.67m	[šu-ūr-m]e	120	18		.67m	šu-ūr-me	12	18	
.67m	mun	12	18		.67m	mun	12	18	
2.67m	šim	160	60		2.67m	šim	162	60.75	
2.33m	ni-gi-tum	52.5	22.5		1.33m	šim-1m	12	9	
2.67m	ar-ga-nūm	16	6		1m	šim-dūg	9	9	
1m	en-mur	4.5	4.5		2.33m	ni-gi-tum	52.5	22.5	
1m	tām-še-lum-ma	4.5	4.5		2.67m	ar-ga-nūm	16	6	
1m	šim-dūg	9	9		1m	en-mur	4.5	4.5	
1.33m	šim-1m	9	6.75		1m	tām-še-lum	4.5	4.5	
3.67s	še-li	90	c24.55		3.67s	še-li	110	30	
3s	šim-GĀN	9	3		3s	šim-GĀN	54	18	
1s	gu-ku-ru	1.5	1.5		3s	šim-gam-gam-ma	9	3	
3s	šim-gam-gam-ma	9	3		1s	gu-ku-ru	1.5	1.5	
5s	pa-li	15	3		5s	pa-li	15	3	
2	á-dār	20	10		2s	sag-X-na	.5	.25	
390s	naga	78	.2		2	á-dār	20	10	
2s	sag-X-na	.5	.25		390s	naga	78	.2	
1s	i-dūg-nun-na	180	180		1s	i-dūg-nun-na	180	180	

nig-dab
(Umma viii)

kišib Lú-
kal-la

Texts AS5PdA, AS5Inm, AS6iiKd, and others show that this standing order concept may have been applied to capital goods also, or rather that the purchasing agent could expect a set quantity of goods to use as capital. The relevant entries are to be found in Appendix 2 under the various kinds of fish and leather objects. Standing orders for capital items seem to be reflected also in wool, grain, and dates in other texts.

It is significant that this penchant for standing orders, or at least round numbers, even extends to texts S40? and S43xGdl from Lagash dealing with copper and bitumen. But several Umma texts apparently do not display this phenomenon. The following abbreviations are used in the list of texts by text code: C before the code shows the text has a standing order in capital, E shows it has at least one in the expenditure section:

	S29Urs	C	AS5LIn
E	S40?	C	AS6iiKd
E	S43xGdl	CE	AS6xiSes
	S44iUrSPE	E	AS6xiUrDZ
	S47Dg	CE	AS6xiPd
	S48snga	CE	AS7viiUrDZ
	AS2xiiiUrT	CE	AS7ixPd
	AS3iUrDZ	E	AS8viiUrDZ
	AS3Urg	C	AS8xiiUrDZ
CE	AS3Ses		AS8xiiUre
	AS3Pd	E	AS8Ag
E	AS4iUrDZ	E	AS9xPd
CE	AS4UrDZ	E	AS9UrDZ
	AS4Lgh		AS9Irm
E	AS4Sgk		AS9Lkl
	AS4dgn	CE	SS2UrDZ
C	AS5PdA		SS5viUrSPE
CE	AS5xiPd	E	SS5Pd
	AS5PdB		SS5Lkl
CE	AS5SesA	E	SS6Ab
C	AS5SesB	E	SS6Lkl
CE	AS5Inm		SS7Aak

Shorter texts or AS9Lkl, which is only partially available, cannot be expected to have traces of standing orders. Another exception to the habit of standing orders may be noteworthy, AS8xiiUre. Ur-e'e is nowhere called a merchant, and his text may be a special use of the standard form by someone not usually connected with the silver account operation.⁶⁹

A survey of the hypothetical bureaus' receipts shows that the picture we have drawn of the Umma bureaucracy is to a large extent the picture given by the texts of Ur-Dumuzida, Šeš-kala, and Pada.

Only occasionally is there any specialization shown in the bureaus that the subscribers serve. Pada alone deals with the bootery, and only he and Sagku are concerned with "kitchen oil." He also is the only subscriber involved with the giš-kin-ti, which has not been included in the tables above because it is so rarely mentioned; see Appendix 1. But even in texts from the same month and year, i.e. AS6xiSes, AS6xiUrDZ, and AS6xiPd, the same bureaus appear to receive deliveries.

Resin list products are known to go to several bureaus, but Table 2 shows that not all the Umma agents were involved with the resin list products en masse. This may mean that resin buying took place in regions more exotic than those frequented by most of the agents. This in turn may mean that more care was taken in keeping track of what was bought and may explain why, for example, we have more texts from Ur-Dumuzida than the others.

Ur-Dumuzida's dealings are known from the most texts and appear in connection with the most bureaus. It is perhaps therefore significant that the bala is mentioned in only two of his texts. This fact, coupled with the small amounts of silver used in the two texts of the "merchant(s) in the bala," AS8Ag and AS9Irm, may again show that it is a special and perhaps comparatively minor fund.⁷⁰

THE CIRCLE OF ŠEŠ-KALA

The similarities in form, the similarities in organizations dealt with, and the continuity of participation by Lu-kala seem to imply a unified group of merchants as the agents that make the Umma balanced account system run. It is nonetheless difficult to prove that there was a merchant organization including all the purchasing agents, and it is very unlikely that there was one involving all titled merchants in Ur III.⁷¹ But relations among some of the silver balanced account subscribers are occasionally suggestive.

Table 29 shows the occurrences of subscribers within silver balanced accounts of other subscribers. Complete references may be found under their names in Appendix 1.

Only relevant subscribers have been included in Table 29. Numbers in

in preserved accounts and one of which is called "bought with silver" in AS6. This text would tend to indicate that Ur-e'e was an intermediary or ultimate recipient of goods but was not usually involved directly in their acquisition. Compare also note 51 above and Chapter 1, note 48.

70. See the discussion above.

the table show the number of texts in which the person occurs, not the actual number of appearances. Appearances of the subscriber in his own account have been shown by a capital X.

Table 29. Occurrences of Subscribers Within Accounts

Subscribers in whose Accounts Other Subscribers Appear	Aa-kala*	Aba-gina	Agu	Lu-Inanna	Lu-kala	Sag-ku	Ur-Dumuzida	Ur-e'e	Ur-Šulpae
Aa-kala	x						1		
Aba-gina		x			1				
Agu			x		1				
damgarne					1		1		1
Inimani-zi					1				1
Irmu					1				
Kuda					1				1
Lu-Inanna			1	x	1				1
Lu-kala	1		1		x				1
Pada	2	1	3		7	1			4
Sag-ku				1	2	x			
Šeš-kala			2		4				4
Ur-Dumuzida	7		3	2	9	1	x	3	8
Ur-e'e					1			x	
Ur-Šulpae					1		1		x

* Not included here are the references to PN with titles other than ašga b "leatherworker."

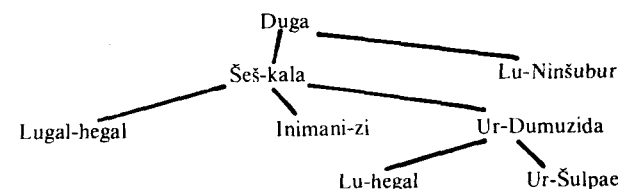
So there seems to be some sort of connection among the subscribers, but texts outside the balanced account genre may allow a bit more precision on this question. Some of the purchasing agents may be related by blood or be considered subordinates of one another.⁷² I am wary of constructing prosopographic groups merely on the basis of occurrences of personal names in possibly unrelated texts, and the relations presented in Table 30 should be regarded as highly tentative.⁷³ The substantiating texts are

72. Cf. Jones and Snyder, *SET*, p. 330, on the possibility that *dumu* means "agent" as well as "son." Compare the succinct definition given by Sollberger in his review of *SET*, *AFO* 21 (1966):91. Jordan, who defends the translation "agent," "Sheshkalla," pp. 19-24, has been liberal in allowing a single Šeš-kala to be the "son" of many fathers.

73. I discussed the difficulties involved in a paper read before the 1976 meeting of the American Oriental Society, "Some standards for Ur III prosopography."

examined in order to determine how likely it is that silver account persons are involved.

Table 30. The Circle of Šeš-kala



Though it may be possible that four blood generations should be attested within the sixteen years between Duga's text in S47 and Ur-Dumuzida's latest in SS5, (if one omits SS7Aak's broken reference to him) such a possibility seems unlikely. In the Nippur family of Ur-meme, for example, the pattern seems to have been one of late reproduction.⁷⁴

Relevant texts include:

Duga — Šeš-kala. *CHEU* 15 Umma S33ii. Šeš-kala receives grain from two persons who do not appear in the silver accounts. His seal shows filiation.

Duga — Lu-Ninšubur. *JCS* 24, p. 154 26 Umma SS2vi. Lu-Ninšubur receives from Ur-Šulpae a sort of bitumen which does not occur in the silver accounts. Seal reads: Lú-Nin-šubur dub-sar dumu Dūg-ga šabra Šarā "A the scribe, son of B, šabra of the god Šara."

Šeš-kala — Lugal-hegal. *OrSP* 47:382:53 Umma AS8xii. The text is a long list of "employees" with relations. Lines 53-54 read in part: Šeš-kal-la, . . . Lugal-hé-gál dumu-ni "(measures for) A, . . . (for) B, his son." Another Lugal-hegal occurs with different filiation in lines 59-60, and Šeš-kala appears as an overseer in lines 42 and 77. (See next paragraph).⁷⁵

Šeš-kala — Inimani-zi. Same text as above. Lines 42-43 read in part: Šeš-kal-la ugula, . . . Inim-ma-ni-zi dumu-ni "(measures for) A the overseer, . . . (for) B, his son." Also in *AOS* 32:C15 SS7 Inimani-zi receives baskets for flour via Lu-Ninšubur. In the text the former's name is spelled Inim-ma-ni-zi; in the seal, which shows filiation to Šeš-kala, it is spelled Inim-ma.

Šeš-kala — Ur-Dumuzida. *YOS* 4:126 = *TCS* 1:119 n.d. Letter-order from Ur-Dumuzida to Lu-Ninšubur with filiation given in the seal. *AnOr*

74. Cf. Hallo, "The House of Ur-meme," *JNES* 31 (1972):87-95.

75. Jordan, p. 17, believes there are two different Šeš-kalas in this text.

7:374:91-3 n.d. List of fields, grain with account personal names and filiation of Ur-Dumuzida to Šeš-kala.

Ur-Dumuzida — Lu-hegal, Ur-Šulpae. *YOS* 4:232:52-55 Umma AS6xii. List of "employees." Lines 52-55 read in part: Ur-Dumu-zi-da, . . . Lu-hé-gál,⁷⁶ . . . Ur-Šul-pa-è, dumu-ni-me "quarts (for) A, quarts (for) B, . . . quarts (for) C, his sons." Some account personal names figure in the text.⁷⁷

The connections between Šeš-kala and Inimani-zi and perhaps between Šeš-kala and Ur-Dumuzida seem soundest. Most of these persons have other attested filiations as may be seen from Schneider, *OrSP* 23-24, under the names, and a prominent subscriber of silver accounts like Pada is absent from the "family."⁷⁸

All of the persons in Table 30 except Lu-Ninšubur and Lu-hegal are known as titled merchants.⁷⁹ The relations shown in Table 30 imply that some if not all of the persons entered there may have been part of a small organization which specialized in silver balanced account operations.

In the study of the prosopography of the silver accounts it has not yet been possible to prove that two different personal names involved in the accounts actually represent the same person, but two names referring to one person suggest themselves:

A — Kud-da = Sag-ku₅

B — Ka-tar or Ka-ku₅ = Sag-ku₅

The equation A presents no philological problems. Name A¹ would simply be a hypocoristicon formed by shortening.⁸⁰ If equation A is true, it would make the subscriber of AS6iiKd, who is called a merchant there, the same as the subscriber of AS4Sgk, who also appears in AS9xPd:3:63f. Kuda is not attested elsewhere in the silver accounts; no merchant of that name is otherwise known. But Kuda appears in ŠA 76 AS5, Lukalla's grain account in which Ur-Dumuzi (*sic*), Pada, Šeš-kala, and Inimani-zi appear; Sagku is absent from this text.

In equation B Ka-ku₅ occurs only in AS4iUrDZ:1:8 contributing silver to capital.⁸¹ Unless the name is to be read Gù-sil for GÚ-TAR, as Gelb

76. Collated: clearly Lú-hé-gál, not Lugal-hé-gál.

77. Jordan, p. 88, says that since persons in this text are members of the *guruš* class, Šeš-kala cannot be the merchant of that name. I am not prepared to say that the Ur III merchants were not of a very low social class, but it is true that *guruš* texts usually show no connection at all to merchant texts.

78. But see below.

79. Cf. Forde, "DAM-KĀR-E-NE," p. 10 and n. 45.

80. Discussed by Limet, *Anthroponymie*, pp. 97f.; he discusses the element sag-ku₅, perhaps a divine name, s.v. ku₅.

suggests in personal communication, it might be the same person since Ka-tar occurs nowhere else in the silver accounts.

Apart from the subscribers, there is evidence to indicate that other merchants may play a role in the accounts. Several of the untitled persons who appear in the accounts have names identical to names of known titled merchants and may in fact be those merchants. A comparison with Forde's list, "DAM-KĀR-E-NE," pp. 6ff. and MS, pp. A75ff., shows the following persons may be merchants (for full reference see the list of personal names, Appendix 1): Huwawa, Ikala, Lu-duga, Lugal-GAR.LAGAR.E, Lugal-kuzu, Lu-Ningirsu, Lu-Suen, Lu-Šara, Lu-Utu,⁸² NIGĪN.GAR-kidu, Nini,⁸³ Ša-guškin, Šarakam, Šeš-šeš, Šu-Ešdar, Ur-Bau, Ur-gišgigir, Ur-Lama, Ur-Numušda, Ur-Nungal, Ur-Suen, Ur-Šara, and Ur-Utu.

Leaving aside all subscribers, I have found 111 different personal names in all the silver balanced accounts now available, of whom 23 (about 21%) may be persons otherwise called merchants. Again omitting subscribers, I found that of the 228 mentions of individual proper names, 63 (about 28%) may involve persons elsewhere called merchants. The merchant personal names appear on the average 2.7 times while the non-merchant personal names appear on the average 1.9 times; the overall average number of appearances is 2.1. These figures do not argue overwhelmingly for a close-knit merchant organization, but putative merchants may play a slightly more active role than others.

The great majority of these persons are not called merchants in the silver accounts. If they are nonetheless merchants, this weakens Hallo's argument that the official status of merchants in the Ur III period is shown by the frequent use of the title in contrast to the Old Babylonian period.⁸⁴

PERIODICITY OF ACCOUNTS

It has been assumed that the Ur III silver balanced accounts are records of activity for one fiscal year because many do not include month dates.⁸⁵ Table 31 shows the chronological distribution of the account corpus arranged according to the subscriber and provenience. The number of the text has not been indicated since the texts are presented in Table 1 in chronological order. Subscribers are given in alphabetical order under each city of origin. Roman numerals in the table refer to the ordinal

82. Lu-Utu is explicitly identified as a merchant in each of his appearances in S40?

83. So read by Forde; Limet admits of such a name but keeps it in capitals, implying that he does not know the reading or that it may be Akkadian *ī-lī*, p. 512.

84. *JCS* 17 (1963):60.

85. Forde, "DAM-KĀR-E-NE," p. 21; Leemans believed the accounts might nonetheless be

number of the month in which the account was composed when that is indicated. The sign Φ shows that an account occurs in that year, but no

Table 31. Periodicity of Accounts

Subscribers Grouped by City	Time S	AS										SS							
		29.	40.	43	44.	47	48	...	2	3	4	5	6	7	8	9.	2...	5	6.
<i>Lagash</i>																			
Duga																			
Galdul				x															
sanga																			
Urguenna																			
Uršugalamma	Φ																		
Uršulpae																			
?																			
<i>Umma</i>																			
Aakala																			
Abagina																			
Agu																			
damgarne																			
Inimanizi																			
Irmu																			
Kuda																			
Lugalhegal																			
LuInanna																			
Lukala																			
Pada																			
Sagku																			
Šeškala																			
UrDumuzida																			
Ure'e																			
Uršulpae																			
UrTAR.LUH																			

month is given in its subscript. The mark \bigcirc indicates that the remainder of the one account appears as the balance carried forward in the subsequent account. Non-standard texts have been included for completeness.

The actual provenience of many of the accounts can be established by means of the month names which are distinctive for the cities of

origin.⁸⁶ Persons who are known to have worked in one city can tentatively be assumed to be working in the same city even if their texts have no month-names. But the provenience of a few texts remains in doubt.⁸⁷

Included in Table 31 under Lu-kala and Aba-gina are the texts subscribed "of the merchants; PN" as well as SS5Lkl, subscribed "via" Lu-kala; see Table 1 and the discussion of subscripts. Ur-Šulpae, Agu, and Irmu's texts go "via" them. Only the deviant AS4dgn is entered under damgarne "merchants."

The fact made obvious by Table 31 is that, with the exception of AS3Urg, the earlier texts come from Lagash, and the succeeding ones seem to come from Umma.⁸⁸ This distribution parallels the overall distribution of texts that have been preserved, which was noted by Curtis and Hallo

86. Cf. for Umma and Puzrish-Dagan Hallo, "Contributions," p. 104; *SL* 52:3d is to be revised in accordance with observations compiled by I. J. Gelb, "Month names" (MS, n.d.). 87. They are as follows:

S48snga. The smith Ur-Ningizida is known to have functioned at Lagash, as noted in Limet, *Méat*, pp. 181f., and occurs here in 2:9. In 1:9 there is another typical Lagash personal name.

AS2xiiiUrT. P. Michalowski's collation shows that the month is iti diri, the intercalary month. Such a month name could presumably be from any city, but Ur-TAR.LUH seems most at home in texts dated by the Umma calendar or otherwise clearly from Umma, like Nik 205 AS2 and UDU 80 S45ix.

AS3Urg. Lagash personal names predominate. Ur-Bau who occurs in 1:6 may be the sanga of Ninkimar, as suggested in Waetzoldt, p. 272, in connection with his Text 68 and the present study's Text S48snga.

AS4l gh. The text is completely ambiguous and has been assigned to Umma only because of the date. Forde, "DAM-KAR-E-NE," p. 9, finds a merchant Lugal-hegal only in Nippur, but there are no accounts from Nippur. Compare however below.

AS4Sgk. The text has no indication of provenience but has been ascribed to Umma by analogy to the Sagku of AS9xPd: 3:64.

AS4dgn. The text mentions Ur-Dumuzida in 4:11 and is assumed to come from Umma since many of that person's accounts have Umma months.

AS5l nm. Completely ambiguous, it does have some of the personal names that occur frequently in the accounts explicitly from Umma.

AS5Lln. Lu-kala and Lu-Enlila occur, and the text may therefore come from Umma.

AS8Ag. Lu-kala and Agu occur widely in Umma accounts, making it likely that this text also comes from Umma.

AS9lrm. Again Umma personal names tentatively locate this account there.

SS5Lkl. Lu-kala's is the only name in the text and it may therefore be from Umma.

SS6Ab. Lu-kala is mentioned in 2:7, so the text may be from Umma.

SS7Aak. Lugal-mURUB-e, known from Umma accounts, appears, and the text may come from Umma.

The above considerations should not be regarded as final determinations of provenience, but they may serve as hypotheses.

88. Or perhaps AS2xiiiUrT, presumably from Umma, is the exception if the "Lagash period" extends into AS3.

and documented by Fish and Legrain.⁸⁹ The distribution of accounts may thus be an accident of archaeology and not necessarily a reflection of the times and places of composition of silver accounts.⁹⁰

The theory that the accounts are annual summaries is disproved by Table 31. Ur-Dumuzida now has two attested texts for each of the years AS4 and 8; Šeš-kala has two for AS5; Pada three for the same year. The months of composition of all accounts that note the month are shown in Table 32. For the texts involved compare Table 31 and Table 1.

Table 32. Months of Composition

Months	1	2	3	4	5	6	7	8	9	10	11	12	13
Number of Texts Composed in Month													
4											x		
3		x											
2							x			x		x	
1		x				x			x				x

One can see that the texts tend to be composed in months around the time of the new year and toward the middle and end of the year. There is some flexibility about which months the accounts are composed in, but Table 32 gives the impression of a loosely semi-annual accounting.

A close examination of the texts of Ur-Dumuzida, Šeš-kala, and Pada, subscribers of more texts than any others, may provide working hypotheses which, with reservation, may be applied to the activities of persons with fewer texts.

From Ur-Dumuzida there are nine texts ranging over nine years: AS3iUrDZ, AS4iUrDZ, AS4UrDZ, AS6xiUrDZ, AS7viiUrDZ, AS8viiUrDZ, AS8xiiUrDZ, AS9UrDZ, and SS2UrDZ. Texts AS4iUrDZ and AS4UrDZ link, that is, the remainder of AS4iUrDZ appears as the balance carried forward of AS4UrDZ. The same is true of AS6xiUrDZ and AS7viiUrDZ. From Šeš-kala there are four texts ranging over only four years, AS3Ses, AS5SesA, AS5SesB, and AS6xiSes. Texts AS5SesA and AS5SesB link, as do AS5SesB and AS6xiSes. From Pada there are eight texts ranging over twelve years, AS3Pd, AS5PdA, AS5xiPd, AS5PdB, AS6xiPd, AS7ixPd, AS9xPd, and

89. Curtis and Hallo, "Money," p. 104; Lagash: MCS 5 (1955): 33-55, Umma: *ibid.*, 61-91, Puzrish-Dagan/Drehem: *ibid.*, 92-114. Ur: L. Legrain, UET 3, pp. 276-79.

90. In this light Forde's discussion of the supposed subordination of the Lagash merchants to the Umma merchants and of the supposed evolution of the merchants' economic role, "DAM-KAR-E-NE," pp. 105ff., esp. p. 112, becomes dubious.

SS5Pd. Though the remainder of AS5PdA is 1 še "grain" larger than the balance carried forward of AS5xiPd, there are erasures in the entry in AS5xiPd indicating some confusion on the part of the compositor, and the two are probably meant to link. The remainder of AS5PdB is 10 še "grains" less than the balance carried forward of AS6xiPd, but again the figures are so similar that the two can be assumed to link.

Of the texts that record a balance carried forward, listed above, all the Umma accounts are standard, and all but AS5LIn stem from Ur-Dumuzida, Šeš-kala, or Pada. Of the 21 texts preserved from the three most prolific subscribers, 13 note a balance carried forward while 11 are actually involved in a link.

The conclusion seems inescapable that for these three persons the presence of a balance carried forward implies the existence of another text where the balance carried forward appears as a remainder. The converse of this conclusion also seems reasonable; if texts of these persons show a positive remainder; it is likely that that remainder actually appears as a balance carried forward in another account. If so, we are entitled to reconstruct the picture of the account activity of these three persons shown in Table 33.⁹¹

In Table 33 the notation across from the heading *Month* shows from what month the account comes. The notation Φ shows that the text has

Table 33. Reconstructed Account Activity

Year	AS								SS
	2	3	4	5	6	7	8	9	1 2 . 5
Person									
UrDumuzida									
Month	A	A	Φ		A	xi	vii	A	xii
	br	br	br		br	br	br	r	
Šeš-kala									
Month			Φ	Φ	xi				
			r	br	br				
Pada									
Month	Φ	xi	Φ	xi	A	ix		A	Φ
	r	r	br	br	br	br		br	

91. These reconstructions are not so speculative as they may seem. The existence of AS5PdA, AS5PdB, AS6xiUrDZ, and AS7ixPd had been posited in earlier drafts of this study before the texts actually came to light. It may be noted that their discovery did not markedly change the reconstructions of the forms, function, or prices of the silver accounts.

no month indicated. The notation "A" shows that according to the arguments above an account can be presumed to exist stemming from somewhere in the indicated period. The notation "b" shows that the account has a balance carried forward indicated; the notation "r" shows that the text has a positive remainder. All texts not so noted lack a balance carried forward and/or a positive remainder. The notation \bigcirc indicates that a preserved link exists between two texts; \odot shows a reconstructed link.

Table 33 affirms the flexibility of the timing of account composition. It shows that Šeš-kala may have composed no account between AS5SešB perhaps at the end of AS5 and AS6xiSeš. But Ur-Dumuzida may have composed an account in AS8 between AS8viiUrDZ and AS8xiiUrDZ.

It is possible that the existence of a balance carried forward or of a remainder need not imply that another account existed. The silver balance might derive, as Forde has suggested, merely from new investment.⁹² It is also possible that the remainder was diverted elsewhere besides to the capital section of a succeeding account, possibly to personal expenses of the agent or to his sponsors. The interesting remarks before the subscripts of AS4UrDZ and AS6iiKd, discussed above, may indicate some such procedure. But such remarks are unusual, and texts related to the balanced accounts do not seem to reveal such operations.

One may speculate on the basis of the reconstruction in Table 33 about the total number of accounts that may once have existed and that may now lie unpublished in museums or in the ground. In the six years AS3, 4, 6-9, those most heavily covered by the texts of Ur-Dumuzida, the merchant with the most accounts preserved, we have eight of his texts. For those same years or years immediately preceding and following, we have reconstructed seven more texts. Thus for these years 53% of Ur-Dumuzida's texts may have been preserved. The other subscribers may not have been so prolific. But if they were, the 34 standard accounts preserved from Umma might indicate that as many as 30 more texts existed.

There is thus hope that the Umma silver account system will one day be much better understood.

THE PROBLEM OF LAGASH⁹³

The texts from Umma relating to silver balanced accounts appear to be unified in form of composition, prosopography, and bureaus served. There are now seven accounts from Lagash, but we still lack the clear correlations

92. Forde, "DAM-KĀRE-NE," pp. 136ff.

93. By Lagash I mean the area of Girsu, modern Telloh, one of the group of cities that included Lagash, modern Al-Hiba. See on this most recently V. Crawford, "Lagash," *Iraq* 36 (1974): 24-35, esp. p. 35.

that might make it possible to follow the careers of subscribers and reconstruct bureaus served.

One reason for this lack of correlation lies in the nature of the archives that have been recovered from the various sites. Texts from Lagash deal in general with land and its produce while Umma texts tend also to reflect the workings of a state bureaucracy that is not directly involved in agriculture.⁹⁴ Thus texts related to the silver account operations seem few and far between.

Another reason for lack of correlations among texts is the relative paucity of remarks about the source or destination of products in some of the Lagash accounts.⁹⁵

The only recurring name is apparently Ur-Bau, a common Lagash name. The only bureau name that seems to occur is AS3Urg's mention of the boat bureau in a broken context, unless S29Urs:3:21's []^dNanše is to be restored é^dNanše "house of the divine Nanše," rather than as a personal name.

S48snga from the sanga-official of Ninkimar may be unrelated to merchants and their problems because of its exclusive concern for acquisition of metals.⁹⁶

But there are some indications that something like the Umma balanced account operation is taking place. Text S40? has two parts of resin lists with some of the same products, showing that this text at least may be a *Sammeltafel* combining smaller texts recording similar transactions. The expenditure and overdraft sections of S47Dg also have a resin list.

The Lagash texts S43xGdl, S47Dg, and AS3Urg have si-i-tum "balances carried forward" among their first entries. This prime mechanism for

94. I. J. Gelb, "Approaches to the study of ancient society," *JAOS* 87 (1967): 3f., briefly characterizes the archives from the various cities, and Jordan, "Sheshkalla," p. 106, records his frustration before the mass of material from Lagash.

95. S29Urs:3:20f. may have a remark, but it is broken; otherwise there are no destination remarks, except perhaps the PN? in S29Urs:3:16.

S40?: Products go via Lu-Utu the merchant three times.

S43xGdl: Practically every entry has some person or purpose noted; none relates to other texts.

S44iUrSPE: Source of capital grain is given; no destination is noted.

S47Dg: There is one capital source given, but the text is fragmentary; also there is the enigmatic presubscript remark ib-kú, for which see above.

S48snga: There are remarks in both capital and expenditure sections.

AS3Urg: The single expenditure item does have a remark.

96. S48snga does mention Ur-Ningizida, another smith, and *ITT* 2:788 SS8 and 646 SS9 may show that Ur-šugalama, possibly the subscriber of S29Urs, received copper implements and might be more involved in metalwork activities than his text shows. The interesting text *ITT* 5:10009 with some priced metal items has no fully preserved personal names or remarks; perhaps it is the concern of smiths and not of merchants.

showing the relations of texts at Umma is not fruitful at Lagash because different persons subscribed each account.⁹⁷

There seems to be a standing order reflected in the copper and bitumen sections of Texts S40? and S43xGdl. The precisely corresponding amounts probably rule out coincidence.⁹⁸

At Lagash it is not yet possible to follow the various steps of capital and expended goods movement through texts that deal with the same goods and persons, but it is possible to reconstruct hypothetically some of this movement.

Capital movements, Steps A and B of Table 6, may be seen in the following texts:

ITT 5:6776 S38 or SS4 = *RA* 57 (1963):197:247. Lu-Utu, perhaps the same person who figures as a merchant in Text S40?, receives priced grain from Lu-kala for the bala.

ITT 5:6760 S 38 or SS4 = *RA* 57 (1963):197:48. Lu-Utu receives priced grain for the bala via Lu-kala.

CT 10:43:14333 AS2v. This text records silver sums from or for various persons among whom are Nini and Ur-guena the merchants, both names that occur in the silver accounts. Two subtotals are called respectively a-rá 1-kam, a-rá 2-kam "the first, the second time." The whole is subscribed kù ka₉ "Nin-kimar "accounting silver of the god Ninkimar."

RA 58:102:58 AS3xi. Ur-guena the merchant, subscriber of AS3Urg receives dates from Ur-abba, the Lagash agriculturalist.⁹⁹

Step E of Table 8, movement of acquired goods to the comptroller, may be seen in *ITT* 5:6736 n.d., where at least one of several resins is priced. The only personal name in the text, Lu-Ningirsu son of Irmu, is not known in the silver accounts, though a certain Irmu does contribute priced grain to capital in S44iUrSPE, and AS9Irm (presumably from Umma) goes via a person of that name.

Step F, internal distribution of acquired goods, is perhaps shown in the following Lagash texts:

RA 62:3:2 S9. Ur-abba receives various unpriced resins from Ir, the merchant.

97. Note however the possible connection between S47Dg's subscriber and Šeš-kala discussed above.

98. Cf. Chapter 3 under bitumens and metals and note the existence of other texts dealing with various resins, including *ITT* 3:5235 SS1vi lacking personal names.

99. On him see M. Lambert, "Les archives de Urabba fils de Bazig," *RA* 54 (1960):113-30, and *RA* 58 (1964):97-110, with H. Figulla. Note the broken *TUT* 97 n.d. may be a similar record of capital; Ur-guena the merchant and a certain Lu-Utu are mentioned in connection with silver sums.

RA 62:4:3 S9.¹⁰⁰ Lu-Ningirsu receives an unpriced resin called "thing taken of the divine Bau" from Ir.

RA 62:3:1 Lagash S47ix. A-kalamu receives unpriced resins from Ur-guena, via Lu-girnun the šabra.

MVN 9:62 AS3. An amount of bitumen for the king's boat comes from Ur-guena the merchant.

MVN 9:65 AS3vi. Poplar trees come from Ur-egal the merchant.

ITT 5:6996 SSlix. Unpriced resin (for?) the bootery comes from Ur-guena.

ITT 5:6982 SS2ix. Ur-guena receives bitumen.

ITT 5:8238 SS4. Ur-guena receives lumber for the door of Šu-Sin's house.

TUT 124 n.d. Columns 1 and 2 show unpriced copper coming separately from Ur-guena and Ir, who is called a merchant.

Another aspect of the merchants' lives seen in Lagash texts is the á d a m-

100. Limet in publishing these texts dates both to the early date of S9 because *RA* 62:3:2 has the year name mu "Nanna Kar-zi-da é-a ba-ku₄," *RA* 62:4:3 has simply mu "Nanna Kar-zi-da," but Ir occurs in both texts, and they may be expected to come from the same year. Ir's possible occurrence in a text from AS5 will be discussed below. If it were the same person, his career would span 44 years, an unlikely but not impossibly long time. But I wonder if Limet's texts may not come from AS9, which has a similar year name. Note incidentally Hallo's observation, *JNES* 15 (1956):223 note h, on the possible confusion of AS9 with AS4.

It has been observed that the year names of the First Dynasty of Babylon show a certain pattern: years named after cultic events there seem to occur in roughly the same order in roughly the same years of several reigns (S. Feigin and B. Landsberger, "The date list of the Babylonian King Samsu-Ditana," *JNES* 14 [1955]:146-48.) There seems also to be a similar pattern traceable in some year names of the Ur III kings, as follows (I shorten the forms quoted in Sykes, 1973):

Šulgi	Amar-Suen	Šu-Sin
2. gu-za ^d En-líl-lá	3. gu-za ^d En-líl-lá	
4. bàd gal AN.KI		4. bàd Mar-tu
8. má "Nin-líl-lá		8. má-gur ₈ ^d En-líl-lá
9. "Nanna Kar-zi-da é-a-ni ku ₄	9. en "Nanna Kar-zi-da ba-hun	

This system, if it is a system, is not carried through all the reigns, but it is interesting to note that both Ur-Nammu and Ibbi-Sin also have year names dealing with wall building, Ur-Nammu 11 and IS 6, and it is S37, following another "Nanna Kar-zi-da year, which is easily confused with SS4 because of the "wall of the land" mentioned in it.

The upshot is that Limet's datings may be wrong, and these texts may come from AS9.

gār “merchant’s work-ration.” This aspect may have nothing to do with the silver account operation since the personal names involved so far do not occur in the Lagash accounts:

CT 3: plate 12: 14602 AS1 = RA 57:92: 19. 5400š silver, merchant’s work-ration, entered the palace from Atu.

BM 14730 SS3ix (courtesy Gelb) = H. Figulla, *CBT* I, p. 227. 8730š silver work-ration of dam-gār kù-lá “silver carrying merchant” from Niga, Lu-Dumuzi received, via Lu-Inanna, the “throne-bearer.”

BM 14697 SS5ix (courtesy B. Foster) = Figulla, *CBT* I, p. 224. 16200š kb: same personal names as above, though the amount is also labeled maš-da-ri-a, a type of offering.

Note also, from Umma (?) ŠA96:4-5 SS6x. In a list of silver amounts mentioning Lu-kala, one finds the entry 540š á Lú-^dNanna, from Lugal-MURUBÉ; the latter occurs as a contributor of wool to capital in the silver accounts from Umma. Lu-Nanna does not occur in the accounts, but may be the same as a merchant known from elsewhere.¹⁰¹

A connection between Ur-šugalamma, subscriber of S29Urs, and Šeš-šeš, who appears in S44iUrSPE with processed bitumen going via him perhaps to a boat bureau, is shown in ITT 4:7027 S37 or SS4 = RA 57:90:3; cf. Lambert’s n. 3. Šeš-šeš there receives bitumen (?) from Ur-šugalam for Utu-bara the courier and is himself called a merchant.

Because there are fewer texts attesting to the Lagash operation, we cannot be sure about the identity of the persons mentioned. But it may be significant that in two of the capital movement texts discussed above a certain Lu-kala occurs. He bears the same name as the putative comptroller of the Umma operation, and he may be the same person. Some support for this view can be found in ŠA 76, Lu-kala’s grain account, from AS5, discussed earlier. The whole of the grain amounts there allocated appears to come from Ir, as shown by the subscript: níg-ka₉-ak še, Lú-kal-la, ki Ir₁₁-ta. Though this person does not appear in the Lagash silver accounts, we have seen that a similar named person appears to be active in possibly related texts, and he may be the same as the Ir₁₁-mu via whom the Umma (?) AS9Irm goes.¹⁰²

A further hint of relation between Umma and Lagash operations is to be found in WMAH 290 n.d. Lagash?, a silver and grain account. Ur-Lama,

101. Forde, “DAM-KAR-E-NI,” p. 10. Compare similarly ŠAKI 61 Umma SS7xi: 900š kb mu-du á Lú-^dNanna dumu Šeš-kal-la Gu-du-du šu ba-ti “900 grains silver; delivery; work ration of Lu-Nanna. Šeš-kala’s son; Gududu took.”

102. Note however that there is a ka-gur: “granary supervisor” named Ir₁₁, who may be a different person, seen in YOS 4:15 AS1vii Umma. This person is discussed by Jones and Snyder, *SET*, pp. 311–321. Cf. Sollberger’s doubts that only one person is involved in all the transactions that Jones and Snyder catalogue, *A/O* 21 (1966):91.

the sanga “administrator” of the god Ninšubur receives (?) the lá-i “surplus” of 1710š silver. An Ur-Lama occurs in conjunction with Elubi in AS5xiPd:4:23: 1716š kù sám urudu Urím^{ki}-ma gir Ur-Lama ù É-lu-bi DAG? “1716š silver of purchase of bronze (for) the Ur (bureau) via PNs.” Elubi zu appears in AS6iiKd:2:13: 1710š kù urudu Urím^{ki}-ma gir É-lú-bi zu, kišib Lu-kala “1710š silver of bronze (for) the Ur (bureau) . . . ; Lu-kala received.”¹⁰³ Sauren’s text is broken, and it is hard to say whether these correspondences are significant.

The relation between the Lagash account operation and the Umma operation is difficult to define. It does appear that sometimes the Lagash people are involved with Lu-kala, and that Ir, if he is the same as AS9Irm’s Irmu, also works at Umma. It is not really possible to say that the Lagash operation is subordinate to the Umma operation.¹⁰⁴ If Ir’s activities are representatively reflected in the preserved texts, it may be that Umma is somehow subordinate to Lagash in the balanced account operations, for Lukalla’s grain comes from him, and AS9Irm may go via him.

The overall trend of the evidence from Lagash seems to show that the silver balanced account operation there serves similar needs as the Umma operation and may have been supervised by the same authorities.

The Ur material is not of sufficient scope at present to allow a sketch of the silver account system there. UET 9:882 IS7ix from Ur concerns mainly animals and except for its priced capital goods, seems not to be analogous to the Umma and Lagash texts. The Šeš-kala who appears in UET 3:1165 IS7x, a very short balanced account that also deals with animals, may or may not be the same person as the Umma merchant.¹⁰⁵ The broken receipt UET 3:337 AS9, discussed briefly in Chapter 1, apparently describes the merchant as belonging to the house of the god Utu of Ur. Such a relation is foreign to the Umma material, where some merchants may be serving the governor. It is possible, however, to see in UET 3:1689 IS4i a notice of the Umma metal specialist Lu-Enlila’s picking up wool and garments from a ša bra official “(for) purchase of Magan copper.” Compare the texts from Ur discussed above.

The Nippur material is equally fragmentary, but there too it seems that some similar acquisition system was operating. TMHC NF 1/11 307 n.d. is a priced resin list received by Lu-Enlila, possibly to be identified with the

103. Cf. above and n. 57.

104. So Forde, “DAM-KAR-E-NE,” p. 151; I do not understand what he means when he says that the Lagash accounts are “intermediary” records of goods purchased for delivery elsewhere. As far as I can see, all the silver balanced accounts studied here are intermediary in that sense.

105. As noted above, Jordan, “Sheshkalla,” p. 31, accepts the Ur text as coming from the Umma merchant because it is subscribed as a silver balanced account.

metal bureau representative of the Umma texts. UM 29-15-509 n.d. (courtesy Gelb) and *BE* 3/1:99 n.d. may be fragmentary remains of the records of something like the Umma system. The first deals with priced resins, and the latter with priced lard, sesame oil, and silver for purchase of copper and tin.

In summary one may say that the silver balanced account system in the various Ur III cities can be characterized as an acquisition system operating apparently for the benefit of a number of state bureaus and of individuals. The system may perhaps have been under a unified authority in both Umma and Lagash, and the loosely semi-annual accounts rendered for that authority record the activities of a small group of purchasing agents some of whom may have been related by professional affiliation or even by blood.

CHAPTER 3

Prices in the Accounts

The following tables are grouped according to the type of product, and these types are alphabetized according to their English names; within these divisions the products are alphabetized according to their Sumerian names. The date, the exact citation within the text for the first line of the entry, and the quantity of the commodity priced are given for each reference. Non-account prices are included for products attested in the silver balanced accounts and for some goods closely related to those products.

Curtis and Hallo attempted to reconstruct some of the native typology of products by arranging their price tables in a five-fold division according to how the products were measured, i.e. by weight, by weight or volume, by volume, by volume or unit, and by unit. Priced products were arranged within each division in approximately ascending orders of value.¹ The five-fold division shows, however, that the native typology does not really run in this direction; several products are measured in different ways. Curtis and Hallo also separated various elements of the resin list although this is one of the few recurring groups of products. Unfortunately the present typology also isolates reed, a regular part of the resin list.

The typology used here is sometimes arbitrary and always dependent on lexical efforts to define the natures of the products. But it seems that broad modern classifications are more useful than any division based on measurements in helping students locate products and prices.

The alphabetical organization of the products by their Sumerian names is equally arbitrary. But the Mesopotamians appear not to be concerned with organizing products by price, by whether a product is cheap or expensive.

The resin list tends to group products of similar price, but the order is not ascending among products with different prices. This tendency may be illustrated by comparing the median account prices of the resin list products as abstracted in Table 2 above:

SĠG.ÛZ	18š/m
za-ba-lum	18š/m

1. Curtis and Hallo, "Money," p. 109.

šu-úr-me	16.5š/m
mun	18š/m
gi	9š/m
šim	60š/m
šim-im	9š/m
ni-gi ₄ -tum	26.8š/m
tám-še-lum	6š/m
šim-dùg	9š/m
ar-ga-nùm	6š/m
en-mur	3š/m
šim-GĀN	15š/m
še-li	36š/m
šim-gam-gam	3š/s
gu ₄ -ku-ru	2.9š/s
pa-li	3š/s
sag-x-na	.6š/s
i-dùg-nun-na	180š/s

There are at least two ways of presenting prices from Mesopotamian sources: (a) 1 gín "shekel" of silver fetches X measures or units of a commodity; (b) X gín "shekel" of silver fetches 1 measure or unit of a commodity.

In Ur III practice the -ta pricing formula sometimes implies that prices could be thought of in terms of how much one gín of silver would buy. In the silver accounts it seems that frequently if not universally this way of conceiving of prices was used. This tendency may be seen at a glance from the price tables. Any price for a product measured in sila that is .6 še per sila, a fraction thereof, or any number divisible by .6 can be thought of roundly in terms of gur (300 sila) per gín (180 še). Any price for a product measured in mana that is 180 še per mana, a fraction thereof, or any number divisible by 180 can be thought of roundly in terms of mana per gín. Not all products have prices that are round in this way, but many do.

Presentation (a) has the merit of reflecting the -ta pricing formula and the native way of thinking about prices which the formula implies. But there are two reasons for not presenting the following tables throughout in terms of presentation (a). The first is that some of the commodities in the accounts do not lend themselves to division because they are measured in units. It is possible to say that 1 shekel of silver will buy about 1500 fish if the price per fish is .12 grains of silver; but it is not too meaningful to say that 1 shekel will buy 2.13 sheep if one costs 84.5 grains of silver.

The second reason for using presentation (b) is that it is usually the

modern custom to use such expressions for prices. It is true that in some areas of endeavor prices are given in form (a), but commonly prices are given in form (b).

Hallo and Curtis note that there appears to be precedent for both forms of presentation in the sources.² That is, the -ta formula sometimes expresses form (a), while the other pricing formulae are ambiguous unless their ratios are rounder when expressed in form (a) or form (b). Schwenzner 1914, pp. 102ff. presented both ratios simultaneously. His teacher Meissner, 1936, tended to use form (a). Curtis and Hallo preferred form (b), and Waetzoldt follows them.³ Sollberger and Limet follow Meissner's practice.⁴ Gelb's planned list will also be in that form.⁵

In order to make the following tables as useful as possible to those who prefer form (a), the median price for each product is expressed in this form at the end of each product list.

In the somewhat related matter of numerical notation Sollberger has made excellent suggestions about notation that clearly allow the forms of the measurements to be seen, *TCS* 1:7b. But when the text is clear, I prefer to convert all measurements into the lowest unit, i.e. gín to še, gur to sila, and gú to mana. Not only does this allow easy calculation of prices, but it also makes addition and subtraction simpler by one step since no unit conversion is involved. It seems the Mesopotamians were doing something similar when for example they wrote 13g 60š for 2400š as in *AS4Lgh*: 1:1, but of course not all figures are round in the decimal or sexagesimal systems.

The goal of any presentation of prices should be to present in chronological order as much information about the price references as possible so that subsequent students can find the references easily and compare new texts to old. The following tables afford the possibility of finding other texts which are not formally related to silver balanced accounts but which reflect the distribution of the products. For reasons of space they do not include the silver values involved, though these easily can be obtained by multiplying the price times the weight, volume, or number for any entry. Neither do they include prices which are broken and cannot be restored; and they lack remarks about origins, destinations, or products in accounts for the same reasons.

The non-account texts here are not exhaustive but representative.⁶ I. J.

2. Curtis and Hallo, "Money," p. 109 n. 34.

3. Waetzoldt, pp. 73-76.

4. Sollberger, *UET* 8, p. 16; Limet, *Métal*, pp. 99-109, esp. p. 109 n. 6.

5. Gelb has on occasion used both ratios, as in his "Growth of a Herd of Cattle," *JCS* 21 (1967): 64-69, where he gives prices in form "a" on p. 67 and in form "b" on p. 68.8.

6. See note 3, Chapter 4 on non-account products.

Gelb's planned price index will utilize among other resources P. Steinkeller's numerous references to prices in the contract literature of the period and will cover all prices for all products priced regardless of relation to any single distribution system from the Fara period to the end of the Ur III period.⁷

The products are arranged as follows:

1. Alkalies	121
2. Animal Products Other Than Leather and Oils	123
3. Bitumens and Gypsums	125
4. Fish and Turtles	131
5. Fruits and Fruit Products	134
6. Grains	138
7. Leather and Hides	143
8. Livestock	145
9. Metals	146
10. Oils or Fats	150
11. Reed	155
12. Resins and Spices	156
13. Tanning Agents	169
14. Trees and Timber	169
15. Vegetables	175
16. Wools	178
17. Miscellaneous	181

The format for presentation of data is as follows:

The product name is given in Sumerian and in English, if known. The normal measurement is given in še of silver per measure.

The year date and month and day, abbreviated Y, if given in the text, are indicated for all texts in the leftmost column; texts for which the year is unknown have been included at the end of each list.

Ambiguous year names have been assigned arbitrarily to the possible years in the reigns of Amar-Suen or Šu-Sin since the silver accounts which have the most prices are from those reigns. This practice simplifies the tables but may be in error for any given ambiguously dated text. The ambiguous Ur III year names are given below, after Schneider *AnOr* 13: 40ff. with the numbering adapted to Sykes. Years following these years and called mu-ús-sa "year following (the year)" may also be ambiguous. The ambiguous year names in Šulgi's reign are assigned to the later date.

7. Personal communication from I. J. Gelb.

Year	Number	Catchword	may equal	Year	Number
S48		Ha-ar-ši		S27	
AS2		Ur-bi-lum		S45	
AS3		gu-za		S2	
AS5		en ^d Inanna		IS4	
AS6		Ša-aš-ru-um		S42	
AS8		en Eridu		S28	
AS9		Kar-zi-da		S9,36	
SS4		bād		S37	
IS3		Si-mu-ru-um		S25,44	
IS5		dumu lugal		S30	

Subscriber abbreviations (abbreviated Sub) for prices from the silver accounts follow the date as part of the text designation; the column number and line number for the beginning of the entry are given in Arabic numerals.

The subscriber abbreviations are as follows:

Aak	=	A-a-kal-la
Ab	=	Ab-ba-gi-na
Ag	=	A-gu
Dg	=	Dùg-ga
Gdl	=	Gál-dùl
Inm	=	Inim-ma-ni-zi
Irm	=	Ir ₁₁ -mu
Kd	=	Kud-da
Lgh	=	Lugal-hé-gál
Lln	=	Lú- ^d Inanna
Lkl	=	Lú-kal-la
Pd	=	Pàd-da
Ses	=	Šeš-kal-la
Sgk	=	Sag-ku ₅
UrDZ	=	Ur- ^d Dumu-zi-da
Ure	=	Ur-e ₁₁ -e
Urg	=	Ur-gù-en-na
Urs	=	Ur-šu-ga-lam-ma
UrSPE	=	Ur- ^d Šul-pa-è
UrT	=	Ur-TAR.LUH

Capital letters A, B after the subscriber abbreviations refer to the first and second texts without month dates from the subscriber in a given year. For the texts see the list of accounts.

Most prices from silver balanced accounts occur in the expenditures

sections, but those that are from the capital sections are indicated by a capital C in the next column.

Site information, abbreviated S, is given only when made certain by an unambiguous month name or origin in a legal excavation. Dubious site identifications are omitted. Sites are abbreviated as follows: L = Lagash, P = Puzrish-Dagan, N = Nippur, U = Umma, Ur = Ur.

The amount of the product measured is given; use of exceptional measures is noted. Measures are abbreviated m for ma-na, roughly equivalent to a pound, and s for sila, roughly equivalent to a quart. See the metrological tables.

Price is given in še "grains" of silver per unit measured. When the price exceeds 180 še "grains" of silver, the equivalents in "shekels" (gin, abbreviated g = 180 še) and "pounds" (mana, abbreviated m = 60 gin) are given. The symbol [] indicates a partially broken passage that can reasonably be restored. Exceptional spellings are given in footnotes. Prices are normally rounded to two decimal places according to standard statistical procedures.⁸

A "c" without period in this column, standing for circa, shows the price is approximate.

If the form of a non-account price is not indicated, it may be assumed to have the form kù-bi "its silver (value)." Other forms, in the column marked F, are abbreviated as follows:

-bi "silver, its value in (a product) . . ."

-ta "(a product), at . . . silver each" or, "at so much (of a product) for 1 gin silver each"

kbn kù-babbar níg-sám-bi "silver, its purchase value (in a product) . . ."

xn níg-sám-bi . . . kù-babbar "(a product), its purchase value in silver . . ."

-š -šê "for (so much silver)."

Citations followed by a capital G are courtesy of I. J. Gelb.

At the end of the table for each product the mean and the median prices have been calculated for instances within silver balanced accounts and outside them and finally for both together. The mean is the arithmetic average, defined in Downie and Heath, pp. 42ff. The median is the price with an equal number of cases above and below it; see Downie and Heath, p. 48. Exceptionally high and low prices are omitted from the mean and median calculations occasionally, and their omission is noted. As Gelb suggests in personal communication, the reason for making this omission is the likelihood that very high and very low prices come from unusual texts

8. N. Downie and R. Heath, *Basic Statistical Methods*, 3rd ed. (New York, 1970), pp. 13f.

that reflect disastrous situations or periods of unusual plenty. After the median I have entered the amount of the product which one shekel of silver will buy; this calculation is based on the overall median for the product. For metals only the ratio of the value of silver to the value of the product is given. These aspects of the tables are due to the helpful suggestions of I. J. Gelb.

The following translations are used in this final calculation:

gin (= 180 še "grains")	= shekel
mana (= 60 gin)	= pound
gú (= 60 mana)	= talent
sila	= quart
gur (= 300 sila)	= gur (no translation)

For precise equivalents of the Sumerian measures see the metrological tables.

1. Alkalies

naga (an alkaline plant)—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S44iUrSPE: 1: 15	L	4272s	c.35				
AS5xiPd: 3: 35	U	30s	.5				
AS6xiSes: 3: 1	U	100s	.15				
AS6xiPd: 3: 8	U	120s	.15				
AS7viiUrDZ: 3: 29	U	180s	c.12				
AS7viiUrDZ: 4: 5	U	40s	c.13				
AS7viiUrDZ: 4: 7	U	60s	c.12				
AS7ixPd: 3: 5	U	60s	.1				
AS8viiUrDZ: 2: 26	U	850s	.15				
AS8viiUrDZ: 3: 3	U	2100s	.15				
AS9UrDZ: 2: 15		120s	.2				
AS9UrDZ: 2: 17		1020s	.2				
AS9UrDZ: 2: 30		15.33s	c.2				
AS9UrDZ: 2: 35		30s	.2				
AS9UrDZ: 3: 11		360s	.2				
AS9UrDZ: 4: 5		20s	.2				
AS9UrDZ: 5: 30		390s	.2				
AS9UrDZ: 5: 40		10s	.2				
AS9UrDZ: 6: 37		390s	.2				
AS9UrDZ: 8: 8		3000s	.2				
AS9UrDZ: 8: 29		120s	.2				

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
AS9UrDZ:8:31		30s	.2				
SS2UrDZ:4:5		90s	c.12				
SS2UrDZ:4:12		60s	c.12				
SS2UrDZ:6:15		495s	c.12				

mean = .19

median = .2

One shekel silver fetches 900 quarts = 3 gur.

naga-gaz "crushed (alkaline plant)"—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
AS4Sgk:4:12		10s	.15*				
AS9UrDZ:2:38		10s	.6				
AS9UrDZ:3:6		[60s]	.6				

mean = .45

median = .6

One shekel silver fetches 300 quarts = 1 gur.

*Priced with 560s naga-si-è.

naga-kum "crushed (alkaline plant)"—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
AS5xiPd:3:3		10s	.45				

One shekel silver fetches 400 quarts = 1 gur 100 quarts or 1 $\frac{1}{3}$ gur.

naga-si-è "sprouted alkali"—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
S46					SAKF 67	1800s	.2
AS3Ses:1:10		515s	c.23				
AS4UrDZ:3:5		5s?	.1				
AS4Sgk:4:12		560s	.15*				
AS5xiPd:1:19	U	41s	c.15				
AS5xiPd:2:2	U	750s	.15				
AS5xiPd:2:12	U	1020s	.15				
AS5xiPd:2:18	U	450s	[.15]				
AS5xiPd:2:31	U	20s	c.12				
AS5xiPd:4:14	U	60s	.15				
AS6xiSes:2:5	U	120s	.2				
AS6xiUrDZ:2:10	U	30s	.15				

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
AS6xiUrDZ:2:16	U	15s	c.13				
AS6xiUrDZ:4:17	U	10s	.15				
AS6xiUrDZ:4:24	U	10s	.15				
AS6xiUrDZ:6:14	U	2100s	.15				
AS6xiPd:2:20	U	120s	.15				
AS6xiPD:2:31	U	1020s	.15				
AS6xiPd:3:28	U	850s	.15				
AS7viiUrDZ:3:6	U	780s	c.12				
AS7viiUrDZ:3:19	U	120s	c.12				
AS7viiUrDZ:5:6	U	65s	c.11				
AS7ixPd:2:15	U	750s	.1				
AS7ixPD:2:22	U	41s	c.1				
AS7ixPd:3:19	U	100s	[c.1]				
AS7ixPd:4:13	U	900s	.1				
AS8xiiUrDZ:2:15	U	30s	.1				
AS8Ag:1:6		851s	c.21				
SS2UrDZ:3:13		1000s	.12				
SS2UrDZ:3:33		1200s	.12				
SS2UrDZ:4:19		60s	c.12				
SS2UrDZ:5:11		8s	c.12				
SS6Ab:1:8		402s	c.15				
SS6Lkl:2:13		3148.33s	c.15				
SS6Lkl:6:11		1250s	c.15				
SS6Lkl:7:17		240s	.15				
SS6Lkl:7:32		1380s	c.18				
SS6Lkl:8:26		210s	.15				
SS6Lkl:8:31		360s	.15				
SS6Lkl:8:34		20s	.2				
SS6Lkl:8:37		10s	.2				

mean = .15

median = .15

overall mean = .15

overall median = .15

One shekel silver fetches 1200 quarts = 4 gur.

*Priced with 10s naga-gaz.

2. Animal Products Other Than Leather and Oils

á-dār "ibex-like horns"—še "grains" per unit

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
AS7viiUrDZ:3:4	U	5	15				

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS8viiUrDZ:2:24	U	4	11.2				
AS9UrDZ:5:28		2	10				
AS9UrDZ:6:35		2	10				
SS2UrDZ:3:9		4	10				
SS6Lkl:5:23		6	12				

mean = 11.4

median = 10.6

One shekel silver fetches c17 units.

eš-ku-ru-um "wax"—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS8viiUrDZ:4:5	U	.05m	90*				
SS6Lkl:7:11		2.17m	c90				

mean, median = 90

One shekel silver fetches 2 pounds.

*Written ^{es}LAL! HUR!

ga-sag, (UD-gunû) (a cheese) še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS4					VDI 19763	3s	1
					110:39		

One shekel fetches 180 quarts.

lâl "honey"—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S39					WMAH	.83s	144
					24:1		
S45					YOS 4	13s	90
					295:15		
S46					Ashmol	2.5s	144
					1935, 527:		
					9 G		
AS3					MCS 2	2.5s	108
					69		
AS4iUrDZ:2:7	U	2.5s	108				
AS4Sgk:3:6		19s	c71.1		VDI 1976	15s	90
AS5xiPd:3:14	U	.33s	36		3:110f.:34		

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS5xiPd:3:31	U	5.5s	c40.9				
AS5xiPd:4:3	U	2.5s	[90]				
AS6xiSes:2:6	U	15s	120				
AS6xiSes:3:9	U	2.5s	90				
AS6xiUrDZ:3:5	U	.67s	90				
AS7ixPd:3:14	U	4.5s	60				
AS9xPd:2:45	U	7s	60				
AS9xPd:3:54	U	2.5s*	84				
AS9UrDZ:3:35		.67s	45				
SS2UrDZ:6:29		1.25s	60				

mean = 73.5

median = 71.1

overall mean = 85.0

overall median = 90

One shekel silver fetches 2 quarts.

*Jones transliterates 130 sila, i.e. 𐎶𐎵𐎶𐎶 but since this amount would give

an unusually low price, and, as Gelb points out in personal communication, to write 130 sila the scribe would not include the sila sign, the entry is best read 2.5 sila.

pa-mušen "bird feathers"—še "grains" per unit

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS3Ses:1:8		18,000	.1				
SS6Ab:2:1		18,000	.1				

mean, median = .1

One shekel silver fetches 1800 units.

sig4-ba "turtle shell?"—še "grains" per unit

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS5xiPd:3:28	U	2	9				
AS9UrDZ:8:17		2	2.5				
SS2 UrDZ:5:16		4	9				

mean = 6.83

median = 9

One shekel silver fetches 20 units.

3. Bitumens and Gypsums

esir "bitumen"—še per sila or mana "grains per quart or pound"

Y Sub	ACCOUNT PRICES				F	OTHER PRICES		
	C S	Amount	Price			Text	Amount	Price
Y Sub	C S	Amount	Price		F	Text	Amount	Price
AS8xiiUrDZ: 2:8	U	20s	[c.78]*					
SS6Lkl: 5:29		1200m	c.38†					

One shekel silver fetches 230.77 quarts or 473.68 pounds = 7 talents 53.68 pounds.

*Text reads esir [].

†Text: esir-a-ba-al, measured in mana. This unique reference has been included here for simplicity.

esir-é-a "refined bitumen"—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES				F	OTHER PRICES		
	C S	Amount	Price			Text	Amount	Price
S29Urs: 12:11		7428.66s	3					
S40?: 6:9		25s	2.4			Bodleian	462s	c2.53
						S339 G		
S43xGdl: 2:13	L	25s	2.4					
S44iUrSPE: 1:7	L	1468s	c2.61					
S44						NBC 228:	20s	1.8
						2:7		
						(copy 17)		
AS3Urg: 1:4		4200s	1.8					
AS3Ses: 2:3		10s	2					
AS4iUrDZ: 3:5	U	110s	2					
AS4iUrDZ: 3:10	U	630s	c2.19					
AS5xiPd: 1:15	U	244.5s	c1.56					
AS5xiPd: 4:13	U	29s	1.5					
AS5PdB: 6		259s	1.97					
AS5LIn: 22		180s	2.4					
AS6xiSes: 2:3	U	25s	1.44					
AS6xiSes: 2:7	U	60s	1.2					
AS6xiSes: 2:11	U	10s	1.2					
AS6xiUrDZ: 2:23	U	45s	1.2					
AS6xiUrDZ: 2:28	U	20s	1.2					
AS6xiUrDZ: 4:13	U	250s	1.5					
AS6xiUrDZ: 4:22	U	120s	1.2					
AS6xiUrDZ: 5:12	U	1345s	c1.5					
AS6xiUrDZ: 5:15	U	300s	1.5					
AS6xiUrDZ: 5:18	U	180s	1.5					
AS6xiUrDZ: 5:22	U	380s	1.5					
AS6xiUrDZ: 6:1	U	20s	1.2					
AS6xiPd: 2:28	U	70s	1.2					
AS6xiPd: 3:21	U	90s	1.2					
AS6xiPd: 4:2	U	328s	c1.2					
AS6xiPd: 4:16	U	30s	[1.2]					
AS6xiPd: 5:1	U	210s	1.2					

Y Sub	ACCOUNT PRICES				F	OTHER PRICES		
	C S	Amount	Price			Text	Amount	Price
AS6xiPd: 5:4	U	300s	1.2					
AS6xiPd: 5:13	U	60s	1.2					
AS7viiUrDZ: 3:2	U	105s	1.8					
AS7viiUrDZ: 3:24	U	190s	c1.79					
AS7viiUrDZ: 4:9	U	360s	1.8					
AS7viiUrDZ: 4:13	U	80s	c1.8					
AS7viiUrDZ: 4:24	U	26s	c1.79					
AS7viiUrDZ: 4:28	U	15s	1.8					
AS7viiUrDZ: 5:2	U	3s	c1.67					
AS7viiUrDZ: 5:11	U	180s	1.8					
AS7ixPd: 2:20	U	228s	1.5					
AS7ixPd: 3:1	U	29s	1.5					
AS7ixPd: 3:8	U	60s	1.5					
AS8xiiUrDZ: 2:19	U	1323s	c1.2					
AS8xiiUre: 2:6	U	975s	1.2					
AS8Ag: 1:4	U	423.5s	c1.5					
AS9xPd: 2:32	U	185s	1.5					
AS9xPd: 2:35	U	180s	1.5					
AS9xPd: 3:51	U	75s	1.5					
AS9UrDZ: 3:4		[20s	1.2]					
AS9UrDZ: 3:22		60s	1.2					
AS9UrDZ: 4:11		330s	1.2					
AS9UrDZ: 7:40		120s	1.2					
AS9UrDZ: 7:43		130s	1.2					
AS9UrDZ: 8:11		65s	1.2					
AS9UrDZ: 8:15		70s	1.2					
AS9UrDZ: 8:24		2800s	c1.33					
AS9UrDZ: 8:39		10s	1.2					
SS2UrDZ: 3:7		180s	1.2					
SS2UrDZ: 3:21		725s	c1.28					
SS2UrDZ: 3:24		600s	1.3					
SS2UrDZ: 3:29		690s	c1.78					
SS2UrDZ: 4:15		10s	1.2					
SS2UrDZ: 4:22		70s	c1.54					
SS2UrDZ: 5:14		16s	c1.22					
SS2UrDZ: 5:19		30s	1.2					
SS2UrDZ: 6:3		683.67s	c1.2					
SS2UrDZ: 6:22		450s	1.2					
SS5Pd: 10		120s	1.5					
SS5Pd: 16		300s	1.5					
SS5Pd: 22		10s	1.5					
SS6Lkl: 2:9		2147.67s	1.5					
SS6Lkl: 5:27		341s	1.5					
SS6Lkl: 7:23		1006s	c1.8					

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
SS6Lkl: 7: 37		300s	c2.22				
SS6Lkl: 9: 3		600s	2.25				
SS6Lkl: 9: 30		440s	1.8				
SS9x	P				BIN 3: 463	750s	2.4
IS2viii	N				RA 8:	10s	4.5
					196: 20		
n.d.					Ashmol	1200s	3
					1935,		
					529: 3 G		
mean = 1.52					mean = 2.85		
median = 1.5					median = 2.53		
overall mean = 1.6							
overall median = 1.5							

One shekel silver fetches 120 quarts.

esir-hád "dry bitumen"—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S29Urs: 12: 22		59190m	.3				
S44iUrSPE: 2: 6	L	[104m]	.35				
AS4UrDZ: 3: 17		1800m	.3				
AS5xiPd: 4: 19	U	780m	.3				
AS6xiUrDZ: 2: 21	U	26.67m	.3				
AS6xiUrDZ: 6: 7	U	360m	.3				
AS6xiPd: 4: 6	U	8.5m	c.29				
AS8xiiUrDZ: 2: 18	U	20460m	c.27				
AS8xiiUre: 2: 8	U	800m	.3				
AS8Ag: 1: 14		8.5m	c.35				
AS9xPd: 2: 30	U	7860s	.3*				
AS9UrDZ: 3: 24		3780s	.25*				
AS9UrDZ: 4: 13		1200m	.27				
AS9UrDZ: 8: 21		360m	c.29				
AS9UrDZ: 8: 26		6060m	c.25				
SS2UrDZ: 3: 26		8020m	.3				
SS2UrDZ: 6: 5		11073.5s	c.3*				
SS2UrDZ: 6: 20		17700s	.3*				
SS5Pd: 11		5160m	.25				
SS6Lkl: 2: 11		17890s	.25*				
SS6Lkl: 9: 32		1200m	c.28				
n.d.					HLC 3:	2160m	.3
					152: 398:		
					2: 7		

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
n.d.					HLC 3:	4800m	.3
					152: 398:		
					2: 10		
n.d.					Ashmol	9000m	.25
					1935,		
					529: 1 G		
n.d.					BM 24999	2460m	.3
					G		
mana mean = .29					mana mean = .28		
mana median = .3					sila median = .3		
overall mana mean = .29					mean = .29		
overall mana median = .3					median = .3		

One shekel silver fetches 600 pounds = 10 talents or 600 quarts = 2 gur.

* Measured by exception by volume.

igi-esir (bitumen type)—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S29Urs: 12: 17		315m	1.5				
AS6xiPd: 4: 4	U	9.5m	c.74				
AS8Ag: 1: 12		9.5m	c1.47				
n.d.					BM 24999	210m	4.5
					G		
mean = 1.24							
median = 1.5							

One shekel silver fetches 120 pounds = 2 talents.*

* Non-account text was omitted because of unusually high price.

im-babbar "gypsum"—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S43xGdl: 3: 3	L	120m	.3				
S44					NBC 228	285m	c.16*
					5-7		
					(Copy 17)		
S46					Ashmol	285m	c.32
					1935,		
					527: 11 G		
AS3Ses: 2: 1		250m	.18		MCS 2 69	225m	.2
AS4iUrDZ: 2: 9	U	225m	.2				
AS4iUrDZ: 3: 13	U	360m	c.17				

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS4iUrDZ:3:21	U	20m	.05				
AS4Sgk:4:16		125m	.72				
AS5xiPd:1:17	U	135m	.2				
AS5xiPd:2:4	U	600m	.2				
AS5xiPd:2:14	U	[360m]	.2				
AS5xiPd:2:22	U	300m	.2				
AS5xiPd:3:34	U	10m	.2				
AS5xiPd:4:4	U	225m	c.15				
AS5xiPd:4:15	U	18m	c.17				
AS6xiSes:2:4	U	120m	.3				
AS6xiSes:3:2	U	10m	.1				
AS6xiSes:3:11	U	225m	.1				
AS6xiUrDZ:2:30	U	10m	.1				
AS6xiUrDZ:6:16	U	1380m	[c.1]				
AS6xiPd:2:22	U	60m	.1				
AS6xiPd:2:33	U	360m	.1				
AS6xiPd:3:9	U	60m	.1				
AS6xiPd:3:30	U	768m	c.1				
AS6xiPd:4:24	U	1200m	.1				
AS7viiUrDZ:3:8	U	480m	c.1				
AS7viiUrDZ:3:21	U	120m	c.12				
AS7viiUrDZ:4:16	U	1800m	.12				
AS7viiUrDZ:5:8	U	10m	.1				
AS7ixPd:2:17	U	600m	.1				
AS7ixPd:3:3	U	18m	c.09				
AS7ixPd:4:11	U	1260m	.1				
AS8Ag:1:8		750m	.2				
AS9UrDZ:2:13		120m	.5				
AS9UrDZ:2:19		360m	.2				
AS9UrDZ:3:8		10m	.2				
AS9UrDZ:4:3		40m	.2				
AS9UrDZ:7:44		3m	c.17				
AS9UrDZ:8:6		2400m	.2				
SS2UrDZ:3:11		420m	.15				
SS2UrDZ:4:2		1500m	.15				
SS2UrDZ:6:17		120m	.15				
SS5Pd:20		10m	.2				
SS6Ab:1:12		295m	c.15				
SS6Lkl:2:17		1542m	c.15				
SS6Lkl:5:31		960m	.15				
SS6Lkl:7:19		596m	c.15				
SS6Lkl:7:34		2040m	[c.12]				

mean = .17

median = .15

overall mean = .17

overall median = .15

One shekel silver fetches 1200 pounds = 20 talents.

*Text: i[m-babba]r

mean = .23

median = .2

im-babbar-kum "crushed gypsum"--še per sila "grains per quart"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS5xiPd:2:27	U	10s	.2				
AS6xiPd:2:25	U	10s	.2				
SS6Lkl:2:15		10s	.3				
mean = 2.33							
median = 2							
One shekel silver fetches 90 quarts.							

4. Fish and Turtles

ku₆ "fish"--še per sila "grains per quart"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
S35ii	L			-bi	TLB 3:	[3220s	c.59]
						146:2:13	
S35ii	L			-bi	TLB 3:	2870s	c.5
						145:3:9	

mean = .54

median = .54

One shekel silver fetches 333.33 quarts = 1 gur 33.33 quarts.

ku₆-ba "turtle"--še "grains" per unit

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS4dgn:2:11	C	9900	.2				
One shekel silver fetches 900 units.							

ku₆-dùg "good fish"--še per sila "grains per quart"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
S44iUrSPE:1:11		64s	11.25				
One shekel silver fetches 16 quarts.							

ku₆-gam-gam (-ma) (a fish)--še "grains" per unit

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS4dgn: 1: 17	C	5160	c.18				
AS5PdA: 2: 1	C	1920	.2				
AS5Inm: 2: 9	C	960	.2				
AS6iiKd: 1: 13	C U	720	.2				
mean = .2							
median = .2							

One shekel silver fetches 900 units.

ku₆-gîr-uš (a fish) —še “grains” per unit

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS4dgn: 1: 1	C	27600	c.23				
AS4dgn: 1: 3	C	6540	c.15				
AS4dgn: 1: 12	C	16200	.23				
AS5PdA: 1: 13	C	8640	c.23				
AS5Inm: 1: 18	C	12570	c.23				
AS5SesB: 1: 9	C	3300	c.23				
AS6iiKd: 1: 4	C U	11970	c.23				
mean = .22							
median = .23							

One shekel silver fetches 782.61 units.

ku₆-izi “smoked fish”—še per sila “grains per quart”

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S46					Ashmol	160s	c.38
					1935,		
					527: 4 G		
AS4iUrDZ: 1: 3	C U	8580s	.3				
AS4dgn: 2: 2	C	5280s	c.3				
AS5Inm: 2: 3	C	984s	c.3				
AS6iiKd: 1: 12	C U	1200s	.3				
mean, median = .3							
overall mean = .32							
overall median = .3							

One shekel silver fetches 600 quarts = 2 gur.

ku₆-kun-zi sigs “(a fish of) good quality”—še “grains” per unit

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S39					WMAH	200	2
					24.11		

One shekel silver fetches 90 units.

ku₆-sag-kúr (a fish)—še “grains” per unit

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S46					Ashmol	600	.5
					1935,		
					527: 6 G		
AS4dgn: 1: 9	C	4380	.2				
AS4dgn: 2: 7	C	3300	[.11]				
AS5PdA: 2: 2	C	2190	c.2				
AS5Inm: 2: 1	C	1980	.2				
AS5SesB: 1: 4	C	1980	.2				
AS5SesB: 1: 10	C	2190	.2				
AS6iiKd: 1: 8	C U	1980	.2				
mean = .19							
median = .2							
overall mean = .23							
overall median = .2							

One shekel silver fetches 900 units.

ku₆-sag-kúr-erín (a fish of some quality)—še “grains” per unit

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS5Inm: 2: 7	C	660	c.12				
AS6iiKd: 1: 11	C U	660	c.12				
mean, median = .12							

One shekel silver fetches 1500 units.

ku₆-šà-bar “scaled fish”—še “grains” per unit

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS4dgn: 1: 5	C	900	.4				
AS4dgn: 1: 7	C	3000	.5				
AS4dgn: 1: 15	C	1740	.2				
AS4dgn: 2: 4	C	3000	c.12				
AS5Inm: 1: 20	C	1380	c.45				
AS5SesB: 1: 6	C	720	.5				
AS6iiKd: 1: 6	C U	1380	c.45				
mean = .37							
median = .45							

One shekel silver fetches 400 units.

ku₆-šà-bar-erín “scaled fish (of some quality)” —še “grains” per unit

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS5PdA:1:15	C	600	c.12*				
AS5Inm:2:5	C	600	c.12				
AS6iiKd:1:10	C U	600	c.12				

mean, median = .12

One shekel silver fetches 1500 units.

* Text reads ku₆ šā-bar gīd, but has been included here because of the similar price data.

5. Fruits and Fruit Products

geštin-hád "raisins"—še per sila "grains per quart"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS3					MCS 2: 69	71.66!s*	c5
AS4iUrDZ:2:5	U	71.66s	c5				
AS4Sgk:3:8		10s	3		VDI 1976	12s	3.83
AS5xiPd:3:18	U	2s	3		3:110f.:35		
AS5xiPd:3:32	U	10s	3				
AS5xiPd:4:2	U	79s	c2.98				
AS5SesB:2:13		8s	3.75				
AS6xiSes:3:8	U	72s	5				
AS6xiUrDZ:3:6	U	4s	4.25				
AS6xiPd:4:9	U	24.5s	c4.49				
AS7ixPd:3:16	U	26s	[c2.31]				
AS8xiiUrDZ:3:3	U	10s	6				
AS9xPd:2:47	U	22s	6				
AS9UrDZ:2:22		1s	4.5				
AS9UrDZ:3:36		4s	3.5				
SS6Lkl:2:5		39.67s	4.5				

mean = 4.08

median = 4.25

overall mean = 4.12

overall median = 4.25

One shekel silver fetches 42.35 quarts.

* See p. 67 above.

giš-hašhur-durus "(a fruit) fresh"—še per sila "grains per quart"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
S44					NBC 228:	500s	.6
					2:2 (Copy		
					17)		
S44iUrSPE:2:3	L	180s	c.38				

mean, median = .49

One shekel silver fetches 367.35 quarts = 1 gur 67.35 quarts.

giš-hašhur-hád "(a fruit), dried"—še per sila "grains per quart"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS6xiSes:3:7	U	180s	.6				
AS6xiPd:2:3	U	3s	.33				
AS6xiPd:3:14	U	3s	.33				
AS9xPd:2:25	U	3s	.33				

mean = .4

median = .33

One shekel silver fetches 545.45 quarts = 1 gur 245.45 quarts.

giš-ma-nu (fruit? of a native tree)—še per mana "grains per pound"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS6xiPd:2:17	U	120m	.1				
AS9xPd:2:28	U	120m	.25				

mean, median = .18

One shekel silver fetches 1000 pounds = 16 talents 40 pounds or 16½ talents.

giš-pèš-durus "fresh figs"—še per sila "grains per quart"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS6iiKd:1:19	C U	180s	.5				

One shekel silver fetches 360 quarts = 1 gur 60 quarts or 1½ gur.

giš-pèš-hád "dried fig"—še per sila "grains per quart"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS2xiiiUrT:1:8		26s	c5.67*				
AS3					MCS 2: 69	115s	c4.61†
AS4iUrDZ:2:1	U	115s	c4.61†				
AS6xiSes:3:6	U	80s	c1.69				

mean = 3.99

median = 4.61

overall mean = 4.15

overall median = 4.61

One shekel silver fetches 39.05 quarts.

* Written giš-pèš (or possibly hašhur?) 11-MA, according to Michalowski's collation.

† Text: 115s giš-pèš-hád, giš-pèš še-er-gu-bi 38.33, 18 giš-pèš! še-er-gu, kù-bi

780š. Thus if the first item constitutes 68% of the whole, it should cost c530.4 for 115s. Cf. giš-pèš še-er-gu below.

giš-pèš še-er-gu "strings of figs"—še "grains" per unit

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS3					MCS 2:69	56.33	c13.85*
AS4iUrDZ: 2:1	U	56.33	c13.85*				
AS4Sgk: 3:10		6	15				
AS5xiPd: 4:7	U	4	12				
AS6xiUrDZ: 3:7	U	4	15				
AS6xiPd: 2:5	U	.5	15				
AS6xiPd: 3:16	U	.5	15				
AS6xiPd: 4:11	U	5	15				
AS9xPd: 2:26	U	.5	15†				
AS9UrDZ: 3:37		4	15				
SS6Lkl: 2:7		16	12				

mean = 14.29

median = 15

overall mean = 14.25

overall median = 15

One shekel silver fetches 12 units.

*Text: 115s giš-pèš-hád, giš-pèš še-er-gu-bi 38.33, 18 giš-pèš! še-er-gu, kù-bi 780š. See giš-pèš-hád above.

†Text is available in transliteration only, which reads 10 giš-pèš še-er-gu kù-[bi] 7.5 še; the 10 may be the MAS sign, and .5 is meant since the price of 15 is consistent with other values. There is however a product of the same name measured in sila; see the Glossary.

zú-lum "dates"—še per sila "grains per quart"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
S43xi	Ur				UET 3	2400s	.6
					1083		
S43xi	Ur				UET 3	8260s	.6
					1084		
S43xiGdl: 1:4	C L	8190s	.6				
S43xiGdl: 2:16	L	135s	.6				
S44iUrSPE: 2:5	L	27s	c.59				
AS3Pd: 1:2	C	3600s	.6				
AS3Pd: 1:3	C	5400s	c.43				
AS4UrDZ: 1:3		65750s	c.43		VDI 1976	10s	.4
AS4UrDZ: 3:20		3000s	c.43		3:110f.:38		
AS4dgn: 3:21		52500s	c.38				

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS5PdA: 2:7	C	18932s	[.4]				
AS5PdA: 2:10	C	18000s	.4				
AS5SesA: 1:1	C	[9000s	.5]				
AS5Inm: 2:11		7460s	.4				
AS5Inm: 2:14		29100s	.4				
AS5SesB: 1:13	C	19200s	.4				
AS5SesB: 1:16		15000s	.4				
AS6iiKd: 1:20	C U	36154s	c.40				
AS6xiSes: 1:5	C U	27000s	.4				
AS6xiUrDZ: 1:5	C U	28800s	c.38				
AS6xiUrDZ: 1:8	C U	7500s	.4				
AS6xiPd: 1:4	C U	22250s	.4				
AS6xiPd: 2:1	U	5s	.4				
AS6xiPd: 3:12	U	5s	.4				
AS7viiUrDZ: 1:13	C U	9000s	.5				
AS7ixPd: 1:3	C U	12000s	.5				
AS8viiUrDZ: 1:3	C U	36360s	c.46				
AS8xiiUrDZ: 1:5	C U	21600s	.5				
AS9xPd: 1:3	C U	6000s	.5				
AS9xPd: 2:24	U	5s	[.5]				
SS4				-bi	OrSP 47	30240s	c.36
					196		
SS6Lkl: 1:15	C	176942s	c.30				
IS7 x	Ur			-ta	UET 9:	600s	.9
					882: 1:4		
n.d.					BM 24999	37800s	.6
					G		
n.d.	N			-bi	N-998 G	750s	.24
n.d.	Ur				UET 3 284	60s	[.1?]
n.d.	Ur			-bi	UET 3	430s	.6
					1108		
n.d.	Ur			-ta	UET 3	?	.9
					1207		(twice)
mean = .45							
median = .4							
overall mean = .48*							
overall median = .43*							
One shekel silver fetches 300 quarts = 1 gur.							

*For both calculations the extremely low broken value from Ur has been omitted.

6. Grains

eša (a cereal?)—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS9xPd:2:27	U	7s	2.57				

One shekel silver fetches 70.04 quarts.

gig "wheat"—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
SS6Lkl:1:12	C	18300s	c.71*				

One shekel silver fetches 253.52 quarts.

*Text: 18300s gig urudu-bi 120m; converted here to še of silver per sila by comparison with the account median of about 108 še per ma-na of copper; see s.v. urudu, Metals.

še "grain"—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S33				-bi	CTNMC	1148320s	.6
					53:2:25		
S33				-bi	CTNMC	81054.83s	c.6
					53:3:24		
S35				-bi	CT 1:4	107465s	.6
					5:2:7		
S39	L				ITT 4: 7154	22480s	1.5
S40xi	N				CBS 11127	1020s	c1.76
					G		
S40				-bi	HLC 2:	2360s	.75
					70:39:1:3		
S40				-bi	MVN 3	5460s	c.76
					186 G		
S40				-bi	CT 7	440s	.75
					21B:2:8		
S42				-bi	CT 7	3000s	.6
					46b:1:4		
S44iUrSPE:1:1	L	11730s	.6				
S45				-bi	HLC 1:	9000s	.6
					91:31:3:5 = 7:1		
S45				-bi	HLC 1:	14700s	c.49
					91:31:7:4		
S47xii	N			-šè	NRVN 198	150s	.4

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S47xii	N			xn	NRVN 200	1290s	c.42
S47				-bi	CT 9:44	850s	.6
					1:16		
S47				-bi	CT 9:44	850s	.6
					2:5		
S47				-bi	CT 9:44	11270s	.6
					2:10		
S47				-bi	CT 9:44	12970s	.6
					3:4		
S48				-bi	TUT 119	1500s	.6
					5:4		
S48				-bi	TUT 119	2950s	.6
					6:2		
S48				-bi	CT 7:5	436.67s	c.6
					1:17		
AS1				-bi	RA 9:158	3000s	.6
AS1					ŠA 224	895s	c.9
AS2xiiiUrT:1:1	C U	14700s	.8				
AS2xiiiUrT:1:4	C U	750s	.75				
AS2					TCL 5	8.33s	.6
					6051:1:1		
AS2					kbn UDU 87: 6	[233s]	c.77
AS3iUrDZ:1:13	C U	54000s	.75				
AS3iUrDZ:1:16	C U	2340s	.75				
AS3Ses:1:2	C	9000s	.6	-bi	NCT 44	570s	.6
					3:81		
AS3				-bi	NCT 44	4425s	.6
					3:95		
AS3				-bi	NCT 44	5300s	c.63
					4:130		
AS3				-bi	NCT 44	400s	.6
					7:237		
AS3				-bi	NCT 44	6000s	.6
					7:249		
AS4iii	N			-ta	AJSL	?	.45
					1938:315 G		
AS4dgn:3:15*	C	67800s	c.5				
AS4dgn:4:1	C	16500s	c.41				
AS5xiPd:1:10*	C U	18000s	.6				
AS5SesB:2:1*		18000s	.6	-bi	YOS 4 27:1	1350s	.4
AS5LIn:3	C	12000s	.5				
AS6				-bi	CT 10	1920s	.75
					44d:2:15		

ACCOUNT PRICES				OTHER PRICES			
Y Sub	C S	Amount	Price	F	Text	Amount	Price
AS6iiKd: 1:2	C U	[27000s]	.5*				
AS6xiSes: 2:8	U	30s	.67				
AS6xiPd: 3:23	U	60s	.6				
AS7ixPd: 1:8	C U	4500s	c.62				
AS7ixPd: 1:10	C U	1500s	.6				
AS7x6	N			kbn	CST 36	440s	c1.09
AS7xii	N			-bi	TMHC 72	420s	c.43
AS8xiiUrDZ: 1:8	C U	9000s	.8				
AS9UrDZ: 1:8	C	18000s	.6				
AS9viii	L			-bi	AOS 32	360s	c2.17?
SS2UrDZ: 1:5	C	28500s	c.53		P5		
SS2UrDZ: 1:9	C	27480s	.6				
SS3viii25	N			-bi	NRVN 199	960s	c.38
SS3xii	N			xn	UM 29-13-	600s	.45
					153G		
SS3	N			-bi	CBS 11125	43200s	.5
					G		
SS3	N			xn	NRVN 194	600s	.3
SS4					NBC	108700s	.9
					10802: 1:3 (Copy 21)		
SS4					NBC	9300s	.6
					10802: 1:8 (Copy 21)		
SS4	L				ITT 5	18000s	.6
					6776		
SS4				-bi	HSS 2	266.67s	.75
					24: 1:9		
SS4				-bi	HSS 2	3000s	.6
					24: 2: 1		
SS4	L				ITT 5	40200s	.6
					6760		
SS4	L			-bi	ITT 4 7536	1200s	.6
SS5vi	N			-bi	AOS 32	1200s	.45
					S2		
SS5viii	U				CST 721	204s	1.5
SS5Lkl: 1	C	54000s	.52	-bi	TLB 3	5730s	.6
SS5Lkl: 5	C	21000s	.6		150: 1:5		
SS5Lkl: 8	C	40200s	.70	-bi	MVN 9:	300s	.6
					96:3		
SS6Ab: 1:1	C	11593s	c.43				
SS6Lkl: 1:5	C	120000s	c.43*				
SS6Lkl: 1:7	C	222779s	c.43				
SS7Aak: 1	C	36000s	c.43				
SS7Aak: 5	C	1800s	.6				
SS8xii	N			-bi	TMHC 99	450s	.4

ACCOUNT PRICES				OTHER PRICES			
Y Sub	C S	Amount	Price	F	Text	Amount	Price
SS9				-bi	JMEOS	15000s	.6
					12: 3488		
IS1xi	U			-bi	YOS 4	[450s	.4]
					49		
IS1					TLB 3	6000s	1.2
					151: 1:1		
IS1	N			-bi	TMHC 33	1620s	.33
IS2iii	N			-ta	UM 29-13-	?	.45
					920 G		
IS2xi	Ur			-šè	MAOG 4	4500s	.6
					188:1		
IS2xii	U			-bi	YOS 4 12	2100s	[c.43]
IS2	N			-bi	YOS 4 20	450s	.4
IS2	N			-bi	TMHC 60	640s	c.38
IS3i	N			-bi	CBS 8365	2500s	c.07
					G		
IS3i	N			-bi	CBS 8353	450s	.4
					G		
IS3				-bi	YOS 4 48	420s	[c.43]
n.d.				-ta	Jacobsen,	?	.6†
					Tammuz,		
					175f.		
n.d.	N				BE 3/1	18000s	c.27
					70: 1		
n.d.				-bi	MVN 9:	8100s	.67
					11:12		
n.d.				-bi	MVN 9:	2385s	.67
					11:14		
n.d.				-bi	HAV 193	[960s]	c.38
n.d.				-šè	HAV 197	150s	.4
n.d.	L				ITT 5	99000s	.6
					10096		
n.d.					Limet,	3600s	.6
					Métal		
					20: 2:6		
SS?iii	N			-ta	CBS 7790	?	.45†
					G		
n.d.	N			-bi	CBS 13554	700s	.3
					G		
n.d.	N				UM 29-	150s	1.2
					13-952G		(twice)
n.d.	N				UM 29-	300s	1.1

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
n.d.					13-952G		
					UM 29	600s	1.2
n.d.					13-952G		
				-bi	OrSP 5	2250s	.6
					49:8 G		
n.d.					RA 62	10300s	c.63
					13:19		
n.d.				-bi	WMAH	18000s	c.09
					32:1		
n.d.				-bi	WMAH	21600s	.1
					32:5		
n.d.				-bi	WMAH	71.67s	.6
					290:1:4'		
n.d.				-bi	TIM 6	7425s	.6
					2:3:21		
n.d.				-bi	TIM 6	16158.33s	.6
					2:4:11		
n.d.				-bi	TIM 6	10710s	c.6
					2:4:13		
n.d.				-bi	TIM 6	6275s	.6
					2:4end		
n.d.				-bi	TIM 6	22445s	c.6
					2:5:17		
n.d.				-bi	TIM 6	9640s	c.6
					2:6:8		
n.d.				-bi	TIM 6	1716.67s	.6
					2:7:1		
n.d.				-bi	TIM 6	2750s	.6
					2:7:16		
n.d.				-bi	TIM 6	5966.67s	.6
					2:8:8		
n.d.				-bi	TIM 6	75081.67s	c.58
					2:9:18		
n.d.				-bi	TIM 6	10710s	c.6
					2:9end		
n.d.	Ur			-ta	UET 3 1207	?	18 (twice)

mean = .59

median = .6

overall mean = .62§

overall median = .6§

One shekel silver fetches 300 quarts = 1 gur.

*§e i-šah "grain (for) lard." cf. Glossary s.v.

mean = .63§

median = .6§

†See F. Ali, "Sumerian Letters: Two Collections From the Old Babylonian Schools." Dissertation, University of Pennsylvania, 1964, p. 13 n. 9.

‡The same as *AJSL* 55 (1938) AS 4, as Gelb observes?

§The extraordinarily high price of 18§s from a non-account text has been omitted in these calculations.

7. Leather and Hides

kuš-a-gá-lá "leather sack"—še "grains" per unit

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS4dgn: 3:9	C	300	4.5*				
AS5PdA: 1:11	C	40	5				
AS5Inm: 1:13	C	65	5†				
AS5LIn: 7	C	40	4				
AS6üKd: 1:15	C U	70	5				

mean = 4.7

median = 5

One shekel silver fetches 36 units.

*Text: kuš-a-gá

†Text adds máš-li-um "pail"

kuš-dùg-gan "leather bag"—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS8xiiUre: 2:15	C U	.70m	c171.43				

One shekel silver fetches 1.05 pound.

kuš-e-sir "sandals"—še "grains" per pair

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS4dgn: 3:3	C	198	11.82*				
AS4dgn: 3:5	C	30	9†				
AS5PdA: 1:7	C	48	12				
AS5PdA: 1:9	C	5	9‡				
AS5SesB: 1:21	C	10	12				
AS5Inm: 1:15	C	45	11.67§				
AS5LIn: 11	C	5	9‡				
AS6üKd: 1:17	C	45	11.67				

mean = 10.77

median = 11.67

One shekel silver fetches 15.42 pairs.

*Adds: é-ba-an gin "pair, normal quality"

†Add: šu LI.LA é-ba-an "... pair"

‡Add: (é-ba-an) šu kuš-gu₄ "(pair), ..., ox hide"

§Text: 40 kuš-e-sír é-ba-an, 5 kuš-e-sír é-ba-an šu LI.LA, kù-bi... "40 shoes, pair, 5 shoes, pair..."

||Text: 40 kuš-e-sír é-ba-an, 5 kuš-e-sír šu SU.HI? é-ba-an... "40 shoes, pair, 5 shoes... pair..."

kuš-šah "pig skin"—še "grains" per unit

ACCOUNT PRICES				OTHER PRICES			
Y Sub	C S	Amount	Price	F	Text	Amount	Price
S43xGdl: 3: 14	L	3	6				

One shekel silver fetches 30 units.

kuš-udu "sheep skin"—še "grains" per unit

ACCOUNT PRICES				OTHER PRICES			
Y Sub	C S	Amount	Price	F	Text	Amount	Price
AS3				-bi	NCT 44	7	c34.28
					5: 172		
AS3				-bi	NCT 44	6	25
					6: 186		
AS4dgn: 3: 11	C	2400	3				
AS5PdA: 1: 3	C	420	2*				
AS5Inm: 1: 9	C	420	2†				
AS6iKd: 1: 16	C U	420	2				

mean = 2.25

median = 2

mean, median = 29.64

One shekel silver fetches 90 units in accounts, 6.07 in non-account texts.‡

*Text adds: úš "dead"

†Text adds: ba-úš "(having) died"

‡Overall mean and median calculations would be meaningless because of disparity between account and non-account prices.

kuš-ummu₄ (A.EDIN.LÁ) "water skin"—še "grains" per unit

ACCOUNT PRICES				OTHER PRICES			
Y Sub	C S	Amount	Price	F	Text	Amount	Price
AS4dgn: 3: 7	C	160	18				
AS5PdA: 1: 5	C	20	10				
AS5SesB: 1: 19	C	10	[10]				
AS5Inm: 1: 11	C	25	10				
AS5LIn: 5	C	10	10				
AS5LIn: 29		1	[10]				
AS6iKd: 1: 14	C U	25	10				

mean = 11.14

median = 10

One shekel silver fetches 18 units.

8. Livestock

(Prices usually vary too widely to give meaningful means and medians.)

máš "goat"—še "grains" per unit

ACCOUNT PRICES				OTHER PRICES			
Y Sub	C S	Amount	Price	F	Text	Amount	Price
SS6Lkl: 8: 8		1	c84.49*				
IS2					YOS 4 277	47	47.87†
IS?	L				ITT 5 7000	1	540‡=3g

*máš-nitá, grouped with other kinds of sheep and priced en masse.

†máš and máš-gal priced together.

‡12 udu-niga, 1 máš-niga, priced together.

silá₄ "lamb"—še "grains" per unit

ACCOUNT PRICES				OTHER PRICES			
Y Sub	C S	Amount	Price	F	Text	Amount	Price
S45				-ta	HSS 4	7	60*
					1: 2: 8		
SS6Lkl: 8: 8		4	c84.49†				

*silá₄-nitá.

†silá₄ bar-gál, grouped with other kinds of sheep and priced en masse.

u₈ "ewe"—še "grains" per unit

ACCOUNT PRICES				OTHER PRICES			
Y Sub	C S	Amount	Price	F	Text	Amount	Price
SS6Lkl: 8: 8		31	c84.49*				

*u₈ bar-gál, grouped with other kinds of sheep and priced en masse.

ud₄ (= ūz) "goat"—še "grains" per unit

ACCOUNT PRICES				OTHER PRICES			
Y Sub	C S	Amount	Price	F	Text	Amount	Price
SS6Lkl: 8: 8		7	c84.49*				

*Grouped with other kinds of sheep and priced en masse.

udu "sheep"—še "grains" per unit

ACCOUNT PRICES				OTHER PRICES			
Y Sub	C S	Amount	Price	F	Text	Amount	Price
S36				-šè	OrSP 6	1?	90
					60 #12		
S46				-bi	STA 17	310.5!	c89.98

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
					2:20		
S46				-bi	STA 17	132	c90.17
					5:17		
S48				-bi	SET 310	93	c15.48†
					20		
AS1				xn	MVN 3	3	95
					219G		
AS4				-bi	SET 130	10	90‡
					363		
IS?	L				ITT 5 7000	12	540\$ = 3g
n.d.	N				UM 29 16	2	225 =
					317G		1¼ g
n.d.	N				TMHC 59	1	225 =
							1¼ g

* Compare also UET 3:1165, where the price of ewes and male sheep is broken and UET 9:882, where prices of sheep and goats appear to be substantially higher than usual.

† udu-máš "sheep and goats"

‡ udu bar-gál "unshorn sheep"

\$12 udu-niga, 1 máš-niga "grain-fed sheep, grain-fed goat"

|| udu a-lum "alum-sheep"

udu-nita "male sheep"—še "grains" per unit

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S45				-ta	HSS 4	7	90
					1:2:5		

SS6Lkl:8:8 6 c84.49*

SS6Lkl:8:15 42 90‡

mean, median = 87.24

* udu-nita bar-gál, "unshorn male sheep," grouped with other kinds of sheep and priced en masse.

‡ udu-nita bar-gál "unshorn male sheep"

9. Metals

A.LU-urudu "lead"—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
SS6Lkl:5:33		9m	20				

One shekel silver fetches 9 pounds = 540 shekels, or the ratio of silver to product is 1:540.

AN.NA "tin"—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS7ixPd:4:8	U	1m	900 = 5g		"5 shekels"		
AS8xiiUrDZ:3:10		4m	540 = 3g				
SS6Lkl:8:5		.17m	c360 = 2g				
n.d.				-ta	CT 7	?	c43200*
					20b:12		= 240g
							or 4m

mean = 600 = 3½g

median = 540 = 3g

One shekel silver fetches .33 pounds = 20 shekels, or the ratio of silver to product is 1:20.

* Omitted in mean, median calculations.

guškin "gold"—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS2					OrSP 15	.0417m	70200
					57:39 G		= 390g = 6½m
AS3iUrDZ:2:30	U	.017m	c75600				
			= 420g = 7m				
AS3iUrDZ:2:38	U	.066m	c172800				
			= 960g = 16m				
AS3iUrDZ:3:41	U	.33m	183600				
			= 1020g = 17m				
AS5					SACT 2	.00417m	c86400
					119		= 480g = 8m
AS6					BIN 5	.0138m	c86400
					109:8		= 480g = 8m
AS6					NBC	.083m	c108300
					244:1:1		= 601½g
					(copy 19)		= 10m 1/3g
AS6					NBC	.033m	c216600
					244:1:4		= 1203½g
					(copy 19)		= 20m 3½g
AS6					NBC	.67m	c75780
					244:1:9		= 421g
					(copy 19)		= 7m 1g
AS6					NBC	.37m	216600
					244:2:7		= 1203½g
					(copy 19)		= 20m 3½g
AS6					NBC	.33m	75600
					246:6		= 420g = 7m
					(copy 20)		
AS6xiUrDZ:6:24	U	.00417m	c86400				

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
							= 480g = 8m
AS8vi	P			-ta	RA 17	?	108000
					207:4		= 600g = 10m
SS6				-ta	TRU 387	?	75600
							= 420g = 7m
SS8ix	P			-ta	MVN 3	.048m	108000
					285 G		= 600g = 10m
SS8x	U			-ta	NBC 6653	?	108000
					(copy 23)		= 600g = 10m
IS15i12	Ur			-ta	UET 3	.0094m	54000*
					653		= 300g = 5m
n.d.				-ta	MVN 3	2m	183600
					340 G		= 1020g = 17m
n.d.				-ta	CBS	.625m	162000
					10483 G		= 900g = 15m
n.d.				-ta	N-828 G	.017m	108000
							= 600g = 10m

mean = 115,192.5 = 639g 172š = 10²/₃m

mean, median = 129,600 = 720g = 12m

overall mean = 118,074 = 655g 174š = 10m 55g 174š

overall median = 10800 = 600g = 10m

One shekel silver fetches .00167 pounds = .1 shekel, or the ratio of silver to product is 10:1.

*Text: guškin si-sá, a kind of gold.

gal guškin "gold cup"—še "grains" per unit

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
AS6					NBC	1	75810
					244:2:2		= 421 ¹ / ₆ g = 7m 1 ¹ / ₆ g
					(copy 19)		
SS5					NBC	1?*	75810
					237:2:2		= 421 ¹ / ₆ g = 7m 1 ¹ / ₆ g
					(copy 22)		

One shekel silver fetches .0024 units.

*Text: 1 mana.

har guškin "gold ring"—še "grains" per unit

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
SS5					NBC	1?*	75810

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
							237:1:2 = 421 ¹ / ₆ g = 7m 1 ¹ / ₆ g (copy 22)

One shekel silver fetches .0024 units.

*Text: 1 mana.

kù-huš-a (a metal)—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
AS4UrDZ:3:23		20.33m	c2655.73				= c14 ³ / ₄ g
AS9Lkl:a		.083m	162000				= 900g = 15m
AS9Lkl:b		.33m	162000				= 900g = 15m
SS5viUrSPE:1:1	C	.5m	162000				= 900g = 15m

mean = 122163.93 = c678g 124š = 11m 18g 124š

median = 162000 = 900g = 15m

One shekel silver fetches .0011 pounds = .067 shekel, or the ratio of silver to product is 15:1.

su-GAN (a metal)—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
S40?:3:5		.1m	270*				= 1 ¹ / ₂ g "shekel"
S40?:6:5		c.86m	c360*				= 2g
S43xGdl:1:20	L	.86m	c360*				= 2g
AS4iUrDZ:3:18	U	2.5m	90				
AS4UrDZ:2:1		.25m	90				
AS4UrDZ:2:6		1m	90				
AS6xiUrDZ:5:34	U	c1.49	[c120]				
AS7viiUrDZ:4:21	U	2.31m	c180				= 1g
AS8viiUrDZ:1:15	U	1.82m	c180				= 1g
AS8xiiUrDZ:2:3		.2m	335				= 1g 155š
AS9xPd:3:60	U	.63m	180				= 1g
SS2UrDZ:3:18		1m	90				

mean = 195.42 = 1g 15.42š

median = 180 = 1g

One shekel silver fetches 1 pound = 60 shekels, or the ratio of silver to product is 1:60.

*Written sù-GAN.

urudu "copper"—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S40?: 3: 3		12m	90				
S40?: 6: 3		c51.58m	c77.16				
S43xGdl: 1: 16	L	c51.58m	c77.16				
S48snga: 1: 11		720m	90				
S48snga: 2: 3		576m	c77.14				
ASI	N				UM 29- 15-427 1: 3 G	20m	90
AS2iii	P			-ta	UDU 87 1	c17.74m	90
AS2xi	N				NRVN 13	2m	90
AS4iUrDZ: 3: 16	U	7.75m	c107.87				
AS4UrDZ: 1: 17		21.75m	120				
AS5PdA: 3: 1		19.83m	c120				
AS5xiPd: 3: 37	U	4.4m	c283.64				
AS5SesA: 2: 2		18m	120				
AS5SesB: 2: 7		38.5m	120				
AS5Inm: 3: 11		c4.47m	c120				
AS5LIn: 19		6.63m	c120				
AS6iiKd: 2: 5	U	[9.83m	83.39]				
AS7viiUrDZ: 4: 19	U	131.63m	c108				
AS8viiUrDZ: 1: 13	U	70m	c98.61				
AS8					MCS 1 491c	70m	c98.19
AS9xPd: 3: 58	U	17.95m	c107.99				
AS9UrDZ: 8: 34		70.5m	108				
SS2UrDZ: 3: 16		53.67m	135				
SS4				-bi	OrSP 47 190	125m	86.4
SS4					MCS 1 491a	9.33m	c96.43
mean = 104.46*					mean = 91.84*		
median = 108*					median = 90*		
overall mean = 101.30*							
overall median = 98.40*							

One shekel silver fetches 1.83 pounds = $1\frac{5}{6}$ pound = 110 shekels, or the ratio of silver to product is 1:110.

*The unusually high price of c283.64 še per mana has been omitted from these calculations.

10. Oils or Fats

(Note that these products appear to be measured using the system for dry, not liquid, products. See Glossary s.v. i.)

i "oil"—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
n.d.					-ta UET 3 1207: 12, 22		72 (twice)

One shekel silver fetches 2.5 quarts.

i-dùg-ga "good oil"—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS1xi	N				UM 29- 15-427 G	30s	27
n.d.	N				CBS 8121 G	2s	45
					mean, median = .36		

One shekel silver fetches 5 quarts.

i-dùg-nun-na (an oil)—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS6xiUrDZ: 4: 14	U	4s	180 = 1g 1 "shekel"				
AS7viiUrDZ: 2: 30	U	4s	180				
AS8viiUrDZ: 2: 28	U	3s	180*				
AS9UrDZ: 5: 34		1s	180				
AS9UrDZ: 6: 39		1s	180				
SS2UrDZ: 3: 3		3s	180				
SS2UrDZ: 4: 10		2.5s	180				
SS2UrDZ: 4: 28		.25s	180				
SS6Lkl: 5: 25		3.25s	180				
SS6Lkl: 7: 7		2.5s	180				

mean, median = 180

One shekel silver fetches 1 quart.

*Text: i-dùg[-nun-na].

i-giš "sesame oil"—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S40?: 6: 7		34s	20				
S43xGdl: 2: 3	L	24s	20				
S43xGdl: 2: 8	L	10s	20				
ASI				-bi	HSS 4	376.5s	15
					3 rev. 5:9		

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS3Pd: 1:8		325.67s	15				
AS4dgn: 4: 12		600s	13.5		MLC 1978:	39s	13.5
					1:1 (copy 18)		
AS4					MLC 1978:	[118?	13.5?]
					2:15 (copy 18)		
AS4					MLC	607s	13.5
					1978: 2:20 (copy 18)		
AS5SesA: 1:9		118s	c13.45				
AS5Inm: 3:8		120s	13.5				
AS6iiKd: 2:3	U	[180s	13.5]				
AS6xiSes: 2:10	U	2s	15				
AS6xiUrDZ: 3:13	U	15s	15				
AS7viiUrDZ: 3:12	U	40s	16.5				
AS7viiUrDZ: 3:14	U	60s	17				
AS7ixPd: 4:18	U	2s	15				
AS8xiiUrDZ: 2:6	U	36.75s	c17.96				
AS8xiiUre: 2:2	U	57s	18				
AS9UrDZ: 3:27		10.5s	18				
AS9UrDZ: 7:33		c401.92	c18.00				
SS4					NBC	1200s	12
					10802: 2:2 (copy 21)		
SS6Lkl: 6:4		1517s	c13.85				
SS6Lkl: 8:22		5s	13.8				
SS6Lkl: 9:24		12s	12				
IS7x	Ur			-ta	UET 9	7786s	72
					882: 1:2		
IS7xi	Ur				UET 3	600s	72
					1165: 1		
IS8				-ta	UET 3		72
					1201: 1:5		
n.d.					MVN 3	2s	14
					343 G		
n.d.	N				CBS 8430	1s	30
					G		
n.d.					UDT 179: 1	2s	15
n.d.					BE 3/1	4s	22.5
					99:12		
mean = 15.95					mean = 16.56*		
median = 15					median = 14*		
overall mean = 16.14*							
overall median = 15*							
One shekel silver fetches 12 quarts = 1/25 gur.							

*The following prices were omitted from the calculations because they are too high to be meaningful: the three instances of 72 še/sila.

i-ku₆ "fish oil"—še per sila "grains per quart"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS4dgn: 2: 14	C	540s	6				
AS5PdA: 2: 5	C	120s	6				
AS5SesB: 1: 12	C	120s	6				
AS6iiKd: 1: 23	C U	60s	6				
n.d.					Ashmol	80s	11.25
					1935,		
					529: 15 G		

mean, median = 6

overall mean = 7.05

overall median = 6

One shekel silver fetches 30 quarts = 1/10 gur.

i-nun (an oil)—še per sila "grains per quart"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS4					VDI 1976	5s	18
					3: 110f.: 37		

One shekel silver fetches 10 quarts = 1/30 gur.

i-nun-ku₆ (an oil)—še per sila "grains per quart"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
n.d.					-ta UET 3		22.5
					1198: 3		
IS3					-ta UET 3		22.5
					1514: 8		

One shekel silver fetches 8 quarts.

i-šah "lard"—še per sila "grains per quart"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
S40?: 4: 6		15s	12				
S43xGdl: 3: 10	L	2(s?)	18				
S46					Ashmol	660s	12
					1935,		
					527: 1 G		

AS3Ses: 2: 15		51s	14				
AS3Pd: 1: 10		449.67s	c13.94				
AS4iUrDZ: 3: 7	U	514s	14				
AS4Lgh: 1: 3		c96.53s	10.50		MLC	245.5s	10

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS4					1978: 1:3 (copy 18)		
					MLC	488s	10.5
AS4					1978: 1:6 (copy 18)		
					MLC	53.33s	10.5
AS4					1978: 1:19 (copy 18)		
					MLC	[173.5s	10]
AS4					1978: 2: 17 (copy 18)		
					MLC	1234.28s	c10.33
					1978: 2: 22 (copy 18)		
AS5xiPd: 4: 9	U	390s	.05				
AS5SesA: 1: 11		173.5s	10				
AS5SesB: 2: 10		466s	9				
AS5LIn: 25		98.25s	c9.01				
AS6xiSes: 3: 4	U	33.67s	9				
AS6xiSes: 3: 5	U	912s	9				
AS6xiUrDZ: 4: 19	U	1112s	9				
AS6xiPd: 5: 9	U	907.33s	c9				
AS7ixPd: 4: 16	U	1169.33s	12				
AS8xiiUre: 2: 4	U	43s	15				
AS9xPd: 3: 65	U	530s	15				
AS9UrDZ: 7: 36		292.5s	c12.77				
AS9UrDZ: 7: 38		3000s	15				
SS6Lkl: 6: 7		3127s	12				
SS6Lkl: 7: 30		60s	12				
SS6Lkl: 8: 24		7s	10				
SS6Lkl: 9: 26		29s	9				
mean = 11.78*					mean = 10.56		
median = 12*					median = 10.42		
overall mean = 11.52*							
overall median = 10.5*							

One shekel silver fetches 17.24 quarts.

*The unusually low account price of .05 še per sila has been omitted.

i-UD.KA (an oil?)—še per sila "grains per quart"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS6xiUrDZ: 6: 3	U	2s	15				

One shekel silver fetches 12 quarts = 1/25 gur.

i-udu "sheep oil?"—še per sila "grains per quart"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS7viiUrDZ: 4: 1	U	20s	9				

One shekel silver fetches 20 quarts = 1/15 gur.

11. Reed

gi "reed"—še per mana "grains per pound"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
S45					YOS 4	22m	18
					295:5		
S44					NBC	3.33m	c18
					228: 1: 16		
					(copy 17)		
AS4iUrDZ: 2: 19	U	.17m	c9.0				
AS4UrDZ: 2: 15		9.17m	c9.0		VDI 1976	8m	10.5
					3: 110f.: 33		
AS4Sgk: 3: 17		8m	10.5				
AS5xiPd: 3: 6	U	.25m	8				
AS5xiPd: 3: 25	U	.67?m	c9.0				
AS6xiPd: 2: 7	U	7m	9				
AS7viiUrDZ: 2: 2	U	2m	9				
AS8viiUrDZ: 1: 26	U	4m	9				
AS8viiUrDZ: 3: 11	U	2m	9				
AS9UrDZ: 7: 11		7m	9				
SS2UrDZ: 2: 6		9.67m	c9.0				
SS6Lkl: 4: 19		33.67m	[c5.70]				
mean = 8.77					mean = 15.5		
median = 9					median = 18		
overall mean = 10.11							
overall median = 9							

One shekel silver fetches 20 pounds = 1/3 talent.

gi-dùg-ga "good or sweet reed"—še per sila "grains per quart"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS9xPd: 1: 14	U	6m	10.5				
SS6Lkl: 9: 12		2.5m	6				
n.d.	N				TMHC	6m	3
					307: 13		

mean, median = 8.25

overall mean = 6.5

overall median = 6

One shekel silver fetches 30 pounds = ½ talent.

nīg-kēš "bound (reed) or (reed for) binding"—še per mana "grains per pound"

ACCOUNT PRICES					OTHER PRICES		
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS4UrDZ:3:9		.25m	60				
AS6xiUrDZ:3:25	U	.05m	60				
AS9UrDZ:4:17		[.05m?	60?]				
SS6Lkl:7:9		.67m	c60.00				

mean, median = 60

One shekel silver fetches 3 pounds = 1/20 talent.

sa-gi (-ra) "reed bundles"—še "grains" per unit

ACCOUNT PRICES					OTHER PRICES		
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
S402:4:9		680	.6				
S40					Bodleian S339 G	275	c.98
SS5Pd:13		295	[c.41]				
SS6Lkl:4:8		1628	c.36				

mean = .47

median = .41

overall mean = .59

overall median = .51

One shekel silver fetches 352.94 units.

12. Resins and Spices

ar-ga-núm (a resin)—še per mana "grains per pound"

ACCOUNT PRICES					OTHER PRICES		
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS7viiUrDZ:2:12	U	11.67m	9				
AS8viiUrDZ:2:2	U	6.33m	c6.63				
AS9UrDZ:5:9		2.67m	6				
AS9UrDZ:6:19		2.67m	6				
AS9UrDZ:7:31		4m	6				
SS2UrDZ:2:18		8m	6				
SS2UrDZ:5:9		2m	6				

mean = 6.52

median = 6

One shekel silver fetches 30 pounds = ½ talent.

en-mur (a resin)—še per mana "grains per pound"

ACCOUNT PRICES					OTHER PRICES		
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS4UrDZ:2:19		6m	3				
AS6xiUrDZ:4:2	U	5m	[2]				
AS7viiUrDZ:2:14	U	3m	3				
AS8viiUrDZ:2:4	U	3m	3				
AS9UrDZ:5:11		1m	4.5				
AS9UrDZ:6:21		1m	4.5				
SS2UrDZ:2:19		4m	3				

mean = 3.28

median = 3

One shekel silver fetches 60 pounds = 1 talent.

gazi "cassia"—še per sila "grains per quart"

ACCOUNT PRICES					OTHER PRICES		
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS2					TCL 5	637.85s	c.6
					6051:1:5		

AS3Ses:2:5 20s .5

mean, median = .55

One shekel silver fetches 327.27 quarts = 1 gur 27.27 quarts.

ku-mul "cumin?"—še per sila "grains per quart"

ACCOUNT PRICES					OTHER PRICES		
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS4Sgk:3:12		63s	12				
AS9UrDZ:2:10		60s	9				
AS9UrDZ:6:42		60s	9				
SS2UrDZ:6:7		60s	9				
SS6Lkl:2:3		62.89s	c9.30				

mean = 9.66

median = 9

One shekel silver fetches 20 quarts = 1/15 gur.

mun "salt"—še per mana "grains per pound"

ACCOUNT PRICES					OTHER PRICES		
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
S44					NBC	3.33m	36†
					228:1:12 (copy 17)		
S44iUrSPE:1:17	L	[586s]*	c.20				
AS1	N				BE 3/1 55	[30s*	6]†

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS4UrDZ:2:13		9.17m	c15				
AS6xiUrDZ:4:33	U	.67m	18				
AS7viiUrDZ:1:24	U	3.33m	c22.50				
AS8viiUrDZ:1:24	U	7.33m	c22.09				
AS8viiUrDZ:3:9	U	3m	18				
AS9UrDZ:5:3		.67m	18				
AS9UrDZ:6:9		.67m	18				
AS9UrDZ:7:9		5m	18				
SS2UrDZ:2:4		11m	15				
SS6Lkl:4:17		17.67m	c14.72				

mean of mana items = 17.93

median of mana items = 18

mean, median of sila item = .2

One shekel silver fetches 10 pounds = $\frac{1}{6}$ talent, 900 quarts = 3 gur.

*Measured in sila.

†Non-account prices vary so widely as to make mean and median calculations meaningless.

ni-gi₄-tum (a resin)—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS4UrDZ:2:25		6m	[32.5]				
AS7viiUrDZ:2:16	U	6.67m	30				
AS8viiUrDZ:1:30	U	5.67m	c31.94*				
AS8viiUrDZ:3:17	U	1.5m	30				
AS9UrDZ:5:7		2.33m	22.5				
AS9UrDZ:6:17		2.33m	22.5				
AS9UrDZ:7:23		4m	22.5				
SS2UrDZ:2:12		11m	22.5				
n.d.					TMHC	2m	30†
					307:11		

mean = 26.80

median = 26.25

overall mean = 27.16

overall median = 30

One shekel fetches 6 pounds.

*Text: ni- [gi₄-tum]; price makes restoration probable.

†Text: šim-ni-ki-tum.

ni-ik-tum (a resin)—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS7viiUrDZ:3:10	U	12s	15				

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
SS2UrDZ:3:5		12s	15				
SS6Lkl:6:2		12s	15*				
SS6Lkl:6:16		12s	15				

mean, median = 15

One shekel silver fetches 12 quarts = $\frac{1}{25}$ gur.

*A different product? Text: ni-ik-tum al-la-ha-ru.

šfG. ŪZ (a resin)—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S45					YOS 4	60m	30
					295:1		
AS4UrDZ:2:9		15.17m	9		VDI 1976	1m	18
					3:110f.:26		

AS4Sgk:3:16		1m	18				
AS6xiUrDZ:2:8	U	1m	20				
AS6xiUrDZ:3:28	U	67m	15				
AS6xiUrDZ:4:27	U	1m	18				
AS7viiUrDZ:1:18	U	69m	c17.97				
AS7ixPd:5:11	U	3m	18				
AS8viiUrDZ:1:18	U	62m	18				
AS8viiUrDZ:3:28	U	1m	18				
AS9UrDZ:2:7		1m	18				
AS9UrDZ:4:8		18m	18				
AS9UrDZ:4:34		19m	18				
AS9UrDZ:6:3		17m	c17.65				
AS9UrDZ:7:3		6m	18				
SS2UrDZ:1:21		74.67m	c20				
SS2UrDZ:4:30		6m	20				
SS2UrDZ:5:27		4m	18				
SS6Lkl:4:11		94.67m	c27				
SS6Lkl:9:6		2m	22.5				

mean = 18.37

mean, median = 24

median = 18

overall mean = 18.91

overall median = 18

One shekel silver fetches 10 pounds = $\frac{1}{6}$ talent.

še-li "pine or juniper seeds"—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S44					NBC	3.33s	36

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S45					228: 1: 14 (copy 17)		
					YOS 4	18s	30
					295: 9		
AS4UrDZ: 2: 31		.17s	c24.00		VDI 1976	21.17s	c36
					3: 110f.: 28		
AS4Sgk: 4: 1		21.67s	c36.00				
AS5xiPd: 3: 10	U	.17s	c36.00				
AS5xiPd: 3: 23	U	.67s	c36.00				
AS6xiUrDZ: 2: 5	U	1s	90				
AS6xiUrDZ: 3: 2	U	6.5s	90				
AS6xiPd: 2: 11	U	9.67s	90				
AS7viiUrDZ: 2: 18	U	15.33s	60				
AS7ixPd: 2: 5	U	9.67s	72				
AS8viiUrDZ: 2: 12	U	15.33s	45				
AS8viiUrDZ: 3: 23	U	1s	45				
AS9xPd: 1: 20	U	9.33s	c74.57				
AS9UrDZ: 2: 3		9.5s	36				
AS9UrDZ: 5: 18		3.67s	c24.55				
AS9UrDZ: 5: 37		2s	30				
AS9UrDZ: 6: 23		3.67s	30				
AS9UrDZ: 7: 15		9s	30				
SS2UrDZ: 2: 23		19.5s	30				
SS6Lkl: 5: 5		38.17s	c22.49				
mean = 47.45					mean = 34		
median = 36					median = 36		
overall mean = 45.62							
overall median = 36							

One shekel silver fetches 5 quarts = 1/60 gur.

še-LÜ "coriander"—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS2					TCL 5	347.58s	c.60
					6051: 2: 10		
AS7ixPd: 3: 11	U	140s	1.2				
AS9xPd: 2: 40	U	188.33s	3				
AS9Irm: 1: 10		390s	1.8				
AS9Irm: 2: 1		780s	1.8				
SS2UrDZ: 7: 16		1500s	1.2				
SS6Ab: 1: 6		10s	.8				
SS6Lkl: 2: 24		1360s	c1.20				
mean = 1.57							

median = 1.2

overall mean = 1.45

overall median = 1.2

One shekel silver fetches 150 quarts = 1/2 gur.

šim "resin"—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S40?: 8: 3		88m	90				
S44					NBC	3.33m	120
					228: 1: 8 (copy 17)		
S45					YOS 4	6m	90
					295: 7		
AS4iUrDZ: 2: 17	U	.5m	30		VDI 1976	31.5m	c35.05
AS4Sgk: 3: 14		32.5m	36		3: 110f.: 27		
AS6xiUrDZ: 2: 34	U	19.5m	60				
AS6xiUrDZ: 4: 35	U	.67m	45				
AS7viiUrDZ: 2: 3	U	5.67m	60				
AS8viiUrDZ: 3: 13	U	1m	60				
AS9UrDZ: 3: 13		2m	60				
AS9UrDZ: 5: 5		2.67m	60				
AS9UrDZ: 6: 11		2.67m	c60.75				
AS9UrDZ: 7: 13		4m	60				
SS2UrDZ: 2: 8		10.5m	90				
SS6Lkl: 4: 21		29.67m	132.67				
n.d.	L				-ta ITT 5	7.33m	45
					6736: 2: 1		
n.d.					MVN 3	270m	c.89*
					343 G		
n.d.	N				UM 29-	4m	60
					15-209 G		
mean = 64.96					mean = 70.01†		
median = 60					median = 75†		
overall mean = 66.36†							
overall median = 60†							

One shekel silver fetches 3 pounds = 1/20 talent.

*Sum of 120m šim sigs and 150m šim gin.

†For both calculations the extremely low value from a non-account text has been omitted.

šim + GAR = bappir (brewing preparation)—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS5xiPd: 3: 8	U	.25m*	44				

One shekel silver fetches 4.09 pounds.

*See under šim+GAR in Chapter 5 for the possibility that this is to be understood as a volume measure; if so, .25s would cost 44š, and one shekel would fetch 4.09 quarts.

šim-ba₅-KU-LUM (a resin)—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
S40?:5:3		5m	18				
S40?:8:1		6m	18				

mean, median = 18

One shekel silver fetches 10 pounds = $\frac{1}{6}$ talent.

šim-düg (a resin)—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
AS4iUrDZ:3:1	U	2m	9				
AS4UrDZ:2:21		6m	9				
AS7viiUrDZ:2:8	U	4m	9				
AS7ixPd:5:4	U	[1.5m	9]				
AS8viiUrDZ:2:6	U	8m	9				
AS8viiUrDZ:3:15	U	2m	9				
AS9UrDZ:5:14		1m	9				
AS9UrDZ:6:15		1m	9				
AS9UrDZ:7:29		6m	9				
SS2UrDZ:2:16		8m	9				
SS6Lkl:4:23		[23m	9]				

mean, median = 9

One shekel silver fetches 20 pounds = $\frac{1}{3}$ talent.

šim-gam-gam-ma (a resin)—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
S40?:5:9		50s	4.5				
AS4iUrDZ:2:23	U	5s	3.6				
AS4UrDZ:2:29		15s	3.6				
AS4Sgk:4:8		12s	2.67		VDI 1976	12s	3
					3:110f.:32		
AS6xiPd:2:13	U	12s	6				
AS7viiUrDZ:2:22	U	16s	6				
AS7ixPd:2:9	U	12s	4.5				
AS8viiUrDZ:2:16	U	14s	4.5				
AS9xPd:1:16	U	12s	3				
AS9UrDZ:5:24		3s	3				

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
AS9UrDZ:6:27		3s	3				
AS9UrDZ:7:21		15s	3				
SS2UrDZ:2:28		27s	3				
SS6Lkl:5:11		[60s	1.5]				
SS6Lkl:9:20		3s	1.67				
n.d.	N				TMHC	6s	2.5

mean = 3.57

median = 3

overall mean = 3.31

overall median = 3

One shekel silver fetches 60 quarts = $\frac{1}{5}$ gur.

šim-GĀN (a resin)—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
AS4iUrDZ:2:21	U	3s	12				
AS4UrDZ:2:27		5s	18		VDI 1976	6s	18
					3:110f.:31		
AS4Sgk:3:19		6s	18				
AS7viiUrDZ:2:20	U	12s	15				
AS7ixPd:2:11	U	6s	15				
AS8viiUrDZ:2:14	U	16s	12				
AS8viiUrDZ:3:21	U	3s	12				
AS9xPd:1:22	U	6s	17.33				
AS9UrDZ:2:32		.17s	c18.00				
AS9UrDZ:5:20		3s	3				
AS9UrDZ:6:25		3s	18				
AS9UrDZ:7:17		8s	3				
SS2UrDZ:2:22		18s	24				

mean = 14.26

median = 15

overall mean = 14.52

overall median = 16.17

One shekel silver fetches 11.13 quarts.

šim-gi (a resin)—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
S40?:5:13		15m	6				
S40?:7:6		29.83m	9				

mean, median = 7.5

One shekel silver fetches 24 pounds.

šim-gig (a resin)—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S40?:4:4		8s	22.5				
S40?:5:7		15s	14.67				
S40?:7:2		18s	15				
AS6xiPd:2:15	U	6s	12				
SS6Lkl:9:16		3s	9				

mean = 14.63

median = 14.67

One shekel silver fetches 12.27 quarts.

(šim) gu₄-ku-ru (a resin)—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S40?:5:5		25s	3.6				
S40?:7:4		154s	3				
AS4iUrDZ:2:25	U	4s	3				
AS4Sgk:4:6		10.67s	c3.00		VDI 1976 3:110f.:29	10.67s	c3
AS6xiPd:2:9	U	10.67s	c3.00				
AS7viiUrDZ:2:24	U	16s	c1.79				
AS7ixPd:2:7	U	10.67s	c1.78				
AS7ixPd:4:22	U	3s	3				
AS8viiUrDZ:2:18	U	10s	1.8				
AS8viiUrDZ:3:25	U	3s	c1.78				
AS9xPd:1:18	U	10.67s	c2.81				
AS9UrDZ:5:22		1s	1.5				
AS9UrDZ:6:29		1s	1.5				
AS9UrDZ:7:27		10s	1.8				
SS2UrDZ:2:29		15s	3				
SS6Lkl:9:22		3s	3				
n.d.	N				TMHC 307	[4s 3.75]	

mean = 2.46

median = 2.9

overall mean = 2.56

overall median = 3

One shekel silver fetches 60 quarts = $\frac{1}{5}$ gur.

šim-hi-a (a resin)—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS4Sgk:4:4		12s	3		VDI 1976 3:110f.:36	12s	3
AS5xiPd:3:16	U	3s	8				
AS5xiPd:3:33	U	2s	6				
AS6xiUrDZ:2:13	U	2s	6				
AS6xiUrDZ:3:9	U	3s	10				
AS8xiiUrDZ:3:5	U	20!s	2.25				
AS9UrDZ:2:26		2s	12				
AS9UrDZ:8:19		1m	18*				
SS2UrDZ:5:5		7s	12				
SS2UrDZ:6:9		2s	12				
SS2UrDZ:7:3		10s	12				
SS2UrDZ:7:11		3s	11.67				
SS6Lkl:5:19		10m	18*†				
SS6Lkl:7:1		.33m	c18*				
SS6Lkl:9:28		20m	18*				

mean of sila items = 8.63

median of sila items = 10

mean, median of mana items = 18

overall mean of sila items = 8.16

overall median of sila items = 9

One shekel silver fetches 10 pounds = $\frac{1}{6}$ talent, 20 quarts = $\frac{1}{15}$ gur.

*By exception weighed in mana and not measured by the sila volume measure.

†Name of product broken, restored from analogous price data; text: šim[m].

šim-IM (a resin)—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS4iUrDZ:3:3	U	2m	9				
AS6xiUrDZ:4:37	U	.33m	9				
AS7viiUrDZ:2:6	U	5m	9				
AS8viiUrDZ:2:8	U	7.67m	9				
AS8viiUrDZ:3:19	U	1.17m	9				
AS9UrDZ:5:16		1.33m	c6.75				
AS9UrDZ:6:13		1.33m	9				
AS9UrDZ:7:19		6m	9				
SS2UrDZ:2:10		11.83m	9				
SS6Lkl:9:14		1m	9				

mean = 8.78

median = 9

One shekel silver fetches 20 pounds = $\frac{1}{3}$ talent.

šim-ligidba (^dNIN-ip-tum) (a resin)—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S40?:5:11		3m	30				
n.d.					UM 29	6m	18
					15 509 G		

One shekel silver fetches 6 pounds = 1/10 talent in the account, 10 pounds = $\frac{1}{2}$ talent in the non-account text.

šim-TUMxA.KI (a resin) —še per šila "grains per quart"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
n.d.	N				TMHC	16s	.94
					307:2:15		

One shekel silver fetches 191.49 quarts.

šu-úr-me (a wood resin)—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S44					NBC 228:	3.33m	36
					1:10 (copy 17)		
AS6xiUrDZ:4:31	U	.67m	15				
AS7viiUrDZ:1:22	U	9.33m	15				
AS8viiUrDZ:1:22	U	10.33m	c15.00				
AS8viiUrDZ:3:7	U	[3m	15*]				
AS8viiUrDZ:3:30	U	3m	15				
AS9UrDZ:5:1		6.67m	18†				
AS9UrDZ:6:7		.67m	18				
AS9UrDZ:7:5		13m	18				
SS2UrDZ:5:29		8m	18				
SS6Lkl:4:13		37.67m	c19.3*				
n.d.	N				TMHC	13.67m	c25.76‡
					307:1:1		

mean = 16.63

median = 16.5

overall mean = 19

overall median = 18

One shekel silver fetches 10 pounds = $\frac{1}{10}$ talent.

*Text: šu-[], restored by price data.

†Text: []-me, restored by price data.

‡Text: giš-šu-úr-me.

tám-še-lum (a resin) —še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS4UrDZ:2:17		9m	6				
AS7viiUrDZ:2:10	U	2m	6				
AS7ixPd:5:6	U	2m	6				
AS8viiUrDZ:2:10	U	8m	6				
AS9UrDZ:5:12		1m	4.5				
AS9UrDZ:6:22		1m	4.5				
AS9UrDZ:7:25		4m	4.5				
SS2UrDZ:2:14		10m	4.5				
SS6Lkl:9:10		1.5m	[7.33]				
n.d.	N				TMHC	.67m	6*
					307:1:9		
n.d.	N				UM 29-	2m	3
					15-509 G		
					mean, median = 4.5		
					mean = 5.48		
					median = 6		
					overall mean = 5.3		
					overall median = 6		

One shekel silver fetches 30 pounds = $\frac{1}{2}$ talent.

*Written tám-ši-lum.

Ū-NINNI₅ (a resin?)—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
SS6Lkl:6:26		240m	.25				
SS6Lkl:8:19		300m	.3				
					mean, median = .28		

One shekel silver fetches 642.86 pounds = 10 talents 42.86 pounds.

Ū-TIR (a resin)—še per šila "grains per quart"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S44					NBC 228:	40s	c5.63*
					1:20 (copy 17)		
S44					NBC 228:	23.33s	6†
					1:22 (copy 17)		
AS2					TCL 5	34.86s	c3.00†
					6051:1:7		
AS2					TCL 5	19.67s	3*
					6051:1:9		
SS2UrDZ:7:6		78s	6				
SS2UrDZ:7:18		60s	6				

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
SS5					CST 721	24s	6†
SS6Ab: 1:4		2s	3				
SS6Lkl: 2:26		2s	3				
SS6Lkl: 9:34		5s	3				
mean = 4.2					mean = 4.73		
median = 3					median = 5.63		
overall mean = 4.46							
overall median = 4.32							

One shekel silver fetches $4\frac{1}{3}$ quarts.

*Text: ū-tir gi.

†Text: ū-tir babbar.

za-ba-lum (a resin)—še per mana "grains per pound"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
S45					YOS 4	120m	27
					295:3		
AS4UrDZ: 2:11		12.17m	9				
AS6xiUrDZ: 3:29	U	.33m	15				
AS6xiUrDZ: 4:30	U	31m	15				
AS7viiUrDZ: 1:20	U	29.33m	15				
AS8viiUrDZ: 1:20	U	32.33m	c18.00				
AS9UrDZ: 4:36		8.67m	18				
AS9UrDZ: 6:5		10.67m	c18.00				
AS9UrDZ: 7:7		8m	18				
SS2UrDZ: 5:31		8m	15				
SS6Lkl: 4:15		24m	22.5				
SS6Lkl: 9:8		5m	20				

mean = 16.68

median = 18

overall mean = 17.54

overall median = 18

One shekel silver fetches 10 pounds = $\frac{1}{6}$ talent.

zi-ba-tum (an aromatic seed?)*—še per mana "grains per pound"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS7viiUrDZ: 4:2	U	8m	11.25				

One shekel silver fetches 16 pounds.

*Compare gu-zé-ba-tum (a cord?) s.v. Miscellaneous below, perhaps made of zi-ba-tum fiber (Gelb in personal communication).

13. Tanning Agents

al-la-ha-ru (a mineral dye)—še per sila "grains per quart"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS4UrDZ: 3:11		1s	9				
AS4UrDZ: 3:14		10s	9				
AS5xiPd: 4:21	U	15s	9				
AS6xiPd: 5:6	U	20s	9				
AS7viiUrDZ: 3:30	U	8s	11.25				
SS2UrDZ: 4:7		5s	12				
SS2UrDZ: 5:23		20s	12				
SS6Lkl: 7:13		1s	9				
mean = 10.03							
median = 9							

One shekel silver fetches 20 quarts = $\frac{1}{15}$ gur.

im-k ū.G1 (a yellow mineral)—še per sila "grains per quart"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS4UrDZ: 3:7		.33s	3				
AS7viiUrDZ: 3:27	U	40s	2.25				
SS6Lkl: 7:15		7s	1.67				
SS6Lkl: 8:28		5s	1.5				
mean = 2.10							
median = 1.96							

One shekel silver fetches 91.84 quarts.

14. Trees and Timber (All še "grains" per unit)

giš-a-gu₄ (an inlaid wooden object)

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS6					NBC 244	1	5400 =
					2:5 (copy 19)	30 g = $\frac{1}{2}$ m	

One shekel silver fetches .03 units.

giš-asal₆ 6-kūš "poplar, 6 cubits long"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
S29Urs: 14:1		6	10				

One shekel silver fetches 18 units.

gis-dím "post"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
S29Urs: 13:26		60	18				

One shekel silver fetches 10 units.

giš-dím ù má-gu₄ "post and . . ."

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
n.d.					Ashmol	16	c5.63
					1935, 529 13 G		

One shekel silver fetches 31.97 units.

giš-é-dím ù giš-mi-rí-za "house-building wood? and punting pole"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
S29Urs: 13:13		183	6				

One shekel silver fetches 30 units.

giš-eme-sig (a ship plank)

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
n.d.					Ashmol	210	6
					1935, 529 5 G		

One shekel silver fetches 30 units.

giš-gi-muš ù giš-KU-má "punting pole and . . . of a boat"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
S29Urs: 13:19		72	15				

One shekel silver fetches 12 units.

giš-gišimmar "date palm"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
SS4	L				NSG 107	12	45*
SS5xii	N				N-800 G	35	c51.43

mean, median = 48.22

One shekel silver fetches 3.73 units.

*Text reads giš-ür giš-gišimmar-gal-gal, and Falkenstein interprets this to mean that

a whole orchard was bought which contained 12 trees. Given the price similarity, however, it may be that only tree trunks were at issue.

giš-hašhur (a fruit tree)

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
S29Urs: 13:18		87	3*				
AS6xiPd: 4:20	U	3	5†				
SS5Pd: 18		4	3‡				

mean = 3.67

median = 3

One shekel silver fetches 60 units.

*Text: giš-hašhur tur.

†Text: giš-hašhur 3 kùš-ta.

‡gid 2-kùš-ta mi-sir giš-ig-šè "long, 2 cubits each, misir-wood? for a door." For giš-mi-sir see Salonen, *Die Türen*, p. 99.

giš-kab 6 kùš-ta "(a wood) 6 cubits each"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
SS6Ab: 2:8		20	11.25				
SS6Lkl: 4:6		20	11.25*				

One shekel silver fetches 16 units.

*Text: giš-kab-bu 6-kùš-ta.

giš-me-dím má-gú "railing? of a . . . boat"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
S29Urs: 14:4		18	c6.67				

One shekel silver fetches 27 units.

giš-mi-rí-za "punting pole?"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
n.d.					Ashmol	5	360 = 2g
					1935, 529 7 G		"2 shekels"

One shekel silver fetches .5 units.

giš-nak-KUL (a wood)

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS5SesB: 2:16		20	18				
AS6xiPd: 4:18	U	3	[10]*				

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS8Ag: 1: 16		12	15				

mean = 14.33

median = 15

One shekel silver fetches 12 units.

*Text: giš nak? [].

giš-pêš má "fig tree (for) a boat"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
n.d.					Ashmol	15	18
					1935, 529 11 G		

One shekel silver fetches 10 units.

giš-še.DUG (a wood)

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
SS6Lkl: 7: 27		2	60				

One shekel silver fetches 3 units.

giš-šinig-hi-a "assorted tamarisk"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S29Urs: 13: 6		5	18				

One shekel silver fetches 10 units.

giš-ū (a wood)

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S29Urs: 14: 7		18	10*				
n.d.					Ashmol	10	18
					1935, 529 9 G		

mean, median = 14

One shekel silver fetches 12.86 units.

*má-tur "(of) a small boat"

giš-ù-suh₅ apin ù SAR giš-ig "fir (for) a plough and binding? of a door"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS5SesA: 1: 14		6	330*				
SS6Lkl: 4: 2		2	60†				

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
SS6Lkl: 4: 4		18	45†				

mean = 145

median = 60

One shekel silver fetches 3 units.

*Text: giš-ù-suh₅ apin-gal giš-ig-šê?

†Text: giš-ù-suh₅ apin ù SAR giš-ig giš-ur₅-ra.

‡Text: giš-ù-suh₅ apin ù SAR ig é.

giš-ù-suh₅ a-ra má 30-gur "fir (for) a 30-bushel boat"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS6xiUrDZ: 3: 16	U	15	30*				
AS6xiUrDZ: 3: 18	U	34	27.79				
SS6Ab: 2: 10		20	11.25				

mean = 23.01

median = 27.79

One shekel silver fetches 6.48 units.

*má 60-gur

giš-ù-suh₅ bar-da-aš nigín-na "fir (for tying?)"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
SS6Lkl: 7: 25		30	6				

One shekel silver fetches 30 units.

giš-ù-suh₅ gal "large fir"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
SS2UrDZ: 6: 26		5	48				

One shekel silver fetches 3.75 units.

giš-ù-suh₅ gi-muš "fir punting pole"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS5xiPd: 4: 12	U	10	24				
SS6Lkl: 3: 18		92	6				

mean, median = 15

One shekel silver fetches 12 units.

giš-ù-suh₅ giš-é-mun (a wood)

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S44iUrSPE: 2:1	L	20	3				

One shekel silver fetches 60 units.

giš-ù-suh₅ giš-ùr giš-é-ka "fir house lumber?"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S29Urs: 13:22		60	15				

One shekel silver fetches 12 units.

giš-ù-suh₅ mi-rí-za "fir punting pole"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
SS2UrDZ: 6:24		129	c1.40				
SS6Ab: 2:12		60	3				
SS6Lkl: 3:20		50	4.5*				
SS6Lkl: 3:22		15	3†				
SS6Lkl: 6:28		40	18‡				
SS6Lkl: 6:30		100	3.6§				
SS6Lkl: 6:32		160	3*				

mean = 3.08||

median = 3||

One shekel silver fetches 60 units.

*Text adds: má 40-gur

†Text adds: má 30-gur

‡Text: giš-ù-suh₅ má 120-gur

§Text adds: má 60-gur

|| The unusually high price of 18 še per unit is omitted in the mean and median calculations.

giš-ù-suh₅ šu-dím má X-gur "fir building wood for a —-gur boat"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S43xGdl: 3:6	L	3	24*				
SS6Lkl: 3:12		6	120†				
SS6Lkl: 3:14		8	60‡				
SS6Lkl: 3:16		22	c11.59§				
SS6Lkl: 6:9		30	8				

mean = 25.9[#]

median = 17.8[#]

One shekel silver fetches 10.11 units.

*giš-ù-suh₅ giš-šu-dím má-šè "fir building wood, for a boat"

†má 120-gur

‡ má 60-gur

§ má 30-gur

|| má 20-gur

*The unusually high price of 120 še per unit is omitted.

giš-ù-suh₅-uš "second-quality fir"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S29Urs: 13:3		80	22.5				

One shekel silver fetches 8 units.

15. Vegetables

(All še per sila "grains per quart")

gú-gal "chick peas"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S45					YOS 4	1200s	1
					295:11		
AS2					TCL 5	341.53s	c1.5
					6051:2:8		
AS6xiSes: 3:10	U	40s	1.5				
AS6xiUrDZ: 4:15	U	30s	1.8				
AS7ixPd: 4:20	U	57s	c1.19				
AS9xPd: 2:42	U	24s	3				
AS9Irm: 1:7		900s	1.8				
SS2UrDZ: 7:14		300s	1.8				
SS5					CST 721	126s	c1.57

mean = 1.85

median = 1.8

overall mean = 1.68

overall median = 1.57

One shekel silver fetches 114.65 quarts.

gú-tur "lentils"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S44					NBC 228	200s	1.2
					1:18 (copy 17)		
S45					YOS 4	360s	1
					295:13		
AS2					TCL 5	186.7s	c1.66
					6051:1:3		
AS9UrDZ: 3:17		14s	[c4.29]*				

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
SS6Lkl:2:22		78s	c1.27				

mean = 1.29
median = 1.2

overall mean = 1.29
overall median = 1.24

One shekel silver fetches 145.16 quarts.

*Text: g[ú-tu]r?; price also partially broken. Omitted in mean and median calculations.

numun-sum-gaz "crushed onion seed"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS2?					MVN 1	144s	2.5
					259:3:12 G		
AS2					TCL 5	90s	2.4
					6051:2:4		
					mean, median = 2.45		

One shekel silver fetches 73.47 quarts.

numun-sum-sikil "garlic seed"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS8xiiUre:3:1		40s	2.25				
SS2UrDZ:7:22		300s	2.4				
SS6Lkl:3:2		900s	1.5				
SS6Lkl:9:36		300s	2.4				

mean = 2.14
median = 2.32

One shekel silver fetches 77.59 quarts.

sag-X-na "bulb of (a plant)"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS7viiUrDZ:2:28	U	4s	c.63				
AS8viiUrDZ:2:20	U	4s	1.25*				
AS9UrDZ:5:32		2s	.25				
AS9UrDZ:6:33		2s	.25				
SS2UrDZ:5:7		10s	.6				

mean = .60
median = .6

One shekel silver fetches 300 quarts = 1 gur.

*Text adds: al-kum

sag-sum-sikil "bulb of garlic"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS2					TCL 5	1945.7s	.6*
					6051:1:11		
AS2					TCL 5	438s	c.6†
					6051:3:3		

SS2UrDZ:7:20 900s 1.2‡

overall mean = .8
overall median = .6

One shekel silver fetches 300 quarts = 1 gur.

*Text: igi sag sum-gaz

†Text: igi sag sum-sikil

‡Text: sag sum-sikil igi nu-sigs.

sum-gaz "crushed onions"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
S44iUrSPE:1:13	L	224s	[c1.81]				
AS3Ses:1:16		17s	c3.53				

mean, median = 2.67

One shekel silver fetches 67.42 quarts.

sum-ha-din (an onion type)*

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS3Ses:1:12		12.5s	6				
AS4Sgk:4:10		108s	12				
AS9xPd:2:38	U	90s	[3]				
SS2UrDZ:7:24		120s	4.5				
SS5Pd:27		56s	3‡				
SS6Ab:1:8		8s	5.63‡				

mean = 5.69

median = 5.06

One shekel silver fetches 35.57 quarts.

*The product is perhaps the same as za-ha-din below.

†sum-ha-din igi-nu-sigs.

‡sum-ha-din igi-sigs.

sum-sikil "garlic"

ACCOUNT PRICES				OTHER PRICES			
<i>Y Sub</i>	<i>C S</i>	<i>Amount</i>	<i>Price</i>	<i>F</i>	<i>Text</i>	<i>Amount</i>	<i>Price</i>
AS3Ses:1:14		17s	c3.53				

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
AS9Irm: 1:4		300s	1.2				
SS6Ab: 1:7		11s	cl.18				
SS6Lkl: 3:4		600s	.6*				
SS6Lkl: 3:7		490s	cl.52†				

mean = 1.6

median = 1.2

One shekel silver fetches 150 quarts = ½ gur.

*sum-sikil igi-nu-sigs

†sum-sikil igi sigs

za-ha-din (an onion type)*

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
SS2UrDZ: 7:8		27s	6†				
SS6Lkl: 3:9		104.25s	cl2.05†				

mean, median = 9.03

One shekel fetches 19.93 quarts.

*The product is perhaps the same as sum-ha-din above.

†Text: sum-za-ha-din igi-nu-sigs

‡Text adds: igi-sigs

zi-gú-gal "chick pea flour"

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
AS5xiPd: 2:8		U 20s	1.2				
AS6xiPd: 3:26		U 83.67s	cl.79				
AS8Ag: 1:10		23.67s	3.38				

mean = 2.12

median = 1.79

One shekel fetches 100.56 quarts \cong ⅓ gur.

16. Wools

(All še per mana "grains per pound")

sig "wool"

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
S48					-bi AnOr 1 70	60m	30
AS3iUrDZ: 1:9	C U	600m	18				
AS3iUrDZ: 1:19	C U	1920m	18				
AS4UrDZ: 1:7	C	976m	20				
AS4UrDZ: 1:10	C	1200m	18.5				

Y Sub	ACCOUNT PRICES			F	Text	OTHER PRICES	
	C S	Amount	Price			Amount	Price
AS4dgn: 3:18	C	2700m	20				
AS5xiPd: 1:3	C U	780m	cl9.23				
AS5xiPd: 1:6	C U	300m	20				
AS5SesA: 1:6	C	360m	20				
AS5SesB: 1:7	C	360m	20				
AS5Inm: 1:8	C	360m	20				
AS6xiSes: 1:2	C U	300m	20				
AS6xiSes: 1:4	C U	420m	18				
AS6xiUrDZ: 1:3	C U	2280m	18				
AS6xiPd: 1:9	C U	480m	20				
AS6xiPd: 1:11	C U	1200m	18				
AS6xiPd: 1:13	C U	1m	20				
AS7viiUrDZ: 1:3	C U	630m	18				
AS7viiUrDZ: 1:4	C U	580m	18				
AS7ixPd: 1:5	C U	567m	18				
AS8viiUrDZ: 1:6	C U	1153m	15				
AS9UrDZ: 1:16	C	1800m	15				
AS9UrDZ: 1:20	C	7m	15				
SS2UrDZ: 1:2	C	300m	15	-bi	MCS 8	1080m	15

93:4:11

SS4 -bi BIN 5 149 60m 18

SS6Lkl: 9:39 [1600m? 13.5?]

SS6Lkl: 10:2 865.67m 15

IS1 P -bi PBS 13 1200m 12

IS2 N -bi CBS 6141 1200m 12

IS2 -bi Ashmol 48m 15

IS2 -bi Ashmol 160m 15

n.d. 1911, 237:13 G

n.d. 1911, 237:15 G

n.d. BM15547 180m 22.5

n.d. G

n.d. BM24999 210m 15

n.d. G

n.d. -bi CHEU 70m 18

51:1:5

mean = 18.05

median = 18

overall mean = 17.82

overall median = 18

One shekel silver fetches 10 pounds = ⅓ talent.

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S34					TCL5	60m	22.5
					6171:2:7		
S44xi	U				Nik 390	4.5m	20*
S44					Waetzoldt	3600m	18
					252:68		
S45					BM14340	3600m	18
					G		
S48snga: 1:6	C	6068.33m	18				
AS5PdA: 1:1	C	360m	20				
AS9xPd: 1:5	C U	720m	15				
AS9UrDZ: 1:12	C	2160m	15				
SS3v	U				CST595	5m	18
SS5xi	U				Salesianum	240m	5
					4:174:1		
SS5Pd:3	C	20m	15				
n.d.					BM24999	600m	18
					1:6 G		

mean = 16.6

median = 15

overall mean = 16.88

overall median = 18

One shekel silver fetches 10 pounds = $\frac{1}{6}$ talent.

*Text: [sig-]gi.

Other Kinds of Wool

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S29Urs: 12:1		[600m]	c6*				
AS6vii10	N				NRVN 203	9m	20†
AS7viiUrDZ: 1:8	C U	300m	18†				
AS7ixPd: 1:16	C U	[300m]	18]†				
SS2v	U				NCT 53:1	10m	22.5§
SS2v	U				NCT 53:5	4m	22.5§
SS6Lkl: 6:13		40m	4.5*				
SS6Lkl: 6:24		40m	4.5*				

mean = 10.2

median = 6

overall mean = 14.5

overall median = 18

One shekel silver fetches 10 pounds = $\frac{1}{6}$ talent.

*S29Urs reads sig-ud, [] "goat hair . . ." SS6Lkl: 6:24 has sig-ud, (üz), and 6:13 reads sig-[] and is restored by analogy.

†sig?-babbar "white wool"

‡sig-kü.G1 "gold? wool" or "wool (for buying) gold?"

§sig-kur-ra "mountain wool"

17. Miscellaneous

giš-ÜRxEŠ₅ (?)

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS6xiUrDZ: 1:10	C U	120s	.5				
AS6xiPd: 1:6	C U	210s	.5				

One shekel silver fetches 360 quarts = 1 gur 60 quarts or $1\frac{1}{5}$ gur.

gu-zé-ba-tum (a cord?)*—še per mana "grains per pound"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
S29Urs: 12:6		1m	36				

One shekel silver fetches 5 units.

*Perhaps (Gelb in personal communication) the product is cord made from the zi-ba-tum plant q.v. under Resins above.

pa-li "juniper bough"?—še per sila "grains per quart"

Y Sub	ACCOUNT PRICES			F	OTHER PRICES		
	C S	Amount	Price		Text	Amount	Price
AS4UrDZ: 3:3		1s	3*				
AS4Sgk: 4:3		.5s	3				
AS6xiUrDZ: 2:18	U	.5s	6				
AS7viiUrDZ: 2:26	U	10s	3				
AS8viiUrDZ: 2:22	U	10s	4.5				
AS8viiUrDZ: 4:3	U	1s	4.5				
AS9UrDZ: 2:24		.5s	3				
AS9UrDZ: 5:26		5s	3				
AS9UrDZ: 6:31		5s	3				
AS9UrDZ: 8:18		.5s	3				
SS2UrDZ: 2:25		10s	3				

mean = 3.55

median = 3

One shekel silver fetches 60 quarts = $\frac{1}{5}$ gur.

*Figures for this entry are partially erased.

CHAPTER 4

Analysis of Prices

"Prices follow no principle," a medieval trader remarked in a letter which has been preserved in the Cairo Geniza.¹ Modern and ancient experience tends to confirm his observation. But an attempt may be made at analyzing the prices of the Ur III silver balanced accounts since they are so numerous and offer so many prices.² Curtis and Hallo presented 424 individual prices for 146 different products. The present corpus of balanced accounts yields 913 prices for 131 products.³ Thus Curtis and Hallo had an average of 2.9 prices per product while we now have about 7.0, though this comparison is slightly distorted by the different grouping of products. In addition it has been possible to collect another 284 references from texts other than silver balanced accounts to prices of products that occur in them or are related to products that occur in them.

Probably these prices do not give a complete picture of all the priced products dealt with in any one year by the silver account operation at Umma. But they may constitute a series of prices or a group of prices coming from the same organization facing similar needs and market conditions over time. Such series are likely to be the least capricious of indicators of a general level of prices.⁴ This is not a continuous series like

1. Quoted in Goitein, *A Mediterranean Society* I, p. 219.

2. The Sumerian word for price, *gan ba* = *mahiru*, *MSL* 1:26:17aff., occurs nowhere in the silver accounts. The normal expression in them is *kù-bi* "its silver value," referring to the total price of a stated amount of a commodity. I see no reason to retain the expression "equivalency" for this phenomenon, which corresponds exactly to the modern category of bulk price.

3. The lower number of products results from grouping similar products together for ease of reference and the elimination of some products by amalgamation with others; for example, Curtis and Hallo considered each kind of shoe separately while they are presented together in the tables in Chapter 3. For eliminated products see Chapter 5 s.vv. **kù*.AN.NA, **še-i-šah*, **šim-babbar*.

Note that very few new products appear in the many texts that have come to light since Curtis and Hallo wrote.

In the price tables eighteen products have been included because they appear to be related to products in the account even though they do not appear in preserved accounts.

4. For a short exposition of the concept of a price series and its importance see E. Morgan, *The Study of Prices and the Value of Money*, *Helps for Students of History* no. 53 (1950), pp. 8ff. The texts from Lagash have been incorporated into the price lists and to some extent in the present discussion. See Introduction, note 9.

some of those available from late medieval England, where prices are recorded each year for decades and centuries. But it is apparently more complete and coherent than anything from the Old Babylonian⁵ or later periods.⁶

A word must be said about what prices mean. In Ur III texts they must, I believe, be interpreted to mean what they say they mean. In the absence of further quality designations prices given for the same product must be assumed to refer to the same quality of product. The accounting terminology had means to distinguish qualities of products and used the terminology when it was relevant, as for example in *OrSP* 15:55:23 IS2, *šim-sig* "good quality resin."⁷ The silver balanced accounts are demonstrably composed from individual texts which reflect conditions in different parts of a loosely semi-annual accounting period, and prices might fluctuate within very short times. Unless it can be demonstrated that they do not, variations in price may be assumed to reflect variations in market conditions.

THEORETICAL PRICE PROBLEMS

The use of pricing in silver assumes to some extent a constant value of silver.⁸ There is no reason to assume that the Mesopotamians were oblivious to the possibility that the value of silver might change; moderns continue to use their currencies as standards of value and units of account though they are well aware that their values fluctuate almost daily in

5. Cf. Sweet, "On Prices," p. 73 on the scarcity of grain prices for example: 21 references over 180 years. Farber, "Fluctuations," has only 17 for his more limited geographic area of northern Babylonia. The Ur III accounts have only 28 references over 21 years, but they have many more for other commodities, for example 46 over 21 years for gypsum.

6. Cf. W. Dubberstein, "Comparative Prices." Though the Seleucid astronomical diaries, which A. Sachs, *JCS* 2 (1948):285f. is studying, are probably not the records of actual purchasers, they constitute a price series because the same observers recorded prices over time. Compare also A. K. Grayson, *Assyrian and Babylonian Chronicles*, TCS V, (Locust Valley, New York, 1975), pp. 178f. and the references there.

7. Wactzoldt is not alone when he erroneously assumes, p. 174, that different prices for *al-la-ha-ru* reflect different qualities of the product; cf. similarly Sweet, "On Prices," p. 25 for Old Babylonian prices supposedly indicating unstated variations in quality.

Though the standard Ur III terms for qualities, *sig*, *gin*, *ús-sa*, *3-kam*, *4-kam*, etc., do not occur together in the silver accounts, the accountants do distinguish quality when it is relevant. Compare *sag sum-sikil igi-nu-sig*, "bad looking(?) onion sprout" and the similar expressions with *sum-ha-din*, *sum-sikil*, and *za-ha-din*. *Giš ù-suh₅-u₅* may indicate poor quality wood; perhaps too the *níg-dab₅*, *níg-sig₅*, Appendix 1 s.v. *níg-sig₅*, is a quality indicator.

8. Cf. Limet, "Les Métaux," p. 19, on the Old Akkadian period, "... [l'argent était] une matière à laquelle on se référait parce qu'elle avait—ou qu'on lui attribuait—une valeur stable."

relation to other currencies and to the value of precious metal. Ur III accountants sometimes gave values in other commodities, like oil as in *UET* 3:1201, or dates as in *OrSP* 47:196, or even sheep hides as in *NCT*:44, though they were aware that the silver values of these items could change. Apparently it was at various times useful to them to express their accounts in terms of the values of these items, and we ought not to posit a sheep hide, date, or oil standard on the basis of such texts.

Lambert has suggested that use of grain as a standard of value and unit of account is a different matter.⁹ He argues that grain is the unit of account for internal government operations at Lagash, while silver is the unit of account for dealings with the private sector. But this unit of account is not identical to actual grain, which is known to fluctuate in value with the seasons. The unit of account has a fixed value in Lambert's scheme in relation to silver of .75 še per sila. As a glance at Table 35b will show, this is not a frequently quoted price, and it does not seem that this would be the basis of the hypothesized conversion. The median price of .6 še per sila, i.e. 1 gur of grain for 1 gín of silver, is more likely as a set rate of exchange. But it is only one of several silver prices attested.¹⁰

Both grain and silver occur in Ur III as units of account. The other functions of modern money, as a standard value and as a means of payment, are also filled by both grain and silver. Use of both as standards of value may be seen by comparing entries in which grain is evaluated in silver and silver in grain.¹¹ Use of both as means of payment is shown by loans that specify repayment in each, like *AOS* 32:S2 SS5vi Nippur (silver evaluated in grain ág-e-dam "to be measured out," i.e. repaid in grain) versus *TMHC* NF I/II:17 SS4viii20 Nippur (silver at no interest, su-su-dam "to be returned").¹²

This situation has analogues in ethnographic reports. Many so-called

9. Lambert, "Argent-Métal," pp. 84, 87f. Lambert's figures, p. 88, for the grain-silver price have been corrected in view of his incorrect attribution of 60 še to the gín instead of 180 še.

10. Occasionally slight deviations from .6 še per sila may represent attempts to round off figures to make a given account balance, but usually we must assume that the prices mean what they say and that deviations from this posited norm are real deviations. Lambert's justifying texts for the existence of two kinds of grain, a grain of account and a real grain with a fluctuating price, are not convincing: they merely give silver evaluated in grain: *CT* 7:21b:13165, *CT* 10:44:18962:2:15. More to the point would be a text like *Babyloniaca* 7:245:12 Lagash SS6vii, which appears to give grain evaluated in grain: 36000s še. še gú-bi sila.DU, še-bi 3000s. The second line is obscure, and the ratio of .083 s/s seems rather unlikely.

11. Cf. s.v. Grain, še, in Chapter 3.

12. The situation in Nippur may not parallel that in the rest of the empire. But Forde, "DAM-KAR-E-NE," p. 32, argues that though differences in contract procedure may be seen in Nippur as compared to Lagash, similar private loans were made at both places. Note that payments in silver and in other goods are paralleled still in the Old Babylonian period, where there seems to

primitive communities had more than one material that functioned in one or more of the uses of modern money.¹³ This multiplicity of standards could be simplified in one of two ways. Either each commodity was relegated to money functions only in specific transactions, or a ratio was fixed among the commodities by law or by custom so that both became part of a single system.¹⁴

Lambert's proposal is that there was a fixed ratio between silver and grain. In view of the many deviant prices even in presumably official documents I doubt that such a ratio really was promulgated by the state or sanctioned by tradition.¹⁵ It is more likely that the money commodities were each used in a separate function. It is certain, however, that the silver account operation used silver as a unit of account, a standard of value, and probably as a means of payment.

Lambert may be correct in suggesting that the internal state accounting relied on grain while dealings with the private sector used silver, but at present it does not seem likely that a set ratio between grain and silver eased the confusion that might have arisen.

The answer to Curtis and Hallo's important question about whether silver was the only Ur III money¹⁶ is clearly no, but silver does seem to be one of at least two monies. And, as I suggested in Chapter 2, it may have been the money of preference when long-distance transactions were involved.¹⁷

Oppenheim observed that especially in the Neo-Babylonian period accountants are careful to note the quality of silver involved in transactions.¹⁸ He believed that mentions of silver without qualification were restricted in this period to internal accounting operations of great organizations while mentions of silver with the quality noted referred to the general economy, where silver could be easily debased and thus had to be carefully checked. Ur III silver references do not as a rule note the quality of silver. By analogy

be no preferred money of payment, but grain, sesame oil, and silver are all used; see Sweet, "On Prices," pp. 168ff., esp. p. 178.

13. P. Einzig, *Primitive Money*, 2nd ed. (Oxford, 1966), p. 346. The data in this book and the theoretical discussions cannot be used uncritically, as V. Childe pointed out in his review of the first edition, *Economic History Review*, Second Series 2 (1949-50): 88f. Einzig gives more analysis, however, than A. Quiggin, *A Survey of Primitive Money* (London, 1949).

14. Einzig, pp. 347 and 414.

15. The rate of .6 še per sila is not sanctioned by the later tariffs with the exception of the Eshnunna Code; compare Table 39.

16. Curtis and Hallo, "Money," p. 106.

17. This is the case for the Old Babylonian period too, according to Sweet, "On Prices," p. 178 and Oppenheim, "Trade," p. 21.

18. Oppenheim, "Trade," pp. 21f.

to Oppenheim's view of the later period the omission of quality designations may mean that the records we have are mainly internal records of great organizations, or it may mean that the problem of debasement had not arisen to any great extent.¹⁹ The lack of concern with quality of silver may also show that silver in Ur III was regarded as a standard of value that did not vary significantly.

A complexity in price study that cannot be elucidated from the silver accounts is that the supply of silver over time may not be uniform. An increase in the supply might lead to a general inflation, for which there is little evidence in Ur III with the exceptions noted below. There is so far no indication of silver scarcity in the documentation for the middle years of the Ur III empire; there seems to be a great deal of silver in the hands of the authorities and especially in the hands of the Umma comptroller. But the silver half of price equations cannot a priori be assumed to be uniform.²⁰ The general stability of some prices in the silver accounts may show this problem to be negligible for the time covered. But it must be considered for understanding the general role of silver as money in Ur III times and the consequent nature of Ur III economic life.

For the ancient world and "primitive" economies, the existence of forces affecting price movements has been questioned by the "substantivist" school of Karl Polanyi. Polanyi argued that the Near East in particular lacked markets and price mechanisms and instead relied on reciprocal traditional arrangements between trading partners.²¹

19. Compare the various qualities of silver noted in *CAD* K:245-47, esp. p. 246b. In the Old Akkadian period quality of silver seems also to have been of concern, as seen in *MAD* 3:152f. Note that Oppenheim's feeling that in Old Babylonian silver was restricted to state operations, "Trade," p. 21, is in direct contradiction to Sweet's finding that it was in general circulation though in small quantities, "On Prices," p. 177. B. Foster notes in personal communication that the Leningrad Larsa project has found that there is good reason to believe that every household had some silver for use as cash in the Old Babylonian period.

20. Cf. Sweet's problems with the ratio of silver to gold, "On Prices," p. 10. Farber believes he has proved that, for the time and place he studied, the fluctuations in this ratio are due to fluctuations in gold value and not silver value. This seems to be the case in the silver accounts studied here. Cf. Also the interesting complication deriving from the gradual loss of silver through natural deterioration explored by C. Patterson, "Silver stocks and losses in ancient and medieval times," *Economic History Review* 25/2 (1972):205-35. Does this have something to do with the difficult Old Assyrian term *muqā'im* "reduction" which occurs when silver is transported? The term is, however, also used in connection with copper shipments; cf. Veenhof, *Aspects*, pp. 46-53.

21. The fullest exposition of this theory is his "Marketless trading in Hammurabi's time," pp. 12-26 in K. Polanyi, C. Arensberg, and H. Pearson, eds., *Trade and Market in the Early Empires* (Glencoe, Ill., 1957), and *ibid.*, pp. 243-70, a slightly revised version of which was later published in M. Fried, ed., *Readings in Anthropology*, 2nd ed., (New York, 1968), pp. 215-38. Compare also Polanyi's "Traders and trade," pp. 133-54 in J. Sabloff and C. C.

It does little violence to Polanyi's exposition to say that for the Near East his theory rests on Herodotus and on Polanyi's own analysis of the Old Assyrian trade.²² Herodotus explains a derisive remark of Cyrus in reference to the Spartans by saying that the Persians had no markets. It is not clear that this actually reflects the pre-Persian state of affairs or really explains Cyrus' derision.²³

The Old Assyrian element in Polanyi's argument has recently been subjected to thorough criticism by K. Veenhof.²⁴ Besides pointing out several factual errors in Polanyi's essay, Veenhof shows that silver in the Old Assyrian trade did function as money and concludes, "... we cannot approach the texts and their terminology with a preconceived idea about the commercial system and the economic situation. . . ."²⁵

There is an added element in the Old Assyrian trade that makes it almost completely useless for formulating any but the most general microeconomic principles. The documents from the trade are almost completely undatable.²⁶ This means that even when archives of individual traders can be compiled, there frequently is no way to order the archives and no way to trace possible decision making or trends therein. As the dating system and organization of the archives become better understood, the texts may become more useful. But now they are by their timelessness skewed toward a hypothesis like Polanyi's in which decisions over time play no role.²⁷

Lamberg-Karlovsky, eds., *Ancient Civilization and Trade* (Albuquerque, 1975), esp. pp. 140f.

22. He also argues from the apparent lack of archaeological evidence for open spaces within cities that might have been markets and the supposed non-existence of a word for market in pre-Greek Mesopotamia. These are both arguments from silence, and the final word is not in on either. See W. Röhlig, "Der altmesopotamische Markt," *WO* 8/2 (1976):286-95, who concludes that in Akkadian *mahiru*, *bāhu*, *sūqu*, and *kāru* all sometimes mean market. Compare also Landsberger, *Baumgartner A.V.*, pp. 184f. Oppenheim's objections to *sūqu* as market, "Trade," p. 21 n. 52, seem arbitrary.

23. Cf. A. Godley, *Herodotus*, Books I and II (London and New York, 1931), pp. 152b-53a. The word is of course *agora*. Godley translates, "I never yet feared men who have a place set apart in the midst of their city where they perjure and deceive each other." This seems to deride immoral action in the market rather than the market itself.

24. Veenhof, *Aspects*, pp. 348ff.; cf. also the theoretical criticism from an anthropological point of view by S. Scott, pp. 239-61 in M. Fried, *Readings*.

25. Veenhof, p. 356.

26. Garelli, *Les Assyriens*, p. 50.

27. W. Leemans in his short review of Polanyi's essay rejects his thesis as being too narrowly based on Old Assyrian material, *JEOL* 15 (1957-58):204. And despite his apparent acceptance of Polanyi's model, A. L. Oppenheim, writing in *Trade and Market*, pp. 27-37, presents a considerably more nuanced and skeptical view. He writes, for example, "In the control of the prices of staples, of the rate of interest, and of weighing standards, exercised or at least attempted by temple or palace, an essential aspect of the mentioned symbiosis [between public

The crux of Polanyi's pronouncement is probably not that fixed prices are the hallmark of marketless reciprocal trading but that prices in "primitive" trading are supposed to have no feedback on production decisions.²⁸ Cuneiform data, including those presented here, are still insufficient to allow any determination as to whether this feedback existed. But there are in many of the Ur III silver account products noticeable price differences even in very short periods of time, sometimes even in the same text. It seems very unlikely that this state of affairs represents a system of reciprocal trading and that the price changes are mutually agreed upon changes in the traditional "right price." In sum, it is unlikely that Polanyi's theories have any application to Ur III trading systems, at least as seen in the silver accounts.²⁹

MERCHANTS AND NON-ACCOUNT PRICE TEXTS

The non-account texts used here concern only goods that have analogues in silver balanced accounts and therefore are more likely than other texts to involve merchants. But only about 35% of the persons occurring in these texts and in the possibly related non-price texts are persons who are known merchants.³⁰ This implies that in Ur III silver and merchants are not as closely linked as might be assumed from studying the silver accounts alone.³¹

Outside the silver balanced accounts silver values are expressed in the following ways:

and private sectors] is revealed," p. 32. Compare also his *Ancient Mesopotamia*, p. 129, and "Trade," p. 19f. and n. 54; in the bibliography of this last study Oppenheim omits both Polanyi's and his own essay in *Trade and Market*.

28. See S. Humphreys, "History, Economics, and Anthropology: The Work of Karl Polanyi," *History and Theory* 8 (1969): 165-212, esp. pp. 186f.

29. It seems clear from G. Dalton, "Karl Polanyi's analysis of long-distance trade and his wider paradigm," pp. 63-132 in J. Sabloff and C. C. Lamberg-Karlovsky, *Trade*, that Polanyi's work can only be fruitfully applied to much simpler economic situations than those of Ur III Mesopotamia. Dalton writes, p. 104, "[Long-distance trade under aboriginal conditions] was not a reflection of cost differentials; rather, goods were sought abroad that were not obtainable at home. It was not a continuous activity, but consisted rather of sporadic expeditions. It was typically confined to relatively few goods." Obviously the Ur III Umma merchants were involved in a continuous activity that involved many different goods.

30. On the basis of Forde's lists, "DAM-KAR-E-Ne," pp. 6ff. and MS pp. A 75ff. I omitted Abagina, Lu-kala, and Ur-e'e from the lists of merchants since they are not given the title merchant. No effort was made to isolate individuals of the same name, and my results should be regarded as suggestive rather than definitive.

31. Cf. Curtis and Hallo's suggestion on the close relation between silver and merchants, "Money," p. 107, and the contrary conclusion that the use of silver at Lagash at least was widespread, Lambert, "Argent-Métal," esp. pp. 80f.

kù-bi	"its silver (value)"
X (silver)-ta	"so much (silver) each"
X (product)-ta	"so much of the product per 1 gín of silver" ³²
níg-sám-bi	"its purchase (i.e. its equivalent in silver or grain or other commodity)"
X-bi	"its (value in some non-silver commodity, frequently grain)"
X-šè	"for (so much of a commodity)"

Though the first three forms appear in the silver accounts, the kù-bi form overwhelmingly predominates.³³ It appears that non-account texts which use that form are more likely to be prosopographically related to the silver accounts than texts that use other forms. But the identification of forms of pricing with milieus cannot be absolute. *OrSP* 47-49: 190 and *MCS* 1:49: 1a have the same persons involved in the same way in a copper-silver deal. But in the former the silver is priced in copper, and in the latter the copper is priced in silver. The personal names all occur in silver accounts.

It is difficult to set up a typology of the texts that use various pricing formulae. Tentatively it may be suggested that there is a general geographical distribution of the formulae and that the kù-bi form is more likely to be found at Umma (compare however the Lagash silver accounts), the X-bi form at Lagash, and the níg-sám-bi form at Nippur.

PRICE ANALYSIS

The analysis of the prices from the silver accounts is not productive if one hopes to find consistent trends or to follow microeconomic decisions. The prices of many products are completely stable (e.g. šim-dùg "good resin"), or they hover around a central point (e.g., še "grain," around .6š per s), or they deviate wildly (e.g. su-GAN [a metal], ranging from 90 to 360š per m).

In light of the possible existence of standing orders this irregularity of behavior is comprehensible. The purchasing agents may have been under orders to obtain set amounts of the products needed by the bureaus apparently regardless of price. Resources were such as to allow whatever

32. This form may easily be confused with indication of size of bundles and the like which is expressed the same way. Note also silver may be priced in a product with -ta, as in *UM* 29-13 920, courtesy Gelb.

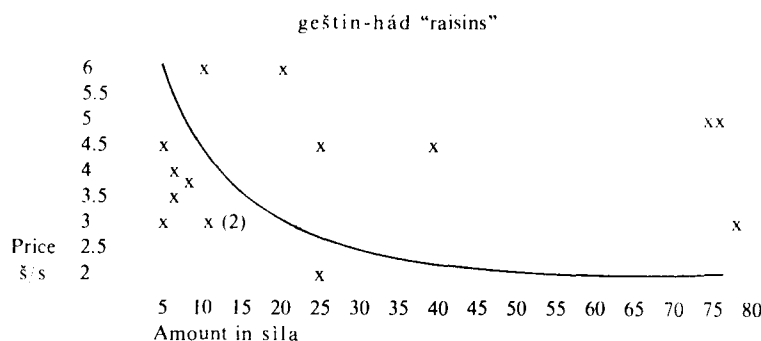
33. Compare Veenhof's discussion of the various Old Assyrian pricing forms, pp. 448-55; the kù-bi and -ta forms persist there though other more explicit forms have been added to the repertoire of terms.

expenditure was necessary. The prices in the silver accounts may therefore be as regular or as irregular as the price-setters wanted; purchasing agents did not care, since their bosses did not care. An overdraft would be covered if it occurred.³⁴

The motivations of the price-setters in changing their prices or in keeping them stable elude us. It does not appear that producers kept priced lists of their inventories,³⁵ and our knowledge of the social history of the period is too meager to say much about the forces affecting even producers who were located in central Mesopotamia.³⁶

Modern producers sometimes set prices according to the law of supply and demand, and consumers respond to changes in the supply of products and consequent price changes by buying more or less.³⁷ It does not seem likely that the Ur III silver balanced account system would display a consumer's response to this law. I have analyzed products that are widely attested with a view to whether the system did respond to such a law, i.e. whether more of a product was bought when it was cheap and less when it was expensive. None show any significant correspondence to the theoretical demand curve with the possible negative exception of raisins, presented in Table 34.

Table 34. Correspondence to the Demand Curve



34. If costs were greater than estimated, does this imply that the agent met the difference initially from his own private funds or from non-silver account funds he had in hand?

35. But cf. *SET* 310, an animal text with a priced ox; *TUT* 129, a list of fruit trees, agricultural products, a priced ox; *TCL* 5:6051, fully priced agricultural goods.

36. See Stable Prices below for the unlikelihood that the state organization attempted to set prices.

37. For the principle see R. Dorfman, *Prices and Markets*, 2nd ed. (Englewood Cliffs, N.J., 1972), pp. 23ff., and M. Archer, *Introductory Microeconomics: A Canadian Analysis* (Toronto, 1974), p. 28.

Table 34 seems to show that more raisins are bought when the price is higher. This datum accords with the nature of the Umma system; the standing orders are filled regardless of price. Raisins have just one perceptible standing order in Appendix 2, s.v. Fruits, geštin-hád, but the principle is probably the same, whether or not we have attested possible standing orders.

Stable Prices

Curtis and Hallo suggest, pp. 111f. that the domestic capital products maintained their relatively stable prices because there was a state effort to control them. But the prices of the capital products, some of which appear to come from the state, are not uniform. Wool does not fluctuate so widely as some other products, but it can cost as little as 15 š/m and as much as 20 š/m. Grain hovers around .6 š/s but dips to .41 š/s and rises to .8 š/s within the accounts. Dates vary between .30 š/s and .6 š/s at Umma. I doubt this represents even a timid effort at state control of the prices, for where save in apparently official documents like the silver accounts would one be most likely to find the set price quoted? Price stability reflects more probably a general economic stability during the middle years of the Ur III state, a stability that seems a likely corollary of the middle kings' largely successful attempts to maintain the empire their predecessors had bequeathed them.³⁸

Prices of other products presumably native to Mesopotamia are not always stable, e.g. onions or even the capital item, fish. The only reasonable way to interpret these facts is with the aid of formal, as opposed to Polanyi's substantivist, economic theory, namely that there were bad years and good years for onions and that individual producers made pricing decisions in response to forces we cannot now perceive.

In the goods that may be of foreign origin we again find irregularity. Some are stable while others are not. There is a possibility that stable prices may reflect a tendency noted in other bureaucratic systems to give a traditional price instead of the actual price.³⁹

Relevant products including both capital (C) and other items and both foreign and domestic goods are:

38. For a summary of what is known about Ur III political history see Hallo and Simpson, *ANEH*, pp. 77-88 and D. O. Edzard, pp. 129-52 in E. Cassin et al., eds., *Fischer Weltgeschichte Band 2: Die Altorientalischen Reiche I* (Frankfurt am Main, Hamburg, 1965). Archival evidence has been surveyed by E. Sollberger, "Sur la chronologie des rois d'Ur et quelques problèmes connexes," *A/O* 17 (1954-56): 10-48; literary evidence has been presented by D. Edzard, "Neue Inschriften zur Geschichte von Ur III unter Susuen," *A/O* 19 (1960): 1-32; M. Civil, "Šu-Sin's historical inscriptions: Collection B," *JCS* 21 (1967): 24-38; and Å. Sjöberg, "A commemorative inscription of King Šu-Sin," *JCS* 24 (1971-72): 70-73.

39. Cf. on this problem E. Morgan, *Prices*, p. 10.

al-la-ha-ru (a tanning agent): 3 deviations in 8 references
 ar-ga-núm (a resin): 2 deviations in 7 references
 en-mur (a resin): 3 deviations among 7 references
 gi "reed": 3 deviations among 12 references
 giš-hašhur-hád (a fruit): 1 deviation among 4 references
 i-dùg-nun-na (an oil): no deviations in 10 references
 i-ku₆ "fish oil": no deviations among 4 references
 im-babbar-kum "crushed gypsum": 1 deviation in 3 references
 C ku₆-gam-gam-ma (a fish): 1 deviation in 4 references
 C ku₆-gír-ús (a fish): 1 deviation in 7 references
 C ku₆-izi "smoked fish": no deviations in 4 references
 C ku₆-sag-kúr (a fish): 1 deviation in 7 references
 C ku₆-sag-kúr erín, šà-bar erín (fishes): no deviation in 2 references each
 ku-mul "cumin": 2 deviations in 5 references
 C kuš-ummu_x "leather water skin": 1 deviation among 7 references
 ni-ik-tum (a resin): no deviation in 4 references
 pa-mušen "bird feathers": no deviation in 2 references
 síg-KÜ.GI (a wool): no deviation in 2 references
 šim-ba₅-KU-LUM (a resin): no deviation in 2 references from the same Lagash text
 šim-dùg "good resin": no deviation in 11 references
 šim-IM (a resin): 1 deviation in 10 references.⁴⁰

It is not clear why some of the resins are so stable in price; it is possible that there was some state effort to control prices in conquered territories. Deviations in price shows that the effort was not always successful.

Unstable Prices

In seeking trends one must use only products attested over several years and in several texts. Otherwise the analysis may be subject to temporary or personal quirks. I have analyzed only products occurring in at least four texts over at least three years. A representative picture is obtained, however, only with more widely occurring products. Prices from non-account sources have usually been omitted since they may reflect other acquisition systems. Undated price texts are of course useless for any but the most general analyses.

From the data assembled two perhaps complementary trends appear.

40. Slight deviations may be due to an accountant's need to balance his account, but the only product that has such a suitably slight deviant price is im-babbar-kum, with .3 instead of .2.

Among some of the resinous products and copper there is a tendency toward rising prices over time. Among some of the staple products with the apparent exception of dates there is a tendency toward falling prices over time. Relevant products are graphed in Table 35a and b.

Table 35a. Rising Prices
(Prices in š/s or m over time)

urudu "copper"														
280														
180														
135														
125														
115														
105														
95														
85														
75														
S40	43													
síg (7 (a resin))														
28														
24														
22														
18														
12														
8														
AS4	5	6	7	8	9	SS1	2	3	4	5	6			
šim "resin"														
150														
120														
90														
60														
30														
S40	AS4	5	6	7	8	9	SS1	2	6					
šim-hi-a (a resin) (by volume only)														
12														
9														
6														
3														
1														
AS4	5	6	7	8	9	SS2								

value. This situation is not synonymous with one modern definition of inflation.⁴¹ But it does indicate an analogous decrease in purchasing power over time. The sources of inflation are to this day not well understood though data for analyzing such trends are much more abundant.⁴² The data from the silver accounts may hint that the presumed inflation in Ibbi-Sin's reign was the result of a process spanning at least two decades and not the result of that king's personal incompetence or political problems.⁴³

In the silver accounts other products apparently do not show any trends; and even if such trends were clear for more products, linking them to economic or political well-being or the opposite probably would not be possible.⁴⁴ Much more remains to be discovered about the economic life of Ur III times before the full significance of pricing and price movements can be understood.

PRICES IN IBBI-SIN'S REIGN

Jacobsen has argued that one aspect of the collapse of the Ur III empire under Ibbi-Sin was rampant inflation.⁴⁵ The price series represented by the Umma silver accounts does not reach into Ibbi-Sin's reign, and the data from other sources may reflect the activities of other kinds of institutions facing different economic problems. Those data, therefore, may not really be comparable to the prices in the Umma series, but they are of interest because of Jacobsen's picture of the closing years of the empire.

41. "An increase in the volume of money and credit relative to available goods resulting in a substantial and continuing rise in the general level of prices." *Webster's Seventh New Collegiate Dictionary* (1963), p. 432b; see, however, below; this represents the monetarist view only.

42. Cf. R. Teigen, "Interpreting recent world inflation," *The American Economic Review* 65/2 (1975): 129-32, on some of the problems involved in analyzing inflation with regard to international trade, and M. Mate, "High prices in early fourteenth-century England: causes and consequences," *Economic History Review*, Second Series 28/1 (1975): 1-16, for analysis of an inflation that appears to be caused by an influx of silver from abroad, esp. p. 9. This approach would be rejected by the so-called real school, which assigns money a passive role in inflation and seeks the cause for price rises in population and resource imbalance. Cf. R. Outhwaite, *Inflation in Tudor and Early Stuart England* (London, 1969), esp. pp. 47-55.

43. For the presumed inflation see, however, Prices in Ibbi-Sin's Reign below.

44. Wolff, "L'Étude," p. 866, has objected to the facile equation of political to economic conditions; his warnings are especially relevant when political history is in its infancy as it is for Ur III: "Les historiens se sont trop souvent battus à coups de faits manifestant les conséquences économiques de telle décision politique, ou inversement le conditionnement économique de l'action de tel pouvoir. Ce débat est sans issue et sans véritable intérêt." Prices for him are significant, but they reveal not politics but tastes, costs of production, and the hierarchy of values that defines a civilization.

45. T. Jacobsen, "The Reign of Ibbi-Suen," *JCS* 7 (1953): 36-47, reprinted in *Toward the Image of Tammuz*, W. Moran, ed., (Cambridge, MA, 1970), pp. 173-86, esp. n. 49.

Prices for silver balanced account products and related products that occur in Ibbi-Sin's reign have been graphed in Table 36. In cases where more than one entry for the product is attested in the silver accounts themselves, the first figure in the graph represents the previous median (PM) of the account prices.⁴⁶

Table 36. Prices in Ibbi-Sin's Reign
(Prices in š/unit, s, or m over time)

esir-é-a "refined bitumen"				
4.5				x
4				
3.5				
3				
2.5				
2			x	
1.5	x			
1				
	PM	SS9	IS2	
zú-lum "dates"				
1.0				x
.8				
.6				
.4	x			
	PM	IS6	7	
še "grain"				
1.5				x
1				
.5	x			
		x	x	x
		x	x	x
0		x	x	x
	PM	IS1	2	3
guškin "gold"				
200000				
150000	x			
100000				
50000		x		
	PM	IS15		

46. For the rationale behind using the median rather than the mean, see N. Downie and R. Heath, *Basic Statistical Methods*, 3rd ed. (New York, 1970), p. 49. For the texts see Chapter 3 and discussion below.

			i-giš "sesame oil"	
			(2)	
80			x	x
60				
40				
20	x			
0				
	PM	IS	7	8
			wool, all kinds	
18	x			
15			(2) x	
12		x	x	
9				
6				
3				
	PM	IS1	2	

The sparseness of these data makes any analysis difficult, but it does seem that Jacobsen's observations are corroborated in a very general way. There are some high prices for bitumen, sesame oil, grain, and dates. But over various periods of time there are rather low prices attested for wool, gold, and even grain.

Jacobsen quoted six dated texts of which only two had prices given in silver, *UET* 3:1165 IS7xi and *UET* 3:1201 IS8, both of which give prices for i-giš "sesame oil" that are 72š/s, and both of which mention balanced accounts. The same amount of sesame oil is not at issue in both texts. His other texts, *UET* 3:1046 IS8vii, 1182 IS8vii, 1185 IS8vii, and 1187 IS8viii, all give sesame oil priced in grain, while *UET* 3:1207, giving the same price for sesame oil, is undated. He arrives at a price for grain by applying the silver price for sesame oil to amounts of grain priced in sesame oil, calculating that a sila of grain costs 36š. There is at present no way of knowing whether that high price actually continued during the year between the composition of *UET* 3:1165 and *UET* 3:1201, and the extrapolated grain and fish prices might not be as high as Jacobsen believes.

Ibbi-Sin's reign was probably economically more complex than has previously been believed. At times it must have been relatively unstable since such high prices are attested. There must have been periods of rampant inflation due doubtless to shortages in some products, as Jacobsen suggested. The area of control of the empire was shrinking, as may be seen from the cessation of records from the various cities outside the capital.⁴⁷ But life in the capital was not necessarily uniformly difficult throughout the last twenty years of Ibbi Sin's reign.

47. Documented by Jacobsen, "Reign," in *Tammuz*, p. 174; note too Hallo's observations on a governor who fled his city for the capital, "Ur-meme," p. 95.

An indication that the reign may have had at least two periods of crisis and possibly economic distress is the distribution of tablets from Ur in *UET* 3, summarized by Legrain pp. 277f., and from *UET* 9.⁴⁸ There are more unpublished Ur III texts from the Ur Excavations,⁴⁹ but the published texts may be representative of what was found.

Sollberger's ordering of the years 15 and following is based on the occurrence during those years of the active Ahu-waqar, and both Sollberger and Falkenstein assumed that heavily attested years most likely come earlier in the reign than later.⁵⁰ The order of years 9-13 in Sollberger's system is made likely by *UET* 1:292, but the exact place of the heavily

48. For convenience the correspondences between Legrain's year numbers, *UET* 3, pp. 277f. and Sykes', pp. 18ff. are listed below:

Legrain	Sykes	Sykes	Legrain
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5.6
6	5	6	7.8
7	6	7	9
8	6	8	10
9	7	9	24
10	8	10	
11	15	11	23
12	16	12	15
13	17	13	16
14	20	14	20
15	12	15	11
16	13	16	12
17	18	17	13
18	19	18	17
19	21	19	18
20	14	20	14
21	22	21	19
22	23	22	21
23	11	23	22
24	9	24	--

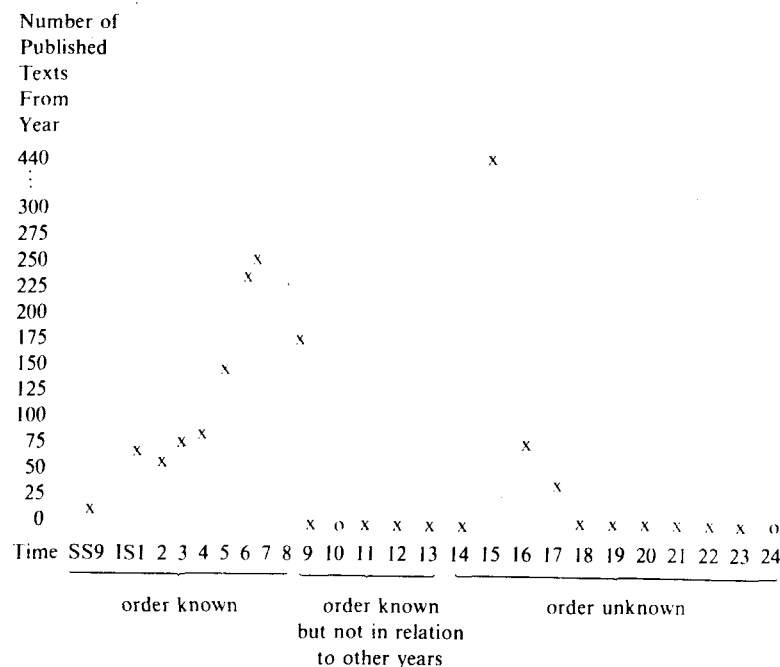
In counting the *UET* 9 texts I worked only from the catalogue and did not include ambiguous year names. But dates which I noted marked with a question mark have been included.

49. Compare Legrain's list of tablet numbers with find locations included in Jacobsen's review of *UET* 3, *AJA* 57 (1953): 128 n. 1. Loding is publishing the remaining texts, which are in the British Museum.

50. Sollberger, "Chronologie," p. 43; compare Falkenstein, *JAOS* 72 (1952): 42, who makes Legrain's year eleven the twelfth year, while Sollberger makes it the fifteenth.

attested year 15 is not certain. And the placing of 14-24 is based on the size of the break in *UET* 1:292.⁵¹ Keeping these uncertainties in mind, we may tentatively assume that the published texts give a general impression of the

Table 37. Distribution of Texts From Ur in the Reign of Ibī-Sin



distribution of texts at Ur at least during Ibī-Sin's reign. Table 37 uses Sykes' order of years. The sign "x" shows the number of texts from the year, and the sign "o" shows there are no published texts from the year.

In spite of Sollberger's and Falkenstein's assumption, it seems more reasonable to assume that most tablets would be preserved at a site from times right before its destruction. The bureaucracy would be unable to dispose of unwanted tablets in the usual manner, whatever that may have been, and the texts would be preserved by the forceful ending of normal activity. It is not clear if this proposed rule of thumb could be extended to include times in which the site was not destroyed but instead suffered severe crises. If so, and if we retain Sollberger's order for the years after IS 8, the

51. Sollberger, "Chronologie," pp. 40f. For the problem of Ibī-Sin's chronology see D. Loding, "A craft archive from Ur," (PhD diss. University of Pennsylvania, 1974), pp. 34-40.

For the "famine in Ur" in IS 6, cf. MacGraw, K, "Rations, Wages and Prices," *ANET* 1:201. As for the high numbers of tablets preserved from IS 7-8 and 15-16, I would rather agree with M. Civil (Quantitative Aspects, 44) that it was due to the nature of particular subsections of a

distribution of Ur texts may show two such crises, in Ibī-Sin's seventh and eighth years and in his fifteenth and sixteenth years.⁵²

The high prices from the early part of the reign may reflect the economic aspect of the first crisis. The posited second crisis apparently does not affect the two lower than normal gold prices. Perhaps the median price for grain quoted in the Ibī-Sin correspondence (= ? in Table 36) is to be placed in the earlier times of troubles, for we customarily date Ibī-Sin's assumption of vaguely royal status to around Ibī-Sin's tenth year.⁵³

The period is, in short, very complex, and the price data available from it give only a few hints about the economic side of that complexity.⁵⁴

COMPARISON WITH ARCHIVALLY ATTESTED PRICES FROM OTHER PERIODS

Comparison of the data on prices supplied by the Ur III silver accounts and possibly related texts with price information from other periods is full of uncertainties. Only for the area controlled by the First Dynasty of Babylon is there a modern comprehensive study of prices, namely Farber's. For other places and periods comparison must be based on the antiquated studies of Schwenzner, Meissner, and Dubberstein or on incomplete compilations.⁵⁵ These scholars' indications of the normal price for a commodity may well be obsolete in light of texts published since they wrote. But it may be useful to indicate in a general way the ranges of prices for long-attested products.

Table 38 compares the Ur III median prices for five commodities with what seem to be the normal prices in other periods. It is usually not certain if the normal prices quoted are actually statistically the median price, but they may fall close to the statistical median.⁵⁶

Sources for the data in Table 38 are the studies by Dubberstein (Neo-Babylonian and after), Farber (Northern Old Babylonia), Limet (Old Akkadian), Meissner (Old Babylonian and after), and Schwenzner (Old

52. In spite of Sollberger's care in establishing this order for Ibī-Sin's years, it seems possible that the preservation of texts itself could be used as an argument for placing IS 15, 16, and 17 right after IS 8. We would then have "normal" curve reaching a zenith in IS 15. To reorder the years thus would of course void the above suggestions about two periods of crisis.

53. Cf. Hallo and Simpson, *ANET*, pp. 86f.

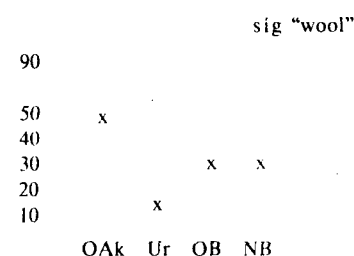
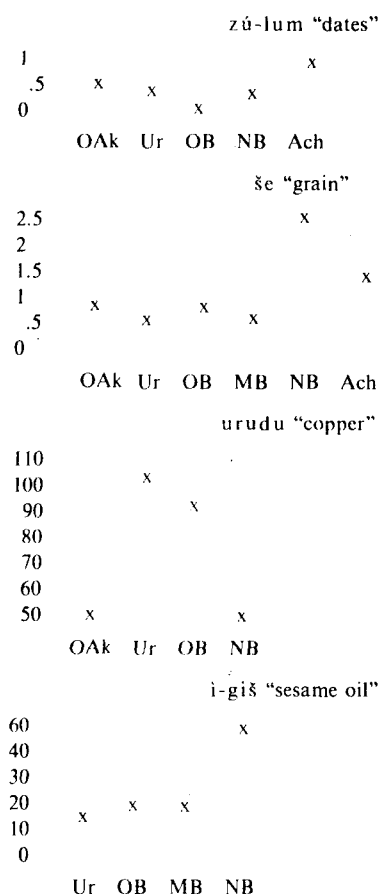
54. Cf. Jacobsen, "Reign," in *Tammuz*, p. 178, "The 'rebellion' against Ibī-Sin was in all probability not one clear-cut event but rather a long-drawn-out process of disintegration beginning as early as the sixth year." C. Wilcke, *ZA* 60 (1970): 54-69, on the basis of the letter collections and the second Ur lament distinguishes three phases in the fall of the empire; he dates the first phase to IS 9, p. 54, and the second to IS 19, p. 57, the third to IS 23, p. 65.

55. See Introduction for price studies of various periods.

56. Compare A. Goetze's abstract of Schwenzner and Meissner for Ur III and Old Babylonian prices, *The Laws of Eshnunna* = *AASOR* 31 (New Haven, 1956), p. 30.

Babylonian and after). Only quotations from archival texts have been used; royal statements on prices will be considered below. The Ur III median is for prices from the silver balanced accounts only. The following abbreviations are used for the periods (absolute chronology according to J. Brinkman in Oppenheim, *Ancient Mesopotamia*, pp. 335-47): OAk = Old Akkadian (2334-2154 B.C.E.), Ur = Ur III (2112-2004), OB = Old Babylonian (2004-1595), MB = Middle Babylonian (1595-1025?), NB = Neo-Babylonian (625-539), Ach = Achaemenid and Seleucid (538-141).

Table 38. Ur III Median Prices Compared with Normal Archival Prices of Other Periods
(Prices in š/s or m over time)



The gross averaging of Table 38 does justice to no period's complexity, especially not to Farber's interesting data on fluctuations in the Old Babylonian period. It may be noted that the Old Babylonian period apparently saw much wider fluctuation in prices than Ur III, and this is perhaps a concomitant of the less stable political conditions during the times when most prices are attested, i.e. during and after Hammurapi's reign.

One might speculate that a millennia-long decrease in the price of copper shows it was becoming less important to manufacturing. The sparse Old Akkadian data, however, do not fit this trend. In general the comparisons mapped in Table 38 seem meaningless.⁵⁷

Comparison of Ur III silver balanced account prices with data from analogous acquisitions systems of other periods may, however, be productive. For example, in the Old Babylonian merchant's account discussed in Chapter I the price of wool appears as 18š/m, the median price of the Ur III accounts. Clothing seems to be the major interest of such Old Babylonian accounts, though Ur III accounts do not deal in such products; the relative stability may nonetheless be a meaningful gauge of the practices of the two acquisition systems. Or it may mean that such systems can flourish when economic stability can be maintained. This similarity in price conforms to Hallo's observations on the similar purposes of the two systems.⁵⁸ But without fuller knowledge about the systems and the economic forces at

57. Note Dubberstein's remark, "Comparative Prices," p. 25: "Obviously prices of any ancient or even fairly recent period of history cannot be taken separately and compared with prices from other ages. Only by using comparative prices and values within a definite period can an accurate picture of that age be reconstructed."

58. *JCS* 17 (1963): 59f., and compare Oppenheim's observations on the continuing pattern of Mesopotamian trade, "Trade," pp. 8-11, esp. p. 11 on the attractiveness of Babylonian wool. Note that medieval European cloth prices were very stable though cereal prices fluctuated widely, Wolff, "L'Étude," pp. 880f.

work in other periods, comparison of Ur III prices with prices from other times is not likely to be fruitful.

COMPARISON WITH TARIFFS

The tariffs reflect the kings' wish to depict their times as prosperous and their administrations as beneficent to the populace.⁵⁹ There is no Ur III tariff. If a tariff had existed in Ur-Nammu's laws, it might be expected to be at the beginning since the Eshnunna laws give the tariff first, and since the beginning of Ur-Nammu's text is preserved, we may tentatively assume it had nothing of the sort in it.⁶⁰

Comparison of the median Ur III account prices for items mentioned in the tariffs with tariff prices occasionally shows some correspondences, as shown in Table 39.⁶¹ The following abbreviations are used there: Esh = Eshnunna, Sinid = Sin-iddinam, Siniq = Sin iqišam, Sinka = Sin-kašid, Šamš = Šamši-Adad, Ur M = Ur III account median.

Grain, copper, sesame oil, lard, and salt show exact or close correspondence to prices from the Eshnunna laws. Goetze wished to use these data, already apparent from Schwenzner's and Meissner's compilations for Ur III, to support his contention that the Eshnunna laws should be dated to a time soon after the Ur III period.⁶² This argument may be correct, but it

59. Cf. the remarks of B. Meissner, *Babylonien und Assyrien* 1 (Heidelberg, 1920), p. 361 and the various references cited in D. Edzard, *Die Zweite Zwischenzeit Babylonien* (Wiesbaden, 1957), p. 154 and notes 815f. and Sweet, "On Prices," pp. 110-14.

60. Ur-Nammu's "code" was edited by J. J. Finkelstein, *JCS* 22 (1969):66-82. For the analogy to Eshnunna see Hallo, "Contributions," p. 98 and n. 48. Weidner, *AfO* 13 (1939-41): 211 n. 38 summarizes two later royal price quotations which convert into the še per unit form of expression as follows:

	Grain	Oil	Wool
Šamaš-šum-ukin	.5 š/s	10 š/s	36 š/m
Assurbanipal	.02 š/m	6 š/s	6 š/m

These are both rather lower than archivally attested prices for the period; cf. Table 38. For very high prices in a literary context as an illustration of unhappy times, see A. Falkenstein, "Fluch über Akkade," *ZA* 57 (1965): 49, 71 and 109, lines 178ff. The Hittite Code also has a tariff, but since there are no contemporary archival price texts from Anatolia, the reality of its prescriptions cannot be gauged; see J. Friedrich, *Die Hethitischen Gesetze* (Leiden, 1959), pp. 79f. J. Grothius, *Die Rechtsordnung der Hethiter* (Wiesbaden, 1973), pp. 29-31 collects the prices and orders them by magnitude, but his assumption about the ratio between the mana and the shekel is incorrect, as H. Güterbock noted, *JCS* 27:3 (1975):178.

61. After Sollberger, *UET* 8, p. 16.

62. Goetze, *Eshnunna*, p. 30. Note, however, that only once in the accounts is salt measured by volume, and the non-account instance of salt by volume has a much higher price.

Table 39. Ur III Median Prices Compared with Old Babylonian Royal Tariffs (Prices in š/s or m over time)

	naga "alkaline plant"					
.6						x
.4						
.2						
0		x				
	Ur M		Esh			
	zú-lum "dates"					
.5						
.4		x				
.3						
.2						
.1						
0			x		x	
	Ur M	Sinid	Siniq			
	še "grain"					
.6		x				x
.5						
.4						
.3				x		
.2						x
.1		x			x	
	Ur M	Sinid	Siniq	Sinka	Esh	Šamš
	uruđu "copper"					
110						
100		x				
90				x		
80						
70						
60						x
50						
40						
30						
20			x			
10						
	Ur M	Sinka	Esh			
	i-giš "sesame oil"					
15		x				x
10						
5			x		x	
	Ur M	Sinid	Sinka	Esh		

i-šah "lard"					
12	x			x	
9					
6					
3			x		
	Ur M	Sinid	Esh		
mun "salt" (by volume only)					
.3		x			
.2	x				
.1					
0					
	Ur M	Esh			
sīg "wool"					
30				x	
26					
22					
18	x		x		
16					
12					
8		x		x	x
	Ur M	Sinid	Siniq	Sinka	Esh Šamš

should be noted that unlike the other tariffs the Eshnunna laws are not apparently part of a royal inscription. The copies we have are probably private documents, perhaps copied from a royal pronouncement.⁶³ And they may thus be more likely to reflect current reality than other tariffs.⁶⁴ The fact that some products even in the Eshnunna tariff vary considerably from the Ur III median price, like the alkaline plant, salt, and the standard variety of copper, shows that economic conditions were nonetheless somewhat different in Ur III and early Old Babylonian times.

The other tariff quotations, with the exception of Sin-iqišam's price for wool, are all lower than Ur III account median prices. It is possible that the stability of the wool price, seen also in some Old Babylonian archival texts, is a function of the continuing ability of the Mesopotamian economy to produce large amounts of the product.⁶⁵ The study of the other royal tariffs probably belongs more to the study of Mesopotamian political morality

63. Ibid., p. 14.

64. Note that the Eshnunna laws lack the expansive prologue full of self-praise typical of other preserved codes, including Ur-Nammu's; the preamble of Eshnunna laws contains only a date, *ibid.*, pp. 17-23.

65. Note incidentally that garments are a major export item in the Old Assyrian trade, Garelli, *Les Assyriens*, pp. 284-94. And compare note 58 above.

than to the study of economic conditions, though they may be expected to reflect those conditions in a very general way.⁶⁶

Prices may show a hierarchy of values which defines a civilization, as Wolff suggests.⁶⁷ They show what a civilization thought was important. Analyzed from this point of view, the priced products the Ur III agents bought can be classified as the sorts of things of interest to dominating classes in any society, amenities that made life pleasant and raw materials that allowed specialized manufacture. They are not the key to the Ur III ruling class's prosperity or continuing power, though the essential metal, copper, was sometimes included. They are, rather, marginal benefits for the ruling elite.

66. As Sollberger noted, *UET* 8, p. 15b. The tariffs do not figure in W. Lambert's study of private morality, "Morals in ancient Mesopotamia," *JEOL* 15 (1957-58): 187-96. C. J. Gadd briefly considered them in his *Ideas of Divine Rule in the Ancient East*, Schweich Lectures (Oxford, 1948), p. 67. The prices from Assurbanipal's time quoted above n. 60 are explicitly moral and political; the context is a prayer for Assurbanipal, that he be given a prosperous reign and that his people be able to buy at such low prices.

67. Wolff, "L'Étude," p. 881, and n. 44 above.

CHAPTER 5

Glossary of Priced Products and Accounting Terms

Knowledge of the lexicon of the Sumerian language has increased markedly in recent years largely through the efforts of the late Benno Landsberger and his colleagues in the ongoing *Materialien zum Sumerischen Lexikon* project.¹ The lists edited there provide a view of the millennia-long effort of Akkadian speakers to learn Sumerian.

The following glossary is completely dependent upon these sources and extracts from them presented in the Akkadian dictionaries. Only rarely do contexts in the accounts themselves and in other Ur III texts allow us to modify or to particularize the entries in the lexical lists. Thus it may be well to consider some of their limitations.²

The most important limitation is that because the lexical lists are lists, they tend not to give much detailed information about each entry. One is lucky to find even an adjective that sheds light on the nature of the product in question. When, as below, the geographic sections of the lists are considered, one looks in vain for indications as to where exactly countries were situated.³

Secondly, since the lists span at least two millennia, the time of use of the lexical items they present is not always clear. They sometimes lack entirely entries for products that seem to be quite common in the late third millennium (see for example under *sag-X-na* and *šġ.ÜZ* below). When the Sumerian product names do occur, the Akkadian translations may lead

us no closer to positive identification of the products, and we must rely on frequently shaky analogies to words occurring in the later Semitic languages (see for example under *še-LÜ* below). Such analogies are dangerous when neither Sumerian nor Akkadian texts give us information on the product's uses or when such information could apply to any of several products, as is usually the case.

The question of origins is important for the silver balanced accounts since they themselves do not indicate from where the products came, and it has been questioned whether the agents who appear in the accounts actually traveled anywhere to obtain the products.⁴ If a product can be proved to be of non-Mesopotamian origin, one cannot be sure that the account merchants actually had to leave Mesopotamia to get it. But the availability of foreign goods does show that there was some sort of contact with foreign lands and that someone, perhaps the merchants themselves, had to travel.

An important if late source for the origins of some of the products is to be found in the *lipšur* litanies, first millennium incantations that try to conjure away punishment for sins by invoking the names of various foreign mountains or lands which are described as the sources of various products. The litanies appear to derive their list of lands and products from Tablet 22 of the lexical series *HAR-ra*.⁵ The lands given as the origins of products that occur in the Ur III silver accounts together with spelling variants are summarized in Table 40.⁶

The evidence for the origins of the account products is considered below under the general categories used in the price tables of Chapter 3. The origins suggested here, especially for metals and resins, must be regarded as very tentative.

Alkalies. It is unknown whether these products sometimes come from outside Mesopotamia.⁷

Animal products. The products of the bee appear to be generally available in Mesopotamia, but the bee may not be at home there.⁸ Amphibious

1. Published 1937 and following by the Pontificium Institutum Biblicum; volumes I through 13 available as of this writing. G. Pettinato, "Il commercio con l'estero della Mesopotamia meridionale nel 3. millennio av. Cr. alla luce delle fonti letterarie e lessicale sumeriche," *Mesopotamia* 7 (1972): 43-166, helpfully assembled and discussed references to trade in lexical and other canonical texts as part of his larger work on third millennium trade.

2. W. von Soden, *Leistung und Grenze Sumerischer und Babylonischer Wissenschaft* (Darmstadt, 1965; original publication in *Die Welt als Geschichte* 2 (1936): 411-64, 509-57), surveyed the limitations of list-making as a whole. As will be clear below, I have benefited from discussions with M. Civil and I. J. Gelb on various difficult words in the accounts. The authorities at Chicago were also very helpful in allowing me access to the files of the *CAD*.

3. As noted by Hallo, "Emar," p. 61.

4. By Forde, "DAM-KAR-E-NE," pp. 21f.; he does admit that several of the items acquired were foreign.

5. E. Reiner, "Lipšur litanies," *JNES* 15 (1956): 129-49, conveniently presented the evidence. M. B. Rowton, "The woodlands of ancient Western Asia," *JNES* 26 (1967): 261-77, wrestled with the problems of identification of the places mentioned.

6. Of the mountains or countries that appear in Table 40 only three are indexed in Edzard and Farber, *Répertoire Géographique* 2, namely Habur, Hubu, and Magan. Sirara also occurs, but apparently only as a part of Lagash-Girsu.

7. Cf. Ebeling's brief "Alkali," *RLA* 1: 70b.

8. Note that both date and grape "honey" is attested, *CAD* D: 163b. In *Iraq* 39 (1977): 481 assumed that honey could be a native product, but as Oppenheim observed, *JCS* 21 (1967): 244, "Apiculture was always rather underdeveloped in Mesopotamia, and honey was imported from the mountains . . ." His reference there, n. 36, to Curtis and Hallo, "Money,"

Table 40. Lands of Origin of Account Products
in *lipšur* Litanies and HAR-ra 22
(After Reiner, pp. 132, 146f. = *MSL* 11:23f.)

erin [?] = sig.ūz "cedar"	šur-man [?] = šu-ūr-me (a resin)	šim.LI [?] = šim-še-li "juniper resin"	
<i>lipšur</i>			
Ha-ma-nu, ni	Lab-na-nu	A-u ₅	
Ha-bur	A-dil-ūr	Ha-na	
Ha-šur	A-ra-an-du		
Si-ra-ra/a			
HAR-ra			
Ha-ma-[nu]	Ia-ab-na-nu/na	[?] = <i>burāšu</i>	
Ha-b[ur!]	A-da-lu-ūr/ur	A-u ₅ -ra	
Ha-š[ur]			
Si-ra-a			
AN.NA "lead"	kū-babbar "silver"	guškin "gold"	urudu "copper"
<i>lipšur</i>			
[Za-]ar-ha-a			
BAR-gūn-gūn-nu	Zar-šu	A-ra-lu Hūb-u ₅	Mā-gan-na
HAR-ra			
Zar-šur/Zar-h[a]	Hāš-bar ₇	A-ra-li/A-ra-al-li	
BAR-gūn-gūn-nu	Hāš _{ha as ha ar} -bar	Hūb _{hu-ub} -lul/	
	Ia-an-na-ki-ta	Hub-lul	
	Kū-sū	Za-ar-šā-šum/	
		Za-ar-šum	

animals and birds are common in lexical and other sources; some birds are imported. See the references under ku₆-ba, pa-mušen, and sig₄-ba below.⁹

Bitumens and gypsums. Bitumen was available around modern Hit on the Euphrates; it is not clear whether the Ur III state was in control of that

p. 128, does not, however, prove that honey was imported; Curtis and Hallo merely list the prices in the silver accounts which they studied.

9. Pettinato, "Il Commercio," pp. 92f., mentions the dar mušen and the ^dHa-ia mušen as coming from Meluhha in literary texts. The only product related to birds in the silver accounts is pa-mušen "bird feathers," and the kind of bird from which the feathers come is not specified.

region.¹⁰ Gudea mentions importation of bitumen and gypsum from Magda, perhaps situated on the upper Tigris.¹¹ Later periods mention the transport of gypsum,¹² but gypsum-like material is available in northern Mesopotamia.¹³

Fish. Fish were abundant in Mesopotamia, although in other periods some fish were imported.¹⁴

Fruits and fruit products. Apples and grapes are at home in Anatolia and Syria.¹⁵ A. Finet has shown that in the succeeding Old Babylonian period wine was imported to Mari on the middle Euphrates and occasionally reexported from there to central Babylonia.¹⁶ For the Neo-Babylonian period Oppenheim claimed that grapes were grown in southern Mesopotamia and used perhaps as dried fruit, but wine was imported, apparently from the northwest.¹⁷ The lexical texts know of figs from Mari, Subartu,

10. For Hit see Landsberger, *ZA* 41 (1933): 226 n.2; compare Fish, *BJRL* 18 (1934): 135f., and note R. Harris' reference, *Ancient Sippar* (Leiden, 1975), pp. 264f. to an Old Babylonian text recording silver to be exchanged for bitumen in the "Kassite encampments" near Sippar. H. Sauren, *AION* 31 (1971): 167f. discusses bitumen from Madga, a land east of Assyria.


Hit is one of at least three cities equated with Ur III Dudul; see D. Edzard, G. Farber, *Répertoire Géographique* 2, 32f. There were šagina's "military governors" posted to Badigihursaga; see *ibid.*, pp. 23f. and map showing the tentative location of Badigihursaga between modern Fallūja and Ramādi. This city would be some 70 km from modern Hit. The presence of a military governor may show that Badigihursaga was on the frontier though cities in the central area also had šagina's. Goetze, *JCS* 17 (1963): 8. Note that the šagina in the early part of Ibbi-Sin's reign was Puzur-numušda, about whom we hear in the letter collections; see C. Wilcke, *ZA* 60 (1970): 54-69, esp. pp. 55-62 and n. 9.

F. Kraus' four provinces of the empire are situated in central Mesopotamia and not the northwestern frontier, *ZA* 51 (1955): 45-75, esp. Table 5.

11. Pettinato, "Il Commercio," pp. 78-79; for Magda see Edzard, Farber, *Répertoire*, p. 113.

12. For example, the Standard Babylonian passage quoted in *CAD* G:54b 2'.

13. Thompson, *DACG*, p. 149 n. 1, quotes Rich saying that he found some between Babylon and Hit. Note that Pettinato, *Untersuchungen*, 1, p. 218:206 on *BIN* 5:271:3 records an Umma field name a-šā esir? a-ra-na "field of . . . bitumen?" The presence of such a name may imply that some sort of bitumen was available nearby. Collation shows the sign is more or

less as copied: , and esir may not be intended. Compare also *ibid.* 2, pp. 98-100:

594ff., a-šā nag-esir "field of . . ." in Lagash.

14. Oppenheim, *JCS* 21 (1967):249, mentions ABL 568 in which some preserved fish comes to Sennacherib, perhaps from the west (obverse 10, 20, reverse 4, 9, 11). Pettinato, "Il Commercio," p. 93:9, notes that fish are said in a literary text to be available, reasonably enough, in the island of Dilmun.

15. H. Hoffner, *AOS* 55:113-16 on apples, 39-42 on grapes. A. Millard, *JSS* 7 (1962): 201-03, locates the sources for wine mentioned in Ezekiel 27:19 in central Anatolia and Syria.

16. *A/O* 25 (1974-77): 122-31.

17. *JCS* 21 (1967): 244, listing Neo-Babylonian sources for wine, including Suhi on the middle Euphrates and Izallu, northwest of Assyria.

Note also that Pettinato, *Untersuchungen*, 2, p. 39:492 has a field in Ur called a-šā giš-kirīa-geštin-na "field of the wine garden." The field is planted in grain, but the name indi-

Elam, and Gutium, i.e. from the west, northeast, and east of central Mesopotamia.¹⁸

Grains. These products are amply attested as native to Mesopotamia.¹⁹

Leather and hides. These products also are at home in Mesopotamia.²⁰

Livestock. Especially for Ur III we are well informed on the wide variety and great numbers of livestock available in Mesopotamia.²¹

Metals. All had to be imported. None of the country names in Table 40 under kù-babbar, guškin, AN.NA, or urudu can be positively identified.²² Magan is somewhere to the south of Mesopotamia.²³ Some persons from Hubum, possibly identical to the source for gold in Table 40, are mentioned in *RTC* 369 n.d., an Ur III messenger text; this mention may not imply that the state had conquered the place.²⁴ In literary texts gold is said to come from Aratta in Iran and Meluhha in the Persian Gulf area, and Šu-Sin obtains some from Mardaman, possibly modern Mardin in southeastern Turkey.²⁵ Copper in literary texts is said to come from Aratta, Dilmun (modern Bahrain or Failaka), Magan, and Kagalad.²⁶ From later periods we have evidence that the source for tin lay to the east and that Eshnunna in the Diyala region was a major transshipment post.²⁷ Copper is

cates it is near a place called the "wine garden," *ibid.* p. 39, n. 2. The presence in lexical lists of words for grape and fig slips, quoted *CAD* K:157b.s.v. *kannu* C (compare *MSL* 5:94f.), may show that such plants were sometimes grown in Mesopotamia.

18. Pettinato, "Il Commercio," p. 150, and note that some special dates, gu-ul "big ones" and ku-ku, "sweet ones," are said to come from Dilmun, p. 90:3. Pettinato, *Untersuchungen* 2, pp. 81-83:567, has a-ša giš-ma-nu "field of ma-nu-fruit trees," implying (from the product's Akkadian lexical equivalent) that this is a native tree.

19. For grain productivity in Ur III Lagash see K. Maekawa, *Zinbun* 13 (1974): 10-40.

20. For the variety of products produced in the immediately following Early Old Babylonian period see V. Crawford, *BIV* 9, p. 67 under Hides, Leather items.

21. Types of sheep have been discussed by H. Waetzoldt, *Textilindustrie*, pp. 3-9. Some sheep are brought as tribute by western barbarians, as may be seen also in literary texts, Pettinato, "Il Commercio," pp. 93f.

22. See "Aralu," *RLA* I:129, the only reference being to these texts. G. Komoróczy, *Acta Or. Hung.* 26 (1972): 119 locates the place on the middle part of the Iranian plateau.

23. See I. J. Gelb, "Makkan and Meluhha in early Mesopotamian sources," *RA* 64 (1970): 1-8, and Pettinato's survey of opinion, "Il Commercio," pp. 99-101. Compare also the Tilmun and Meluhha coppers cited by Leemans, *Trade*, p. 10.

24. The persons are called NIM; on this term in the "messenger" texts see R. McNeil, "The Messenger Texts of the Third Ur Dynasty" (PhD diss. U. of Pennsylvania, 1971), pp. 64-73.

25. Pettinato, "Il Commercio," pp. 79-80. For the possible equation of Mardaman with modern Mardin see Edzard, Farber, *Répertoire* 2, p. 118.

26. Pettinato, "Il Commercio," pp. 82f. See *ibid.*, p. 113, for the possible location of Kagalad near the Jebel Hamrin and the lesser Zab. For Dilmun see Edzard, Farber, *Répertoire* 2, p. 193.

27. G. Dossin, "La Route de l'étain en Mésopotamie au temps de Zimri-Lim," *RA* 64 (1970): 97-106. Leemans observes that Assyria was a source, probably again a transshipment area

available in the northern Zagros and via the Persian Gulf, but the ultimate source of tin is still unknown.²⁸

Oils or fats. All are probably native to Mesopotamia, though the high price of i-dùg-nun-na causes one to suspect either foreign origin or expensive processing. Ī-giš "(sesame) oil" is attested as exported to Dilmun from Ur in the Enki and Nin-hursag myth.²⁹

Reed. These products too are probably native, if all are really reed. But a lexical text mentions reed from Magan, and some reed may have been imported.³⁰ See below under gi-dùg-ga for the possibility that some are actually resinous.

*Resins and spices.*³¹ The evidence in Table 40 locates erin, perhaps the same as Ur III Umma's sig.ūz, in Habur, a land to the northwest of Mesopotamia.³² The land Hamanu is perhaps identical to the modern

28. See J. Muhly, *Copper and Tin*, Transactions of the Connecticut Academy of Arts and Sciences 43 (1973), 220-32, and Limet, *Métal*, pp. 85-99. But note that Egypt is rich in tin, Muhly, *Supplement to Copper and Tin*, Transactions of the Connecticut Academy 46 (1976), pp. 77-136, esp. pp. 102-04. Trans-Tigridian Kimash is known as a source of copper, and it may occasionally have been under Ur III sovereignty, Limet, *Métal*, p. 90. The difficult *lipšur* and HAR-ra names remain unidentified.

In literary texts tin is said to come from Iranian Aratta and Meluhha, Pettinato, "Il Commercio," p. 82:8. Silver in literary texts comes from Dilmun, Aratta, URU.KI.U+A, Meluhha, Elam, and Marhashi, *ibid.*, pp. 80f.: 2-3. Compare also the unpublished Neo-Babylonian mention of "silver of the Habur River" quoted by Oppenheim, "Trade," p. 10 n. 22. Oppenheim's Neo-Babylonian "overland trade" texts have copper from Yamana, possibly Cyprus or the coast of Asia Minor, and tin, perhaps also from the northwest, *JCS* 21 (1967): 236-54, esp. p. 241ff.

29. Pettinato, "Il Commercio," pp. 90:2, 121.

30. From Magan and Meluhha, *ibid.*, pp. 90:152 = *MSL* 7:7:4, 4e.

31. This grouping is somewhat arbitrary, but usually I cannot determine whether a given product is a resin or a spice. A resin is "any of various solid or semisolid amorphous fusible flammable natural organic substances . . . formed especially in plant secretions . . . used chiefly in varnishes . . . and in medicine," *Webster's Seventh New Collegiate Dictionary* (1963), p. 731a. A spice is "any of various aromatic vegetable products . . . used to season or flavor foods," *ibid.*, p. 841b. The difference between the English words seems to be that the resins are used for more or less industrial purposes while the spices are used for culinary purposes. We are very poorly informed about the uses of the Ur III products. Some, for example sig.ūz, may be burned for their aromas; others may flavor food, for example še-li, received by the brewery; see Chapter 2.

Some are known as medicines in contemporary medical prescriptions, edited by M. Civil, "Précriptions médicales sumériennes," *RA* 54 (1960): 57-72 and 55 (1961): 91-94; giš li (related to še-li?) and mun, but also non-resinous substances like i-giš, giš-hašhur-hád, giš-pěš-hád, and even giš-ù-suh. Later medical texts also use them, as in R. Labat, "Le premier chapitre d'un précis médical assyrien," *RA* 53 (1959): 1-18; erin, šurmēnu, šim-gam-gam, and gazi, but also gù-gal and gù-tur.

32. See M. Civil, "Šu-Sin's historical inscriptions," *Collection B*, 1963, 1965, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 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2786, 2787, 2788, 2789, 2790, 2791, 2792, 2793, 2794, 2795, 2796, 2797, 2798, 2799, 2800, 2801, 2802, 2803, 2804, 2805, 2806, 2807, 2808, 2809, 2810, 2811, 2812, 2813, 2814, 2815, 2816, 2817, 2818, 2819, 2820, 2821, 2822, 2823, 2824, 2825, 2826, 2827, 2828, 2829, 2830, 2831, 2832, 2833, 2834, 2835, 2836, 2837, 2838, 2839, 2840, 2841, 2842, 2843, 2844, 2845, 2846, 2847, 2848, 2849, 2850, 2851, 2852, 2853, 2854, 2855, 2856, 2857, 2858, 2859, 2860, 2861, 2862, 2863, 2864, 2865, 2866, 2867, 2868, 2869, 2870, 2871, 2872, 2873, 2874, 2875, 2876, 2877, 2878, 2879, 2880, 2881, 2882, 2883, 2884, 2885, 2886, 2887, 2888, 2889, 2890, 2891, 2892, 2893, 2894, 2895, 2896, 2897, 2898, 2899, 2900, 2901, 2902, 2903, 2904, 2905, 2906, 2907, 2908, 2909, 2910, 2911, 2912, 2913, 2914, 2915, 2916, 2917, 2918, 2919, 2920, 2921, 2922, 2923, 2924, 2925, 2926, 2927, 2928, 2929, 2930, 2931, 2932, 2933, 2934, 2935, 2936, 2937, 2938, 2939, 2940, 2941, 2942, 2943, 2944, 2945, 2946, 2947, 2948, 2949, 2950, 2951, 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3450, 3451, 3452, 3453, 3454, 3455

Amanus mountain chain, again in the northwest.³³ Hašur "seems to have included the whole of the Eastern Taurus and part of the northern Zagros," according to Rowton. Sirara is known as a name for Mount Hermon in what is now northern Israel.³⁴

The analogue to Ur III's šurme is said to be from Labnanu, again probably a northwestern country. The area called Arandu may be the same as the classical Orontes region. Adilur, if it is the same as Adalur, is a mountain in the neighborhood of the Amanus chain.³⁵

Kinnier-Wilson has suggested that the origin of šurme and of zabalum is to be sought in the east, possibly in the Zagros foothills which may have had more foliage in earlier times than now. See below under the products.³⁶

The analogue to še-li is said to be from Hana, perhaps identical to the middle Euphrates settlement known from later periods.³⁷ Leemans, however, prefers to locate the region in Anatolia, referring to a mountain mentioned in a Hittite text.³⁸ There is also an A'ura in central Anatolia.³⁹ Oppenheim's Neo-Babylonian trader once has some šim-li, perhaps the

33. See "Amanos," *RLA* 1:92f., and G. del Monte and J. Tischler, *Répertoire Géographique* 6 (Wiesbaden, 1978), pp. 11f., for A-ma-na in Hittite texts.

34. M. Rowton, "The woodlands of ancient Western Asia," *JNES* 26 (1967): 261-77, esp. pp. 267f. and n. 40. Pettinato's literary texts note in addition that erin "cedar" comes from "the upper country," "II Commercio," p. 84.

J. Hansman, "Gilgamesh, Humbaba, and the Land of the Erin-Trees," *Iraq* 38 (1976): 23-35, argues that in the earliest periods of Mesopotamian history erin came from the east but by the time of Sargon of Akkad the supply there had been exhausted, and new western sources had to be found. He suggests, p. 29, that giš-erin-babbar was the *Juniper excelsa*, the commonest of the few coniferous trees in the southern Zagros at the present time.

Note that Neo-Assyrian kings brought *erēnu* "cedar" and *šurmēnu* "cypress?" from conquered lands and planted them presumably in Assyria, as shown in passages quoted in *CAD* E:275b.

35. Leemans, *Trade*, p. 8 and n. 1, Rowton, "Woodlands," p. 270 and n. 56, and G. del Monte, J. Tischler, *Répertoire Géographique* 6, pp. 53f. Pettinato, "II Commercio," pp. 87f.: 12, notes that the product comes from "the upper country." And see note above on Neo-Assyrian importation of the tree.

36. There is a city called Zabalam (= modern Ibzeh), but it is located near Umma and may not be a source for the resin with a like-sounding name; see E. Bergmann, *ZA* 56 (1964): 7, C. Wilcke, *ZA* 62 (1972): 44; and Å. Sjöberg, *TCS* 3:115f. for references to the city. Literary texts say za-ba-lum comes from "the upper country" and Ursu, perhaps in the northwest, Pettinato, "II Commercio," pp. 88f., 119f.

37. Cf. J.-R. Kupper, *RA* 41 (1947): 154-59, locating it around Terqa. Rowton suggests that later geographic information locates a Mt. Hana to the east of the Tigris, "Woodlands," p. 272 and n. 70.

38. Leemans, *Trade*, p. 8 and n. 3, and G. del Monte, J. Tischler, *Répertoire Géographique* 6, p. 76.

39. Leemans, *Trade*, p. 8 and n. 2, and G. del Monte, J. Tischler, *Répertoire Géographique* 6, p. 57; but Rowton, "Woodlands," p. 272, locates it somewhere to the east of the Tigris, if Aura may be equated with Arua.

same as Ur III še-li, in his consignment of goods that comes from the west.⁴⁰

If šim-hi-a is sometimes frankincense in Ur III, it must derive either from Arabia or Somaliland, the only known sources of the tree. See below under the product.⁴¹

Other products in this category are probably native, like ga zi "cassia?" and še-LÜ "coriander."⁴²

Tanning agents. The exact identifications of these products elude us, and it is uncertain whether these can be regarded as native to Mesopotamia.

Trees and timber. Most of the designations of woods refer not to specific types of wood but to their use in manufacture. The recurrent exception is giš-ù-suh₅ which in later periods sometimes seems to be imported, but there are also references to locally growing trees.⁴³ Some woods mentioned in the accounts are probably native, like giš-asal_x; see below under the product.⁴⁴

Vegetables. These are native plants as far as can be determined.⁴⁵

Wools. These products constitute an important source of wealth in Mesopotamia, and all may be native, with the possible exception of sigkur-ra "mountain wool" from a non-account text.⁴⁶

40. *JCS* 21 (1967): 236-54, esp. pp. 243f., where Oppenheim briefly discusses the product's uses.

41. Note also my speculation that šim-im has something to do with Karkar, s.v. Leemans believes that in Old Babylonian Sippar sources resins are imported from the west and exported to locations east of the Tigris, *Trade*, pp. 92f. and 129, but cf. Chapter 6, n. 5 below. Foreign origins for resins that do not occur in the accounts are indicated by names like šim-dug hur-sag-ba "sweet mountain? resin" and šim-mar-tu "western resin," in YBC 1397: 7, 10, Ur III n.d. (copy 24) and *BIN* 5:292: 7, 11 Ur III Umma viii. Collation shows the latter entry, as in the copy, perhaps glossed EN.X, in which X is more like dug than mur.

42. For local production of these products see H. Limet, *Iraq* 39 (1977): 51-58, p. 52 and n. 6.

43. See *CAD* A2:478, and compare H. Limet, *Iraq* 39 (1977): 54 and n. 15, who gives Ur III references to locally growing giš-ù-suh₅.

44. On local forests north of Umma see H. Sauren, *Topographie der Provinz Umma* (Diss. Heidelberg, 1966), p. 89 and n. 279.

45. But the lexical series HAR-ra does know of sum-sikil "garlic" from Marhashi, northwest of Elam. Pettinato, "II Commercio," pp. 90, 114f. = *MSL* 10:112:141.

H. Limet, *Iraq* 39 (1977): 52 and n. 5 notes the large harvests of gù-gal and gù-tur. Pettinato, *Untersuchungen* 2:234f.:866, lists a Lagash field a-šà za-ha-tin(-na) "field of zahatin-onions" in which grain, emmer, peas (gù) and vegetables (sar) are planted. The name would seem to indicate that onions also were sometimes grown there.

46. Oppenheim, *JCS* 21 (1967): 245f., notes that wool was the dominant native fiber in Mesopotamia, though in the first millennium some wool was imported from the west, sometimes in the form of tribute of dyed woollen garments. Pettinato, "II Commercio," p. 94, has literary contexts that mention wool from the hitherto unidentified Zalambar and Elam which comes to Mesopotamia by way of Dilmun and lexical texts listing wool of Mari, Subartu, Elam, Gutium, Amurru, and Hana.

Miscellaneous. The "juniper boughs" may be from the northwest.⁴⁷

In general we may conclude that most of the products that appear in the Ur III silver balanced accounts may have been native to central Mesopotamia.⁴⁸

Curtis and Hallo's short glossary, "Money," pp. 136-38, treats products for which Akkadian equivalents were available but offers no discussion. Here we shall consider all priced products in the accounts and analogous products included in the price tables in Chapter 3 along with some important accounting terms.

The format of the glossary entries is as follows:

Sumerian word. Number of occurrences in silver balanced accounts studied here. English translation. Akkadian equivalent(s), if any. Discussion.

For specific references see the price tables in Chapter 3 under the product names.

GLOSSARY

á-dār. 6. "ibex-like horn." Probably to be understood as "antelope arm, antler," with dār = *turāhu*, *MSL* 8/2:18:147. Compare á-dara₄: *immer ad-re-e* "sheep with ibex horns," *CAD* A1:130b-31a and á-dara₄: *idān šaqātu* "high arms," *CAD* I-J:12a.

A.KA PN ba-a-gar. See under ugú PN ba-a-gar.

al-la-ha-ru. 8. (a tanning agent). Equivalent to later *alluharu*, *AHw*:38a, apparently "a mineral dye or mordant used to produce a white color," *CAD* A1:359b-60a. Landsberger, *JCS* 21 (1967):169, believed it was not alum. It is used in the Isin period leather texts along with im-kū-gi, naga-si-è, and ni-ik-tum, for which see below s.vv. Note especially al-la-ha-ru ni-ik-tum in the Isin period text *BIN* 9:83:1 and compare ni-ik-tum al-la-ha-ru below. See in general Waetzoldt, *Textilindustrie*, p. 174, and Matouš, *BiOr* 13 (1956):137. For Ur III references see Gelb, *MAD* 3:38.

A.LU-urudu. 1. "lead." = *abāru*, *AHw*:4a, *CAD* A1:36b; *ibid.* 38a suggests that the lexically attested reading for LU as gar₅ in this word

47. See the later references for li = *burāšu* "juniper" from the west (*KUR Hamāni* as Amanus) and northwest (Urartu), *CAD* B:325ff. and the discussion, p. 328b.

H. Limet, *Iraq* 39 (1979):55, notes that we have no information at all from Ur III about the importation of stones though they seem to be generally available. The accounts studied here have no light to shed on this subject.

48. See my study of domestic versus possibly imported products in four of the accounts, *Iraq* 39 (1977):49f.

should be limited to vocabularies. Limet, *Métal*, pp. 33 and 39, takes urudu here as a determinative for metal. (In the latter citation Limet quotes our passage as urudu-a-bár = *KWU* 295, but the order is A.LU = *KWU* 293-urudu.)

AN.NA. 3. "tin." = *annaku*, *CAD* A2:127a, *anāku*, *AHw*:49b. J. Muhly, *Copper and Tin and Supplement*, surveys the evidence for tin in the ancient world; the sources of Near Eastern tin are unknown though there is evidence that it came from the northeast of Mesopotamia and from the south via the Persian Gulf, pp. 288ff. Note R. M. Adams' suggestion, *JNES* 37/3 (1978):268, based on metallurgical analysis that the substance at least until the Old Assyrian period was "a poorly controlled mixture that might contain varying proportions of tin and/or arsenic." For the reading see Muhly, p. 243, following Hallo, *BiOr* 20 (1963):137 and 139 n. 41, against Limet's attempt, *Métal*, pp. 50ff., to read nagga. A. Falkenstein, *NSG* 1, p. 65 n. 5, showed that the writing may sometimes stand for iron. Gelb in personal communication suggests that only KÙ.AN means meteoric iron; see *CAD* A2:98b s.v. *amūtu* B (a precious metal).

ar-gá-num. 7. (a resin). Akkadian *argānum*, *CAD* A2:253b-54b, *AHw*:67a. In *MSL* 5:102:117 it has the determinatives giš and šim, showing it is a resin from a tree of some sort; in *MSL* 5:141:23 it is glossed *sihu*, perhaps "wormwood," *AHw*:1040b. Ebeling, *OrNS* 17 (1948):133f., saw the root *wrq in the word and translated it "safflower" on the basis of the root's sense of "yellow." For uses in later periods see Thompson, *DAB*, p. 361. For Ur III references see Gelb, *MAD* 3:63 and compare s.v. giš-hašhur below.

bala. passim. "special fund?." = *palū*, *AHw*:817a. See the discussion in Chapter 2. Note that Sollberger, *TCS* 1:127, p. 38, translates šà-bala-a as "(to be counted) in the term(s) deliveries)." Some such meaning, more general than the usual "term of office," may fit the account contexts. The etymology may go back to the verb bala meaning "to turn, rotate," Hallo, *JCS* 14 (1960):89.

diri. "overdraft." = *atru*, *CAD* A2:499b. See under lá-ì below.

en-mur. 7. (a resin). The product is called šim R in *OrSP* 15:55:36:10. This is possibly another writing for the šim-an-mur that appears in lists of resins from Sargonic Umma, *BIN* 8:300:5, 319:7; the latter does not have the typical Umma dating, but Lambert considers it to be from that site, *RA* 59 (1965):120, numbers 23, 25. šim-an-mur might be in turn another writing for the material mur-ra-nūm, usually i-mur-ra-nūm at Sargonic Umma; the two writings do not occur in the same text, but an *i-šim-an-mur does not occur. Akkadian *murrānum* is a type of ash tree, *CAD* M2:220, *AHw*:676a

- or possibly myrrh, as Lambert translates *mur-ra-nûm*, *RA* 59 (1965): 120. But compare *murru* "myrrh," *CAD* M2: 221a, 222a, *AHW*: 676a and the standard Babylonian *amurrānu* (a plant), *CAD* A2:91a. Ebeling's suggestion, *OrNS* 17 (1948): 138, to relate *en-mur* to *šim-AN.BAR* is also a possibility.
- esír*. 1? "crude bitumen." = *ittû*, *CAD* I-J: 310a, 311bf, or *iṭṭû*, *AHW*: 408a. Oppenheim, *AOS* 32: 37, 232, lists various kinds that occur in Ur III. The equation to *napṭu* assumed by R. Forbes, *Studies in Ancient Technology* 1, Table 1, is not supported by lexical texts; see *AHW*: 742b and in general, Ebeling, "Erdöl, Erdpech," *RLA* 2:462f.
- esír-a-bā-al*. 1. (a kind of bitumen). Forbes says this is "crude rock asphalt," *SAT* I, p. 19, but that suggestion is uncertain. Oppenheim, *AOS* 32: 37, interprets R followed by *si-ga* as "bitumen filled in buckets," but in the account R appears between refined bitumen and gypsum and seems to stand for another type of bitumen.
- esír-é-a*. 76. "refined bitumen"? = *kupru*, *CAD* K: 553b, 554b, *AHW*: 509a. *Kupru* is written *esír-é-a*, once beside *esír šā é-esír*, "bitumen within the bitumen house," and may not be the precise equivalent. Forbes, *SAT* I, pp. 19f., and Table 1, calls the product "bituminous mastic." See also *esír-hád* below, which is equated to *kupru* in a lexical text.
- esír-hád*. 21. "dry? bitumen." = *kupru*, written in a lexical text *esír-ha*, (*ud*)-a, *CAD* K: 553b, *AHW*: 509a, and see the discussion s.v. *ittû* A, *CAD* I-J: 311b-12a. A Salonen, *Die Türen des alten Mesopotamien*, pp. 112-14, reviews the evidence. The precise relation in Ur III of the product to *esír-é-a*, related to the later logogram for *kupru*, is unknown; they are clearly separate products in the accounts.
- eša*. 1 (a flour?). = *sask/qû*, *AHW*: 1032a. Compare B. Hrozný, *Das Getreide im alten Babylonien* (Wien, 1913), pp. 118f. Oppenheim, *AOS* 32: 60, thought this was a cereal or a spice. For Ur III references see Sollberger, *TCS* 3: 117: 210.
- eš-ku-ru-um*, also ⁶⁵*LĀL.HUR*! 2. "wax." Akkadian *iškuru*, *CAD* I-J: 251b, 252b, *AHW*: 396b. Compare Landsberger, *WO* 1: 371ff. and Civil, *Oppenheim AV*, pp. 74f. Hallo, personal communication, suggests relating *LĀL.HUR* to *lallāru* "white honey," *CAD* L: 48b, *AHW*: 530a.
- gal* (*guškin*). "(gold) cup." See Limet, *Métal*, pp. 206f., translating "large receptacle."
- ga-sag_{xx}* (*ud-gunû*). "high-quality? cheese." V. Sharashenidze, *VDI* 1976 (3): 119f. n. 18, discusses the product and the reading. Van Dijk, *HSAO*, pp. 248-50, takes the reading *it_{ixx}* = *ellu*, referring to Schneider *AnOr* 12: 294f., as the one relevant to milk products and reserves *sag_{xx}* for beer. Oppenheim, *AOS* 32: 96-98, relied on *Lutz* 1 100: 7:

- 184f. to guess that *ga-sag_x* was "round cheese." Kang, *SACT* 2: 281 to 256: 21 reads *ga-muru_x* and translates "cottage cheese?"; compare *ibid.*, p. 443, for *murux* as "medium size," said of garments. In short, neither the reading nor exact meaning of the product name is known.
- gazi*. 1. "cassia?" = *kasû* (a native spice plant) *CAD* K: 248a, "mustard (-plant)" *AHW*: 455. Landsberger, *Afo* 18: 337f. with earlier literature, thought it was mustard, but Oppenheim, *AOS* 32: 7f., suggested cassia; the latter's view is slightly preferable because of the possibility that the English, Sumerian, and Akkadian words represent a *Kulturwort* for the same substance. The expression *mun-gazi* "salt, cassia?" probably means spices in general, as Landsberger suggested, *Afo* 18: 337b and not a kind of salt as Oppenheim thought, *AOS* 32: 7. For a possible proverb involving *gazi* see T. Jacobsen, following a suggestion of Landsberger in E. Gordon, *SP*, p. 459, to Proverb 1.55.
- geštin-hád*. 15. "raisins." = *mu(n)zīqu*, *MSL* 5: 93: 16c, *CAD* M2: 322b, *AHW*: 692a. But compare *giš-tin babbar* "white wine," s.v. *karānu*, *CAD* K: 205a. C. Seltman, *Wine in the Ancient World*, pp. 14-31, suggests that the beginnings of wine-making is to be sought in Anatolia or Kurdistan; grapes flourished in classical antiquity in both areas. See the literature cited by B. Laufer, *Sino-Iranica*, pp. 223ff.
- gi*. 12. "reed." = *qanû*, *AHW*: 898a. See however s.v. *gi-düg-ga* for the possibility that reed products are resinous, and s.v. *šim-gi* for the reading.
- gi-düg-ga*. 2. "good or sweet reed." = *qanû iābu*, *MSL* 7: 7: 5 aḥd *AHW*: 898a and *passu* "a kind of reed," *MSL* 7: 24: 258 and *AHW*: 839a. Compare however *šim-gi-düg-ga* among various resins, some of which occur in the accounts, in the forerunners to *HAR-ra*, *MSL* 11: 122: 10, 163: 7: 9, 166: 3. Curtis and Hallo's "planed or aromatic cane" may be near the truth. Gelb in personal communication suggests R is "sugar cane" but notes that that should be more expensive than plain *gi*, as *gi-düg-ga* is not.
- If "good reed" is a resin, perhaps "reed" is too in view of its place in the resin list, Table 2 above. Not everything in the resin list is demonstrably resinous, but most of it is. Compare *šim-gi* below, occurring in a Lagash text in which there is no plain *gi*; prices for *gi* and *šim-gi* are similar. The product was an article of trade in the Old Babylonian period also; see Leemans, *Trade*, pp. 96, 104, 152.
- gig*. 1. "wheat." = *kibtu*, *CAD* K: 340a, *AHW*: 472b. There is also a *šim-gig* = *kanaktu* (an aromatic product) *CAD* K: 135a, *AHW*: 434b, an article of trade in the Old Babylonian period, Leemans, *Trade*, p. 152, but since the product occurs in the capital section of the account, probably the grain is meant.
- gir*. *passim*. "via." See the discussion in Chapter 1. The translation derives

from the Akkadian equivalent *tallaktu*, "way," *AHW*:1310a. Jacobsen's suggestion to read *šakán*, *Tammuz*, pp. 225f. and n. 41, is based on the suffixed -na in *PBS* 9:4:4, an Old Akkadian text in which the sign is broken. Compare supporting his view L. Krušina-Černý, *ArOr* 55 (1957):554f.

giš-a-gu₄. (a wood). In *NBC* 244:2:5, Copy 19, R is said to be inlaid with lapis and gold. Compare also *RTC* 307:5:13 for one 5 kùš "cubits" long.

giš-asal₄ (A.TU.GAB.LIŠ). 1. "poplar." = *šarbatu*, *CAD* Š:108af, *AHW*:1085a; *CAD* notes the wood in later periods is cheap and used for fuel, therefore is probably the Euphrates poplar, "apart from the willow, ... the most common tree of lower Mesopotamia." Note that the product appears in the Old Babylonian trade too; see Leemans, *Trade*, p. 103.

giš-dím. 1. "post." = *timmu*, Salonen, *Die Wasserfahrzeuge in Babylonien*, p. 126; *AHW*:1360a.

giš-é-dím. 1. "house-building wood?" Or is this related to giš-dím?

giš-eme-sig. (ship plank). = *paršiktum*, *MSL* 5:172:253; = *metenu* "a narrow plank," *CAD* M2:43b; compare Salonen, *Wasserfahrzeuge*, pp. 86f. and *AHW*:835a.

giš-gi-muš. "punting pole." = *gimuššu*, *CAD* G:78a, "oar" *AHW*:289b, = *parisu*, *AHW*:833b, and compare Salonen, *Wasserfahrzeuge*, p. 102 and giš-mi-ri-za below.

giš-gišimmar. "date palm." = *gišimmaru*, *CAD* G:102a, *AHW*:292b. See Chapter 3 s.v. for the possibility that the trunks and not the live trees are at issue.

giš-hašhur. 3. (a fruit tree). = *hašhūru*, *CAD* H:139f., *AHW*:333b. The traditional translation "apple" is based on the Syriac cognate, discussed in Thompson, *DAB*, p. 304. Goetze, *JCS* 10 (1956):34 n. 23, noted that a synonym list equates *henzūru*/*inzūru* with *hašhūru*; the former is a tree and the dye derived from it (*CAD* H:170a). Goetze concluded that *hašhūru* cannot be an apple tree. Gelb in the *Kraus AV* suggests that R is "apricot."

Compare *MSL* 5:97:38,40: giš-hašhur *ar-ga-nu* = ŠU, giš-hašhur *tám-šil-lum* = ŠU. It is not clear if these entries mean that these account products are from varieties of the tree.

See Ebeling's brief "Apfel," *RLA* 1:118b, noting the existence of both "reed-bank" and "mountain apples," i.e. perhaps local and imported kinds; the latter may be some other sort of fruit. See *CAD* A2:291 s.v. *armannu*.

In the accounts R is the wood of the tree and not its fruit, but compare giš-hašhur-durus and giš-hašhur-hád below.

giš-hašhur-durus. 1. "(a fruit), fresh." Gelb, *Kraus AV*, suggests R is "fresh apricots." Compare the entries immediately above and below. giš-hašhur-hád. 4. "(a fruit), dried." = *kamiššaru*, *CAD* K:122, *AHW*:432a, translating "pear tree, pear" on the basis of Arabic *kummatrā*. Also = *sippirū* "a fruit tree," *AHW*:1049a. Gelb, *Kraus AV*, suggests R is "dried apricots."

giš-kab, also giš-kab-bu. (a wood) 2. Possibly -bu is for gíd "long," though the length of both is given as the same, 6 kùš "cubits." Compare giš-kab-ná, = *kiti[m erši]* "covering of a bed," *CAD* K:466b; perhaps this is a wood for covering.

giš-ma-nu. 2. (fruit of? a native tree). = *e'ru*, *CAD* E:318b, 320a, "cornel?" *AHW*:247a. Its measurement by weight makes it unclear whether the fruit or the wood is intended. Oppenheim, *AOS* 32:54 n. 71, notes that it is usually packed in bundles and rarely weighed. Falkenstein, *ZA* 56 (1964):93, observed that it is used as fuel by Gudea. M. Civil, quoted in B. Landsberger, *Afo Beiheft* 17, p. 26 n. 77, proposed "(dwarf) ash." For medical uses in later periods see Thompson, *DAB*, pp. 298ff.

giš-me-dím. 1. "railing?." See Salonen, *Wasserfahrzeuge*, pp. 91f.

giš-mi-ri-za. A forerunner to HAR-ra gives giš-mi-r[i-za] for later giš-má-ri-za = *parisu* "punting pole," *MSL* 5:172:254 and *AHW*:833b. And compare giš-gi-muš, also "punting pole," above. But Gelb in personal communication notes that the price is too high for a mere punting pole.

giš-nak-KUL. 3. (a wood). It would be attractive to relate this product to the Akkadian adjective *naklu*, feminine *nakiltu* "artfully made," *AHW*:722b and the cognate verb *nakālu*. *AHW*:717b. The root does not, however, occur in Old Akkadian, in *MAD* 3:201. For the *parrus* form, see Von Soden, *GAG*, p. 62, 55:25. The crafts bureau is the only one to receive the product in the accounts, and it does not appear among boat-building materials.

giš-pěš. "fig (tree)." = *tittu*, *AHW*:1363a. Identification rests on analogy to Hebrew *tē'ēnāh*, Thompson, *DAB*, pp. 303f. See in general Ebeling, "Feige(nbaum)," *RLA* 3:32f. It is apparently a native product, though also common on the Iranian plateau, B. Laufer, *Sino-Iranica*, p. 412, and also in Asia Minor and Syria, H. Hoffner, *AOS* 55, p. 116. R's timber may be at issue in the non-account text entered in Chapter 3 under Trees and Timber.

giš-pěš-durus. 1. "fresh figs." The meaning is established by Gelb in the *Kraus AV*.

giš-pěš-hád. 3. "dried figs." Gelb, *Kraus AV*, discusses the meaning;

- compare similarly Thompson, *DAB*, p. 303, and Civil, *RA* 54 (1960): 67.
- giš-pěš še-er-gu. 10. "string(s) of figs." Gelb, *Kraus AV*, establishes the meaning "string of fruit" for še-er-gu; compare pěš še-ir-kum = šerku, *MSL* 11:85:234, *AHW*: 1217a.
- giš-ŠEDÜG. 1. (a wood). The product is used in boat building, Salonen, *Wasserfahrzeuge*, pp. 142f; cf. Deimel, *OrSP* 16:60. Comparison with giš-še-dù-a = supālu, *AHW*: 1059b, is probably irrelevant since za-ba-lum, which also equals supālu, is present in the accounts.
- giš-šinig-hi-a. 1. "assorted tamarisk." Cf. giš-šinig = binu, *CAD* B: 239a, *AHW*: 127a.
- giš-Ü. 1. "(a wood)." Salonen thinks giš-Ü má are "ship planks," *Wasserfahrzeuge*, pp. 90f. Gudea, Cylinder A 15:32 mentions giš-Ü gal-gal as a building material beside erin, šurme, and zabalum. Perhaps the product is to be related to giš-ù-suh₅, q.v.
- giš-ÜRxEŠ₅. 2. "(?)." Probably not a wood for use as timber since it is measured by volume and occurs in the capital section.
- giš-ù-suh₅. "fir." = ašūhu, *CAD* A2:478a, *AHW*:85b, and Civil, *RA* 55 (1961):93.11. The reading was suggested by R. Labat, *BiOr* 7 (1950): 79b. There is a tendency in the accounts to label every wood a fir; probably different products are not involved, but the compositors were merely being more precise about designating the kind of wood from which the timber was made.
- giš-ù-suh₅ apin ù SAR giš-ig. 3. (a wood). The elements after "fir" indicate the purpose of the wood: "(for) a plough and binding? of a door," if one takes SAR as kešda by analogy to kéš-da, cited by Salonen, *Die Türen*, pp. 23, 135, 143.
- giš-ù-suh₅ a-ra. 3. (a wood). Salonen, *Wasserfahrzeuge*, p. 89, thinks this might be a bow plank.
- giš-ù-suh₅ bar-da-aš nigín-na. 1. (a wood). Giš-bar-da can be "a kind of tying wood," *Wasserfahrzeuge*, p. 95; Perhaps bar-da can be related to giš-bar-dù-a = bardû "crosspiece," *CAD* B: 110a, *AHW*: 106a. The last elements remain obscure, perhaps "wrapped or turned for . . ."
- giš-ù-suh₅ gi-muš. 2. Probably the same as giš-gi-muš, q.v.
- giš-ù-suh₅ giš-é-mun. 1. (a wood). A bit ṭābī is a wilderness, *AHW*: 134b, and is probably irrelevant.
- giš-ù-suh₅ giš-ür-ra giš-é-ka. 1. "house lumber." Cf. *CAD* G: 144a, *AHW*: 300a, giš-ür = gušūru "log, beam."
- giš-ù-suh₅ mi-rí-za. 7. Probably the same as giš-mi-rí-za, q.v.
- giš-ù-suh₅ šu-dím. 5. "(ship-)building wood." So Salonen, *Wasserfahrzeuge*, pp. 139f.; it may be unrelated to giš-šu-dím, read girah_x, = suppinnu, a kind of tool, *AHW*: 1060a.

- giš-ù-suh₅-uš. 1. "second quality fir?" For uš or ús see *AOS* 32:5 n. 11.
- gú-gal. 6. "chick peas." = hallūru, *CAD* H:47a, *AHW*:313a based on Semitic etymologies. H. Hoffner, *AOS* 55:95-97, discusses the identification of the product. See *AOS* 32:57 for some Ur III references; note also among many others *Nikolski* 321 and *YOS* 4:298.
- guškin. 4. "gold." = hurāšu, *CAD* H:245b, *AHW*:358a, and compare *MSL* 7:238:90ff. where an Old Babylonian forerunner to HAR-ra lists R 9-ta-àm, 8-ta-àm, down through 2-ta-àm. Gordon Young, who published AS3iUrDZ, believes this refers to something like the modern karat system of evaluating quality of metals and stones. But in AS3iUrDZ the -ta figure gives the price in terms of gín of silver per gín of gold, and it seems unlikely anything else is meant by the notation. See in general Leemans, "Gold," *RLA* 3:505a and the discussion of origins above.
- M. Civil, *JCS* 28 (1976): 183-84, has argued that KÜ.GI should be read kù-sig₅ (GI) "yellow precious metal." The traditional reading is retained here though Civil's is an attractive suggestion.
- gú-tur. 2. "lentils?" = kakkû, *CAD* K:58a, noting R may refer to some other small bean; "a little kind of pea," *AHW*:422b. For Ur III references see the texts mentioned s.v. gú-gal and *TCS* 1:169, p. 48.
- gu-zé-ba-tum. 1. (a cord?). *CAD* K:615b and *AHW*:519b have a ku-zippu as a kind of garment. But there are no other garments in the accounts, and B. Alster, *Dumuzi's Dream*, p. 112 to line 158, believes the context in his text of gu-zi-ip-pa-tum suggests "a kind of reinforced cord" and refers to the context of our text for support. In fact there are few references to similar items in the accounts, but Gelb in personal communication suggests that R may be a cord of fiber from the zi-ba-tum plant, q.v. (*MAD* 3:153 "cake" is to be deleted according to personal communication from Gelb.)
- har. "ring." = šawirum, *AHW*: 1205b, and Limet, *Métal*, p. 211. For Ur III use see P. Michalowski, "The Neo-Sumerian Silver Ring Texts," *Syro-Mesopotamian Studies* 2/3 (1978): 1-16.
- i. "oil, fat." = šamnu, *AHW*: 1157b. Products classed as fats or oils appear in the accounts always to be measured with the measuring system for dry, not liquid, products. The liquid measures which one would expect are, according to a tentative reconstruction by I. J. Gelb, as follows:

4 gín	= 1 á-gam	5 kúr	= 1 kil-kil
15 á-gam	= 1 sila	2 kil-kil	= 1 dug
2 sila	= 1 kúr	3 dug	= 1 hubur

Thus, except for the sila, all measures have completely different names from the dry measures. The odd fact that only the dry measures

are used in the accounts may be explained in one of two ways: either (1) all oils in the accounts are not in liquid form but have been partially or totally dried to facilitate transport; or (2) for some reason the liquid capacity system is simply not used by the account scribe(s). In either case the situation is anomalous, as Gelb emphasizes in personal communication, and I can offer at present no explanation for it. On the liquid measure á-gam see the remarks by Oppenheim, *AOS* 32:154 under X5, and R. McNeil, "The 'Messenger Texts' of the Third Ur Dynasty," PhD diss., University of Pennsylvania, 1971, pp. 179f. For the possibility that one product in the accounts is measured in the liquid capacity measures see below s.v. šim+GAR.

ì-dùg-ga. "good oil." Possibly the same as ì-giš-dùg-ga = *qāhu* "good (sesame? oil)," *AHW*:1157b, s.v. *šamnu* bottom.

ì-dùg-nun-na. 10. (an oil). Probably not related to ì-nun = *himētu* "ghee," *CAD* H:189b, *AHW*:346a, since there are no other dairy products in the accounts. The Old Babylonian letter *YOS* 2:17:5, quoted *CAD* I/J:45f., mentions this oil with ì-gu-la "perfumed oil," and it may be similar. It occurs in an Old Babylonian forerunner to HAR-ra, *MSL* 11:164:16; the broken equation ì-dug-nun-na = *pu-[ri hi-me-ti]* "ghee pot," *MSL* 11:79:38, is probably unrelated.

ìgi-esir. 3. (a type of bitumen). Forbes' assumption that this is the same as esir-hád, *SAT* I, Table I n. 8, is proved wrong for Ur III by the fact that both products occur in the same accounts.

ì-giš. 20. "sesame oil." = *ellu*, *CAD* E:106a, *AHW*:205a. But ì-giš also = *šamnu* "oil, fat," *AHW*:1157b. See in general for sesame F. Kraus, *JAOS* 88 (1968):112-19, esp. p. 115. It is also used in shipbuilding; see A. Salonen, *Wasserfahrzeuge*, p. 149.

ì-ku₆. 4. "fish oil." Glossed *šaman nūni*, *AHW*:804a. Note that it is used in ship building and repair, *Wasserfahrzeuge*, p. 149.

im-babbar. 46. "gypsum." = *gaššu*, *CAD* G:54a, *AHW*:282b. See discussion above on origins of the product.

im-babbar-kum. 3. "crushed gypsum." Apparently a different product from plain im-babbar since it is measured by volume and not by weight. For kum see under naga-kum.

im-KU.GI. 4. (a yellow? mineral for use in tanning). See Matouš, *BiOr* 13 (1956):137. Three equations are attested: = *illur pāni* "rouge for the face," *CAD* I-J:87b, *AHW*:373a, = *kalû* "a yellow mineral," *CAD* K:94a, 95a, *AHW*:428a, and = *šarserru* "red paste," *AHW*:1191b. The only recipient in the accounts is the tanner.

ì-nun-ku₆ (an oil?). The meaning is unclear.

ì-šah. 23. "lard." = *nāhu ša šahi* "pig lard," *AHW*:715b.

ì-UD.KA. 1. (an oil?). One might read na₄-KA, taking NI+UD as na₄ (*KWU*

779), but since it is measured by volume, it would appear to be an oil rather than a stone; no other stones occur in the accounts.

ì-udu. 1. "fat, tallow (of sheep)." = *lipû*, *AHW*:555a, *CAD* L:202b, noting, p. 205a, that IUDU may sometimes be only a variant writing for ì or ì+GiŠ, i.e. *šamnu* "fat or oil" in general.

kišib. passim. "seal or sealed tablet." = *kunukku*, *CAD* K:543b, *AHW*:507b. For kišib ra "actually sealed," and kišib nu-ra "not sealed," see above, Chapter 1, and the discussion by Oppenheim, *AOS* 32:158f., supplemented by the Akkadian contexts of *CAD* I-J:7 s.v. *ibrû* "sealed receipt." Before PNs we have translated "received by PN."

kù, kù-babbar. passim. "silver." = *kaspu*, *CAD* K:245a, *AHW*:454a. Both the short and long forms are used in the accounts with no distinction between them, as Limet, *Métal*, p. 46 and n. 6, and Hallo, *BiOr* 20 (1963):138b, observed was possible.

W. Eilers, *WO* 2 (1957):322-37, derived the etymology for *kaspu*, literally "broken (metal)" from *kasāpu* "to chip, break off" (*CAD* K:241b, *AHW*:453a), and this derivation may help explain how silver was handled; it was probably carried in chunks which were broken into small pieces and then weighed. The Sumerian word kù Eilers derives from the adjective kù = *ellu* "bright (metal)" (*CAD* E:102f., *AHW*:204a).

*kù-AN.NA. Curtis and Hallo's reference, p. 118, refers only to "silver of tin" as is shown by the fact that no separate silver value is given in AS8viiUrDZ:3:38.

kù-bi. passim. "its silver (value)." probably = *kasapšu*, Curtis and Hallo, "Money," p. 105 n. 6 and references in *CAD* K:247a. The expression is also used outside the accounts to express the sum of previously listed silver amounts, as in *HSS* 4:1:5:21.

ku₆. "fish." = *nūnu*, *AHW*:803b. Cf. Ebeling's general remarks, *RLA* 3:66f., and Salonen, *Die Fischerei im alten Mesopotamien*.

ku₆-ba. 1. "turtle?" Perhaps to be equated with *raqqu* "small turtle" = Sumerian bal-gi or ba-al-gi-ku₆, *AHW*:958a, or *šelepû* "turtle" Sumerian (muš-)nig-bun-na(-ku₆), *AHW*:1210b; compare the discussion in *ŠL* 1:5:4. See also sig₄-ba below and the remarks about the difficulties of exact identification of ba-ku₆ and other water animals by W. Farber, *JCS* 26/4 (1974):195-207.

ku₆-dùg. 1. "good fish." Compare Salonen, *Fischerei*, p. 195.

ku₆-gam-gam(-ma). 4. (a fish). See Salonen, *Fischerei*, pp. 176f. Note that there is a fish called *gam-gam* in Modern Persian, the *Pomadasys stridens*; it is common in the Persian Gulf but is not found in great numbers. See H. Blegvad, *Fishes of the Iranian Gulf*, pp. 124f. Salonen,

Fischerei, p. 235, says the *Pomadasys stridens* is to be equated with Sumerian ur-ha (or ur-ku₆). For etymology compare the suggestion s.v. šim-gam-gam-ma below.

ku₆-gír-uš. 7. (a fish). See Salonen, *Fischerei*, p. 196; he takes uš here to mean "second quality," but there seems to be no ku₆-gír of other qualities, as M. Powell, *JCS* 27/3 (1975): 183, notes. The last element must be part of the name, perhaps related to gír-ús : *kabāsu* "to step on," *CAD* K:6a, as Powell suggests.

kù-huš-a. 4. (a metal). Limet does not recognize this metal, though he does discuss guškin-huš-a "yellow gold." *Métal*, pp. 42ff. The accounts seem to differentiate kù-huš-a from gold. Poebel, *OLZ* 1914, col. 242, assumed that it was gold, and the prices for it and gold are not too different. Gold occurs as an acquired product only in AS3iUrDZ and AS6xiURDZ, which lack kù-huš-a. In the account prices for R it is priced with the normal kù-bi formula along with the -ta pricing formula. But in AS5xiPd: 1:8 two quantities of kù-huš are not separately priced, and their weights are added to the silver totals to form the capital sum; the huš signs, however, are partially erased. Perhaps the AS5xiPd entries are simply mistakes, or perhaps we are dealing with two metals, one a kind of silver, the other not.

Several times kù-huš-a occurs in notations "so much silver, the purchase price of kù-huš-a," AS3Ses: 2:10, AS6xiUrDZ: 1:16, AS6xiiUrDZ: 6:26, AS8xiiUrDZ: 1:1, AS8xiiUrDZ: 3:14, and AS9UrDZ: 4:27. The notation in AS3Ses adds PA.A-šè, which Curtis and Hallo, p. 116, interpreted as "for eye-paint," probably relying on the equation in *SL* 2:295:169 with *guhlu*, which however is interpreted as [x-x-] *ka!-a* in *CAD* G:125a and *AHW*:296b, and is therefore probably irrelevant. The other remarks are not indicative of the purpose of the product, though receipt of silver for it by the metalworker in AS8xiiUrDZ: 1:1 shows it is a metal. Non-account references include *UET* 3:284:3 n.d., *ŠA* 96:1:8 SS6x, and *TLB* 3:153 S40vi. For huš = *huššu* as a color, see Landsberger, *JCS* 21 (1967): 149f.

ku₆-izi. 4. "smoked fish." Compare izi-ku₆ = *nūnu išati*, *AHW*:804a and Curtis and Hallo, "Money," p. 111 n. 40; also note the variant i-zi quoted by Hallo in *JAOS* 87 (1967): 66. Salonen, *Fischerei*, pp. 193ff., rejects this reading and opts for the old ku₆-bil "fresh fish" on the grounds that there are other words for smoked or dried fish. The fact that these fish are measured by volume indicates that they may have been processed in some way while other fish have not been. (Note, however, the references to ku₆ and ku₆-dùg measured by volume.) "Fresh fish" would not be processed, and the reading is therefore to be rejected.

ku₆-kun-zi. (a fish). Perhaps "straight-tailed fish" or "fish-pond fish,"

with Grégoire, *AAS*, p. 220. See Salonen, *Fischerei*, p. 198, for Ur III references.

ku-mul. 5. "cumin." Probably another spelling for the *Kulturwort* seen in Akkadian *kamunu*, *CAD* K:131b, *AHW*:434a, spelled *ga-mun* in Old Akkadian, *MAD* 3:147. (M. Civil, personal communication, supports this view.) The product may be native to Iran, according to Laufer, *Sino-Iranica*, p. 383. H. Hoffner, *AOS* 55:103f., surveys the identification and later use of the product.

ku₆-sag-kúr. 7. (a fish). Perhaps "head-turned fish." See Salonen, *Fischerei*, p. 200.

ku₆-sag-kúr-erín. 2. (a fish). What erín means here is unclear; it seems to have little to do with "troops" and the like; cf. Salonen, *Fischerei*, p. 37 and ku₆-šà-bar-erín below. Perhaps it just means light-colored, taking erín as *zalağ₂* = *nawru*, *AHW*:770b, but see s.v. ku₆-šà-bar-erín below.

ku₆-šà-bar. 7. "scaled fish." = *qalpu*, *AHW*:895a and Salonen, *Fischerei*, p. 201. The equation derives from *MSL* 8/2:120:133 šà-bar-ra [ku₆] [qal-pu] relying on ibid. 106:66 [gir]x.bar.ra ku₆ qal-p[u].

ku₆-šà-bar-erín. 3. "scaled fish (of some quality)." See ku₆-sag-kúr-erín above, but note the apparent variant with the same price, ku₆-šà-bar-gíd "long šà-bar fish."

kuš-a-gá-lá. 5. "leather sack." = *narūqu*, *AHW*:749b and *MSL* 9:197:79. *Mašlium* added once to the product name defines it more closely as a "pail," *AHW*:628a, *CAD* M1:380b, and *MAD* 3:270f.

kuš-dùg-gan. 1. "leather bag." = *tukkannu*, *AHW*:1367a, *MSL* 7:131:184, glossed in *HAR-gud naruqu*, ibid., 149:148, so probably more or less the same as kuš-a-gá-lá. In the account, however, it is measured by weight, and thus perhaps its contents are meant, but what the contents are is not stated.

kuš-e-sír. 8. "sandal." = *šēnu*, *AHW*:1213b. Compare Salonen, *Fussbekleidung*, pp. 15ff. The various descriptive remarks in the accounts remain obscure. Salonen thinks é-ba-an is the name of the city Hamban, a source for fine goods; see *Fussbekleidung*, pp. 20, 83ff., and *BiOr* 25 (1968): 101f. But Landsberger's suggestion that é-ba-an is another writing for é-pa-na = *tāpalu* "a pair," *JCS* 21 (1967): 169 n. 128 (*AHW*:1320), is more convincing.

kuš-šah. 1. "pigskin." Perhaps = **mašak šahī*; compare *AHW*:627b, 1133a, *CAD* M1:376.

kuš-udu. 4. "sheep hide." Perhaps = **mašak immeri*; compare *AHW*:627a, 378a, *CAD* I-J:129a, M1:376.

kuš-ummu₆ (A.EDIN.LÁ). 7. "leather waterbag." = *nādu*, *AHW*:704b; for the reading see *MSL* 9:197:80.

lāl. 13. "honey." = *dīšpu*, *CAD* D:161a, *AHW*:173a. The bee may not be

native to Mesopotamia, as noted by Ebeling, *RLA* 2:25b, and it is at home in Anatolia and Syria, H. Hoffner, *AOS* 55:123. But honey does appear to be available at least for ritual and medical uses in most periods. J. Sasson, *JESHO* 9 (1966):173, shows that Old Babylonian Mari also may have imported honey from northern Syria.

H. Limet, *Iraq* 39 (1977):55, suggests that R often is a syrup made from fruit, perhaps dates, and that honey was quite rare in Ur III Mesopotamia; compare the date and grape honeys mentioned in *CAD* D:163b s.v. *dišpu*.

lá-ì. *passim*. "remainder." = *ribbatum*, *AHW*:980b and F. Kraus, *Ein Edikt des Königs Ammišaduqa*, pp. 88-97; the reading lá-u_x (NI) is shown by several glosses quoted by Kraus and von Soden, but Civil (personal communication) prefers lá-ì on the basis of spelling variations lá-a and lá-ù. M. Powell, *JCS* 27/3 (1975):182 and "Sumerian Numeration and Metrology," (PhD diss., University of Minnesota, 1971):139-49, prefers to read la_x for lá-NI. Etymologically the term appears to mean "lacking," and the opposite term, *diri*, means "excess"; see M. Lambert, *RA* 56 (1962):39-44, esp. p. 43. Kraus has shown clearly however that the two terms have the same meanings in Old Babylonian as in Ur III: lá-ì is the remainder left over after an operation, and *diri* is the overdraft incurred, *Ein Edikt*, pp. 88ff., esp. 93. Similar translations were suggested independently by Curtis and Hallo, "Money," p. 108, notes 29 and 30.

Perhaps lá-ì is to be related not to *mašû* "to become less," but to *našû* "to raise," usually written *il* but also sometimes lá, quoted *AHW*:764f. lá-ì might thus be a sum to be "raised" or "carried forward" to the next account, usually expressed with *il* as in *AS9Irm*:2:3, *níg-ka₉ mun-gazi il-dam* "to be carried forward (to) the spice account." Compare Sollberger, *TCS* 1:146:443, "difference."

máš. 1. "goat." = *urīšu*, *AHW*:1430b *MSL* 8/1:30:215. Landsberger, *ibid.* p. 56, notes that máš is the only word for young goats, regardless of sex, in Ur III.

mun. 11. "salt." = *qābtu*, *AHW*:1377a, Thompson, *DACG*, pp. 1-3.

naga. 25. (alkaline plant). = *uhūlu*, *AHW*:1404b. The material is used for washing wool, Jacobsen, *Tammuz*, pp. 223 and 226, and Waetzoldt, *Untersuchungen*, p. 172 and n. 113, and for ritual purposes, J. Læssøe, *Bīt Rimki*, p. 10, n. 5. Goetze, *Eshnunna*, p. 27 and n. 11, read R *tē*, but that reading may be limited to *tē* = *qaqullum* "cardamon," *AHW*:901b and *tē* = *mangu*, a bean, *AHW*:602b, *CAD* M1:211a.

naga-gaz. 3. "crushed (alkaline plant)," or perhaps "suitable for crushing," by analogy to onions, Gelb, *AS* 16:57. Compare naga-kum below.

naga-kum. 1. "crushed (alkaline plant)." Both kum and gaz have the equivalent *hasālu* "to crush," *CAD* H:137a, *AHW*:333a. Gelb believes they sometimes must have different meanings since they are attested in the same text (personal communication), but the correspondence between *AS3Ses*, which uses gaz, and *YOS* 4:298, which uses kum, apparently for the same products, discussed in Chapter 2 may show that the same operation is meant at least occasionally.

naga-si-è. 40. "sprouted (alkaline plant)." Perhaps = *uhūltu qarnānitu*, *AHW*:904a, 1404b, more fully quoted, *CAD* I-J:14b. Compare Oppenheim, *AOS* 32:5f., and Salonen, *Hausgeräte* I, p. 75. Waetzoldt, *Untersuchungen*, p. 172, is unsure exactly what the product's use was in the wool industry. Civil, *RA* 54 (1960):70 and n. 4, doubts there are enough data to support Thompson's identification of the exact plant involved, *DAB*, pp. 32-35.

níg-dab₅. *passim*. "thing taken." = *nigdabbu*, *AHW*:787a. See the discussion in Chapter 1. The purposes of the "thing taken" are not necessarily cultic, as Oppenheim, *AOS* 32:92f., thought.

ni-gi₄-tum. 8. (a resin). This cannot be the same as the similar sounding ni-ik-tum since both occur in the same texts, as Gelb observed, *MAD* 3:199. Ebeling, *OrNS* 17 (1948):138 read ni-gi₄-ib and compared this product to *nikiptu*, the equivalent of an account's *šimligidba* (^d*NIN-ip-tum*), and he may well have been right since the latter spelling occurs only in an early Lagash account, and the price is roughly the same for both products.

ni-ik-tum. 4. (a resin). i.e. Akkadian *niqdu*, *AHW*:792b. Von Soden's guess "wild caraway?" on the basis of Arabic *niqda* remains hypothetical. Once in the accounts R is qualified as al-la-ha-ru, perhaps referring to the mineral dye, q.v. Note ni-ik-tum a-al-la-ha-ru in the early Old Babylonian text *BIN* 9:83:1, and compare Gelb, *MAD* 3:205 and Thompson, *DAB*, p. 65.

níg-ka₉-ak. *passim*. "balanced account." = *nikkassu epšu*, *AHW*:789a and *MSL* 5:64:168. The reading ka₉ is assured by Landsberger, *JCS* 13 (1959):129 = Ea vii 193. See the discussion in Chapter 1. Note that in later periods there is a dub-sar níg-ka₉ "mathematician," Landsberger, 23rd *ICO*, pp. 123f. Compare A. Falkenstein, *ZA* 57 (1965):100 for literary references to níg-ka₉ as table of fates and B. Foster, *Gratz College Annual* 3 (1974):4 for an unplaced date formula named for a balanced account: mu níg-ka₉-ak Al-la-ka mu 4-ka mu ús-sa-bi "year: the balanced account of Alla, its fourth year following."

níg-kéš. 4. "bound (reed) or (reed for) binding." = *riksu*, *AHW*:984. It is possible that R is yet another resin, and we are to read níg-mú (resin

- for) burning," comparing *mú-mú* = *napāhu ša*? [], "to ignite, of . . .," *AHw*:732a.
- numun-sum-gaz*. "crushed onion seed." See *sum* below and *naga-kum* above.
- numun-sum-sikil*. 4. "garlic seed." See *sum-sikil* below.
- pa-li*. 11. "juniper boughs?" Perhaps equals **ari burāši*; compare *CAD* A2:311a, B:326b, as Civil suggests in personal communication. The product is measured by volume, and perhaps pine needles or the like are at issue.
- pa-mušen*. 2. "bird feathers." = *kappi iššūri*, *CAD* K:185a, *AHw*:444a, and compare Salonen, *Vögel und Vögelfang im alten Mesopotamien*, pp. 311ff., though, p. 41, he translates "slingshot" and uses *YOS* 4:298:27 as evidence for both translations. "Slingshots" are unlikely to have occurred in such great numbers, and we have no other weapons or tools in the silver accounts.
- sa-gi(-ra)*. 3. "reed bundles (processed?)." Compare *AOS* 32:45f. The obscure line, *AOS* 32:46, n. 64, *ITT* 5:6930:2, "the key passage" in Oppenheim's view for understanding the product name, remains obscure: (so many) *m gu giš-gi-zi*, *šid-da ša giš-gi*, *u₄ 30 ku₄-ra*.
- sag-níg-GA-ra*. *passim*. "capital." See discussion in Chapter 1. As with *lá-i*, etymology is a problem. Lambert, *RA* 57 (1963):86 n. 1, expressed the traditional etymology when he translated "head of possessions"; T. Jacobsen, *Cuneiform Texts in the National Museum, Copenhagen*, p. 74, supplied "capital" as a translation. F. Kraus, *Staatliche Viehhaltung im altbabylonischen Larsa*, pp. 10-12, proposes that *níg-GA* is *níg-gur₁₁* "what has been piled up" as in *GA* = *kamārum ša makkūri*, *CAD* K:112b, and the whole is to be rendered "what has been accounted for." Compare *sannigū*?, *AHw*:1023b, but the reading *sag-gar-GA-ra* is not excluded because *sannigū* is not fully written out. Civil notes in personal communication that the new edition of Proto-Ea in *MSL* 14 establishes finally that *GAR* has a value *gar* and another *gar(a)*, the latter presumably meaning "to pile up"; this implies that *sag-níg-ga-ra* may have been used to avoid confusion with *gar*, which would be written *gá-ra*.
- sag-x-na*. 5. "bulb of (a plant)." Schneider considered this product different from *šig.ūz* and suggested it was a kind of perfume from the *hašhur* tree, *AnOr* 12:289-93. The sign *x*, *KWU* 318, is usually not too different from the *šig.ūz* sign, *KWU* 896, however, and aspects of the same plant may be at issue, as Civil suggests in personal communication. The product is once given the determinative *šim*, in *MVN* 3:160:12 (courtesy Gelb). Civil suggests from the *Auslaut* that it may be read *hirin_x* and be equivalent to *lardu* (= *hirin*) (a plant with

- high alkali content, used as soap), *CAD* L:103; Civil rejects the idea that the plant is alkaline.
- sag-sum-sikil*. 1. "bulb of garlic." Compare *sum-sikil* below and [*sag.sum SAR* = *qaqqa*] *d šūmi*, *MSL* 10:91:255.
- sig*. 25. "wool." = *šipātu*, *AHw*:1244a, and Waetzoldt, *Untersuchungen*, esp. pp. 39-60.
- sig₄-ba*. 3. "turtle shell?" Perhaps literally "turtle back." Leemans' suggestion, *Trade*, p. 25 n. 4, accepted by Hallo, *JCS* 17 (1963):60, most recently finds support in M. Cohen's identification of the *kušū* as "turtle," *JCS* 25 (1973):208, sometimes mentioned in connection with the product (written, however, *ba-sig₃*). But contrast the view of W. Farber, *JCS* 26 (1974):203f. and n. 38, who thinks *ba-sig₃* is not a turtle shell but just a kind of turtle. It seems unlikely in view of the absence of tools in other accounts that a brick-making tool, *giš-ba* = *suppinnu*, *AHw*:1060a, would be included among the acquisitions; see Oppenheim, *AOS* 32:127 for *sig₄-ba* as a tool.
- sig₁-babbar*. "white wool." = *pešātum*, *AHw*:857, Waetzoldt, *Untersuchungen*, pp. 50f. and n. 94. Waetzoldt prefers this reading because of the product's proximity to *sig-gi₆* "black wool." The later equations *sig-hād* or *sig-tam* = *hišū* "combed wool," *CAD* H:187b, *AHw*:345b, Waetzoldt finds irrelevant, p. 111 and n. 278.
- **sig-engar*. Curtis and Hallo, "Money," p. 120, misread *sig-ud_x(UZ)* thus; to be corrected with Waetzoldt, *Untersuchungen*, p. 75.
- sig-gi*. 5. (a wool). Waetzoldt, *Untersuchungen*, p. 6, takes this as wool from the *uligi* sheep.
- sig-KÜ.GI*. 2. (a wool?). See the discussion in Chapter 1, and note that in *AS7ixPd*:1:5 the metal bureau's Lu-Enlila delivers some plain *sig* for the capital of the account, implying that this product too, which occurs in capital sections, might merely be "wool of gold," i.e. for buying gold, *KÜ.GI* to be read *guškin*, q.v. The price of 18 š/m is the same as the median wool price in the accounts.
- sig-kur-ra*. (a wool). Perhaps "mountain wool." See Waetzoldt, *Untersuchungen*, pp. 41f.
- sig-ud_x(UZ)*. 3. "goat's hair." = *šārti enzi*, *CAD* E:181a, *AHw*:222a and 1191b, and compare Waetzoldt, *Untersuchungen*, p. 75 on prices. For the reading of the second sign see s.v. *ud_x* below.
- šig.ūz*. 19. (a resin). For the rationale behind this reading see Chapter 1. Schneider regarded this as a cedar product rather than cedar itself, and noted that the sign, *KWU* 896, occurs only at Umma, *OrNS* 4 (1935):178-83. This geographic observation holds true for the accounts since *giš-erin* (*KWU* 895) occurs without a price in *S47Dg*:1:9, which is from Lagash. R once has the determinative *giš* also, *MVN* 3:160:1

(courtesy Gelb), and its occurrence at the head of the resin list is analogous to *erīn* = *erēnu* "cedar" in other periods; see pp. 30ff., p. 51 and note 67 there. But it should not simply be read *erīn*, as many scholars have done. It may actually stand for a different product perhaps related to *sag-X-na*, as Civil suggests. For the cedar's role in Near Eastern history see H. Klengel, *Das Altertum* 13 (1967): 67-76.

*silā*₄. 1. "lamb." = *puhādu*, *AHW*: 875a; for various kinds see *MSL* 8/1: 34-40.

si-i-tum. passim. "balance carried forward." For occurrences see Chapter 1. The translation, precise for the silver accounts, goes back to S. Langdon, *Babyloniaca* 6 (1912): 41-53; the reading goes back to Jacobsen, *CTNMC*, p. 17 n. 1. Gelb derives the word from *šiatum* "to leave behind," *MAD* 3: 262. Compare also Lambert, *RA* 57 (1963): 90 n. 2.

su-GAN, sū-GAN. 12. (a metal). In *RA* 12 (1915): 20: 3 S34vi a quantity of copper and a quantity of *su-GAN* are called "copper of Pada the merchant," showing that *su-GAN* may be a type of copper. Gelb notes that it costs only a little more than copper, and the low price shows it is not likely to be "electrum" as Civil *JNES* 23 (1964): 7f. suggests. Limet, *Métal*, pp. 56-58, believes *R* was a separate metal and not a by-product of bronze-making, as Hallo does, *BiOr* 20 (1963): 140; if *R* were a by-product, it seems odd that the metal bureau in the accounts should frequently be in need of it.

The Lagash accounts use the writing *sū-GAN* while the Umma accounts use *su-GAN*. The reading of the second sign remains unknown since Limet's reference, *Métal*, p. 57, to Hebrew *sig, sigim*, perhaps "dross," is dubious, as Hallo noted, *BiOr* 20 (1963): 140.

sum-gaz. 2. "crushed onions" or "onions suitable for crushing." So Gelb, *AS* 16: 57. Perhaps = **šūmu hašlu*; compare *AHW*: 1275b, 334b, *CAD* H: 141b.

sum-ha-din. 6. (a type of onion). Compare *AOS* 32: 139; as Oppenheim suggested there, *R* may be connected to *sum-za-ha-din*; see *za-ha-din* below.

sum-sikil. 5. "garlic." = *šušikillum*, *MSL* 10: 91: 248 and *AHW*: 1155a.s.v. *šamaškillum*. Gelb, *AS* 16: 57, suggested the translation.

šā-bi-ta. passim. "from within it (i.e. the capital) ... (was expended)." Cf. Lambert, *RA* 56 (1962): 41. Note that *šā-bi* is possibly the designation of a kind of a tablet stored in tablet baskets of *Lu-kala*, *RA* 34: 76: 4 and *ITT* 3: 5494, in Table 16.

še. 28. "grain." = *še'u*, *AHW*: 1222a. Presumably barley is usually meant; see Gelb, *MAD* 3: 256.

**še-i-šah*. (?). Curtis and Hallo considered this a separate product,

"Money," p. 126, but it always occurs in huge quantities in capital sections and has prices within the range for *še* "grain." Since there appear to be no lexical equivalents, I prefer to interpret this product as "grain of (i.e. for buying) lard." The fact that *i-šah* does not occur in some of the texts does not argue against this interpretation in view of analogous capital entries, discussed in Chapter 2.

še-li. 19. "pine or juniper seeds." = *kikkirānu*, *CAD* K: 352a, *AHW*: 475a. *MVN* 3: 160: 13 (courtesy Gelb) uses the determinative *šim* "resin or spice" before *R*.

še-LÜ. 7. "coriander." = *kisibirru*, *CAD* K: 420f., *AHW*: 486, by analogy to Aramaic *kūšbar* and Arabic *kushbara*. Oppenheim, *AOS* 32: 26f., gives *Ur III* references, and Hoffner, *AOS* 55: 104f., discusses later uses.

šim. 13. "resin or spice." = *riqu*, *AHW*: 988a.

šim+GAR. 1. (a beer-making preparation) ? Read perhaps *bappir* (*ŠIM+GAR*) = *bappiru*, *CAD* B: 95b, *AHW*: 103bf. If this reading is correct, the product is a rare connection with brewing in the accounts; note that *še-li* is received, however, by the brewery as seen in Table 20 above. Since, as Civil has pointed out, *Oppenheim AV*, p. 76, *bappir*₂ is measured usually by volume and not by weight, the reference in *AS5xiPd*: 3: 8 to 15g of *R* might mean .25s, if the liquid capacity measure is used in the accounts.

**šim-ḥabbar*¹. Considered a separate product by Curtis and Hallo, "Money," p. 122, both entries have the last sign broken, and both have the same price as *šim-dūg*, which does not occur in these accounts. Probably therefore this product is identical to *šim-dūg*.

šim-ba₅-KU-LUM. 2. (a resin). Compare also *bu₆-KU-LUM*, *UM* 29-15-509 G, where 4m cost 5š each, and *bu-lu-hu-um*, *TMHC* 307, where 267m cost 3.75š each. Perhaps these are spellings for the resin *baluh-hu*, *CAD* B: 74f, *AHW*: 101a *MAD* 3: 95, but that identification is uncertain. Thompson's identification of *baluhhu* with storax and galbanum, *DAB*, pp. 340ff., is hypothetical.

šim-dūg. 11. "good or sweet resin." Supposedly = *riqu tābu*, Ebeling, *OrNS* 17 (1948): 129, though the equation is not lexically attested; compare *riqē tābūte*, *AHW*: 988b. *R* is a specific resin in the accounts and does not seem to be a better quality of another resin; note for example that the median price of plain *šim* in the accounts is considerably more (60š/m) than that of *R* (9 š/m).

šim-gam-gam(-ma). 15. (a resin). Compare *šim-gam-ma* = *šumlalū* (an aromatic), *CAD* Š: 245a, *AHW*: 1111b. Thompson's identification, *DAB*, p. 347, is hypothetical. Note that *šim-gūr-gūr* (*GAM-GAM*) = *kukru*, *CAD* K: 500b, *AHW*: 501a, but this product is found in the accounts as (*šim-*)*gu₄-ku-ru*, another spelling for *kukru*, and

cannot be the same as R, as noted by R. Biggs, *RA* 69 (1975): 186 n. 1.

Etymologically gam-gam may be related to kin gurum₄(GAM)-ma = *hamadīru* "shriveled," *CAD* H:57b, *AHw*:315a.

šim-GĀN. 13. (a resin). Perhaps literally "field resin." Ebeling, *OrNS* 17 (1948): 139, notes that šim-eš-ha-ra = *sappandu*, and that GĀN may be read išhuru₃, perhaps meaning mustard. But *sappandu* is only lexically attested, *AHw*:1027a. Note that Copy 24:12f. has gal-gal "large" and tur-tur "small" varieties of the product; the implied plurality would accord well with seeds.

šim-gi. 2. (a resin). There are apparently no lexical equivalents; cf. ŠL 2:215:33, but compare gi and gi-dūg-ga, which may be resins rather than reeds, and which have prices in the same range as those for R.

Sharashenidze's reading of gi, which he interprets as always meaning R, as zi is certainly incorrect, *VDI* 1976 (3):109:2, 117:3. His reference to Falkenstein, *AnOr* 28:60 šim-zi(-da) "rechtes Parfum" (Cyl. A XXVII 9, 24) is in the context of a listing of substantives with adjectives (ibid., p. 59) and does not imply that Falkenstein thought this was a separate product. Sharashenidze correctly copies gi (KWU 123), pp. 110:10, 111:33, and not zi (KWU 125).

šim-gig. 5. (a resin). = *kanaktu*, *CAD* K:135a, *AHw*:434b. *CAD* K:136 correctly rejects Thompson's identification. *DAB*, pp. 344ff., as opopanax or olibanum and says that the evidence points to "a tree growing in mountains (but capable of acclimatization in Assyria)," referring to the "mountain *kanaktu*."

(šim-)gu₄-ku-ru. 16. (a resin). i.e. *kukru*, *CAD* K:500b, *AHw*:501a. Ebeling's identification with "melilotus," *OrNS* 17 (1948): 137, and Thompson's with "fir-turpentine," *DAB*, pp. 262ff., are hypothetical. The product is equated with šim-gam-gam. q.v., in later periods. The determinative šim is optional as may be seen from AS4Sgk:2:17 (with šim) versus AS4Sgk:4:6 (without). The spelling šim-gúk-ku-ru, Copy 24:14, can be added to those in *MAD* 3:143.

šim-hi-a. 15. (a resin). = *ú-ru-ú*, *MSL* 5:102:109; glossed *lahānātu* "frankincense," *CAD* L:8b, by analogy to Hebrew *lēbōnāh*, etc; compare *lahanātu* "incense," *AHw*:522a. If R is frankincense, it is found only in southern Arabia and northern Somaliland, G. van Beek, *BiAr* 23/3 (1960):69-95, esp. pp. 72-75.

Etymologically šim-hi-a means "assorted resins" and appears clearly in that meaning in *UM* 29 15-509 (courtesy Gelb) in a total of silver values of several kinds of resins. In the accounts-R appears to be a specific resin, but the wavering between measurement by volume and by weight may show that such is not always the case.

šim-IM. 10. (a resin). Ebeling's guess, *OrNS* 17 (1948): 137, relating IM to *šāru* "wind" and R to "incense" had not yet been supported by lexical evidence. Perhaps R comes from IM^{ki}, i.e. Karkar, between Umma and Adab; see Sjöberg, *TCS* 3:119 and Edzard, Farber, *Répertoire*, p. 92, but note that the names of two other cities in Mesopotamia, Muru and Enegi, are written with the same signs, ibid. p. 84.

šim-ligidba (^dNIN-ip-tum). 1. (a resin). = *niqiptu*, *AHw*:788b. The writing is quasi-phonetic for *niqiptum*, as may be seen from Copy 24:11 šim-NIN-ki-ip-tum. Cf. *MAD* 3:201 and s.v. ni-gi₄-tum above for the possibility that the two products are identical. Compare in a literary context C. Wilcke, *Das Lugalbadaepos*, p. 55:104.

šim-TUM_xA-KI. (a resin). R may perhaps refer to šim-x, as in sag-x-na, q.v., and the final -ki may be a poorly written -na. The other products in *TMHC* NF I/II:307 seem to be ones that commonly occur in the accounts.

šu ba-ti. passim. "(s)he took." = *ilteqe*, *imtahar*; *MSL* 1:22:26f. ti in R is a weak form of the verb te; see Hallo and Van Dijk, *YNER* 3:91, and Yoshikawa, *JNES* 27 (1968):259. There seems to be no difference in meaning between *lequ* and *mahāru* in these contexts, as observed for Old Babylonian by E. Pritsch, "Zur juristischen Bedeutung der *šubanti*-Formel," *F. Nötscher AV.*, pp. 175f. Lambert's suggestion that the formula always represents an order that a credit be established for the person, *RA* 53 (1959):216, 54 (1960):113ff., 55 (1961):48ff., finds some support in the observations made in Chapter I that the formula does not imply physical presence, as well as Waetzoldt, *Untersuchungen*, Text 69 S42/AS6vi: sig, nig-sām, gu₄-šè, Ur-gú-en-na šu ba-ti, mu Ur-gu-en-na dam-gār-šè, kišib A-gi₄ dam-gār "... wool, the purchase price of an ox, Ur-guena took; for Ur-guena, the merchant; received by Agi, the merchant."

The accounts use *šu ba-ti* instead of the more explicit *šu ba-an-ti*, which seems to appear at Nippur and Ur. For the peculiarities of Nippurian writing and phonetics in Ur III see in general H. Sauren, *ZA* 59 (1969):11-64.

šu-nigin. passim. "total." (=) *napharu*, *AHw*:737a.

šu-nir. "emblem." = *šurinnu*, Limet, *Métal*, pp. 228f., *MSL* 6:87:39ff., *AHw*:1283b. Curtis and Hallo, "Money," p. 135, interpreted AS8xiiUre:2:20 as the price of one "emblem." The text reads: 270š šu-nir gú-dè-na. Whatever the second element of the entry means, the absence of further pricing and the fact that these emblems regularly were made of metal show that this entry refers only to silver for making or for buying an emblem but is not the price of a finished product. Compare the first entries in NBC 253:3 and 237:1 (Copies 16 and

- 22), both (so much) kù šu-nir gú-edin-na "silver of an emblem of ?."
- šu-úr-me. 10. (a resin). Akkadian *šurminu*, *MSL* 5:111:225, *AHw*:1284 "cypress." Kinnier-Wilson, *ZA* 54 (1961):87, notes that the usual equation with cypress is based on the questionable equation with Arabic *šarbīn* ("a variety of larch," H. Wehr, *A Dictionary of Modern Written Arabic*, p. 463; note Von Soden also mentions Arabic *sarw* "cypress"). Kinnier-Wilson suggests rather that R is a "Persian oak and its acorns," coming therefore from the east of Mesopotamia.
- tám-še-lum. 9. (a resin). perhaps = *šimeššalu*, "type of boxwood" (*AHw*:1237b), as suggested by Ebeling, *OrNS* 17 (1948):141. See *MAD* 3:186 for Ur III references and note giš-hašhur-dam-šil-lum = ŠU, *MSL* 5:97:40.
- TUN. passim. "(a bureau connected with the royal establishment at Umma)." See the discussion, Chapter 2. Oppenheim's suggestion that one should read gín and connect it with a weight measurement, *AOS* 32:138, is unlikely, and Jacobsen's translation "crown," *Tammuz*, p. 174, n. 2, is not precise enough, though the bureau's exact function remains unknown.
- u₈ I. "adult female sheep." = *immertu*, *lahru*, *CAD* I-J:128a, L:42b, *AHw*:378a, 528b.
- ud_x (ÜZ). 1. "goat." = *enzu*, *CAD* E:181a, *AHw*:221b. For the reading see Landsberger, *MSL* 8/1:28:192a and note. For the use of the word especially in relation to máš (also "goat") in Ur III see *ibid.* pp. 56f.; the distinction seems to be that máš is used for the young of both sexes and for male goats while ud_x refers to female goats in Ur III.
- udu-nita. 2. "male sheep." = *zikaru*, *MSL* 8/1:7:7, *CAD* Z:110ff. udu "sheep" = *immeru*, *CAD* I-J:129, *AHw*:378a.
- ugú PN ba-a-gar. passim. "credited to PN." Civil has suggested reading ugú for A.KA, to be considered equivalent to Akkadian *eli* "at the debit of," *JNES* 32 (1973):58f. A.KA has been translated "account," e.g. by Sollberger, *TCS* 1:97 item 33, but in the silver accounts it seems to have no reference to accounts except in the loose sense of R and its derivative, ugú-a gá-gá "(to be) placed in the account." Lambert proposes "dépôt sur la garantie de," but that is too specific for the accounts, *RA* 57 (1963):195 sub 32 and n. 31. Here the meaning is a very general crediting that does not imply the physical presence of the receiver; see above, Chapter 1.

For the element -a- in ba-a-gar as a locative infix see Yoshikawa, *OrNS* 46:4 (1977):447-61, esp. pp. 449-51 for numerous Ur III references.

Ü-NINNI₅ (TIR_{TID}). 2. (a resin?). = *abukkatu*, *ašlu*, *ašlukatu*, *elpetu*, *kililu*, *ur-*

- batu*, *CAD* A1:81b, all rushes and the like, but note *hil abukkati* (a resin), *ibid.* 81f. In view of the possibility that some of the reeds in the accounts are resinous (see s.v. gi, šim-gi), we have rather arbitrarily classified R as a resin. Note also that NINNI₅ without Ū has the reading karadin₆ which may = *nagappu* (a vegetable), *AHw*:709b, and this also is a possible meaning of R.
- urudu. 19. "copper." = *erū*, *CAD* E:321b. Compare Limet, *Métal*, pp. 30ff., and Hallo, *BiOr* 20 (1963):40; the product name can sometimes be a general term for metal, but it seems not to be in the accounts, except as a determinative in A.LÜ-urudu, q.v.
- Muhly, *Copper and Tin*, pp. 220-32, examines the evidence for a southern and a northwestern source; compare also Limet, *Métal*, pp. 85-99, and the discussion above.
- Ü-TIR. 5. (a resin). Not identical to Ü-NINNI₅ since both occur in the same text, and the latter is measured by weight while the former is measured by volume. See for references *ŠL* 3:375:11 and *AOS* 32:57. Perhaps this writing is short for later ū.din.tir = *zibū* "black cumin" or something similar, *CAD* Z:104b. Compare zi-ba-tum below.
- za-ba-lum. 11. (a resin). = *supālu*, *AHw*:1059b. Kinnier-Wilson rejects the traditional translation "juniper," calling this "a local variety of cedar," perhaps from the Zagros, *ZA* 54 (1961):86f. Compare *MAD* 3:240 and note von Soden translates both *supālu* and *burāšu* (see above under še-li) as "juniper," *AHw*:1059b, 139b.
- za-ha-din. 2. (a type of onion). = *sahatinnu*, *šuhatinnu*, *AHw*:1261a and *MAD* 3:238. Compare sum-ha-din above.
- zi-ba-tum. 1. (an aromatic seed?) Perhaps the same as *zibitu*, *CAD* Z:103b; compare the discussion *ibid.* p. 103a s.v. *zibibānu*, later "black cumin," and the similar product Ü-TIR above; the prices of this latter and R are not similar. (*MAD* 3:305's "grain" is to be emended). Perhaps gu-zé-ba-tum, q.v., is a cord made from the fiber of R, as Gelb suggested in personal communication.
- zi-gú-gal. 3. "chick pea flour." Presumably = *qēm hallūri*, *AHw*:913a, 313a, *CAD* H:47b. Compare gú-gal above.
- zū-lum. 29. "dates." = *suluppu*, *AHw*:1057a. These are "dry dates" as opposed to "fresh dates" (giš-gišimmar-u₄-hi-in = *uhinnu*, *MSL* 5:120:328), Landsberger, *Afo Beiheft* 17, pp. 17f.

CHAPTER 6

Conclusions

The reconstruction of the Ur III silver balanced account system suggests some hypotheses about economic life and methods of study. All of these require further research but are offered here with due reserve under the categories of the role of merchants, trade systems, price study, and methodology.

The role of merchants. Not all persons who bear the title of merchant in Ur III sources are involved in the silver balanced account systems of the various cities. Though the merchants involved in the account systems may be closely related by blood or by organization, it is unlikely that all titled merchants are so related. This seems to imply that the title merchant may be, as Fish believed, a general indication of a class of persons and not a narrowly professional designation.¹

It has been suggested that the Ur III silver account merchants were in some way the cutting edge of economic change, that their use of silver as money means that they were in the forefront of the presumed transition from a statist to a capitalist economy.² We have seen, however, that the connection between silver and merchants goes back at least to the Fara period and is probably based on the ease of transport and generally accepted value of silver. Recent study has shown that the private as opposed to the royal or temple sector of the economy had a long history even in supposedly statist eras³ and in presumably capitalist eras the role of the crown continued to be important.⁴ Such continuity implies that the Ur III silver accounts may represent no special evolution in the economy but rather an evolution in the way economic activity was documented.

Trade systems. The Ur III silver account system has earlier and later analogues. There are differences in the systems over time, seen for example in Leemans' view that goods were sometimes exported eastward from

Mesopotamia in the Old Babylonian period⁵ and in the non-standard accounting forms noted in Chapter 1. But the Ur III system may be the best documented portion of a millennia-long trend in acquisitions systems formed to acquire goods which some of the great organizations did not themselves produce. Insofar as some of these goods were foreign, the systems reflected the geographic advantages and handicaps of the Mesopotamian plain.⁶

Price study. With the possible exception of some products with extremely stable prices, it does not appear that there was any effort on the part of the state or anyone else to control prices in the Ur III period. The fact that prices were considered worth recording implies that they were expected to change and did change. The reasons for price fluctuations in general elude us, but they probably should be sought in the economic life of the period and not in political developments, of which we know little.

Methodology. The Ur III period has a wealth of documentation, and I have been able to use it in several instances to trace what appear to be exactly the same commodities in their progress through the distribution system. This suggests that in other periods it may also be possible to trace specific commodities and to gain a fuller view of the systems involved.⁷ Such attention to detail may go a long way toward reconstructing ancient Mesopotamian economic relations, may help elucidate the nature of economic and social life in general, and may give us a quantitative check on the purely qualitative judgments which sparse documentation allows.

1. "Dam-qar," p. 162.

2. Curtis and Hallo, "Money," p. 112.

3. I. J. Gelb, "On the alleged temple and state economies in ancient Mesopotamia," *Vollterra A. V.* (Rome, 1969), pp. 137-57, esp. pp. 146ff. Compare similarly I. M. Diakonoff, *Beiträge zur sozialen Struktur des alten Vorderasien* 1 (1971): 18-20.

4. N. Yoffee, *The Economic Role of the Crown in the Old Babylonian Period* (Malibu, 1977), pp. 143-51, especially 149f.

5. Leemans, *Trade*, pp. 92-96. His texts 4.7 and 4.8 dealing with resins do not substantiate this view since trans-Tigridian geographic names are not mentioned; it is clear only that the person selling resins was not where the addressee was, probably Sippar. Other texts Leemans cites there do show trans-Tigridian relations in connection with other products and persons. Compare also the role of the merchant in first millennium Mesopotamia as outlined by M. Dandamajev in the study cited Introduction, n. 24.

6. Outlined in Leemans, *Trade*, pp. 114-16, Oppenheim, "Trade," pp. 8-10, and C. C. Lamberg-Karlovsky, "The economic world of Sumer," D. Schmandt-Besserat, ed., *The Legacy of Sumer* (Malibu, 1976), pp. 59-68.

7. Trolle Larsen has been able to do that in Old Assyrian sources, *Procedures*, pp. 8-20.

APPENDIX I

Indices

Entries in the name indices give the contexts of the names in the text citations for the persons, institutions, and places that occur in the accounts. Though this information duplicates some of the information in the various tables, it is intended to serve as a more useful substitute for transliterations of all the texts. Prices in these sections are omitted from all entries but may be found by comparison with Chapter 3 under the product name. References in parentheses after names are to Tables 14 through 27 in which persons' activities are related to the various bureaus. Also included are names and words occurring in the non-account texts published in Copies 16 through 24; contexts have not been given for these references.

I have followed Limet, *Anthroponymie*, and Gelb, *MAD 3*, in reading personal names.

The word index includes words in the accounts and the non-account texts published here which are not personal names, institutional or professional names, or place names. Only the line reference is given for each entry; priced products are included with references to where they can be found in Chapter 3.

PERSONAL NAMES

A-[]

10s esír-é-a . . . k. R SS5Pd:23

A-a-kal-la See A-kal-la.

A-ab-ni

90š kù esír Šà-guškin d. R sbt AS5SesA:2:10

A-a-mu

20s zì-gú-gal . . . ndb giš-kin-ti^{ki} R gîr UrSPE AS5xiPd:2:8

60s naga . . . ndb giš-kin-ti^{ki} ki R AS7ixPd:3:5

A b-ba-gi-na (Boat bureau)

2 s i-UD.KA . . . Ga-eš^{ki}-šè k. R. AS6xiUrDZ:6:3

5 giš-pèš še-cr-gu . . . k. R AS6xiPd:4:11

18000 pa-mušen . . . ugú R . . . SS6Ab:2:5

60 giš-ù-suh₃ mi-ri-za . . . k. R SS6Ab:2:12

ssc dg-ne R SS6Ab

A-bu-ni

41s naga-si-è . . . níg-sikil GíR-kin-ti^{ki} R gír Ur-sag-ku₅
AS5xiPd:1:19

A-da

[] kb, R sbt AS9UrDZ:4:27

A-da-BI

1s še-li . . . ndb R AS6xiUrDZ:2:5

Ad-da

1800s . . . sám urudu ki R-ta AS9UrDZ:1:8

Ad-da-da (Cf. Royal bootery)

10s im-babbar-kum . . . ndb kuš-šuhub_x lugal, ki Šu-eš₄-dar,
gír R 19: AS5xiPd:2:27

A-du

2s i-giš . . . k. R AS6xiSes:2:10

A-du-mu

1333s esír-é-a . . . k. R AS8xiiUrDZ:2:19

360m esír-hád . . . k. R AS9UrDZ:8:21

A-gu (Cf. Crafts)

180š kù sám giš-nak-KUL k. -bi 2-àm k. R AS5xiPd:4:17

20 giš-nak-KUL . . . k. R AS5SesB:2:16

180s esír-é-a . . . k. R AS5LIn:22

10s esír-é-a . . . k. R AS6xiSes:2:11

10s naga-si-è . . . k. R AS6xiUrDZ:4:24

8.5m esír-hád . . . k. R AS6xiPd:4:6

210s esír-é-a . . . k. R AS6xiPd:5:1

190s esír-é-a . . . k. R AS7viiUrDZ:3:24

60s esír-é-a . . . k. R AS7ixPd:3:8

ssc níg-ka₉-ak dg šà bala-a gír R AS8Ag

180s esír-é-a . . . k. R AS9xPd:2:35

75s esír-é-a . . . k. R AS9xPd:3:51

720š kb k. R AS9UrDZ:3:34

1m šim-hi-a . . . k. R AS9UrDZ:8:19

725s esír-é-a k. 12 R SS2UrDZ:3:21

2 giš-ŠEDÜG . . . k. R SS6Lkl:7:27

A-kal-la, also A-a-kal-la (In texts using the latter spelling the full spelling is given. Cf. Leatherwork)

1.10s al-la-ha-ru . . . k. R ašgab AS4UrDZ:3:14

15s al-la-ha-ru . . . k. R ašgab AS5xiPd:4:21

1 kuš-ummu_x k. R ašgab [] AS5LIn:29

[] al-la-ha-ru . . . [k.] R AS6xiUrDZ:5:27

20s al-la-ha-ru . . . k. R ašgab AS6xiPd:5:6

8m zi-ba-tum . . . k. R ašgab AS7viiUrDZ:4:2

30s naga-[si]-è.k.R ašgab AS8xiiUrDZ:2:15

120s naga . . . k. R ašgab AS9UrDZ:8:29

30s naga . . . k. Lú^dNagar-pa-è ugú R AS9UrDZ:8:31

5s al-la-ha-ru . . . k. A-a-kal-la ašgab SS2UrDZ:4:7

5s im-KÜ.GI . . . k. A-a-kal-la ašgab SS6Lkl:8:28

2. (blank)še . . . še i-šah engar-gu₄-diri ki A-kal-la nu-banda₅-
ta AS5Inm:1:4

3.(?) níg-ka₉-ak kù A-a-kal-la[]/Ur-^dDumu-zi-[]SS7Aak:25

4.(?) Copy 19:2:11; Copy 20:11 and seal

AN.BU₆.ZI Read perhaps ^dPù-gi? Cf. MAD 3:138

60s esír-é-a . . . k. R AS6xiSes:2:7

3 giš-hašhur 3-kùš-ta . . . k. R AS6xiPd:4:20

An-né-ba-du₇

[] zú[-lum] . . . ki R-ta S47Dg:1:2

A-tu

10s šim-hi-a, R sagi AS4Sgk:2:4

BA₁₁.BA₁₁

60s i-giš . . . dam R k. nu-ra-a k. UrSPE AS7viiUrDZ:3:14

Ba-sig₅

60m ?[] . . . sa[gi] aga₂-ús ensí AS6xiUrDZ:6:21

20s naga-si-è . . . k. R SS6Lkl:8:34

Ba-ša₆

Copy 16:2:3

Da-a-ga

1500s še . . . gír R AS7ixPd:1:10

Da-a-gi, also Da-a-gi₄

380s esír-é-a . . . k. Da-a-gi₄ AS6xiUrDZ:5:21

180s esír-é-a . . . é Ga-eš^{ki}-šè, k. R AS7viiUrDZ:5:11

Da-da

Copy 18:1:18

Da-da-ga (Cf. Royal bureau)

26s esír-é-a . . . giš-me-dím giš-mi-ri-za má-gur₈ lugal-ka-ke₄
ba-ab-su-ub, k. R. AS7viiUrDZ:4:24

Dan-i-li

6 giš-ù-suh₅ apin-gal giš-ig-šè . . . na-kab-tum Uri^{ki}-ma ku₄-
ra, gír R lú-kin-gi₄-a lugal AS5SesA:1:14

Dingir-ra (Cf. Governor)

180s esír-é-a . . . má-gur₈ ensí-ka-šè k. R AS6xiUrDZ:5:18

65s esír-é-a gi X su-bu-dè . . . k. R AS9UrDZ:8:11

70s esír-é-a šu giš-ùr-ra-ke₄ ba-ab-su-ub . . . k. RSS2UrDZ:4:22

Dùg-ga

ssc níg-ka₉-ak níg-sa_x(NINDÁŠE)-a R dg S47Dg

É-lu-bi (Cf. Ur)

1716š kù sám urudu Uri^{ki}-ma gír Ur^dLama ù R DAG AS5xiPd:4:23

1530š kù urudu Uri^{ki}-ma gír Ur^dLama ù R BI AS5SesB:2:19

1710š kù urudu Uri^{ki}-ma gír É-lú-bi zu k. Lú-kal-la AS6iiKd:2:13

Eš₄-dar-HUR.HUR.SU₆?

6 šu-mah-su₆ R S29Urs:3:16

É-zi-mu

2s ì-šah ... un-il-me gír R S43xGdl:3:10

GÁl-dùl

ssc níg-ka₉-ak R dg S43xGdl

GAR.LAGAR.E

630s esír-é-a ... k. R AS4iUrDZ:3:10

1800m esír-hád ... k. R AS4UrDZ:3:17

300s esír-é-a ... k. R AS6xiUrDZ:5:15

Gír-^dBa-ú-ì-dab₅

15s zú-lum gír R S43xGdl:2:18

Gu-du-du

540š kù sám giš-ù-suh₅ ù gigir? mu SS7 k. R SS7Aak:11

Ha-ba-ba-tum

.17s se-li ... ndb KAŠ.KAM ki ^dŠul-gi-uru-mu gír R AS5xiPd:3:10

Ha-lu₅-lu₅ (Cf. Metal)

.63 m su-GAN ... k. R. AS9xPd:3:60

Hu-ba

20s naga-si-è ... ndb Šu-še-é?-a ki Zabar-dab₅ gír R AS5xiPd:2:31

Hu-li-bar

30s še ... šà-gal ANŠE.BAR.AN R k. Lú-gi-na AS6xiSes:2:8

Hu-ud-da

3m sÍG.ÜZ ... gír R dam Pád-da AS7ixPd:5:11

Hu-wa-wa

185s esír-é-a ... k. Hu-wa-wa AS9xPd:2:32

3780s esír-hád ... Hu-wa[] AS9UrDZ:3:24

Igi-si₄

60s še ... k. R AS6xiPd:3:23

60 naga ... k. R AS7viiUrDZ:4:7

Ì-kal-la (Cf. Royal wardrobe)

360m im-babbar ... k. R AS4iUrDZ:3:13

33.67s ì-šah ... k. R AS6xiSes:3:4

1800m im-babbar ... k. R AS7viiUrDZ:4:16

900s naga-si-è ... k. R AS7ixPd:4:13

2100s naga ... ugú R ba-a-gar k. Ur^dNun-gal AS8viiUrDZ:3:33

Inim-ma-LU (Cf. bala)

28500s še ... iti (Umma vi) níg-sám-ma bala-a-šè R-ta SS2UrDZ:1:15

Inim-ma-ni-zi

ssc AS5Inm

Copy 18:2:10

In-ti-la

120s zú-lum gír R S43xGdl:2:16

Ir₁₁-mu

11739s še ... ki R d. Lugal-pirig-tur-ta S44iUrSPE:1:1

900s gú-gal ... gír R AS9Irm:1:7

ssc níg-ka₉-ak dg šà bala-a gír R ù Ur-^dNu-muš-da AS9Irm:2:6

Ka-ku₅

400š kù gig ki R ù Lú-^dInanna-ta AS4iUrDZ:1:7

Kud-da

ssc AS6iiKd

Kù-ga-ni

3m šu-úr-me ... k. R AS8viiUrDZ:3:30

Kù-^dNin-ur₄-ra

Ur-gi₆-pàr Ur-^dNun-gal ù R-ke₄ íb-ba AS4UrDZ:4:3

Li-še-na Compare perhaps Li-ša-núm MAD 3:164

450s naga-si-è ... ndb è? Ur?-lugal ki R gír Ur-^dDa-mu AS5xiPd:2:18

Lú-bala-sig₅

56s sum-ha-din igi-nu-sig₅ ... k. R SS5Pd:27

Lú-dùg-ga

16500s ... še R AS4dgn:4:1

60s naga-si-è ... k. R SS2UrDZ:4:19

360s naga-si-è ... k. R SS6Lkl:8:31

10s naga-si-è ... k. R SS6Lkl:8:37

Lú-^dEn-líl-lá (Cf. Metal)

2.5m su-GAN ... k. R AS4iUrDZ:3:18

.25m su-GAN ... k. 3 R AS4UrDZ:2:1

19.83m urudu ... R sbt AS5PdA:3:1

c 4.4m urudu ... k.-bi 3-àm k. R AS5xiPd:3:37

18m urudu ... R sbt AS5SesA:2:2

c4.46m urudu ... R sbt AS5Inm:3:11

6.63 urudu ... k. R AS5Lln:19

10800š[+ X]kb, iti (Umma iv), 6420š kù iti (Umma vi), 5400š kù iti

(Umma ii), mu (AS6) gír R AS6iiKd:2:7

10m im-babbar ... k. R AS6xiSes:3:2

1.5m[]lá 60š su-GAN ... k. R AS6xiUrDZ:5:34

- 300m sig-KÜ.GI i-bí-za-bi 10g gir R AS7viiUrDZ:1:8
 2.31m su-GAN . . . k. R AS7viiUrDZ:4:21
 567m sig . . . gir R AS7ixPd:1:5
 1.81m su-GAN . . . k. R AS8viiUrDZ:1:15
 .2m su-GAN . . . k. R AS8xiiUrDZ:2:3
 3s esír-é-a . . . k. R AS9UrDZ:3:31 (price blank)
 1.033m X (su-GAN?) . . . k. R AS9UrDZ:8:36
 1m su-GAN . . . k. R SS2UrDZ:3:18
 .17m AN.NA . . . ugú R . . . SS6Lkl:8:5
 Lugal-an-dùl
 R ensí S29Urs:16:4
 30s naga . . . 'ndb' ki R AS5xiPd:3:35
 Lugal-ba-ra-ab-è
 [] níg-dab₅ gazi-urudu gir R AS9UrDZ:4:1
 Lugal-dub-lá
 [] naga-si-è . . . ndb Ur?-lugal ki R AS5xiPd:2:24
 Lugal-e-ba-an-ša₆ (Cf. Boat bureau)
 780 esír-hád . . . k. R AS5xiPd:4:19
 6060m esír-hád . . . k. R AS9UrDZ:8:26
 8020m esír-hád . . . k. R SS2UrDZ:3:26
 300m U.NINNI₅ . . . k. R SS6Lkl:8:19
 Lugal-ezen
 Copy 16:1:5; Copy 17:2:11; Copy 20:10
 Lugal-GAR.LAGAR.E (Cf. Dukuga)
 270š kb níg-sám-ma šuku^dInanna ù nisag^dEn-líl-lá mu (AS4)
 k. R AS4iUrDZ:2:12
 225m im-babbar . . . ndb Du₆-kù-ga k. R AS5xiPd:4:4
 [2]40š ku-mul . . . k. R AS6xiSes:2:9
 //ndb Du₆-kù-ga k. R// AS6xiSes:3:12
 140s še-LÚ . . . k. R AS7ixPd:3:11
 24s gú-gal . . . k. R AS9xPd:2:42
 2.5s lál . . . ndb Du₆-kù-ga k. R AS9xPd:3:54
 1080š kb ndb Du₆-kù-ga k. R SS2UrDZ:4:25
 27s sum-za-ha-din igi-nu-sig . . . k. R SS2UrDZ:7:8
 Lugal-hé-gál
 ssc AS4Lgh
 Copy 18:1:15
 Lugal-húl?
 34 giš-ù-suh₃ giš-a-ra má 30-gur . . . na-kab-tum-ma ku₄-ra k.
 R tūmu-dam AS6xiUrDZ:3:18
 Lugal-I[M?]
 20s esír-é-a . . . k. R AS6xiPd:4:14

- Lugal-kù-ga (Cf. Agriculture)
 5160 ku₆-gam-gam ki R d. Ur-^dEn-[] AS4dgn:1:17
 Lugal-kù-zu (Cf. Metalwork)
 1740š kb gir R AS4Sgk:1:3
 10s naga-kum . . . ndb é kù-dím ùr-ra-ka ki R AS5xiPd:3:3
 Lugal-má-gur₈-re (Cf. Boat bureau)
 3600š kù má su-a gir R AS7ixPd:7:1:14
 Lugal-MÚRUB-e
 7m sig . . . ki R-ta AS9UrDZ:1:20
 300m sig . . . R-ta SS2UrDZ:1:2
 20m sig-gi . . . ki R-ta SS5Pd:3
 1800š (še) . . . ki R-ta mu SS5 SS7Aak:5
 Lugal-NÍG.BA-e
 390s še-LÚ . . . ugú R ba-a-gar As9Irm:1:10
 Lugal-nir (Cf. Šara's House)
 10s esír-é-a . . . gi é^dTaxKUR?-IB-ka é^dŠará-ka-ke₄ ba-ab-su-ub
 k. R AS9UrDZ:8:39
 596m im-babbar . . . zi-ga é^dŠará-ka k. R SS6Lkl:7:19
 Lugal-nir-gál (Cf. Royal bureau)
 360s esír-é-a má^dLama^dAs-ka-še k. R AS7viiUrDZ:4:9
 Lugal-pirig-tur
 11730s še . . . ki Ir₁₁-mu d. R -ta S44iUrSPE:1:1
 Lugal-ša-lá
 2s geštin-hád gir R AS5SesB:2:14
 Lú-gi-na
 5g kù-huš R AS5xiPd:1:8
 30s še . . . šà-gal ANŠE.BAR.AN Hu-li-bar k. R AS6xiSes:2:8
 Lú-^dGiš!-bar-è
 120m im-babbar . . . gir R S43xGdl:3:3
 Lú-^dHa-ià
 3s gu₄-ku-ru . . . k. R AS8viiUrDZ:3:25
 800m esír-hád . . . k. R AS8xiiUre:2:8
 300s numun-sum-sikil . . . ugú R . . . SS6Lkl:9:36
 Copy 18:1:24 []-^dHa-ià; Copy 21:2:13
 Lú-lb-gal
 [g]ur? k. R AS4Sgk:3:3
 Lú-igi-ša₆-ša₆
 20s gazi . . . ndb Ur^{ki}-ma k. Ur-^dNin-Kimar gir Lú-^dŠará d. R
 AS3Ses:2:5
 Lú-^dInanna
 450š kù DU₆? sám NU.UM 1080š R sbt AS2xiiiUrT:2:5
 400š kù gig ki Ka-ku₅ ù R-ta AS4iUrDZ:1:7

3000s zú-lum . . . R sbt AS4UrDZ:3:20
 ssc níg-ka₉-ak R dg AS5LIn:34
 Copy 18:1:12
 Lú-kal-la (Cf. Governor; Comptroller; Metal; "Kitchen Oil"; Šara's House)
 10800š kb. k. R ki Ur-TAR.LUH mu-^{du} AS2xiiiUrT:2:2
 10800š kb kù R AS3iUrDZ:1:6
 //ki R-ta (: misc. capital) AS3iUrDz:2:25
 10800š kb guškin-ta gur-ra R sbt AS3iUrDZ:3:46
 9000s še . . . [] a-rá 2-kam ki R-ta AS3Ses:1:2
 200š kù sám zabar 3660š kù R sbt AS3Ses:2:12
 900š kù ki R-ta AS3Pd:1:5
 20m im-babbar . . . k. R 5400š kb R sbt gír UrsPE kù-dím k. nu-
 ra-ra AS4iUrDZ:3:21
 21.75m u[rudu?] . . . k. R AS4UrDZ:1:17
 6300š kb gír R AS4Sgk:1:1
 šn 14040š kù kuš ki R-ta AS4dgn:3:13
 10632š kb k. R AS5PdA:3:4
 //k.-bi 4-ám k. R AS5xiPd:3:30
 3600š kb mu (AS4) 1800š kb mu (AS5) R sbt AS5SesA:2:5
 29910š kb a-rá 1-kam 9900š a-rá 2-kam R sbt AS5Inm:3:3
 38.5m urudu . . . k. R AS5SesB:2:7
 2340š kb a-rá 1, 360š kù iti (Ummi), a-rá 2-kam, R sbt AS5LIn:15
 1710š kù urudu Uri^{ki}-ma gír É-lú-bi zu k. R AS6iiKd:2:13
 15s lál-sig₈ . . . k. R AS6xiSes:2:6
 7200š kb R sbt 3600š kù k. nu-ra-a R AS6xiSes:4:2
 (erased)š kù sám kù-huš šā Nibru^{ki} ki R-ta AS6xiUrDZ:1:16
 21900š kb R sbt AS6xiUrDZ:2:1
 //k. R (: i-giš, etc.) AS6xiUrDZ:3:12
 //k. R (: resin list) AS6xiUrDZ:3:27
 //k. R (: esír-é-a) AS6xiUrDZ:5:11
 1380m im-babbar . . . k. R AS6xiUrDZ:6:16
 .5 giš-pěš še-er-gu . . . ndb i ugú lugal mu (AS5) k. R AS6xiPd:
 3:16
 60s esír-é-a . . . //k. R AS6xiPd:5:13
 10m im-babbar . . . k. R AS7viiUrDZ:5:8
 //k. R (: AN.NA etc.) AS7ixPd:4:4
 .05m ⁶⁵LĀL.HUR . . . k. R AS8viiUrDZ:4:5
 4m AN.NA . . . kak-gal ensí-ka-šē k. R AS8xiiUrDZ:3:10
 //k. R 270š (kù) šu-nir gú-ne-na AS8xiiUre:2:19
 [1232]š kb [ki] R-ta AS8Ag:1:1
 (kù zú-lum, sig-gi)// ki R-ta AS9xPd:1:10
 21385š (kù) ki R-ta AS9UrDZ:1:23

10.5s i-[giš] . . . níg-GiŠ.AŠ ba-ab-[] k. R AS9UrDZ:3:27
 [] kb R sbt AS9UrDZ:4:25
 zi-ga mu (AS8) k. R AS9UrDZ:7:1
 4080š kù ki R-ta AS9Irm:1:1
 ssc níg-ka₉-ak kù-ga R AS9Lkl
 4140š kb 10800š kù šā bala-a 30š kù PA-ga ki R-ta SS2UrDZ:1:14
 8m za-ba-lum . . . é ^dŠarā-ka temen-si-ga k. R SS2UrDZ:5:31
 120s sum-ha-din . . . //k. R SS2UrDZ:7:24
 10800š kb gír R SS5viUrSPE:2:1
 1050š kb ki R-ta SS5Pd:1
 53s [+?] kù-[] k. R. SS5Pd:24
 ssc níg-ka₉-ak kù ensí-ka gír R SS5Lkl
 1800š kb. k. R SS6Ab:2:14
 ssc dgn R SS6Lkl
 Copy 21:2:11
 Lú-kisal (Cf. Agriculture)
 [] zú-lum [ki] R nu-kiri₆-ta AS6xiUrDZ:1:12
 Lú-^dKU.PA.KA
 21s še bala-e-dē ba-ab-su-ub k. R SS2UrDZ:5:21
 Lú-^dNagar-pa-ē (Cf. Leatherwork)
 40s naga . . . k. R AS7viiUrDZ:4:5
 30s naga . . . k. R ugú A-kal-la gá-gá-dam AS9UrDZ:8:31
 Lú-^dNanna
 Copy 23:3
 Lú-^dNin-gír-su
 6068.33m sig-gi . . . ki R-ta S48snga:1:6
 Lú-^dNin-Šubur (Cf. Šara's House)
 4 giš-pěš še-er-gu . . . k. R AS5xiPd:4:7
 360m esír-hád . . . má-gur₈ ^dŠarā ú [] šim ba-ra-a[b-X] k. R
 AS6xiUrDZ:6:7
 120m im-babbar . . . k. R AS7viiUrDZ:3:21
 26s geštin-hád . . . k. Lú-^dNin-[] AS7ixPd:3:16
 20s šim-hi-a . . . ugú R . . . AS8xiiUrDZ:3:5
 22s geštin-hád . . . k. R AS9xPd:2:47
 60s naga . . . k. R SS2UrDZ:4:12
 20s al-la-ha-ru . . . túg IM.GAL ^dŠarā-šē k. -ra-ra R SS2UrDZ:5:
 23
 10s šim-hi-a . . . k. R SS2UrDZ:7:3
 Lú-^dSuen (Cf. Boat bureau)
 5 giš-ù-suh₈-gal . . . k. R SS2UrDZ:6:26
 Lú-šā₆-i-zu (Cf. Boat bureau)
 1225s esír-é-a . . . k. R AS6xiUrDZ:5:12

Lú-^dŠará (Cf. Ur)

20s gazi . . . ndb Uri^{ki}-ma k. Ur-^dNin-Kimar gir R d. Lú-igi-
ša₆-ša₆ AS3Ses:2:5

Lú-^dŠul-gi-ra (Cf. Agriculture)

1500s še i-šah . . . ki R -ta AS7ixPd:1:19

54000s šā Nibru^{ki}še i-šah . . . ki R -ta AS9UrDZ:1:2

Lú-^dUtu

x . . . gir R dg S40?:2:1

15s i-šah gir R dg S40?:4:6

15m šim-gi . . . gir R dg S40?:5:13

Na-me-a Short for Namir or Namutum? Cf. *MAD* 3:192, 202

300m sig . . . R AS5xiPd:1:6

NIG.BA-e

80s esie-é-a má-a X-šè . . . k. R AS7viiUrDZ:4:13

NIGIN.GAR-ki-du₁₀ or perhaps NIGIN.GAR-ki-du₁₀-ma-an-gi₄, with

Limet, *Anthroponymie*, p. 208. NIGIN.GAR is probably to be read ni_x-
gar(a), as noted by D. Owen, *AOAT* 22, p. 132 to line 1.

10800s kù R ma-an-gi₄ AS8viiUrDZ:3:36

Ni-ni

24s i-giš mu i-túg-ke₄ ag-da-šè, R dg S43xGdl:2:3

Nin-kal-la

Copy 19:1:7

Nin-me-lám (Cf. Governor)

300s esir-é-a . . . k. R AS6xiPd:5:4

1800m sig . . . ki R-ta šā é-šu-si-ma AS9UrDZ:1:16

Copy 19:1:8

Pád-da

ssc AS3Pd, AS5PdA, AS5xiPd, AS5PdB, AS6xiPd

3m sig.ÜZ . . . gir Hu-ud-da dam R AS7ixPd:5:11

ssc AS7ixPd, AS9xPd

1050s kù i-zu-bi? R SS5Pd:6

ssc SS5Pd

Copy 17:2:11; Copy 18:1:9

Púzur-^dEn-lil-lá

600m im-babbar . . . ndb giš-kin-ti^{ki} R gir é id lú-ru-gú-da
AS5xiPd:2:4

Pù-zu-núm

Copy 23:4

Sag-ku₅ (Cf. Governor)

960s kb gir ensi-ka k. R nu-zi-ir ki ensi-ka AS4Sgk:1:5

ssc níg-ka₉-ak R dg AS4Sgk

90s kù numun garaš SAR sám-ag-bi k. R AS9xPd:3:63

Sar-ru-um-i-lí (Cf. Royal Wardrobe)

360m im-babbar . . . ndb é a-gi₄-um lugal ki ^dUtu-ušumgal gir
R AS5xiPd:2:14

SIG₄-te-la-ni Compare *TRU* 292:2:2 and *VDI* 1976 (3), p. 119 n. 17,
but note Gelb prefers to read ši_x, *MAD* 2:115 and 3:290f., and rec-
ognizes no value mur-, which Sharashenidze uses without suggest-
ing an etymology for the name.

10s pa-li ki R AS4Sgk:1:17

Šà-guškin

90s kù esir ? R d. A-ab-ni sbt AS5SesA:2:10

10m im-babbar . . . k. R SS5Pd:20

^dŠará-kam

176942s zú-lum . . . ki R-ta SS6Lkl:1:15

40m sig . . . ugú R . . . SS6Lkl:6:13

12s ni-ik-tum . . . mu (SS5) ugú R . . . SS6Lkl:6:16

mar-sa-aš 40 giš-ù-suh₃ šu-dím má 20-gur gir R (no price)

SS6Lkl:7:4

Copy 21:2:4

^dŠará-i-zu

18300s gig urudu-bi 120m ki R-ta SS6Lkl:1:12

Šeš-kal-la

ssc AS3Ses, AS5SesA, AS5SesB, AS6xiSes

21s še bala-e-dè su-bu-dè k. R SS2UrDZ:4:17

Copy 18:2:19

Šeš-šeš

4200s esir-é-a gir R ugú Ur^dBa-ú . . . mar-sa . . . AS3Urg:1:4

Šu-eš₄-dar (Cf. Royal Bootery)

10s im-babbar-kum . . . ndb kuš-šuhub_x lugal ki R gir Ad-da-
da AS5xiPd:2:27

28800s zú-lum . . . gir R AS6xiUrDZ:1:15

^dŠul-gi-uru-mu

17s še-li . . . ndb KAŠ.KAM ki R gir Ha-ba-ba-tum AS5xiPd:3:10

Šu-še-É-a?

20s naga-si-è . . . ndb R ki Zabar-dab₃ gir Hu-ba AS5xiPd:2:31

Tu-ru-hu-um

125s esir-é-a . . . ndb R AS6xiSes:2:3

UM.É

Copy 18:1:18

Ur-AN See Institutions below s.v. é-kišib-ba R

Ur-^dBa-ú

Lugal-an-dùl ensi []R mu (S29) ssc S29Urs

4200s esir-é-a . . . gir Šeš-šeš ugú R . . . mar-sa . . . AS3Urg:1:4

Ur-^dDa-mu (Cf. Royal bureau)

10s ì-giš túg-ge ag-dè gír R ugula uš-bar S43xGdl:2:8

450s naga-si-è ... ndb é? Ur-^dlugal ki Li-še-na gír R AS5xiPd:2:18

Ur-^dDumu-zi-da (Cf. Royal bureau)

ssc AS3iUrDZ

9000š (kb) sám guškin-še R sbt AS4iUrDZ:3:28

ssc AS4iUrDZ, AS4UrDZ

9900š kù sám guškin TUN ^dAS ba-a-gar gír R dg AS4dgn:4:10

1800š kb mu k. kaša NIM.[]DA k. R AS6xiUrDZ:6:11

ssc AS6xiUrDZ, AS7viiUrDZ, AS8viiUrDZ, AS8xiiUrDZ, AS9UrDZ,

SS2UrDZ

4500š (kb) gír R dg SS5viUrSPE:2:3

níg-ka₉-ak kù A-a-kal-la[] , Ur-^dDumu-zi-[] SS7Aak:22

Copy 21:2:9

Ur-e₁₁-e (Cf. Agriculture)

7200š kb kù R AS3iUrDZ:1:7

8580s ku₆-izi ... ku₆ gán-mah ki R-ta AS4iUrDZ:1:3

40s numun-sum-sikil ... numun-še a-ša gibil ba-a-gar mu
(AS7) k. R AS8xiiUre:3:1

ssc níg-ka₉-ak kù-ga R AS8xiiUre

2s še-li ... ugú R ... AS9UrDZ:5:37

Ur-gi₆-pār

R Ur-^dNun-gal ù Kù-^dNin-ur₄-ra-ke₄ íb-ba AS4UrDZ:4:3

Ur-giš-gigir

1800š kb mu a-ša 10 gán-še ki R dg-ta S43xGdl:1:8

Ur-gú-en-na

ssc AS3Urg

Ur-^dGu₄-ná-a

1710š kù urudu Uri^{ki}-ma gír É-lú-bi zú k. Lú-kal-la Ur-^dNun-
gal ù R-ke₄ níg-ka₉-bi íb-ak AS6iiKd:2:13

Ur-^dLama (Cf. Ur)

R ensí S44iUrSPE:2:17

1716š kù sám urudu Uri^{ki}-ma gír R ù É-lu-bi DAG AS5xiPd:4:23

1530š kù urudu Uri^{ki}-ma gír R ù É-lu-bi BI AS5SesB:2:19

Copy 18:2:12

Ur-lugal? PN?

450s naga-si-è ... ndb é? R ki Li-še-na gír Ur-^dDa-mu AS5xiPd:
2:18

[]naga-si-è ... ndb R ki Lugal-dub-lá AS5xiPd:2:24

Ur-^dMa-[]

295 sa-gi ... k. R SS5Pd:13

Ur-^dMa-mi

ki R eššad-ta 16200 ku₆-gír-uš ... ku₆ nisag-še má-a ba-a-gar-
ra íb-ta-zi ... AS4dgn:1:11

Ur-NIGIN

Copy 20 seal

Ur-^dNin-giz-zi-da

576m urudu ... mu (S48) ugú R simug S48snga:2:3

Ur-^dNin-Kimar (Cf. Ur)

20s gazi ... ndb Uri^{ki}-ma k. R gír Lú-^dŠará d. Lú-igi-ša₆-ša₆
AS3Ses:2:5

Ur-^dNin-su

21600š kb kù R dg AS3iUrDZ:1:3

Ur-^dNu-muš-da

360š kb esír []na-kab-tum-ma ku₄-ra []k. R AS6xiUrDZ:5:37

níg-ka₉-ak dg šà bala-a gír Ir₁₁-mu ù R AS9Irm:2:6

Ur-^dNun-gal (Cf. Royal Wardrobe)

Ur-gi₆-pār R ù Kù-^dNin-ur₄-ra-ke₄ íb-ba AS4UrDZ:4:3

900š kù-huš Lú-gi-na 360š kù-huš R AS5xiPd:1:8

R ù Ur-^dGu₄-ná-a-ke₄ níg-ka₉-bi íb-ak AS6iiKd:2:16

6s šim-GÁN ... ndb ì ugú lugal k. R AS7ixPd:2:11

180š kù esír-é-a k. R AS7ixPd:5:9

2100s naga ugú Í-kal-la ... k. R AS8viiUrDZ:3:33

120m giš-ma-nu ... k. R AS9xPd:2:28

120m im-babbar ... k. R SS2UrDZ:6:17

42 udu nitá bar-gál ... Uš-mu ì-dab₅ k. R SS6Lkl:8:15

Ur-pa₄-ú-e

1692š kù zú-lum-ma R AS3iUrDZ:2:22

Ur-sag-ku₅

41s naga-si-è ... níg-sikil GÍR-kin-ti^{ki} A-bu-ni gír R AS5xiPd:
1:19

Ur-Suen (Cf. Agriculture)

3300 ku₆-sag-[kúr] é-kišib-ba Ur-AN ku₆ R AS4dgn:2:7

UR₄.ŠA.BI.TA PN?

10s šim[] ... k. R AS9UrDZ:3:19

Ur-^dŠakan

6 giš-pèš še-er-gu k. R AS4Sgk:2:25

Ur-^dŠará

(49 animals) ... R ì-dab₅ SS6Lkl:8:8

Copy 16:2:4

Ur-šu-ga-lam-ma

ssc níg-ka₉-ak R šabra S29Urs

Ur-^dŠul-pa-è 1. = 2. (Cf. Palace; Agriculture; Dukuga; Leatherwork)

1. ssc níg-ka₉-ak R dg S44iUrSPE
2. 900š kb sám kù-huš-a PA.A.-šè R sbt AS3Ses:2:10
 51s i-šah ... k. R AS3Ses:2:15
 514s i-šah ... k. R AS4iUrDZ:3:7
 65700s zú-lum ... ki R-ta AS4UrDZ:1:3
 540s i-ku₆ ... ki R-ta AS4dgn:2:14
 52500s zú-lum ... ki R-ta AS4dgn:3:21
 20s zì-gú-gal ... ndb giš-kin-ti^{ki} A-a-mu gîr R AS5xiPd:2:8
 390s i-šah ... é-gal-la ku₄-ra k. R AS5xiPd:4:9
 1735s i-šah ... R sbt AS5SesA:1:11
 466s i-šah ... k. R AS5SesB:2:10
 120s i-giš ... AS5Inm:3:8
 98.25s i-šah ... k. R AS5Lin:25
 [1]80s i-giš ... R sbt AS6iiKd:2:3
 [27]000s zú-lum ... ki R-ta AS6xiSes:1:5
 912s i-šah ... k. R AS6xiSes:3:5
 //k. R ... esír-é-a AS6xiUrDZ:4:21
 907.33s i-šah ... k. R AS6xiPd:5:9
 60s i-giš ... dam BA₁₁.BA₁₁ k. nu-ra-ra k. R AS7viiUrDZ:3:14
 2m tám-še-lum ... k. R AS7ixPd:5:6
 36260s zú-lum ... ki R-ta AS8viiUrDZ:1:3
 21600s zú-lum ... ki R-ta AS8xiiUrDZ:1:5
 530s i-šah ... k. R AS9xPd:3:65
 1s še-li[]ndb A.DA[]NA k. Ur^dŠ[ul-pa-]è AS9UrDZ:3:14
 60s ku-mul ... k. Ur^dŠ[ul-pa-]è AS9UrDZ:6:42
 .83s[]šuku^dInanna^dEn[-lil-lá] k. R AS9UrDZ:8:3
 []ki[]še[ki Ur-]^dŠul-pa-è-ta SS2UrDZ:1:1
 1000s naga-si-è ... k. R SS2UrDZ:3:13
 (lá-i) 39[960š]kb []gîr Ur^dŠul-[pa-è] SS5viUrSPE:7
3. (cf. Governor, Metal)
 5400š kb Lú-kal-la sbt gîr R kù-dím k. nu-ra-a AS4iUrDZ:3:24
 37800š kb sám kù-huš-a ki ensí-ka-ta gîr R kù-dím AS8xiiUrDZ:1:1
 6480š kb igi-kár nin R kù-dím sbt AS8xiiUrDZ:3:15
- 4.(?) Copy 18:2:24

Ur-TAR.LUH

- 10800š kb k. Lú-kal-la ki R X mu-đu AS2xiiiUrT:2:2
 ssc níg-ka₉-ak R dg AS2xiiiUrT

Ur-^dUtu

- 360š (kb) ki R-ta AS2xiiiUrT:1:10

Copy 18:2:14

Uš-mu (Cf. Royal Wardrobe)

15s esír-é-a ... giš-kak é-a-ni é^dAs-ka-ke₄ ba-ab-su-ub k. R AS7viiUrDZ:4:28

1500m im-babbar ... k. R lú-ašlag SS2UrDZ:4:2

42 udu nitá bar-gál ... R i-dab₅ k. Ur-^dNun-gal SS6Lkl:8:15

^dUtu-ušumgal

10980š kb R sbt AS4dgn:4:6

360m im-babbar ... ndb é-a-gi₄-um lugal ki R gîr Sar-ru-um-ì-lí AS5xiPd:2:14

Za-a-a

Copy 21:2:15

Zabar-dab₅

20s naga-si-è ... ndb Šu-še-É-a ki R gîr Hu-ba AS5xiPd:2:31

INSTITUTIONS, TITLES, AND ROYAL NAMES

A.DA[]NA (?)

1s še-li[]ndb R k. UrSPE AS9UrDZ:3:14

aga₂-ús "policeman"

60m DA? [] Ba-sig₅ sa[gi] R ensí AS6xiUrDZ:6:21

Copy 18:1:24

ara₅ "miller"

š kb lá-ì su-ga ugula R-ka sá-du₁₁ ensí-ka SS5Lkl:12

ašgab "leather worker"

See under A-kal-la, Personal Names.

a-tu₅-a "lustration"

See under lugal below.

bala "turn of office?"

... še R-bi ... S29Urs passim

ssc iti (Lagash xii) iti (Lagash i) iti 2-kam R-bi l-àm S44iUrSPE

For other entries see bala, Chapter 2.

dam-gār "merchant"

See Personal Names under Ab-ba-gi-na, A-gu, Dug-ga Gál-dùl, Inim-ma-ni-zi, Ir₁₁-mu, Kud-da, Lú-^dInanna, Lú-kal-la, Lú-^dUtu, Ni-ni, Pád-da, Sag-ku₅, Šeš-kal-la, Ur-giš-gigir, Ur-^dDumu-zi-da, Ur-^dNin-su, Ur-^dŠul-pa-è

Copy 18:2:14

Du₆-kù-ga "pure sanctuary"

225m im-babbar ... ndb R AS4iUrDZ:2:9

225m im-babbar ... ndb R k. Lugal-gar-lagar-e AS5xiPd:4:4

//ndb R k. Lugal-gar-lagar-e AS6xiSes:3:12

25s lál ... ndb R k. Lugal-gar-lagar-e AS6xiPd:2:54

- 1080š kb ndb R k. Lugal-GAR.LAGAR.E SS2UrDZ:4:25
 Copy 17:1:7
 é-AŠ.GIŠ "house of ..."
 70s esir-é-a ... ndb R AS6xiPd:2:28
 é-ba-dim "building? house"
 10m im-babbar ... ndb R AS9UrDZ:3:8
 é-gal "palace"
 390s i-šah R ku₄-ra k. UrSPE AS5xiPd:4:9
 é id lú-ru-gú-da "river ordeal house"
 600m im-babbar ... ndb giš-kin-ti^{ki} Púzur-^dEn-líl-lá gir R AS5xiPd:2:4
 é-kišib-ba "storehouse"
 120s giš-URxES₅ ... R-ta AS6xiUrDZ:1:10
 é-kišib-ba Ur-AN "storehouse of ..."
 3300 ku₆-sag-[kúr] ... R ku₆ Ur-^dSuen AS4dgn:2:7
 é-kišib-ba KWU 896 "storehouse of ..."
 3000 ku₆-ša-bar ... R AS4dgn:2:4
 é-kù-dim "metalworker's house"
 10s naga-kum ... ndb R ùr-ra-ka ki Lugal-kù-zu AS5xiPd:3:3
 10m im-babbar ... ndb R šà-dub-ba AS6xiUrDZ:2:30
 é-muhaldim "kitchen"
 //63s ku-mul ndb R AS4Sgk:1:19
 engar-gu₄ "ox-ploughmen"
 (blank) še ... še i-šah R diri ki A-ka-l-la nu-banda₅-ta AS5Inm:1:4
^dEn-líl (a god)
 See under ^dInanna and nisag below
 ensí "city governor"
 Lugal-an-dùl R ssc S29Urs
 Ur-^dLama R ssc S44iUrSPE
 600m s[†]g ... gir R-ka AS3iUrDZ:1:9
 1980š kb. šu-nir R-ka AS3iUrDZ:2:32
 [18450š] kù [ki] R-ta AS3Pd:1:1
 960š kb gir R-ka k. Sag-ku₅ nu-zi-ir ki R-ta AS4Sgk:1:5
 2700m sig ... ki R-ka AS4dgn:3:18
 6 giš-ù-suh₅ apin-gal giš-ig-šè ... na-kab-tum Uri^{ki}-ma ku₄-ra gir Dan-i-lí lú-kin-gi₄-a lugal k. R AS5SesA:1:14
 420m sig ... ki R-ka-ta AS6xiSes:1:4
 180s esir-é-a ... má-gur₈ R-ka-šè k. Dingir-ra AS6xiUrDZ:5:18
 60m DA? [] ... Ba-sig₅ sa[gi] aga₂-ús R AS6xiUrDZ:6:21
 120š kù giš-ù-suh₅-a sa₁₀-a [k.] R-ka AS6xiUrDZ:6:27
 1153m sig ... ki R-ka-ta AS8viiUrDZ:1:6

- 37800š kb sám kù-huš-a ki R-ka-ta gir UrSPE kù-dim AS8xiiUrDZ:1:1
 4m AN.NA ... kak-gal R-ka-šè k. Lú-kal-la AS8xiiUrDZ:3:10
 2160m sig-gi ... ki R-ta AS9UrDZ:1:12
 16s esir-é-a giš-gigir ù má-gur₈ R-ka ... SS2UrDZ:5:14
 17100š (kb) a-rá l-kam 7740š kb a-rá 2-kam gir R-ka SS5viUrSPE:1:5
 5915š kb lá-i su-ga ugula ara₅ sá-du₁₁ R-ka SS5Lkl:12
 48600š kb 'k.?' R SS5Lkl:17
 ssc ní-g-ka₉-ak kù R-ka gir Lú-kal-la SS5Lkl
 eššad "fisherman"
 See under Ur-^dMa-mi, Personal Names
 é-šu-si-ma "warehouse"
 1800m sig ... ki Nin-me-lám-ta šà R AS9UrDZ:1:16
 é-^dTA?xKUR.IB
 See under ^dŠar_á
 é-uz-ga "fattening house"
 1s še-li ndb R AS4Sgk:2:13
 10s [] é uz-[ga] AS6xiPd:3:5
 ezen-mah "great festival"
 20.33m kù-huš-a ... R šà Uri^{ki}-ma AS4UrDZ:3:23
 [] g sám kù-huš-a a-rá l-kam [] m sám kù-huš-a R AS9UrDZ:4:29
 ezen še-gur₁₀-ku₅ "harvest festival"
 See below under máš-da-ri-a R
 giš-kin-ti "craftsmen" = GİR-kin-ti
 41s naga-si-è ... ní-g-sikil GİR-kin-ti ki A-bu-ni gir Ur-sag-ku₅ AS5xiPd:1:19
 600m im-babbar ... ndb R ki Púzur-^dEn-líl-lá gir é id lú-ru-gú-da AS5xiPd:2:4
 20s zì-gú-gal ... ndb R ki A-a-mu gir UrSPE AS5xiPd:2:8
 18m im-babbar ... ndb GİR-kin-ti AS5xiPd:4:15
 600m im-babbar ... ndb R AS7ixPd:2:17
 8.5m [] ndb giš-[kin-ti] AS7ixPd:2:26
 60s naga ... ndb R ki A-a-mu AS7ixPd:3:5
 IM.É (?)
 0.83m kù-huš-a ... R-šè sum-ma-da [] x-ra šà Unu^{ki} AS9Lkl
 i(-muhaldim) "(kitchen) oil"
 See below under lugal
^dInanna (a goddess)
 270š kb ní-g-sám-ma šuku R ù nisag ^dEn-líl-lá mu (AS4) k.
 Lugal-GAR.LAGAR.E AS4iUrDZ:2:12
 .83s [] šuku R ^dEn[-líl-lá] k. UrSPE AS9UrDZ:8:3

ka b-UŠxX "shepherd?"

450s naga-si-è R lugal AS4Sgk:2:6

ka-gur, "granary supervisor"

36,000s še ... ki R-ta mu SS6 SS7Aak:1

27480s še ... sám sig-ba ša-gu₄-ka ù sám urudu kar-ta ki R-ta
SS2UrDZ:1:9

Copy 21:2:1

ka š₄ "courier"

15s i-giš ... k. R AS6xiUrDZ:3:13

1800š kb mu k. R NIM.[]DA k. Ur^dDumu-zi-da AS6xiUrDZ:6:11

ka š-dé-a "libation"

Copy 19:2:10; Copy 22:2:10

ki-a-nag "death offering"

2s geštin-hád ... R Ur-^dNammu AS5xiPd:3:18

3s šim-hi-a ... R Ur-^dNammu AS6xiUrDZ:3:9

4 giš-pèš še-er-gu ... R Ur-^d[Nammu] zi-ga bala-[a] AS9UrDZ:
3:37

3s šim-hi-a ... R Ur-^dNammu SS2UrDZ:7:11

kuš-šuhub_x (MUL) lugal "royal sandal (bootery)"

See below under lugal

^dLama

See under lugal, ^dAmar-^dSuen

lú-ašlag "fuller"

See under Uš-mu, Personal Names

lugal "king"

450s naga-si-è kab-UŠxX R AS4Sgk:2:6

11s še-li ... ndb nag R AS4Sgk:2:9

9.67s še-li ... i ugú R AS4Sgk:2:19

360m im-babbar ... ndb é a-gi₄-um R ki ^dUtu-ušumgal gir Sar-
ru-um-i-li AS5xiPd:2:14

10s im-babbar-kum ... ndb kuš-šuhub_x R ki Šu-eš₄-dar gir
Ad-da-da AS5xiPd:2:27

.67m gi ... i-muhaldim sá-du₁₁ R AS5xiPd:3:25

6 giš-ù-suh₅ apin-gal giš-ig-šè ... na-kab-tum Uri^{ki}-ma ku₄-
ra gir Dan-i-lí lú-kin-gi₄-a R AS5SesA:1:14

6s geštin-hád ... geštin-hád sá-du₁₁ R AS5SesB:2:13

120s naga-si-è ... ndb TUN R AS6xiSes:2:5

10s pa-li ... a-tu₅ R AS6xiUrDZ:2:18

6.5s še-li ... lú-šim-nag R íb-dab₅ AS6xiUrDZ:3:2

120m giš-ma-nu ... ndb i ugú R AS6xiPd:2:17

10s im-babbar-kum ... ndb kuš-šuhub_x R AS6xiPd:2:25

360m im-babbar ... ndb túg-a-gi₄-um R AS6xiPd:2:33

.5 giš-pèš še-er-gu ... ndb i ugú R mu (AS5) k. Lú-kal-la
AS6xiPd:3:16

26s esír-é-a ... giš-me-dím giš-mi-rí-za má-gur₈ R-ka-ke₄
ba-ab-su-ub k. Da-da-ga AS7viiUrDZ:4:24

6s šim-GĀN ... ndb lá-i ugú R k. Ur-^dNun-gal AS7ixPd:2:11

80[]giš[^d]u₈ giš-gigir ^d[]-du-šè k. R [] AS8xiiUrDZ:2:12
= a PN?

9.5s še-li ... ndb lú-šim-nag R AS9UrDZ:2:3

120s naga ... ndb TUN R AS9UrDZ:2:15

360m im-babbar ... ndb túg-a-gi₄-a-um R AS9UrDZ:2:19

.17s šim-GĀN ... ndb a-tu₅ AS9UrDZ:2:32 (lugal not mentioned)

97.5š (kb) síla sám R AS9UrDZ:5:41

690s esír-é-a ... gi é ù é-é ^dŠar₄-ka-ke₄ ba-ab-su-ub k. R []
= a PN? SS2UrDZ:3:29

Copy 16:1:2; copy 17:2:9; Copy 19:2:1, 2:10; Copy 22:1:8, 2:10; Copy
24:2:2

See also túg-nin

lugal by royal names: (occurrences in date formulae are not indexed.)

^dAmar-^dSuen

9900š kù sám guškin TUN R ba-a-gar gir Ur-^dDumu-zi-da dg
AS4dgn:4:10

.00417m guškin ... níg-pi[]R AS6xiUrDZ:6:24

360s esír-é-a ... má ^dLama R-ka-šè k. Lugal-nir-gál AS7
viiUrDZ:4:9

15s esír-é-a ... giš-kak é-a-ni é R-ka-ke₄ ba-ab-su-ub k.
Uš-mu AS7viiUrDZ:4:28

3s naga ... a-tu₅-a R (Price blank) AS7viiUrDZ:5:4

^dŠu-l-gi

.05m níg-kés ... [t]u₅-a R-ra AS9UrDZ:4:17

^dŠu-^dSin

.33m kù-huš-a ... maš-da-rá-a R lugal-e[]š_u-ti-a AS9Lkl

4 sig₄-ba ... alam R SS2UrDZ:5:16

Ur-^dNammu

See under ki-a-nag above

(lú)-kin-gi₄-a "messenger"

Im síg.ŪZ ... R-aš AS6xiUrDZ:2:8

See also under Dan-i-lí, Personal Names

lú-šim-nag "spice drinkers?"

See under lugal

mar-sa "boat transport center"

4200s esír-é-a ... gir Šeš-šeš ugú Ur-^dBa-ú[m]ar-sa ba[-a-gar]
AS3Urg:1:4

78779s še níg-sám-ma bala-a ù níg-sám-ma esír R SS6Lkl:1:9
 R-aš 40 giš-ù-suh₅ šu-dím má 20-gur (no price) gir ^dŠará-kam
 SS6Lkl:7:5
 600s esír-é-a . . . R A-pi₄-sal₄^{ki}-šè SS6Lkl:9:3
 maš-da-rá-a (an offering)
 See under lugal, ^dŠu-Sin above
 Copy 16:1:2; Copy 19:1:17, 2:1; Copy 22:1:8
 máš-da-ri-a ezen še-gur₁₀-ku₅ "offering of the harvest festival"
 10800š kb R SS7Aak:10
 maš-šu-gíd-gíd "diviner" = šu-máš-gíd-gíd
 1m síG.ÜZ maš-šu-gíd-gíd AS4Sgk:2:21
 1m síG.ÜZ . . . ndb šu-máš-gíd-gíd AS9UrDZ:2:7
 na-hi-iš-tum (?)
 5m im-babbar sá-du₁₁ na-i-éš-tum-ma AS4gk:1:12
 []im-babbar . . . n[d]b giš-R AS9UrDZ:3:1
 na-kab-tum "cattle pen"
 6 giš-ù-suh₅ apin-gal giš-ig-šè . . . R Ur^{ki}-ma ku₄-ra gir Dan-
 i-lí lú-kin-gi₄-a lugal AS5SesA:1:14
 34 giš-ù-suh₅ giš-a-ra má 30-gur R-ma ku₄-ra k. Lugal-húl
 tùmu-dam AS6xiUrDZ:3:18
 360š kb esír[] R ku₄-ra[]k. Ur-^dNu-muš-[da] AS6xiUrDZ:
 5:37
 nisag "first-fruits (offering)" = ne-sag
 16200 ku₆-gír-uš . . . ku₆ R-šè má-a ba-a-gar-ra íb-ta-zi AS4dgn:
 1:12
 30s naga-si-è . . . gú ne-sag-gá-šè AS6xiUrDZ:2:10
 See also s.v. ^dInanna above.
^dNin-Kimar (a goddess)
 ssc níg-ka₉-ak urudu sa_x(NINDÁ_xŠE)-a gir sanga R S48snga
 nu-banda₅ "supervisor/sergeant"
 (blank) še . . . še i-šah engar-gu₄-diri ki A-kal-la R-ta AS5Inm:
 1:4
 nu-kiri₆ "gardener"
 []zú-lum [ki] Lú-kisal R-ta AS6xiUrDZ:1:12
 Copy 18:1:21
 sá-du₁₁ "regular offering"
 5m im-babbar R na-hi-éš-tum-ma AS4Sgk:1:12
 67m gi . . . i-muhaldim R lugal AS5xiPd:3:25
 6s geštin-hád R lugal AS5SesB:2:13
 5915š kb lá-i su-ga ugula ara₅ R ensí-ka SS5Lkl:12

sagi "cupbearer"
 10s šim-hi-a A-tu R AS4Sgk:2:4
 60m DA? [] Ba-sig₅ sa[gi] aga₅-ús ensí AS6xiUrDZ:6:21
 sanga "economic director of a temple"
 See under ^dNin-Kimar above
 simug "smith"
 576m urudu . . . mu (S48) ugú Ur-^dNin-giz-zi--da R . . . S48
 snga:2:3
 šabra (a high temple official)
 1320s še-LÚ// ki šabra^{ra}-ne-ta S29Urs:4:11
 ssc níg-ka₉-ak Ur-šu-ga-lam-ma R S29Urs
 8190s zú-lum . . . ki R-ta S43xGdl:1:4
^dŠará (a god)
 []s sag-X-na . . . i-dùg-zi R-ke₄ dah-ha AS6xiUrDZ:5:8
 360m esír-h[ád] . . . má-gur₈ R ù []šim ba-ra-ab-[]k. Lú-
^dNin-Šubur AS6xiUrDZ:6:7
 18m síG.ÜZ . . . ndb é R AS9UrDZ:4:8
 1200m esír-hád . . . má-gur₈ R ba-a-gar AS9UrDZ:4:13
 10s esír-é-a . . . gi é ^dTA_xKUR?-IB-ka é R-ka-ke₄ ba-ab-su-ub k.
 Lugal-nir AS9UrDZ:8:39
 690s esír-é-a . . . gi é ù-é-é R-ka-ke₄ ba-ab-su-ub k. lugal[-nir?]
 SS2UrDZ:3:29
 20s al-la-ha-ru . . . túg IM.GAL R-šè k.-ra-ra Lú-^dNin-Šubur
 SS2UrDZ:5:23
 8m za-ba-lum . . . é R-ka temen-si-ga k. Lú-kal-la SS2UrDZ:
 5:31
 596m im-babbar . . . zi-ga é R-ka k. Lugal-nir SS6Lkl:7:19
 šu-máš-gíd-gíd
 See under maš-šu-gíd-gíd above
^dTA_xKUR?-IB ŠL 141n = LAK 577
 See under ^dŠará above
 tapin sa Cf. ŠL 536:227f. (?)
 30s naga . . . ndb R AS9UrDZ:2:35
 túg-a-gi₄-um lugal "agium-cloth of the king"
 See under lugal above
 túg-nin "queen's cloth"
 60m im-babbar . . . ndb R AS6xiPd:2:22
 60m im-babbar . . . ndb R AS6xiPd:3:9
 TUN lugal
 See under lugal above

ugula ara₅ "supervisor of miller(s)"

5915š kb lá-i su-ga R sá-du₁₁ ensí-ka SS5Lkl:12

un-il-me "menials"

2s i-šah ... R gír É-zi-mu S43xGdl:3:10

úr-ra (?)

10s naga-kum ... ndb é kù-dím R-ka ki Lugal-kù-zu AS5xiPd:3:3

Copy 17:2:9

PLACE NAMES*

A-pi₄-sal₄^{ki} (near Umma)

600s esír-é-a mar-sa R-šè SS6Lkl:9:3

Copy 21:2:12

Ga-eš^{ki} (near Ur)

2s i-UD.KA ... R-šè k. Ab-ba-gi-na AS6xiUrDZ:6:3

180s esír-é-a ... é R-šè k. Da-a-gi AS7viiUrDZ:5:11

I₇-sal₄-la^{ki} (near Umma)

54000s še R-ta ... 54000s še šà Nibru^{ki} AS9UrDz:1:1

Ka-id-da (near Umma)

9900 ku₆-ba ... R AS4dgn:2:11

Ka-ma-ri^{ki} (near Umma)

54000s še ki-su₇ R-ta AS3iUrDZ:1:12

Nibru^{ki} (modern Nuffar)

[erasure]š kù sám kù-huš-a šà R ki Lú-kal-la-[ta] AS6xiUrDZ:1:16

5400š kb sám kù-huš-a šà R AS8xiiUrDZ:3:13

54000s še I₇-sal₄-la^{ki}-ta 54000s še šà R AS9UrDZ:1:1

Unu^{ki} (modern Warkā)

.083m kù-huš-a ... IM.E-šè sum-ma-da[] X-ra šà R AS9Lkl

Uri^{ki} (modern al-Muqayyar)

ssc nig-ka₉-ak UrsPE dg šà R-ma iti (Lagash xii) iti (Lagash i) ... S44iUrSPE

20s gazi ... ndb R-ma k. Ur-^dNin-Kimar gír Lú-^dŠarád. Lú-igi-š_{a6}-š_{a6} AS3Ses:2:5

20.33m kù-huš-a, ezen-mah šà R-ma AS4UrDZ:3:23

1716š kù sám urudu R-ma gír Ur-^dLama ù É-lu-bi DAG AS5xiPd:4:23

6 giš-ù-suh₅ apin-gal giš-ig-šè ... na-kab-tum R-ma ku₄-ra gír Dan-i-lí lú-kin-gi₄-a lugal AS5SesA:1:14

* For locations see Edzard, Farber, *Répertoire Géographique* 2 s.vv.

1530š kù urudu R-ma gír Ur^dLama ù É-lu-bi B1 AS5SesB:2:19

1710š kù urudu R-ma gír É-lú-bi zu k. Lú-kal-la AS6iiKd:2:13

uru = Umma^{ki} (modern Jōha)

//zi-ga šà R-ka (esír-é-a etc.) SS2UrDZ:6:2

WORDS

ab-tum S29Urs:6:15

á-dár See Chapter 3 under Animal Products.

ág AS9xPd:3:63

ak AS2xiiiUrT:2:10; AS6iiKd:2:16

alam S29Urs:15:8; SS2UrDZ:5:18

al-la-ha-ru See Chapter 3 under Tanning Agents

A.L.Ü-urudu See Chapter 3 under Metals

AN.NA See Chapter 3 under Metals

anše-bar-an AS6xiSes:2:8

a-rá AS2xiiiUrT:1:3, 6; AS3iUrDZ:2:21, 35, 37; AS3Ses:1:4; AS4UrDZ:1:9, 12; AS5xiPd:1:3, 4; AS5Inm:3:4, 6; AS5Lin:15, 17; AS6xiKd:1:22; AS7viiUrDZ:1:6; AS9UrDZ:4:30; SS5viUrSPE:1:6, 8; Copy 18:1:5, 8

ar-ga-núm See Chapter 3 under Resins

ar-za-na S29Urs:7:9

a-šà S43xGdl:1:9; AS8xiiUre:1:3, 14

ba AS4UrDZ:4:3

ba-ba-zid S29Urs:7:17

dab₅ AS5SesA:1:5; AS6xiUrDZ:3:2; Copy 21:2:8; AS8xiiUrDZ:3:16

da h-ha AS6xiUrDZ:5:10

dam AS7viiUrDZ:3:16; AS7ixPd:5:13

diri S29Urs:14:14, 19; S47Dg:2:10, 3:9; AS5Inm:1:6; AS8xiiUrDZ:3:9

du₈ AS8xiiUre:1:16

dug Copy 17:2:4f. (priced)

edin Copy 21:1:12

EN S29Urs:5:15

en-mur See Chapter 3 under Resins

esír See Chapter 3 under Bitumens; AS2xiiiUrT:2:4; AS5SesA:2:10; AS6xiUrDZ:5:37

esír-a-ba-al See Chapter 3 under Bitumens; S29Urs:5:20

esír-é-a See Chapter 3 under Bitumens; S29Urs:5:23; AS4Sgk:1:14; AS7ixPd:5:9

esír-hád See Chapter 3 under Bitumens; S29Urs:5:21

eša See Chapter 3 under Grains

eš-ku-ru-um See Chapter 3 under Animal Products

^{es}LÄL HUR See Chapter 3 under Animal Products, eš-ku-ru-um

gaeš-SAR AS9xPd:3:63

gal guškin See Chapter 3 under Metals

ga-sag_x (UD-gunû) See Chapter 3 under Animal Products

gazi See Chapter 3 under Resins

gazi-urudu AS9UrDZ:4:1

geštin-hád See Chapter 3 under Fruits; AS4Sgk:2:24

gi See Chapter 3 under Reed; AS4Sgk:2:12, 18, 3:2; AS6xiUrDZ:2:25, 5:10; AS9UrDZ:8:12, 40; SS2UrDZ:3:31; Copy 24:5

gi₄ S29Urs:11:8

gi₄ AS8viiUrDZ:3:37

gi-dùg-ga See Chapter 3 under Reed

- gig See Chapter 3 under Grains; AS4iUrDZ:1:7
 giš-ab-ba S29Urs:10:7
 giš-ab-ba-tur S29Urs:15:15
 giš-a-da S29Urs:15:17
 giš-a-gu₄ See Chapter 3 under Trees
 giš-a-ra AS8xiiUre:2:14
 giš-asal_x (A.TU.GAB. [Liš]) See Chapter 3 under Trees; S29Urs:3:6, 10:4?, 12, 15:10, 12, 23
 giš-dím See Chapter 3 under Trees
 giš-dím ù má-gu₄ See Chapter 3 under Trees
 giš-dúb-dúb KWU 518 S29Urs:13:29
 giš-dug-giš S29Urs:15:21
 giš-é-dím See Chapter 3 under Trees
 giš-eme-sig See Chapter 3 under Trees
 giš-eren S47Dg:1:9
 giš-gam-ma S29Urs:15:14
 giš-gan S29Urs:15:22
 giš-gigir AS7viiUrDZ:5:3; AS8xiiUrDZ:2:13; SS2UrDZ:5:14
 giš-gi-muš See Chapter 3 under Trees
 giš-gír S47Dg:1:5
 giš-gišimmar See Chapter 3 under Trees
 giš-hašhur See Chapter 3 under Trees; S29Urs:15:8; AS8xii Ure:1:12
 giš-hašhur-durus See Chapter 3 under Fruits
 giš-hašhur-hád See Chapter 3 under Fruits
 giš-ig SS5Pd:18
 giš-kab 6-kùš(-ta) See Chapter 3 under Trees; S29Urs:3:3
 giš-kak AS7viiUrDZ:4:30
 giš-ka-ku-ku ù giš-ka-mun S29Urs:15:5
 giš-ma-nu See Chapter 3 under Fruits
 giš-má-šu-ù S29Urs:15:18
 giš-me-dím See Chapter 3 under Trees; AS7viiUrDZ:4:26
 giš-mi-rí-za See Chapter 3 under Trees; S29Urs:3:9; AS7viiUrDZ:4:26
 giš-nak-KUL See Chapter 3 under Trees; AS5xiPd:4:17
 giš-pa-naga-gal S29Urs:3:4
 giš-pa-naga-hi-a S29Urs:3:5
 giš-pèš-durus See Chapter 3 under Fruits
 giš-pèš-hád See Chapter 3 under Fruits
 giš-pèš má See Chapter 3 under Trees
 giš-pèš še-er-gu See Chapter 3 under Fruits
 giš-ŠE.DUG See Chapter 3 under Trees
 giš-šinig-hi-a See Chapter 3 under Trees
 giš-šu-zu-X S29Urs:10:6
 giš-ù See Chapter 3 under Trees; S29Urs:15:16
 giš-ú-bil-la S29 Ure:10:9
 giš-ÚRxEŠ₅ See Chapter 3 under Miscellaneous
 giš-ù-suh₅ AS6xiUrDZ:6:27; SS7Aak:11
 giš-ù-suh₅ apin ù SAR giš-ig See Chapter 3 under Trees
 giš-ù-suh₅ a-ra má 30-gur See Chapter 3 under Trees
 giš-ù-suh₅ bar-da-aš nigín-na See Chapter 3 under Trees
 giš-ù-suh₅-gal See Chapter 3 under Trees; S29Urs:3:7

- giš-ù-suh₅ gi-muš See Chapter 3 under Trees
 giš-ù-suh₅ giš-é-mun See Chapter 3 under Trees
 giš-ù-suh₅ giš-ùr giš-é-ka See Chapter 3 under Trees
 giš-ù-suh₅ mi-rí-za See Chapter 3 under Trees
 giš-ù-suh₅ šu-dím má X-gur See Chapter 3 under Trees; SS6Lkl:7:5
 giš-ù-suh₅-uš See Chapter 3 under Trees; S29Urs:3:8
 giš-ùr-ra SS2UrDZ:4:22
 giš-zi-gan S29Urs:15:19
 gú AS6xiUrDZ:2:12
 gu₄ AS5Inm:1:6; Copy 16:2:1 (priced); Copy 22:1:5, 2:5
 gú-edín-na Copy 16:1:3; Copy 22:1:1
 gú-gal See Chapter 3 under Vegetables; S29Urs:8:16; 11:14
 gur-ra AS3iUrDZ:3:44
 gu-šà-gu S29Urs:14:19
 guškin See Chapter 3 under Metals; AS3iUrDZ:3:44; AS4dgn:4:10; AS7ixPd:1:18; AS8Ure:2:17; Copy 16:1:1; Copy 19:2:5
 gú-tur See Chapter 3 under Vegetables; S29Urs:11:13
 gu-zé-ba-tum See Chapter 3 under Miscellaneous
 har guškin See Chapter 3 under Metals
 hu-rí-um S29Urs:11:18
 i See Chapter 3 under Oils; S47Dg:2:3
 i-bí-za AS7viiUrDZ:1:10; AS7ixPd:1:18; AS8xiiUre:2:17
 i-dùg AS6xiUrDZ:5:10
 i-dùg-ga See Chapter 3 under Oils
 i-dùg-nun-na See Chapter 3 under Oils
 igi-esir See Chapter 3 under Bitumens; S29Urs:5:22
 igi-guru AS8xiiUrDZ:3:16
 i-giš See Chapter 3 under Oils; S29Urs:11:11
 i-ku₆ See Chapter 3 under Oils; S29Urs:14:25
 il AS9Irm:2:3
 im-babbar See Chapter 3 under Bitumens, Gypsums; S29Urs:3:14, 6:9
 im-babbar-kum See Chapter 3 under Bitumens, Gypsums
 im-KÜ.GI. See Chapter 3 under Tanning Agents
 i-nun-ku₆ See Chapter 3 under Oils
 in-zar S29Urs:3:17, 6:13
 i-šah See Chapter 3 under Oils; S29Urs:14:24; AS4dgn:4:17
 i-tùg S43xGdl:2:4
 i-UD.KA See Chapter 3 under Oils
 i-udu See Chapter 3 under Oils
 i-udu-ku₆ S29Urs:14:23
 izi-kú Copy 19:1:2, 5, 10, 14; 2:3, 8; Copy 22:1:3, 7, 10; 2:3, 7, 9
 KAXGÁN-Ü-DU AS6xiUrDZ:6:33
 KAXGÁN-tenû Copy 20:3
 ka-gu₄ Copy 22:1:5, 2:5
 kak-gal AS8xiiUrDZ:3:12
 kar SS2UrDZ:1:12
 ki-lá Copy 19:2:2
 ki-sura_x (su₇) AS3iUrDZ:1:13
 kišib passim
 kišib X-(àm) AS4UrDZ:2:3, 2:8; AS5xiPd:3:30, 4:1; AS7ixPd:4:10; SS2UrDZ:3:23
 kú S47Dg:3:9
 ku₆ See Chapter 3 under Fish
 ku₆-ba See Chapter 3 under Fish

- ku₆-dùg See Chapter 3 under Fish
 ku₆-gam-gam-ma See Chapter 3 under Fish
 ku₆-gír-uš See Chapter 3 under Fish
 kù-huš-a See Chapter 3 under Metals; AS3Ses:2:10; AS5xiPd:11:8; AS6xiUrDZ:1:17, 6:26; AS8xiiUrDZ:1:2, 3:12; AS9UrDZ:4:29
 ku₆-izi See Chapter 3 under Fish; S29Urs:3:11
 ku₆-kár-mah AS4iUrDZ:1:15
 ku₆-kun-zì sig₅ See Chapter 3 under Fish
 ku-mul See Chapter 3 under Resins; S29Urs:5:3, 11:23; AS4Sgk:1:19; AS6xiSes:1:6
 ku₆-sag-kúr See Chapter 3 under Fish; S29Urs:5:4
 ku₆-sag-kúr-erín See Chapter 3 under Fish
 ku₆-šà-bar See Chapter 3 under Fish
 ku₆-šà-bar-erín See Chapter 3 under Fish
 kuš-a-gá-lá See Chapter 3 under Leather
 kuš-dùg-gan See Chapter 3 under Leather
 kuš-e-sír See Chapter 3 under Leather
 kuš-nu-úr-ma S29Urs:6:10
 kuš-šah See Chapter 3 under Leather
 kuš-uđu See Chapter 3 under Leather
 kuš-um mu_x (A.EDIN.LÁ) See Chapter 3 under Leather
 KU.UDU AS9UrDZ:4:32
 lál See Chapter 3 under Animal Products; AS4Sgk:2:23
 lá-i passim.
 lá-i su-ga AS8xiiUre:1:6, 7; SS5Lkl:13
 lá-ù S29Urs:15:20
 lum-peš S29Urs:6:3, 15:2
 má AS7viiUrDZ:4:11, 13; AS7ixPd:1:14
 ma-da Copy 21:1:12
 ma-an-ga-ga S29Urs:6:1
 má-gur₈ AS6xiUrDZ:5:20, 6:9; AS7viiUrDZ:4:26; AS9UrDZ:4:15; SS2UrDZ:5:14
 máš See Chapter 3 under Livestock
 maš-a-šà-ga AS8xiiUre:1:3, 14
 mi-sír SS5Pd:18
 mu-đu S43xGdl:3:18; AS2xiiiUrT:2:3; AS5PdB:5; AS8xiiUre:1:12
 mun See Chapter 3 under Resins; S29Urs:6:7; Copy 24:4
 mun-gazi AS9Irm:2:3; SS6Lkl:3:11
 naga See Chapter 3 under Alkalies; S29Urs:6:8
 naga-gaz See Chapter 3 under Alkalies; AS4Sgk:1:10
 naga-kum See Chapter 3 under Alkalies
 naga-si-è See Chapter 3 under Alkalies; AS4Sgk:1:11, 15, 2:2, 6
 níg-dab₅ AS3Ses:2:7; AS4iUrDZ:2:11; AS4Sgk:1:20, 2:10, 14; AS5xiPd:2:6, 10, 14, 20, 29, 3:1, 5, 12, 36, 4:6, 16; AS6xiUrDZ:2:7, 25, 32; AS6xiPd:2:19, 24, 27, 30, 34, 3:11, 18; AS6xiSes:2:3, 5, 3:12; AS9UrDZ:2:6, 9, 12, 16, 21, 3:15, 5:36; SS2UrDZ:4:26; Copy 17:1:7, 2:9
 níg-giš-aš AS9UrDZ:3:29
 ni-gi₄-tum See Chapter 3 under Resins

- níg-ka₉ AS9Irm:2:3; SS6Lkl:1:4, 3:11
 níg-ka₉-ak See Table 1. All references are from account subscripts except AS8xiiUrDZ:3:9.
 níg-kéš See Chapter 3 under Reed
 níg-pi AS6xiUrDZ:6:24
 níg-sa_x (NINDÁxŠE)-a S47Dg:4:1
 níg-sa_x (NINDÁxŠE)-ma AS4iUrDZ:2:13; AS9UrDZ:10:3; SS6Lkl:1:10; Copy 21:2:7, 12; Copy 23:1:2
 níg-sig₅ AS9UrDZ:2:12
 níg-sikil AS5xiPd:1:21
 níg-tur-tur AS9xPd:1:9
 níg-ur₅-ra S29Urs:2:3
 ni-ik-tum See Chapter 3 under Resins
 ni-ik-tum al-la-ha-ru See Chapter 3 under Resins, ni-ik-tum
 numun-gu S29Urs:5:18
 numun-sum-gaz See Chapter 3 under Vegetables
 numun-sum-sikil See Chapter 3 under Vegetables; S29Urs:4:9; Copy 21:2:14
 numun-zag-hi-li S29Urs:3:10, 11:19
 PA.A AS3Ses:2:10
 PA-ga AS6xiUrDZ:6:26; SS2UrDZ:1:16
 pa-gišimmar S29Urs:6:12, 15:3 (so Pettinato and Cagni)
 pa-li See Chapter 3 under Miscellaneous; AS4Sgk:1:17
 pa-mušen See Chapter 3 under Animal Products
 pisan-im-sar-ra S43xGdl:2:14
 sa_x (NINDÁxŠE)-a S48nga:2:12; AS4Sgk:3:2; AS6xiUrDZ:6:27; SS5Lkl:11; Copy 18:2:24; Copy 21:2:14
 sa-EN SS29Urs:5:15
 sag-gu₄ Copy 19:1:13
 sag-na₄ Copy 19:1:11, 15
 sag-níg-GA-ra passim
 sag-sum-sikil See Chapter 3 under Vegetables
 sag-X (KWU 318)-na See Chapter 3 under Vegetables
 sa gi(-ra) See Chapter 3 under Reed
 sa-luh-EN S29Urs:3:18
 sám AS3Ses:2:10, 12; AS4dgn:4:10; AS5xiPd:4:18, 23; AS6xiUrDZ:1:17, 6:26; AS6xiSes:1:6; AS8xiiUrDZ:1:2, 3:14; AS8xiiUre:2:13, 14; AS9xPd:3:63; AS9UrDZ:1:10, 4:29, 5:41; SS5Lkl:16; SS6Lkl:1:7, 8; SS7Aak:11; Copy 21:2:5, 6
 sar-hi-a S29Urs:5:16
 sa_x-sa_x (NINDÁxŠE) AS4dgn:4:18
 sig See Chapter 3 under Wools; SS6Lkl:1:4
 sig₄ AS2xiiiUrT:2:10
 si-ga SS2UrDZ:5:33
 sig-ba SS2UrDZ:1:11
 sig₄-ba See Chapter 3 under Animal Products
 sig-babbar See Chapter 3 under Wools
 sig-gi See Chapter 3 under Wools; S29Urs:1:1
 sig-gír-ra? S29Urs:3:13, 11:10
 sig-KÜ.GI See Chapter 3 under Wools
 sig-kur-ra See Chapter 3 under Wools
 sig-ud_x (ÜZ) See Chapter 3 under Wools
 sfG.ÜZ See Chapter 3 under Resins; Copy 24:1
 sila₄ See Chapter 3 under Livestock
 su-a AS7ixPd:1:14

- su-bu AS9UrDZ:8:12
 su-ub AS7viiUrDZ:4:26, 30, 5:3;
 AS9UrDZ:8:41; SS2UrDZ:3:31,
 4:17, 22, 5:21
 su-GAN, sù-GAN See Chapter 3
 under Metals
 sum-gaz See Chapter 3 under Vege-
 tables
 sum-ha-din See Chapter 3 under
 Vegetables
 sum-sikil See Chapter 3 under
 Vegetables
 šà-gal AS6xiSes:2:8
 še See Chapter 3 under Grains;
 S29Urs:4:18, 5:15, 6:20, 7:7; AS8
 xiiUre:1:6; SS2UrDZ:4:17, 5:21
 še-a S29Urs:4:19, 11:7
 še-ba Copy 21:1:12
 še-bad-du S29Urs:2:7
 še-li See Chapter 3 under Resins;
 AS4Sgk:2:9, 13, 19
 še-lū See Chapter 3 under Resins;
 S29Urs:4:11
 ši-ha-la-ba S29Urs:15:4
 šim See Chapter 3 under Resins;
 AS4Sgk:2:8, 11; AS6xiUrDZ:6:
 9; Copy 24:6
 šim-baš-KU-LUM See Chapter 3
 under Resins
 (šim)-baš-LU-LUM S47Dg:1:13
 šim-düg See Chapter 3 under Res-
 ins
 šim-düg hur-sag-BA Copy 24:
 7
 šim-gam-gam-ma See Chapter 3
 under Resins; S47Dg:3:5; AS4
 Sgk:2:15; Copy 24:16
 šim-GĀN See Chapter 3 under Res-
 ins; AS4Sgk:2:16; Copy 24:12,
 13
 šim + GAR See Chapter 3 under
 Resins
 šim-gi See Chapter 3 under Res-
 ins; S47Dg:3:7
 šim-gig See Chapter 3 under Res-
 ins
 šim-gúk-ku-ru Copy 24:14
 (šim)-gu₄-ku-ru See Chapter 3
 under Resins; AS4Sgk:2:17
 šim-hi-a See Chapter 3 under
 Resins; AS4Sgk:1:16, 2:4
 šim-i Copy 24:2:2
 šim-IM See Chapter 3 under Res-
 ins; Copy 24:8
 šim-kum-GĀ Copy 24:9
 šim-ligidba (^dNIN-ip-tum) See
 Chapter 3 under Resins
 šim-mar-tu Copy 24:10
 šim-NIN-ki-ip-tum Copy 24:11
 šim-sag-maškim al-gaz-GĀ
 Copy 24:15
 šim-TUMxAKI See Chapter 3 under
 Resins
 šu-bar-ra AS8xiiUre:2:18
 šu-mah-su₆ S29Urs:3:15
 šu-nir AS3iUrDZ:2:33; AS8xii
 Ure:2:20; SS5Lkl:16; Copy 16:
 1:1, 3; Copy 22:1:1
 šu . . . ti (verb) passim
 šu-ti-a AS9Lkl
 šu-úr-me See Chapter 3 under
 Resins; Copy 24:3
 tám-še-lum See Chapter 3 under
 Resins
 tapin S29Urs:2:1
 temen SS2UrDZ:5:33
 TIL AS2xiiiUrT:2:10
 túg-da-ba[]-tum S29Urs:5:
 25
 túg-ni-gal SS2UrDZ:5:25
 túg-ù-ma-al-tum S29Urs:14:21
 túg-uš-bar S29Urs:5:24
 tùmu AS6xiUrDZ:3:21
 u₈ See Chapter 3 under Livestock

- ud₈ (ÜZ) See Chapter 3 under Live-
 stock
 udu See Chapter 3 under Livestock
 udu-nita See Chapter 3 under
 Livestock
 ú-kur S29Urs:11:17
 Ū-NINNI₅ See Chapter 3 under
 Resins; S29Urs:3:2
 urudu See Chapter 3 under Metals;
 S48snga:2:12; AS5xiPd:4:23;
 AS6iiKd:2:13; AS9UrDZ:1:10;
 SS2UrDZ:1:11; SS5Lkl:16; SS6
 Lkl:7:4; Copy 21:2:6
 Ū-IR See Chapter 3 under Resins
 za-ba-lum See Chapter 3 under
 Resins; Copy 24:2
 zabar AS3Ses:2:12; SS5Lkl:16
 za-gin Copy 19:2:5
 za-ha-din See Chapter 3 under
 Vegetables
 zé-na S29Urs:6:5
 zì-ba-ba-sig₅ S29Urs:7:13
 zì-ba-tum See Chapter 3 under
 Resins
 zì-gú-gal See Chapter 3 under
 Vegetables
 ziz Copy 21:1:5 (priced)
 ziz-an S29Urs:7:14
 zì-zì-ne-a-lum S29Urs:5:1, 11:
 21
 zu-hu-ri-ne SS6Lkl:7:4
 zú-lum See Chapter 3 under Fruits;
 S29Urs:15:1; AS3iUrDZ:2:22

APPENDIX 2

Standing Orders

This appendix lists possible standing orders, that is, recurring amounts of the same commodity. The products are arranged in the same order as in the price tables in Chapter 3. Entries under products are arranged from lower to higher amounts.

Question marks in the Recipient (or Capital Source) column mean the entry is found in a longer list all of which may be receipted by or come from this person. The bureau is given as in Chapter 2 above; these assignments must be considered working hypotheses only. Question marks in the Bureau column mean the entry is found in a longer list all of which may go to the bureau. Parentheses around items in this column show there is some indication that the product goes to the bureau though the recipient has not been connected with the bureau in Chapter 2.

Lagash texts have been included here where relevant. Approximate correlations have been included only occasionally when they seem strikingly close. All prices are given as in Chapter 3 in še "grains" of silver per unit measured. Reasonably restored prices have been included here without notation. For the full entry see Chapter 3.

Subscriber names are abbreviated as follows:

Aak = A-a-kal-la
 Ab = Ab-ba-gi-na
 Ag = A-gu
 Dg = Dūg-ga
 Gdl = Gál-dūl
 Inm = Inim-ma-ni-zi
 Irm = Ir₁₁-mu
 Kd = Kud-da
 Lgh = Lugal-hé-gál
 Lln = Lú^d-Inanna
 Lkl = Lú-kal-la
 Pd = Pád-da
 Ses = Šeš-kal-la
 Sgk = Sag-ku₅
 UrDZ = Ur^d-Dumu-zi-da
 Ure = Ur-e₁₁-e

Urg = Ur-gú-en-na
 Urs = Ur-šu-ga-lam-ma
 UrSPE = Ur^d-Šul-pa-è
 UrT = Ur-TAR.LUH.

Other personal names are written without the usual hyphens to save space.

Product	Amount	Date	Subscriber	Price	Recipient C = Capital	Bureau
1. Alkalies						
naga	30s	AS5xi	Pd	.5	?	?
	30s	AS9	UrDZ	.2	?	tapin sa
	30s	AS9	UrDZ	.2	LuNagarpae	leather
naga	60s	AS7vii	UrDZ	c.12	Igisi	?
	60s	AS7ix	Pd	.1	?	giš-kin-ti
	60s	SS2	UrDZ	.1	LuNinŠubur	Sara's House
naga	120s	AS6xi	Pd	.15	?	queen's wardrobe?
	120s	AS9	UrDZ	.2	?	royal wardrobe
	120s	AS9	UrDZ	.2	Akala	leather
naga	390s	AS9	UrDZ	.2	?	?
	390s	AS9	UrDZ	.2	UrSPE?	?
naga-gaz	10s	AS4	Sgk	.15	?	na-hi-èš-tum
	10s	AS9	UrDZ	.6	?	giš-na-hi-iš- tum
= naga-kum	10s	AS5xi	Pd	.45	?	é kù-dim
naga-si-è	10s	AS6xi	UrDZ	.15	?	?
	10s	AS6xi	UrDZ	.15	Agu	Crafts
	10s	SS6	Lkl	.2	Luduga	?
naga-si-è	20s	AS5xi	Pd	c.12	Huba	?
	20s	SS6	Lkl	.2	Basig	?
naga-si-è	30s	AS6xi	UrDZ	.15	?	ne-sag
	30s	AS8xii	UrDZ	.1	Akala	leather
naga-si-è	41s	AS5xi	Pd	c.15	Ursagku	giš-kin-ti
	41s	AS7ix	Pd	c.1	?	giš-kin-ti?
naga-si-è	60s	AS5xi	Pd	.15	?	GI _R -kin-ti
	60s	SS2	UrDZ	c.12	Luduga	?
naga-si-è	120s	AS6xi	Ses	.2	?	royal wardrobe
	120s	AS6xi	Pd	.15	?	queen's wardrobe?
	120s	AS7vii	UrDZ	c.12	LuNinŠubur	Sara's
naga-si-è	1020s	AS5xi	Pd	.15	?	royal wardrobe?
	1020s	AS6xi	Pd	.15	?	royal wardrobe?

Product	Amount	Date	Subscriber	Price	Recipient C = Capital	Bureau
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2. Animal Products Other Than Leather and Oil

á-dár	2	AS9	UrDZ	10	?	?
	2	AS9	UrDZ	10	UrSPE?	?
á-dár	4	AS8vii	UrDZ	11.2	?	?
	4	SS2	UrDZ	10	UrSPE?	?
lál	2.5s	AS4i	UrDZ	108	?	Dukuga?
	2.5s	AS5xi	Pd	90	Lugalgar-lagare?	Dukuga?
	2.5s	AS6xi	Ses	90	Lugalgar-lagare?	Dukuga?
	2.5s	AS9x	Pd	84	Lugalgar-lagare?	Dukuga?
pa-mušen	18000	AS3	Ses	.1	?	Ur?
	18000	SS6	Ab	.1	?	?
sigar-ba	2	AS5xi	Pd	9	Lukala	?
	2	AS9	UrDZ	2.5	Ag?	Crafts

3. Bitumens and Gypsums

esir-é-a	10s	AS6xi	Ses	1.2	Ag	Crafts
	10s	AS9	UrDZ	1.2	Lugalnir	Sara's
	10s	SS5	Pd	1.5	A[]	?
esir-é-a	20s	AS6xi	UrDZ	1.2	?	?
	20s	AS9	UrDZ	1.2	?	é ba-dim?
esir-é-a	25s	S40	?	2.4	?	?
	25s	S43x	Gdl	2.4	?	?
esir-é-a	30s	AS6xi	Pd	1.2	AN.BU ₆ ZI	?
	30s	SS2	UrDZ	1.2	Lú ⁶ KU.PA.KA	?
esir-é-a	60s	AS6xi	Ses	1.2	AN.BU ₆ ZI	?
	60s	AS7ix	Pd	1.5	Ag	Crafts
	60s	AS9	UrDZ	1.2	Huwawa	?
esir-é-a	70s	AS6xi	Pd	1.2	?	é-AS.GIS
	70s	AS9	UrDZ	1.2	Ag?	Crafts
	70s	SS2	UrDZ	1.54	Dingira	?
esir-é-a	120s	AS6xi	UrDZ	1.2	Ag?	Crafts
	120s	AS9	UrDZ	1.2	?	Sara's
	120s	SS5	Pd	1.5	UrMa[]?	?
esir-é-a	180s	AS5	LIn	2.4	Ag	Crafts
	180s	AS6xi	UrDZ	1.5	Garlagare	?
	180s	AS7vii	UrDZ	1.8	Daagi	é Gaeš
	180s	AS9x	Pd	1.5	Ag	Crafts
	180s	SS2	UrDZ	1.2	UrSPE	?
esir-é-a	300s	AS6xi	UrDZ	1.5	Nigbae	?
	300s	AS6xi	Pd	1.2	Ninmelam	Governor
	300s	SS5	Pd	1.5	Šaguškin?	?
	300s	SS6	Lkl	c2.22	?	?
esir-hád	1200m	AS9	UrDZ	.27	Huwawa	?
	1200m	SS6	Lkl	c.28	LuHaia	?

Product	Amount	Date	Subscriber	Price	Recipient C = Capital	Bureau
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igi-esir	9.5m	AS6xi	Pd	c.74	Ag?	Crafts
	9.5m	AS8	Ag	c1.47	Ag?	Crafts
im-babbar	10m	AS5xi	Pd	.2	?	?
	10m	AS6xi	Ses	.1	LuEnlila	Metal
	10m	AS6xi	UrDZ	.1	?	é kù-dim
	10m	AS7vii	UrDZ	.1	?	é kù-dim
	10m	AS9	UrDZ	.2	?	é kù-dim
	10m	SS5	Pd	.2	Šaguškin	?
im-babbar	60m	AS6xi	Pd	.1	?	queen's wardrobe
	60m	AS6xi	Pd	.1	?	queen's wardrobe
im-babbar	120m	AS6xi	Ses	.3	?	royal wardrobe
	120m	AS7vii	UrDZ	c.12	LuNinŠubur	Sara's
	120m	AS9	UrDZ	.5	?	royal wardrobe
	120m	SS2	UrDZ	.15	UrNungal	royal wardrobe
im-babbar	225m	AS4i	UrDZ	.2	?	Dukuga
	225m	AS5xi	Pd	c.15	Lugalgar-lagare	Dukuga
	225m	AS6xi	Ses	.1	Lugalgar-lagare?	Dukuga
im-babbar	360m	AS4i	UrDZ	.17	Ikala	royal wardrobe
	360m	AS5xi	Pd	.2	Sarrumili	royal wardrobe
	360m	AS6xi	Pd	.1	?	royal wardrobe
	360m	AS9	UrDZ	.2	?	royal wardrobe
im-babbar	600m	AS5xi	Pd	.2	é id luruguda	giš-kin-ti
	600m	AS7ix	Pd	.1	?	giš-kin-ti
im-babbar-kum	10s	AS5xi	Pd	.2	Adada	bootery
	10s	AS6xi	Pd	.2	?	bootery
	10s	SS6	Lkl	.3	?	bala?
4. Fish						
ku ₆ -sag-kúr	1980	AS5	Inm	.2	C?	?
	1980	AS5	Ses	.2	C?	?
	1980	AS6ii	Kd	.2	C?	?
ku ₆ -sag-kúr	2190	AS5	Pd	.2	C?	?
	2190	AS5	Ses	.2	C?	?
ku ₆ -sag-kúr	660	AS5	Inm	c.12	C?	?
erin	660	AS6ii	Kd	c.12	C?	?

Product	Amount	Date	Subscriber	Price	Recipient C = Capital	Bureau
kuč-ša-bar	1380	AS5	Inm	.45	C?	?
	1380	AS6ii	Kd	.45	C?	?
kuč-ša-bar	600	AS5	Pd	c.12	C?	?
erín	600	AS5	Inm	c.12	C?	?
	600	AS6ii	Kd	c.12	C?	?

5. Fruits and Fruit Products

geštin-hád	10s	AS4	Sgk	3	UrŠakan	?
	10s	AS5xi	Pd	3	?	?
	10s	AS8xii	UrDZ	6	LuNinšubur	Šara's
giš-hašhur-hád	3s	AS6xi	Pd	.33	?	kitchen oil?
	3s	AS6xi	Pd	.33	Lukala	kitchen oil?
	3s	AS9x	Pd	.33	UrNungal	wardrobe
giš-ma-nu	120m	AS6xi	Pd	.1	?	kitchen oil
	120m	AS9x	Pd	.25	UrNungal	wardrobe
giš-pěš še-er-gu	.5	AS6xi	Pd	15	?	kitchen oil?
	.5	AS6xi	Pd	15	Lukala	kitchen oil?
	.5	AS9x	Pd	15	UrNungal	wardrobe
giš-pěš še-er-gu	4	AS5xi	Pd	12	LuNinšubur	Šara's
	4	AS6xi	UrDZ	15	?	cultic
	4	AS9	UrDZ	15	?	cultic
zú-lum	5s	AS6xi	Pd	.4	?	kitchen oil?
	5s	AS6xi	Pd	.4	?	kitchen oil?
	5s	AS9x	Pd	.5	UrNungal?	wardrobe
zú-lum	9000s	AS5	Ses	.5	C?	?
	9000s	AS7vii	UrDZ	.5	C?	?

6. Grains

še	9000s	AS3	Ses	.6	C Lukala	?
	9000s	AS8xii	UrDZ	.8	C?	?
še	18000s	AS5xi	Pd	.6	C?	?
	18000s	AS5	Ses	.6	C?	?
	18000s	AS9	UrDZ	.6	C Ada	Metal

7. Leather and Hides

kuš-a-gá-lá	40	AS5	Pd	5	C?	?
	40	AS5	LIn	4	C?	?
kuš-e-sír	5	AS5	Pd	9	C?	?
	5	AS5	LIn	9	C?	?
	45	AS5	Inm	11.67	C?	?
	45	AS6ii	Kd	11.67	C?	?
kuš-udu	420	AS5	Pd	2	C?	?
	420	AS5	Inm	2	C?	?
	420	AS6ii	Kd	2	C?	?
kuš-ummu	10	AS5	Ses	10	C?	?
	10	AS5	LIn	10	C?	?
kuš-ummu	25	AS5	Inm	10	C?	?
	25	AS6ii	Kd	10	C?	?

Product	Amount	Date	Subscriber	Price	Recipient C = Capital	Bureau
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9. Metals

su-GAN	1m	AS4	UrDZ	90	Lú[Enlila?]	?
	1m	SS2	UrDZ	90	LuEnlila	Metal
urudu	c4.4m	AS5xi	Pd	c283.64	LuEnlila	Metal
	c4.47m	AS5	Inm	120	LuEnlila	Metal
urudu	18m	AS5	Ses	120	LuEnlila	Metal
	17.95m	AS9x	Pd	c107.99	Halulu	Metal
urudu	c51.58m	S40	?	c77.16	?	?
	c51.58m	S43x	Gdl	c77.16	Nini dg	?
urudu	70m	AS8vii	Pd	c98.61	LuEnlila	Metal
	70.5m	AS9	UrDZ	108	LuEnlila	Metal

10. Oils

i-düg-nun-na	1s	AS9	UrDZ	180	?	?
	1s	AS9	UrDZ	180	Lkl	?
i-düg-nun-na	2.5s	SS2	UrDZ	180	LuNinšubur?	Šara's
	2.5s	SS6	Lkl	180	Lugalnir	Šara's
i-düg-nun-na	3s	AS8vii	UrDZ	180	?	?
	3s	SS2	UrDZ	180	UrSPE	?
i-düg-nun-na	4s	AS6xi	UrDZ	180	UrSPE	?
	4s	AS7vii	UrDZ	180	dam BA11.	?
					BA11?	?
i-ku ₆	120s	AS5	Pd	6	C?	?
	120s	AS5	Ses	6	C?	?

11. Reed

gi	2m	AS7vii	UrDZ	9	dam BA11.	?
					BA11?	?
	2m	AS8vii	UrDZ	9	LuHaia?	?
gi	7m	AS6xi	Pd	9	?	kitchen oil?
	7m	AS9	UrDZ	9	?	?
nig-kěš	.05m	AS6xi	UrDZ	60	?	?
	.05m	AS9	UrDZ	60	?	lustration

12. Resins and Spices

ar-ga-nüm	2.67m	AS9	UrDZ	6	?	?
	2.67m	AS9	UrDZ	6	Lkl?	?
en-mur	1m	AS9	UrDZ	4.5	?	?
	1m	AS9	UrDZ	4.5	Lkl?	?
en-mur	3m	AS7vii	UrDZ	3	dam BA11.	?
					BA11?	?
	3m	AS8vii	UrDZ	3	?	?
ku-mul	60s	AS9	UrDZ	9	?	nig-sigs
	60s	AS9	UrDZ	9	UrSPE	?
	60s	SS2	UrDZ	9	UrNungal?	wardrobe
ku-mul	63s	AS4	Sgk	12	?	kitchen
	62.89s	SS6	Lkl	c9.30	?	hala?

Product	Amount	Date	Subscriber	Price	Recipient C = Capital	Bureau
mun	.67m	AS6xi	UrDZ	18	?	Sara's
	.67m	AS9	UrDZ	18	?	?
	.67m	AS9	UrDZ	18	UrSPE?	?
ni-gi-tum	2.33m	AS9	UrDZ	22.5	?	?
	2.33m	AS9	UrDZ	22.5	UrSPE?	?
ni-ik-tum	12s	AS7vii	UrDZ	15	dam BA _{II}	?
					BA _{II} ?	
	12s	SS2	UrDZ	15	UrSPE?	?
	12s	SS6	Lkl	15	Šarakam	?
	12s	SS6	Lkl	15	Šarakam	?
ig.ūz	1m	AS4	Sgk	18	?	cultic
	1m	AS6xi	UrDZ	20	?	kin-gi-a
	1m	AS6xi	UrDZ	18	?	Sara's
	1m	AS8vii	UrDZ	18	Kugani?	?
	1m	AS9	UrDZ	18	?	cultic
ig.ūz	6m	AS9	UrDZ	18	?	?
	6m	SS2	UrDZ	20	?	?
še-li	.17s	AS4	UrDZ	c24	UrSPE?	?
	.17s	AS5xi	Pd	c36	UrSPE	giš-kin-ti
še-li	1s	AS6xi	UrDZ	90	Adaga	?
	1s	AS8vii	UrDZ	45	LuHaia	?
še-li	3.33s	AS9	UrDZ	c24.55	?	?
	3.33s	AS9	UrDZ	30	UrSPE?	?
še-li	15.33s	AS7vii	UrDZ	60	dam BA _{II}	?
					BA _{II} ?	
	15.33s	AS8vii	UrDZ	45	?	?
šim	2.67m	AS9	UrDZ	60	?	?
	2.67m	AS9	UrDZ	c61	UrSPE?	?
šim-dùg	1m	AS9	UrDZ	9	?	?
	1m	AS9	UrDZ	9	UrSPE?	?
šim-dùg	6m	AS4	UrDZ	9	UrSPE?	?
	6m	AS9	UrDZ	9	UrSPE?	(Dukuga?)
šim-dùg	8m	AS8vii	UrDZ	9	?	?
	8m	SS2	UrDZ	9	UrSPE	?
šim-gam-	3s	AS9	UrDZ	3	?	?
gam-ma	3s	AS9	UrDZ	3	UrSPE?	?
	3s	SS6	Lkl	1.67	LuHaia?	?
šim-gam-	12s	AS4	Sgk	2.67	?	kitchen oil?
gam-ma	12s	AS6xi	Pd	6	?	kitchen oil?
	12s	AS7ix	Pd	4.5	UrNungal?	kitchen oil
	12s	AS9x	Pd	3	UrNungal?	wardrobe
šim-gam-	15s	AS4	UrDZ	3.6	UrSPE?	?
gam-ma	15s	AS9	UrDZ	3	UrSPE?	(Dukuga?)
šim-GĀN	3s	AS4i	UrDZ	12	UrSPE?	?
	3s	AS8vii	UrDZ	12	LuHaia?	?
	3s	AS9	UrDZ	3	?	?
	3s	AS9	UrDZ	18	UrSPE?	?

Product	Amount	Date	Subscriber	Price	Recipient C = Capital	Bureau
šim-GĀN	6s	AS4	Sgk	18	?	kitchen oil?
	6s	AS7ix	Pd	15	?	kitchen oil
	6s	AS9x	Pd	17.33	UrNungal?	wardrobe
šim-gu-	1s	AS9	UrDZ	1.5	?	?
ku-ru	1s	AS9	UrDZ	1.5	UrSPE?	?
šim-gu-	3s	AS7ix	Pd	3	UrSPE	?
ku-ru	3s	AS8vii	UrDZ	c1.78	LuHaia	?
	3s	SS6	Lkl	3	LuHaia?	?
šim-gu-	10s	AS8vii	UrDZ	1.8	?	?
ku-ru	10s	AS9	UrDZ	1.8	UrSPE?	(Dukuga?)
šim-gu-	10.67s	AS4	Sgk	c3.00	?	kitchen oil?
ku-ru	10.67s	AS6xi	Pd	c3.00	?	kitchen oil?
	10.67s	AS7ix	Pd	c1.78	?	kitchen oil?
	10.67s	AS9x	Pd	2.81	UrNungal?	wardrobe
šim-hi-a	2s	AS5xi	Pd	6	?	?
	2s	AS6xi	UrDZ	6	?	lustration
	2s	AS9	UrDZ	12	?	lustration?
	2s	SS2	UrDZ	12	UrNungal?	wardrobe
šim-hi-a	3s	AS5xi	Pd	8	?	cultic?
	3s	AS6xi	UrDZ	10	?	cultic
	3s	SS2	UrDZ	11.67	?	cultic
šim-IM	1.33m	AS9	UrDZ	6.75	?	?
	1.33m	AS9	UrDZ	9	UrSPE?	?
šu-ūr-me	.67m	AS6xi	UrDZ	15	?	Šara's?
	.67m	AS9	UrDZ	18	?	?
šu-ūr-me	3m	AS8vii	UrDZ	15	LuHaia?	?
	3m	AS8vii	UrDZ	15	Kugani	?
tām-še-lum	1m	AS9	UrDZ	4.5	UrSPE?	?
	1m	AS9	UrDZ	4.5	UrSPE?	(Dukuga?)
tām-še-lum	2m	AS7vii	UrDZ	6	dam BA _{II}	?
					BA _{II} ?	
	2m	AS7ix	Pd	6	UrSPE	?
U 11R	2s	SS6	Lkl	3	?	?
	2s	SS6	Ab	3	?	?
za-ba-lum	8m	AS9	UrDZ	18	UrSPE?	(Dukuga?)
	8m	SS2	UrDZ	15	Lukala	Šara's
13. Tanning Agents						
al-la-ha-ru	1s	AS4	UrDZ	9	?	?
	1s	SS6	Lkl	9	Lugalnir	Šara's
al-la-ha-ru	20s	AS6xi	Pd	9	Akala	leather
	20s	SS2	UrDZ	12	LuNinŠubur	Šara's
14. Trees and Timber						
giš-kab	20	SS6	Ab	11.25	Abagina?	boat
6-kūš-ta	20	SS6	Lkl	11.25	?	?

Product	Amount	Date	Subscriber	Price	Recipient C = Capital	Bureau
15. Vegetables						
numun-sum-	300s	SS2	UrDZ	2.4	Lukala?	?
sikil	300s	SS6	Lkl	2.4	LuHaia	?
sag-X-na	2s	AS9	UrDZ	.25	?	?
	2s	AS9	UrDZ	.25	UrSPE?	?
sag-X-na	4s	AS7vii	UrDZ	c.63	dam BA11.	?
					BA11?	?
	4s	AS8vii	UrDZ	1.25	?	?
16. Wools						
sig	300m	AS5xi	Pd	20	CNamea	?
	300m	AS6xi	Ses	20	C?	governor
	300m	SS2	UrDZ	15	CLugal-murube	?
sig	360m	AS5	Ses	20	C?	?
	360m	AS5	Inm	20	C?	?
sig	1200m	AS4	UrDZ	19.5	C?	governor
	1200m	AS6xi	Pd	18	C?	?
sig-üz	40m	SS6	Lkl	4.5	Šarakam	?
	40m	SS6	Lkl	4.5	?	boat
sig-KU.GI	300m	AS7vii	UrDZ	14.67	CLuEnlila	metal
	300m	AS7ix	Pd	18	CLuŠulgi	?
17. Miscellaneous						
pa-li	.5s	AS4	Sgk	3	SIG4-te-la-ni	?
	.5s	AS6xi	UrDZ	6	?	lustration
	.5s	AS9	UrDZ	3	?	lustration
	.5s	AS9	UrDZ	3	Ag?	crafts
pa-li	1s	AS4	UrDZ	3	UrSPE	?
	1s	AS8vii	UrDZ	4.5	Lukala	?
pa-li	5s	AS9	UrDZ	3	?	?
	5s	AS9	UrDZ	3	UrSPE	?
pa-li	10s	AS7vii	UrDZ	3	dam BA11.	?
					BA11?	?
	10s	AS8vii	UrDZ	4.5	?	?
	10s	SS2	UrDZ	3	UrSPE?	?

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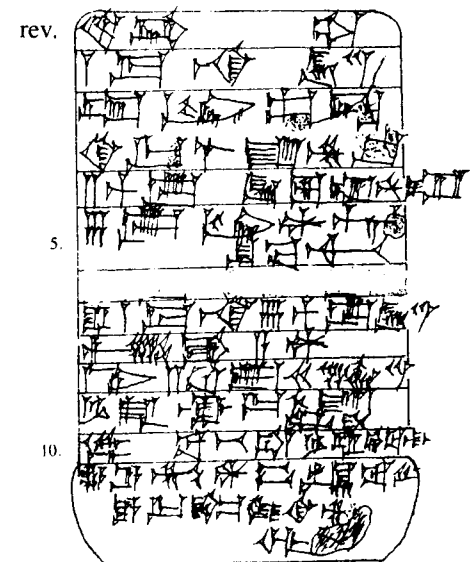
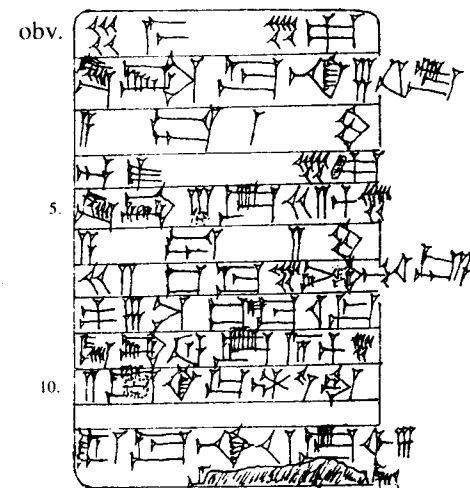
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Concordance of Museum Numbers

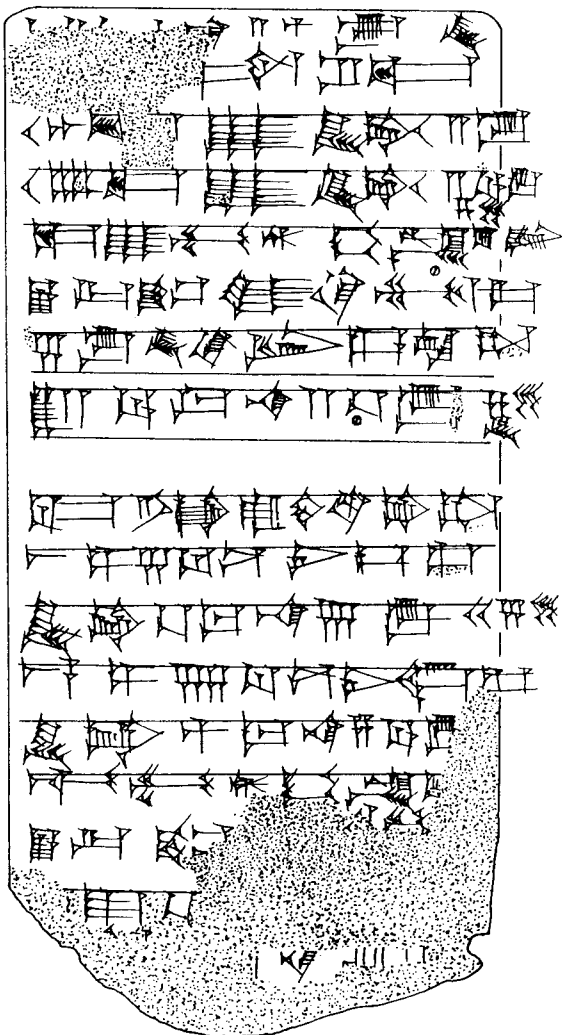
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MLC 2602	9	YBC 1397	24
NBC 228	17	YBC 15333	8
NBC 237	22	YBC 16487	5
NBC 244	19	YBC 16562	12
NBC 246	20	YBC 16569	7
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NBC 6653	23	YBC 16607	13

1—Sequence 7—AS2xiiiUrT



2—Sequence II—AS3Pd

obv.

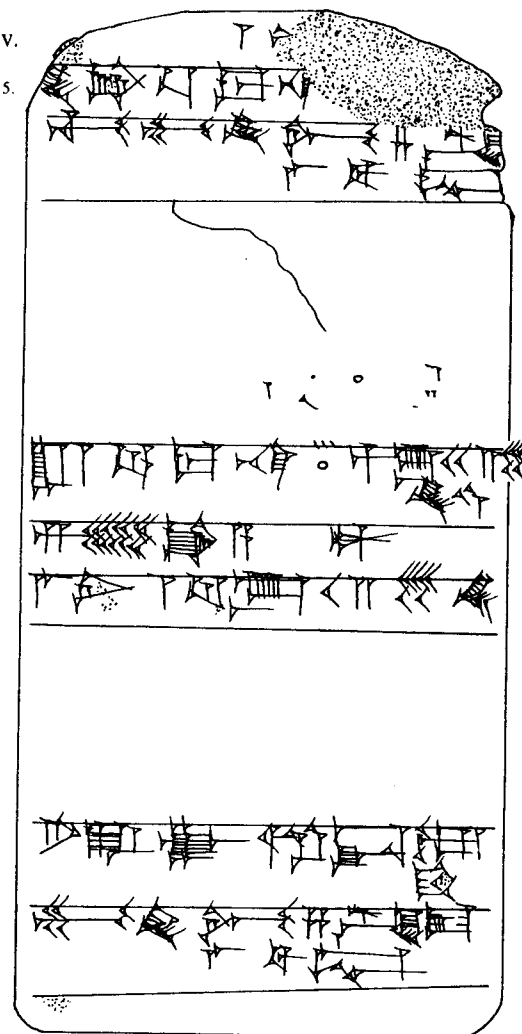


○ over erasure

2

rev.

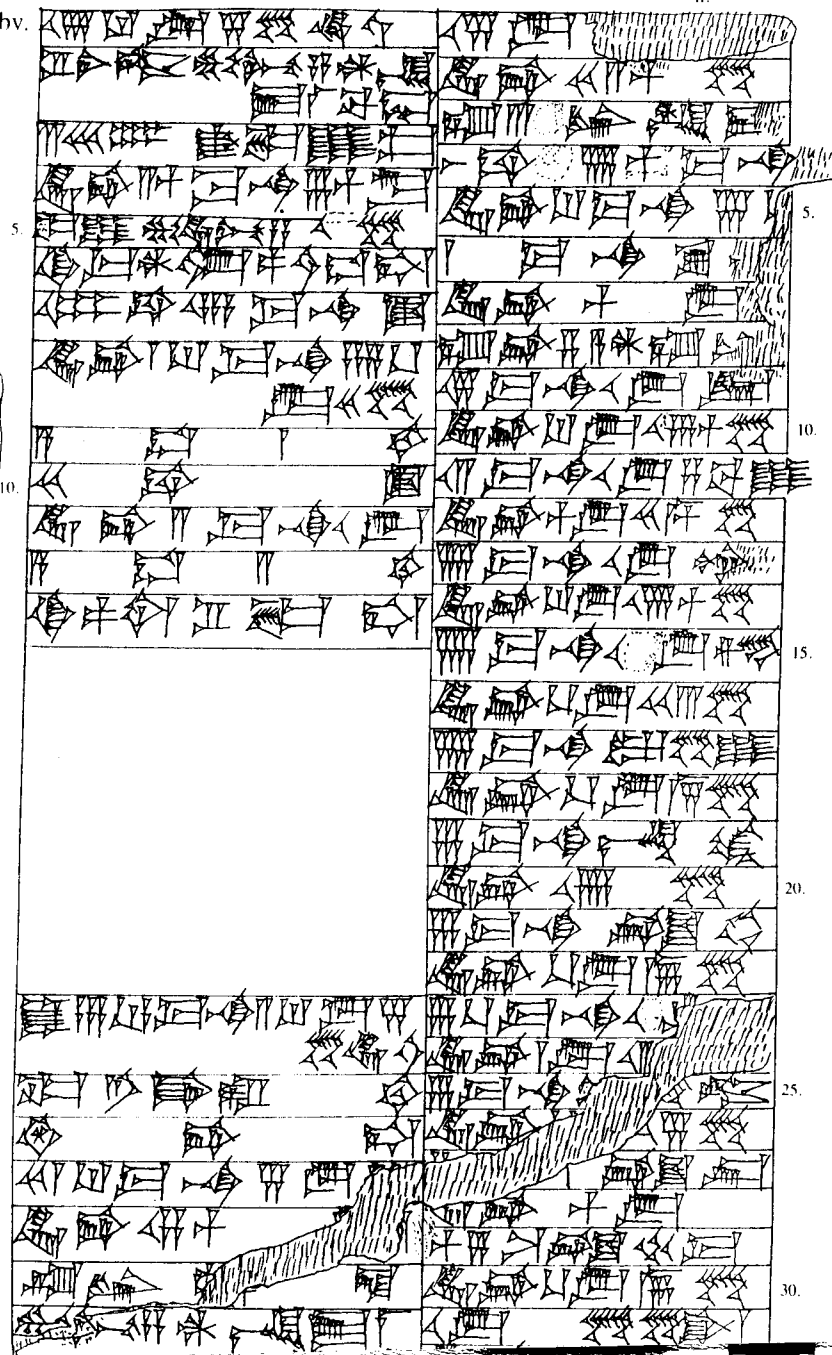
15.



20.

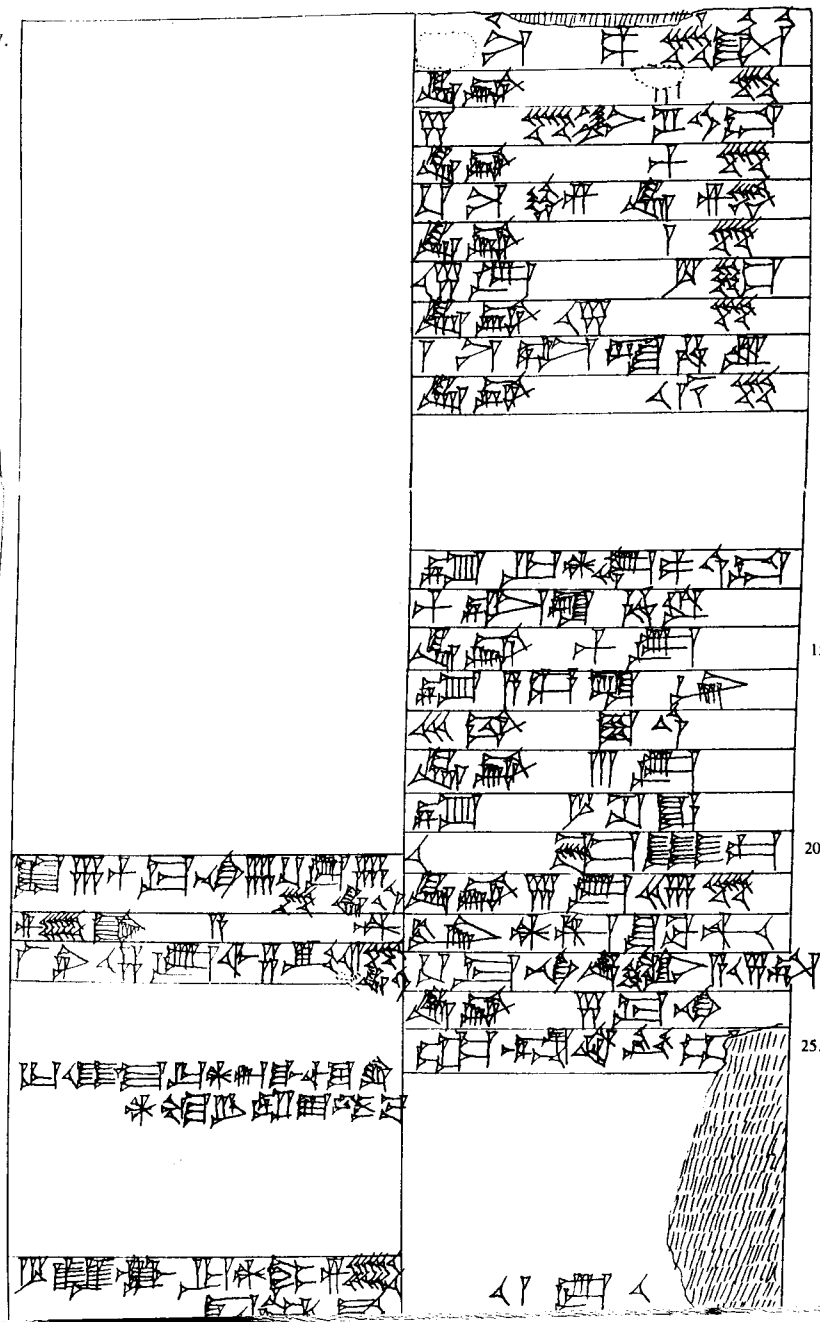
○ erasure

obv.



32
ku-bi 4 se
broken
ma-na 5 gin ururu
broken

rev.



da aam-gur
nu En-mah-gal-an-na
en dhanna ba-hur
AS 4 [empty]

00-01m

5

10

15

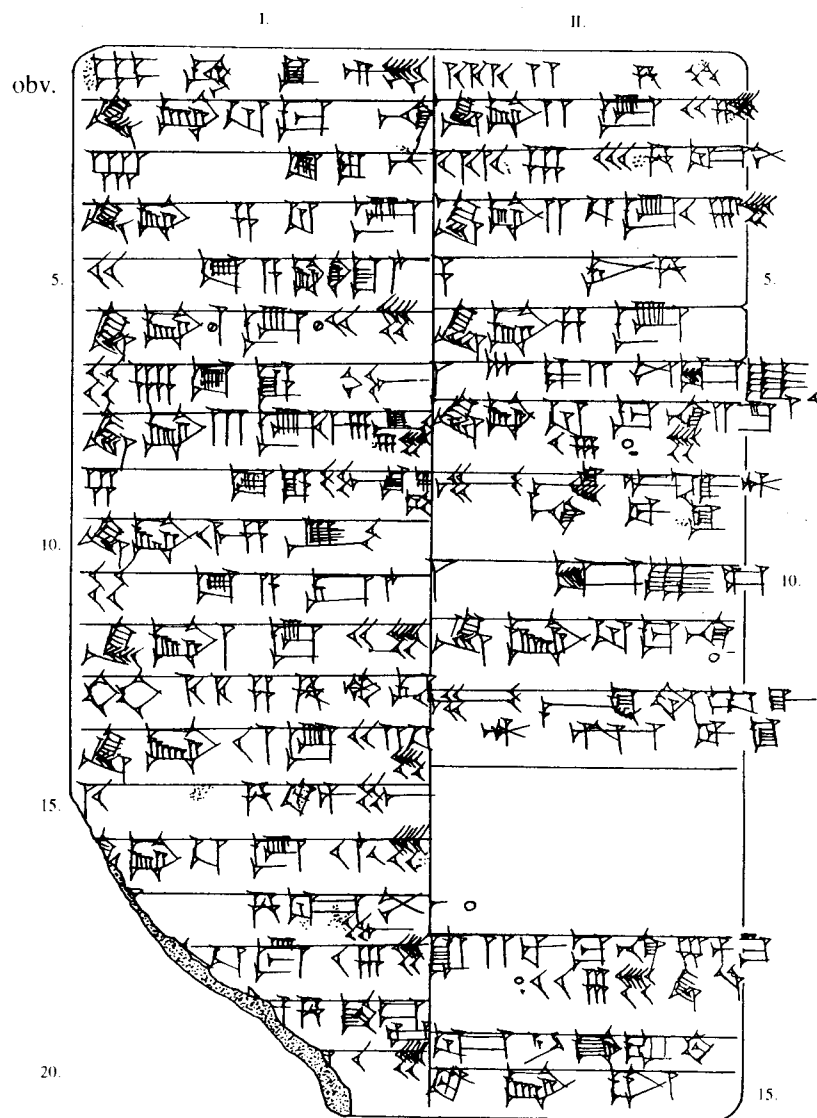
20

25

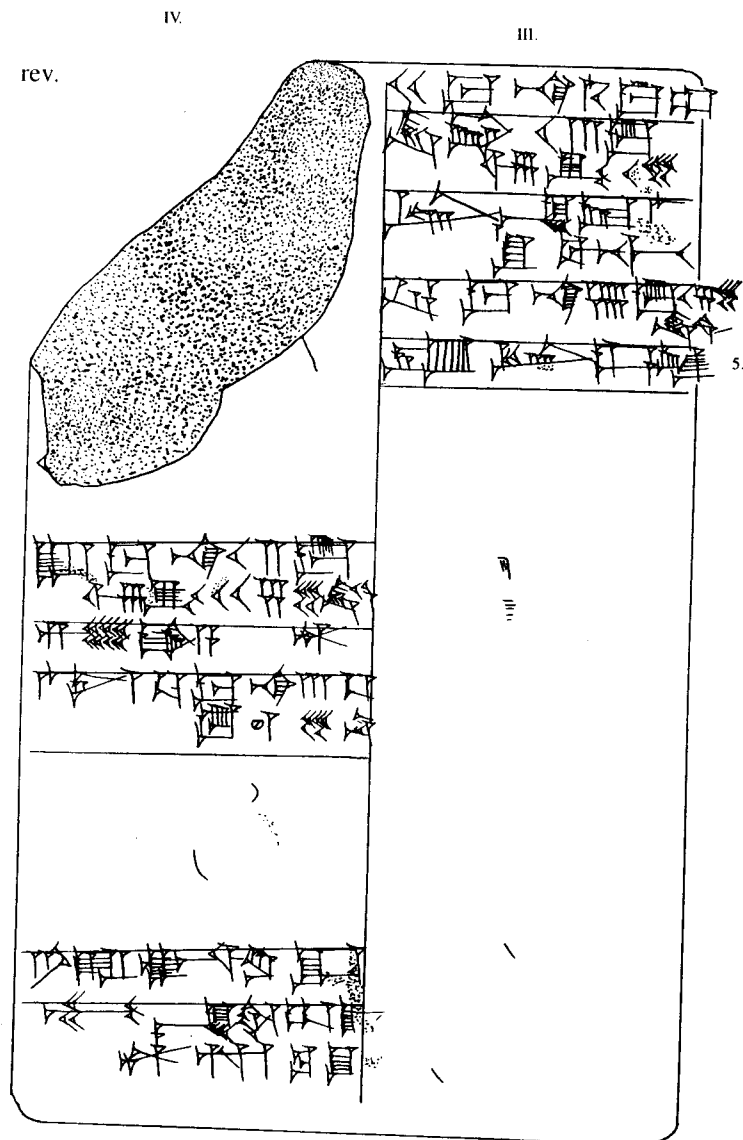
6

5

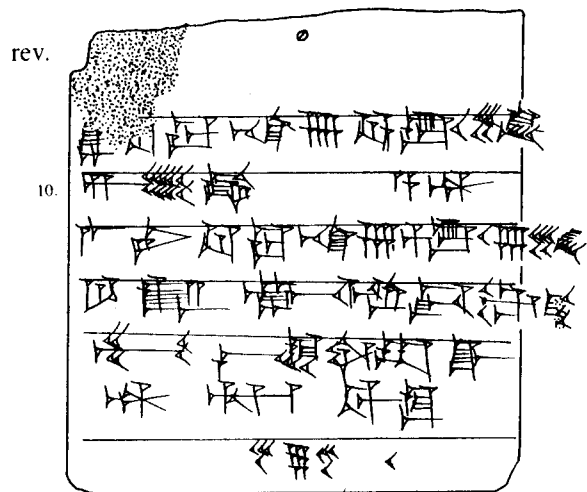
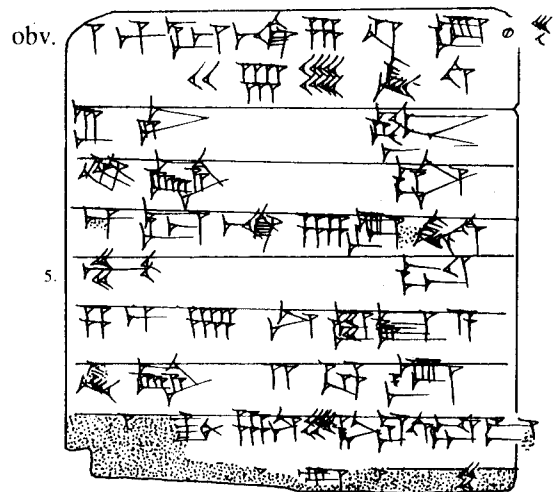
4—Sequence 17—AS5PdA obverse



4

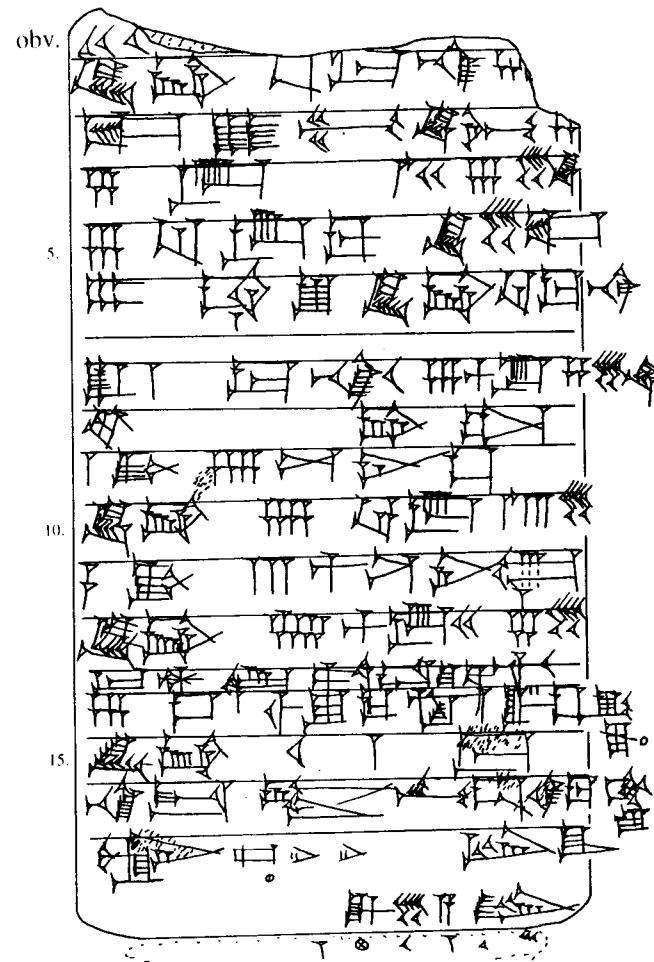


5—Sequence 19—AS5PdB



② erasure

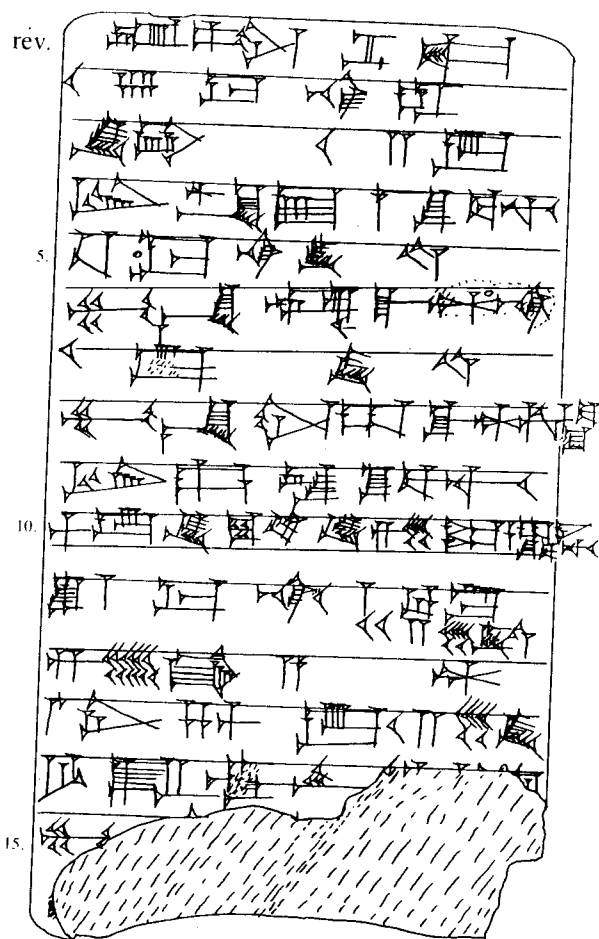
6—Sequence 20—AS5SesA



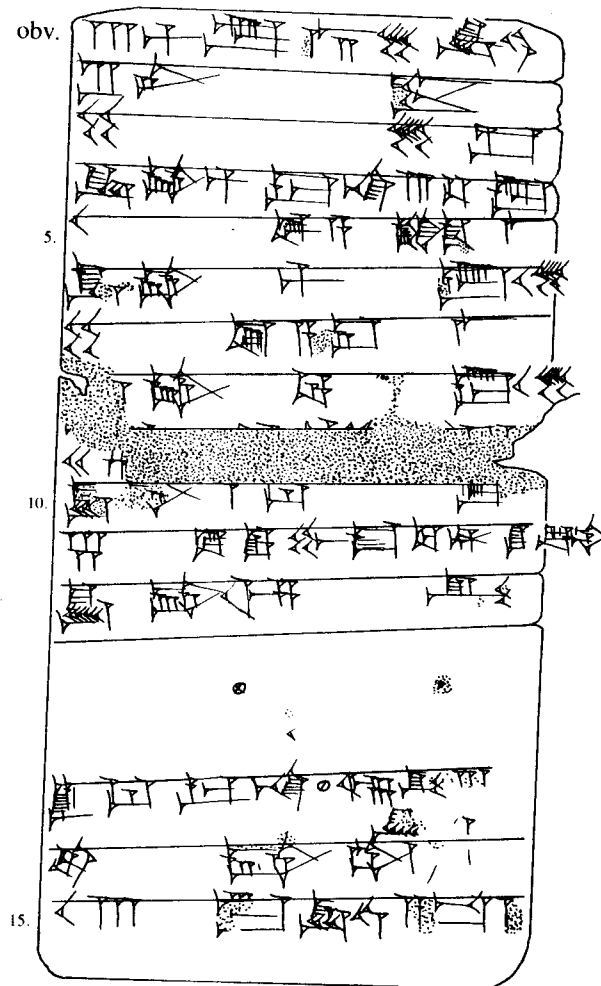
○ interference of rule of line 6 reverse

② scratched on after clay had dried

③ lower edge erased



○ sic. written over erasure?



○ here to end of line over erasure

● erasure over whole area

⦿ hole of 1mm diameter directly through tablet

rev.

20.

25.

30.

35.

② here to end of line over erasure

obv.

3

10

15

20

rev.

2

143

15.

20

erasure

obv.

1

11

11

5

10

15

20

五

1

1

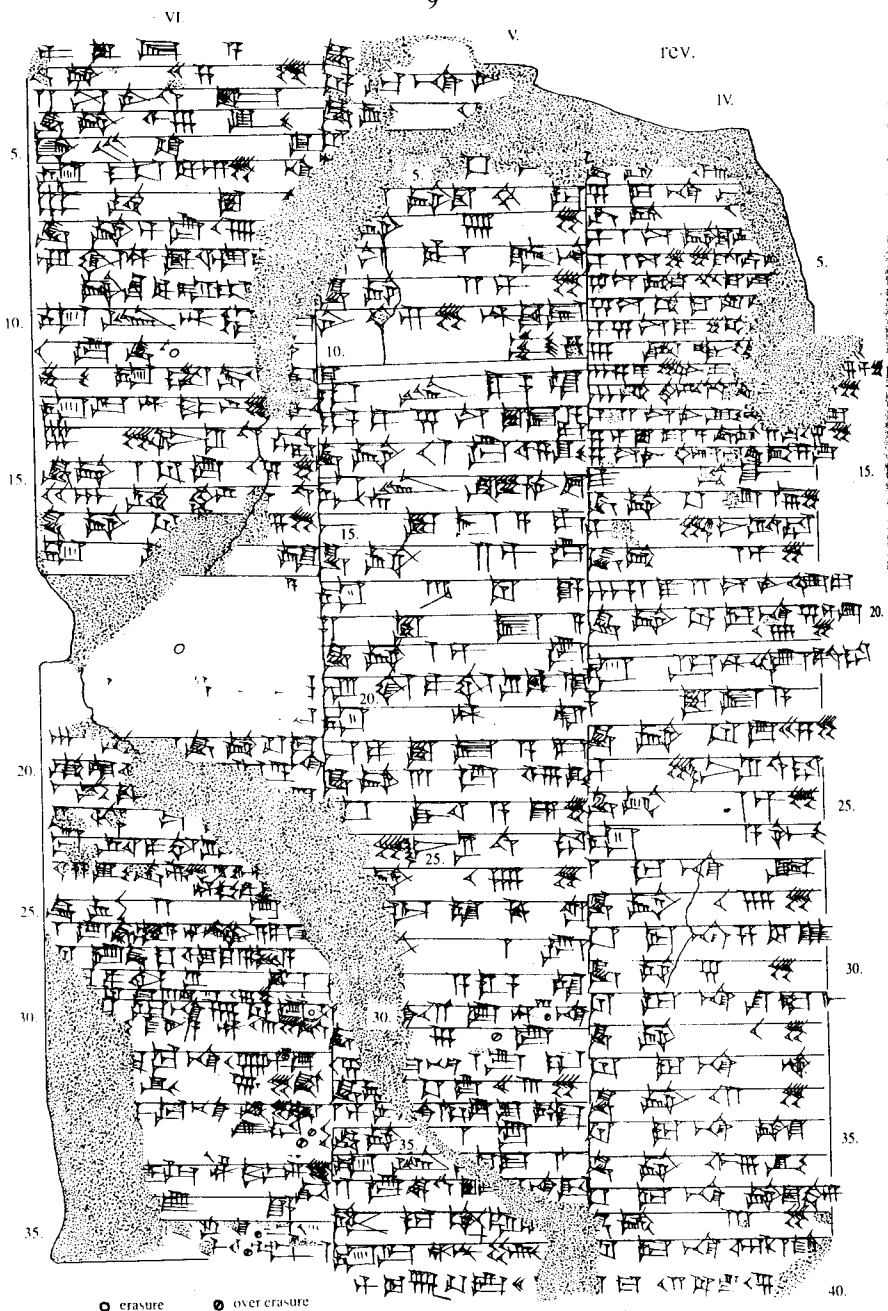
1

2

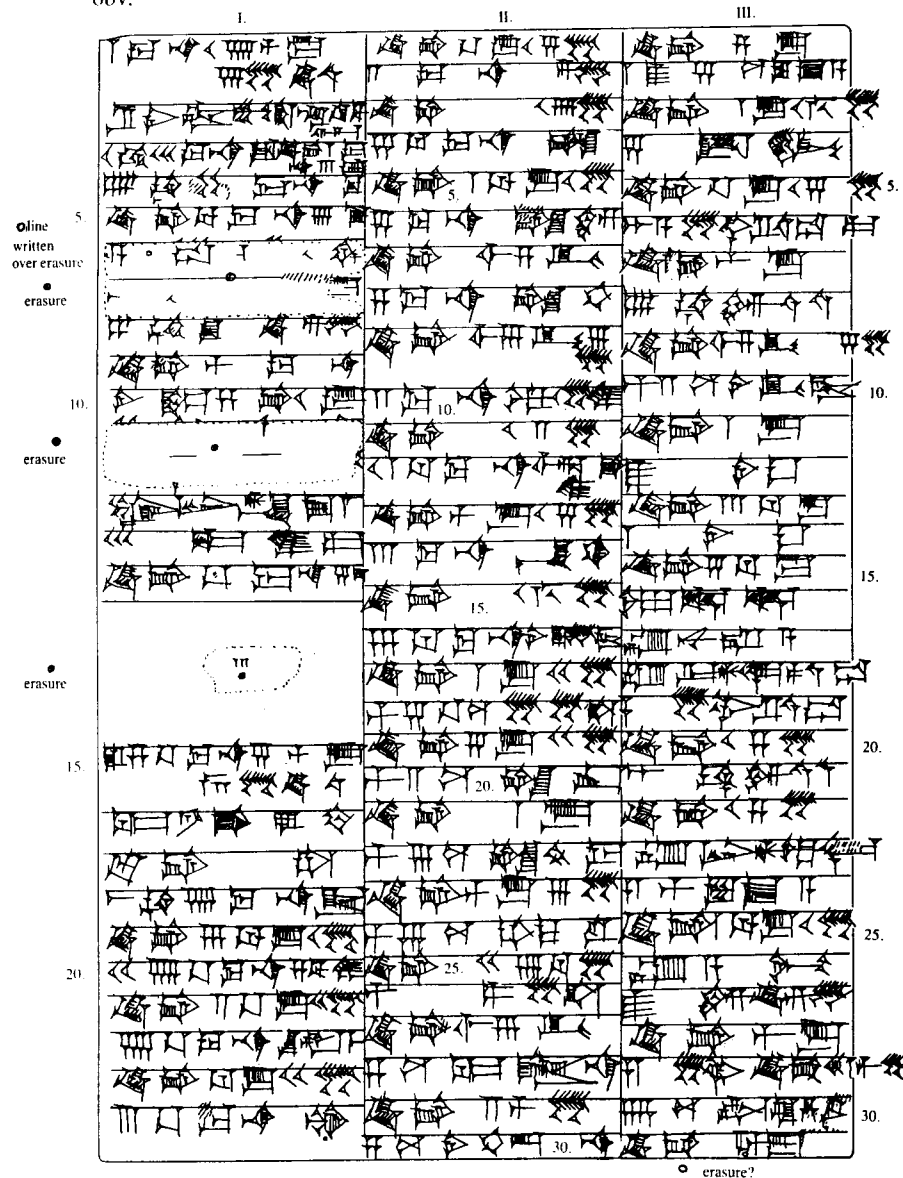
1

5

39



obv.

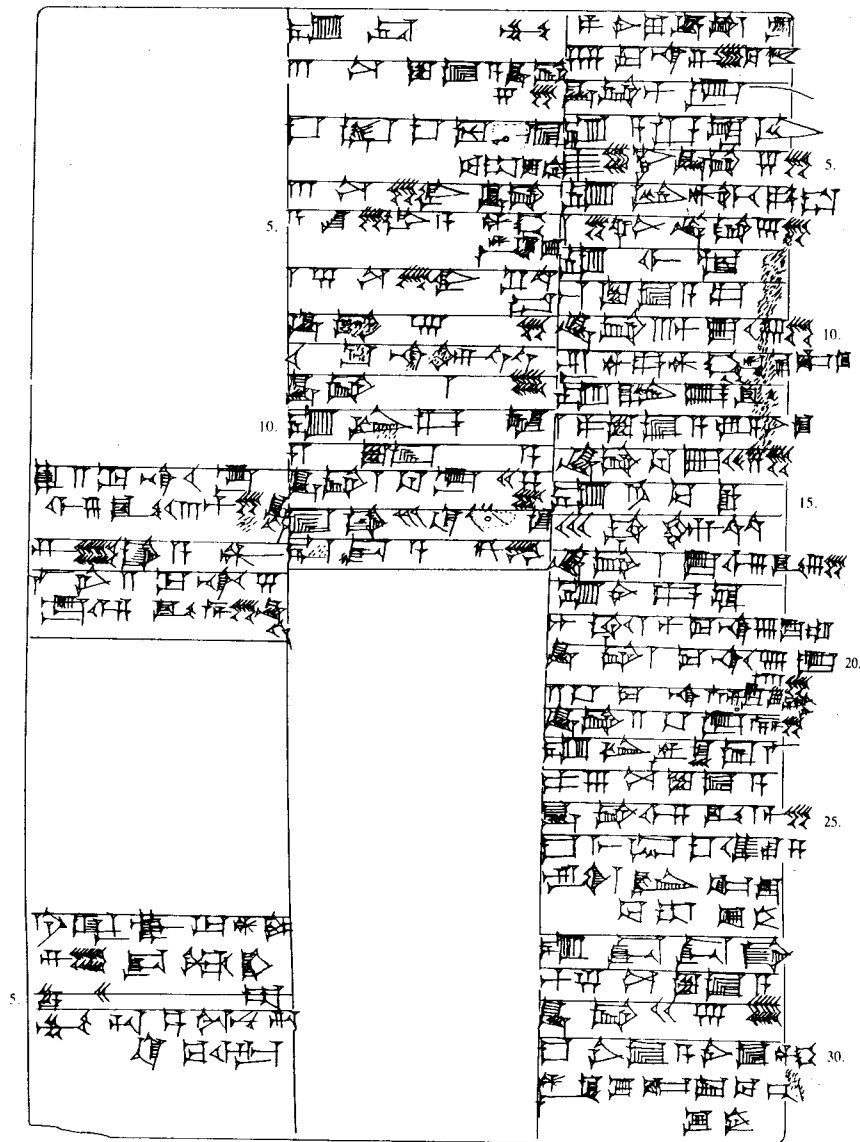


rev.

VI

V

IV



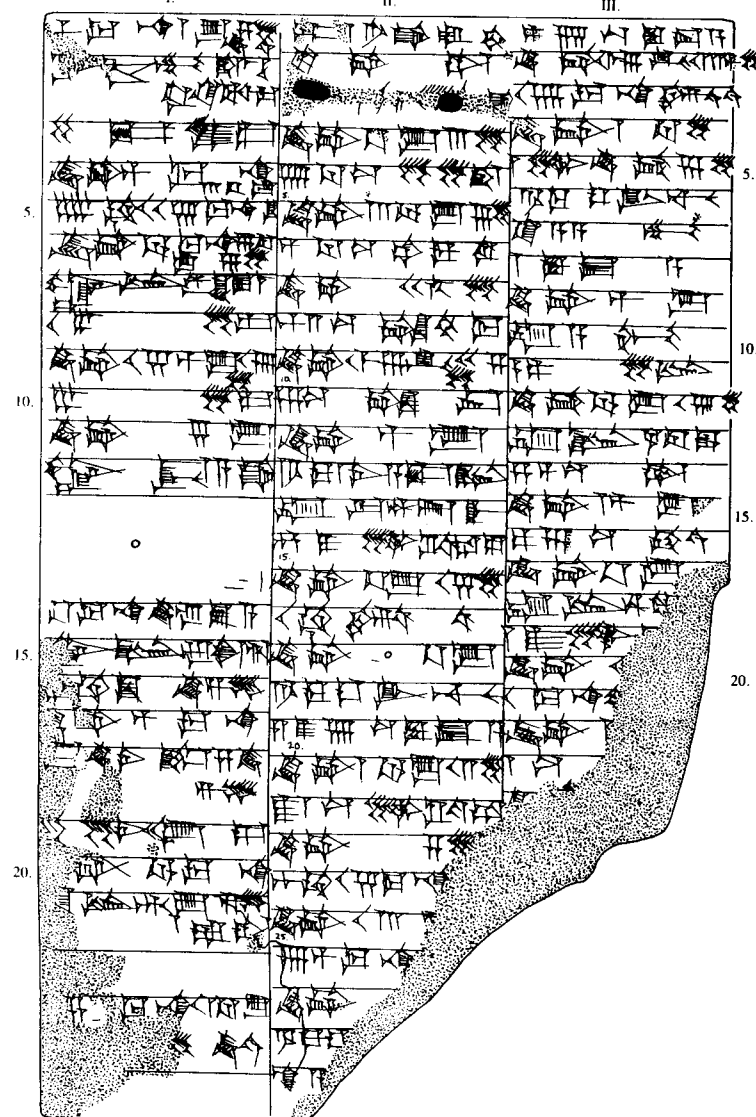
○ erasure

obv.

I

II

III



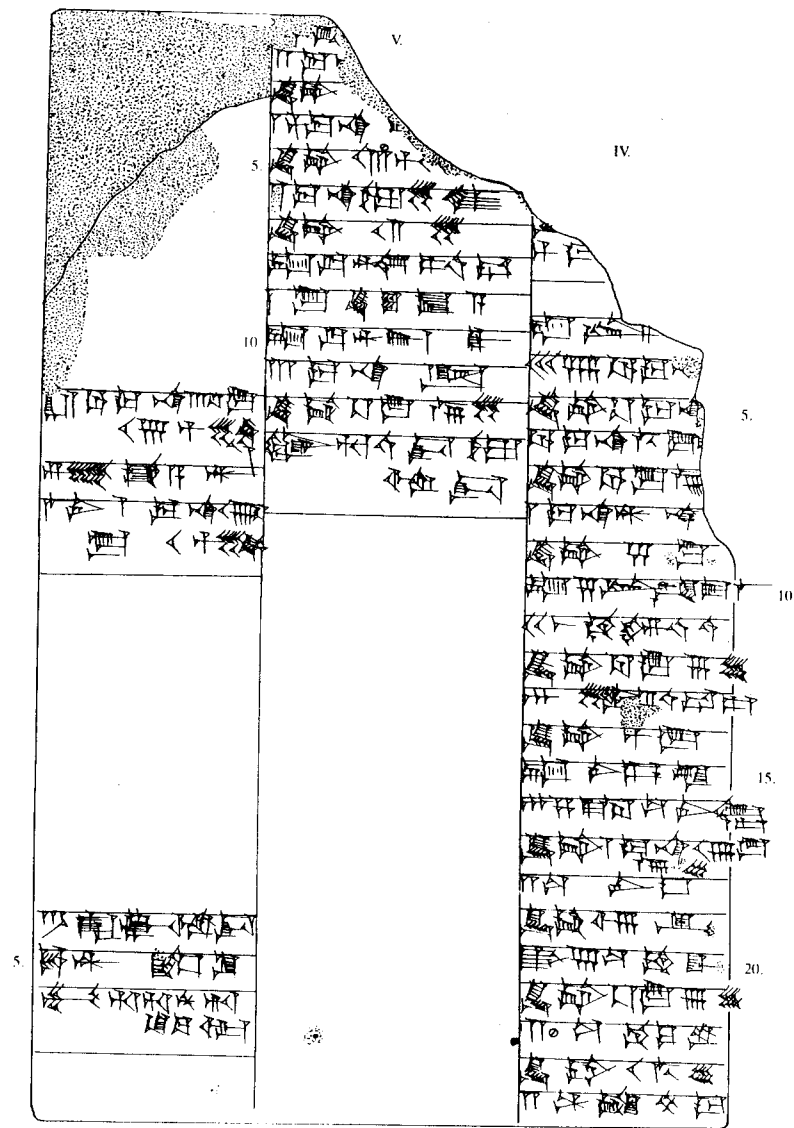
○ erasure

● hole reaching through to reverse

rev.

VI.

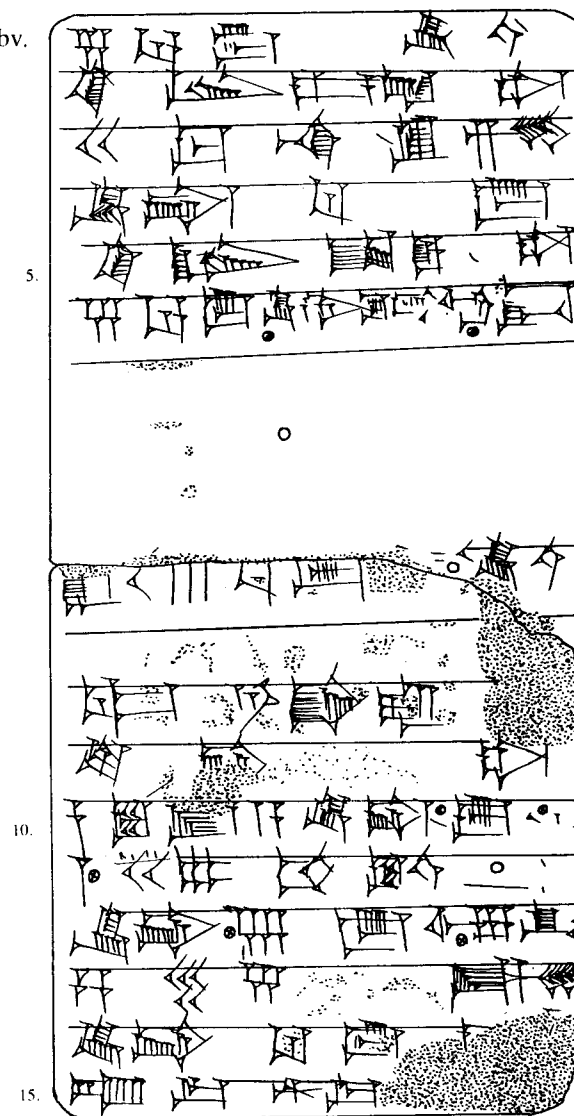
II



● hole reaching through to obverse ● over erasure

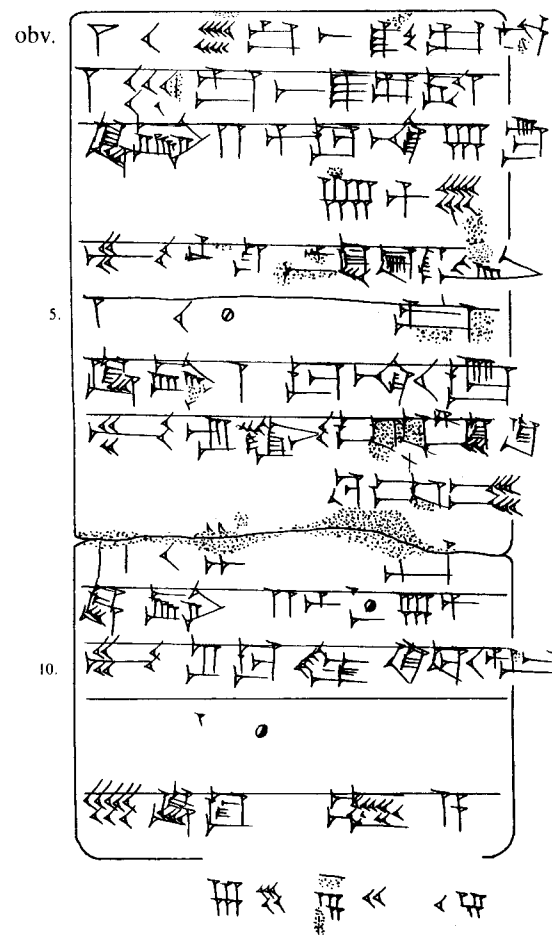
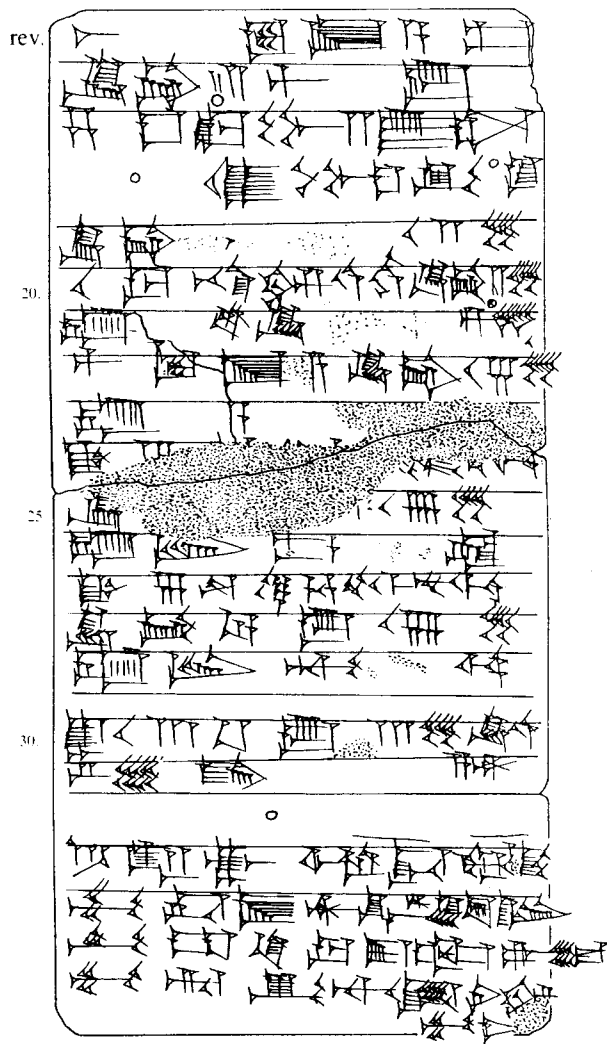
12—Sequence 40—SS5Pd

obv.



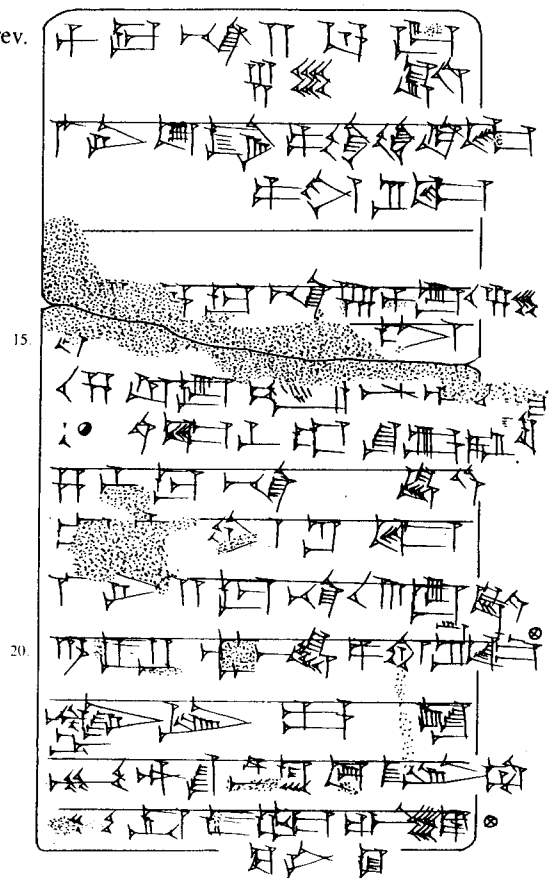
● ● over erasure: imprinted after clay had dried

○ erasure ● over erasure



13

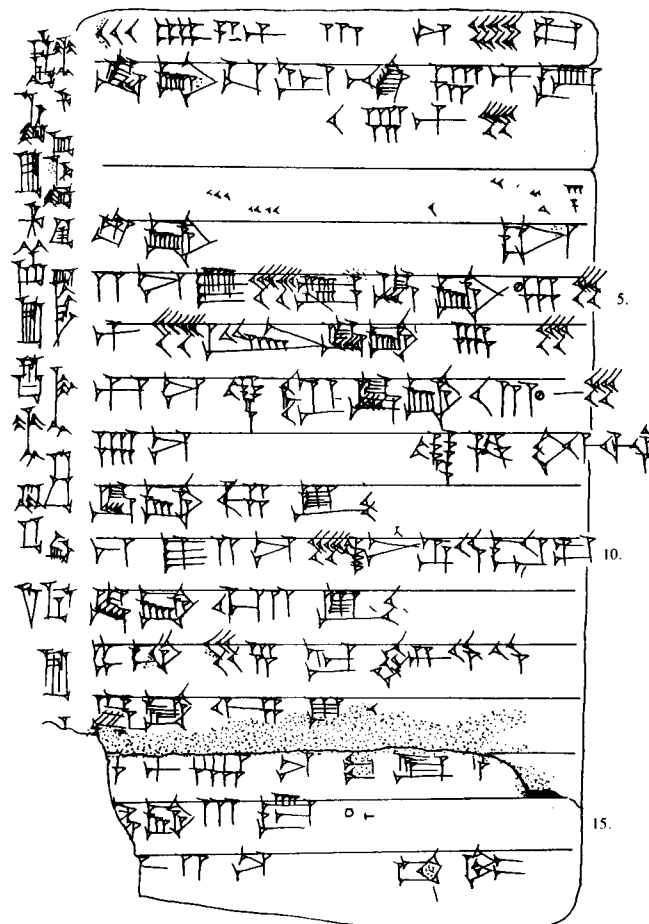
rev.



● over erasure

14—Sequence 42—SS6Ab

obv.



○ over erasure
 ○ erasure

rev.

5.

10.

15.

erasure!

obv.

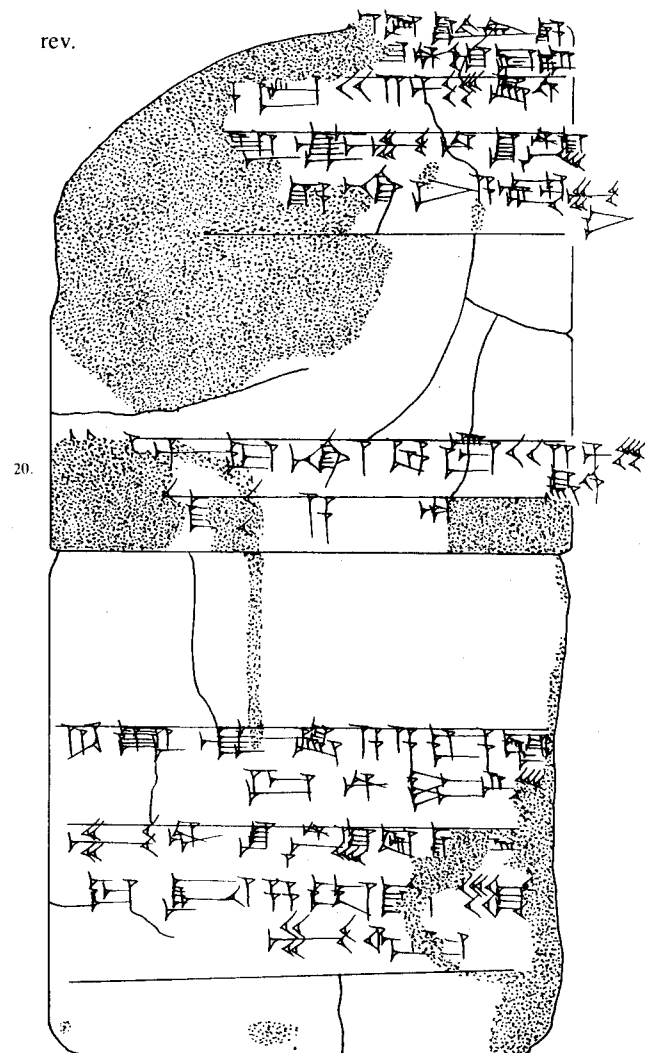
5.

10.

15.

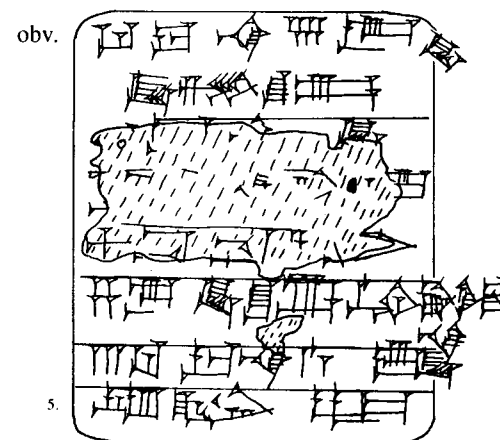
15

rev.

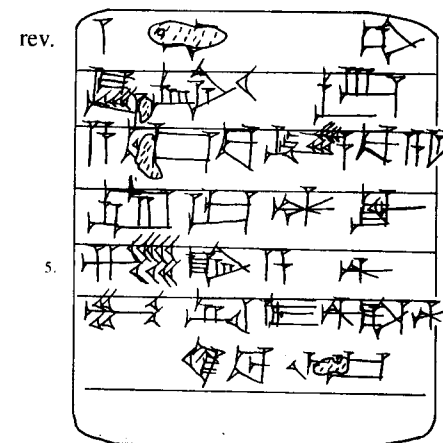


16—NBC 253 (S36)

obv.



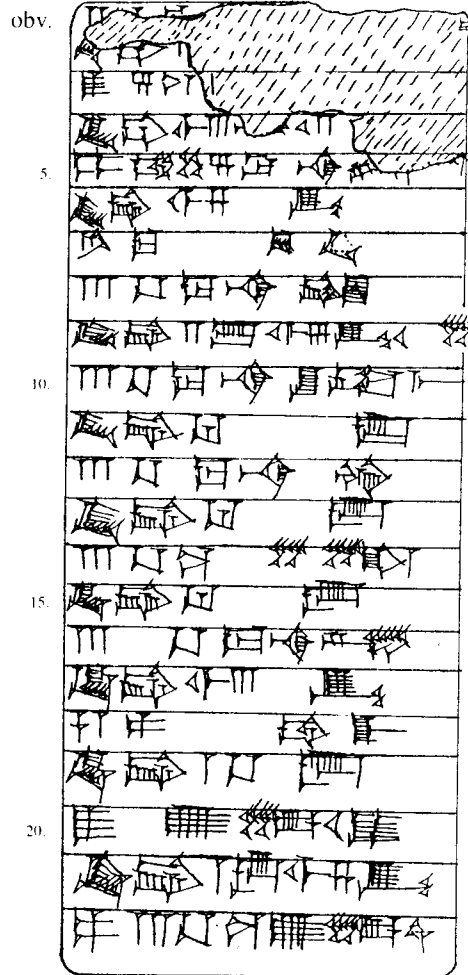
rev.



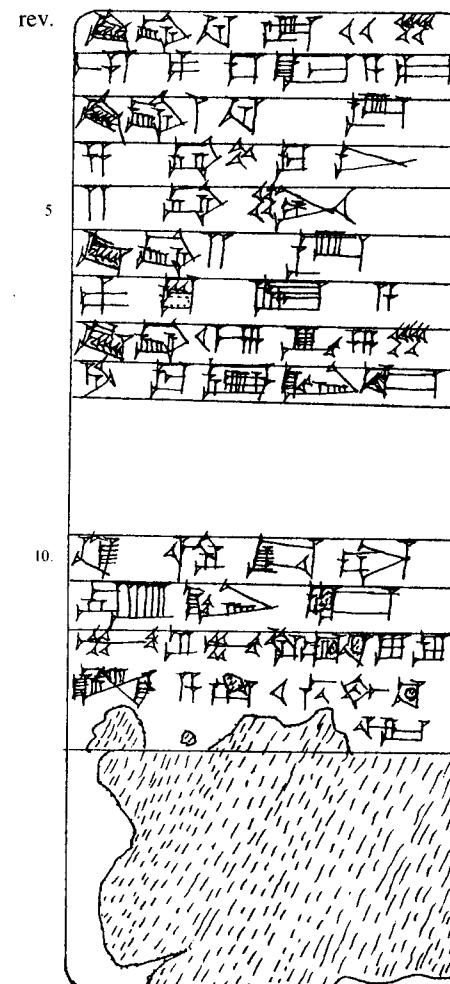
○ erasure

17—NBC 228 (S44)

9.6 cm X 4.2 X 1.9 brown, baked

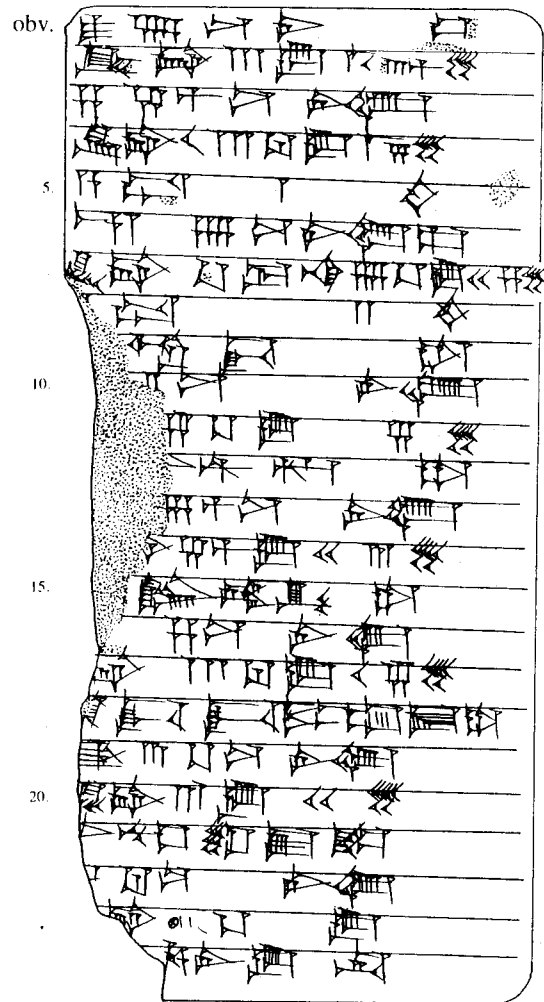


17



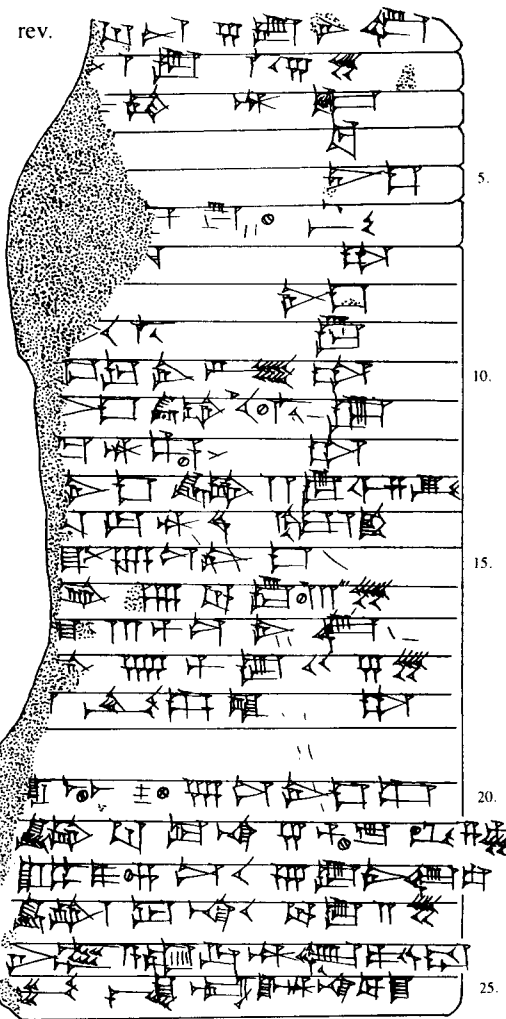
18—MLC 1978 (AS4)

10.4 cm X 5 X 2.3 reddish, baked



● scratched on after drying, then erased?

18

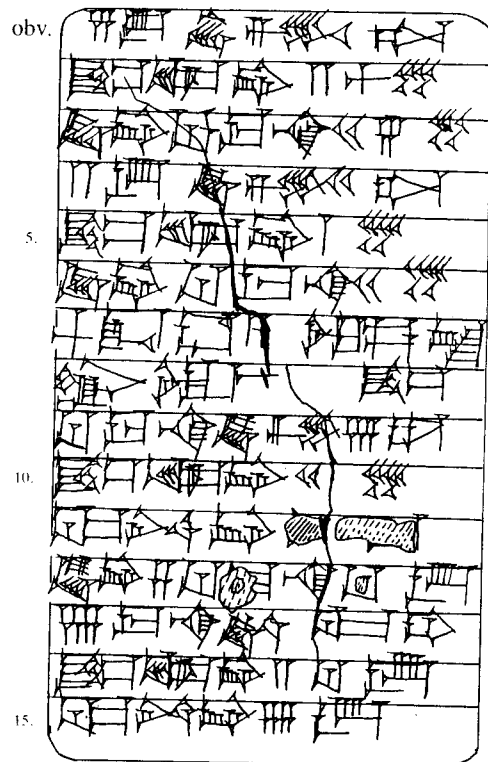


● scratched on after drying, then erased?

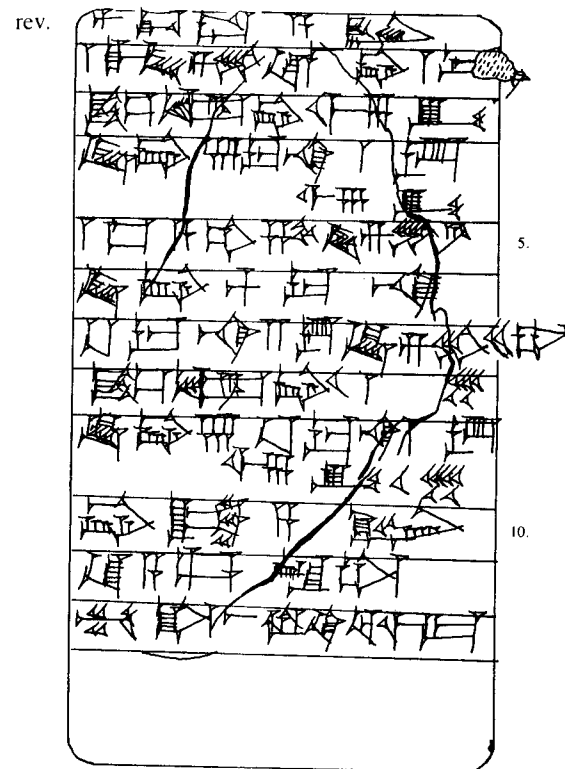
● over erasure ● partly erased

19—NBC 244 (AS6)

7.8 cm X 4.6 X 2.2 light brown, baked

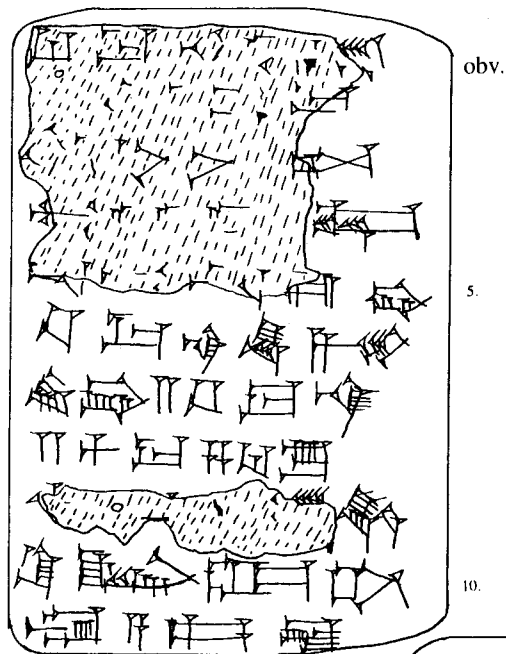


19



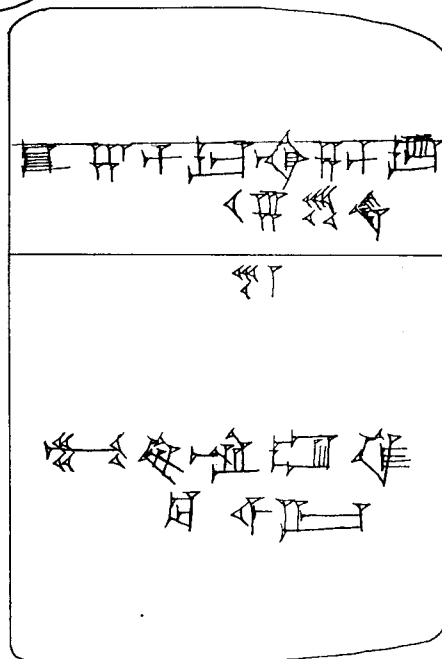
20—NBC 246 (AS6)

6.9 cm X 4.6 X 2.1 brown and reddish, baked



○ erasure

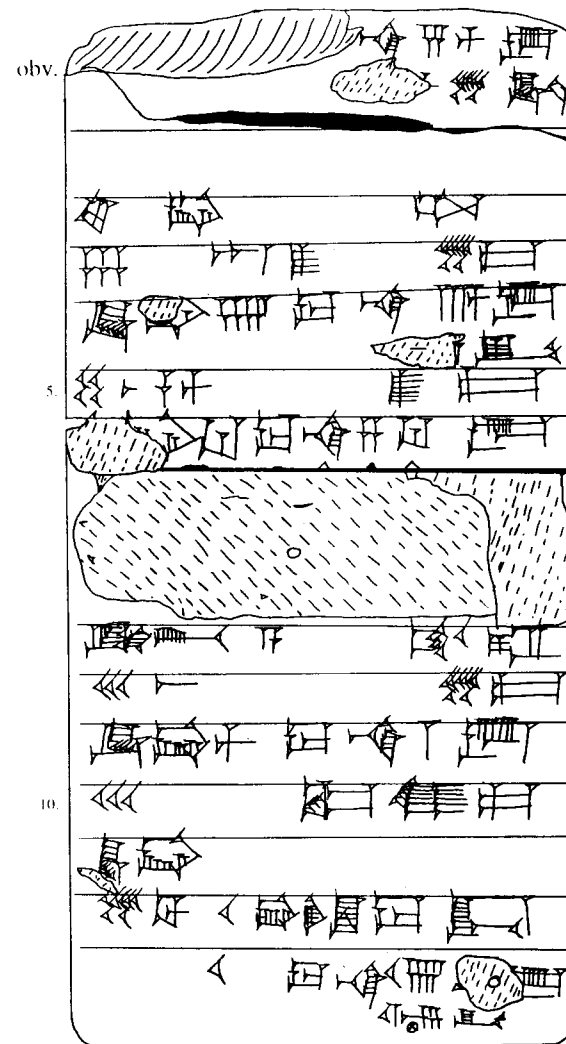
rev.



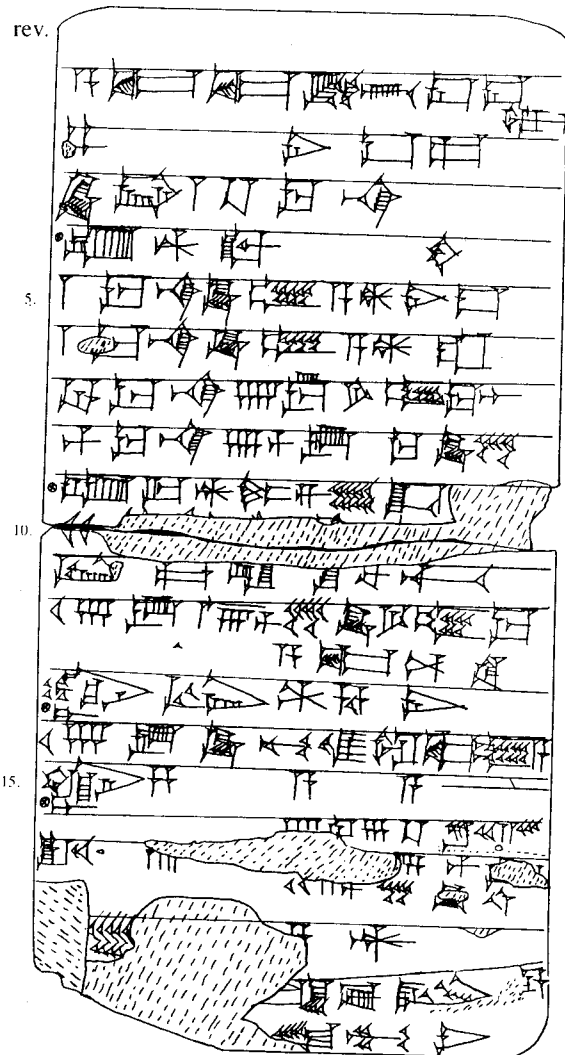
sealings on reverse only

21—NBC 10802 + 10803 (SS4)

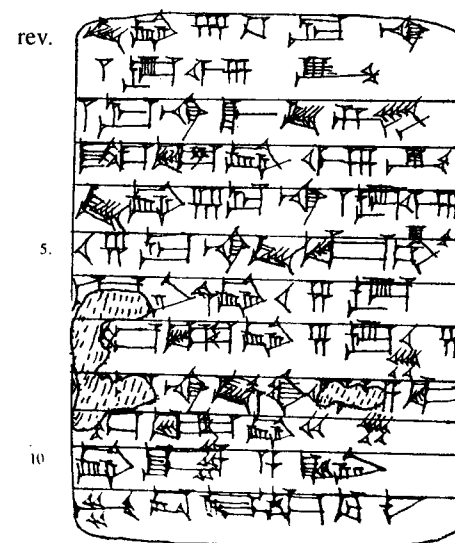
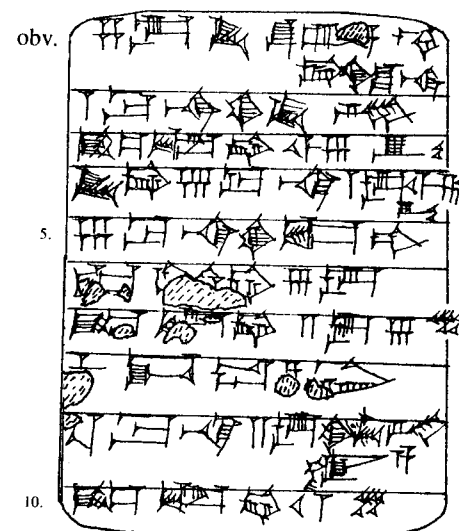
10.9 cm X 5.4 X 2.1 brown, baked



● scratched on after clay had partially dried

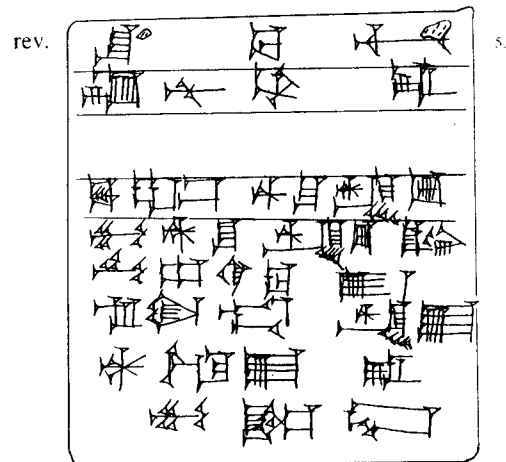
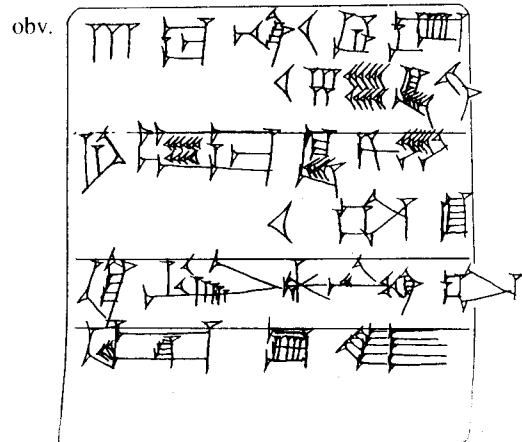


- whole line scratched on after clay had partially dried
- scratched on after clay had been fired



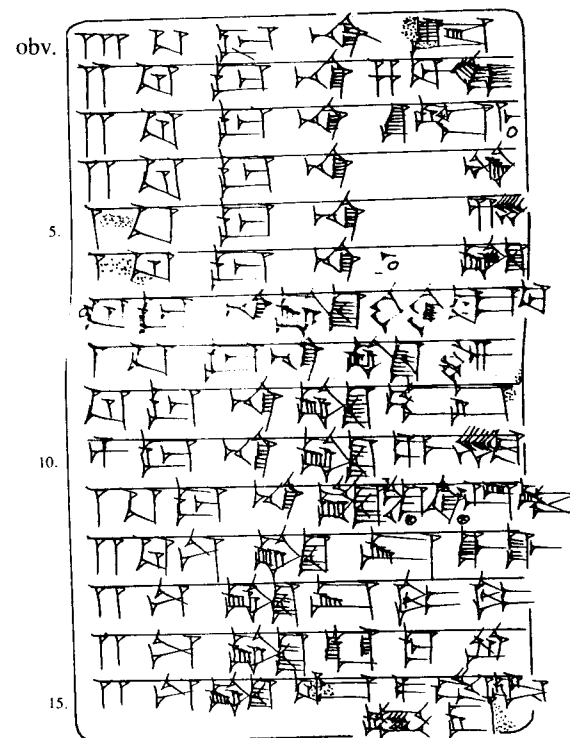
23—NBC 6653 (SS8)

4.9 cm X 4.3 X 2 light brown, baked



24—YBC 1397 (n.d.)

7.6 cm X 4.8 X 2.1 reddish, baked



○ erasure
●...● over erasure

