

Markham J. Geller

Melothesia in Babylonia

Science, Technology, and Medicine in Ancient Cultures



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Volume 2

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Melothesia in Babylonia

Medicine, Magic, and Astrology
in the Ancient Near East

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Picture right side: *Les Très Riches Heures* (du Duc de Berry) illustrating Melothesia, the system determining which zodiac signs govern the health of specific regions of the human body. Reproduced courtesy of the Preussischer Kulturbesitz (signature: bpk | RMN – Grand Palais | René-Gabriel Ojéda).

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Aries. leo. sagittarius. sunt
calida et sicca colerica
malastrua. Orientalia.

Taurus. uirgo. capricornus.
sunt frigida et sicca melanco
lica struua. Occidentalialia.



Geminus.
aquarius.
libra. sunt calida et
humida malastrua
sanguinea. Orientalia.

Cancer. sco
pius. pisces.
sunt frigida et humi
da struua. Occidentalialia.

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Berlin, April 2014

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Abbreviations

AfO	<i>Archiv für Orientforschung</i>
AHW	<i>Akkadisches Handwörterbuch</i>
AMT	R. C. Thompson, <i>Assyrian Medical Texts</i>
BAM	F. Köcher, <i>Babylonisch-assyrische Medizin in Texten und Untersuchungen</i>
BRM	<i>Babylonian Records in the Library of J. Pierpont Morgan</i>
CAD	<i>Chicago Assyrian Dictionary</i>
GCCI	Goucher College Cuneiform Inscriptions
JA	<i>Journal Asiatique</i>
JAOS	<i>Journal of the American Oriental Society</i>
JCS	<i>Journal of Cuneiform Studies</i>
JNES	<i>Journal of Near Eastern Studies</i>
KAR	<i>Keilschrifttexte religiösen Inhalts</i>
LBAT	<i>Late Babylonian Astronomical Texts</i>
LKU	<i>Literarische Keilschrifttexte aus Uruk</i>
MSL	<i>Materials for the Sumerian Lexicon</i>
OECT	Oxford Editions of Cuneiform Texts
PGM	Papyri Graecae Magicae (Greek Magical Papyri)
SBTU	<i>Spätbabylonische Texte aus Uruk</i>
STT	<i>The Sultantepe Tablets</i>
ZA	<i>Zeitschrift für Assyriologie</i>

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Introduction: Globalisation of Knowledge

Any similarities between Babylonian and Greek medicine may reflect an increasing globalisation of knowledge in the ancient Mediterranean world, after the advent of philosophical thinking in Greece and advances in astronomy and mathematics within contemporary Babylonian scholarship. Comparisons, however, between Babylonian and Greek medicine are not always obvious because of the very different nature of the source material. Greek philosophers wrote elaborate and even polemical treatises putting forth their medical theories, while the impressively large and complex corpus of Babylonian medicine consisted primarily of *Listenwissenschaften*, i.e. lists of symptoms and *materia medica*, as well as therapies listing appropriate drugs and procedures for alleviating symptoms, with little in the way of theoretical speculation. One must therefore look beyond the forms in which the information was given to discover whether similar notions were being shared between Babylonian and Greek scholars. One of the important areas of ancient scholarship lending itself to this kind of inquiry is the genre of astral-medicine and astral-magic, in which therapy and healing techniques were influenced by new discoveries in astronomy and even astrology, such as the zodiac. The results were new efforts in attempting to make more accurate predictions of the course of disease and therapies, based upon astrological models.

Among the many Akkadian medical and incantation texts from Persian and Hellenistic Babylonia, two texts in particular stand out and deserve special attention because of their unique features. Both texts probably emanate from Uruk cuneiform archives, one of the important centres of learning in ancient Mesopotamia whose archives survived well into the Hellenistic period. This is where we find a great many important medical texts, as well as unique medical commentaries. Although all of these texts merit much further study, the two texts to be discussed here represent innovative thinking about medicine among Babylonian scholars in the Persian and Hellenistic periods. The first of the two tablets, SBTU I 43, is a unique list of diseases associated with parts of the body, and no adequate explanation for the correspondence between organs and diseases has as yet been proposed. The second Uruk tablet, BRM 4 20, adapts older inherited concepts of astral magic to the newly discovered zodiac, thereby presenting a novel approach to magical rituals. The aim of this study is to present these texts within their respective scholarly contexts and to see possible connections between these ancient disciplines. The present study will argue that these seemingly disparate examples of late Babylonian scholarship, containing medical and magico-astrological data, have more to do with each other than has been hitherto realised.

I The Uruk ‘taxonomy’ (SBTU I 43)

This Late Babylonian Uruk tablet is a one-column tablet divided into four sections, each corresponding to a part of the body, with each section associated with a particular bodily organ. Each of the four divisions of the tablet contains a list of diseases somehow assigned to the four regions and related organs. As such, the tablet could be thought of as an unusual form of disease taxonomy, although the organising principles in which diseases are associated with specific organs are far from obvious. The tablet has so far defied explanation because of its uniqueness, since it is not characteristic of any other Late Babylonian medical text, and because we lack any ancient commentary on its cryptic format and puzzling data. The text, edited below, was collated from a photograph kindly supplied by Hermann Hunger, who produced the *editio princeps*.

SBTU I 43

cf. Köcher 1978: 24–25, Stol 1993: 26f., Heeßel 2010: 30f.

1	<i>ul-tu lib-bi hip(gaz) lib-bi</i>		from the mind	depression
			(‘heart’)	
2	KI.MIN	<i>miqtu(an.ta.šub.ba)</i>	ditto	seizure
3	KI.MIN	<i>qāt ili(šu dingir.ra)</i> ¹	ditto	hand of the god
4	KI.MIN	<i>qāt ištari (šu ^dinnin.na)</i>	ditto	hand of goddess
5	KI.MIN	<i>be-e[n]-nu</i>	ditto	epilepsy
6	KI.MIN	^d lug[al]. ^r ur ^r .[r]a	ditto	epilepsy
<hr/>				
7	<i>ul-tu KA</i>	<i>mu-ru-uš sag.du</i>	from the throat, head and mouth	
	<i>kar-šú</i>	<i>(qaqqadi) u pi-[i]</i>	disease	
8	KI.MIN	<i>pi-i šin-ni ^rmur.dúr^r.</i>	ditto ²	mouth, teeth their
		<i>meš-šú-nu</i>		‘toothworms’
9	KI.MIN MIN	^r gir ₁₁ ^r -[gī]- ^r iš ^r -šum	ditto, ditto	red skin lesions
10	KI.MIN MIN	^d dim.me	ditto, ditto	Lamaštu
11	KI.MIN MIN	<i>pa-šit-t[u₄]</i> ^{mi} mar-tu ₄	ditto, ditto	Pašittu-daughter
12	KI.MIN	^r ma-li ^r me-e	ditto	dropsy
13	KI.MIN	<i>qāt etimmi (šu.gedim.ma)</i> ³	ditto	hand of ghost
14	KI.MIN	<i>maš-ka-du</i> ⁴	ditto	joint disease
15	KI.MIN	<i>mi-šit-ti</i>	ditto	stroke

1 See Heeßel 2000: 49f. for an alternative explanation of these disease names.

2 = ‘from the throat (and)’

3 Cf. BRM 4 20: 30 and duplicates.

4 Cf. the astral medicine text LBAT 1597: 6’ (below).

16	KI.MIN	<i>a-šu-ú</i>	ditto	(skin disease)
17	KI.MIN	<i>gi-iš-ša-tu₄</i>	ditto	(skin disease)
18	KI.MIN	<i>hi-miṭ ṣēti</i> (ud.da) <i>ù nap-har mur-šu⁵</i>	ditto	'sun-light'-fever and all illnesses
19	[<i>ul-t</i>]u	<i>ha-še-e tib-bi</i>	from the lungs	throbbing
20	[KI.MIN]	<i>ši-i-qu</i>	[ditto]	moisture(?)
21	[K]I.MIN	<i>šá-a-ri</i>	ditto	wind
22	KI.MIN	<i>e-[z]i zu</i>	ditto	defecating, sweating?
23	KI.MIN	<i>bu-šá-a-nu</i>	ditto	diphtheria
24	KI.MIN	<i>ši-in-na-ah-tir</i>	ditto	(intestinal- disease)
25	<i>ul-tu</i> éllag. meš	(<i>kalâti</i>) <i>hi-niq-ti</i>	from the kid- neys	stricture
26	KI.MIN	<i>nīš libbi</i> (šà.zi.ga) ⁶	ditto	impotence
27	KI.MIN	<i>muruš šuburri</i> (du.ur gig. ga) ⁷	ditto	anal disease
28	KI.MIN	<i>sa-gal-lu₄</i> ⁸	ditto	muscle-disease
29	KI.MIN	<i>la a-li-du-ti</i>	ditto	barrenness
30	KI.MIN	<i>rēmu</i> (arhuš) <i>šá zi-i-ri</i>	ditto	womb which is twisted
31	KI.MIN	<i>ka-le-e šāri</i> (im)	ditto	'gas' retention

(colophon) gim be-šú sar-ma ba-ri im.gì.da
 [^m]Ri-mut-^dA-nu dumu šá ^{md}šá-máš-mu(*iddin*)
 dumu ^{lú}sanga-^dNin-urta maš.maš
 qa-át ^mBe-lu-ka-šir dumu šá ^{mtin}(*Balātu*)

5 LBAT 1597 8', tu.ra.kilib.ba, which appears in the Exorcism Manual KAR 44: 9 (Jean 2006: 65).

6 Cf. BRM 4 20: 38. but cf. also šà.si.sì in BRM 4 20 33.

7 Cf. BRM 4 20: 33.

8 Cf. BRM 4 20: 33, STT 300: 21, BRM 4 19: 32.

Vs.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Handwritten text in vertical columns, some with hatching.

Rs.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Handwritten text in vertical columns, some with hatching.

Fig. 1: SBTU I 43

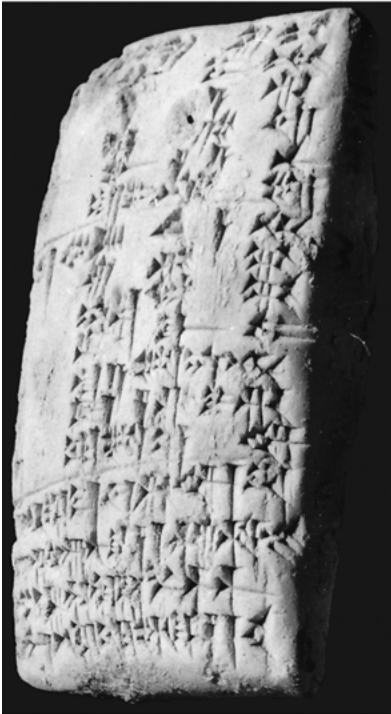


Fig. 2: SBTU I 43

Philological notes on SBTU I 43

ll. 1–5: A similar collection of diseases in Greek is attributed to astral influences:

Mercury portends death by madness, distraction, melancholy, the falling sickness, epilepsy, diseases accompanied by coughing and raising, and all such ailments as arise from the excess or deficiency of dryness. (Ptolemy *Tetrabiblos* IV 9, Loeb 431)

Several of the ailments mentioned by Ptolemy correspond to *hīp libbi*, *miqtu*, *bennu*, and perhaps *qāt ili* in SBTU I 43, and we will return to these parallels below. The important point is that ‘seizure’ and ‘epilepsy’ were often treated as psychic rather than simply physical diseases.

l. 2: Cf. BRM 4 20: 30, STT 300 15. In LBAT 1597: 7’-8’ (edited below), *antašubba* / *miqtu*-disease is associated with the moon in Taurus and Orion, or with Gemini (see below). Cf. KAR 44 rev. 10 (Jean 2006: 70): *bul-tu* an.ta.šub.ba ^dlugal.ūr.ra šu.dingir.ra šu.^dinanna šu.gedim.ma, showing how these illness were already classified as a group with common characteristics, but to be treated with a medical *bul-tu* (recipe) rather than with incantations.

l. 3: Cf. BRM 4 20: 30, STT 300 15. In LBAT 1597: 11’, *šu.dingir.ra* (-disease) is listed with *šu.^dinnin*(-disease) as reflections of impotence.

l. 5: Cf. BRM 4 19: 29 and STT 300 15 but omitted in the duplicate line, BRM 4 20: 30, while in LBAT 1597: 5’, this disease is associated with the constellation Perseus (*šu.gi*); see Stol 1993: 116.

l. 6: The reading was suggested by Köcher 1978: 35 and occurs in BRM 4 20: 30, STT 300: 15, and BRM 4 19: 29; in LBAT 1597: 7’ this disease is associated with an.ta.šub.ba and other illnesses, as influenced by the moon in Gemini.

ll. 7–8: Literally, the *pî karši* is the ‘mouth of the stomach’, see the discussion in Cadelli 2000: 298. Three locations are referred to in this connection, namely the throat, mouth and teeth, all of which can potentially be affected by ‘toothworm’.

For the toothworm, see Akkadian *tūltu*, pl. *tūlātu*, toothworm, CAD T 466. The pattern of ‘ditto’ notations in ll. 8–11 show that toothworm, *girgiššu*, *lamaštu* and *pašittu* diseases are all associated with the throat, mouth, and teeth, while remaining ailments in this group (ll. 12–18) belong only to the throat. A translation of the toothworm incantation can be found in Foster 1993 ii 878.

ll. 9–11: The dittos here refer to the mouth and teeth.

l. 11: The *pašittu* demon, like *Lamaštu*, is female and the two are associated with each other; a medical commentary which states that *pa-šit-tú* ^d[im.me] [:] *pa-ši-ṭat zu-mur*, ‘the *pašittu* / *lamaštu* (demon) (is one that) obliterates (*pāšīṭat*) the body’ (Hunger 1976: no. 49: 4). The logogram for the *pašittu*-demon is a Sumerian

phrase, KA-muš ì-gu₇-e, ‘the toothworm hurts’, but this phrase refers to the illness as well as to the demon.⁹ The *pašittu* is also a constellation, although this astral connection is probably not relevant to astral magic or medicine. The writing ^{mi}*martu*₄ ‘daughter’, is used to clarify an ambiguity. On one hand *martu*, together with *pašittu*, can mean ‘gall’, as in the medical commentary GCCI 2 406:4, *pašittu imtu : pašittu ša marta ukallū*, ‘*pašittu*-disease, poison’ means ‘*pašittu*-disease which contains bile.’¹⁰ On the other hand, *mārtu* ‘daughter’ is a frequent epithet of *pašittu*, as in STT 138: 11’ (dupl. BAM 338 10’), *la-[maš]-tu₄ maš-tu₄ pa-šiš-tú*, ‘Lamaštu daughter (of) Pašittu’. SBTU I 43, in lines 10–11, provides a different interpretation, treating Lamaštu (disease as well as demon) as parallel to another demonic disease, ‘Pašittu-daughter’.

l. 19: For *tibbi*, Köcher (1978: 24) tentatively suggests reading *dappi*, ‘Blutgerinnsel’, but see rather AHw 1355f. and CAD T 390, s.v. *tibu*, although the orthography *tibbu* is not attested. A close parallel may be found in Greek medicine, in Ptolemy’s *Tetrabiblos* IV.9 (Loeb 430f.), which mentions the medical condition *bēchikôn kai anaphorikôn nosēmatôn*, ‘diseases accompanied by coughing and raising’, with the latter term referring to bringing up phlegm or blood, and described as the opposite of *pepsis*, ‘digestion’. Akkadian *tibbu* might describe a similar condition.

l. 20: The term *šiqu* may actually mean ‘irrigation’ in other contexts, as suggested by G. Buisson, and could represent a disease of excessive ‘moisture’, like the disease *ruṭibtu*. CAD Š/3, 101 suggests eczema and Heeßel 2010: 31 concurs, although without sufficient supporting evidence. The disease occurs in the list of MSL 9 96: 197, associated with bile or gall.

l. 21: The ‘wind’ (*ša-a-ru-um*) appears as the object of a short OB incantation (Fish 1939: 184, now republished by O. R. Gurney in OECT 11 No. 3), ordering the wind to depart from the patient’s head, eye, mouth, ear, and body. This is probably the same condition as the disease *šibiṭ šāri*, cf. Cadelli 2000: No. 5 ii 54’, iii 18.

l. 22: Heeßel 2010: 31 keeps to the idea of *ezezu*-disease, but I can find no supporting evidence for such a disease.

l. 24: The disease *šinnahtīru* is associated with lungs, e.g. [diš na] mur.meš gig-ma na.bi ši-na-a[h-ti-ra] (Cadelli 2000: 243: 15, see also AMT 45, 1 and duplicates). In SBTU I 44: 1, this disease is associated with the nose and mouth and hence with respiration, which also confirms the identification of *bu-šā-a-nu* (associated with the nose) in the previous line (SBTU I 43: 23).

l. 31: Cf. BRM 4 20 33: šā.si.si ana ka-le-e, which may be similar to the meaning here.

⁹ Cf. Uruanna IV i 24, KA-muš ì-gu₇-e gig; see also see MSL 9 107.

¹⁰ Cf. Geller and Wiggermann 2008: 153f., 156f., translating *mar-tam pa-ši-it-tam* as ‘exterminating bile’.

General notes on SBTU I 43

There are several possible routes for trying to interpret this text without the guidance of ancient Uruk scholars, but it is immediately clear that we are not dealing here with a typical Babylonian taxonomy of diseases. For one thing, there is remarkably little interest in this text in fevers, which play a major role in Babylonian medical history (Stol 2007). Furthermore, we have examples of other texts which list diseases, but never in association with specific internal organs or parts of the human anatomy.

The unique nature of the SBTU I 43 can best be seen if compared with other more traditional listings of maladies within the body, apart from those lists known from the *Diagnostic Handbook* (Labat 1951, Heeßel 2000), which served a completely different purpose, i.e. prognosis. Below is a therapeutic text with information to offer on diseases occurring within the body, although the essential purpose of the appended ritual is to transfer disease from the patient's body into that of a figurine. Despite being more of a sympathetic magic ritual than a strictly medical text, the connection between illness and anatomy in the text following is relevant to the present discussion.

BAM 212¹¹

- 1 én [at-ta man-nu mi]m-ma lem-nu d^alad lem-nu
- 2 [gedim[?] lem]-nu [a.l]á lem-nu gal₅.lá lem-nu
- 3 [.....] x lem-nu ha-a-a-ṭu ha-i-ṭu
- 4 gig di-'i-i di-lip-tú lú.líl.lá
- 5 ki.sikil.líl.lá ki.sikil.ud.da.kar.ra
- 6 [..... m]u-ša-bit a-me-lu-[ti]
- 7 šá [.....]-ma ur-ra u ge₆ ús-an-ni
- 8 gig.[mu] hul at-ta-d[i-ka]

9 gig sag.ki.mu	ana s[ag].ki-ka min
10 gig ugu.mu	ana ugu-ka min
11 [g]ig pa-ni-mu	ana pa-ni-ka min
12 gig ṛigi ^{II} -mu	ana igi ^{II} -ka min
13 gig a[p]-pi-mu	ana ap-p[i-k]a min
14 gig geštug ^{II} -mu	ana geštug ^{II} .[k]a min
15 gig ṛnundum ⁷ .mu	ana nun[dum-ka min]
16 gig [e]me.mu	ana em[e-ka min]
17 gig ka.mu	ana ka-[ka min]
18 gig gú.mu	ana gú-k[a] min

¹¹ See also duplicates BAM 213 and LKU no. 37.

19	gig á.mu	<i>ana á-[k]a min</i>
20	gig kišib.mu	<i>ana kišib-ka min</i>
21	gig umbin.mu	<i>ana umbin-ka min</i>
22	gig 15.mu	<i>ana 15-ka min</i> ¹²
23	gig 2,30.mu	<i>ana 2,30-ka min</i>
24	gig ubur.mu	<i>ana ubur-ka min</i>
25	gig ti.mu	<i>ana ti-[k]a min</i>
26	gig šà.mu	<i>ana š[à-k]a min</i>
27	gig li.dur.mu	<i>ana l[i.dur-ka min]</i>

rev.

28	[g]ig gú.murgu.mu	<i>ana gú.murgu-k[a min]</i>
29	gig murub ₄ .mu	<i>ana murub₄-k[a min]</i>
30	gig giš.kun.mu	<i>ana giš.kun-k[a min]</i>
31	gig tuhul.[m]u	<i>a[na tuhul-ka min]</i>
32	[gig] peš ₄ .mu	<i>ana peš₄-k[a min]</i> ¹³
33	[gi]g ú[r].mu	<i>ana úr-ka min</i>
34	[gi]g kìn-ši-mu	<i>ana kìn-ši-ka min</i>
35	gig gír ^{II} .mu	<i>ana gír^{II}-ka min</i>
36	im 1 li-zi-qam-ma at-ta la [ta-ziq-qa] ¹⁴	
37	im 2 ki.min im 3 ki.min im 4 k[i.mi]n	
38	[.....] ugu ^d gu-[la]	
39	[šum]-ma gur-ma lá- ^r ti gar ^r t[u.é]n	

40	[dù]dù.bi kullata(ki.gar) tu-qad-dáš im ki.gar [ti]-qí
41	[duh].lâl téš.bi hi.hi nu mim-ma lem-[n]u dù-uš
42	[mu-šú] <i>ana</i> maš.sila gùb-šú sar <i>ina</i> šà x x -ri x
43	[ina] igi ^d utu ta-dan-šú ì.[kur.r]a ì ku ₆ kâš [...]
44	[t]a-sal-luh-šú 3 u ₄ .me ^r ina ^r kâš ^r gig t[uš-te-mid]
45	[e]-ma ² an.[b]ar ₇ x én 3.ta.àm <i>ana muh-hi</i> šid-nu
46	<i>ina</i> 3 u ₄ .me è- ^r ma ^r <i>ina har-ba-te te-te-mir</i>
47	zi-pa-di-i tu-tam-ma-šú
48	<i>ana</i> egir-[k]a nu igi.bar

49	(colophon)
	[ú-ì]l-ti ^m d ^d muati.idim.pap.meš-šú
	^r lú.maš ^r .[maš] é.aš.šur
	dumu ^m r ^r aš-šur-gin ^r [maš.m]aš ^r é ^r .[aš.šur]
	[l]ú.s[anga gal-u š]á é.[aš.šur]

¹² Var. LKU 37 a-hi.

¹³ Cf. BAM 213: 25’.

¹⁴ Cf. AMT 72/1 20–21 [ref. courtesy M. Stol].

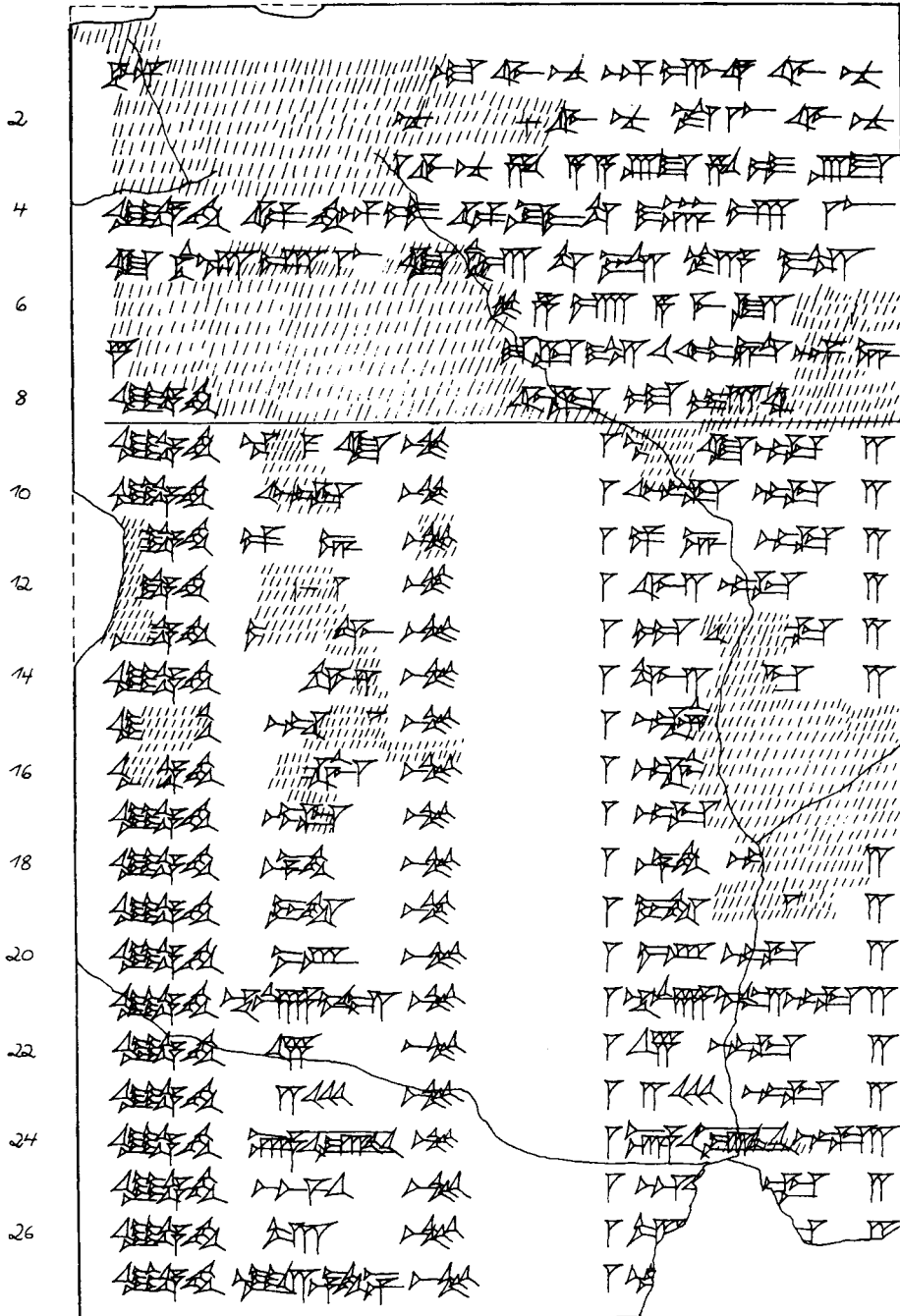


Fig. 3: BAM 212 obv

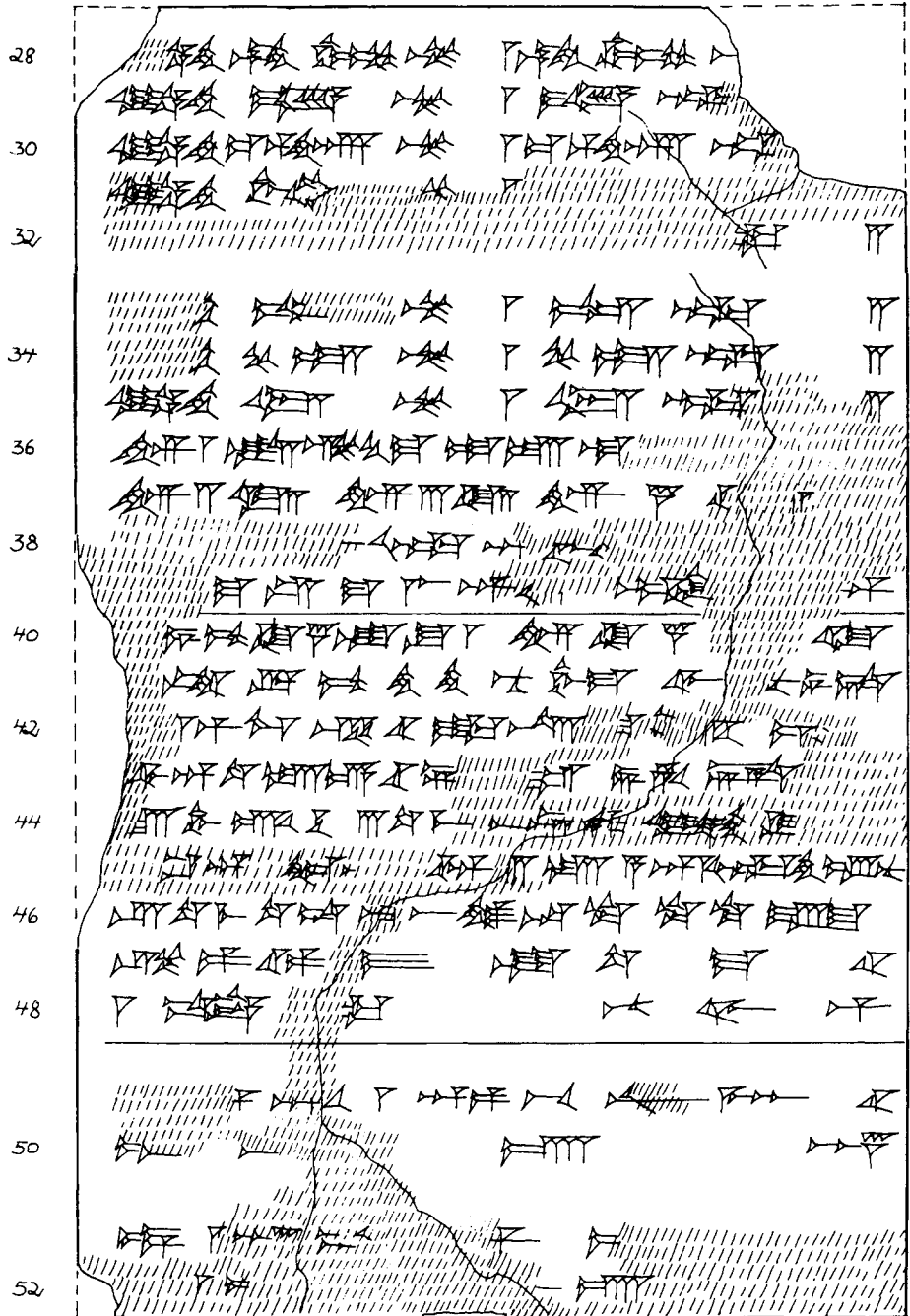


Fig. 4: BAM 212 rev

Translation BAM 212

- 1 Incantation. [Whoever you are], whatever evil, evil spirit,
 - 2 evil [ghost²], evil Alû-demon, evil Gallû-demon,
 - 3 evil [.....], watcher, watched,
 - 4 illness, headache, depression, lil-demon,
 - 5 lilith-demon, maiden-lil-demon,
 - 6 [.....], seizing mankind,
 - 7 which [.....] and pursues me day and night.
 - 8 I inflict on you [my] illness, evil [.....].
-
- 9 The disease of my forehead, ditto (= I inflict) onto your forehead,
 - 10 The disease of my brain, ditto to your brain,
 - 11 the disease of my face, ditto to your face
 - 12 the disease of my eyes, ditto to your eyes,
 - 13 the disease of my nose, ditto to your nose,
 - 14 the disease of my ears, ditto to your ears,
 - 15 the disease of my lip, ditto to your lip,
 - 16 the disease of my tongue, ditto to your tongue,
 - 17 the disease of my mouth, ditto to your mouth,
 - 18 the disease of my neck, ditto to your neck,
 - 19 the disease of my arm, ditto to your arm,
 - 20 the disease of my vertebra, ditto to your vertebra,
 - 21 the disease of my nail, ditto to your nail,
 - 22 the disease of my right side, ditto to your right side,
 - 23 the disease of my left side, ditto to your left side,
 - 24 the disease of my breast, ditto to your breast,
 - 25 the disease of my rib, ditto to your rib,
 - 26 the disease of my stomach, ditto to your stomach,
 - 27 the disease of my navel, ditto to your navel,
 - 28 the disease of my spine, ditto to your spine,
 - 29 the disease of my hip, ditto to your hip,
 - 30 the disease of my buttocks, ditto to your buttocks,
 - 31 the disease of my pelvis, ditto to your pelvis,
 - 32 the disease of my vagina, ditto to your vagina,
 - 33 the disease of my lap, ditto to your lap,
 - 34 the disease of my shin, ditto to your shin,
 - 35 the disease of my foot, ditto to your foot,
 - 36 although the south wind may blow on me, you must not [blow against me],
 - 37 the north wind, ditto, the east wind, ditto, the west wind, ditto,
 - 38 [.....] over Gula [.....
 - 39 If it returns, apply a poultice. Incantation-spell.
-

40 Its ritual: you purify the potter’s clay-pit, you take the potter’s clay,
 41 you mix it together with wax, you manufacture a ‘whatever evil’ figurine.
 42 You inscribe [its name] on its left shoulder within ...
 43 you judge it before Šamaš, you sprinkle it with naphtha, fish oil, urine, and [...],
 44 for 3 days you mix (it) in the *patient’s urine*,
 45 whenever at noon, recite it 3 times over (it),
 46 take it out in 3 days, you bury it in wastelands,
 47 you conjure him with the incantation formulae,
 48 (and) you do not look behind you.

(colophon)

tablet of Nabû-kabti-ahhešu,
 exorcist of the Assur-temple
 son of Aššur-kēnu, exorcist of the Assur-temple,
 (and) high priest of the Assur-temple.

Although there is no question that this text relates disease to human anatomy, it is hardly similar to SBTU I 43, with its four categories of diseases related to four regions of the body. Clearly a different methodology is required to explain SBTU I 43.

One obvious possibility is to take a comparative approach, based on Greco-Roman medicine, which looks for foreign models to explain the unique arrangement of SBTU I 43. We are searching for certain medical notions which may have been common to the ancient scientific world and hence reflect a type of globalisation of medical knowledge. This is not simply a record of ideas borrowed by A to B, but a more complex arrangement in which ideas travel back and forth and become common scientific property, irrespective of where the actual idea originates.

Before searching for parallels, it is worth reviewing some background information. There is an enormous advantage to comparing systems of ancient medicine because of its finite field of scientific inquiry (i.e. the human body), and the finite number of diseases and conditions which were being studied in each individual society. The actual subject of inquiry is the same everywhere, which is what distinguishes medicine from magic, religion, and storytelling, etc. There is nothing specific which defines magic or religion, and nothing prevents an active imagination from introducing new concepts or ideas, whether generated *de novo* or borrowed from elsewhere. As with mathematics or astronomy, medical theories are restrained by certain limiting factors, such as human anatomy or disease symptoms, and although much is left to human imagination, the nature of inquiry is relatively restricted. We tend, therefore, to find *systems* of medicine in the ancient world, as exemplified by Babylonian, Egyptian, Greek, Roman, Ayurvedic, or Chinese medicine, and these are identifiable by various general characteristics, along with their sub-categories and specialities.¹⁵ Some of these *systems* of medicine (and their sub-specialities) share

¹⁵ For a stimulating study of comparisons between Greek and Chinese medical systems, see Unschuld 2009, which is an improvement on Lloyd and Sivin 2002.

common features, others do not. Although some sources for Greek and Chinese medicine come from roughly the same time, the geographical differences between these cultures is vast, and proximity is one relevant factor in the exchange of scientific ideas. Not only was there little in the way of direct contact, but approaches to medicines developed within completely different philosophies and with very different ways of understanding the workings of the human body.

Much effort has been made to find parallels between Egyptian and Greek medicine, but the failure to find more than superficial similarities has more to do with the nature of our sources than with the actual medicine being practiced. Egyptian medicine mostly comes from a single archive of papyri dating from the first half of the second millennium BC, long before the advent of Greek medicine. We have little information about Egyptian medicine contemporary with Hippocrates, which is a serious handicap. One should try, from a methodological standpoint, to compare systems of medicine which are roughly contemporaneous, since ideas and approaches change over time.

So far little progress has been made in comparing Babylonian and Hippocratic medicine, despite the fact that the sources come from the same period and medicine was being practiced in neighbouring regions. Essentially, Babylonian medicine was an extremely conservative system of healing, already well-attested by the early 2nd millennium BC, consisting of recipes and drugs used to treat diseases which were identified by exhaustive examination of all external bodily symptoms, as well as urine and other indicators of bodily functions. With little in the way of surgery, Babylonian medicine was based almost entirely on large collections of *materia medica* used as either simple or compound recipes, with many different ways of utilizing the extensive pharmacopia.¹⁶ Moreover, disease was considered to be the result of external attack on the body in the form of demons, or from natural causes such as bites, draughts, or poisoned food. The initial phases of healing arts in Greece were probably similar, as can be seen from early Hippocratic treatises which also relied upon careful scrutiny of external symptoms. As in Babylonia, Greek medicine first expressed prognoses in the form of signs and omens, as indications of whether the patient was likely to live or die or survive for a limited time. Finally, like Babylonian physicians, Hippocratic physicians had only a rather vague idea of internal anatomy because few physicians conducted autopsies on human corpses.

¹⁶ Babylonian recipes offer numerous instructions on how the drugs are to be prepared and administered to the patient, and instructions were often complex and technical. Drugs were to be 'taken' and 'weighed', 'washed' and 'immersed', 'dried', 'dессicated', 'roasted', or 'burned'; 'crushed', 'cut up', 'beaten', 'ground', 'pounded', 'diced', 'chopped', 'grated', and 'pulverised'; 'sifted' and 'pressed'; 'mixed', 'blended', 'moistened', 'dissolved', 'soaked', 'dripped', 'sprinkled', and 'poured'; 'kneaded' and 'stirred'; 'boiled', 'heated', 'warmed up', 'heated in an oven', or 'cooled' and 'left overnight'; 'filtered', 'divided up', 'saturated' and 'soaked', etc. Drugs, consisting mostly of plants and minerals, were prepared in the form of potions, salves, powders, pills, tampons, and pessaries. See Goltz 1974 index.

Hippocratic medicine as a general system departed from traditional Babylonian medicine in the fifth century BC by developing a new approach to both diagnosis and therapy. The notion of external attack by demons was replaced by a theory of humours or internal imbalance within the human body, which had to be corrected through the use of diet, purgatives, and eventually minor surgery in the form of venesection. Greek medicine is often considered to be more 'rational' than its Babylonian counterpart, in the same way that Greek mathematics improved upon that of its predecessors. Greeks were able to replace complex calculations for every individual problem by mathematical 'laws' or theorems, thereby offering a general rule which can be applied to numerous types of calculations. In a similar way, once a general theory of humours was developed to explain all manner of disease, the theory allows the practitioner to dispense with the cumbersome system of preparing recipes which had to be tailored to each individual condition and ailment. In other words, the simple rule replaces the exhaustive database. Although not necessarily more effective for the patient, the new Hippocratic methodology took its place among other emerging disciplines in Greek science, as initiated by Thales and his contemporaries. Similar changes were taking place, however, both in Babylonia and even further afield in Chinese medicine roughly at the same time, in an age when it became fashionable to look for natural causes for disease as an alternative to direct interference of gods and demons in human health.¹⁷

Non-Hippocratic Greco-Roman Medicine

Pre-Hippocratic medicine never actually became obsolete. Recipe-based medicine, using hundreds of drugs without relying upon any one theory of causes of disease, probably remained current while Hippocratic medicine was being hotly debated among learned physicians. Recipe-based medicine may not have been fashionable among the literati and philosophers, with practitioners being referred to rather pejoratively as 'root-cutters'.¹⁸ Little else is heard of them, which is also why we have relatively little in the way of recipes in the Hippocratic corpus as a whole. On the other hand, Dogmatists¹⁹ and Empiricists²⁰ were sharply divided over theories of

¹⁷ See Harper 1997: 9ff., suggesting that Chinese medicine developed an interest in nature after the third century BC. The Chinese did not develop natural philosophy along the same lines as the Greeks, but they nevertheless had their own observations which they applied to medicine through analogy. See also Unschuld 2009.

¹⁸ Lloyd 1979: 38 and see Nutton 2004: 173f., referring to non-professional healers in Roman medicine who developed a reputation for effective treatment through drugs.

¹⁹ According to Temkin 1956: xxv, Dogmatists 'believed in the necessity and possibility of rational scientific investigation as the basis of medicine.' This approach encouraged the study of anatomy and even dissection to discover the 'hidden' causes of disease.

²⁰ Temkin argues that the Empiricists rejected studying 'hidden causes' as fruitless, but the physician who would recognise such "evident" causes as hunger, cold, etc., would diagnose a disease according to its symptoms, and would know the treatment that had proved efficient in these cases.

causes of disease, and whether causes can be ascertained or not, and these arguments appear to dominate the discussions, until the advent of a new theory in the first century BC.

The Methodists originally consisted of Greek doctors in Rome who developed their own philosophy of medicine in around the 2nd century BC, and Methodism distinguished itself from both Dogmatism and Empiricism by refusing to acknowledge causes of illness. Methodists redefined medical terminology for their own non-theoretical approach to disease. Instead of the widely used Greek word *nosos* ‘disease’, they employed a more general term *pathe*, ‘affections’. Second, they developed the idea of *koinotetes*, namely three states²¹ which describe disease, as either ‘constricted’, ‘loose’, or ‘mixed’, although the second category ‘loose’ is often translated by Classicists as ‘flux’.²² Temkin explains Soranus’ understanding these three states (*status strictus*, *status laxus*, *status mixtus*) in the following way:

diseases marked by a flux²³ would be classified as belonging to the *status laxus*, where a stytic treatment²⁴ is indicated; whereas hysterical suffocation with its accompanying convulsions would impress the physician as presenting the *status constructus*, requiring a relaxing therapy.²⁵

The other important contribution of Methodists was to distinguish between acute and chronic ailments, and Methodists in the first century BC. divided diseases into 3-day periods (*diatritos*) marking critical stages of illness, ‘an initial increase, a middle period when the level of disease was constant, and a final stage in which it diminished’ (Nutton 2004: 191). As Galen argues in his staunch critique of Methodism, ‘the leader of their madness’, Themison, refers both to ‘affections’ (*pathe*) and also to ‘symptoms’ (*symptomata*); Galen accuses Methodists of not making a clear distinction between the two (Tecusan 2004: Fr. 166, 434f.). In fact, Methodists had both a general term, ‘affections’, but also kept terms for individual diseases. One other important criticism from Galen is that the Methodist theory of *koinotetes* (‘common features’) does not refer to particular features of any individual person

This approach has some important similarities to Babylonian medicine, although both Dogmatism and Empiricism developed in Alexandria (Temkin 1956: xxvi).

21 Vallance 1990: 131 prefers to translate this term as ‘communities’.

22 See Tecusan 2004: 10, Nutton 2004: 191. Vallance, 1990, 131, fn. 28. quoting from Celsus, *De medicina* I, proem 54–5, in which Celsus mentions three classifications of disease by Methodists, namely *unum adstrictum*, *alterum fluens*, *tertium mixtum*. Edelstein sees things differently, citing Galen to explain that the physician needs no special training or knowledge, except to be able to recognise three general conditions (*communia*, *koinotētes*) of the body, ‘the body’s dryness, its fluidity, and a mixed condition, as well as variations.’ (Edelstein 1967: 180).

23 E.g. gonorrhoea.

24 E.g. stopping bleeding.

25 Temkin 1956: xxxii, and see Tecusan’s edition of Pseudo-Galen, Fr. 279, (Tecusan 2004: 716f.), in which ‘flux’ is explained by its opposite state, and ‘the opposite of flux will be not swelling but constriction’.

but to patients in general (Tecusan Fr. 178, 456f.). Furthermore, Galen complains about the Methodist view that ‘the doctor’s job is either to guard health when it is present (as in the case of the healthy) or to restore it when it has been damaged (as in the case of the ill); as for making predictions about what will happen, this would be a diviner’s job’ (Tecusan Fr. 215, 590f.). One crucial distinction made by Galen between Methodists and other philosophies of medicine is that Methodists refuse to consider what is ‘hidden’ but simply derived their treatment from what is ‘manifest’, what is obvious to determine (Tecusan 2004: Fr. 277, 694f.). In this way, Methodists reject any entertainment of ‘causes’ of disease, except that which may be obvious and observable (Tecusan 2004: Fr. 279, 706f.). As we will see, all of these attributes have Babylonian analogues.

Methodism and Babylonian Medicine

The question of origins of Methodism is unclear, except that the label ‘Methodist’ was first associated with one Themison of Laodicea, a disciple of the second century BC physician Asclepiades of Bithynia, who was known for his radical medical theories in the ancient world (Vallance 1994). One theory is that Methodism derives from an older philosophy of Asclepiades, but this is now disputed (Tecusan 2004: 13). Methodist approaches to medicine were probably widespread in the Roman world; an epigram on a first century AD bust from Smyrna reads, ‘Marcus Modius Asiaticus, Methodist doctor’ (Tecusan 2004: Fr 12, 132f.).

The origins of Methodism may have been influenced by the rising popularity of the theriac, a compound antidote against poisons and bites. Antiochus III of Mesopotamia was reported to have developed a herbal theriac against venoms already in the second century BC, and it is possible that Antiochus may have relied upon more ancient Babylonian sources.²⁶ In 66 BC King Mithridates of Pontus was

²⁶ Watson 1966: 13. However, Babylonian medicine preserves almost no record of antidotes among hundreds of preserved recipes, including panaceas. One example is BAM 176 11’-15’, a concoction consisting of 13 drugs for snakebite which are to be drunk in wine (*maš-qiṭ* 13 ú.meš ka.tar muš *ina* geštin na[gl]). A second example is the following, consisting mostly of ‘simples’:

BAM 42: 63–68 (see also AMT 92, 7: 6–7, translation Heeßel 2010: 154):

diš na muš [i]š-šuk-šú suhuš *ur-ba-tim ta-qâl-lu* gu₇-ma né-eš

diš na muš [i]š-šuk-šú [ú]gi-*lim* súd *ina* kaš nag-ma né-eš diš min ^úigi-*lim* *ina*

ugu *niš-ki-šú gar-an né-[eš]*

diš na muš [i]š-šuk-šú ^úigi-[*lim* še].ná.a gu₇-ma diš min ^úša-šu-um-tú ^{giš}kam-ka-du súd

‘a’ *ana* igi š[ub⁷-m]a né-eš : diš min ^úan.dah.še súd igi *simmī(gig) ta-kar-ma né-eš*

diš min ^útar.muš₈ súd *ina* kaš nag-ma né-eš diš min ^{giš}mi-uru₄-iš-^{giš}má-ra¹

ina ù-šú gar.gar-ma né-eš

diš min [ú]nam.tar nita x súd *ina* dè *tu-šar-rap-ma né-eš*

If a man is bitten by a snake, you roast the root of rushes, he will eat it and get better.

If a man is bitten by a snake, you crush *imhur-lim*-plant in beer, he will drink it and get better. If ditto, you put *imhur-lim* on his bite and he will get better.

defeated by the Romans, and it was widely reported that Mithridates had perfected an effective antidote during his lifetime to protect himself from being poisoned. The antidote proved to be so effective that Mithridates was unable to poison himself after his defeat but had to be killed by a soldier. The Mithridates antidote became famous as a panacea partly because it was a compound recipe consisting of some 90 ingredients, while in Greco-Roman medicine it was often the practice to rely upon *pharmaka* or ‘simple’ drugs, i.e. a single drug employed against a single condition.²⁷ The popularity of the theriac among the Roman public may have served to publicise the idea of ‘old-fashioned’ medicine, as practiced in the East (e.g. Babylonia), in preference to Hippocratic type medicine in the West, with its emphasis on theory, diet, purging, and bloodletting. The result may have been that Methodists were responding to this feeling abroad in the Roman world, that medicine should rely less (or not at all) on theoretical assumptions about causes of disease and concentrate on effective remedies, which were usually pharmacological. This might have been the impetus for the popularity of recipe-based medicine, which had probably always been employed in Greek circles in the intervening periods from before Hippocrates until the first-century BC, when recipes became more often cited among the medical and social elite as well. The point is that Babylonian-style medicine may have simply resurfaced in our sources, although in a negative way. With the sole exception being the writings of Soranus (whose work was even acknowledged by Galen), Methodism and Methodism was uniformly criticised and lampooned by later Greek authors, and especially by Galen himself. This means that most of our sources on Methodism have to be reconstructed from critical or denigrating comments from the works of authors who objected to its approach and basic tenets.

Methodism describes disease in three general categories of ‘strictness’, ‘looseness’, and a mixture of the two. Although we have no Babylonian medical theory where such ideas are put forward, nevertheless the notions of ‘strictness’ and ‘looseness’ are common in Babylonian medicine. One of the major symptoms of diseases affecting the organs is ‘*hiniqtu*’, ‘stricture’, which refers to some kind of

If a man is bitten by a snake, he will eat *imhur-lim*-plant and *šunû* and if ditto, crush *šašumtu*-plant and *kamkadu*, put water² into it and he will get better. If ditto, crush *antahšu*-plant, rub it over the lesion and he will get better.

If ditto, you crush *tarmuš*-plant, he drinks it in beer and he will get better. If ditto, you keep applying *mirišmara* during his sleep, and he will get better.

If ditto, you ... and crush male mandrake, you burn it over coal and he will get better.

²⁷ See Celsus Book V 1, ‘all medicaments have special powers, and afford relief, often when simple, often when mixed,’ (Loeb II, 5). According to Pliny, medicinal plants were not studied in Rome before the work of Linaeus became known in the first century BC (Watson 1966: 36), and only later were compound drugs perceived as being efficacious (ibid. 75f.). According to Galen, even Mithridates operated on the assumption that having identified simple drugs (*pharmaka*) as antidotes, he could combine them into a compound drug for a more effective result (ibid. 34).

tightening.²⁸ The opposite description of organs (including limbs) is to be 'loose' or 'flaccid' (Akk. *paṭāru*), literally untying a knot.²⁹ This description is common in diagnostic texts, referring to many different parts of the anatomy being 'loose', including the ear, neck vertebrae, buttocks, epigastrium, intestines, chest, fingers, and chin, among others. I cannot find Babylonian examples of the third Methodist category, a mixture between 'strictness' and 'laxness', but this may be a later refinement in Methodism which was not part of Babylonian descriptions of disease.

As for diseases being described by Methodists as *pathe* rather than *nosos*, this conforms generally to Babylonian medical terminology, which lacks any specific term for 'disease'. The Akkadian term *muršu*, which modern translations identify as 'illness' or 'disease', actually means something quite different, much closer to Greek *pathe*. The verb *marāšu* literally means 'to be difficult, to suffer' or in a causative form 'to make things difficult, to trouble, to cause hurt'. The adjective *maršu* is often applied to organs within medical contexts (head, eye, nose, lungs, etc.), although the word can actually mean simply 'sore' or 'troublesome', which we translate as 'sick' only by extension. In essence, the term for 'sick' in Babylonian medicine is really a description of discomfort or how the patient *feels* under adverse conditions, and hence parallels Greek *pathe*.

Moreover, the fact that Methodism recognised certain specific diseases by name (e.g. epilepsy, diseases of various organs, etc.) offers a similar picture to what we find in Babylonia. For instance, Themison, the founder of Methodism, when writing on pathology, described paralysis and apoplexy, incubus (nightmare), melancholy, flux, hemorrhages, stomach 'affections', worms, fevers, and women's 'affections' (Tecusan 2004: 97). Correspondences can be found to all these 'ailments' within Babylonian disease categories. Themison also labelled diseases by general designations (epilepsy, phrenitis, lethargy, pleuritis, jaundice, fevers, nausea, etc.) as well as associating diseases with specific organs (cephalaea, peripneumonia, stomach 'affection', conditions of the spleen and liver, inflammation of the uterus) (Tecusan 2004: 101f.). This same type of disease taxonomy can be found in Babylonia, as we have seen above in SBTU I 43.

There is no evidence from Methodism, however, of the use of 'case histories', i.e. treating individual patients, and Galen severely criticises Methodism for this failure. He writes that a good physician must be aware of the individual characteristics of each patient. Galen writes:

The best doctor for any kind of disease would be the one who has worked out some method through which he might be able both to discern the natures and to conjecture the remedies

²⁸ Although the term *hiniqtu* appears regularly in therapeutic rather than diagnostic texts, the diagnosis can be found: 'if (the patient's) larynx is "constricted" (*haniq*)' (Labat 1951: 84, 28). The nouns *hinqu* and *hiniqtu* for 'stricture' are common in therapeutic texts, such *hiniq ellibuhhi*, 'stricture of the bladder' (Geller 2005: 46).

²⁹ In therapeutic texts, limbs can be described as being 'poured out' (from Akk. *šapāku*), another synonym for flaccid or loose.

specifically adapted to each. To believe that there is some treatment common to the entire mankind is foolish in the extreme; and this is exactly what the utterly senseless Methodists think. (Tecusan 2004: 456f.)

Galen would have no doubt been equally critical of Babylonian medicine, which operated on similar assumptions. The Babylonian *Diagnostic Handbook* (Labat 1951, Heeßel 2000) is a universal record of all symptoms of all diseases organised according to affected parts of the anatomy (i.e., symptoms of the head, symptoms of the eyes, neck, etc.), but in no case associated with an individual patient. We have no idea from how many patients these symptoms were drawn, since the *Diagnostic Handbook* was strictly concerned with disease and not with patients. Galen goes on to write,

And their [sc. the Methodists'] art is an investigation of *koinotetes* [= common features], not of particular features, as if they were treating the common and generic man, not individual patients. (Tecusan 2004: 456f.)

This is precisely how Babylonian medicine operated, being concerned with a common grouping of all symptoms from all diseases in abstract terms, without reference to a single patient. As in the Babylonian *Diagnostic Handbook*, Akkadian therapeutic medical recipes usually begin with a generic statement something like, 'if a man suffers from ...', but the 'man' is never specified or identified with any individual patient.

Furthermore, as mentioned earlier, Galen criticizes Methodists for failing to distinguish between a disease and disease-symptom (*symptoma nosēmatos*). Galen accuses the Methodists of being confused in their terminology, using as an example the term 'apoplectic' referring to a 'violent seizure in the whole body' which lasts for a few hours, but in general one refers to the same condition as epileptic. Similarly, Galen chides the Methodists for being vague regarding 'persistent' or 'prolonged' conditions, suggesting that what is really meant is a condition which is 'hard to resolve', referring to chronic disease (Teluscan 434f.). The point is that Babylonian medicine shares all of the attributes which Galen associates with Methodists. In Akkadian medical terms, for instance, there is no real distinction between 'feverish' and 'fever' as a symptom or as a malady; in fact, one common Akkadian term for fever, *ummu*, simply means 'heat' (Stol 2007: 5f.). Little distinction is made between being hot and the condition called 'fever', a term for the illness itself. At the same time, vague expressions are used in Akkadian medicine to describe longer-lasting conditions, such as 'persistent fever' (*ummu lazzu*, Stol 2007: 9), although such conditions may not be chronic but only persist for three or four days (Labat 1951: 116, 3). At the same time, illnesses can be 'prolonged' (*irrik*), a frequent description in Babylonian medical texts. There is no precise differentiation, however, between a disease which is 'prolonged' or 'protracted' and one which is a

'disease not removable,'³⁰ which is more likely to refer to a chronic ailment. In any case, Galen's frustration with Methodist vocabulary for disease would apply equally well to Babylonian medicine.

As for Galen's criticism of the Methodists that the role of the physician was to heal the sick while prediction was the job of the diviner (Tecusan 2004: Fr. 215, 590f.), this conforms to a certain extent to the situation in Babylonia, where the task of prognosis through diagnostic omens (in the *Diagnostic Handbook*) belonged, not to the physician, but to the ka.pirig-exorcist, a sub-speciality of exorcists who visited the patient at home and predicted the course of the illness. Although Galen refers to the diviner for this task, the significant thing is that the physician was not responsible for predicting what would happen to the patient.

No one has as yet investigated a possible Babylonian parallel to the Methodist theory of critical stages of disease divided into three-day periods, as mentioned above. Babylonian medicine had the concept of *adannu*, the 'critical time' or 'fixed time' for the course of a disease, but without reference to stages. It is true that Babylonian medicine often refers to three-day periods, either as a period during which symptoms are present, or for a period of time during which therapy should be applied, but no consistent picture emerges; four and five day periods are also common. Nevertheless, there may be some basis for comparison in a recipe published by Stol:

If [the illness] leaves him [in] two days, and seizes him on the third day: whenever it seizes him, he becomes stiff (*magāgu*) all the time, after he has been stiff all the time [ditto], he gets trembling (*ra'ibu*), his limbs ... hurt him, his hands and feet are cold..., afterwards a fever 'together' ... rides him / pours down (*rehū*) upon him and (*u*) sweat falls upon him, and he comes to rest (*nāhu*): seizure of the mountain has seized him. (Stol 2007: 14)

Such descriptions of different stages of an illness are not systematic or divided into initial, middle, and final stages, but one can nevertheless see some similar patterns here, how the disease at first increases, then becomes constant, and finally diminishes, according to Methodist theory. It is unlikely to find any theoretical statements in Babylonian sources, but Babylonian therapy may nevertheless have been aware of different stages in the progression of illness.

Pseudo-Galen also has plenty to criticize in Methodist and Empirist philosophies of medicine, and once again some of these same criticisms would be equally valid for Babylonian medicine. The issue is whether one should look for hidden causes of disease, deduced by logical assumptions drawn from symptoms, or be content with manifest causes which one can easily identify from external factors (Tecusan 2004: 694f.); this was a major point of contention between conflicting schools of thought. As Pseudo-Galen points out, 'Empiricists and Methodists declare that the apprehension of hidden things is useless; for nothing useful is dis-

³⁰ Sumerian logogram 'gig nu zi', see Stol 2007: 30.

covered from hidden things' (Tecusan 2004: 697). Within Babylonian diagnosis and prognosis, there is virtually no evidence of logical deductions from symptoms or esoteric knowledge, but descriptions of disease are mostly based upon observation of external bodily signs and symptoms. There are cases within Babylonian diagnosis of descriptions of internal bodily organs, whether soft or hard, or having a particular colour, but such descriptions are simply extensions of the same criteria observable from external anatomy, applied mechanically to internal organs; such observations are not based upon hidden or esoteric knowledge.

Finally, let us return to the specific case of SBTU I 43. There is one point of comparison with Hippocratic medicine which needs to be borne in mind, namely the Hippocratic notion of the 'seat' of a disease being in one of the bodily organs. As Tecusan points out,

In traditional, so-called 'Hippocratic' medicine this notion carried certain basic assumptions. It tied together an item which was in principle well specified, the seat or the part affected, and one which was, by contrast, general and speculative: the 'cause' or aetiological theory supposed to explain the disease. These two functioned as main sources of indications for therapy. (Tecusan 2004: 10)

Tecusan adds that 'even if the Hippocratics did not speak in the technical language of Hellenistic concepts..., basic notions of cause and seat of a disease were there' (Tecusan 2004: 10 n. 12). This might serve as one possible explanation of SBTU I 43, namely that the heart, throat, lungs and kidneys each serve as a 'seat' for the diseases listed with them, but unfortunately there is no evidence for such a 'seat' of disease found as yet within Babylonian medicine, which was therefore unlikely to have been influenced by a basic aspect of Hippocratic theory. In general, the many interesting parallels between Babylonian medicine and 'alternative' Greek medicine (e.g. Methodism) provide a more promising line of approach to comparative studies. However, little gleaned from Methodists or Empiricists enlightens us about the underlying structure and purpose behind SBTU I 43.

Galen on four crucial organs

Although there is obviously no direct connection between the Uruk 'taxonomy' (SBTU I 43) and Galen's medical theories of some six centuries later, nevertheless one obvious aspect of Galen's view of human anatomy is similar enough to require further examination. The crucial passage occurs in Galen's *Ars Medica* V.1, discussing the four *archai* ('causes', 'first principles') which govern four bodily organs. The passage has been most recently edited and translated in a French edition:

Elles présentent des différences qui sont quatre au total. En effet certaines d'entre elles jouent en quelque sorte le rôle de centres directeurs, d'autres tirent leur origine de celles-ci, d'autres encore n'en gouvernent pas d'autres, ni ne sont dirigées par d'autres, possédant comme in-

nées les facultés qui les gouvernent; quelquesunes enfin possèdent des facultés innées et en même temps des facultés qui se répandent en elles. Les centres directeurs sont donc le cerveau, le coeur, le foie et les testicules. (Boudon 2000: 286f.)

According to this passage, the four *archai* (‘centres directeurs’) control four organs, namely the brain, the heart, the liver, and testicles. The *archai* can lead to fevers and major illnesses if the correct *krasis* (blending or temperament) of these organs is not properly controlled. The organs possess four essential qualities (hot, cold, wet, dry) which will lead to illness if these are out of balance.³¹

We recall above that the Uruk ‘taxonomy’ highlights the ‘heart’ or ‘mind’ (*libbu*), ‘mouth of the stomach’ (*pî karši*, which we translated above as ‘throat’ but could be elsewhere), lungs (*hašû*), and kidneys (*kalâti*). Although the four organs cited in SBTU I 43 are not identical with those listed by Galen, nevertheless the general concept is remarkably similar, namely that certain inherent factors or properties of these four organs can create conditions which cause disease. There are certain features in common between the listing of organs in the Uruk ‘taxonomy’ tablet and in Galen’s scheme, namely the Babylonian heart, throat (pharynx?), lungs, and kidneys versus the brain, heart, liver, and testicles. For one thing, the Babylonian listing of the organs does not follow the usual *de capite ad calcem* scheme, unless one is prepared to take a rather radical stance that *libbu* in SBTU I 43 actually alludes to the ‘mind’ or even by extension to the brain, which was not normally considered to be the centre of cognition within Babylonian physiology. Only in this way could *libbu* head the list of organs; we do not yet know enough about Babylonian anatomical theory to jump to this conclusion, but nevertheless the idea is intriguing that SBTU I 43 may represent a far-reaching departure from traditional Babylonian scholarship. Furthermore, the second organ in SBTU I 43 is the ‘mouth of the stomach’ (*pî karši*), which should correspond to the ‘heart’ in Galen’s list of organs. In Babylonian terms, there is no great distinction between the organs ‘heart’ and ‘stomach’ (*karšu*), because one thinks with his ‘stomach’ as well as with his ‘heart’ in Babylonian idiom. In SBTU I 43, however, the ‘mouth of the stomach’ represents an organ associated with breathing (nose and mouth), but it is just possible that the organ being referred to was the heart rather than throat.³² Babylonian scholars had no concept of the heart acting as an organ pumping

³¹ See Hankinson 2008: 214, quoting Galen’s own explanation of the *archai* or ‘principles’: “In addition to this there are four qualities, pure cold, dryness, heat and moisture. These are not *elements* of either man or anything else, but rather *principles* [*archai*]: but this was confused by early thinkers, who failed to distinguish the concepts of principle and element, since the word ‘element’ may be used in the case of the principles as well.”

³² There is no physiological function identified with the heart in Babylonian sources. Hence, the ‘mouth of the stomach’, which we provisionally translated as ‘throat’, could have referred to the heart as an organ of respiration, just as Greeks conceived of air being inhaled and traveling through veins and arteries. Likewise, there is little evidence associating lungs with respiration in Babylonian medical texts.

blood, while Greek physiology conceived of the heart as pumping *pneuma* as well as blood. The common denominator is a body organ association with breathing, but not lungs. The third correspondence is between Babylonian ‘lungs’ and Greek ‘liver’; neither Babylonians nor Greeks had correct notions regarding the functions of the liver, and the basic correspondence may simply rest upon there being two major organs of the thorax. The final correspondence between kidneys and testicles may be more suggestive, since within Babylonian medicine the kidneys were seen as the major organs of the entire urinary system and ‘kidney’ disease also involved all functions of the penis, including ejaculation.

Moreover, the four factors mentioned above in Galen’s work (hot, cold, dry, wet) are equally important within Babylonian diagnostics and occur frequently within the Babylonian *Diagnostic Handbook* as fixed reference points for diagnostic and prognostic criteria, to determine the nature of the disease and its duration. We lack, of course, any theoretical basis within Babylonian medicine upon which such observations are based. Although the entire discourse within Galen’s theoretical framework is much more complex and highly sophisticated than anything we find in Babylonia, nevertheless it is plausible to posit that Galen’s own theoretical concept of disease being an impairment of an organ’s natural functions³³ was ultimately based upon a much earlier and cruder general understanding of internal anatomy, in which four internal organs were closely associated with specific diseases, as seen in SBTU I 43. In this view of things, Galen’s ideas of *krasis* of heat and cold within four crucial organs may have ultimately originated in the suppositions of his predecessors.

Nevertheless, like with Hippocratics and Methodists, Galen’s intriguing discussion of the *archai* ruling four organs raises more questions than answers, since there is no hard evidence to ascertain the relationship between diseases and the associated organs within the four sections of the Uruk ‘taxonomy’ (SBTU I 43). It remains unproven whether this Uruk tablets really is a taxonomy of sorts, intended to classify diseases, or has some other theoretical basis which has so far completely alluded us. It is time to turn to alternative explanations outside the Greek medical corpus.

So far, then, Greek parallels to SBTU I 43 have not proven decisive in being able to interpret this mysterious text, although it is helpful to remind ourselves of the large amount of Greek medical theory and practice which existed outside of the standard works known to us as the Hippocratic Corpus. In order to shed further light on our text, however, we must look elsewhere among the large number Late Babylonian tablets, and specifically at tablets dealing with astral magic and medicine, in the hope of finding further clues.

³³ Cf. Hankinson 2008: 167. The suggestion has been made that the *Ars Medica* (an atypical treatise) should be ascribed to a Pseudo-Galen (ibid. 237 n. 28), which might mean that this work could have improved upon Galen’s theories by including theories found outside the Galenic corpus.

II Uruk Astral Magic (BRM 4 20 and BRM 4 19)

Babylonian astral magic was provocatively treated in a monograph by Erica Reiner, with passing references to Greek and Latin texts resembling Late Babylonian zodiac-based astrology within Akkadian incantations and related genres (Reiner 1995). In many cases, the new astrology was adapted to traditional Babylonian magical themes, and the new genres resulting from this amalgam of 'astral magic' represented a departure from the standard incantations which had previously been faithfully copied and transmitted by generations of scribes. Astral magic provides examples of real innovation in Babylonian scribal culture, only a few centuries before the ultimate decline of cuneiform script.

We turn now to another unique Uruk text from the Hellenistic period, BRM 4 20 (with a parallel text also from Uruk, BRM 4 19), which is astral magic rather than astral medicine but referring to many of the same illnesses. These Uruk tablets are essentially a reworking of a text from Sultantepe (STT 300), which relates astral magic to specific days in the lunar year, while the Uruk texts adapt the same conditions to zodiac signs. What concerns us specifically is the Uruk perspective on astral magic (with its zodiac orientation) and any possible connection with disease classification at Uruk during the same period (or slightly earlier). The question is whether medical taxonomy and astral magic might both represent examples of new scientific thinking in Uruk, some of which may share common features with Greek medical astrology emerging at the same time and later.

In Uruk astral magic (BRM 4 20), the individual entries associated with zodiac signs represent aggressive magic which can alter reality, rather than being defensive or protective spells and rituals which react to the reality of disease or misfortune which has already occurred. Presumably these spells are deemed effective if they are to be used when a planet or the moon traverses a certain zodiac sign. Reiner describes this text as follows: 'Many of the activities listed describe calamities or diseases in order to indicate the proper time for carrying out apotropaia against them, especially when they are caused by maleficent practices' (Reiner 1995: 109). We do not agree. One purpose of this text is on occasion to invoke black magic, rather than merely protect against it, or to counter the evil pre-emptively.

As for the general character of this text, there is no doubt about close parallels with other texts within the witchcraft corpus (Schwemer 2007: 160f.). The essential problem in this text is how to counteract evil predominantly caused by human agency rather than by demons or angry gods. So although gods play a background role in this kind of magic, the aims are very different from classical bilingual Sumerian-Akkadian incantations, or from a formal composition like *Šurpu* (Reiner 1970), all of which are essentially concerned with an individual's relationship to gods (and demons). The kind of magic found in Uruk astral magical texts, such as BRM 4 20, was also known to the Greeks, and Plato describes such practices in succinct if critical terms:

But the strangest of all these speeches are the things they say about the gods and virtue, how so it is that the gods themselves assign to many good men misfortunes and an evil life, but to their opposites a contrary lot; and begging priests and soothsayers go to rich men's doors and make them believe that they by means of sacrifices and incantations have accumulated a treasure of power from the gods that can expiate and cure with pleasurable festivals any misdeed of a man or his ancestors, and that if a man wishes to harm an enemy, at slight cost he will be enabled to injure just and unjust alike, since they are masters of spells and enchantments that constrain the gods to serve their end. Plato, *The Republic* Book 2 (Lloyd 2003: 69)

Here is an edition of the most important of the Uruk astral magic texts:

BRM 4 20 (MLC 1859)¹

1	šà.bal.bal	ki ^{mul} ur.a	(STT 300 4)
2	di.bal.a ²	ki ^{mul} gu.la	(" 39)
3	šu.du ₈ .a.kam ³	ki ^{mul} ab.sín	(" 7)
4	nam.érim.búr.ru.da	ki ^{mul} gu.la	(" 7)
5	ki.ág.gá nita <i>ana</i> munus ⁴	ki ^{mul} zi-ba-nu	(" 10, 13)
6	ki.ág.gá munus <i>ana</i> nita ⁵	ki ^{mul} kun.meš	(" 9)
7	ki.ág.gá nita <i>ana</i> nita	ki ^{mul} gír.[tab]	(" 12)
8	munus gin.na	ki ^{mul} ú.hun.gá	(" 21) ⁶
9	zi.ku ₅ .ru.da ⁷	ki ^{mul} pa.bil.sag šá-niš ki ^{mul} maš.maš	(" 21, 38)
10	igi.nigin.na	ki ^{mul} (maš).tab.ba gal.gal	(" 14)
11	ʿíd u pú kù.ga	ki ^{mul} suhur.máš	(" 16)
12	é.gal.ku ₄ .ra ⁸	ki ^{mul} al.lu ₅	(" 11,16)
13	šúr.hun.gá	ki ^{mul} gu.[la]	(" 120)

1 The parallel texts BRM 4 19 (MLC 1886) and STT 300 are edited below, treated by Scurlock 2005–2006, and discussed by Reiner 1990: 421f.; Stol 1993: 116f.; Rochberg 1984: 119 shows how designations of the zodiac signs differed between these texts. BRM 4 19 lines 1–14 are reconstructed according to BRM 4 20 (Ungnad 1944), also providing evidence for a *dodekatemoria* (Neugebauer and Sachs 1952–53, and Rochberg 1988: 57f.). The end of BRM 4 20 has a commentary explaining some of the entries, which were probably no longer understood by Uruk scribes, or possibly because few exemplars of these spells were known in Uruk.

2 SBTU 5 243 rev. 5' (astral magic fragment), see Schwemer 2007: 160.

3 SBTU 4 129 v 47 (rubric), and SBTU 2 23, see Schwemer 2007: 128

4 Cf. Biggs 1967: 5, for ll. 5–8, and see Schwemer 2007: 159.

5 See SBTU V 243: 1.

6 See below l. 50.

7 The term also occurs in SBTU 5, 243 rev. 4' as well as frequently in the witchcraft corpus (Schwemer 2007: 14–16, 160). See also STT 89, spells against *zikurudû* administered according to the appearance of stars or in various months, edited by Stol 1993: 91–98.

8 SBTU 4 129 v 47 and SBTU V 243: 5'.

- 14 lugal *ina* é.gal-šú mu-šú ki 5 uš *ina* igi mul [.]⁹ (" 23, 25)
ana sig₅-tim ha-sa-sa
- 15 nun *ina* é.gal-šú mu-šú *ana* ki ^{mul}kun.[meš] (" 25)
sig₅-tim mu-ár¹⁰
- 16 *a-mir-ka ana igi-ka ha-de-e* ki ^{mul}ur.[a] (" 26)
u ra-a-ši
- 17 munus *šu-ud-bu-bu* ki ^{mul}lú.hun.[gá]
- 18 *a-mir-ka šu.si-šú ana sig₅-tim* ki ^{mul}ab[sin] (" 32)
ana muh-hi-ka ta-ra-aš
- 19 *ši-kin kù.babbar* ki sa₄¹¹ šá ^{mul}gu₄.an.[na] (" 36)
- 20 *záh gur.ru.da¹²* ki ^{mul}lugal šá-niš ki
^{mul}zi-ba-[nu]
- 21 munus lú *ana nita šá-nim-* ki ^{mul}maš.tab.ba gal.[gal] (" 39)
ma igi¹¹ u igi la na-še-e
- 22 hul.gig ki ^{mul}[g]í[r.tab] (" 10, 39)
- 23 uš₁₁.búr.ru.da ki ^{mul}gu-la šá-niš ki ^{mul}kun.[meš] (" 4,40)
- 24 gîri hul-tú *ina* é lú tar-si ki ^{mul}mul šá-niš ki ^{mul}gu.la (" 40)
- 25 *iš-di-hu lú.kurun.nam* ki ^{mul}al-lu₅ šá-niš ki ^{mul}gu.la (" 41)
šur-ši-i
- 26 uš₁₁.zu *ana búr-ra¹³ana lú* ki ^{mul}suhur.máš (" 5–6)
gig nu.te sag.du ti.la ra-i-
ib-šú a-na šu-ši-i si-im-ma
a-na ti.la¹⁴ múd munus
ana tar-si hul ana é lú nu.
te¹⁵
- 27 líl.lá.en.na ki ^{mul}mul šá-niš ki ^{mul}giš.rín (" 8,26, 35–
38)
- 28 ki.sikil.líl.lá¹⁶ ki ^{mul}mul šá-niš ki ^{mul}maš.maš šal-šiš ki
^{mul}p[a-bi]l-[s]ag

9 Ungnad 1944: 259, restores [lugal] here for ‘Regulus’. This and the following two entries are probably cited from Egalkurra-type incantations; see SBTU II 24: 19, nun *ina* é.gal-šú mu-šú *ana sig₅-tim ha-sa-sa* [ref. courtesy H. Stadhouders].

10 See in another Uruk text a variant formulation, nun *ina* é.gal mu-šú sig₅-tim *ha-sa-sa* (SBTU II 24: 19).

11 *nebû* = brightest star of a constellation.

12 See below l. 40 and BRM 4 19 20: ìr lú nu záh šà ìr *u geme* [kúr] dù-*ma* silim, as well as STT 300 37f. and 42 and cf. SBTU V 243, rev. 2’.

13 Akk. *kišpî ana pašâri*, cf. Schwemer 2007: 160.

14 BRM 4 19 26.

15 BRM 4 19 26, adding the clause *tep[puš-m]a išallim*; the phrase occurs in Wiggermann 1992: 6, 18.

16 KAR 44 10.

- 29 líl.lá.en.na ki.sikil.líl.lá¹⁷ ki^{mu}r pa.bil^r.[sag] (" 12f.)
 30 an.ta.šub.ba^dlugal.ùr.ra šu. ki^{mu}[^lur.a] (" 15)
 dingir.ra šu.gedim.ma¹⁸
 31 gedim dab-bat ki¹⁹ lú <ana>²⁰ kēš nu lú ana ug₇ pa-qá-du²¹ (" 17)
 ana ged[im a.meš]
 ana nag-e²² hi-bil-ti è-i²³ ki^{mu}[^lal.lu₅] (" 17–18)
 32 munus gin.na²⁴ dù-ma hi- ki^{mu}[^lgiš.rín] (" 20–21)
 řam nu.tuk²⁵
 33 dingir ana qé-re-e^r iř₈-tár^r ana qé-re-e sa.gal.la²⁶ ana ti.la²⁷ (" 21–23,
 é ana hu-up^r-[pi²⁸ lú.gig ana e-se-ri²⁹ dúr.gig ana ti.la]³⁰ 26)
 na₄[!] ana ti.la šà.si.si ana (" 22)
 ka-le-e³¹ kúm³² ana^r zi-hi^r [ki^{mu}]lú.hun.gá]³³
 34 idim u nun ana eme.sig nu. ki^{mu}maš.tab.ta gal.gal] (" 27)
 gu₇¹³⁴ ga[ba.ri]³⁵

17 BRM 4 19 27–28, adding zi-hi dím-ma al-silim.

18 BRM 4 19 29, var. an.ta.šub.ba be-en-na^dlugal.ùr.ra (om. šu.gedim.ma), adding zi-hi dím-ma al-silim.

19 See comm. below l. 62: e-řim-mu řa-ba-tu it-ti lú ana ra-k[a-su], ‘to seize a ghost, to bind it with a man’. Cf. BRM 4 19 26.

20 BRM 4 19: 30 has ana kēš.

21 See comm. below, l. 60, nu lú ana ug₇ pa-qa-du : nu lú a-na mu-ú-tu p[a-qa-du], ‘to entrust the figurine of a man to a dead (person)’, probably meaning that the figurine is to be buried with a corpse.

22 BRM 4 19 30 reads nag.nag-e, referring to providings offerings for the dead.

23 Cf. BRM 4 19 30, adding dím-ma al-silim.

24 See Biggs, TCS 1 70 (KAR 61), with the incipit, diš ki.min řum₄-ma munus nu du-ku, ‘ditto, if a woman doesn’t come’.

25 BRM 4 19 31, var. dím-ma for dù-ma, and at the end adding dím-ma al-silim. See Scurlock AfO 51, 136, translating this phrase as ‘to perform attraction magic without having done anything wrong’.

26 See STT 300 21, BRM 4 19: 32, also KAR 44 rev. 9.

27 BRM 4 19: 32.

28 BRM 4 19: 32, é ana hu-ub-bi, with the latter being a form of hiāpu, ‘to cleanse’.

29 To arrest disease, see CAD E 335, an unusual usage of the word for shutting, enclosing.

30 Restored BRM 4 19: 32. There is more restored here than space allows.

31 Although one expects the reading šà si.sá, as in the earlier STT 300 22, BRM 4 19: 32 also reads si.si. Note the phrase in KAR 44: 18, šà.sur ku₅.ru.da, interpreted as stopping diarrhea (Jean 2006: 79).

32 BRM 4 19: 32, but omitting kúm, adding dím-ma a[^l-silim].

33 Restoration Ungnad 1944: 259, 37.

34 Copy nag, but var. BRM 4 19 is correct (l. 33).

35 This line is in BRM 4 19: 33, see note above; also no ana before eme.sig, and glossenkeil before gaba.ri.

- 35 nu *ši-il-la-ti ana tuk lú ina igi lú [šá-ka-nu šúr.hun.gá³⁶* (" 28–29)
*ana kar-ši nu igi-ri]*³⁷ *lu ug₇ / idim tag₄ lu lú.uš₁₁.zu³⁸ [lu*
mí.uš₁₁.zu lu mí.dingir šu-ud-bu-bi]
lu idim ina é.gal ana zi-hi [lu ana šà.dab.dab³⁹ ana⁴⁰ (" 29)
sag.du lú]
ana dib-tim lú ki.ág.gá⁴¹ lugal ana ta[r-si⁴² munus ág (" 29f.)
ana tar-si⁴³] ki^{mul}ur.a⁴⁴
- 36 ka.dab.bé.da⁴⁵ k[i^{mul}mul⁴⁶] (" 33, 34)
 37 sag.ki.dab.ba⁴⁷ ki [mul]
 38 šà.zi.ga⁴⁸ ki [mul.....] (" 1)
 39 *ma-gâr lugal ana lú⁴⁹* ki^{mul}[.....]
 40 *ir lú nu záh⁵⁰* ki^{mul}gí[r.tab] (" 37, 42)
 41 *dingir igi.bar dingir.šà.dab.* ki^{mul}mul (" 36, 37)
ba búr-ri⁵¹
- 42 *dam.tab.ba⁵² pur-ru-dî⁵³ ù* ki^{mul}suhur.maš (" 19)
lú ina man-za-zi-šu zi-hi
- 43 *lú ina qí-ip-ti-šú zi-hi ù lú* ki^{mul}lú.hun.ga (" 24)
ina igi lú gar-ni
-
- 44 *gaba.rim šeš.unug^{ki54} u tin.tir^{ki}*
-
- 45 *ud.da.kam* u₄-mu a-da-nu

36 Restoration based upon BRM 4 19: 34 and STT 300: 28, although the latter reads ZI-e (*tebê*).

37 STT 300: 28 has a variant, šúr.hun.gá nu gaba.ri.

38 Var. BRM 4 19: 34: *lu lú lu uš₁₁.zu lu mí.uš₁₁.zu*.

39 So STT 300: 29, although šà.dib.ba would be another possible restoration, with both expressions being for Akk. *kimiltu*.

40 Although the *ana* sign is clear in BRM 4 19: 34, it is not present in the older duplicate, STT 300 29.

41 BRM 4 19 34 var. ág.ki.

42 See the commentary at the end of the text (BRM 4 20: 63): *lú.ág lugal ana tar-si : lú šá šar-ri i-ra-mu-šú a-n[a tar-si]*, ‘to keep away the one whom the king loves’.

43 Entire passage duplicated in BRM 4 19 34.

44 Restored Ungnad 1944: 259, 42.

45 BRM 4 19 35, adds *dù-ma i-šal-lim*, as does STT 300 (*dím-ma al-silim*).

46 Restored Ungnad 1944: 259.

47 Known also from SBTU 4 129 vi 42 (ka.inim.ma) and SBTU 5 243 5.

48 KAR 44 14 (Jean 2006: 66); SBTU 4 129 v 47 (rubric).

49 The phrase also occurs in LBAT 1626: 2’.

50 See SBTU 5 243 rev. 2’, *ir na u munus nu.záh ki mül.gír.tab*.

51 Cf. BRM 4 19 36, adding *dím-ma al-silim*.

52 Akk. *tappātu*.

53 To terrify; probably = BRM 4 19: 37, followed by *dím-ma al-silim*.

54 Although Ur is mentioned rather than Uruk, Ungnad was correct in translating Uruk, since it fits this period. See also fn. 109.

46	šà.bal.bal	<i>lib-bi a-na na-bal-ku-tú</i>
47	šà.bal.bal	<i>lib-bi a-na šu-un-nu-u</i>
48	di.bal.a	<i>na-bal-ku-tú di-i-ni</i>
49	šu.du ₆ .a.kam	<i>pa-ta-ri šá qa-ti</i>
50	munus gin.na	<i>sin-niš-tú a-na a-la-ku</i>
51	igi nígin.na	<i>su-uh-hu(-ur) pa-ni</i>
52	ʿíd kù.ga	<i>a-me-lu ina hur-šá-nu zu-uk-ku-ú</i> (" 16)
53	munus šu-ud-bu-bu	<i>munus su-un-nu-qa</i> <i>munus šá e tul-la-tu-šu¹</i> <i>mim-ma ma-la ta-sal-lu-šu</i> <i>i-ťáh-hu-ka</i>
<hr/>		
54	ši-kin kù.babbar šá-niš záh kù.babbar	<i>kù.babbar ta-áš-ku-tú la-bi-ri</i> <i>šá é a-na pa-te-e</i>
<hr/>		
55	hul.gig	<i>zi-'i-ri</i>
56	iš-di-hu	<i>né-me-lu</i>
57	iš-di-hu	<i>ir-[bu]</i>
58	ra-'i-bi ana šu-ši-i	<i>ra-'i-bi mur-[šu]</i>
59	nam.érim.búr.ru.da	<i>ma-mit pa-šá-[ru]</i>
60	nu lú ana ug ₇ pa-qa-du	<i>nu lú a-na mu-ú-tu p[a-qa-du]</i> (" 17!)
61	eme.sig nu gaba.ri	<i>kar-ši la ma-[ha-ru]</i>
62		<i>e-ťim-mu ša-ba-tu it-ti lú ana ra-k[a-su]</i>
63	lú.ág lugal ana tar-si	<i>lú šá šar-ri i-ra-mu-šu a-n[a tar-si]</i>
64	dingir igi.bar	<i>dingir.meš li-ip-pal-sa-a[n-ni]</i>
65	dingir.šà.dab.ba búr-ra	<i>lib-bi dingir.meš kam-ri⁵⁵ li-ip-pa-š[ir]</i>
66	tu ₆ .tu ₆ bar.ra ⁵⁶	<i>ši-pa-a-tú a-ha-a-tú</i> (" 44)
<hr/>		
67	ul ⁵⁷ u šu-ut ka šá iti.bára ud.10.kam ud.da.kam šà.bal.bal	
<hr/>		
	[i]m ^m ba-ša-a bu _g -kúr ^m innin.mu.kam šà.bal.bal ^m é-kur-za-kir lú.maš.maš	

Translation of BRM 4 20

- 1) (The spells⁵⁸ for) 'changing someone's mind': (in the) region of Leo.
- 2) (The spells for) 'overturning a judgement'⁵⁹: region of Aquarius.

55 CAD K 124 s.v. *kamlu* angry.

56 This occurs in KAR 44 Rev. 8, see Jean 2006: 69.

57 Akk. *šātu*.

58 Consisting of incantations and/or rituals.

59 Scurlock 2005–2006: 125ff., is certainly correct in assuming this to be black magic for justice to be overturned and hence perverted. She assumes, however, that performing such rites would have resulted in the execution of the practitioner; this is an unproven assumption for which she supplies no evidence. These incantations may never have actually been performed, but their theoretical existence is sufficient for the purposes of the present text. See Schwemer 2007: 63f.

- 3) (The spells for) ‘loosening the grasp’⁶⁰: region of Virgo.
- 4) (The spells for) ‘breaking an oath’: region of Aquarius.
- 5) (The spells for) ‘love of a man for a woman’: region of Libra.
- 6) (The spells for) ‘love of a woman for a man’: region of Pisces.
- 7) (The spells for) ‘love of a man for a man’: region of Scorpio.
- 8) (The spells for) ‘a woman to come’: region of Aries.
- 9) (The spells for) ‘cutting off of the breath’: region of Sagittarius, alternatively Gemini.
- 10) (The spells for) ‘bringing about a *volte-face*’: region of Gemini.
- 11) (The spells for) ‘cleansing (of guilt) by river or well-water’ (ordeal): region of Capricorn.
- 12) (The spells for) ‘entering the palace’ (*egalkurrû*): region of Cancer.
- 13) (The spells for) ‘appeasing (divine-)anger’: region of Aquarius.
- 14) (The spells for) the ‘king remembering his name favourably in his palace’: 5 degrees before
- 15) (The spells so that) the ‘prince will mention his name favourably in his palace’: in the region of Pisces.
- 16) (The spells so that) the one who sees you will rejoice and be happy at seeing you: in the region of Leo.
- 17) (The spells for) making a woman have intercourse: region of Aries.
- 18) (The spells for) the one who sees you to point to you favourably: region of Virgo.
- 19) (The spells for) depositing of silver: region of the brightest star of Taurus.
- 20) (The spells for) returning a runaway (slave):⁶¹ region of Regulus, alternatively Libra.
- 21) (The spells so that) a man’s wife not turn her eyes or face towards another man: the region of Gemini.
- 22) (The spells for) hate magic: region of Scorpio.
- 23) (The spells for) annulling witchcraft (*ušburruda*): region of Aquarius, alternatively Pisces.
- 24) (The spells for) preventing the approach of an enemy⁶² in a man’s house: region of Taurus, alternatively Aquarius.
- 25) (The spells for) bringing about profit for the publican: region of Cancer, alternatively Aquarius.

60 According to Scurlock 2005–2006: 125, these black magic spells were designed to make a victim keep his hands open and render him unable to refuse requests for money. She stretches the point (p. 130) by relating this type of magic to a statement in the *Mandaic Book of the Zodiac* in which, under the sign of Virgo, one can get money from a widow. The association of ideas is possible but certainly not provable.

61 BRM 4 19: 20 differs: ‘(spells for) the slave of a man not to escape, to alter the intentions of the slave or slave-girl.’

62 Lit. ‘foot of evil’.

- 26) (The spells for) releasing sorcery,⁶³ for illness not to approach a victim; for healing the head; for getting rid of *mania*, for healing a wound, for stemming menstrual bleeding, for preventing evil from approaching a man's house: region of Capricorn.
- 27) (The spells for)⁶⁴ lilû-demon: region of Taurus, alternatively Libra.
- 28) (The spells for) Lilith: region of Taurus, alternatively Taurus, alternatively, Gemini, third alternative, Sagittarius.
- 29) (The spells for) Lilû and Lilith: region of Sagittarius.
- 30) (The spells for) seizure, epilepsy, (var. adds *bennu*), Hand-of-the-god-disease, Hand-of-the-ghost-disease:⁶⁵ region of Leo.
- 31) (The spells for) seizing a ghost and tying him to a man,⁶⁶ for entrusting the figurine of a man to a dead (person),⁶⁷ for making a libation to a ghost (thus) removing harm: region of Cancer.
- 32) (The spells for) 'you make a woman come', without incurring recriminations: region of [...].
- 33) (The spells for) 'inviting the god, inviting the goddess',⁶⁸ (needing) to heal paralysis, (needing) to purify the house,⁶⁹ (needing) to quarantine the patient, (needing) to heal rectal disease, (needing) to heal a calculus, (needing) to stop diarrhea, (needing) to get rid of fever:⁷⁰ region of Aries.
- 34) (The spells for) a mogul or prince not to indulge in (var. believe) slander:⁷¹ region of Gemini.

63 Our translation attempts to distinguish between *uš₁₁.búr.ru.da* in l. 23 and *uš₁₁.zu* in l. 26.

64 Var. 'getting rid of'. The meaning is taken from the duplicate, BRM 4 19: 27–28, which inserts the verb *nasāhu* in this and following lines (28–30).

65 All of these conditions are to be found in the first section of SBTU 1 43.

66 See Reiner 1995: 109.

67 *Ibid.* 110.

68 The word *qerû* is attested in Old Babylonian legal texts, in which being 'invited by the god' is a euphemism for dying (cf. CAD Q 242f.). Even as a connotation, the idea fits well into our text, in the sense of '(spells for) being invited by the god or goddess', suggesting that the patient is going to die. This leaves the problem of healing of various diseases, such as wounds, paralysis, kidney stones, and diarrhea, all of which are mentioned in this line. The seeming contradiction between 'being invited by the gods' and being healed is based on an irony: the magical spell wishes for the victim to need to be healed, to require being cured, as a way of wishing that he become ill. Scurlock, on the other hand, relates the banquets to Hellenistic rites from Greek magical papyri in which virgin boys are used as assistants in order to attract gods to a banquet (Scurlock 2005–2006: 136).

69 Probably because of the presence of an epidemic or contagious disease in the house.

70 All of these illnesses which need to be healed in this passage are either difficult to cure (e.g. paralysis) or involve very unpleasant treatments associated with a patient's private parts (penis or rectum), or cause the patient to incur the social stigma of quarantine.

71 This statement conforms to the aims of aggressive magic to alter the behaviour of an opponent, even a powerful one.

- 35) (The spells for) having no insults, for setting a man against (another) man, for appeasing anger, for not believing slander, or for abandoning a dead person, for making (var. a man or) sorcerer or witch or priestess talk⁷², or remove a mogul from the palace, or for divine wrath on man's head, to prevent a man being loved by the king, to prevent a woman loving (someone else): region of Leo.
- 36) (The spells for) aphasia: region of [...].
- 37) (The spells for) 'forehead-affliction':⁷³ region of [...].
- 38) (The spells for) impotence: region of [...].
- 39) (The spells for attracting the) favour of the king:⁷⁴ region of [...].
- 40) (The spells for) a man's slave not to run away: region of Scorpio.
- 41) (The spells for) annulling divine anger of a watching god: region of Taurus.⁷⁵
- 42) (The spells for) frightening off a (female) rival or removing a man from his office: region of Capricorn.
- 43) (The spells for) removing a man from his position of trust or for setting a man against (another) man: region of Aries.
-
- 44) (Based on) copies from Uruk¹ and Babylon⁷⁶
-

[*Commentary on technical terms in the text*]

- | | |
|-------------------------------|--|
| 45) ud.da.kam | normal time (or a fixed point in time) ⁷⁷ |
| 46) šà.bal.bal | to cause a change of heart |
| 47) šà.bal.bal | to change the mind |
| 48) di.bal.a | to overturn a judgement |
| 49) šu.du _g .a.kam | to loosen the grasp |

72 In this case, *šudbubu* means to make someone talk, usually with mantic rather than sexual connotations, as in the so-called *Totengeist* incantation from Uruk in which the rubric reads, ka.inim.ma nam.tar šu-ud-bu-bi, 'incantation for the Fate demon to talk' (SBTU 2, 20: 15), and a subsequent incantation which has as its rubric: ka.inim.ma gedim igi.du_g eš.bar tar-si, 'incantation for seeing the ghost and making a decision'. The idea behind these texts is for the demon or ghost to provide information.

73 See Reiner 1995: 109 n. 486.

74 Ibid. 110–111, n. 497.

75 Is this not positive (defensive) magic rather than aggressive (black) magic? It may be so, if the patient is innocent and does not deserve divine anger, but if the patient is actually guilty of a crime, he may have to resort to a more aggressive type of magic in order to deflect divine anger.

76 Although the text actually says 'Ur' rather than Uruk (as noted by Neugebauer and Sachs 1952–1953: 66), Ungnad 1944: 281 was correct to translate Uruk and Babylon, since these two cities were the most important centres of Mesopotamian scholarship during the Hellenistic period.

77 H. Stadhouders (personal communication) makes the astute observation that this expression may have changed meanings in Hellenistic times, but originally it was used to indicate a length of time consisting of only one day.

- | | |
|---------------------------|--|
| 50) munus gin.na | for a woman to come |
| 51) igi nigin.na | bringing about a <i>volte-face</i> |
| 52) ^d id kù.ga | a man acquitted through the river ordeal |
| 53) munus šu-ud-bu-bu | to make an approach to a woman
a woman which you must not ‘swallow’
whatever you ask of her
she will have sex with you. ⁷⁸ |
-
- | | |
|---|--|
| 54) ši-kin kù.babbar šá-niš záh kù.babbar | to locate silver – old treasure – of the house |
|---|--|
-
- | | |
|---|--|
| 55) hul.gig | hate (magic) |
| 56) iš-di-hu | profit |
| 57) iš-di-hu | trade |
| 58) ra-'i-bi ana šu-ši-i | to remove ‘anger’-disease (mania) |
| 59) nam.érim.búr.ru.da | to undo an oath |
| 60) nu lú ana ug ₇ pa-qa-du | to entrust the figurine of a man to the dead |
| 61) eme.sig nu gaba-ri | not to believe slander |
| 62) e-ṭim-mu ša-ba-tu etc. | to seize a ghost; to tie (him) to a man |
| 63) lú.ág lugal ana tar-si | to keep a man away whom the king loves |
| 64) dingir igi.bar | ‘may the gods look at me’ |
| 65) dingir.šà.dab.ba búr.ra | may the angry heart of the gods be appeased |
| 66) tu ₆ .tu ₆ bar.ra | non-canonical incantations |
-
- 67) Extract and commentary of ‘Nisannu, normal period for šà.bal.bal’
-
- 68) Tablet of Iqišā, son of Inanna-šuma-ereš, descendant of the exorcist Ekurzakir

Philological commentary on BRM 4 20

l. 10: The phrase igi.nigin.na can simply mean ‘to look back,’ which is the way it is treated in the explanatory lines at the end of this text (l. 51 = *su-uh-hu(-ur) pa-ni*). Reiner (1995: 109 n. 484) gives this as an equivalent to Akk. *šidānu* ‘vertigo’, and her interpretation is supported by other evidence from medical texts in which a symptom is implied; see, for example, Scurlock 2006: 303: 6f. [diš n]a *pa-nu-šu iṣ-ša-nun-du*, or Schwemer 2007a: 31: 1, *pa-nu-u-šú nigin.meš-d[u]*. The phrase *pānū suhhuru* can equally mean to turn the face towards someone or something (see CAD S 49f.), usually with evil intentions, although we consider it simply to be a *volte face*.⁷⁹

⁷⁸ Cf. Geller 2005a.

⁷⁹ As suggested by H. Stadhouders.

l. 11: The entry is explained by the commentary at the end of this text (see l. 52), as: ^díd kù.ga = *a-me-lu ina hur-šá-nu zu-uk-ku-ú*, ‘a person cleansed through the river-ordeal’. The phrase *íd.kù.ga* occurs in LBAT 1626 rev. 3 and SBTU V 243 rev. 4.

l. 13: CAD Š/3 344 gives the term *šurhungû* as an affliction, based upon Maqlu I 90 and AfO 18 290: 13, but CAD does not rule out the reading *uzzi nuhhi* ‘to calm anger’, which is elsewhere attested in magic and medicine to appease the anger of a god or demon. In the present context both meanings could apply.

l. 16: BRM 4 19 16 has *glossenkeil* instead of *u* before *ra-a-ši*. This phrase occurs in LBAT 1626 and in SBTU II 24 16, 20, the rubric of which reads, *ka.inim.ma igi.bi húl.la.ke₄*, ‘incantation for one seeing him to rejoice’ (ibid. 13, 31). This formulation differs somewhat from what we find in an incantation from an earlier era, which reads, *igi.lá a-na ha-de-e ugu a-mi-ri-šú zi*, ‘to have he who sees him rejoice, to rise above one wishing him ill’ (Ebeling 1949: 187).

l. 17: The phrase is explained in the commentary at the end of the text; see below l. 53 and Geller 2005a. The phrase also occurs within love magic, see Biggs 1967: 70, which has the incipit of an incantation: [*ana*] *munus šu-ud-bu-bi*, ‘[to] make a woman indulge in intercourse’.

l. 18: The unique point about this phrase is that a finger is being pointed at someone *with good intentions*, since the opposite is normally the case, that a finger is pointed at someone with evil intent; for examples from Uruk, see Schuster-Brandes 2008: 247–264 (along with many of the categories here, such as *hul.gig*, *di.bal.a*, *zi.ku₃.ru.da*, etc.). The phrase also occurs in LBAT 1626 rev. 4’.

l. 19: The phrase is explained in the commentary at the end of the text (l. 54): *ši-kin kù.babbar šá-niš záh kù.babbar : kù.babbar ta-áš-ku-tú la-bi-ri šá é a-na pa-te-e*, ‘the depositing of silver, alternatively the disappearance of silver: to reveal silver and old *treasure* belonging to the house’. Reiner 1995: 109 n. 480, mentions a hemerology referring to a non-propitious time for laying aside barley or silver (KAR 178 iv 67 = Labat 1939: 78, see Livingstone 2013: 59), and she relates the expression *šikin kaspi* to a Latin *Lunaria* which discusses when lending or borrowing money might be auspicious under various signs of the zodiac (Aries, Cancer, Libra, or Capricorn). See also SBTU I 94 for astrological influences over the market place and trade.

l. 21: BRM 4 19 21 reads *munus-ka ana nita igi nu il-e*. This is another example of offensive magic, related to love magic, preventing the wife from doing something which she may wish to do. Ungnad 1944: 265 gives examples of incantations with this phrase as incipit (BRM 4 32:1, KAR 61 7, 22 = Ebeling 1925: 12); see also Biggs, 1967: 70 (KAR 61), with the incantation rubric, *ka.inim.ma ana munus igi ana nita na-aš-ši*, ‘incantation for a woman raising her eye towards a man’, as well as SBTU V 243: 3. This formulation is closer to what we find in the older duplicate, STT 300 39.

l. 22: The commentary at the end of the text (BRM 4 20: 55) reads, *hul.gig : zi-'i-ri* 'hate', referring to a specific type of offensive 'hate' magic which is the antithesis of love magic; it forces a loved one to separate from her spouse or lover; cf. also BRM 4 19 22 and Schwemer 2007: 159.

l. 23: This genre of incantation-ritual occurs in the Exorcism Manual, KAR 44 12–13 (Jean 2006: 65, see also BRM 4 19 23, SBTU V 243 rev. 4', and Schwemer 2007: 160), designed to keep black magic or 'the approach of evil' at bay. The fact that such magical rituals are associated with witchcraft explains why they are cited in the present context, but see l. 26 below, where the same idea is repeated in a somewhat different form.

l. 24: This type of magic is mentioned in the Exorcism Manual, KAR 44: 20 (Jean 2006: 67), and in BRM 4 19: 24. Incantations to prevent the 'foot of evil' (*šēp lemut-tim*) from entering the house also occur elsewhere (Wiggermann 1992: 6, 19, and in Uruk, SBTU V Nos. 246–247).

l. 25: The commentary at the end of BRM 4 20: 57f. explains these terms as follows: *iš-di-hu : ir-[bu]* 'trade'. BRM 4 19: 25 has an interesting variant: *iš-di-ih lú.kúrun.na šu.kar u an.ta.lù*, translated by Scurlock 2005–2006: 143 as 'the appropriate day for (rites) to take away the beer merchant's profit or (to cause his) eclipse'. Although the idea of 'eclipse' is undoubtedly correct (see already Ungnad 266), it is not clear to whom this eclipse should refer, although from Scurlock's translation it appears that it is the beer merchant who is being eclipsed. Scurlock also seems to be equating the Sumerogram *šu.kar* with *ekēmu*, 'to take away by force', or alternatively *eṭēru*, for which the Sumerian is usually /kar/. However, Sumerian *šu.kar* has the meaning of to 'save' (*šūzubu*), which suggests translating the phrase as: '(spells) to save the profits of the publican – or (spells to be recited on the occasion of) an eclipse'.

l. 26: Notice the variant (BRM 4 19: 26, *uš₁₁.zu búru.da*), which is not the usual idiom for breaking a spell (usually *uš₁₁.búr.ru.da*). Why should magic for breaking a spell appear in this list of mostly offensive magic? One other problem: *uš₁₁.zu* can refer to a male witch (*kaššāpu*), as well as to sorcery (*ruhû* or *kišpu*), and this might account for the difference between terminology in ll. 23 and 26. Alternatively, one might read *uš₁₁.zu ana búr-ra ana lú.gig nu te-e*, '(spells) for exorcising a sorcerer so that he does not approach a patient', but our rendering is based upon the older duplicate, STT 300: 5, *ana na gig nu te-e*, which is unambiguous: 'for illness not to approach a man'.

The term *sag.du ti.la* is not the same as headache or *sag.gig*-disease, and most likely refers to witchcraft affecting the head or cranium; cf. Schwemer 2007a: 79: 16', a witchcraft medical text with the incipit stating that the patient's head (*qaqqa-du*) has been stricken, presumably in this case by a disease attributable to witchcraft.

The term *raʾibu* denotes a disease here, as explained in the commentary section of BRM 4 20: 69, *ra-'i-bi ana šu-ši-i = ra-'i-bi (=) mur-[šu]*. It is reasonable to assume that the disease itself is psychological, indicated by rage, since the term *raʾibu* is synonymous in lexical texts with *uggatu* ‘anger’, cf. CAD R 81. Alternatively Heeßel 2000: 420 defines this disease within the *Diagnostic Handbook* as ‘Zitterkrankheit, Zittern’, although also associated with symptoms of being agitated or angry.

l. 31: Scurlock’s translation (2005–2006: 133f.) differs: ‘giving a ghost water to drink so that he will take (punishment for) a wrong way (with him to the Nether World).’ Her idea is that since the Nether World is not a place for food and drink (as we are told in the Gilgamesh Epic), libating to ghosts would cause problems for the victim en route. A simpler understanding of this phrase would be that the spell referred to in this line is trying to inflict a ghost on some victim, which is a dangerous endeavor for the perpetrator. He can do this by placing a figurine of his intended victim with a freshly buried corpse, but to avoid being attacked by the ghost himself, the perpetrator makes a *kispu*-style funerary libation, in order to remove any punishment or ill effects (*hibiltu*) which might result from dealing with ghosts.

l. 36: This type of affliction (*kadabbedû*) occurs frequently in the witchcraft corpus, e.g. Schwemer 2007a: 50: 18, but Reiner (1995: 109 n. 485) prefers the reading *šibit pî*, which is also attested.

l. 41: The commentary at the end of the text (BRM 4 20: 64) explains the expression ‘dingir igi.bar’ as ‘dingir.meš *li-ip-pal-sa-a[n-ni]*’, ‘may the gods look upon me’, which is probably a citation from an incantation. The second phrase in this line also appears in the commentary (BRM 4 20: 65), *dingir.šà.dib.ba búr.ra : lib-bi dingir.meš kam-ri li-ip-pa-š[ir]*, ‘may the angry heart of the gods be appeased’, probably another citation from an incantation.

A second tablet from the same collection (BRM 4 19) provides similar data, although in a somewhat different format. It is significant that the two Uruk tablets are not exact duplicates but cover the same ground, although the second tablet (see below) does so in a more abbreviated fashion. BRM 4 19 also presents the data in the form of a *dodekatemoria* (Neugebauer and Sachs 1952–53), in which astrological data for any zodiac sign can also be applied to other signs as well through a simple calculation. It is unusual in Babylonian school tradition to find such similar texts which do not descend from a common *Vorlage* or do not duplicate the same text; usually standard curriculum tablets are nearly identical in form and content, particularly if coming from the same ‘school’ (in this case from Uruk). The only other genre which shows similar characteristics is that of commentary tablets; these do not normally appear in duplicate copies, even if commenting on the same proof text. Medical texts can also deal with similar ailments although containing differing prescriptions or the same prescriptions in a different sequence. The uniqueness of BRM 4 20 and 19 make these texts stand out and hence encourage us to compare them with our other Uruk tablet, SBTU I 43.

BRM 4 19

- 1 [I 10 ud.da.kam šà.bal.bal I 10 V 10 ur.a šá lu zi]
 2 [I 24 ud.da.kam di.bal.a I 24 XI 12 gu šá lu zi]
 3 [II 10 ud.da.kam šu.du₈.a.kam II 10 VI 10 absin šá múl.múl zi]
 4 [II 21 ud.da.kam nam.érim.búr.ru.da II 21 XI 3 gu šá múl.múl zi]
 5 [III 10 ud.da.kam ki.ág.gá nita *ana* munus III 10 VI 10 rín šá maš.maš zi]
 6 [III 21 ud.da.kam ki.ág.gá munus *ana* nita III 21 XII 3 iku šá maš.maš zi]
 7 [IV 10 ud.da.kam ki.ág.gá nita *ana* nita IV 10 VIII 10 gír.tab šá alla zi]
 8 [IV 21 ud.da.kam munus gin.na IV 21 I 3 lu šá ur.a zi]
 9 [V 10 ud.da.kam zi.ku₅.ru.da V 10 IX 10 pa.bil šá ur.a zi]
 10 [V 24 ud.da.kam igi.nígin.na V 24 III 12 maš.maš šá ur.a zi]
 11 [VI 10 ud.da.kam ^díd u pú kù.ga VI 10 X 10 máš šá absin zi]
 12 [VI 24 ud.da.kam é.gal.ku₄.ra VI 24 IV 12 alla šá absin zi]
 13 [VII 10 ud.da.kam šúr.hun.gá VII 10 XI 10 gu šá rín zi]
 14 [VII 24 ud.da.kam lugal *ina* é.gal-šú mu-šú *ana* sig₅-tim *ha-sa-sa* VII 24 V
 12 ur.a šá rín zi]
 15 [VIII 10 ud.da.kam nun *ina* é.gal-šú mu-šú *ana* sig₅-tim mu-á]^r "VIII 10 XII"
 10 iku šá "gír.tab" z[i]
-
- 16 "VIII 21 ud.da.kam" *a-mir-ka ana* igi-ka *ha-de-e* : *ra-a-š[i]* VIII 21 V 3 ur.a
 šá gír.tab z[i]
-
- 17 IX 10 ud.da.kam munus *šu-ud-bu-bu* IX 10 I 10 lu šá "pa.bil" [zi]
-
- 18 IX 21 ud.da.kam *a-mir-ka* šu.si-šú *ana* sig₅-tim *ana* [ugu-ka] *ta-ra-aš* IX 21
 VI 3 absin šá p[pa.bil zi]
-
- 19 X 10 ud.da.kam *ši-kin* kù.babbar X 10 II 10 múl.múl šá [máš zi]
-
- 20 X 21 ud.da.kam ìr lú nu záh šà ìr u geme [kúr] dù-*ma* silim X 21 VII 3 rín
 ša m[áš zi]
-
- 21 XI 10 ud.da.kam munus-*ka ana* nita igi nu íl-e XI 10 III 10 maš.maš šá "gu zi"
-
- 22 XI 21 ud.da.kam hul.gig XI 21 VIII 3 gír.tab šá gu zi
-
- 23 XII 24 ud.da.kam uš₁₁.búr.ru.da XII 24 XI 21 gu šá gu¹ zi
-
- 24 XII 28 ud.da.kam gír hul-tim *ina* é na tar-si XII 28 XII 4 gu šá iku zi
-
- 25 XII 29 ud.da.kam *iš-di-ih* lú.kúrun.na šu.kar u an.ta.lù XII 19 XII 17 gu.la
 šá iku zi
-
- 26 I 21 uš₁₁.zu búr.da *ana* lú gig nu.te-e
 sag.du ti.la *ra-i-ib-šu a-na* šu-ši-i
 "si"-im-*ma a-na* ti.la múd munus *ana* tar-si hul *ana* é lú nu te
 "dím-*ma* al".silim I 21 X 3 máš šá lu zi

rev.

- 27 II 22 líl.lá.en.na ki.sikil.líl.lá.en.na⁷ zi-hi
dím-ma al.silim IV 22 VII 6 rín šá múl.múl zi
-
- 28 IV 12 líl.lá.en.na ki.sikil.líl.lá.en.[n]a zi-hi
dím-ma al.silim IV 12 IX 6 pa.b[i]l šá⁷ ralla zi⁷
-
- 29 II 29 an.ta.šub.ba *be-en-na* ^dlugal.úr.ra šu.dingir.ra
zi-hi dím-ma al.silim V 29 V 17 absin šá⁷ rur.a⁷ z[i]
-
- 30 VI 24 gedim dab-bat ki lú ana kēs nu lú ana ug₇ pa-qá-^rdi⁷ ana ug₇ [a]
ana nag.nag-e hi-bil-tu₄ è-i dím-ma al.silim VI 24 IV 12 [alla šá absin z]i
-
- 31 VII 11 munus gin.na dím.ma hi-*ṭam* nu tuk dím-ma al.silim VII 11 11 23¹
[gu šá rín z]i
-
- 32 VII 16 dingir ana qé-re-e iš₈-tar ana qé-re-e sa.gal.la ana ti.la
é ana hu-ub-bi gig ana e-se-ri dúr.gig ana ti.la
na₄ ana ti.la šà.si.si ana ka-le-e dím-ma a[l.silim]
VII 16 I 28 lu šá rín z[i]
-
- 33 VII 18 idim u nun eme.sig nu gu₇ : gaba.ri VIII 18 III 24 maš.maš šá g[ír.tab
zi]
-
- 34 VIII 21 nu ši-il-la-ti ana tuk lú ina igi lú šá-ka-nu šúr.h[un.ga]
ana kar-ši nu igi-ri lu ug₇ tag₄ lu lú lu uš₁₁.zu lu mí.u[š₁₁.zu]
lu mí.dingir šu-ud-bu-bi lu idim ina é.gal ana zi-hi lu ana šà.dab.d[ab]
ana sag.du lú ana dab-tim lú ág.ki lugal ana tar-si munus ág ana tar-si VIII
21 V 3⁸⁰
-
- 35 [XI] 12 ka.dab.bé.da dù-ma i-šal-lim IX 12 II 6 múl.múl šá {pa} pa.bil z[i]
-
- 36 [X 11 di]ngir igi.bar dingir.šà.dab.ba búr-ri dím-ma al.[silim]
[X 11] II 23 múl.múl šá máš [zi]
-
- 37 [... dam.tab.ba] ^rpur-ru⁷-da dím-ma a[l.silim]

There is no need to translate the above text since it follows thematically the related tablet from the same Uruk archive, BRM 4 20.

The question is what these astrological catalogues of apotropaic rituals have in common with that other Uruk text, SBTU I 43, beyond the fact that these three tablets are all late (from Persian and Hellenistic periods) and reflect different forms of Late Babylonian *Listenwissenschaften*. What is clear is that BRM 4 20 and 19 represent innovative departures from the previous system of hemerologies, which

⁸⁰ Ungnad restores the signs ur.a šá gír.tab zi, but they are not on the copy.

recorded propitious and unpropitious days in the annual calendar, including those in which certain foods were prohibited and treatment by the doctor was also not advised (Labat 1939). Before we judge the relevance of these texts to the Uruk 'Taxonomy', we should examine an almost exact version of this same ritual catalogue from some 200 years earlier, although with different calendrical notations and a somewhat differing order of presentation of the data.

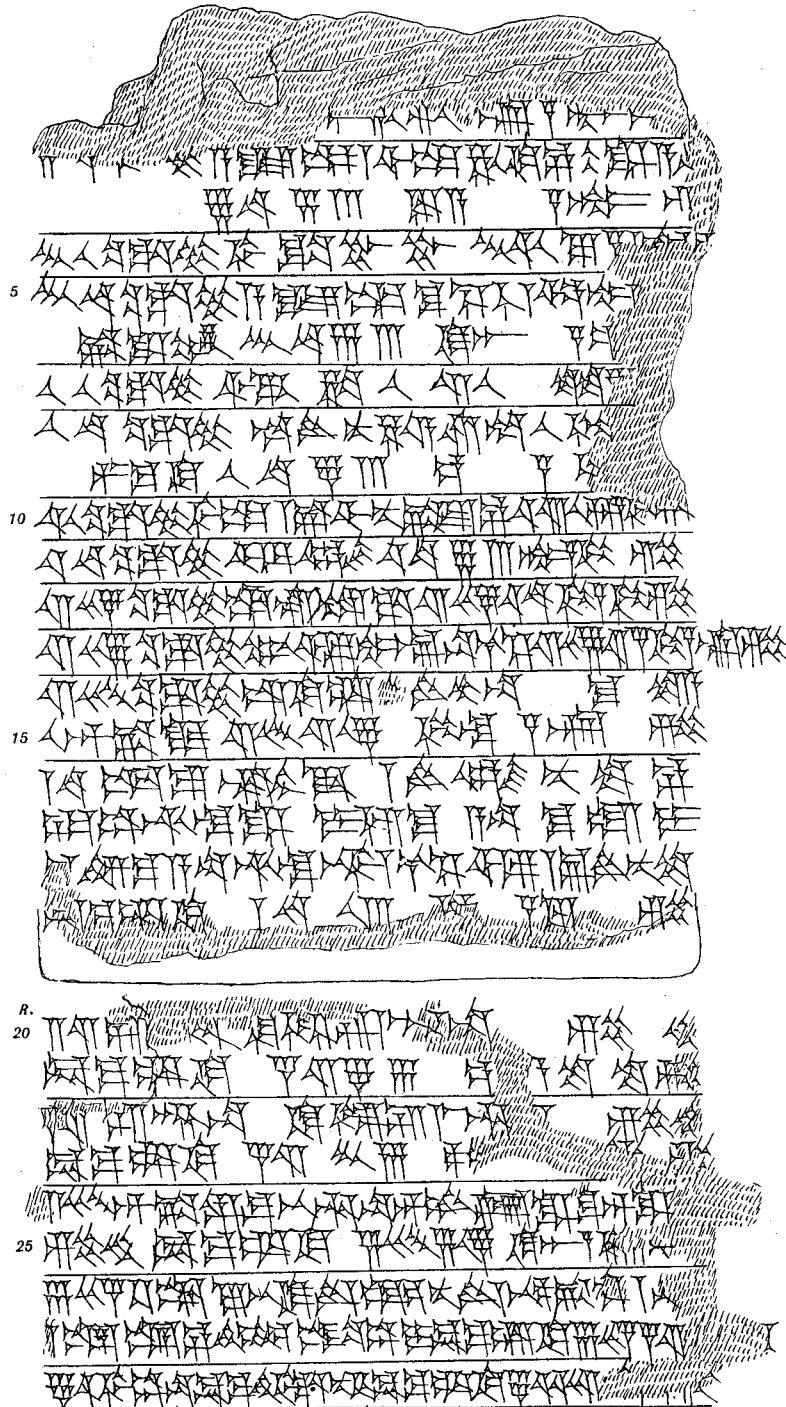
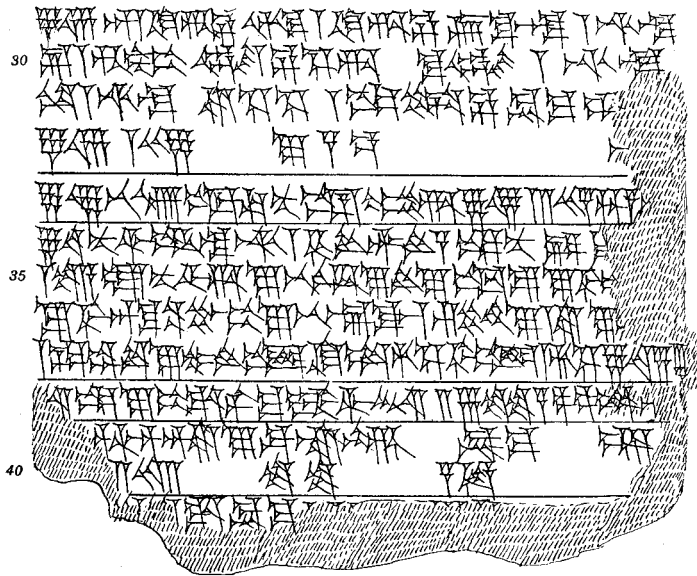


Fig. 5: BRM 4 19



20

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	𒀭 𒀭 𒀭 𒀭	𒀭 𒀭 𒀭	𒀭
	𒀭 𒀭 𒀭 𒀭 𒀭 𒀭	𒀭 𒀭 𒀭 𒀭 𒀭 𒀭 𒀭 𒀭	𒀭
15	𒀭 𒀭 𒀭 𒀭 𒀭 𒀭 𒀭 𒀭	𒀭 𒀭 𒀭 𒀭 𒀭 𒀭	𒀭
	𒀭 𒀭 𒀭 𒀭 𒀭 𒀭 𒀭 𒀭	𒀭 𒀭 𒀭 𒀭 𒀭 𒀭	𒀭

Fig. 6: BRM 4 19 and 20

III The Neo-Assyrian Precursor: Before the Zodiac

The highly cryptic catalogue known from Late Babylonian Uruk tablets BRM 4 20 and 19 (see above) are duplicated in a late 7th century tablet from Sultantepe (STT 300, edited below), which contains essentially the same information but with one important difference: the Sultantepe tablet was composed before the discovery of the zodiac. The same phenomena are associated in this earlier tradition with specific days of the month and with the ‘usual time’ (ud.da.kám = *adannu*) for carrying out the apotropaic rituals catalogued in this text.

The addition of zodiacal data was obviously important enough to warrant a revision of the text in later periods by Uruk scholars, and this in itself may be a clue to developments in later periods which are also relevant to our first text, SBTU I 43, discussed above. In other words, the zodiac itself may be playing a decisive role in Late Babylonian scientific thinking, which becomes pervasive. So the system of cataloguing appropriate apotropaic and magical rituals on specific days of the month is unchanged, just as previously hemerologies recorded lucky and unlucky days of the month. The discovery of the zodiac, however, introduced a new dimension into other genres of texts (beyond astronomy and astrology), which we need to explore more fully. The text has been edited previously by Casaburi (2002-2005) and Glassner (2009), but without cross-referencing BRM 4 19 and 20.

STT 300

(NB: the line numbers below reflect lines on the tablet rather than of the text, to facilitate cross-references with the late duplicates BRM 4, 19 and 20 above. See the collations of S. Panayotov below.)

obv.

- 1 [diš *ina* iti.zíz] ta ud.1.kám e[n] ud.30.kám šà.zi.[g]a dí[m]-*ma* al.silim
- 2 [diš *ina* iti.še ta] ud.1.[kám] e[n u]d.[1]5.kám ‘sag’.ki.da[b] tuk-e ù [n]u-[u]h-
*hi*¹ šà.zi.ga ‘ta’
- 3 [ud.1.kám] en ud.30.[k]ám líl.lá.en.na an.ta.[š]u[b].[b]a [z]i-*hi* dí[m]-*ma* al.silim
- 4 [diš *ina* iti.bára.ud.10.k]ám [ud.d]a.kám šà.bal.‘bal’ ud 21.[k]ám ud.da.‘kám’
di [bal].a u[d.2]1.kám uš.‘.búr.da
- 5 [a]na na g[í]g nu te-e sag.d[u] ana ti-ṭi ‘*ra-i-ib-šu*’ [ana š]u-ši-i [s]i-*im-ma* ana t[í].l]a
- 6 múd munus ana tar-si hul ana é nu te-e dí[m]-*ma* al.‘silim’

1 See SBTU III 85 iii 3, dingir *ez-zu ana lú nu-uh-hu*, which may be the full text behind our phrase here. There are many similar phrases in SBTU III 85 iv, but these are used with amulet stones in order to nullify the evil, which is a completely different approach to that of our text.

- 7 diš *ina* iti.gu₄ ud.10.kám ud.da.kám šu.du₈.a ud.[2]1.kám
 ʿnam.érim.búru.daʿ érim *ana* lú tar-si
- 8 ud 13.kám líl.lá.an.na ki.sikil.líl.lá.en.na ʿziʿ-hi dím-ma al.silim
-
- 9 diš *ina* iti.si[g₄] ud.10.kám ud.da.kám ki.ʿágʿ nita *ana* munus ud.21.kám
 ki.ág.gá munus *ana* nita ud.4.kám ʿíd.kù.ga²
- 10 ud.30.kám hul.gig ud.30.kám ki.ág nita *ana* munus dím-[m]a a[l],silim
-
- 11 diš *ina* iti.gu₄ u iti.sig₄ ki.ág é.gal.ku₄.ra ta ud.1.kám e[n] ud.[3]0.[ká]m
 [d]ím-ma al.silim
-
- 12 diš *ina* iti.šu ud.10.kám u[d.d]a.kám ki.ág nita *ana* nita ud.21.kám
 ud.d[a.k]ám [mun]us.[gin].na ud.12.[kám líl].lá.en.na
- 13 ki.sikil.líl.lá.en.na zi-hi ud.21.kám ʿud.daʿ.kámʿ k[i.á]g nita *ana* munus *ana*
 ʿbúr-riʿ dím-[ma al].silim
-
- 14 diš *ina* iti.ne ʿud.10.kámʿ ud.d[a.ká]m z[i.ku₅.r]u.da ud.10.kám ud.da.kám
 igi.nigin.na
- 15 ud.28.kám an.[t]a.šub ^dbe-en-nu ^d[l]ugal.gìr.ra šu.dingir.ra šu.ʿgedimʿ.ma zi-
 hi dím-ma al.silim³
-
- 16 diš ʿ*ina* iti.kinʿ ud.1.kám ud.da.kám ^díd.kù.ga ud.21.kám ud.da.kám
 é.gal.ku₄.ra ud.24.kám
- 17 gedim dib-ti ki lú *ana* nu késʿ!(text KA) nu lú *ana* ug, nu *pa-qa-diš*⁴ gedim
 me¹ *ana* nag.nag-e *ana* hi-ʿbilʿ-ti
- 18 šu-ši-i dím-ma al.[si]lim
-
- 19 diš *ina* iti.šu u iti.ne dam.tab.ba *pur-ru-di* ù lú *ina* ki.gub-šú zi-hi dím-ma al.silim
-
- 20 diš *ina* iti.ʿdulʿ ud.10.kám ud.da.kám šúrʿ.hun.gá ud.11.kám ud.da.kám mu-
 nus gin.na ta ud.16.kám en ud.20.kám
- 21 zi.ku₅.ru.da munus gin.na ud.16.kám ud.17.kám dingir *ana* qé-re-e ^d15 min
 sa.gal *ana* ti-ṭi é *ana* hu-up-pi
- 22 lú.gig *ana* e-se-ri dúr.gig *ana* ti-ṭi na₄ *ana* ti-ṭi šà.si.sá⁵ *ana* ka-le-e kúm-ma
ana zi-hi
- 23 ud.7.kám lú.gig *ana* e-se-ri dím-ma al.silim ud.21.kám lugal *ina* é.gal mu.ne
ana sal.sig₅ mu dím al.silim
-
- 24 diš *ina* iti.kin u it[i.d]ul *ana* lú *ina* qi-ip-ti-šu zi-hi lú *ina* igi lú gar-ni dím-ma
 al.silim
-

² The text is damaged, but even if the reading is correct, this phrase looks out of place here.

³ Cf. BRM 4 20: 30.

⁴ The late duplicates (see above l. 31) have regularised the form to nu lú *ana* ug, *pa-qa-du*, although the STT 300 reading (courtesy H. Stadhouders) is more elegant.

⁵ See šà.si.si in BRM 4 20: 33.

- 25 diš *ina* iti.apin ud.10.k[ám u]d.da.kám nun *ina* é.gal mu.ne *ana* sig₅-*tí* mu
ud.21.kám ud.da.kám igi-*ka*
26 [*ana* i]gi-*ka* sù (text: muš)⁶ ud.12.kám lú.gig *ana* e-se-ri líl.lá.en.na ki.sik-
il.líl.lá.en.na zi-*hi*
27 [ud].28.kám idim *u* nun eme¹(text: ka).sig nu gaba.ri ud.28.kám nu igi *šil-la-*
ta dím-*ma* ʿal⁷.silim

rev.

- 28 [diš *ina* it]i.apin ud.28.kám lú igi ʿlú⁷ zi-e šúr.hun.gá (eme.)sig gaba.ri *lu* ug,
[t]ag₄ *lu* u[š₁₁.z]u m[í.uš₁₁.zu l]u
29 [n]in.dingir du₁₁.du⁷ [l]u idim *ina* é.gal zi-*hi* ki.min *ana* šà.dib.dib sag.du lú
ana dab-[bat lú]
30 [k]i.ág lú *ana* tar-*si* munus ág.ki munus *ana* tar-*si* dím-*ma* al.[si]lim
-
- 31 diš *ina* iti.apin lú *ina* ki.bi.gar.ra-šú gur-ri di.bal.a ka.dib.bé.da uš₁₁.búr-ri
igi.ʿnigin⁷.na⁷ dím-šú silim
-
- 32 diš *ina* iti.gan ud.10.kám ud.da.kám [munus] du₁₁.du₁₁ ud.21.kám ud.da.kám
a-mir-ka šu.si *ana* sig₅-*tím* ta-*ra-ši*
33 [*ana* s]ig₅-*ka* šu.si ʿsig₅-*tí* *ana* ʿta⁷-*ra-ši* ud.12.kám ka.dab.bé.da dím-*ma*
al.silim
-
- 34 [ud.x].kám qí-*b*[it k]a-šú *ana* šu-*ud-di-i* ù dab-*zu*⁸ dím-*ma* al-sil[im] ʿá⁷.sàg
dím-*ma* al.silim
-
- 35 diš *ina* iti.ga[n ud...k]ám líl.lá.en.na ki.sikil.líl.lá.en.na zi-*hi* ka.dib.bé.da dím-
ʿ*ma* al.silim⁷
-
- 36 diš *ina* iti.[ab ud.10.k]ám ud.da.kám ší-*kin* ku.sig₁₇ kù.babbar ud.11.kám
dingir igi.bar dingir.šà.dib.ʿba⁷ búr ud.ʿ11⁷.kám ud.da.kám
37 ʿir na⁷ nu zâh šà ir *u* geme (nu)⁹ kúr dingir igi.bar dingir šà.dib.ba búr-ri
ud.12.kám zi.ʿku₅.ru.da líl⁷.lá.en.na
38 ki.sikil.líl.lá.ʿen.na⁷ zi-*hi* dím-*ma* al.silim *ina* iti.ab zi.ku₅.ru.da dím-ʿ*ma*
al⁷.silim
-
- 39 diš *ina* iti.zíz ud.10.kám ud.da.kám munus [*ana*] ʿnita igi nu⁷ ʿíl ud.21.kám
ud.da.kám hul.gig di.bal.a ki.min
-
- 40 diš *ina* iti.še ud.26.kám ud.da.kám uš₁₁.búr.ru.da ud.28.ʿkám⁷ u[d.da.ká]m
ʿgiri hul⁷-*tím* *ina* é na tar-*si*

6 For Akk. *râšu*, ‘rejoice’.

7 For Akk. *šudbubu*.

8 = *šühuzu*, reading courtesy H. Stadhouders.

9 See below l. 42.

- 41 ud.27.kám ud.da.ṽkám ṽiš-dī-ih lú.kúrun.na sa-da-ri é-lat a-k[a-li i]š-dī-ih ṽkúr-un ṽna-su búr ki.min
-
- 42 diš ina iti.ab u iti.zíz ud.21.kám ìr na nu záh šà ìr u geme nu kúr [dím-ma al.silim]
-
- 43 diš ina iti.zíz u iti.še ud.27.kám ud.da.kám uš₁₁.búr.ru.da dím-m[a al.silim]
-
- 44 diš ina iti.zíz u iti.še tu₆.tu₆ bar.ra dím-[ma] ṽal.silim ṽ
-
- 45 ina 12 iti.meš kal mu.an.na ud.27.kám ud.28.kám ud.29.kám sag.ṽhul ṽha.za dím-ma ṽal.silim ṽ
-
- 46 én.meš mu-pe₄-tu sam-tak-ki é.ṽdub¹⁰ mu-du-ú mu-da-a li-k[al-lim an]a la mu-du-u nu zu
-
- 47 šum^{sar} zà.hi.li^{sar} ga¹.ras^{sar} ku₆ mušen uzu.ṽšah ṽnu bal nu gu₇ x -šú x x x -ri

colophon (cf. Hunger 1968: No. 362 and Reiner 1967: 200)

gim ^dlab-^dìr-ra [ṽd]i-šum sar-ma ba-è-[ma] ^{md}maš-ṽmu-še^ṽ-[zib](?)

^{lú}šam-lù-u tur dumu ^{md}muati.numun.ṽki ṽne.giš lú.a.ba tur dumu ^mx x x x ^{lú}é.maš rdza-ba₄-ba₄ u ^dba-ú a-šib ^{uru}lìmmu-ìl qé-reb ṽkaskal^{ki} u ^{uru}hu^ṽ-zir-i-na-ṽma ṽ

[b]al.bal ^mizi.gar.man ^{lú}šam-lù-u ṽtur dumu x x x man ^{lú}sa[nga]

[^{iti}] x ud.13.kám lim-mu ^{md}en.pap.pap šá i[gi.ku]r

On edge of tablet, criss-cross patterns with the following written into the spaces between the lines:

obv. dingir.ra silim.meš.àm ^dasal.lú.hi
dingir mu-šal-lim ^dmarduk

rev. dingir.ra silim.meš.àm ^dasal.lú.hi dingir mu-šal-lim
dingir tur ú.dug
dingir.ra silim.meš.àm ^dasal.lú.hi
dingir mu-šal-lim ^dmarduk

10 Reading courtesy H. Stadhouders. Marduk is described as *pētû sattaki*, one who elucidates wedges, in Marduk's Address to the Demons (cf. Lambert AfO 17 313 B 11). See below.

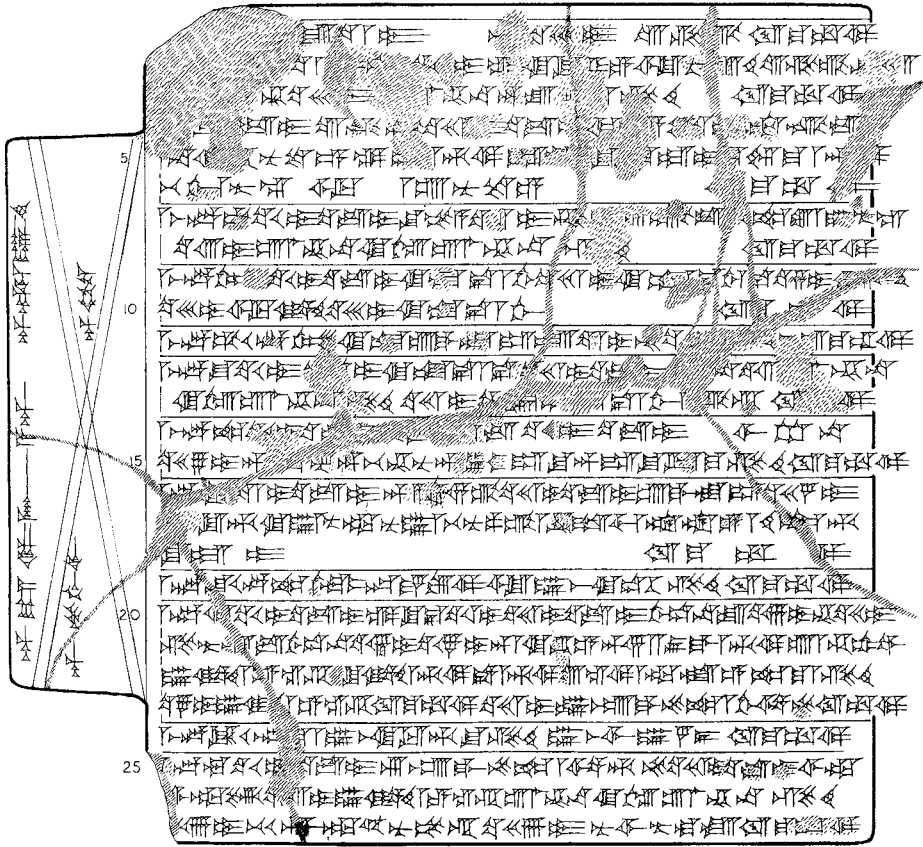
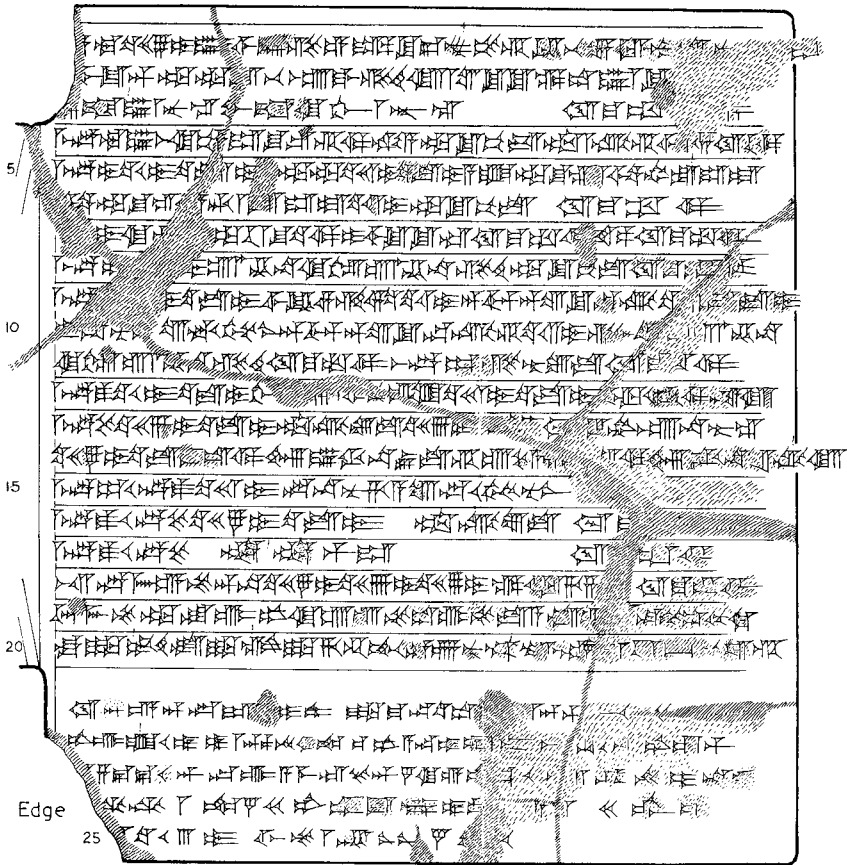


Fig. 9: STT 300 obv



Projection

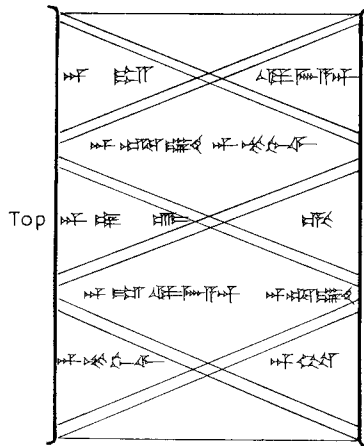


Fig. 10: STT 300 rev

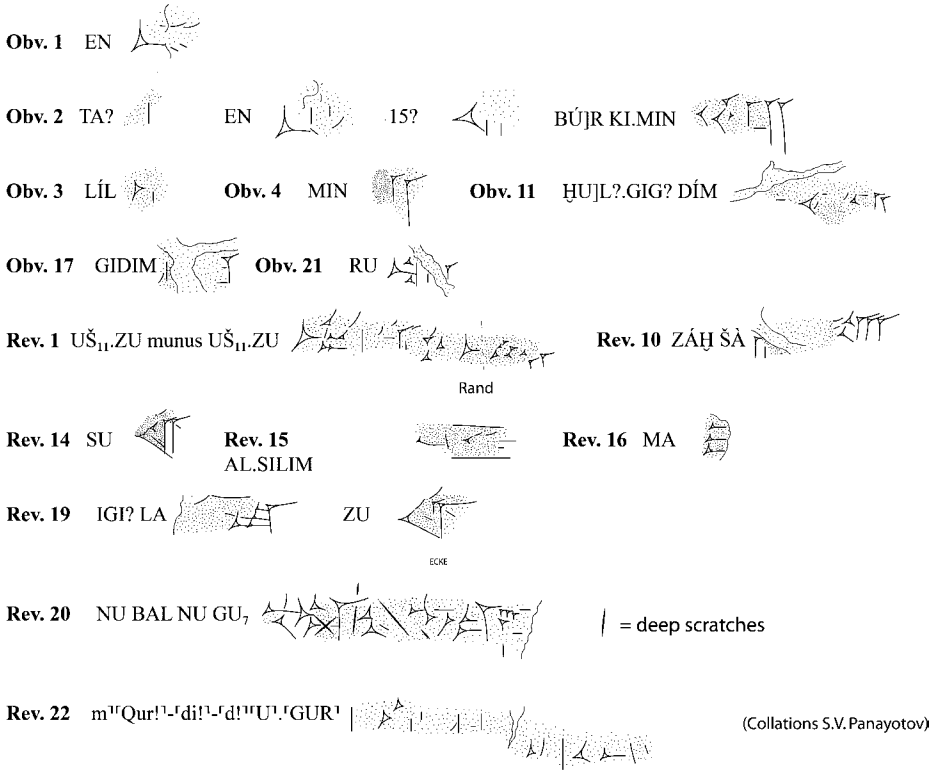


Fig. 11: STT 300 collations

Translation of STT 300

- 1 [If] you perform potency spells [on] the first day of the month [Šabātu], from the first day to the 30th day, it will pay off.
- 2–3 [If in month Ayyāru], you perform (the spells) from the first day to the 15th day (for) having ‘forehead affliction’ or (for) alleviating impotence, (or) from [the first day] to the 30th day for getting rid of Lilû-demon and seizure, it will pay off.
- 4–6 [If in month Nisannu on the 10 day] at the usual time you perform (the spells) for ‘changing someone’s mind’, on the 21st day (the spells) for ‘overturning a judgement’, on the 21st day (the spells) for ‘breaking a spell’; (the spells) ‘for illness not to approach a man’; (the spells) for curing the head; (the spells) for getting rid of *mania*; (the spells) for curing wounds; (the spells) for stopping menstrual bleeding; (or the spells) for ‘evil not to approach the house’, it will pay off.
-
- 7–8 If in the month Ayyāru on the 10th day at the usual time, you perform (the spells) for ‘loosening the grasp’, on the 21st day (the spells) for ‘breaking an oath’; (the spells) for ‘keeping an enemy away from someone’, (or) on the 13th day (the spells) to get rid of the Lilû and Lilith demons, it will pay off.
-
- 9–10 If in the month Simānu on the 10th day at the usual time, you perform (the spells) for ‘having a man love a woman’, on the 21st day (the spells) for ‘having a woman love a man’; on the 4th day (the spells) for ‘acquittal through the river ordeal’; on the 30th day (the spells) for ‘hate magic’; or on the 30th day (the spells) for ‘having a man love a woman’, it will pay off.
-
- 11 If in the months of Ayyāru and Simānu, from the 1st day to the 30th day, you perform (the spells for) ‘entering the palace’ (*egalkurrû*), it will pay off.
-
- 12–13 If in the month Du’uzu on the 10th day at the usual time, you perform (the spells) for ‘a man to love a man’, on the 21st day (the spells) for ‘having a woman come’, on the 12th day (the spells) for getting rid of the Lilû and Lilith demons, (or) on the 21st day at the usual time (you perform) the counterspells for ‘making a man love a woman’,¹¹ it will pay off.
-
- 14–15 If in the month of Abu on the 10th day at the usual time, you perform (the spells) for ‘cutting off the breath’ (spells), on the 10th day at the

¹¹ If the reading is correct, spells to annul a love charm are unique here and do not appear in the later duplicates.

usual time (the spells) for bringing about a *volte-face*, on the 28th day (the spells) for stroke, *bennu*, seizure, ‘hand of the god’-disease, (or) ‘hand-of-the-ghost’-disease, it will pay off.

16–18 If in the month Ulūlu on the first day at the usual time, you perform (the spells) for ‘acquittal through the river ordeal’, on the 21st day at the usual time (the spells) for ‘entering the palace’ (*egalkurrū*), on the 24th day (the spells) for ‘seizing a ghost in order to tie a figurine to a man’; (the spells) for not entrusting the figurine of a man to the dead, (the spells) for giving water to a ghost to remove harm, it will pay off.

19 If in the months of Du’uzu and Abu, you perform (the spells) for frightening a (female) rival and for removing a man from his office, it will pay off.

20–23 If in the month Tašritu on the 10th day at the usual time, you perform (the spells) for ‘appeasing anger’ (spells); on the 11th day (the spells) for ‘making a woman come’; from the 16th day to the 20th day (the spells) for ‘cutting off of the breath’; (the spells) ‘for a woman to come’; on the 16th and 17th day (you perform the spells) for ‘inviting a god to a banquet, goddess ditto’; (the spells) for (needing) to cure paralysis; (the spells) for purifying a house; (the spells) for quarantining a man; (the spells) for (needing) to heal a sick rectum; (the spells) for (needing to) cure a calculus; (the spells) for (needing to) stop diarrhea; (the spells) for (needing to) get rid of fever; on the 7th day (you perform the spells) for quarantining a man, it will pay off; on the 21st day (you perform the spells) for ‘the king to mention his name with good intentions’, it will pay off.

24 If in the months of Ulūlu and Tašritu, you perform the spells for removing a man from his position of trust or (spells) for a man being set against (another) man -- it will pay off.

25–27 If in the month of Arahsamnu the 10th day at the usual time, you perform (the spells) for a prince to mention his name in the palace with good intentions, on the 21st day at the usual time (the spells) for ‘one who sees you to rejoice at seeing you’, on the 12th day (the spells) for quarantining the patient (and) for getting rid of the Lilû and Lilith demons, on the 18th day (the spells) for a mogul or prince not to believe slander, (or) on the 28th day (the spells) ‘not to experience insults’, it will pay off.

rev.

28 [If in the] month of Arahsamnu on the 28th day, you perform (the spells) for a man rising before (another) man; (the spells) for ‘appeasing anger’; (the spells) for ‘believing slander’; (the spells) for the dead to leave, or

(the spells) for having intercourse with a sorcerer, witch or priestess; (the spells) for removing a mogul from the palace, ditto; (the spells) for divine anger; (the spells) for afflicting a man's head; (the spells) for keeping a man away from a man who loves him and to keep a woman away from a woman who loves her, it will pay off.

31 If in the month Arahsamnu, you perform (the spells) for returning a man through his substitute (image),¹² (the spells) for 'overturning a judgement'; (the spells) for aphasia; (the spells) for breaking a spell; (the spells) for bringing about a *volte-face*, it will pay off.

32–33 If in the month Kislimu on the 10th day at the usual time, you perform (the spells) for seducing a woman, on the 21st day at the usual time (the spells) for 'whoever looks at you to point his finger with good intentions'; (the spells) for 'for pointing the finger with good intentions [for] your benefit', (or) on the 12th day (the spells) for aphasia, it will pay off.

34 If the ... day (of the month) you perform (the spells) for 'making known and making him grasp his promise', it will pay off. If you perform the *taboo* (spells), it will pay off.

35 If in the month of Kislimu, the [...] day being for (spells) to get rid of Lilû and Lilith demons (and spells for) aphasia -- if you perform them, it will pay off.

36–38 If in the month [Ṭebetu, on the 10th day] at the usual time you perform (the spells) for depositing gold and silver; on the 11th day (the spells) for annulling the 'divine anger of the watchful god'; on the 11th day at the usual time (the spells against) a 'man's slave not running away'; (the spells for insuring that) the intentions of male or female slaves not change'; (the spells) for annulling the 'divine anger of the watchful god' or on the 12th day (the spells) for 'cutting off the breath' and to get rid of Lilû and Lilith demons, it will pay off. (If) in the month Ṭebetu, you perform the (spells) for 'cutting off the breath', it will pay off.

39 If in the month Šabātu on the 10th day at the usual time, ditto (= you perform the spells) against a woman gazing [at] a man, on the 21st day at the usual time (the spells) for 'hate magic', 'overturning a judgement', ditto (= it will pay off).

¹² I.e. *amēla ina pūhišu turri* (courtesy H. Stadhouders). This phrase has no parallels in late duplicates and presumably refers to a ritual in which a figurine is offered to Ereškigal as a substitute for the patient.

- 40–41 If in the month of Addaru on the 26th day at the usual time, ditto (= you perform the spells) for ‘breaking a spell’; on the 28th day (the spells) for ‘keeping the foot of evil out of a man’s house’; on the 27th day at the usual time (the spells) to regularise a publican’s trade, apart from (spells) for counteracting the continuing over-consumption of the profit of his tavern, ditto (= it will pay off).
-
- 42 If in the months of Țebetu and Šabātu on the 21st day, [ditto = you perform (the spells)] for ‘a man’s slave not to run away’ (and) ‘that the intentions of slave and slavegirl not change’, it will pay off.
-
- 43 If in the months of Šabātu and Addaru on the 27th day at the usual time, you perform (the spells) for ‘breaking the spell’, it will pay off.
-
- 44 If in the months Šabātu and Addaru, you perform non-canonical incantations (and rituals), it will pay off.
-
- 45 In all 12 months of the entire year, on the 27th, 28th, or 29th day, if you perform ‘sag.hul.ha.za’ (incantations/rituals), it will pay off.
-
- 46 Incantations elucidate the writings (lit. wedges) of the scribal school, let the knowledgeable reveal it to the knowledgeable but do not reveal it to the ignorant.
-
- 47 Onion, *sahlû*, leeks, fish or fowl, and pork is not to be exchanged nor eaten¹³

(colophon)

According to its original written and checked, apprentice (scribe) Inurta-mušeziḫ son of Nabû-zeru-kitti-lišir, junior scribe, son of Qurdi-Nergal, priest of Zababa and Ba’u, resident of Erbil and Huzirina, descendant of the apprentice Nur-Šamaš, son of the priest, 13th day of the [month of], eponym of Bēl-ahu-ušur, official.

This seventh century BC text from Sultantepe text enumerates various spells and rituals to be performed on various days of the month, while later duplicates from Uruk provide the same data under the influence of zodiac signs. The profound change taking place is that a traditional hemerology-based system of favourable and unfavourable days of the month for various rituals (STT 300) has been replaced by zodiac-based system which assumes astral influences over the same spells and rituals (BRM 4 20 and 19). This change was likely to have occurred in the Persian period, contemporary with new ideas represented by SBTU I 43.

13 This is a hemerology, showing the connection between the text genres.

Further Comparisons

We are now in a position to begin to assess the relevance for SBTU I 43 of these late Uruk texts, along with their earlier counterpart from Sultantepe. On the surface, there is little here which appears to offer valid points of comparison between these genres of magic and medicine. However, what these other Uruk texts demonstrate is the increasing importance of the zodiac in all calculations of ritual practices, and it is plausible to assume that the magical problems addressed by BRM 4 20 and 19 may have resulted in some of the same diseases listed in SBTU I 43. With this in mind, it now seems appropriate to examine a few related texts in the Late Babylonian astrological corpus, to search for other points of comparison between astral medicine and SBTU I 43.

Two other fragmentary texts from Babylon and Uruk offer similar data to that in BRM 4 20 and 19, and these texts need to be noted.

LBAT 1626 (BM 35537)

cited Reiner 1995: 110f. n. 492 and 495–498. Written in a late, very cursive script.

obv. (almost nothing remains)

rev.

- 1' [.....] ʿé-šú tu xʿ [.....
 2' [*āmírka ana amārika h*]a-de-e ki mul.absin : <ma-)gar lugal ki m[ul.x]¹⁴
 3' [.....ki m]ul.absin íd kù.ga ki mul.[...]¹⁵
 4' [a-mi]r-ka¹⁶ šu.si sig₅-tim egir na lá-[.....]¹⁷
 5' [.....k]i mul.máš¹⁸ di en du₁₁-šú¹⁹ šu.s[i]
 6' [.....] x meš dù x [.....]

¹⁴ Cf. BRM 4 20: 16 and BRM 4 19: 16, and BRM 4 20: 33.

¹⁵ See Reiner 1995 n.493, citing as a parallel BRM 4 20 11 = Capricorn.

¹⁶ The sign, which also looks like mul, is the same sign as du₁₁ in l. 5'.

¹⁷ Cf. BRM 4 20 18.

¹⁸ The sign is mul.SUM as drawn, but Reiner (1995: n 497) suggests this is a misreading for mul.máš, Capricorn.

¹⁹ See BAM 315 ii 42 [diš] en du₁₁-šú hul, along with other similar problems, such as *zikurruđú*, *dibalú*, and *kadabbedú*.

Translation

- 1'
- 2' (The spells so that) one who sees you will rejoice at seeing you: region of Virgo; (the spells for attracting the) favour of a king, region of [...].
- 3' [(The spells for)], region of Virgo; 'cleansing (of guilt) by the river' (ordeal); region of [...].
- 4' [(The spells for) the one who] sees you to point the finger favourably, [region of].
- 5' [(The spells for)], region of Capricorn, for [pointing] the finger at one's adversary in court, [region of].
- 6'

SBTU V 243

- 1 [...] x x x [.....] ʳki.ágʳ.gá munus ana¹ nita ʳkiʳ múl.hun.gá
- 2 [.....] x ki.sikil.líl.e.ne ki.múl(šu.gi) ki múl.múl
- 3 [munus lú ana nita igi^{II} u igi] nu íl-e ka.dab.ʳbé.daʳ ki múl.maš.maš
- 4 [.....] ki múl.alla
- (traces)

rev.

- 1' [..... k]i mul.^{giš}[rín]
- 2' [.....] x ír na u munus nu.záh ki múl.gír.tab
- 3' [u]š₁₁.búr.ru.da zi.ku₅.ru.da líl.lá.e.ne ki.sikil.e.ne ki múl.pa.bil.sag
- 4' ʳíd ù pú kù.ga ki múl.máš
- 5' di.bal.a é.ʳgal.ku₄ʳ ki múl.gu.la
- 6' gír hul ʳtarʳ k[i.múl] x

Translation

- 1 [.....], (the spells for the) love of a woman for a man, region of Aries.
- 2 [.....] (the spells for) Lilith, region of Taurus, region of Pleides.
- 3 [(The spells so that) a man's wife] not turn her eyes or face towards (another) man; aphasia; region of Gemini.
- 4 [.....], region of Cancer.

rev.

- 1' [.....], region of Libra.
- 2' [.....]. (spells that) a man or woman's slave not run away; region of Scorpio.

- 3' (The spells for) annulling witchcraft (ušburruda), 'cutting off the breath', Lilû and Lilith, region of Sagittarius.
- 4' (The spells for) 'cleansing (of guilt) by river or well-water' (ordeal); region of Capricorn.
- 5' (The spells for) overturning a judgement, 'entering the palace' (*egalkurrû*), region of Aquarius.
- 6' (The spells for) preventing the approach of an enemy, region of ...

These two duplicate texts from Babylon and Uruk do not always associate the same spells with the same zodiac signs as in BRM 4 20 and 19, indicating a different arrangement of spells and zodiac signs which has yet to be studied.

Two Commentaries on Marduk's Address to the Demons²⁰

Two late commentaries on the incantation text, *Marduk's Address to the Demons*, demonstrate similar patterns in which scholarship was deeply affected by the invention of the Zodiac. The first commentary presented below is Late Babylonian (c. 5th century BC), while a second commentary on the same text (from c. 700 BC) displays no knowledge of the zodiac. The hermeneutics of these two commentaries mirror in some ways the differences in orientation between BRM 4 19-20 and STT 300, as noted above. Both these commentaries to *Marduk's Address* come from the Nachlass of W. G. Lambert, offered here courtesy of A. R. George.

BM 47529+47685: A Late Babylonian Commentary on Marduk's to the Demons

This Late Babylonian tablet from Babylon has been included within the present volume because of the consistent reference to stars and zodiac signs which form a *Leitmotif* of the commentary, although no obvious astral allusions appear in the commented text, a litany of praise in which Marduk describes his own attributes. The tablet, identified by I. L. Finkel and transliterated by Lambert, is unusual in that every commented line is cited in full, a feature not typical of Late Babylonian commentaries (Frahm 2011: 126).

²⁰ The composition known as *Marduk's Address to the Demons* is known from numerous manuscripts from Assur, Nineveh, Babylon and Sippar, which attest to its popularity. It was incorporated into the magical series known as Udu.g.hul.a.kam (*Utukkû Lemnûtu*) as Tablet XI, and a full edition of the this text will appear in the author's forthcoming edition of the canonical series.

BM 47529+47685 (81–11–3, 234+390)

- 1 (60) [ge u-hi ur.sag dingir.meš mu-ma-'ir an-dúru-na: šubat²¹] an-zu-ú šá ina šár.šár^[ki]
[al]-du x [.....] x u ^dnin-giš-zi-da : x [.....]
- 2 (61) [ge u-hi š]á nam-ri-r[i lit-bu-šu ma-lu-ú pu]l-ha-a-ti
lu-ba-ri šá x [.....] x lu-ú ur.mah
- 3 (62) ge u-hi a-pir aga š]á me-lam-mu-šú ra]-šub-bat za-a-nu
šu-ku-us ^{gad}a[^ta-kil-ti šá na₄ pi-i iṣ-ṣ]i : ši-ir-mu²¹ ina šá ^{mú}ab.sín
šá me-lam-mu-šú pi x [.....] x x ṭàb-ba-^ra' nu²⁷ sar-ár
- 4 (63) ge u-hi ha-tin a-bi-ri-^ri' m[u-še-zib en-ši : d]un-na-mu-u : en-šú : dun-na-
mu-u : ú-la-la ^{mú}zab si ^{mú}gír.tab : [.....].meš-šú ana ^ríl'-me-šú x
ni-ši i-na igi nu.gig.me ina šá gír.tab igi.meš šú-nu x [... ina m]a-har aga šá
^dši-da-da nu.igi.meš
lìb-bu-ú ^d15.meš [sa]g.du-šú-nu tar múl mu gab-bi²² ki ^{mú}gír.tab
- 5 (64) ge u-hi mu-up-pir²³ íd.meš m[u-k]in na-piš-tú kur : íd.me ki ^{mú}gír.tab
tam-tim
na-piš-tú ma-a-tú šá dug₄-u : ^dbe-let-da-ád-me
- 6 (65) ge u-hi ^{lú}hal eš.bar pa-ri-is hal-hal-la : ki ^{mú}pa.bil.sag
^{lú}hal u ^{lú}šá-'i-lu : hal-hal-la : hal: bi-ri hal: pi-riš-tú
- 7 (66) ge u-hi pe-tu-ú sat-tak-ku mu-hal-liq ṣe-nu u rag-gu : suhur.maš ina qí-
bit-su ina-aṭ-ṭal dù
šu-pul me-e mu-ú-tú [: š]u-pul šá an-e šú-nu : 'é' ni-ṣir-tú šá ^dšal-bat-a-nu
mul ṣar-hu ṣar-[rip-t]u-šú : bür : ši-la ' : ' bür : šu-pul : bür : ^dšal-ba-ta-nu
- 8 (67) 'ge' u-hi šá u₄-šam-mu p[i-i ni-š]i i-hi-ṭu : ^{mú}x x [:] ^didim : ^da-la-la : ^didim
^da-la-la [ina pi-i] ni-ši li-in-na-bi : ^didim šá ina pi-i ni-ši šak-nu
- 9 (68) [g]e u-hi šá šá-ru-(ru)-šú ú-na[m-ma-ru kur].kur.meš : ki ^{mú}kun.meš ^{iti}še
ud.20.kam
šá ni-ši suk.meš-ši-na ana ^dutu [gar-ma ma-aq]-qí-tú šá ud.20.kam šá
^{iti}še šá ni-ši igi.meš-ši-na
i-qa-a én ^dutu ud.20.[kam u₄-ka na]m-ri gurun pi-i iṣ-ṣi : šá-niš ana ugu
šá-ru-ru šá ^dutu dug₄-^rú
- 10 (69) ge u-hi bir-bir-ru-šú ub-[ba-tú bàd na₄ :] ana ugu ^{mú}hun.gá 5 uš egir giš-šú
šá ^{mú}lú.hun.g[á] x šá ^d30 ^dutu ana ugu kur-du ul-tu ^dutu
ina ^{giš}gú-h[a-áš-š]i ina igi ^dutu gub bàd na₄ : aga ^d30
it-ti ni-[..... D]U-na : a-di ^d30 ub-ba-tú bàd na₄
ana ugu aga [.....] x : ^dutu ana ki na₄ šá ^d30 ^{na}a.sag : sàg

21 The usual idiom *širim qarni*, 'trimming of horns', has astrological significance.

22 for mu.an.na *gab-bi*.

23 < *hepēru* dig.

- lú.hun.gá : x [.....^{mú}]kušu á.sàg šá-niš ana ugu zi-mi šá^dutu šá
kur-ú šá na₄ pi-i iṣ-ṣi
- 11 (70) ge u-hi er-šú it-pe-šú šá š[u-tu-ru ha-si-sa :] šá áb.áb.áb.áb^didim
ha-si-si : ^didim
- 12 (71) ge u-hi šá^{giš}tukul-šú a-bu-b[u ez-zu : ^{mú}zu]bi kak-ku šá šu^{II}^dmarduk
gam-lu
šag-gi-šú : qab-[lu ša]g-ga-šú ṛmuš^ṛ im-tú : mu-bal-li-tu
bi-iṣ-šú : ni- x [.....] ina lib-bi mu šá^dmarduk qa-bi²⁴
- 13 (72) [ge] ṛu-hi^ṛ šá ina di-pa-ri-šú i-qa-m[u-ú a-a-b]i u lem-nu : ^dgirra nu-ú-ri šá
igi^den-me-šár-ra
- 13 (73) [ge u-hi^den-líl ding]ir.meš a-ši-ir [kib-rat : ki(?)]^{mú}giš.gigir^den-me-šár-
ra : ^den-líl
- 14 (74) [ge u-hi re-^ṽú kiš-šat ni]š-ši ṣ[u-lul kal da-á]d-me : ^{mú}sipa.zi.an.na re-^ṽum
[.....] ^di-lí-ab-rat : dingir.meš ab-ra-a-ti
-
- 15 [.....^m]^dšà.zu(Marduk)-per-^ṽu-uṣ-ru a ^{mE}-ṭ[i-ru]²⁵

Translation BM 47529 +

- [I am Asalluḫi, warrior of the gods, the director of Anduruna: dwelling] of Anzu who is in Sarsar:
Born ...[.....]. and Ningišzida : .. [...]
- [I am Asalluḫi], who is [clothed] with splendour, [filled] with terror:
Costume of [.....] or a lion.
- I am Asalluḫi, wearing a tiara, [whose radiance] is adorned with awe :
Headdress of purple [of ...-minerals] : *trimming* in the middle of Virgo
the sheen of which is [like a tablet(?)]... cancelled (or) not inscribed.²⁶
- I am Asalluḫi, who protects the needy, who [saves the weak] : indigent :
weak : indigent : poor, horn of Scorpio : its [.....], for the amber,
seen in front of the hierodules in the middle of Scorpio, they [.....] not seen
in front of the crown of Šidada.
This refers to goddesses, their head *cut off*, a star (visible) throughout the
year, in the region of Scorpio.
- I am Asalluḫi, who digs the canals, who sustains the life of the land : can-
als in the region of Scorpio of the Sea, 'life of the land', which they say is
Bēlet-dadme (Išhara)²⁷.

²⁴ Emended from *-ti* by W.G.L.

²⁵ For this scribe, see Frahm 2011: 126.

²⁶ Perhaps a simile referring to a tablet rubbed or made ready for writing.

²⁷ Cf. Šurpu II 172.

- 6 I am Asalluḫi, seer who gives decisions, who assigns lots : Region of Sagittarius.
Diviner and Dream-interpreter : lots (*halhallu*): hal = divination, hal = secret.
- 7 I am Asalluḫi, who reveals (the meaning) of cuneiform wedges, who destroys the evil and the wicked : Capricorn; under his command he observes all.
The depth of the waters of death : they are the depth of heaven : the hypsoma of Mars,
a shining star (and) its reddening : b̄ur (U) = hole (in the liver), b̄ur = depth, b̄ur = Mars.
- 8 I am Asalluḫi, who daily checks what the people say : (constellation) = Enlil (Ellil). Alala = Enlil (Ellil). ‘Let Alala be mentioned [in the mouths] of the people’ = Enlil placed in the mouths of the people.
- 9 I am Asalluḫi, whose rays light up the lands : in the region of Pisces, 20th of the month of Ayyaru, which (is when) the people give their offerings to Šamaš and libations which are seen on the 20th of the month.
Incantation of Šamaš of the 20th, your shining [day], fruit of : alternative, they say, refers to the rays of the sun.
- 10 I am Asalluḫi, whose brilliance destroys a [stone wall] : referring to Aries, 5 uš behind its *giš*, of Aries [...] .. of Sin and Šamaš (moon and sun), referring to the ‘arrival’ from Šamaš in the ...[...], erecting the stone wall in front of Šamaš = the corona of Sin, with the ...[...]: until Sin destroys the stone wall, referring to the crown [.....] = Šamaš (moving into) the region of the moon-stone; the asag-stone = a.sàg-stone.
Hired man = .. [.....] Cancer (is) taboo (á.sàg). Alternative explanation referring to the face of Šamaš from a mountain of ...-stone.
- 11 I am Asalluḫi, wise, sagacious, superlative in intelligence : [in the] middle of the stars, wise Idim = Ea.
- 12 I am Asalluḫi, whose weapon is a [fierce] flood : Auriga-star, the weapon of Marduk’s hands
is a murderous throwstick : battle is a murderer (is) a snake (is its) poison : healing droplets : ... [...], referring to a name by which Marduk is called.
- 13 [I am] Asalluḫi, who with his torch burns the enemy and the evil one : Girru, lamp which is in front of Enmešarra.
- 14 [I am Asalluḫi, Enlil] of the gods, who looks after the [world regions: region] of the Chariot of Enmešarra = Enlil.
- 15 [I am Asalluḫi, shepherd of all] the peoples, protection of [every] population: Sipazianna the Shepherd-star,
[..... =] Iliabrat = the gods of humanity.

The commentary illustrates how relatively standard incantation-themes (e.g. praise to Marduk) were interpreted as reflecting zodiacal influences, completely altering the nature of what is essentially a religious text into one which is secular and

astrological in character. It is useful, however, to contrast this commentary with one from some two centuries earlier (c. 700 BCE) from the city of Assur, which deals with the very same proof text in a very different manner.

Comm. Assur Ass. Photo 4130 : Ass. 13955/gt, cf. A 195.²⁸ A Late-Assyrian Commentary on Marduk's Address to the Demons

Like the previous Late Babylonian commentary cited above, this Assur commentary also cites each line being commented upon. Marduk's name appears in various forms in this text, in his classical Sumerian form Asalluhi, but translated syllabically as ^dmar-duk (l. 1), then as ^dmes (ll. 8, 14), ^dša-zu (l. 15), and ^dšú (l. 16.). The significance of this commentary, in comparison with the previous commentary (BM 47529+) from roughly two centuries later, is that no zodiacal or even astral themes appear here, but Marduk is described in theological terms, in the way he assumes the very highest of divine rankings and his attire reflects ritual practices.

- 1 (24) ana-ku ^dasal-lú-hi šá pu-luh-tú ez-ze-tú hi-it-lu-pu šu-^rtu-^rru nam-ri-ir
mu en šá ta ^{iti}bára en ^{iti}kin ú.meš ik-tan-šu-ma
^den-líl-ú-ta dù-šú ^den-líl ^dmar-duk ina muh-hi-ma qa-b[i]
- 2 (73) ki.min ^den-líl dingir.meš a-ši-ir kib-ra-te ina ^rmuh-^rhi-ma qa-b[i]
- 3 (25) ki.min šá ina é-u₆-nir ib-ba-nu-u ma-lu-u hur-ba-šú é-u₆-nir ziq-qur-rat
nibru^{ki}
- 4 (27) ki.min šá an-e ru-qu-te me-la-šú-nu i-hi-^{tu}
20 ma.na ki.lá 3 me lim 16 lim danna ta ^rmurub-at^r an-e a-di i-[rat ki-
tí²]
- 5 (28) ki.min šá hu-bur pal-ka-ti šu-pul-šá i-di
40 ma.na ki.lá ^r3^r me lim 32 lim danna ta ^rmurub-at an-e a-^rdi^r i-[rat
asurraki²]
33² ma.na m[e] 1 lim 44 lim danna zì-šu-re-e²⁹ an-e
18² danna mu-bu-u [...] šá an-e
ina ^rlib-bi^r x x x ki.lá x an-^re^r
- 6 (35) [ki.min] ^re-^rtir ^rka-me-e^r ša-bit šu^{II} na-as-k[u]
[k]a-mu-ú gar-ba-nu
- 7 (45) [ki.min] a-šar šil-la-te la i-qab-bu-u a-na-ku
[m]u en šá ina á-ki-it ina qa-bal tam-tì áš-bu
[š]á-niš šá ina é.ér lú ina qab-ri-šú la i-kar-ra-bu
šal-šiš mu dumu.meš ká.dingir.ra^{ki}
šá ina ^{mu}l¹sag.me.gar la i-tam-m[u]-u

²⁸ See Frahm 2011: 124.

²⁹ An esoteric writing for *zisurrû*, a circle (of flour used in rituals).

- 8 (47) ki.min šá ina *ṭè-me-šú ib-ba-nu-u a-na-ku*
 ̂l³⁰ ṛšá i-na^{iti}šú⁷ ud.13.kam ina igi en gar-nu
 šá-niš ma-a ina ugu ú-lu-lu an-šár qa-bi
 šá ka um-ma-ni min-e ma-a^dné-bi-ru: ^dmes šá ana ra-ma-ni-šú dù-u
^dné-bi₇(KU)-rú^{ra}: šá-a: ra: i-na: umuš: ṭè-e-mu: dù: ba-nu-u:
 ní: ra-ma-nu: ^dné-bi-ru: ^dné-bi₇-rú
- 9 (49) [ki.m]in dingir el-lu a-šib me-lam-me a-na-ku
 [m]e: an-e: lam: er-še-tú: a-šib an-e ki-ti ki qa-bu-u
 šá mu-kal-lim-te šu-u
- 10 (50) [ki.mi]n šá ina é.ug₇-ga ik-ka-ri-bu ana-ku: šá ina é lú ki-ma izi.gar
 š[u-u]
 i-kar-ra-bu ṛma-a⁷ la ana lú šú-u i-kar-rab ma-a [.....]
 x x x -ma te-du-u^de[n ...]
- rev.
- 11 (61) [ana-k]u^dasal-lú-hi šá nam-ri-ir lit-bu-šú ma-lu-u pul-h[a-a-ti]
 mu en šá ta^{iti}ziz en^{iti}še mé-e-qa šal-t[i]
^dlāh-mu il-lab-bi-šú^da-nu-ta^l (text: um) dù-šú
 šá-niš mu^{lú}maš.maš šá^{túg}áb.sag sa₅ gar-nu iq-t[a-bi]
- 12 (62) ki.min a-pir a-ge-e šá me-lam-ṛmu⁷-šú ra-šub-ba-tú za-’na
 šá ina é šip-pu^{lú}maš.maš^{éš}áb.sag sa₅ gar-nu iq-t[a-bi]
- 13 (67) ki.min šá ú-me-šam-ma ugu un.meš i-hi-r[u]
 ma-a a-na izi.gar i-qab-bi
- 14 (68) ki.min šá šá-ru-ru-šu ú-nam-ma-ru kur.kur.meš
 mu šu-lum šá lib-bi^dutu^dmes iq-ta-bi
- 15 (71) ki.min^{giš}tukul-šú a-bu-bu ez-zu: ^dmuš-te-šir-hab-lim^{giš}tukul (= kakki)
^dšà-zu
- 16 (80) ki.min šá ki-ma^dutu-ši i-bar-ru-u kur.kur.meš: ^dutu^dšú šá de-e-ni
 šá-niš: ud: ^dšá-maš: mul^l (text: nab): ^dutu: ^dšul-pa-è-a
- 17 (82) ṛki.min⁷ šá ina id ub-ba-bu ke-e-nu u rag-gu: mu hur-sa-an iq-ta-bi
- 18 (86) [ki.min] ha-iṭ lāl-gar ba-ši-mu giš-hur-ri
 [m]u iṣ-šur-tú šá ina ṛmuh-hi^dutu⁷ iq-ta-bi
 [...] x [...] x x [...] x x i[q-ta-bi]
 [.....] x x^dmarduk šá x [.....]
- 19 (109) a-’na^dnà⁷ sukkal-šú a-ma-ta i-za-kar : ir-ta- x [.....]
- 20 (122) lu-u li-lu-u šá ha-as-si[ṛ-ra-a-te tat-ta-nab-lak-ka-tú]
 ha-as-sir-ra-a-te: li-[lu-u]
- 21 (ii 4) lu-u pi-it-qâ-a-te ta-at-ta-[n]a-bal-ka-ta ana ti- x [...
 pi-ti-iq-t[ú: ...] x x šá-niš kur mu-[...]

30 Akk. *tupšikku*, a type of ritual basket. Frahm (2011: 356) provisionally suggests reading these signs as ̂l.balag (sanga₄ = Akk. *mullilu*) an instrument of purification.

- 22 (ii 45) *lu-u šá ina igi lú gig ki-^rma ur¹.ki ta-at-ta-na-ad-ma-m[a]
ur.ki kalab-ur-ši ga-ri-du šá íd*
- 23 (ii 59) *lu-ú šá ina ^rigi^r lú gig ki-ma ku-za-zi ta-at-ta-nap-r[i-šú]
k[u-z]a-zu: pi-lak ^d15 (= ištar)*
- 24) *[ina lib-b]i én dup-pir lem-nu*
-
- 25) *[... u]š-šab ana ka-ra-ši egir-šú iš-šaṭ-ṭ[ar]
[ana i]gi.lá-šú ^mki-šir-^dnà šá ^dr nà^r nir(tuklat)-su
[dum]u ^{md}utu.dù maš.maš é.an.[šár]*

Translation:

- 1) I am Asalluḫi, who is girded with fierce awe, superlative in splendour: referring to the lord to whom plants prostrate themselves between (the months) Nisannu and Ululu, as he practices divine rule, Markuk is said to be in place of Enlil.
- 2) Ditto, Enlil of the gods, who looks after the world regions: he (Marduk) is said to be in place (of Enlil).
- 3) Ditto, who was created in E-unir, is full of terror: the Eunir-temple is the Nippur ziggurat.
- 4) [Ditto], who surveys the height of the distant heavens: 20 mina weight, 316,000 miles from the middle of the heavens to the [terrestrial horizon].
- 5) Ditto, I know the depth of the vast Ḫubur-river: 40 mina is the weight, 332,000 miles from the middle of the heavens to the edge [of the depths]. 33 mina (is the weight), 144,000 miles is the *circumference* of the heavens. 16 miles is the thickness [...] of the heavens, in the middle weight .. of the heavens.
- 6) [Ditto], who saves the defeated, takes the hand of the fallen: 'defeated' (is a) leper.
- 7) [Ditto], who does not speak in the place of blasphemy, am I: referring to the lord who is seated in the middle of the 'sea' during the Akitu.³¹
Alternative: the one in the 'house of mourning' -- the man in his tomb -- cannot pray.
Third alternative: referring to the citizens of Babylon who do not take an oath under Jupiter.

³¹ See Frahm 2011: 94.

- 8) Ditto, who was created by his own decree, am I:
a (ritual) basket in the 13th day of the month *Tammuz* is placed in front of the lord. Alternative: this means he is called Anšar in advance of Ulūlu, according to a second expert; this means Nebiru = Marduk (Mes), who was born by himself. Nebiru: suffix ra = ‘in’, umuš (KU) = mind; dū(/rú) = be born,
ní = by oneself: Nebiru = Nebiru (= ‘born by one’s own decree’).
- 9) Ditto, the holy god, who sits in radiance, am I:
Me = heaven, lam = earth, thus called, ‘dweller in heaven (and) earth’, which is a *mukallimtu*-comment.
- 10) Ditto, who is blessed in the Eugga, am I: the one who offers greeting in a person’s house like a lamp, this does not mean he greets a man, it means [...] you know
- 11) I am Asalluhi, who is clothed with splendour, filled with terror:
referring to the lord who from the month of Šebaṭ to the month of Adar ... quarrels,
He is a dressed-up Lahmu, he practices the highest rank (of Anu), alternatively, referring to the exorcist who is said to be furnished with a red strap.
- 12) Ditto, wearing a tiara, whose radiance is adorned with awe:
which is said to be the exorcist furnished with a red strap in a ... chamber.
- 13) Ditto, who daily picks on what the people say:
i.e. one speaks to a lamp.
- 14) Ditto, whose rays light up the lands:
referring to the black spots in the sun (which) is called Mes (= Marduk).³²
- 15) Ditto, whose weapon is a fierce flood: ‘Muštešir-hablim’³³ is the weapon of Šazu (= Marduk)
- 16) Ditto, who, like the sun, looks over the lands: Utu is Šu (= Marduk) of judgement.
Alternatively: ‘day’ [ud] = Šamaš [utu]; the star = Utu (Šamaš) = Šulpa’ea.
- 17) Ditto, who purges the righteous and the wicked in the river: referring to what is called ‘river ordeal’.
- 18) Ditto, who surveys the subterranean ocean, forms the (its) regulations:
referring to what is called a (female) bird-(symbol)³⁴ which is (placed) in front of Šamaš. It is said to be,
.....Marduk who
- 19) Ditto, to Nabû, his vizier, he addressed a word: ...
.....

³² The interpretative pun is based on Sum. mes = Akk. *šulmu* ‘black’, see Frahm 2011: 82.

³³ CAD H 17 translates this as ‘brings justice to oppressed’.

³⁴ A pun on *uṣurtu* ‘divine plan’ and the fem. of *iṣšūrtu*, ‘female bird’.

- 20) or the Lil-demon who [constantly walks around] the grasses:
grass: L[il-demon]
- 21) Or who constantly clamber over mud walls to
mud wall: [...], alternatively,
- 22) Or who constantly moan like a badger before an invalid:
badger (Sum.) = badger (Akk.), river beaver.
- 23) Or who are always fly like a wasp(?) before an invalid:
wasp = Ištar's spindle³⁵
- 24) According to the incantation *Duppir Lemnu*.

(colophon)

..... (= catchline), after which it is written,
for the lecture of Kišir-Nabû, whose trust is in Nabû,
son of Šamaš-ibni, exorcist of the Assur-temple.

A comparison of these two commentaries, from Babylon and Assur respectively, indicate quite different ways in interpreting the same text. While the late Babylonian commentary relies upon astral and zodiacal imagery, the Assyrian commentary relies upon more traditional attributes of gods in relation to other gods and to various rites, many of which we cannot understand. Nevertheless, what is important for the current study is the difference in approach, which we saw earlier with STT 300, a record of magical practices organised like a traditional hemerology, identifying favourable days of the month in which these can be employed, while its later Babylonian counterpart provides similar data organised according to zodiac signs. The prevalence of the zodiac in a Late Babylonian commentary indicates how fundamental it had become as a tool for hermeneutics and virtually any genre of text could be interpreted as reflecting zodiac influences. It is the awareness of the importance of the zodiac in Babylonian scholarship which leads us to our next supposition, namely that SBTU I 43 may also have some connection with the zodiac which is not clearly indicated in the text.

³⁵ a type of insect, cf. CAD P 371; cf also *hanzizûtu*, AHW 321.

IV Ancient Aramaic and Greek Parallels

The texts edited above (BRM 4 20 and STT 300) have been previously discussed from a comparative perspective in which passages have been excerpted for comment, with parallels drawn from the Greek Magical Papyri and the *Mandaic Book of the Zodiac* (Scurlock 2005–2006). The aims of J. Scurlock’s article are commendable in bringing such wide-ranging material together, but there are some weaknesses in the methodology. First of all, Scurlock does not sufficiently recognise the important distinction between the non-zodiacal reckoning of the Sultantepe text versus the zodiacal orientation of the later Uruk duplicates; she simply assumes that both systems can be taken into account, when in fact the later zodiacal system replaced the earlier hemerological one. Second, Scurlock tends to cite excerpts from the Greek Magical Papyri without reference to context, such as her comment on one passage (BRM 4 20, 8) that a spell to seduce a woman is assigned to Aries, which she relates to a Greek spell which has the label, ‘Aries: love charm’ (Scurlock 2005–2006: 131). In fact the PGM text is much more interesting in its entirety, since it offers a general parallel to our Uruk texts:

Orbit of the moon: Moon in Virgo: anything is rendered obtainable. In Libra: necromancy. In Scorpio: anything inflicting evil. In Sagittarius: an invocation or incantations to the sun and moon. In Capricorn: say whatever you wish for best results. In Aquarius: for a love charm. Pisces: for foreknowledge. In Aries: fire divination or love charm. In Taurus: incantation to a lamp. Gemini: spell for winning favor. In Cancer: phylacteries. Leo: rings or binding spells. (PGM VII 284–99, Betz 1986: 124)

There are certainly some general parallels from PGM which should be studied in more detail, such as PGM III 275–81 (Betz 1986: 26), a text similar to that quoted above, and PGM III 494–611 (Betz 1986: 31f.), in which Helios appears in the form of an animal accompanied by tree, stone, and animal icons, with certain similarities to astral magic texts which we will see below. PGM X 24–35 (Betz 1986: 149) provides the drawing of an amulet to protect against anger of enemies, accuser, brigands, phobias and nightmares. This still leaves us with the difficulty of explaining how such texts from Achaemenid and Hellenistic Uruk have analogues in Hellenistic and Roman Egypt.

Furthermore, any possible parallels from the *Mandaic Book of the Zodiac* require scrutiny, since it is insufficient to compare such texts in English translation alone. The Mandaic text has to be checked for possible Akkadian loanwords, since we do not know whether Mandaic texts were derived from Akkadian before the demise of cuneiform script, or were simply remembered orally (and imperfectly), later committed to writing. Comparisons should ideally include other available sources, such as the *Syriac Book of Medicines*, which contains relevant material such as aggressive spells and the use of astrology combined with magic and medicine.

There are other important Greek parallels to the Uruk texts from Ptolemy's *Tetrabiblos*, Book IV, in which he catalogues numerous kinds of influences of various planets, depending upon their positions relative to constellations in the zodiac. The headings alone of Ptolemy's Book IV highlight his thoughts on planetary influences:

- Of Material Fortune (IV. 2 Loeb 372)
- Of the Fortune of Dignity (IV. 3 Loeb 376)
- Of the Quality of Action (IV.4 Loeb 380)
- Of Marriage (IV.5 Loeb 392)
- Of Children (IV.6 Loeb 408)
- Of Friends and Enemies (IV.7 Loeb 412)
- Of Foreign Travel (IV.8 Loeb 422)
- Of the Quality of Death (IV.9 Loeb 426)
- Of the Division of Times (IV.10 Loeb 436)

Similar themes are addressed by spells in the Uruk tablets above, as well as in horoscopes known from Babylonia. For example, under Ptolemy's heading 'Friends and Enemies', we find the following statement:

Thus there come about occasional spells of silence and of disparaging talk in friendships, whenever the maleficent planets are passing through these configurations, and truces and reconciliations in enmities at the ingress of the benevolent planets upon them. (Ptolemy *Tetrabiblos* IV 7, Loeb p. 415)

Ptolemy goes on to enumerate how planets affect such relationships, and many of his lists have parallels in BRM 4 20, edited and discussed above. These include 'intentional quarrels and scheming';¹ 'associations through kinfolk, which, however, quickly cool'; 'marriage and partnerships for the sake of giving and receiving, trade, or the mysteries';² 'friendships through women, religious rites, oracles';³ 'associations through love, adultery, or illegitimate relations';⁴ 'enmities, noisy disputes, and lawsuits which arise through business or poisonings' (ibid. 419).⁵ Under the heading 'Of the Quality of Death', Ptolemy catalogues diseases associated with planets, e.g. citing Saturn being associated with 'long (chronic?) illness', rheumatism, chills and fevers, while Jupiter brings about death through strangulation, pneumonia, apoplexy, spasms, headache, and cardiac affections (ibid. Loeb 429).

The comparisons with BRM 4 20 deserve a separate and more intense investigation, but the extracts above are sufficient to show important similarities between

¹ See BRM 4 20: 35.

² See BRM 4 20: 56 and 57, referring generally to profit and trade, as well as specific trade of publicans (25).

³ See BRM 4 20: 35

⁴ See BRM 4 20: 5–6; 8; 32; 53.

⁵ See BRM 4: 2.

medical astrology at Uruk and later astrology within Greek sources. It is not easy, however, to prove how these associations came about, but since Ptolemy flourished in the second century AD when cuneiform was probably still legible, it would not be inconceivable that Ptolemy gathered ideas from Mesopotamia as part of a living heritage, quite possibly through Aramaic translations. We have little idea about the nature of Ptolemy's sources, but one of the fascinating descriptions of the early use of primary sources comes from his *Tetrabiblos* I., 21, in which Ptolemy explains that he came across a 'Chaldean' manuscript in a bad state. According to Ptolemy,

Recently, however, we have come upon an ancient manuscript, much damaged, which contains a natural and consistent explanation of their order and number.... The book was very lengthy in expression and excessive in demonstration, and its damaged state made it hard to read, so that I could barely gain an idea of its general purport; that too, in spite of the help offered by the tabulations of the terms, better preserved because they were placed at the end of the book (Ptolemy *Tetrabiblos* I 21, Loeb p. 103).

This is certainly the kind of text which Ptolemy may have collected and which could have formed the link between Uruk astral magic and his own writings on astrology.

V Astrological Interpretation of SBTU I 43

As we have seen, our attempt at finding a solution for explaining SBTU I 43 by referring to analogues from contemporary and later Greek medicine has not been fruitful; albeit parallels between Babylonian and non-Hippocratic medicine are interesting in themselves, they do not enlighten us further about the purposes of the Uruk ‘taxonomy’ text. In order to find a more satisfactory explanation, we opted to search further afield, delving into astrology and especially astral magic.¹ At first glance, an astrological decipherment of SBTU I 43 is also hardly credible, because of too many possible variables. One can speculate about the numbers of divisions of SBTU I 43 into four units, each consisting of 6, 12, 7 and 6 lines of text respectively. But what kinds of associations can be made with these sequences? Twelve signs of the zodiac? The theory of the ‘lunar six’? Seven planets? Four phases of the moon? Nothing seems concrete enough within astrology to make a convincing case.

Without attempting, therefore, to posit an explanation, the next step in our investigation is to review the similar genre of astral medical texts, to see if clues might emerge which cast light on SBTU I 43. We turn now to an astral-medical text for comparisons. What if there is some astrological basis behind SBTU I 43 which has not yet been noticed, but which is somehow cryptically encoded within the number of entries in each section of the text? In other words, there might be some astrological connection with each disease mentioned, if it is associated with a zodiac sign as well as with a body organ. Here is an example of what astral medicine of this kind looks like:

LBAT 1598

- 1’ [ki-i^dsin ina absin] ù gig šá g[ír.tab šu-ú a-na zib.me zi...
When the moon is in Virgo, and the illness belonging to Scorpio moves into Pisces, (sequence: VI, VIII, XII)
- 2’ [ki-i^dsin ina r]ín ù gig šá pa šu-ú [a-na hun zi ...
When the moon is in Libra and the illness belonging to Sagittarius moves into Aries, (sequence: VII, IX, I)
- 3’ [ki-i^d]sin ina gír.tab ù gig šá máš šu-ú [a-na múl.múl zi ...
When the moon is in Scorpio and the illness belonging to Capricorn moves into Taurus (sequence: VIII, X, II)
- 4’ [ki-i^d]sin ina pa ù gig šá gu šu-ú a-na m[aš.maš zi ...

¹ Heeßel was obviously thinking along similar lines when referring to SBTU 1 43 within the context of astral medicine (Heeßel 2005: 22).

When the moon is in Sagittarius and the illness belonging to Aquarius moves into Gemini.... (sequence: IX, XI, III)

5' [ki-i^d]sin ina máš ù gig šá zib.me šu-ú a-na a[[lla zi ...

When the moon is in Capricorn and the illness belonging to Pisces moves into Cancer (sequence: X, XII, IV)

6' [ki-i^d]sin ina gu ù gig šá hun šu-ú a-na a [zi ...

When the moon is in Aquarius and the illness belonging to Aries moves into Leo ...

7' [ki-i^d]sin ina zib.me ù gig šá múl.múl šu-ú a-na absin [zi ...

(translations all follow the same sequences, as above)

8' [ki-i^d]sin] ina hun ù gig šá absin šu-ú a-na máš [zi ...

9' [ki-i^d]sin ina múl.múl] ù gig šá rín šu-ú a-na gu [zi ...

10' [ki-i^d]sin] ina maš.maš [ù] gig šá gír.tab šu-ú a-na zib.me g[in² ...

11' [ki-i^d]sin ina alla ù gig š[á pa šu-ú a-na hun g[in²

12' ki-i^d]sin ina a ù gig š[á máš šu-ú a-na múl.múl zi ...

13' ki-i^d]sin ina absin ù gig š[á gu šu-ú a-na maš.maš zi ...

14' ki-i^d]sin ina rín ù gig š[á zib.me šu-ú a-na alla zi ...

15' ki-i^d]sin ina gír.tab ù gig š[á hun šu-ú a-na a zi ...

16' ki-i^d]sin ina pa ù gig š[á múl.múl šu-ú a-na absin zi ...

17' ki-i^d]sin ina máš ù gig š[á maš.maš šu-ú a-na rín zi ...

18' ki-i^d]sin ina gu ù gig š[á alla šu-ú a-na maš.maš zi ...

19' ki-i^d]sin ina zib.me ù gig š[á a šu-ú a-na alla zi ...

20' ki-i^d]sin ina hun ù gig š[á absin šu-ú a-na a zi ...

21' ki-i^d]sin ina múl.múl ù gig š[á rín šu-ú a-na absin zi ...

22' ki-i^d]sin ina maš.maš ù gig š[á gír.tab šu-ú a-na rín zi ...

23' ki-i^d]sin ina alla ù gig š[á pa šu-ú a-na gír.tab zi ...

24' ki-i^d]sin ina a ù gig š[á máš šu-ú a-na pa zi ...

25' ki-i^d]sin ina absin ù gig š[á gu šu-ú a-na máš zi ...

26' ki-i^d]sin ina rín ù g[ig šá zib.me šu-ú a-na gu zi ...

With this text, we have the moon moving through various houses of the zodiac with consequences for associated diseases.² However, this text is only relevant if

² Francesca Rochberg (oral communication) offers the following tentative explanation of the text as follows: 'If gig here is the sick person, the text might be saying when the moon is in sign 1 and the sick person's (birth?) sign is sign 2, go to sign 3 (meaning "treat" when the sun is in sign 3)? The distance from the gig's sign and the treatment(?) sign is 120°, i.e., in "trine," which is most favourable. The distance from the moon's sign to the sick person's sign is 60°, or "sextile," which is another but slightly less favourable aspect that I have not seen in cuneiform before.

Cale Johnson (oral communication) offers the following useful observation on this text as well:

– Section 1: (lines 1'-7') 1st and 2nd signs are TWO signs apart, 2nd and 3rd signs are FOUR signs apart

there is some kind of astrological basis behind SBTU I 43, which we have yet to demonstrate.

– Section 2: (lines 8'-17') 1st and 2nd signs are FIVE signs apart, 2nd and 3rd signs are FOUR signs apart

– Section 3: (lines 18'-26') 1st and 2nd signs are FIVE signs apart, 2nd and 3rd signs are MINUS ONE (or 11) signs apart.

The interesting thing is that there is certainly a trine aspect hiding in each section: between the 2nd and 3rd signs in the first two sections: 6>8>12 in line 1' and 1>6>10 in line 8', and between the 1st and 3rd signs in the third section as in line 18': 11>4>3. So given the reconstruction in the third section, which is only hypothetical, a trine description is only correct for the first two sections; in the third section the trine is between the moon and the goal rather than the sick person and the goal.

VI Melothesia

So far, all of our efforts to explain the text of SBTU I 43 have ended in failure. One final avenue for us to explore will be the astrological science of melothesia.¹ According to Harry Bober, the classical concept of melothesia originating in the Hellenistic period represents ‘the doctrine of the domination of the twelve signs of the zodiac over the anatomical regions indicated, beginning with Aries for the head, Taurus for the neck, Gemini for the shoulders and arms, and so on in sequence down to Pisces for the feet (Bober 1948: 2). Neugebauer refers to Greek astrological sources which divide a zodiac sign into 12 micro-divisions (*dodekatemoria*), with each being associated with a part of the zodiacal body, such as ‘head’, ‘throat’, ‘mouth’, ‘heart’, ‘privy parts’, etc., referring to the parts of the zodiac sign (i.e. crab, goat, etc.).² For example, Aries was divided into the head, throat, shoulders, chest, stomach, abdomen, buttocks, pudenda, knees, loins, tibia, and feet. The problem is that Greek astrologers identified two different types of melothesia, one describing influences of zodiac signs and the other influences of planets, and the system of astral influences became increasingly complex over the course of time (Bouché-Leclercq 1899: 319–325, Bezza 1995 II 722–731, 741–744). The obvious danger is to try to read back into Babylonian astrology ideas learned from Greek astronomy which may have developed at a later date.

In Book II of his *Tetrabiblos*, Ptolemy outlines his notions of astral influences on human affairs:

Constellations of human form, both in the zodiac and among the fixed stars, cause the event to concern the human race. Of the other terrestrial signs, the four-footed are concerned with the four-footed dumb animals, and the signs formed like creeping things with serpents and the like. Again, the animal signs have significance for the wild animals and those which injure the human race; the tame signs concern the useful and domesticated animals, and those which help to gain prosperity, in consistency with their several forms; for example, horses, oxen, sheep, and the like. (Ptolemy, *Tetrabiblos* II 7, Loeb p. 171–173)

As far as disease goes, Ptolemy is specific about planetary influences on human health. About Saturn he writes that this planet

is in general the cause of destruction by cold, and in particular, when the event concerns men, causes long illnesses, consumptions, withering, disturbances caused by fluids, rheumatisms, and quartan fevers. (Ptolemy, *Tetrabiblos* II 8, Loeb p. 179–181)

¹ The idea of exploring melothesia in Babylonia was first suggested to me by F. Rochberg.

² Neugebauer 1983: 270–275. See Hunger and Pingree 1999: 89ff., listing fixed *ziqpu* (fixed) stars coming from parts of the anatomy of the animals representing constellations, such as lion, panther, and scorpion, etc., giving stars from the head, horn, breast, thigh, tail, knee, heel and shoulder. This is quite similar to the type of Greek melothesia discussed by Neugebauer, *op. cit.*

Ptolemy goes on to conclude that Saturn also leads men to exile, impoverishment, prison, mourning, anxiety, and death. Saturn also causes harm to animals, disrupts the weather and natural ecology, and ruins crops. Jupiter, on the other hand, brings happiness and ‘bodily and spiritual health’ (II.8, Loeb 182f.).

Mars, another malevolent planet, has an adverse effect on humans, causing war, slavery, and death; as for human health, he brings about fevers, tertian fevers, and ‘raising of the blood’ (ibid.).

While Venus is seen as benevolent in every respect, Mercury is more ambiguous since he is influenced by other planets which approach him. He is capable of causing a disease of ‘dryness’, quotidian fever, cough, and consumption (ibid., Loeb 186f.).

One of the cardinal aspects of planetary influence on human health concerns either quartan, quotidian, or tertian fevers; it is noteworthy that only one type of fever (sun-light fever) is mentioned is SBTU I 43 18, the very last entry associated with the ‘throat’ (‘mouth of the stomach’).

Ptolemy goes further into melothesia by exploring which parts of human anatomy are directly affected by the planets. The malevolent planets which bring disease only do so under certain conditions, depending upon their positions in relation to the sun and moon.

For the parts of the individual signs of the zodiac which surround the afflicted portion of the horizon will indicate the part of the body which the portent will concern, and whether the part indicated can suffer an injury or a disease or both. (Ptolemy *Tetrabiblos* III 12, Loeb p. 319)

Ptolemy goes on to explain that Saturn controls what happens to the right ear, spleen, bladder, phlegm, and bones. Jupiter controls the faculty of touch, the lungs, arteries, and semen. Mars controls the left ear, kidneys, veins, and genitals. The sun controls the brain, heart, sinews and everything related to the right hand. Venus controls the sense of smell, the liver, and viscera; Mercury controls speech and thought, the tongue, bile and buttocks. The moon controls the sense of taste, as well as drinking, the stomach, belly, womb, and everything related to the left hand (ibid, Loeb p. 318f.).

Ptolemy then proceeds to explain how planets affect a single example of eye disease or injury. The conjunction of the moon with other orbs can bring about eye disease in one eye, while other conjunctions will cause disease in both eyes. Conjunctions with Mars causes eye injury through a physical blow, while configurations with Saturn can affect the eyes with glaucoma (ibid.). Ptolemy next explains what specific ailments are influenced by planets.

Diseases are likely to result when at the positions already described the maleficent planets are in aspect, but in the opposite sense, that is, evening stars with respect to the sun and morning stars to the moon. For in general Saturn causes his subjects to have cold bellies, increases the phlegm, makes them rheumatic, meagre, weak, jaundiced, and prone to dysentery, coughing, raising, colic, and elephantiasis; the females he makes also subject to disease of the womb. (Ptolemy *Tetrabiblos* III 12, Loeb p. 327).

He describes the effects of what happens when Mercury is allied with Mars, which results in sore eyes and abscesses, as well as ‘black bile, insanity, the sacred disease’ (ibid.).

Ptolemy goes on to discuss what diseases are affected by the zodiac, apart from planets, and we find a similar listing of ailments, such as skin diseases, epilepsy, and falling fits. But all is not lost, since the benevolent planets have an effect as well, in which case Jupiter in conjunction with Mercury can help treatment through drugs and good physicians, while Venus and Saturn tend to help healing through prayer and magic (ibid., Loeb 330–333).

Unlike in Greek, there is no single text devoted specifically to melothesia in cuneiform texts,³ although Reiner has discovered melothesia in an important source, in a Late Babylonian medical commentary from Nippur (Reiner 1993: 21f.). These medical commentaries are crucial for understanding contemporary scholarship of the Persian and Hellenistic periods in Babylonia, and their significance must not be underestimated. The entry which caught Reiner’s attention is a learned comment on the typical medical phrases, ‘If a man’s spleen hurts him’ and ‘if a man’s kidney hurts him’. What the commentary explains is that the spleen is equated with Jupiter, and the ‘the Kidney-star is Mars’ (Reiner 1995: 60, Civil 1974: 336: 7). Reiner correctly concludes that the intention of the commentary is that Jupiter governs the spleen and Mars governs the kidneys, which are clear examples of melothesia, as we know from Greek sources.

In other words, the essential elements and ingredients were available within Babylonian astronomy to construct a theory of melothesia. For one thing, within standard astronomical texts such as *Enūma Anu Enlil*, diseases were often connected with celestial omens, and it was an easy step to take to associate diseases with zodiacal phenomena; this idea was previously discussed by Rochberg, in her edition of a Late Babylonian tablet of lunar eclipses within the zodiac (rather than the more traditional appearance of an eclipse on a certain day of the month). Hence Rochberg translates:

If the moon is eclipsed in Leo and finishes the watch and the north wind blows, Jupiter does not stand (in) the eclipse; Saturn and Mars stand in Aries or in Sagittarius or The Field; variant: in its eclipse [a halo surrounds (the moon) and Regulus stands within it]. For this sign: [the king] of Akkad will experience severe ... *šibbu*-disease. (Rochberg 1984: 136, also idem. 1999–2000: 245)

It is clear that *šibbu*-disease is influenced by an eclipse of the moon in Leo, with the positions of two malefic planets Saturn and Mars being noted.

³ Referring to a late Babylonian tablet of lunar eclipses within the zodiac, Rochberg observes that, despite parallels with Greek astrology, ‘explicit benefic and malefic influence on the planets cannot be recognized’ (Rochberg 1984: 125).

Let us review further possible connections with melothesia, such as those revealed in an astral-medical text LBAT 1597. This comes closest to some of the diseases mentioned in SBTU I 43, but which are all ascribed to celestial influences. The importance of this text is that it shows the characteristic features of a commentary or explanatory text.⁴ The first few lines (1'-3') refer to what fortunate or unfortunate events can happen as a result of a zodiac event, which we assume to be the moon moving into various celestial regions.⁵

LBAT 1597 (collated)⁶

1' [diš ki] rdingir⁷ x x x šâ² du₁₀ga dingir lugal idim u nun ad-ru u
rpal-hu² [dum]u.meš u dumu.mí.meš ki min

2' [diš ki d]r^dudu⁷.idim.sag.uš ug₇ ár-nu šá nu si.sá

3' [diš ki] dudu.idim.gu₄.ud e-tel(-liš) nu du-ak é šeš.meš-šú (i-)be-el

4' diš ki múl.šu.gi be-en-nu di-hu u ra-pa-du^{he-pí} sag.ki.dab.ba mul-dmarduk
ana be-en-nu a.ri.a dšul-pa-è be-en-nu⁷

5' diš ki múl.múl tu.ra kilib.ba⁸ u nam.úš šib-tu⁹ ši-bit kúm^{he-pí}

6' diš ki múl gu₄.an u múl sipa šá-aš-šá-tu ši-[d]a-nu¹⁰ maš-ka-du šu-ú
an.ta.šub.ba dumu.mí^da-nim mul.sipa.zi.an.na dudu.idim.sag.uš

rev.

7' diš ki múl maš.tab.gal an.ta.šub.ba u dlugal.úr.ra múl.maš.tab.gal dlu-
gal.úr.ra u^dmes.lam.ta.è.a¹¹

8' diš ki múl.al.lu₅ ugu.sag.ki.dab.ba sil-hu u ra-'i-bi¹² mul.alla íd dnin.gír.su
da-nim : diškur

9' diš ki múl.ur.gu ddim.me ddim.me.a ddim.me.lagab ddim.me.tab

⁴ The tablet contains *Winkelhaken* (:) indicating that a = b, and the word MU (= *aššu*) in l. 9' is typical in commentaries meaning 'a relates to b'.

⁵ Similar kinds of events are noted by Weidner 1967: 32, and in BRM 4 20 and 19.

⁶ See Leibovici 1956: 275–280. This text was partially translated by Heeßel, 2008: 8.

⁷ See Stol 1993: 116, translating, 'The star of Marduk for *bennu*; Spawn of Šulpae (is) *bennu*.' Stol also identifies Šulpae with Jupiter and the 'spawn of Šulpae' as a severe form of epilepsy.

⁸ See SBTU I 43: 18 and KAR 44: 9 (Jean 2006: 65).

⁹ Cf. KAR 44: 20 (Jean 2006: 67).

¹⁰ Labat 1951: 22, 36.

¹¹ See Stol 1993: 117, translating 'Gemini: Lugal-urra and Meslamtaea', equating Gemini with the twin stars.

¹² BRM 4 20: 26, with the commentary *ibid.* 69, and the duplicate BRM 4 19: 26.

^ddim.me.tab.ge.ù.na dingir *la-ab-ba* mu dingir lirim¹³ ^diš-tar u šu.ge-dim.ma ^ddili-bat u ur.a

-
- 10' [diš] ʾki múlʾ x [l]ú munus nu si.sá šu.^dinnin šu.dingir.ra šu.nam.érim.ma
 šu.nam.lú.u₁₈.lu ka.dimma kúr¹⁴
 [...šu] ^diš-tar še-e-du šá šu ^dbé-let-dingir.meš
- 11' [.....] x x x x ^dsin u ^dutu sag : zi-i-mu
 [.....] x du
-
- 13' [.....] x na

Translation

- 1' [If (the moon is)¹⁵ in the region of] a glad heart, whether god, king, noble or prince, melancholy or fearful, [.....] sons or daughters, ditto.
- 2' [If (the moon is) in the region of Saturn, he will die, (his) guilt will not be rectified.
- 3' [If (the moon is) in the region] of Mercury, he will not proceed in a lordly way, but he will rule over the household of his brothers.
- 4' If (the moon is) in the region of Perseus, epilepsy, fever, or joint-disease¹⁶, (broken Vorlage), migraine; [alternatively] Mercury (lit. Marduk-Star)¹⁷ for epilepsy, or 'sperm of Šulpa'e' (Jupiter)¹⁸ (for) epilepsy.
- 5' If (the moon is) in the region of the Pleiades, 'all' diseases or a plague; epidemic, attack of fever, (broken Vorlage)
- 6' If (the moon is) in the region of Taurus and Orion, joint-disease, vertigo,

¹³ Cf. CAD Š/1 449 lex., *šitpušu* 'belligerent'.

¹⁴ Akk. *ṭēmu šanū*.

¹⁵ Our interpretation of the moon in conjunction with various zodiac signs follows the pattern of a text published by Hunger, ZA 64 (1975), 41–43.

¹⁶ SBTU I 49: 39, where this word appears in a medical commentary but rendered by Hunger as 'herumirren', suggesting a psychological trauma (translating Sumerian dib.ra.ah).

¹⁷ A Marduk-star is known from the Great Star List (Koch-Westenholz 1995: 192), identified as Mercury in Hunger-Pingree 1999: 137.

¹⁸ This may be an allusion to a Šumma Izbu omen (Leichty 1970: 38, 68), referring to a freak birth. The text reads, be munus a.ria ^dŠul.pa.e ù.tu é.bi ^diškur ra-iš, 'if a woman gives birth to the "sperm of Šulpa'e", Adad will devastate the household.' This might be a secret name for some kind of plant, since the 'sperm' of a god is found in the Greek Magical Papyri to be a *Deckname* for various kinds of plants, e.g. 'semen of Aries' = clover, see Betz 1986, 168f. Similarly, 'human sperm' (a.ri.a nam.lú.u₁₈.lu) is a *Deckname* for the common plant *maštakal* (BRM 4 32:5 [a medical commentary]). This would mean that the text is identifying a remedy for epilepsy, as well as the celestial influences on this disease.

- maškadu*-disease, *šû*-disease, seizure; [alternatively] *lamaštu*-disease (lit. 'Daughter of Anu')¹⁹ (in) Orion (and) Saturn.
- 7' If (the moon is) in the region of Gemini, seizure or epilepsy; Gemini and Great Twins (Lugalurra and Meslamtaea).
- 8' If (the moon is) in the region of Cancer, migraine, dribbling,²⁰ cramp; [alternatively] Cancer, a lunar halo,²¹ Ningirsu of Anu = Adad.
- 9' If (the moon is) in the region of Leo, *lamaštu*, *labašu*, and *ahhāzu*-demons, the seized-by-*lamaštu*(-disease), seized by *lamaštu* day-and-night(-disease), the god is a lion related to a belligerent god, Ištar, and Hand of the Ghost-disease, (in the region of) Venus and Leo.
- 10' If (the moon is) in the region of ..., a man cannot make advances towards a woman, Hand-of-the-Goddess-disease, Hand-of-the-God-disease, Hand-of-the-Oath-disease, Hand-of-Mankind-disease, madness, [... the Hand of] Ištar (is) a deputy of the Hand of Bēlet-ilī.
- 11' [If (the moon is) in the region of], moon and sun; head = face.....

There are some specific elements of melothesia in this text, especially in those passages which assign diseases to specific zodiacal influences. In line six, a sequence of six ailments known as *šaššaṭu šidānu maškadu šû miqtu* and *lamaštu*-caused disease occur together under the same zodiacal influence; these diseases are similarly grouped in SBTU I 43 and elsewhere in Babylonian medical literature. What we lack here is the intermediate stage, which would have explained how the moon's position within the zodiac influences individual organs or parts of the body. In fact this is exactly what we expect in a classic melothesia text. So although we lack the theoretical explanation for this text (as often happens in Babylonian science), we can nevertheless infer the system which operates in the background, i.e. planets influence organs which are associated with various groups of diseases.

Another important text published by Nils Heeßel does not mention diseases by name but gives zodiac signs together with stones, plants, and tree substances which are to be used for various healing purposes, specifically fumigation, amulets, and salves (Heeßel 2005).²² Here is a sample extract of this text in Heeßel's English translation:

¹⁹ See Stol 1993: 117.

²⁰ So CAD S 267, cf. BAM 111 ii 8 and 29 for this rare disease, characterised by the general symptoms: *diš na kâš.meš-šû ut-ta-na-tak ka-la-a la i-la-a'* *uzu.bir-šu he-sa-at im.diri-ma ma-as-la-ah kâš.meš-šû i-bi-ta diri*, 'if a man continually drips urine and is not able to withhold it, his bladder is swollen, he is full of wind and the opening of his penis (lit. urine) is full of thick matter'. BAM VII no. 3.

²¹ CAD N/1 376.

²² For a somewhat similar concept, cf. the Greek spell in Betz 1986: 31 (PGM III 501-508), in a spell to 'establish a relationship with Helios':

"In the first hour you have the form and character of a young monkey; [the tree] you produce is a

Month Šabātu (11th month of the year, Jan/Feb), region of (the corresponding zodiacal sign) Aquarius: hematite, poplar wood, *aktam*-plant, dust from the gate of (the god) Ellil you sew up [in a linen cloth] with a linen thread. One piece of hematite you attach to a string with (this) amulet and put it on his neck. (With) poplar wood [you fumigate him], with *aktam*-plant (and) dust from the gate of (the god) Ellil (mixed) in fine (*pūru*)-oil you anoint him. Salve from the 15th to the 21st day of (the month) Šabātu, on the 15th day [...]. (Heeßel 2008: 10)

A further group of similar texts recording astral influences (Weidner 1967) hardly makes any mention of disease but refer more characteristically to chances of avoiding snakebite or winning a lawsuit.²³ Here is one example: ‘Capricorn: one should not eat fish; solar eclipse; unfavourable for a court case’ (ibid. 35). Here again we have a combination of zodiac astrology and hemerology-style favourable and unfavourable days, although without mentioning the month. The interesting point is that of all texts providing similar information and data, none gives the complete record of the system, but only a partial scheme of the complexities of astral medicine.

Heeßel has also published a Late Babylonian tablet from Yale (YBC 9833), possibly also from Uruk, which relates to the *dodekatemoria* tablet cited below (BM 55605) and fills in further small sections of our large puzzle. This interesting tablet gives a specific simplicium as a remedy to be wrapped in some form of hide and applied with oil to the patient, but in this case reference is made to each of twelve months, rather than the appearance of a planet or zodiac sign. Nevertheless, the information is relevant to melothesia, as we will see below.

YBC 9833

- 1 ^{iti}bára ^{giš}šur.mìn ina kuš sa.a ina gú ga[r]-a[n] ù ina ì.giš šés t[ī]
- 2 ^{iti}gu₄ ^úba-ri-rat ina kuš ur.bar u ina ì.giš ki.min
- 3 ^{iti}sig₄ ^{giš}šak-kul ina kuš ka₅.a u ina ì.giš ki.min
- 4 ^{iti}šu ^{giš}kìim ina kuš gu₄ u ina ì.giš ki.min
- 5 ^{iti}ne giš.kín ina kuš udu.níta u ina ì.giš ki.min
- 6 ^{iti}kin ^{giš}mur-ra-nu ina ši-hi-iṭ muš u ina ì.giš ki.min
- 7 ^{iti}du₆ ^{giš}šar-bat ina ši-hi-iṭ gír.tab u ina ì.giš ki.min
- 8 ^{iti}apin ^{giš}á.zu ina kuš ur.gi₇ u ina ì.giš ki.min
- 9 ^{iti}gan ^{giš}hašhur ina kuš maš.dà u ina ì.giš ki.[min]
- 10 ^{iti}ab ^{giš}nu.úr.ma ina kuš eme.šid u ina ì.giš ki.min
- 11 ^{iti}zíz ^{giš}geštin ina kuš dar.lugal^{mušen} u ina ì.giš ki.min
- 12 ^{iti}še ^{giš}pu-qut-tú ^{giš}mur-ra-nu ši-hi-iṭ muš ^úkur.kur ina túg.gada u ina ì.giš ki.min

silver fir; the stone, the *aphanos*; the bird In the second hour you have the form of a unicorn; the tree you produce is the persea; the stone, the pottery stone, the bird the halouchakon In the third hour you have the form of a cat; the tree you produce is the fig tree; the stone, the *samouchos*; the bird, the parrot...”.

²³ Except for Weidner 1967: 22, mentioning *bennu*-disease (epilepsy).

Translation

- 1 Nisan, place cypress in catskin on the neck and rub with oil, he will improve.
- 2 Ayyāru, (place) *barīrātu*-plant in wolfskin and with oil, ditto,²⁴
- 3 Simānu, (place) *šakkullu*-wood in foxskin and with oil, ditto,
- 4 Du'uzu, (place) willow in ox hide and with oil, ditto,
- 5 Abu, (place) *kiškanū* in buckskin and with oil, ditto,
- 6 Ulūlu, (place) *murrānu*-wood in cast snakeskin and with oil, ditto,
- 7 Tašrītu, (place) poplar in cast scorpion-skin and with oil, ditto,
- 8 Arahsamnu, (place) bolt-wood²⁵ in dog-hide and with oil, ditto,
- 9 Kislimu, (place) apple-wood in gazelle-skin and with oil, ditto,
- 10 Ṭebetu, (place) pomegranate in lizard-skin and with oil, ditto,
- 11 Šabāṭu, (place) vine-wood in rooster-skin and with oil, ditto,
- 12 Addaru, (place) *puquṭtu*-thorn (and) *murrānu* into snakeskin, (and) *atā'išu* in linen and with oil, ditto.

The above text relates to the another Late Babylonian tablet, BM 56605, probably from Sippar, the reverse of which lists a specific stone, tree and plant for each zodiac sign, as well as a day of the month on which certain foods should not be consumed (Heeßel 2000: 128f). This tablet further shows a combination of zodiac astrology and hemerology; here is a sample passage: 'Gemini, carnelian, *tiātu*-plant, *kamkadu*-plant, drink no milk on the 15th of the month Simānu' (ibid. 129, see 469). The same tablet also includes a *dodekatemoria*.²⁶ There is no direct evidence that the stone, tree, and plant listed in BM 56605 have any relevance to medicine or healing, but it is a likely assumption, provided that both texts are considered to belong to the same genre. BM 56605 is a highly unusual text which has thematic parallels in BM 47755, from Babylon (Heeßel 2000: 124f.) and in YBC 9833. Both of these former texts include a passage intended for a patient who has been affected by a star, and specific parts of his body hurt as a consequence, which is typical of the genre of melothesia. Several of the stars mentioned can be found in the Great Star List, given as the 12 stars of Amurru (Koch-Westenholz 1995: 198). Below is a combined edition and translation of relevant lines from BM 47755 and from BM 56605 obv. 48–71, and lines from YBC 9833 have been added for convenience.²⁷

²⁴ Ditto = rub (with oil), place on the (patient's neck) and he will improve.

²⁵ *aškuttu*, written *á.zu* instead of *á.súkud*.

²⁶ This is similar to what we found in the Uruk text, BRM 4 19, which divides each zodiac sign into a micro-zodiac of 2 1/2 degrees, to allow each zodiacal point to be associated with other points in the zodiac. See Neugebauer and Sachs 1952–1953, Rochberg 1988, Heeßel 2008: 12.

²⁷ Heeßel has given these texts separately, but we give them in *Partitur* format, in order to show the relationship between the various texts, since they are not exact duplicates.

A = BM 47755**B = BM 56605 ii 46-74****C = YBC 9833**

- 1' A = diš na Šulak dab-su ^úuri^{ki} súd ina a.meš ina ^íd^í hi.hi šés-su tin-ut
šit-tu téš.bi an-nu-tú ina gú-šú min
- 2' A = diš ina min lú gig ^{mú}gu.la tag-su úr 15-ti² gu₇-šú ^{giš}šur-mìn-ni ina
kuš sa.a ina gú-šú gar-an ina ì šés tin-ut
B = [..... lú g]ig ^{mú}gu.la tag-su úr 15-šú gu₇-šú šur.mìn
[.....]-an ša-niš ina ì.giš šés-su-ma ti.la
C = ^{ti}bára ^{giš}šur.mìn ina kuš sa.a ina gú ga[r]-a[n] ù ina ì.giš šés t[i]
- 3' A = min min aš.iku tag-šú ^íur^í 2,30-šú gu₇-šú ^úba-ár-ra-tú ina kuš
ur.bar.ra ina gú-šú gar-an ina ^í [.....]
B = [..... g]ig ^{mú}aš.iku tag-su úr 2,30-šú gu₇-šú [.....]
u[r].bar.ra ina gú-šú gar-an šá-niš ina ì.giš šés-su
C = ^{ti}gu₄ ^úba-ri-rat ina kuš ur.bar u ina ì.gi ki.min
- 4' A = min min nu.muš.da tag-šú ^ígiš^škun murub₄ gu₇-šú [giš^šsa]g.kul (ina
kuš) k[a₅].^ía^í [ina g]ú-šú ^ígar-an šés^í-su tin-^íut^í
B = [... ^{mú}]nu.muš.da tag-su giš.kun u murub₄ gu₇-šú [.....]-šú
gar-an šá-niš ina ì.giš šés-su
C = ^{ti}sig₄ ^{giš}šak-kul ina kuš ka₅.a u ina ì.giš ki.min
- 5' A = min min šu.g[i] ina kuš gu₄ [ina gú-šú [.....]
šé]š-[s]u ^ítin-ut^í
B = [...] ^{mú}šu.gi tag^í-su gaba-su gu₇-šú [.....] gar-an šá-
[niš] ^íina^í ì.giš šés-su
C = ^{ti}šu ^{giš}kim ina kuš gu₄ u ina ì.giš ki.min
- 6' A = min min gú.an ^ítag^í-šú x x ^ígu₇-šú [.....] ina kuš ^íudu^í.n[íta ina]
gú-šú gar-an ina ì ^íšés tin^í-u[t]
B = [... lú g]ig ^{mú}gú.an ^ítag-su šu^í 15-šú u bar gu₇-šú [.....] x ina
gú-šú gar-an [šá-ni]š ina ì.giš šés-su
C = ^{ti}ne giš.kín ina kuš udu.níta u ina ì.giš ki.min
- 7' A = min min maš.[tab.ba gal.gal] tag-šú sag.du gu₇-šú mu[r-ra-nu] ina
kuš ^ímuš^í [ina g]ú-^íšú^í gar-an ina ì šés ^ítin^í-u^ít
B = [..... ^{mú}]maš.tab.ba gal.gal ta[g-su sa]g.^ídu^í-su gu₇-šú [.....]
ina gu₇-šú gar-an šá-niš [ina ì.giš šé]š-su
C = ^{ti}kín ^{giš}mur-ra-nu ina ši-hi-i^ít muš u ina ì.giš ki.min
- 8' A = min min zubi^í tag-šú gú-šú gu₇-šú ^{giš}šar-ba-tu₄ ina kuš gír.tab ina gú-
šú gar-an ina ì.giš šés tin-ut
B = [..... ^{mú}]gag.si.s]á tag-su gú-šú [g]u₇-šú [.....] ga[r]-an šá-niš
ina ì.giš šés-su
C = ^{ti}du₆ ^{giš}šar-bat ina ši-hi-i^ít gír.tab u ina ì.giš ki.min
- 9' A = min min uga tag-šú gu₄.murub-šú ^ígu₇-šú^í ^{giš}ed-de-et-tu₄ ina kuš
ur.a in gú-šú gar-an

- B = [...^{mul}ug]a^{mušen} tag-su murgu-šú gu₇-šú [..... šá-ni]š ina
 ì.giš šéš-su
- C = ^{iti}apin^{giš}á.zu ina kuš ur.gi₇ u ina ì.giš ki.min
- 10' A = min min ab.sín tag-šú ku-a-mu-u u maš.sil g[u₇-šú^{giš}hašhur] ina kuš
 maš.dà ina gú-šú gar-an ina ì šéš [ti]n-[u]t
- B = [.....] x x 2,30-šú šá-niš maš.ṛsil gu₇[?]-šú [.....]
- C = ^{iti}gan^{giš}hašhur ina kuš maš.dà u ina ì.giš ki.[min]
- 11' A = min min šá-ru-ru-ur šar.[gaz tag-š]ú ti 15 g[u₇-šú^{giš}nu.úr.mu i]na
 kuš e]me.šid ina gú-šú [gar-an]
- C = ^{iti}ab^{giš}nu.úr.ma ina kuš eme.šid u ina ì.giš ki.min
- 12' A = min min ur.gi₁₅ tag-šú ina [....-šú] gu₇-šú^{giš}geštin ina ṛkuš⁷ dar.[lugal
 ina g]ú-šú gar-an ina ì šéš
- C = ^{iti}zíz^{giš}geštin ina kuš dar.lugal^{mušen} u ina ì.giš ki.min
- 13' A = min min ^{giš}da-a²⁸ t[ag-šú] bu-bat-ta-šú gu₇-šú [.....] ^{giš}pèš
 ina túg.gada [.....] ina ì šéš-su [.....] lá-šú t[i]
- C = ^{iti}še^{giš}pu-qut-tú^{giš}mur-ra-nu ši-hi-iṭ muš^úkur.kur ina túg.gada u ina
 ì.giš ki.min

Translation

- 1' If a man has been seized by (the toilet-demon) Šulak, pound up Akkad-plant, mix it in river water, rub it on him and he will get better; (put) the remainder together with these (things) on his neck etc.
- 2' Ditto, when a man suffers ditto, with the Great-star (Aquarius) has affected (lit. touches) him, his right thigh hurts him, place cypress in catskin on his neck, secondly, rub him with oil and he will improve.
- 3' Ditto (= if) ditto, a man suffers from ditto, the Field-star (Pisces) has affected him and his left thigh hurts him, place *barīrātu*-plant in wolfskin on his neck, secondly, rub him with oil and he will improve.
- 4' Ditto (= if) ditto, the Wild Herd-star has affected him and his buttocks and hips hurt him, place datepalm in fox-skin on his neck, secondly, rub him in oil and he will improve.
- 5' Ditto (= if) ditto, Perseus has affected him and his chest hurts him, place willow in oxhide on his neck, secondly rub him with oil and he will improve.
- 6' Ditto (= if) ditto, the Bull of Heaven-star (Taurus) has affected him and his right hand and scaly skin hurt him, place *kiškanû* in buckskin, secondly rub him with oil and he will improve.

28 Presumably a variant is *le'a* for is *lê*, 'Hyades', which can be written *iš le-e*, cf. CAD I/J 188.

- 7' Ditto (= if) the Great Twins (Gemini) has affected him and his head hurts him, place *murrānu*-wood in snakeskin and secondly, rub him with oil and he will improve.
- 8' Ditto (= if) ditto, Auriga (var. Sirius) has affected him and his neck hurts him, place popular in scorpion skin on his neck, secondly rub him with oil and he will improve.
- 9' Ditto (= if) ditto, the Raven has affected him and his spine (var. groin) hurts him, place boxthorn in lionskin and secondly, rub him with oil and he will improve.
- 10' Ditto (= if) ditto, the Furrow-star (Virgo) has affected him and his upper shoulder²⁹ and shoulder hurt him, place apple-wood in gazelle-skin on his neck and rub him with oil and he will improve.
- 11' Ditto (= if) ditto, Šarur and Šargaz (Scorpio) have affected him and his right rib hurts him, place pomegranate in lizard-skin on his neck (and rub him in oil and he will improve).
- 12' Ditto (= if) ditto, the Dog-star (Hercules) has affected him and his [.....] hurts him, place vine-wood in rooster-skin on his neck and (rub him) with oil (and he will improve).
- 13' Ditto (= if) ditto, Hyades has affected him and his boils³⁰ hurt him, [place *puquttu*-thorn (and) *murrānu* into snakeskin] and fig-wood in linen and rub him in oil (var. bandage him ...) and he will improve.

A passage from one of the above texts, BM 56606 rev. col. i, provides some additional data, since instead of using the zodiac as the only point of reference, it reflects the genre of hemerologies, identifying lucky and unlucky days of the month; this unique text combines reference to specific days of the month with zodiac signs, showing the development of astral magic. We provide a translation of a few lines of the reverse.

BM 56606 reverse col. i

- 1) In Aries: the stone (is) *zānu* (lit. decorative)-stone³¹, the plant (is) *imhur-lim*, on the 20th day of Nisan you should not eat fish and leeks.
- 2) Pleiades: the stone (is) ...³², the wood is *e'ru*, the plant is *barirātu*³³, on the first day of the Ayyāru do not cleanse faeces.

²⁹ The intended word *qumāru* 'upper shoulder' has been incorrectly rendered by the scribe.

³⁰ Reading *bu-bat-ta-šú* from *bubuttu* rather than *puquttu*.

³¹ *za'ānu*, 'adorned'.

³² [^{na4}]kúr.ra, for ^{na4}kur.ra? or for *šanû*, 'strange' stone?

³³ Written *ba-ri-ri-tu₄*, for *barirātu*.

- 3) Capricorn: the stone (is) carnelian, the wood is *suādu*, the plant is *kamka-du*, you should not drink milk on the 15th day of Simānu.
- 4) Cancer: the stone is *apsû*, the wood is *šennur*, the plant is pomegranate,³⁴ you should not *dry out* latrine water.³⁵

What we can see from these Late Babylonian tablets, probably from roughly contemporary archives, is that no single text preserves all relevant information, but the data is divided piecemeal over several different tablets. If we had only had the Yale tablet, we could easily have surmised that the text concerned itself with *materia medica* to be applied to a patient while wrapped in some form of skin or leather, in conjunction with rubbing with oil, each time associated with a particular month. From the two British Museum tablets we now learn that the months can be converted into planetary influences affecting a specific part of a patient's body, which is a classic example of melothesia, in fact the clearest example we have from Mesopotamia. According to these two texts, a certain star affects (lit. touches) the patient, resulting in pain somewhere in his anatomy; this interpretation comes close to Ptolemy's own description of melothesia:

For the parts of the individual signs of the zodiac which surround the afflicted portion of the horizon will indicate the part of the body which the portent will concern, and whether the part indicated can suffer an injury or a disease of both, and the natures of the planets produce the kinds and causes of the events that are to occur. For, of the most important parts of the human body, Saturn is lord of the right ear, the spleen, the bladder, the phlegm, and the bones; Jupiter is lord of touch, the lungs, arteries, and semen; Mars of the left ear, kidneys, veins, and genitals; the sun of the sight, the brain, heart, sinews and all the right-hand parts; Venus of smell, the liver, and the flesh; Mercury of speech and thought, the tongue, the bile, and the buttocks; the moon of taste and drinking, the stomach, belly, womb, and all the left-hand parts. (Ptolemy *Tetrabiblos* III 12, Loeb p. 319–321; see above p. 78)

Ptolemy also describes the effects of planets on disease:

Mars causes men to spit blood, makes the melancholy, weakens their lungs, and causes itch or scurvy. (Ptolemy *Tetrabiblos* III 12, Loeb p. 327)

34 Also in YBC 9833: 10

35 The present author took the opportunity to collate some of the readings on the reverse of BM 56605, suggesting some minor improvements to the excellent edition of Heeßel 2000: 129:

– line 1: we would suggest reading the stone name as $na_4.za-nu < za'ānu$ 'adorned'.

– line 3: read: $na_4].tar.ra giš.ma.nu ú.ba-ri-ra-tu_4$ (for *barirātu*).

– line 5: perhaps read $giš].su^-a^-du^-$.

– line 6: for (x) read *u*.

– line 8: for GAZ.ME x, read $kaš-šu^-ú^-$.

– line 9: for the plant name at the end of the line read: $ú^-li^-ni^-[i]n$.

– line 10: for x at the end of the line, read gu_7 .

– line 11: perhaps read the stone name as $na_4.ka.bar.ra$.

– line 14: for gu_7 , read gur_5 (= *kašāšu*).

Another interesting astrological tablet, which has never been fully edited, refers to treating a man, probably (but not necessarily) indicating illness. The text is LBAT 1596 = BM 34618 + A 1670³⁶, with some lines (obv. I 10–14) edited in Sachs 1952: 74. The text begins with a phrase repeated several times, *a-dan-nu lú dab*, ‘critical time for the “treated man”’. Here are some relevant lines from this text from the first column:

1. *a-dan-nu lú dab šá é diš na ap-lu ana d[am-šú TE]*, ‘The usual time of treating³⁷ a man of the household: if a man’s heir has [had sex] with his wife ...’³⁸
4. ⁴*udu.til.me kin.k[in-m]a lú dab u nu dab me-a gar-an*, ‘keep searching the planets and you will make a statement (whether) the man is to be treated or not’.
5. *a-dan-nu lú d[ab ana dù]-ka šá a ana a-bi sar ina bar ud 1 lú dab-bat*, ‘For you to calculate the usual time for treating a man when an heir deceives his father, you should treat the man in Nisan on the first day...’³⁹
13. *be-ma gu₄.ud u genna ina ki.gub lu ina dur lu ina mi-hir gub-iz lú.bi nu dab*, ‘if Mercury and Saturn stand in the same position (*mazzāzzu*) or line (*riksu*) or equivalent position (*mihir*), you should not treat the man.

The point about this text is that it predicts the usual time (*adannu*) when a man should or should not be treated, which in this particular case may not refer to illness but to other kinds of misfortune, such as betrayal by his own son. The predictions are based upon positions of various planets within the zodiac, which affect the client’s fortunes. Although we cannot consider this to be a case of *melothesia per se*, it is relevant because of the notion of *adannu*, which also occurs within therapeutic omens referring to the critical period of a disease. Second, it is clear from this text that the relative positioning of planets is the single factor determining the client’s fate, whether he is to be treated or not.

36 A 1670 (in the Oriental Institute Chicago) is joined to the top left hand corner, uninscribed on the rev. (col. iv); the join was made by Hermann Hunger and the complete text is to be edited by him, although he was kind enough to supply me with his own edition of this tablet.

37 Translation courtesy H. Stadhouders.

38 Medical diagnosis often establishes a link between illicit sex and illness (see Heeßel 2000: 219: 21–23), but in this case it looks like the man is a cuckold.

39 The heir harming his father fits the pattern of the earlier protasis.

VII Concluding Hypothesis

We return finally to our very first text above, the Uruk ‘Taxonomy’ (SBTU I 43). The question is whether SBTU I 43 could conceivably have been an early form of melothesia, dating from the time of Darius. The later ideas of Greek and Latin astrology are still a long way off, but they could have originated in this period, and the elements which we have in the Uruk text may have been a forerunner to later Greek astral medicine. Gundel suggests that Greeks themselves often falsified traditions about astronomy going back to sources in the fifth or sixth centuries BC but simply claimed that everything came from Homer and Hesiod.¹ The elements of the Uruk texts, ‘heart’, ‘mouth of the stomach’ and mouth, lungs, and kidneys, could all represent a first step in this direction, in which each of the diseases appears at least once within a 12-month cycle, but not necessarily every month.

The crucial point is that Babylonian scholars do not record (at least as far as we know) all aspects of astral medicine and magic, *because it was unnecessary to do so*. In other words, anyone familiar with astrology at the time would have known automatically which planets and which zodiac signs would govern the heart, throat, lungs, and kidneys, as explained in Ptolemy’s *Tetrabiblos*. Astrologers even today command such information by heart, without having to look it up. Therefore, any trained astrologer would have instantly been able to associate the organs mentioned in SBTU I 43 with the relevant astral bodies; he or she would have known that *Leo rules the heart, Taurus rules the throat, Jupiter (in Sagittarius) rules the lungs, and Mars (Scorpio) rules the kidneys*. Moreover, it is hardly coincidental that a similar sequence of zodiac signs exists as a quartile in Greek astrology, as recorded in Ptolemy’s *Tetrabiblos*; quartiles are groupings of four zodiac signs, in 90-degree relationships to each other (Ptolemy *Tetrabiblos* I.13). According to this system, the zodiac signs Taurus, Leo, Scorpio, and Aquarius comprise a quartile, which is quite similar to the sequence of zodiac signs in SBTU I 43 of Leo, Taurus, Sagittarius, and Scorpio;² three out of four zodiac signs fit this pattern. In fact, the deviations can be explained on several grounds. While Greek astrology has Jupiter ruling the lungs, we know from a Babylonian commentary that Jupiter rules the spleen rather than the lungs (Civil 1974: 336 and Reiner 1993: 21f.). If Saturn (in Aquarius) were to be attested in Babylonia as ruling the lungs, this would give us a sequence of Taurus, Leo, Aquarius, and Scorpio, and hence match the quartile in Ptolemy’s *Tetrabiblos*. It is also possible that the Babylonian quartile is not quite identical to the Greek scheme, since it appeared several centuries earlier than the zodiac order in Greek sources. Nevertheless, the important detail is that any worthy Uruk astrologer reading SBTU I 43 could have immediately associated

1 Gundel 1966: 72 and 80, suggesting that astral melothesia dates from c. 400 BC.

2 I.e., zodiac signs corresponding to the four regions of the body in SBTU I 43.

the proper zodiac signs with each part of the body, following the rules of melothesia, and SBTU I 43 then simply records which diseases were associated with melothesia, i.e. the parts of the body affected by zodiac signs. Such astrological information could have been given orally, without the necessity of composing a separate tablet to explain the obvious. This would also explain why our records are incomplete; each single tablet only records one aspect of the complex system of astral magic and medicine.

We have embarked on a roundabout course of inquiry, to determine whether a single so-far unique Uruk text, SBTU I 43, associating diseases with regions of the human anatomy, can be best explained from the perspective of medical theory or from further afield, astral medicine. To this end, we have explored possible parallels within Greek medicine and particularly the fragmentary records of the Methodists, whose rather traditional approach to medicine was both non-Hippocratic and similar to what we find in Babylonian medicine. Despite these important parallels, no real progress can be made on this front to explain the text of SBTU I 43.

A second line of inquiry was to explore astral magic, which is much better preserved than astral medicine from Babylonia, to see how the zodiac signs and zodiacal influences were thought to affect human behaviour and illnesses. What seems to emerge from these texts is that zodiac signs were considered to be crucial in determining when specific kinds of spells (often representing aggressive magic) were to be prescribed, and the specific periods of zodiacal influence rotated throughout the year (as a *dodekatemoria*).

The next piece of this large puzzle appears within Babylonian astral medical texts which assign a stone, plant, and wood to be used in amulets to specific zodiac signs, corresponding to specific calendrical dates; these *materia medica* were clearly designed to treat diseases, which often remain unmentioned in the texts. Furthermore, we also have a text which mentions illness associated with monthly cycles of the moon through zodiac signs, although the illness or illnesses are unspecified. Nevertheless, other fragmentary astral medical texts cite diseases by name associated with various zodiac signs, which again provide further pieces to the unfinished puzzle.

Finally, the few references to melothesia in Babylonian medicine are sufficient to indicate that zodiac signs could affect specific regions or parts of the body, perhaps as a rudimentary basis for the complex system of melothesia which develops in Hellenistic Greek and Latin sources. Moreover, descriptions of melothesia in Greek sources have some parallels in Babylonian medicine.

This leads us back to our original line of inquiry, how to explain the Uruk text SBTU I 43. The pieces of the puzzle are scattered, but may provide important clues. We know from Greek melothesia that both the zodiac and individual planets are thought capable of influencing parts of the human body as well as diseases associated with these same body parts. When seen from this perspective, the text of SBTU I 43 might render up its secrets, at least to some extent. If the four regions of the

body, the ‘heart’, ‘throat’, ‘lungs’ and ‘kidneys’ in SBTU I 43 represent parts of the body influenced by zodiac signs, then it is also possible to conjecture that the diseases associated with these bodily regions are likewise influenced by zodiac signs or individual planets.

Theoretically, one should eventually be able to reconstruct a complete table or grid showing a schedule of zodiac influences, when all relevant texts become known. The grid would include names of all stones, plants, wood, parts of the body and diseases influenced by particular zodiac signs,³ thereby showing which diseases can be treated by recipes containing relevant stones, plants, and wood, and under what times of the year. At the same time, one should also be able to know when magical spells are considered to be most effective. Whether this information was only known by heart by Babylonian scholars or committed to writing in antiquity is too early for us to tell, but what is clear is that we do not yet have the missing links, providing the diseases and remedies for each zodiacal period. The Uruk ‘taxonomy’ tablet, SBTU I 43, which turns out not to deal with disease taxonomy, might have been one piece of this large and complex puzzle, listing the diseases associated with the parts of the body associated with zodiacal influences.

³ This grid could look quite similar to that on the tablet BM 56605 (Heeßel 2008: 128f.), showing a table of zodiac signs, parts of the body, and various animals, although the combination is not clearly understood.

VIII Appendix: Modern Reflections

It is worth remembering, when translating ancient data dealing with technical subjects such as astral medicine, that what is being described are universal problems which have always been with us and persist until our own day. Although astrological influence today is hardly reckoned to have any scientific basis or relevance to drug therapy, there are nevertheless modern adherents to both astrology and herbal remedies who would adopt a different point of view. A good case in point is a company known as Bach Remedies, whose literature is widely distributed, offering herbal treatments for the following kinds of mental and physical states:

You are shy or feel anxious about something
You are anxious but can't say why
You feel an extreme terror about something
You fear you might lose control
You find yourself making the same mistakes
You feel down in the dumps and don't know why
Your talkativeness leads to loneliness
You feel impatient with the slow pace of people or things
You give up when things go wrong
You can't make your mind up
You feel overwhelmed by your many responsibilities
You feel guilty or blame yourself
You expect to fail and lack confidence in your skills
You feel unclean or dislike something about yourself
Sometimes you are a tyrant when you want to lead
You feel critical of or intolerant towards others
You feel wounded, spiteful, jealous, or want revenge

This selection from the Bach Remedies brochure features common types of anxieties and insecurities, the kinds of conditions for which today one might seek psychological counseling or psychiatric help. The Bach Remedies brochure groups the 'symptoms' into various categories: 'face your fears', 'live the day', 'reach out to others', 'know your own mind', 'find joy and hope', 'live and let live', and 'stand your ground'.

The recommended treatment for each of the modern Bach Remedy conditions is some form of herbal remedy, many of which are easily recognisable from the garden, such as cherry plum, honeysuckle, clematis, wild rose, mustard, olive, heather, impatiens, wild oat, willow, elm, pine, crabapple, pine, vervain, and Star of Bethlehem. Although not exactly like the various magical spells listed in BRM 4 and similar texts above, nevertheless the underlying human feelings of self-doubt and angst are common to both ancient and modern lists. In the ancient world, however, no recourse to psychotherapy was possible, and the only treatments available to a Babylonian patient were either incantations or therapeutic recipes, consisting mostly of plants and drugs to be administered in various forms

or attached to the person within an amulet. Although we cannot associate Akkadian plant names with most of the above modern garden herbs, nevertheless the common feature is that quite ordinary plants and herbs, also used for standard culinary purposes, could form the basis of a pharmacopeia to be used to treat psychological distress of different sorts.

The only thing missing from the Bach Remedy list, from an ancient perspective, is when such herbal remedies are best applied, and modern herbal medicine has no real answer to this question. Ancient physicians, however, working in the latter half of the first millennium BC, could find a ready answer in the form of astrology and astral medicine, which attempted to determine when incantations and recipes had an optimal effect on the condition to be treated, whether physical disease or mental problems. Because of the fragmentary nature of our ancient source material, we cannot always know how astrology was applied to medical recipes or even incantations, since this knowledge may have been orally transmitted and taught without necessarily being committed to writing. In a similar way, one could easily imagine a Bach Remedies brochure in the hands of a modern astrologer, intent to find the most propitious times when such herbal remedies could be used to cure the kind of psychological problems to which astrology is often addressed. There would be no record of such calculations, apart from those in the know.

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