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THE SIGN AND NAME FOR PLANET IN BABYLONIAN.

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Kugler begins his valuable work on Babylonian astronomy¹ with a discussion of the ordinary name for planet in Babylonian, namely, *bibbu*, and for which the ideographic designation is LU-BAT.² He

¹ "Sternkunde und Sterndienst in Babel" (Münster, 1907), I., pp. 7-9.

² That this combination is used for planet in general follows from such passages as (1) Thompson, "Reports of the Magicians and Astrologers," No. 112 Rev. 7; 236 B Rev. 4, where LU-BAT occurs with the plural sign to designate the planets in general; See also nos. 88 Obv. 4 and Rev. 1; 89 Rev. 6; 101 Obv. 5; 103 Obv. 6, Rev. 7; 163 Obv. 4; 167 Rev. 1; 172 Rev. 1 and 3; 175 Obv. 4; 200 Rev. 5; 216 Rev. 1; 218 Obv. 1; 218 A Obv. 5; 219 Obv. 1; 220 Obv. 1; 222 Obv. 1; 223 Obv. 1; 224 Obv. 3; 225 Obv. 4; 229 A Obv. 1, 2, 4; 232 Rev. 1; 234 Obv. 3; 234 A Rev. 1; 235 Obv. 11; 244 C Obv. 6, where LU-BAT is used for planet in general. It is to be noted, however, that the only planets which are regularly designated by means of LU-BAT are Mercury (LU-BAT GU-UD) and Saturn (LU-BAT SAG-UŠ). So in the famous list of planets IIR 48; 50-54 a-b and IIIR 57, No. 6, 65-67, and Thompson, *l. c.*, *passim*, though occasionally even in the case of these two planets the element LU-BAT is omitted, *e. g.*, Thompson, *l. c.*, Nos. 105 Obv. 8; 215 Obv. 1; 217 Obv. 1; 223 Obv. 4; 228 Obv. 1; (GU-UD) and 167 Rev. 4 (SAG-UŠ). Further references in Kugler, *l. c.*, p. 12. Occasionally also Mars is designated as LU-BAT DIR instead of (il) ZAL-BAT-(a-nu), so *e. g.*, Thompson No. 146 Rev. 4-6, and 195 Rev. 1-2, where in both cases a gloss LU-BAT DIR = (il) ZAL-BAT (-a-nu) furnishes the proof for the identification. In the later period (after c. 400 B. C.) Saturn is designated as GI and Mars as AN. See Kugler *l. c.*, p. 12, including the note on that page.

accepts the interpretation proposed as long ago as 1890 by Jensen³ for the ideographic compound as “frei weidendes, abseits weidendes Schaf.” This view rests on the identification of the first sign LU as “sheep,” while the second is taken in the sense of “to remove,”⁴ the combination thus expressing the movement of the planets, like sheep that wander away from the flock. That Jensen was right in his explanation of the first element as “sheep” follows from various considerations, among which the testimony of the lexicographical list IIR. 6, 4 c-d by itself, LU-BAT = *bi-ib-bu*, is decisive, since in the same list LU-IGI is explained as *lu-li-mu* (1. 8) “ram” or “bellwether” and LU is the common ideogram for *immcru* the ordinary term for “sheep.”⁵ In addition we have the equation IIR. 39, No. 5, 62 a-b (*il*) *bi-ib-bu* = (*il*) LU-BAT.

Jensen's explanation, however, of the second element is not satisfactory. In the first place the equation BAT = *nisû* (“to remove”) does not represent the most common value of the ideograph in question, for the various meanings of which it seems more reasonable to start from the fundamental notion of “coming to completion,”⁶ whence we have the further development in two directions: (1) “coming to an end” (*gamâru*, *katû*, Br. Nos. 1499, 1512, etc.), “closing up” (*sakku*, *sikêru* Meissner, Assy. Ideogramme, Nos. 869-872); “removing” (*nisû*, Br. No. 1525); “growing old” (*labâru*, Br. No. 1515); “die” (*mâtu*, etc., Br. Nos. 1517-19, 1527, 1533); “set at rest” (*pašâhu*, Br. No. 1528): (2) “Completion” in the sense of “fullness” and “vitality,” consequently, “life” (*balâtu*, Br. No. 1494); “being” (*bašû*, Br. No. 1495); “blood”

³ Kosmologie der Babylonier, p. 99. Hommel (Aufsätze und Abhandlungen p. 379) thinks that the designation *bibbu* which he takes as “ram” is an allusion to the “solar” character of the planets, but this is even less plausible than Jensen's explanation.

⁴ Cf. Brünnow, No. 1525 (BAT = *nisû*).

⁵ See Muss-Arnolt, Assy. Dict., p. 61 b. Note also that in the list IIR. 6, 5-8 we have the group *bi-ib-bu*, *a-tu-du* (“he-goat”), *šap-pa-ru* (“mountain-goat”) and *lu-li-mu*.

⁶ We must bear in mind as Thureau-Dangin, “Recherches sur l'Origine de l'Écriture cuneiforme,” No. 11, has pointed out, that two originally distinct signs have been confounded in BAT, so that all meanings associated, e. g., with *pitû* (Br. No. 1529) must be referred to No. 278 (p. 45) and explained accordingly.

(*dâmu*, Br. No. 1503), and "rule" (*bêlu*, etc., Br. No. 1496; Meissner, No. 856), as manifestations of vitality and power as well as "strong" (*ikdu*, Meissner, No. 851), "protect" (*emû*, Meissner, No. 853), etc. The idea of "removing" falls, therefore, in the category of a secondary or tertiary derivative from the fundamental value of the sign BAT. In the second place, it is rather a violent transition from the sense of "removing" to that of "pasturing by itself" and the like. Nor does the metaphor introduced in the Babylonian creation epic⁷ (Tablet VII., III, ed. King) where the stars, or rather the gods, are compared to sheep under the guidance of Marduk strengthen the conclusion that the planets are sheep that "pasture aside" from the stars in general, since the passage does not refer specifically to the planets. This passage, as well as the others adduced by Kugler (*l. c.*, p. 7), merely justifies the interpretation of the first element in LU-BAT as "sheep." For the second element we must start from the much more common meaning attaching to the sign in question, namely, "dead" (*mîtu*). The Babylonians themselves had this equation in mind when they explained LU-BAT as *muš-mit bu-lim*, "causing cattle to die" (VR, 46, No. 1, rev. 41) even though this explanation is to be regarded as a fanciful one.⁸

Taking the two signs as they stand, the simplest explanation is to interpret them as "dead sheep" in the sense of a sacrificial animal. To the question which now arises, what connection is there between the planets and "dead sheep," the divination texts, I venture to think, furnish a satisfactory answer.

II.

On the basis of recent researches,⁹ we must distinguish in Baby-

⁷ See Kugler, *l. c.*, p. 7.

⁸ Recognized as fanciful by Jensen, *Kosmologie*, p. 96. Kugler's attempt (*l. c.*) to reconcile this explanation with the interpretation offered in astrological texts whereby certain phenomena connected with the planets prognosticate death is very artificial and encounters a fatal objection from the consideration that the prognostication of death in one form or other, is a common interpretation of omens, indeed one of the commonest. See examples in Jastrow, "Religion Babyloniens und Assyriens," II., pp. 261, 298, 328, 329, 331, 333, 343, etc.

⁹ See Jastrow, *l. c.*, pp. 212 f., and various papers by the writer as, e. g., "Signs and Names of the Liver in Babylonian" (*Zeitschrift für Assyriologie*, XX., p. III f.), "The Liver in Divination and the Beginnings of Anatomy" (*University of Pennsylvania Medical Bulletin*, January, 1908).

Ionian-Assyrian methods of divining the future two classes: (1) what we may call voluntary divination, and (2) involuntary divination. The characteristic feature of voluntary divination lies in deliberately seeking out some object by means of which an answer to a specific question regarding the future or the outcome of an undertaking, a sickness or what-not is furnished. The signs furnished by the liver of an animal selected as a sacrifice belong to this category; likewise the observation of the flight of birds sent out for the purpose of securing omens, the throwing of arrows before the image of a deity and the like. Involuntary divination, on the other hand, is concerned with the attempt to interpret signs that *force* themselves on our notice, such as phenomena connected with the sun, moon, planets and stars, the movements of clouds, earthquakes and storms; the actions of animals—dogs, snakes, locusts, birds, etc., that one happens to encounter and all the unusual or significant happenings and accidents in human life, while dreams form a special subdivision in this class of involuntary divination. We might for the sake of convenience distinguish the signs furnished by voluntary divination as “omens” and those of involuntary divination as “portents,” but however we may distinguish them, the recognition of these two distinct classes is fundamental to an understanding of the general subject of divination.

Confining ourselves to Babylonia and Assyria, the chief method of voluntary divination was the inspection of the liver of the sacrificial animal and the chief method of involuntary divination, the observation of phenomena of the heavens. The correctness of this thesis is shown by the wide scope of these methods as revealed in the texts themselves.¹⁰ Both methods rest on a well-defined theory, the inspection of the liver on the basis of the primitive view that the liver was the seat of vitality, of the intellect, of both the higher and lower emotions—in short, the seat of the soul, as that term was popularly understood.¹¹ The deity in accepting the sacrificial animal identifies himself, as it were, with the animal, becomes

¹⁰ See Jastrow, *l. c.*, II., p. 209 f.—especially note 1 on p. 210. See parts II–12 of this work for “liver” omens and the forthcoming parts 13 and 14 for “astrological” omens.

¹¹ Jastrow, *l. c.*, pp. 213 f.

one with it and, accordingly, the liver of the animal reflects the mind and will of the god. If one can therefore read the liver correctly, one enters, as it were, into the workshop of the deity. The mind of the animal and the mind of the deity become for this specific occasion like two watches regulated to be in perfect accord.

The divining of the future through the observation of the phenomena in the heavens rests on the identification (or personification) of the gods with the sun, moon, planets and stars. The movements of these bodies, the changes in their aspects and the variations in their relationship to one another represent, as it were, the activity of the gods and since, according to the current theory, all happenings on earth are due to the gods or to one god or the other, a knowledge of what the activity in the heavens portends furnishes the means of foretelling what is to happen on earth. In time no doubt the theory was perfected, at least in the theological circles of Babylonia and Assyria, into a complete correspondence between occurrences on earth and the decision to bring about these occurrences by the manifested activity of the gods in the heavens; but even without the perfected theory, the repeated observation of the kind of happenings on earth coincident with conditions and phenomena in the heavens would have led to attaching importance to these conditions—both those of a usual order and those of a more or less unusual nature.

Of these two chief divisions of divination, it is evident that the inspection of the liver, connected as it is with a primitive view of that organ, can be accounted for as the distinct outgrowth of popular beliefs, whereas the divination through the phenomena of the heavens not only makes greater demands on scientific or pseudo-scientific knowledge but presupposes also a conception of world-philosophy which can hardly be termed popular. The personification of the sun and moon is, of course, an element in all primitive phases of belief, but the extension of such personification to the planets and stars belongs to a higher order of thought, since the bearings of those bodies on the life, happiness and fate of mankind are of a more remote and a more indirect character than in the case of the two luminaries; and when we come to the projection of practically all the activity of the gods on to the heavens, we have definitely passed beyond the intellectual range of popular fancy and

have entered the domain of distinctly theological speculation. If the views of the school associated with the names of Winckler and Jeremias, that the entire Babylonian religion is under the sway of "astral" conceptions, turn out to be correct, it will also have to be recognized that the underlying "Weltanschauung" is a product of the schools rather than an expression of popular notions.^{11a} I venture to think that one of the weaknesses of the "astral" theory, which has from other points of view so much in its favor, is this failure on the part of its promoters to recognize the essentially "learned" character of what according to them became the prevailing world-philosophy in the ancient Orient and which must for a long time at least have separated it sharply from the much lower plane of popular beliefs and fancies.

Be this as it may, the development of a method of divination, through elaborate observations of the movements and positions of sun, moon, planets and stars, it will be admitted, belongs to a later stage in the unfolding of religious rites than so primitive a method as the inspection of the liver of a sacrificial animal. The persistence of astrology among advanced cultures as in India and Persia and in western Europe¹² down to the threshold of modern times, whereas "liver" divination disappeared with advancing culture everywhere except among the Babylonians and Assyrians and the Greeks, Romans and Etruscans,^{12a} clinches the argument in favor of divination through the liver as the earlier and more primitive method. If this be admitted, it would be reasonable to find in the

^{11a} See also Comont, "Les Religions Orientales dans le Paganisme Romain" (Paris, 1907), p. 197.

¹² See the summary by Jeremias, "Das Alte Testament im Lichte des Orients" (1 ed.), p. 7, note 1.

^{12a} Roman divination is dependent upon Etruscan, while in the case of Greek divination it is still a question whether we are to assume direct influence from Babylonia or likewise through the mediation of the Etruscans. In either case we have only two systems of "liver" divination surviving among cultured nations—the Babylonian and the Etruscan; and further investigations may definitely confirm the view which on the surface seems plausible that "liver" divination among the Etruscans stands in some direct connection with Babylonian divination. If this be so, then the single cause to which the persistence of "liver" divination in certain quarters is to be ascribed is the elaboration of the complicated and ingenious system of interpretation which we owe to Babylonian priests. See Jastrow, II., pp. 215 and 320, note 3.

later method of divination through the heavens, traces of the earlier one, if not indeed some link directly connecting the two. Among the Etruscans we actually encounter such a link in the interesting circumstance that the famous "bronze liver" of Piacenza,¹³ prepared like the Babylonian clay model of a liver^{13a} as an object lesson for instruction in the temple schools, is divided off along the margin into sixteen regions, corresponding with the ordinary divisions of the heavens and that the forty Etruscan words with which the surface of the liver is covered are names of deities. Whether we accept Thulin's view,¹⁴ who sees a direct relationship between the enumeration of the gods and the list and arrangement given by Martianus Capella, or follow Körte,¹⁵ in either case the "liver" reproduces the recognized divisions of the heavens and through this combination the liver becomes, as it were, a microcosm reflecting the macrocosm. The much-discussed problem^{15a} whether this remarkable object dating from about the third century B. C. is a "liver" or, as was first supposed, a "templum," thus resolves itself into the thesis that it is both. To use the words of Körte in his paper in summarizing the results of twenty-five years of study of this object:¹⁶

"The liver as the seat of life according to the view of antiquity appears as a miniature reproduction of the universe. As the latter, so the liver is divided into a right and left half,¹⁷ a day division and a night division, the line of division corresponding to the line dividing the universe into east and west. As the vault of heaven, so the edge of the liver is divided into 16 regions in which the gods who furnish portents dwell."

¹³ See Körte, "Die Bronzeleber von Piacenza" (*Mitteil. d. Kaiserl. Deutsch. Archæolog.-Instituts.*, XX., pp. 348-379), the latest and probably final word on the subject.

^{13a} Cuneiform Texts, VI., Pl. 1-2 and photograph.

¹⁴ "Die Götter des Martianus Capella und der Bronzeleber von Piacenza" (Giessen, 1906), pp. 31-59.

¹⁵ Körte, *l. c.*, p. 367 f.

^{15a} See the references in Körte, p. 349 f., to which Nicola Terzaghi, "La piu recente Interpretazione dei Mundus-Templum di Piacenza" (*Bolletino Storico Piacentino*, 1906, Maggio-Giugno) is to be added.

¹⁶ Körte, *l. c.*, p. 362.

¹⁷ Referring to the band on the reverse of the object. See the illustration in Körte's article, p. 356.

III.

If, therefore, among the Etruscans we find the unmistakable proof of a direct link between the two classes of divination, we should be prepared to find a similar association in Babylonia and Assyria. I believe that the ordinary name and sign for planet in Babylonia points in this direction. While already in early days we find various animals and all kinds of products dedicated as offerings to the gods,¹⁸ for purposes of divination the only animal set aside was the sheep. This follows not only from the fact that the famous clay model of a liver found near Bagdad is that of a sheep,¹⁹ but from the specific references to sheep in "liver" divination texts *and to no other animal*.²⁰ The sheep thus becomes the animal of divination *par excellence*, and we can well suppose that the word itself should come to be used as synonymous with divination. Such a usage would be paralleled by the extension of the term *auspicium* in Latin, which from being an omen derived through "bird observation" was applied to any kind of an omen or portent, so that an inspection

¹⁸ See Thureau-Dangin, "Die Sumerischen und Akkadischen Königsinschriften" (Leipzig, 1907), pp. 16, 80, 84, 86, 88, 124, etc. I cannot here enter into a full discussion of the nature of sacrifices among the Babylonians and Assyrians but it may be proper to point out that in an elaborate ritual controlled by an extended priestly organization we must sharply differentiate between (1) offerings that constitute part of the income of the temples, (2) voluntary gifts, (3) sacrifices offered in connection with purification or expiatory rites and (4) sacrifices offered directly to and for the god. So far as I can see sacrifices of the latter kind were brought only when an answer to a specific question was desired, so that it would appear that divination forms the starting point for the development of the whole idea of sacrifice in the proper sense in Babylonia.

¹⁹ CT, VI., Pl. 1. See Jastrow, *l. c.*, II., p. 218 note 1, where a reference should have been given to Stieda, "Ueber die aeltesten bildlichen Darstellungen der Leber" (Bonnet-Merkel, Anatomische Hefte XV., p. 697), who shows that it is (as also in the case of the bronze liver of Piacenza) the liver of a sheep and not of a goat—as had been supposed by some scholars.

²⁰ *E. g.*, CT, XX., I, 1—in the opening line of the first tablet of a series dealing with "liver" divination; also Boissier, "Documents Assyriens relatifs aux Présages," p. 97, 11; 212, 27; also in the "omen" text CT., IV., Pl. 34, 9; in the omen report of the Cassite period (Clay, *Cassite Archives*, XIV., Pl. 4, Obv. 10, and lastly the constant mention of the "sheep" in the omens attached to Knudtzon, *Assyr. Gebete an den Sonnengott*. Note also the expression *bêl immeri* "owner of the sheep" (CT, XX., 33, 93 and Boissier, Documents, p. 96, 13). The addition of NITA to LU shows that a "male" sheep was selected for the purpose.

of the liver of an animal for the purpose of securing an "omen" was also designated as an *auspicium*.²¹ Similarly, in Greek the word *ὄρνις*, "bird," is used for any kind of an omen and my colleague, Professor Lamberton, has kindly called my attention to the interesting passage in the *Birds of Aristophanes* in which this usage finds a striking illustration. In the "Parabasis," after indicating all the blessings that accrue to men from the birds, the chorus turns to divination and continues as follows:²²

"You consider all things a bird, whatever gives a decision through divination. With you a word is a 'bird,' and you call a sneeze a 'bird,' a sound a 'bird,' a sudden meeting a 'bird,' and an ass a 'bird.' Are we not clearly a prophetic Apollo to you?"

The sheep, being the animal of divination *par excellence* in Babylonia, would in the same way become the Babylonian term for an "auspicium" in general. If we assume that this use of the term lurks in the application of "sheep" as the designation of a planet, a satisfactory explanation can be found for the addition of the sign BAT to the sign for "sheep" which has more specifically the same force in the combination LU-BAT as in the combination IIR. 27, No. 2, Obv. 46, c-d, UR-BAT, *i. e.*, "dead liver" in the sense of the liver of a sacrificial lamb and hence as the equivalent of *ter-tu ša ha-še-e*, "omen through the liver."²³

The combination LU-BAT thus expresses more precisely than LU alone the association of an "omen" with a "sheep," and we would be justified in rendering the combination as "sheep omen," and then through the association of ideas above pointed out, as a general term for "omen."²⁴

²¹ See Pauly-Wissowa, "Real-Encyclopaedie," (new ed.), II., p. 2580 f.

²² Ll. 719-22 (ed. Van Leeuwen, Leiden, 1893). Dr. R. G. Kent, of the University of Penna., also calls my attention to the interesting passage in Xenophon's *Anabasis* (III, 2, 9) where a "sneeze" as a good sign is spoken of as *ὄρνις* or "bird" in the general sense of an omen.

²³ On the word *hašû* for liver which may have been used in earlier days in place of *kabittu* see Jastrow, *l. c.*, II., p. 213, note 1, and p. 276, note 7.

²⁴ It is to be noted that at least in one passage in a "liver divination" the sign BAT is added to LU-NITA "male sheep," namely Boissier, *Doc. Assy.*, p. 212, 27, ultu libbi LU-NITA BAT (u) têtû (written UR-BAT as in the passage IIR 27) tu-še-la-a, *i. e.*, "Out of a dead sheep thou shalt bring forth an omen," where the phonetic complement *u* added to BAT suggests the reading *mîtu* and where "dead sheep" is clearly the equivalent of "sacrificial sheep" or "omen sheep."

Now what was the purpose for which the movements of the planets were observed by the Babylonians? What other than to secure through such observation, signs by means of which the future could be divined? The planets were, primarily, regarded as "omens" and since, as has been above set forth, divination through the heavens follows in point of time divination through the liver of the sheep, we would expect conceptions and terms used in "liver" divination to be transferred to astrological divination. The use of the term "sheep" as the designation of the planets observed to secure omens, precisely as omens were furnished by means of sacrificial sheep, I, accordingly, take as an illustration of this dependence of astrology upon hepatoscopy, forming, as it were, the connecting link between the two. It may be noted in this connection that the interpretations given in astrological texts to signs observed are paralleled in the "liver" divination texts,²⁵ and there can be little doubt that they are transferred bodily from the latter and earlier class of texts to the former.

The explanation here proposed, according to which LU-BAT as applied to the planets conveys the notion that they were regarded as "omens" or means of securing omens, throws a new light upon the statement in Diodorus²⁶ that the Babylonians commonly called the five planets ἐρμηνεῖς, *i. e.*, "interpreters," adding as a reason for the designation that the planets were regarded as "interpreting" for mankind the intention of the gods. Bouché-Leclercq ("L'Astrologie Grecque," p. 40, note 3), recognizes that the term "interpreters" does not embody a Greek tradition, but the notice in Diodorus, so far from being, as he supposes, of "doubtful value," reflects the perfectly correct view that the planets were used as "omens"²⁷ and the term "interpreters" is evidently an attempt to

²⁵ The interpretations in the "astrological" texts are in fact practically identical with those in "liver" divination, furnishing the same references to public events and differing merely in containing more references to crops, to prices of food and to famine. Cf., *e. g.*, Craig, "Astrolog.-Astronom. texts," Pl. 2, 3; 20, 22 with CT, XX., 26, Obv. 3; Boissier, Doc. Assyri., 7, 21; Craig 20, 31 with CT, XX., 32, 54; 99, 100 (where *ilu* = Nergal). Cf. Jastrow, *l. c.*, II., p. 342, note 11).

²⁶ Bibl. Histor., Book II. (ed. Dindorf), 30, 4.

²⁷ To be sure, what Diodorus says in addition why the planets and not also the other stars were regarded as "interpreters" is rather beside the

convey this idea. The term may, therefore, be regarded as a rendering of the Babylonian designation "sheep omen" in the general sense above pointed out.

The objection may be raised at this point, why should not the moon and sun, as playing an equally if not more important rôle in divination lore, likewise have been designated as LU-BAT in the generic sense of an "omen" or "auspiciu"? The answer is obvious. Sun and moon cults are such ingredient parts of early forms of religion everywhere and the dependence of human fortune, life, health and welfare upon these two luminaries is so direct that other factors were at work in the development of conceptions regarding these two deities than merely the observation of their movements and changing relationship to one another as a basis for determining what these deities were preparing for mankind. Their cult precedes their introduction into divination texts, whereas the planets were observed solely for purposes of divination. Since the influence of the latter on human life was a matter of speculation rather than of direct experience, the basic and primary motive for noting their movements was in connection with the view that, as representing gods, their movements indicated the activity of these gods in preparing the events that were to happen on earth. The old and long established names and designations for sun and moon were accordingly retained, whereas the new term chosen for the planets was ordinarily restricted to them. Occasionally, however, so, *e. g.*, III. R, 57, No. 6, 65-67, sun, moon and the five planets are summarized as seven LU-BAT (pl.).

That the association of ideas did not, on the other hand, lead to the extension of LU-BAT to the stars in general constitutes no valid objection to the thesis here propounded. In the divination texts the number of stars introduced, outside of the planets, is not large and their role is quite secondary,²⁸ and it is not until we reach the period when astronomy becomes more definitely differentiated as a science from astrology, when calculations are made and "planet" tables are mark; and shows that he no longer fully understood the force of the Babylonian designation which he here faithfully reproduces.

²⁸ In astrological texts proper as distinguished from astronomical tablets, the stars mentioned are chiefly certain ones belonging to the constellations of the ecliptic and which are frequently introduced as guides and indications for fixing the position of the planets, rather than as omens.

prepared independently of divination, that star-lore assumes larger dimensions. Besides, in securing omens the positions of the stars constitute a minor factor and are of value chiefly, if not exclusively, in relationship to phenomena connected with the planets—a condition which is specially applicable to the relationship between the planets and the constellations of the zodiac.

Attention has already been called to the fact that although LU-BAT is commonly applied to any planet, there are only two planets—Mercury and Saturn—that regularly appear written with this compound ideograph,²⁹ the former being designated as LU-BAT GU-UD,³⁰ the latter as LU-BAT SAG-UŠ, while Mars occasionally appears as LU-BAT DIR.³¹ The other planets appear in the lists IIR, 48, 48–54 ab and IIIR, 57, No. 6, 65–67, as (il) ŠUL-PA-UD-DU-A (Jupiter) (il) DIL-BAT (Venus) and ZAL-BAT-a-nu (Mars), with MUL = *kakkabu* interchanging with AN = *ilu*. Moreover, the phonetic reading bi-ib-bu in the latter list for LU-BAT GU-UD points to Mercury as being the planet *par excellence*. Why should Mercury have been assigned to this preëminent position among the planets? It has been suggested to me³² that the position of Mercury nearest to the sun may have led to its being looked upon as the chief planet for purposes of divination and it is perhaps not without significance that in Greek astrology Mercury, frequently designated as *στῆλβων*, “shining,”³³ is closely associated with the sun, and indeed at times identified with Apollo.³⁴ Certainly, the peculiar conceptions connected with Mercury in the astrology of the Greeks and of other nations—whose dependence upon Babylonian beliefs and speculations is generally admitted—sharply separate that planet from his fellows. While the others, *e. g.*, are conceived as masculine or feminine, Mercury, and Mercury alone, is double sexed.³⁵ Qualities are heaped upon Mercury in profusion,

²⁹ See above, p. 141, note 2.

³⁰ Generally read GUD-UD but the reading GU-UD seems preferable.

³¹ See above, p. 141, note 2.

³² By my friend, Mr. H. H. Furness, Jr., whose suggestion commended itself to my colleague, Professor C. L. Doolittle, Director of the Flower Observatory (University of Pennsylvania).

³³ Bouché-Leclercq, “L’Astrologie Grecque,” pp. 66 and 100.

³⁴ *Ibid.*, p. 100, note 5.

³⁵ *Ibid.*, p. 102. So also in modern astrology. See Ellen H. Bennett, “Astrology” (New York, 1897), p. 98.

in contradistinction to the other planets to whom generally a single dominant trait is given. Intelligence, thought, feeling, eloquence, artistic spirit are all associated with Mercury,³⁶ which thus becomes, as it were, the "soul" among the planets and it will not seem far-fetched to see in the fancy which makes Mercury the planet of revelation and of language³⁷ a trace of primitive views regarding the seat of vitality. In accord with this, we actually find Mercury assigned to the liver³⁸ as the organ of revelation, though in deference to later views of the liver as the seat of the affections specifically—and not of *all* intellectual life and of *all* emotions—Venus is sometimes identified with this organ.³⁹ To be sure, such associations of ideas have not as yet been encountered in Babylonian texts and therefore a certain reserve is called for. On the other hand, the dependence of Greek astrology on Babylonian conceptions, fancies and prototypes is so evident at every turn⁴⁰ that we are justified in assuming a large measure of identity between the two systems of divination, just as, on the other hand, modern astrology is full of conceits and notions that can be paralleled in ancient Greece, India and Persia.

Another factor that may have led to assigning to Mercury a specially prominent place among the planets for purposes of divination is the circumstance that by virtue of its close position to the sun and its small size, it makes its circuit in the short space of twelve weeks and four days, or 87.97 solar days. Hence, since the basis of divination in the case of the planets is largely bound up with their relative position to the sun—upper conjunction, ascent, culmination, standstill, descent, lower conjunction⁴¹—Mercury would present a far larger proportion of changes in any given time than any other planet. In the case of frequent observations, Mercury would thus play a more prominent part than the other planets whose movements except for periods of some duration would furnish less of moment

³⁶ Bouché-Leclercq, p. 101; Bennett, p. 99.

³⁷ Bouché-Leclercq, pp. 312, 321, 323.

³⁸ *Ibid.*, p. 312 and 323.

³⁹ *Ibid.*, p. 321.

⁴⁰ See Bouché-Leclercq's summary, pp. 70-71.

⁴¹ See the valuable discussion in Kugler, *l. c.*, p. 20 f., of the Babylonian equivalents for those terms.

to the observer, dependent upon the naked eye. But whatever the reasons, we can only conclude from the fact that Mercury is the "sheep" *par excellence* that it was at one time singled out as *the* planet of revelation and that, therefore, it was in all probability the first planet whose movements were observed for the purpose of securing through them a means of determining what events the gods were preparing to take place on earth.

The designation of Saturn as *lulimu*, "ram," I am inclined to regard of secondary origin, that is to say, dependent upon the application of *bi-ib-bu* to Mercury—the latter term taken no longer in the sense of an "omen" but already as a specific and distinguishing designation. As companion piece, therefore, to Mercury as a "sheep," Saturn was called a "ram" just as the designation of the seven Maši-stars by the determinative LU ("sheep")⁴² is a secondary extension from LU-BAT, limited originally to the planets. Saturn presents in almost every respect a contrast to Mercury. It is infinitely larger⁴³ in bulk, at a great distance from the sun, the most regular of the planets and the slowest in its motion, taking 10,759 days or 29.46 years to pass around the sun. In Greek astrology a preëminent position is accorded to Saturn,⁴⁴ which is expressed, for example, by making the planet the head and "brain" of the planetary world—reflecting the later view which placed the seat of the soul in the head,⁴⁵ while the association of Saturn with Mercury

⁴² Kugler, *l. c.*, p. 7.

⁴³ Jupiter alone is larger.

⁴⁴ Bouché-Leclercq, *l. c.*, p. 94 f. It is to be noted that Saturn is in Babylonian astrology called "the star of the sun" (as Diodorus, II., 30, also says)—which reminds one that Mercury (see above, p. 152) was identified with the sun in Greek astrology; the same appears to have been the case with Saturn. See Kugler, *l. c.*, p. 8.

⁴⁵ *Ibid.*, p. 95. The soul was placed successively (a) in the liver, (b) in the heart and (c) in the brain. "Liver" divination is the outward expression corresponding to the first stage. The addition of the "heart" (and then of other organs) to the "liver" in the examination of the sacrificial animal—as among the Romans—is a concession to the second stage, while phrenology is an expression—outside of the official cult—of the third stage. See Jastrow, "Divination through the Liver and the Beginnings of Anatomy" (*University of Pennsylvania Medical Bulletin*, January, 1907). In a special paper on "The Liver as the Seat of the Soul" I propose to treat in detail of these successive views.

crops out in the belief which makes the history of the world begin with the reign of Saturn and end with that of Mercury.⁴⁶ The prominence of Saturn in Babylonian-Assyrian astrological texts is in accord with this association with Mercury as a second LU-BAT *par excellence*.^{46a}

In modern astrology Saturn continues to play a particularly conspicuous rôle⁴⁷—all of which points to its having been the first planet to become, by the law of contrasts, associated with the original “source” of divination among the planets—Mercury.

Lastly, a word regarding the ideographic designations of these two “sheep”—Mercury and Saturn. Kugler,⁴⁸ following in part Jensen,⁴⁹ proposes to take the element GU-UD in LU-BAT GU-UD as *ḫarradu ša urri*,⁵⁰ “warrior of the light,” because shortly after his appearance in the East day triumphs over night. The explanation seems forced and it is hardly likely that a circumstance like this should have suggested a name for a planet. In view of the fact that Mercury and Saturn are the two planets more particularly designated as LU-BAT, it is more reasonable to see in LU-BAT GU-UD and LU-BAT SAG-UŠ descriptions of characteristic features. For SAG-UŠ, fortunately, the equivalent, *ka-a-ma-nu*,⁵¹ has been definitely ascertained and the meaning “regular” is also beyond doubt. The name was clearly given to the planet because of the slow and regular motion which is its distinguishing feature. Mercury, on the

⁴⁶ Bouché-Leclercq, pp. 187, 498 f.

^{46a} The statement of Diodorus (*l. c.*) that Saturn was regarded by the Babylonians as the most important for purposes of divination may correctly reflect a later stage when Saturn assumed the preëminent place once occupied by Mercury.

⁴⁷ Bennet, *l. c.*, p. 93.

⁴⁸ Kugler, *l. c.*, p. 10. On p. 218 he prefers the rendering “full of light” (as Hommel, *Aufsätze*, p. 381, does) but the two ideas (“full” in the sense of “strong” and “warrior”) are correlated.

⁴⁹ “Kosmologie,” p. 131, who takes GUD-UD as a single term = *ḫarradu* “warrior” (Br. 5742). It is always to be born in mind that we are to substitute Mercury for Mars throughout Jensen’s volume—now that it has been definitely ascertained that GUD-UD = Mercury and not Mars and ZAL-BAT (a-nu) = *muštarru mutānu* = Mars not Mercury.

⁵⁰ GUD = *ḫarradu* and UD = *urru* (Br. 7798)—though *ūmu* = “day” would suggest itself as more probable.

⁵¹ See Jensen, *l. c.*, p. 114. Cf. כִּיּוֹן in Amos 5, 26.

other hand, is marked by its rapid and irregular course and I accordingly propose the equation GU-UD = *šahâtu*—a common value of the compound ideogram in “liver” divination texts in the sense of “hinder, check, restrain.”⁵²

Assuming the adjective formation *šahtu* from this stem, the “checked” one as the designation of this planet would form a companion piece to *kaimanu*, the “regular” one. In contrast to *kaimanu* “regular,” the designation *šahtu* would, naturally, convey the notion of a body checked and restrained and therefore “irregular” in its motion.⁵³

⁵² Cf. Jastrow, II., p. 366, note 9.

⁵³ The gloss in Hesychius according to which *βελέβατος* is in Babylonian the “fire” star cannot be explained as Jensen “Kosmologie,” p. 97, proposes, since he starts from the false assumption—since abandoned by him—that *bibbu*—the LU-BAT *par excellence* is Mars, whereas it is Mercury. That *βελέβατος* designates Mars is however no doubt correct and since the common ideographic designation for Mars is ZAL-BAT—the addition of a-nu being a phonetic complement to suggest the phonetic reading *muštabarru mutânu*, “the one satiated with death”—the correction of *βελέβατος* to *ζελέβατος* suggests itself as a simple solution of the problem.



Jastrow, Morris. 1908. "The Sign and Name for Planet in Babylonian."
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