

Written in the Stars: On the Origins of Writing

“The association of the heavenly bodies with certain deities seems to go back to the very beginnings of Mesopotamian civilization and persists as well to the end.”¹

“Such is the nature of Sumerian, of course, that even apparently straightforward names are open to multiple interpretations.”²

“It is unfortunate that the decipherment of the earliest writing in Sumer has not yet reached the point that the formation of the whole system can be understood. The pictograms for ‘ear of barley’, ‘fish’, ‘rising-sun, =day’, etc., which have long adorned the pages of popular books on the origin of writing, still leave many presumed pictograms unexplained, and the development of many phonetic values of signs still requires explanation. Indeed, it is not completely certain that the Uruk period tablets were written by scribes who spoke Sumerian, and the existence of the so-called UD.GAL.NUN system of writing containing some values that seem to be remnants of a writing system other than that known to us, arouses a suspicion that the system known and mostly understood by us may have been only one of several in early times.”³

Ancient Mesopotamia is justly renowned as the birthplace of astronomical science. Given this historical fact, Sumerian and Akkadian terminology describing the respective celestial bodies has long formed an important database for researchers investigating the possible astronomical roots of ancient religion and mythology. While conventional scholarship would have us believe that everything is relatively straightforward with regards to the stellar terminology employed in the early Sumerian script, the real story is dramatically different and much more interesting. In the present essay, we will examine a number of early logograms and words for clues to the recent history of the solar system.

According to current best estimates, writing is believed to have originated in the latter half of the fourth millennium BCE (circa 3500-3100), most likely in the ancient Near East and Egypt. At Uruk, an early urban center in Southern Mesopotamia, the rudimentary beginnings of an early form of writing were unearthed in 1912. It is the

¹ F. Rochberg, “Heaven and Earth,” in S. Noegel et al eds., *Prayer, Magic, and the Stars in the Ancient and Late Antique World* (University Park, 2003), p. 174.

² A. George, *House Most High* (Winona Lake, 1993), p. 62.

³ W. Lambert, “Babylonian linguistics,” in K. van Lerberghe & G. Voet eds., *Languages and Cultures in Contact* (Leuven, 1999), p. 217.

proto-script from Uruk that later gave rise to the full-blown writing system of the early Sumerians.⁴

The earliest script of the Sumerians, like those from ancient Egypt, China, and Mesoamerica, was pictographic in nature.⁵ In such systems each particular graph or logogram originally represented a single word or concept, typically a familiar object in the natural world (The Sumerian script is known to have had slightly more than 900 such pictographic symbols). In most cases the natural referent is easily recognizable; i.e., the word for “head” or “foot/to walk” is simply a picture of a human head or foot. In other cases, however, there remains some uncertainty about the precise nature of the natural referent in question. Consider the pictograph depicted in figure one, transcribed UD or u₄, and denoting “sun,” “day,” and “light.”

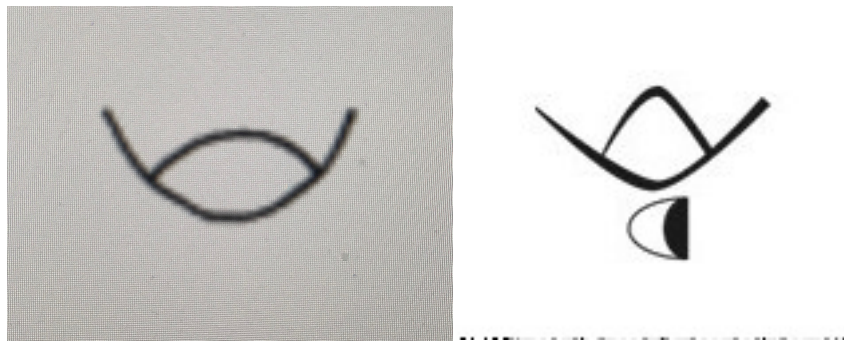


Figure one

It is obvious at once that this sign hardly represents a straightforward depiction of the familiar Sun. Indeed, leading Sumerologists are divided over whether it represents the sun rising over a twin-peaked hillock or the waxing moon! Witness Kurt Jaritz’s commentary on this glyph in his dictionary of Sumerian pictographs:

⁴ D. Schmandt-Besserat, *When Writing Met Art* (Austin, 2007); J. Cooper, “Babylonian Beginnings: The Origin of the Cuneiform Writing System in Comparative Perspective,” in S. Houston ed., *The First Writing: Script Invention as History and Process* (Cambridge, 2004), pp. 71-99.

⁵ N. Postgate, T. Wang & T. Wilkinson, “The Evidence for Early Writing: Utilitarian or Ceremonial?” *Antiquity* 69 (1995), pp. 459-480.

“The pictograph doubtless has reference to the sun rising—between hills (?)—hardly, however, the waxing crescent [as proposed by Deimel in SL II: 722] (because of the meanings), hence also the root meaning ‘sun, day, bright light, white’. The semasiological way to the storm is not recognizable.”⁶

As noted by Jaritz, the logogram UD denotes “storm” as well as “sun,” a puzzling extension of meaning if the present Sun served as the original celestial referent. To make matters even more perplexing, when translating early Sumerian texts scholars must deduce which one of these two radically different meanings is best suited for a particular passage based upon its context in the document in question. For example, if the subject is the glorious epiphany of Utu at daybreak, a translation “sun/light/day” is typically offered: “When dawn was breaking, when the horizon became bright, when the little birds, at the break of dawn, began to clamour, when Utu had left his bedchamber...”⁷ Yet if a cosmic disaster involving thunder and flooding is being described, a translation akin to “storm” is substituted. The Sumerian Deluge story, for example, describes the extraordinary cataclysm as UD-like:

“The devastating flood was leveling (everything). Like a great storm it roared over the earth, who could escape it?”⁸

While translating these two particular passages might seem relatively straightforward, complications arise when Sumerian hymns portray the sun god’s epiphany as accompanied by thunder and lightning.⁹ Consider the following passage celebrating

⁶ K. Jaritz, *Schriftarchaeologie der altmesopotamischen Kultur* (Graz, 1967), p. 116. “Das Ub. ist zweifellos die—zwischen Hügeln (?)—aufgehende Sonne, kaum (wegen der Bedeutungen) hingegen die wachsende Mondsichel [as proposed by Deimel in SL II: 722], daher auch die Gb. ‘Sonne > Tag, hell licht weiß’. Der semasiologische Weg zu Sturm ist nicht erkennbar.” Translation courtesy of Rens van der Sluijs.

⁷ Lines 47-49 from “Gilgamesh, Enkidu and the nether world,” *ETCSL*.

⁸ Lines 107-108 as translated in Y.S. Chen, *The Primeval Flood Catastrophe* (Oxford, 2013), p. 60.

⁹ C. Woods, “At the Edge of the World: Cosmological Conceptions of the Eastern Horizon in Mesopotamia,” *JANER* 9:2 (2009), p. 186 observes: “In the cosmological conception...the Sun-god, Utu-Šamaš, scales the eastern mountains in his daily ascent and emerges through the gates of heaven in a thunderous event that ushers in a new day.”

Utu: “The lord, the son of Ningal...thunders over the mountains like a storm [ud-gin₇].”¹⁰ Equally disconcerting are other early hymns in which the luminosity of the ancient sun-god is likened to lightning: “Utu, your sacred year shining brightly from the horizon like lightning flashes [d^dutu an-ur₂-ta gir₂-gir₂-gin₇, mu-ku₃-zu kar₂-kar₂].”¹¹ Far from being isolated examples of figurative language run amok, Sumerian descriptions of the prototypical “sunrise” routinely emphasize its tumultuous nature: “As my king [Utu] comes forth, the heavens tremble before him and the earth shakes before him.”¹² Now I ask: Does this sound like a realistic description of the modern experience of sunrise? In what sense is the Sun’s appearance along the eastern horizon ever accompanied by the shaking of heaven and earth? More to the point of the present monograph: How, upon reading such passages, are we to determine which of the two senses of UD, “sun” or “storm,” best suits the intended meaning of the hymn’s author?¹³

Sumerian hymns describing the so-called Storm-god are equally problematic. In ancient Mesopotamia, as throughout the ancient Near East in general, the Storm-god was denoted simply with the pictograph UD, or u₄.¹⁴ This circumstance alone hints at the possibility that the archaic “sun-god” and “Storm-god” originally shared a fundamental affinity. The fact that Akkadian *umu* and Hebrew *yôm* share the same dual meanings of “sun/day” and “storm” points to the same conclusion.¹⁵

¹⁰ Line 28 from “A hymn to Utu (Utu B),” *ETCSL*.

¹¹ J. Polonsky, *The Rise of the Sun God and the Determination of Destiny in Ancient Mesopotamia* (2002), p. 187, citing Ni. 1094 I 2-4. Note: This is a dissertation presented to the University of Pennsylvania.

¹² Lines 13-14 from “A hymn to Utu (Utu B),” in J. Black et al, *The Electronic Text Corpus of Sumerian Literature* (<http://www-etcs1.orient.ox.ac.uk/>) (Oxford, 1998). Hereafter *ETCSL*.

¹³ On the many difficulties attending the translation of the phrase u₄-gal, see the discussion in Å. Sjöberg, “A New Shulgi Hymn,” in Y. Sefati et al eds., *An Experienced Scribe Who Neglects Nothing* (Bethesda, 2005), p. 297.

¹⁴ A. Green, *The Storm-God in the Ancient Near East* (Winona Lake, 2003), pp. 131ff.

¹⁵ M. Saebo, “yôm,” in G. Botterweck, H. Ringgren & H. Fabry eds., *Theological Dictionary of the Old Testament, Vol. 6* (Stuttgart, 1990), p. 13. See also P. Steinkeller, “On Stars and Men,” in A. Gianto ed., *Biblical and Oriental Essays in Memory of William L. Moran* (Jerusalem, 2005), p. 45.

The question arises as to why the Sumerian scribes would have elected to employ the same logogram to describe what, to the modern mind, are two diametrically opposed meteorological phenomena—i.e., the Sun and the Storm? A satisfactory answer to this question is not only a priority, it has the potential to revolutionize our understanding of the celestial basis of the Sumerian pantheon and, in the process, shed some much-needed light on the solar system's recent history.

A decisive clue is provided by Mesopotamian artworks, wherein images of “sun-like” objects are commonplace in the earliest periods (4000-2000 BCE). A representative example is depicted in figure two, wherein the ancient sun is depicted as a circular disc with an eight-rayed star inscribed in its center.¹⁶



Figure two

Now consider the image depicted in figure three: It shows what can best be described as a thunderbolt-like object set within the center of the solar disc.¹⁷ The fact that the thunderbolt form is set within an upturned crescent, as is the eight-rayed star in figure two, attests to the probable fundamental affinity between the two images.

¹⁶ Adapted from B. Teissier, *Egyptian Iconography on Syro-Palestinian Cylinder Seals of the Middle Bronze Age* (Fribourg, 1996), figure 111.

¹⁷ *Ibid.*, figure 107. Figure 113 offers an analogous image.



Figure three

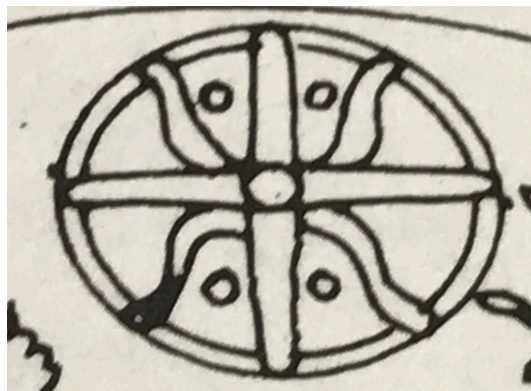


Figure four

A very similar image is represented in figure four.¹⁸ This particular image depicts a four-pointed star set within the center of the so-called solar disc, with four wavy streamers emanating outwards. Especially noteworthy here are the four dots that accompany the thunderbolt-like object set within the center of the solar disc.¹⁹

¹⁸ Figure 12 in M. Mellink, "Rivers in Anatolian Art?," in D. Meijer ed., *Natural Phenomena* (Leiden, 1992), p. 211.

¹⁹ According to Anthony Peratt, "Characteristics for the Occurrence of a High-Current, Z-Pinch Aurora as Recorded in Antiquity," *IEEE Transactions on Plasma Science* 31:6 (2003), pp. 1192-1214 the dots in question likely represent telltale signs of synchrotron radiation, a hypothesis he has supported through high-density discharge experiments at Los Alamos lab in New Mexico.

Figure five, finally, offers a classic example of the Storm-god hurling his thunderbolt/lightning from ancient Assyria.²⁰ The resemblance of the god's three-pronged thunderbolt to the three-pronged form set in the center of the solar orb is evident at once.²¹



Figure five

How, apart from artistic license, are we to understand this peculiar conflation of solar and thunderbolt imagery? From our vantage point there is only one logical explanation for this evidently purposeful superimposition of meteorological imagery: The ancient sun-god was fundamentally identical to the ancient Storm-god and, as such, had nothing whatsoever to do with the current solar orb, however this fact is to be explained from the vantage point of modern astronomy.

Enlil as Exemplar

The Sumerian god Enlil offers a classic example of the Storm-god in many respects.²² If, in the *Song of the Hoe*, Enlil is described as the Prime Mover behind the

²⁰ Adapted from figure 73 in A. Vanel, *L'icongraphie du dieu de l'orage* (Paris, 1965), p. 185.

²¹ See also the discussion in D. Talbott & W. Thornhill, *Thunderbolts of the Gods* (Portland, 2005), pp. 52-56, wherein Peratt's experimental findings are discussed in great detail with regards to various thunderbolt images.

²² Y.S. Chen, *The Primeval Flood Catastrophe* (Oxford, 2013), observes, p. 210: "What is unmistakable, though, is that the storm imagery is intimately associated with Enlil more than any other deity."

organization of the cosmos and the creation of man, in the *Curse of Agade* he appears as a terrifying agent of wanton destruction:

“The roaring storm that subjugates the land entirely, the rising deluge that cannot be confronted.”²³

The phrase translated as “roaring storm” here is *ud te-eš*.

The Cylinder of Gudea celebrates the god in similar fashion: “Enlil’s flood storm, who has no opponent.”²⁴

Like other Storm-gods throughout the ancient Near East, Enlil is specifically described with the epithet UD. Yet even here there is some ambivalence about whether the term is best translated as “storm” or “sun” in early hymns to the aerial god. Thus, in one royal inscription the Sumerian king Shulgi introduces Enlil as follows: *^den-lil₂ ud e₃*, “Enlil, the beaming light.”²⁵ Yet the phrase in question could be translated as “Enlil, the rising Sun” with equal justification, insofar as *e₃* is the most common term used to describe the sun’s appearance at daybreak.²⁶

The same king elsewhere invokes Enlil with the epithet *u₄-ti*.²⁷ Jacob Klein, in his translation of the text in question, renders the phrase somewhat colorlessly as “invigorating light.”²⁸ The *ETCSL* translates Enlil’s epithet as “life-giving light.”²⁹ Reading such bland translations, one would never guess that a prodigious, awe-inspiring celestial power was being described! Yet the very fact that the same god is also invoked as a “perfected heavenly star” (*mul-an šu-du₇-a*) several lines earlier should leave little doubt about the celestial basis of the language in question, hitherto almost completely

²³ Lines 149-150 in “The cursing of Agade,” *ETCSL*.

²⁴ Lines 630-631 from “The building of Ningirsu’s temple (Gudea, cylinders A and B),” *ETCSL*.

²⁵ Line 1 from “A dedication of a statue (Shulgi V),” *ETCSL*.

²⁶ J. Polonsky, *The Rise of the Sun God and the Determination of Destiny in Ancient Mesopotamia* (PHD Dissertation for the University of Pennsylvania, 2002), p. 179.

²⁷ Line 6 from “An adab to Enlil to Shulgi (Shulgi G),” *ETCSL*.

²⁸ J. Klein, “The Coronation and Consecration of Sulgi in the Ekur (Sulgi G),” in M. Cogan & I. Eph’al eds., *Ah, Assyria: Studies in Assyrian History and Ancient Near Eastern Historiography Presented to Haym Tadmor* (Jerusalem, 1991), p. 303

²⁹ Line 6 from “An adab to Enlil to Shulgi (Shulgi G),” *ETCSL*.

ignored by the translators.³⁰ Indeed, in his commentary on this passage Klein seemingly goes out of his way to deny the obvious interpretation: “Although Enlil is not an astral deity, he is characterized here as ‘a perfected heavenly star,’ to illustrate his divine splendor (ni-gal).”³¹

It is our opinion that Klein has the true situation exactly backwards: Enlil was described as having a divine splendor precisely *because* he was conceptualized as an awe-inspiring “sun-like” astral deity! Thus it is that the Sumerian sun-god was likewise described as enveloped in the ni-gal: “Utu on the horizon, clad in awesome luminosity” [dutu an-ur₂-ra ni₂-gal gur₃-ru-de₃]. The ni-gal itself, properly understood, was a wholly celestial phenomenon associated with stellar gods like Utu, Enlil, and Inanna and only later co-opted by Sumerian kings in an attempt to emulate or incarnate their beloved gods.³²

UD.GAL.NUN

Additional evidence pointing to a stellar origin for Enlil comes from the recent discovery of an archaic cuneiform system of writing that evidently operated alongside the more familiar Sumerian system. Commonly known by the name UD.GAL.NUN after the writing of the god Enlil’s name in the system, it is attested already during the Fara period (2600 BCE) and apparently persisted for thousands of years. Although much about the origins and workings of the archaic script remains obscure, it is known that the pictograph UD replaced the AN sign entirely, assuming the latter’s meanings while supposedly losing the semantic connections traditionally associated with the UD pictograph in the Sumerian language.³³

The AN pictograph is an eight-pointed star and serves to denote not only the concept “Heaven” but also the god An himself, the latter celebrated as the “King of the Gods” in Sumerian tradition.³⁴ The same pictograph was also employed as a determinative for the

³⁰ Line 4 from “An adab to Enlil to Shulgi (Shulgi G),” *ETCSL*.

³¹ J. Klein, *op. cit.*, p. 306.

³² See the discussion in S. Aster, *The Unbeatable Light* (Münster, 2012), pp. 22, 112.

³³ I. Finkel, “Strange Byways in Cuneiform Writing,” in A. de Voigt & I. Finkel eds., *The Idea of Writing* (Leiden, 2010), pp. 11-12.

³⁴ Lines 13-15 from “A prayer for Samsu-iluna (Samsu-iluna E),” *ETCSL*.

concept “god” (DINGIR) in the archaic Sumerian script, thereby supporting the hypothesis that the earliest Sumerian gods were astral in nature.³⁵ In the UD.GAL.NUN script, however, the UD sign was substituted for AN in order to denote the concept DINGIR:

“Still poorly known, specialists call it UD.GAL.NUN, after the writing of the god Enlil’s name in the system. The sign UD is used instead of the determinative DINGIR, GAL instead of EN, and NUN instead of LIL. Its principles seem to be clear. It is an extreme use of the rebus principle. Instead of writing the name of the god in its usual way, ^dEn.lil, it is written with other signs, UD.GAL.NUN. Those have been given the needed values for the occasion, at the same time as they constitute a type of commentary. By spelling out the name of the god in this way, they identify him as ‘Light, Great Prince.’”³⁶

It stands to reason, based upon its substitution for the AN/DINGIR sign in the UD.GAL.NUN script, that the Sumerian scribes understood perfectly well that the UD pictograph, like that for AN, originally depicted a celestial body—specifically, a “sun-like” star or planet capable of producing spectacular storms.³⁷ Indeed, the mere fact that Mesopotamian seals depicting the so-called “sun” frequently include an eight-pointed star (see figure two) would appear to confirm the fundamental analogy of these two astral signs for early skywatchers and scribes. If so, the writing UD.GAL.NUN likely identifies Enlil as “Sun/Star-like light, Great Prince.” The fact that the Sumerian sun-god Utu was early on denoted by the epithet NUN, “Prince,” lends additional support for this interpretation.³⁸ Be this as it may, the evidence provided by the writing of Enlil’s name

³⁵ K. Szarzynska, “Cult of the Goddess Inana in Archaic Uruk,” *NIN* 1 (2000), p. 10: “The sign of star read an or dingir was written primarily only before the names of astral deities, and was read as a first element of their names.”

³⁶ J. Glassner, *The Invention of Cuneiform* (Baltimore, 2003), pp. 162-163.

³⁷ C. Woods, “On the Euphrates,” *Zeitschrift für Assyriologie* 95 (2010), p. 29 has expressed a similar opinion: “Obviously, the fact that both signs represent heavenly entities is the principal factor here, but the motivation may run deeper still, drawing parallels between the respective astral deities.”

³⁸ Utu’s temple at Sippar was known as E-nun-ana, “House (of) the Heavenly Prince.” See G. Selz, “‘The Tablet with ‘Heavenly Writing’, or How to Become a Star,” in A. Panaino ed., *Non licet stare caelestibus* (Udine, 2014), p. 59.

in the UD.GAL.NUN script serves to complement and reinforce the testimony provided by early Sumerian texts, wherein Enlil was regularly described by the epithet UD.

Sun, Star, or Wind?

Enlil's name is commonly thought to be composed of the two logograms en, "lord," and lil₂, conventionally rendered "wind."³⁹ As a result, many scholars have interpreted his name as denoting "Lord Wind" (see below).⁴⁰ While there is some basis for this interpretation, there is no getting around the fact that the god was, in origin, a celestial phenomenon—specifically, an awe-inspiring star or "sun" of a decidedly *extraordinary* nature.

Insofar as the usual Sumerian word for wind was IM (see below), it would appear possible that lil₂ might have a slightly different meaning. Indeed, Jean Bottéro has suggested that the term originally had reference to the space between heaven and earth, the latter region being explicitly associated with Enlil's singular act of creation, wherein he separated heaven and earth: "We have to understand with this term [lil₂] something like the atmosphere, the space that separates heaven from earth."⁴¹ Piotr Steinkeller, on the other hand, translates the god's name as "Lord-Ghost," understanding the noun lil₂ as "ghost, haunting spirit."⁴²

Given his archaic status as the Storm-god par excellence, and his singular role in the Sumerian account of Creation recounted in the *Song of the Hoe*, there is much justification for inquiring further into the original nature of the cosmic power identified as Enlil. In order to gain a proper understanding of the Sumerian god in question, it is essential that we come to grips with the Mesopotamian concept of "wind."

³⁹ J. Halloran, *Sumerian Lexicon* (Los Angeles, 2006), p. 158. See also F. Wiggerman, "Mythological Foundations of Nature," in D. Meijer ed., *Natural Phenomena* (Amsterdam, 1992), who translates the name as "Lord Ether."

⁴⁰ T. Jacobsen, *Toward an Image of Tammuz* (Cambridge, 1970), p. 31. See also A. Green, *op. cit.*, p. 37.

⁴¹ J. Bottéro, *Mesopotamia: Writing, Reasoning, and the Gods* (Chicago, 1992), p. 233.

⁴² P. Steinkeller, "On Rulers, Priests, and Sacred Marriage," in K. Watanabe ed., *Priests and Officials in the Ancient Near East* (Heidelberg, 1999), p. 114.

It is a curious fact, first discovered by Knut Tallqvist many years ago, that cultures around the globe identified the four winds with the four cardinal directions.⁴³ Such was the case in ancient Mesopotamia, where wind was conceptualized as a celestial phenomenon extending to the four quarters of the universe:

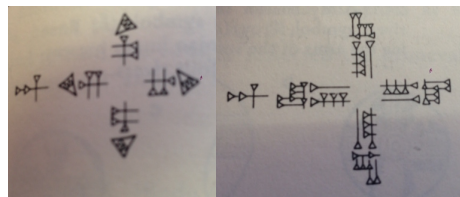
“Sumerian *im*, Akkadian *šaru*, und Hebrew *ruah*, die alle eigentlich Wind aber auch Weltgegend bedeuten, nhd. *Windstrich*, Swedish *väderstreck*, Finnish *ilmansuunta* (eig. ‘Luftrichtung’), English ‘*quarter of the wind* oder *the four winds*...und French *aire de vent* bezeugen endlich, dass Himmelsgegenden und Winde im Zusammenhang mit einander stehen.”⁴⁴

The Sumerian pictograph for “wind,” transcribed IM, depicts a diamond-shaped object with four arrow-like forms projecting outwards to the four different directions (see Figure six).



Figure six

It is also significant to note that the cuneiform signs for the Akkadian words for “wind” and “storm-wind”—*šaru* and *mehu*—also present a quadripartite, cruciform structure (see Figure seven).⁴⁵ Analogous conceptions are also attested in Old Europe. Thus, the Baltic symbol for wind likewise depicts a cruciform structure (see Figure eight).⁴⁶



šaru **Figure seven** *mehu*

⁴³ K. Tallqvist, “Himmelsgegenden und Winde,” *Studia Orientalia* II (1928), pp. 105-185.

⁴⁴ *Ibid.*, p. 106.

⁴⁵ D. Talbott, *The Saturn Myth* (New York, 1980), p. 125.

⁴⁶ Adapted from V. Straizys & L. Klimka, “The Cosmology of the Ancient Balts,” *JHA* 28 (1997), p. 66.

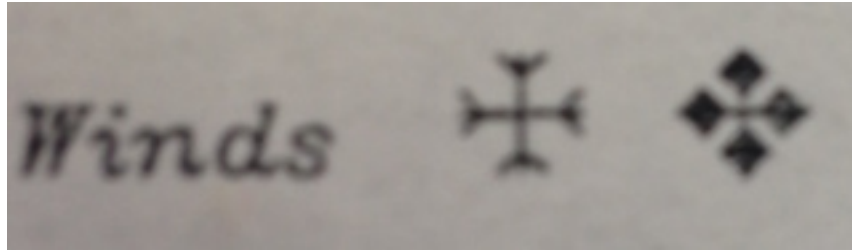


Figure eight

Given Tallqvist's finding that the four winds were commonly associated with—indeed, identified with—the four directions, the most natural interpretation of the IM-graph would regard it as a relatively realistic, albeit schematic, depiction of the four winds. Now here is a belief-system that will not be readily explained by reference to the familiar natural world. In what sense is it possible to explain the fact that ancient skywatchers the world over conceptualized an invisible force like the “wind” as a cruciform structure connected with the four world-directions?

Equally difficult to explain is the widespread idea that the four winds emanated from the locus of the sunrise. This belief-system is well attested in ancient Mesoamerica, as reported by the Spanish friar Bernardino de Sahagún:

“That which was known as [the wind] was addressed as Quetzalcoatl. From four directions it came, from four directions it traveled. The first place whence it came was the place from which the sun arose, which they named Tlalocan.”⁴⁷

The Mesoamerican idea that the sun arose from the very nexus whence originated the four winds and four directions finds a close parallel in ancient Mesopotamia. Thus it is that an Akkadian name for the place of the sunrise was *kippat tubuqat erbetti*, literally “circle of the four corners.”⁴⁸ Such epithets are destined to remain elusive to modern scholars who look to the familiar heavens for guidance.

⁴⁷ B. Sahagún, *Florentine Codex: Book 7* (Sante Fe, 1953), p. 14.

⁴⁸ C. Woods, “At the Edge of the World: Cosmological Conceptions of the Eastern Horizon in Mesopotamia,” *JANER* 9:2 (2009), p. 186.

Yet if we take our cue from certain early Mesopotamian cylinder seals an obvious solution to this archaic crux presents itself, as first proposed by David Talbott in 1980.⁴⁹ Consider the image depicted in Figure nine, commonly believed to represent the present Sun.

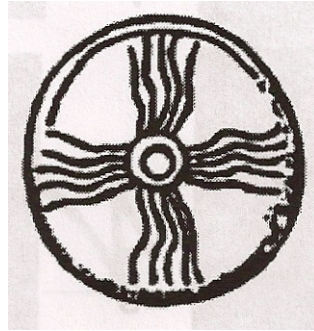


Figure nine

Given the fact that analogous images can be found around the globe, often in prehistoric (i.e., Neolithic) contexts, it is difficult to deny that they encode some celestial reality, whether a temporary apparition or, more likely, a sustained stellar phenomenon of some sort, such as a particularly spectacular nova or conjunction of planets. Granted this proposition, can it be doubted that a prehistoric skywatcher, upon beholding such a celestial apparition, would conceptualize the four radiating streamers as four “winds” or four “streams” extending to the four corners of the universe? To merely pose the hypothetical question is to know the answer: The interpretation of the four radiating streamers as four winds would not only be perfectly natural and rational, it would be almost certain to follow.

The fact that such “solar” images predate the origins of the Sumerian script is of fundamental importance for the hypothesis advance here, for it is doubtless such archaic artworks and symbols that the early Sumerian scribes would presumably have drawn upon in selecting suitable pictographs to illustrate their most important ideas and belief-systems.⁵⁰ Now that we have a bit of historical context on ancient Mesopotamian

⁴⁹ D. Talbott, *The Saturn Myth* (New York, 1980).

⁵⁰ J. Cooper, “Babylonian Beginnings: The Origin of the Cuneiform Writing System in Comparative Perspective,” in S. Houston ed., *The First Writing: Script Invention as History and Process* (Cambridge, 2004), p. 77.

conceptions of wind, we return to the curious traditions surrounding the Sumerian god Enlil.


The Arrows of Life

As noted earlier in a discussion of Enlil's epithet u₄-ti, one of the earliest Sumerian glyphs was TI, a pictograph denoting the concept "life" (see Figure ten). Interestingly enough, the same glyph was also known to denote "arrow."⁵¹ How, then, are we to account for the semantic connection between the concepts of "arrow" and "life"?



Figure ten

It is the unanimous opinion of Sumerologists and linguists everywhere that the example in question offers a classic illustration of the so-called rebus principle, whereby one particular pictograph/logogram eventually comes to determine an originally unrelated word or concept simply because of an arbitrary resemblance of sound between the two words. Barry Powell's opinion here may be taken as representative of modern scholarship:

"The sign for arrow , which in Sumerian is called TI with the value /ti/, is used to represent the unrelated but phonetically similar Sumerian word /til/ meaning 'life' and /ti/ meaning 'rib' through the rebus."⁵²

According to the conventional view, as accurately summarized by Powell, there is no inherent logical or historical connection between the concepts of "arrow" and "life." At first sight, this interpretation makes perfect sense, for what natural circumstances could

⁵¹ J. Halloran, *op. cit.*, p. 275.

⁵² B. Powell, *Writing: Theory and History of the Technology of Civilization* (Oxford, 2012), pp. 71-72.

conceivably produce a logical (or semantic) connection between a concrete weapon bringing “death” and an elusive, non-substantial concept like “life”?

It is often claimed that the rebus principle provided the historical impetus for the development of phonetic writing: “The basis of phonetic writing is rebus, the use of a sign to represent a homonym or near homonym.”⁵³ As evidence for the claim that the rebus principle best explains the semantic range associated with the logogram TI, scholars point to an archaic text from Jemdet Nasr (circa 3000 BCE) wherein the god Enlil is mentioned alongside an arrow. Adam Falkenstein, the original discoverer of the text in question (1926-1928), suggested that it offered conclusive evidence of phoneticism. Jean Bottéro has offered a particularly lucid summary of the archaeological discovery and issues at hand:

“The only certain information that we have with regard to it [i.e., the development of phoneticism], and it is an important one, is a very telling sequence of three ‘pictograms’ on one of the tablets in question... We have good reason for interpreting the first two signs as the traditional name of the highest Sumerian god: en.lil... written here lil.en, and this is followed by the sign that represents an *arrow*. Now it is known that in the classical script this last sign in its cuneiform shape, read ti, is often used to denote *life*, its homophone in Sumerian. We also know that in the anthroponymic tradition of Mesopotamia (where the proper names are most often pious exclamations of the type *This-god-is-my savior!*...) the use of the concept of ‘life’ attached to a divine name is extremely common. We thus have reason to conclude that the three signs in question must represent a proper name of a known type, something such as *Enlil-gives-life*...”⁵⁴

Granted the presuppositions that currently dominate Sumerian studies, such as a uniformitarian view of the solar system’s recent history, Bottéro’s argument makes perfect sense. As we have documented here, however, there are valid reasons to reconsider this presupposition. Certainly it is relevant to point out that a number of

⁵³ J. Cooper, “Babylonian Beginnings: The Origin of the Cuneiform Writing System in Comparative Perspective,” in S. Houston ed., *The First Writing: Script Invention as History and Process* (Cambridge, 2004), p. 89.

⁵⁴ J. Bottéro, *Mesopotamia: Writing, Reasoning, and the Gods* (Chicago, 1992), pp. 79-81.

ancient cultures described “solar rays” as arrows or in arrow-like terminology. The German word *strahlen*, “rays, radiance (of the sun),” for example, is cognate with Old High German *stral*, *strala*, “arrows.”⁵⁵ The ancient Egyptian word *stj*, likewise, denotes both “to shoot an arrow” and “to shine” and is obviously cognate with *stw.t*, “(solar)rays.”⁵⁶

There is compelling evidence that analogous conceptions prevailed in ancient Mesopotamia. Thus, in the archaic epic *Lugalbanda and the Anzud bird* the hero’s arrows (ti) are explicitly compared to the sun’s rays (ud-gin₇): “Shoot forth with your barbed arrows like a sunbeam.”⁵⁷ *The Cylinder of Gudea* (circa 2140) attests to the same basic conception: “Equip it [the king’s chariot] with arrows that will fly out from the quiver like sunbeams.”⁵⁸ For Jeremy Black and the vast majority of other leading scholars, such language is best understood as figurative in nature: “Here both images of light... seem to be metaphors for the intensity of the attack of arrows that Lugalbanda might shoot; possibly the multiplicity of arrows as they shoot past suggests an effect of light literally.”⁵⁹ Such learned interpretations are more akin to wild guesses than serious scholarship. It is our opinion, in contrast, that creative imagination and abstract thinking have very little to do with the imagery in question. Rather, the poet’s likening of sunbeams to “arrows” likely reflects a *witnessed* celestial phenomenon and, as such, represents a natural association of ideas, as it were. In this sense the “arrows” in question, together with the sunbeams themselves, had substantive structure and were wholly concrete in nature.

The fact that analogous conceptions are to be found in the New World lends additional credence to this interpretation. Among the Aztecs, according to John Bierhorst, an arrow

⁵⁵ A. Scherer, *Gestirnnamen bei den indogermanischen Völkern* (Heidelberg, 1953), p. 24.

⁵⁶ R. van der Molen, *A Hieroglyphic Dictionary of Egyptian Coffin Texts* (Leiden, 2000), pp. 569-570.

⁵⁷ Line 143 from “Lugalbanda and the Anzud bird,” *ETCSL*.

⁵⁸ Line 158 from “The building of Ningirsu’s temple (Gudea, cylinders A and B),” *ETCSL*.

⁵⁹ J. Black, *Reading Sumerian Poetry* (Cambridge, 1998), p. 93.

in flight served as “a traditional emblem of sunlight.”⁶⁰ Indeed, several centuries ago the Mexican (*mestizo*) chronicler Fernando de Alva Ixtlilxochitl called attention to religious rituals in which the Aztec ruler shot four arrows to the four corners of the world:

“In Nahuatl the ray [of the sun] was named ‘*tonamitl*,’ literally ‘the shining arrow,’ ‘shaft of light.’ Ixtlilxochitl tells us that it was an ancient custom of his people on taking possession of a new territory ‘to shoot with utmost force four arrows, in the directions of the four regions of the world.’ This interesting passage shows us that the rays, i.e. arrows of light, carved on stone, conveyed the idea of possession of the four regions.”⁶¹

It will be noted that the idea of *radiant* “arrows” was expressly associated with the four corners of the world.

As it turns out, virtually identical rituals were performed in ancient Egypt, India, Japan, and elsewhere, typically at the accession of a new king.⁶² The fact that such rites are found in the New World as well as the Old, moreover, reinforces the conviction that they reflect a shared empirical reality—in our view, a common experience of an extraordinary celestial stimulus.

The Storm-god’s arrows

As documented above, the semantic range associated with the Sumerian pictograph UD points to an archaic fundamental affinity between a sun-like star and a storm-god. Much the same conflation of seemingly disparate natural phenomena is evident in the archaic terminology describing the “arrows” of the celestial god. Thus, just as the Germanic word *strahlen* denotes the sun’s rays so, too, is the same root employed to describe a flash of lightning (*Blitzstrahl*). The same inherent relation between solar rays and

⁶⁰ J. Bierhorst, *Four Masterworks of American Indian Literature* (New York, 1974), p. 84.

⁶¹ Z. Nuttall, “The Fundamental Principles of Old and New World Civilizations,” *Archaeological and Ethnological Papers of the Peabody Museum 2* (Cambridge, 1901), p. 255.

⁶² See the discussion in H. Frankfort, *Kingship and the Gods* (Chicago, 1948), p. 88; A. Lloyd, *Ancient Egypt* (Oxford, 2014), p. 69.

lightning is shown by the fact that *strala* also denotes the “lightning-like” arrows shot by the Slavic Thundergod Perun.⁶³

Analogous conceptions are evident in early Sumerian literature, wherein arrows are likened to lightning. In the early epic *Lugalbanda in the mountain cave* the hero Enmerkar is expressly compared to the onrushing storm and arrows (ti) are likened to lightning: “His head shines with brilliance, the barbed arrows flash past him like lightning.”⁶⁴ *The Cylinder of Gudea* attests to similar conceptions: “With his angry arrows which whizz like lightning flashes in battle.”⁶⁵

Such overlapping imagery between solar radiance and lightning is difficult to explain by reference to the modern sky. Yet if the ancient sun-god also doubled as the prototypical Storm-god, as suggested by the semantic range of the Sumerian UD-pictograph and the “solar” form depicted in figure three, such imagery is only to be expected.

MUL-ling over the Sumerian Concept of “Star”

The pictograph employed to denote “star,” “planet,” and various other celestial bodies in the Sumerian script is MUL (see Figure eleven).⁶⁶ Later cultures borrowed this terminology and thus the Akkadian, Eblaitic, Babylonian, and Assyrian languages employed a similar term (*mulmul*) to denote “stars.” When employed as a verb, *mul* denotes “to shine,” “to radiate (light).”⁶⁷ Yet the Sumerian logogram *mul* also denoted “arrow.”⁶⁸ Thus there can be little doubt that the Sumerian scribes themselves recognized

⁶³ M. Gimbutas, “Perkunas/Perun: The Thunder God of the Balts and Slavs,” *Journal of Indo-European Studies* 1 (1973), p. 475.

⁶⁴ Line 55 from “Lugalbanda in the mountain cave,” *ETCSL*.

⁶⁵ Line 1135 from “The building of Ningirsu’s temple (Gudea, cylinders A and B),” *ETCSL*.

⁶⁶ W. Horowitz, “Some Thoughts on Sumerian Star-names and Sumerian Astronomy,” in Y. Sefati et al eds., *An Experienced Scribe Who Neglects Nothing* (Bethesda, 2005), p. 163: “Sumerian *mul* = Akkadian *kakkabu* has a much broader sense than English ‘star’ and can refer to comets, shooting stars, and other astronomical phenomena, as well as fixed stars, planets, and constellations.”

⁶⁷ J. Klein & Y. Sefati, “The ‘Stars (of) Heaven’ and Cuneiform Writing,” in L. Sassmannshausen ed., *He Has Opened Nisaba’s House of Learning* (Leiden, 2014), p. 96.

⁶⁸ *ePSD* online, see *mul*. <http://psd.museum.upenn.edu/epsd/nepsd-frame.html>

an inherent connection between the words mul “arrow” and mul “radiance,” however this fact is to be explained.



Figure eleven

To return to the pictograph depicted in Figure nine: Grant the likelihood that the Sumerian artists were not hallucinating when they carved such images, and grant further that the image in question corresponds to a celestial reality—one in which a towering stellar form presented a cruciform structure, with four streamers radiating outwards to the four directions—and there can be but little doubt that the streamers in question would be conceptualized as four radiating “winds,” “lightnings,” or “arrows.” The fact that the Sumerian word *mulmul* denotes not only “radiance” and “arrows” but also radiating branches, as of a tree or river, is certainly consistent with this interpretation.

Having documented a semantic relationship between arrow-like forms and the radiating “rays” of suns and stars, it remains to document an affinity between the radiating streamers depicted in Figure nine and archaic conceptions of “life.” While the linguistic evidence on this point is less obvious than that pertaining to “radiance” and “arrows,” it is possible to point to a number of clues supporting this proposition. Granted that the ethereal streams radiating outwards from the central “sun” in Figure nine were conceptualized as “wind” or “breath,” it seems but a small step to identify the same stellar efflux with the stuff of life. Thus it is that the Akkadian word *šaru*, “wind,” denotes both “wind/direction” and “breath of life”⁶⁹ (The related word *šaruru(m)* denotes a stellar “ray” or “sunbeam”).⁷⁰ The Hebrew *rûah*, likewise, denotes both “wind” and “life.”⁷¹ So, too, the very same semantic range is attached to the Chinese word *feng*,⁷² which likewise denotes “wind, breath, or life-soul.”

⁶⁹ H. Fabry, “*rûah*,” in G. Botterweck, H. Ringgren & H. Fabry eds., *Theological Dictionary of the Old Testament*, Vol. 13 (Cambridge, 2004), p. 369.

⁷⁰ J. Black, *A Concise Dictionary of Akkadian* (Manchester, 2000), p. 362.

⁷¹ H. Fabry, *op. cit.*, p. 368.

⁷² A. Schuessler, *ABC Etymological Dictionary of Old Chinese* (Honolulu, 2007), p. 238.

An analogous semantic situation is evident in ancient Mesoamerica. As noted earlier, the “rays” of the sun-god were conceptualized as arrows (*tonamitl*). The word *tonamitl* derives from Nahuatl *tona*, literally the “rays” or radiance of the Sun (*Tonatiuh*).⁷³ The same root is found in *tonalli*, one of the most sacred concepts in all of Aztec cosmology, denoting the sun’s radiance as the “life-force” or “spark that gives life to humans.”⁷⁴ According to scholars of Mesoamerican religion, *tonalli* was turquoise-green in color and represented the “vital energy necessary for all life.”⁷⁵ How interesting, then, to find that the Aztecs depicted this concept with a stellar image that is all but indistinguishable from certain Shamash-forms from ancient Mesopotamia (see figure twelve).

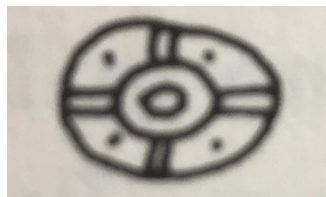


Figure twelve

Properly understood, the *tonalli*-sign represents a cosmogram. For the indigenous cultures of Mesoamerica, the cosmos was quadripartite in nature, being characterized by four roads emanating outwards from a central juncture. Thus, in her discussion of Maya sacred geography, Bassie-Sweet observes: “From the center of the world, four roads radiated out to the four directions.”⁷⁶ In the Quiché Maya account of Creation preserved in the *Popol Vuh*, one reads of the “life-giving” roads in heaven. In the passage in question, the word translated as “life-giving” is *raxal*, which also denotes the color

⁷³ M. León-Portilla & E. Shorris, *In the Language of Kings* (New York, 2001), p. 21.

⁷⁴ M. Graulich, *Myths of Ancient Mexico* (Norman, 1997), p. 48.

⁷⁵ M. Izeki, *Conceptualization of ‘Xihuitl’: History, Environment and Cultural Dynamics in Postclassic Mexica Cognition* (Oxford, 2008), p. 34. See also J. Maffie, *Aztec Philosophy* (Boulder, 2014), p. 425 who observes: “In sum, *tonalli* includes within a single concept a variety of aspects that appear by our lights as distinct: heat, irradiation, destiny or birth merit, spatiotemporal orientation, life energy (*elan vital*, soul, spirit), vigor, coessence, and character.”

⁷⁶ K. Bassie-Sweet, *Maya Sacred Geography and the Creator Deities* (Norman, 2008), p. xxi.

green.⁷⁷ While four greenish colored roads are nowhere to be found in the present sky, the testimony provided by figure twelve above and analogous artworks from around the globe suggests that four such roads formerly “radiated” outwards from a sun-like object located in the center of the sky.

The ancient cultures of Mesopotamia, like those of Mesoamerica, conceptualized the cosmos as quadripartite in nature. Early Sumerian and Akkadian kings, with such cosmic geography clearly in mind, boasted that they ruled the “four corners.” In this bit of braggadocio they were doubtless attempting to emulate Enlil himself, who established his throne in the middle of the four quarters: “You founded it in the Dur-an-ki, in the middle of the four quarters of the earth.”⁷⁸ And much as we would expect from the *Popol Vuh* testimony with regards to the life-giving roads in heaven, the four corners in question were remembered as being a luminous green in color: “The four corners of heaven became green for Enlil like a garden.”⁷⁹

Conclusion

It is a remarkable circumstance that ancient pictographs supposedly depicting the sun bear little or no resemblance to the present solar orb. This fact alone should serve as a red flag that all is not well with the conventional model regarding the recent history of the solar system.

The fact that the archaic Sumerian pictograph UD denotes both “sun” and “storm” offers compelling evidence that the “sun” in question is not to be identified with the present solar orb. No skywatcher in their right mind would ever mistake the present solar orb for a thunderbolt-hurling Storm-god, any more than any rational mythmaker would describe the epiphany of the sun as accompanied by a thunderous roaring and a shaking of heaven and earth.

Equally compelling evidence for a radically different solar system comes from ancient traditions testifying to a period during which four spectacular streamers emanated from

⁷⁷ A. Christenson, *The Popol Vuh* (Norman, 2007), p. 206.

⁷⁸ Line 68 from “Enlil in the E-Kur (Enlil A),” *ETCSL*.

⁷⁹ Line 6 from “The Keš temple hymn,” *ETCSL*.

the ancient “sun” and served to demarcate the four corners of the universe (see Figure nine). The peculiar traditions of four winds radiating outwards from the locus of the “sun” and extending to the four corners, like the ancient pictographs depicting the sun with a cruciform structure in its center, are to be found around the globe.

The historical reconstruction offered here has profound implications for the origins of civilization, including the origin of writing. It stands to reason that individual cultures, as they devised their earliest pictographic scripts, would draw freely upon their most treasured and numen-laden artworks for their signs—pictographs depicting the “sun,” “stars,” and gods (the stars). Yet as we have documented here with respect to the logogram UD, whereupon the same pictograph denotes the seemingly incompatible concepts of “sun” and “storm,” it is possible to point to certain parasemantic shifts that have no conceivable rationale given the stereotypical appearance and customary workings of the present solar system.

In addition to the semantic situation pertaining with respect to UD, the example offered by the Sumerian pictograph ti is of inestimable importance for the theoretical origins of the world’s earliest writing systems. Far from being a classic example of the rebus principle, as per the scholarly consensus, it is probable that the parasemantic shift from “arrow” to “life” associated with ti reflects the unique history and structure of the polar configuration, wherein a central “sun” was seen to project four streamers to the four corners of the universe. In addition to being conceptualized as “arrows” or “rays” radiating outwards from the sun, the four streamers were also conceptualized as four “winds” or as four “life-giving” roads or rivers. If so, the semantic development evident in the Sumerian ti-sign is best understood as reflecting perfectly rational and coherent thought processes and, as such, offers compelling evidence of a radically different solar system.