

Babylonian Hermeneutics and Heraclitus

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Babylonian hermeneutics has been at the center of numerous studies, particularly in recent years.¹ Scholars have established that through analogical reasoning, Babylonian hermeneutics developed speculative thought that exploited the potential of the cuneiform writing system to explore new meanings according to phonetic, semantic, and graphic similarities. Analogical hermeneutics was prompted by the polysemic and homophonic nature of the cuneiform writing and was intended as an inquiry into the cuneiform system itself. Babylonian hermeneutics often developed mean-

ings, equivalences, and explications that may appear fanciful.²

One of the foremost examples is contained in the final section of the Babylonian creation poem, *Enuma Eliš*, where the gods, after having elevated Marduk to the head of the pantheon, recite his fifty names, explaining what each name means. Scribes established multiple equivalences that, as shown by Jean Bottéro,³ were based on phonetic, semantic, and graphic associations. For example, the name Asari is explained as ^d*Asar-re ša₂-rik mi-riš-ti ša iṣ-ra-ta u₂-kin-nu // ba-nu-u₂ še-am u qe₂-e mu-še-ṣu-u₂ ur-qe₂-t[i]*, “Asari the giver of arable land who established plough-land, the creator of barley and flax, who made plant life grow” (EE VII, 1–2).⁴ The commentary Sm 11+ published by Bottéro⁵ helps us to crack the intellectual process behind the creation of these names. The name ^d*Asar-ri* is broken down into its syllabic elements: the sign RI is interpreted as *šārik*, “giver,” for its phonetic proximity to RU corresponding to *šarāku*; SAR for *mēreštu*, “arable land,” derives from

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¹ Bottéro, “Noms de Marduk” (1977), Cavigneaux, “Aux sources du Midrash” (1987), Seminara, *Lugal-e* (2001), Frahm, *Text Commentaries* (2011), Van De Mieroop, *Philosophy before the Greeks* (2015), Rochberg, “Babylonians and the Rational” (2015), Rochberg, *Before Nature* (2016), Van De Mieroop, “Babylonian Philosophy” (2018), Crisostomo, *Translation as Scholarship* (2019).

² Cavigneaux, “Aux sources du Midrash” (1987), 247, Van De Mieroop, “Babylonian Philosophy” (2018): 30–31.

³ Bottéro, “Noms de Marduk” (1977).

⁴ See Lambert, *Creation Myths* (2013), 124–25.

⁵ Bottéro, “Noms de Marduk” (1977); the commentary has been republished by Lambert, *Creation Myths* (2013), 139–42.

semantic proximity (or extension) because the sign SAR with the reading sar means “garden” and with reading kiri₆, “orchard;”⁶ the sign A corresponds to *isratu*, a rare word that another commentary explains as an equivalent of *tamirtu*, a type of cultivated land;⁷ the sign RI is phonetically similar to the value ra₂ of the sign DU that with the reading gin corresponds to *kānu*, “to establish.”⁸ In the second explanation of the name the sign RI is a partial homophone of the value ru₂ of the sign DU₃ that corresponds to *banú*, “to build;” the sign SAR is then provided with four different equivalences by semantic and phonetic associations: *še’um*, “barley;” *qūm*, “flax;” the reading MA₄ of the sign SAR represents a rare equivalent to *wašú*, “to grow,” which normally corresponds to mu₂, another reading of SAR; and finally *urqūtu*, “greenery” that plainly corresponds to the reading nisig, “greenery.”⁹

Another often quoted example is Marduk’s name Tutu-ziku (^dTu-tu-^{zi}ku₃) that is explained as *il₃ ša₂-a-ri ta-a-bi be-el taš-me-e u ma-ga-ri*, “the god of the pleasant breeze, lord who hears and accedes” (EE VII 19–20).¹⁰ In the same *Enuma Eliš* commentary, Sm 11+, the name is analyzed as follows: the determinative DINGIR (^d) regularly means *ilu*, “god;” the sign TU is a homophone of the reading tu₁₅ of the sign IM corresponding to *šāru*, “wind;” the sign TU is the voiceless rendering of du₁₀ which means *tābu*, “good;” by semantic extension, DINGIR is equated to *bēlu*, “lord;” the sign ZI is equated with *šemú*, “to hear,” perhaps because the sign contains the shape of the sign ŠE which is taken as an apocope for *šemú*; by the same token, the sign ZI with the meaning “life” corresponds to Emesal šī which is a partial homophone of ŠE that with reading šeg means *maḡāru*, “to consent, to agree.”¹¹

Cuneiform commentaries, the hermeneutical texts *par excellence*, offer many examples of analogical reasoning, and not only taken from literary texts.¹² In a commentary of the list Aa, the explanation is simply based on a parono-

mastic association: *ši-ip-ku : ana ša₂-pa-ki : na-du-u : ša₂-niš-ši-ib-qī₂ : te₃-e-mu*, “heap (is related to) heap up (which means) to lay down; secondly (it is related to) scheme (which means) plan” (BM 38137 obv. 13).¹³ The word *šipku*, “heap,” and *šibqu*, “scheme,” are linked on the basis of their phonetic similarity. The medical commentary STBU 1 49 provides an etymology that utilizes the same analytical technique seen in the *Enuma Eliš*. In this commentary the word *eṭemmu*, “ghost” is explained as follows: ^{gi-di-im}GIDIM₂ : ^ΓGIDIM^Γ [^{pe}]-^Γtu-u₂^Γ ĜEŠTUG. MIN : BAR : ^{pe-tu-u₂}BUR₃^{bu-ur} : *uz-nu*, “GIDIM₂ (means) ghost, the opener of the ear, (because) BAR (means) to open (and) BUR₃ (means) ear” (r. 13-14). The word for ghost is explained through the signs that form the logogram GIDIM₂ (BAR.U), BAR corresponding to *petú*, “to open,” and BUR₃(U), that is equivalent to *uznu*, “ear.” The word for ghost is thus explained as “opener of the ear” because the illnesses discussed in the commentary included some form of tinnitus that was believed to be caused by hearing the voice of the dead.¹⁴

Omens are another very rich source for analogical reasoning in Mesopotamia.¹⁵ For instance, an omen of the series *Šumma Izbu* is built around hermeneutical associations: *šumma sinništu ulidma išaršu lā ibbašši bēl bitī ul inneššir rīd eqli*, “If a woman gives birth and (the foetus) has no penis—the owner of the house will not prosper (and/or) confiscation of the field.” The link between protasis and apodosis is given by the sign UŠ that is used to write both the word *išaru*, “penis,” with reading giš₃, and the word *rīdu*, “confiscation.” The connection is further strengthened by alliterations and assonances.¹⁶ The etymographical techniques we have seen applied in *Enuma Eliš* and the commentaries are found in a report on a celestial omen derived from the commentary *Šumma Šin ina tāmartišu*¹⁷ that explains features of the new moon.¹⁸

¹³ *Ibid.*, 71.

¹⁴ *Ibid.*, 74. Both equivalences are rather uncommon: BUR₃(U) = *uznu* is attested in lexical lists, CAD U s.v. *uznu* lexical section; Aa I/6 122 has an entry MAŠ.U = *pe-ta-Γa^Γ uz-nu* which is the same equivalence of the commentary because in the first millennium bar and MAŠ are the same; I thank Niek Veldhuis for drawing my attention on this entry.

¹⁵ See De Zorzi, “Omen Serie *Šumma Izbu*” (2011), Van De Mieroop, *Philosophy before the Greeks* (2015), 114–21, Winitzer, *Early Mesopotamian Divination Literature* (2017).

¹⁶ For this and other omens based on hermeneutical associations, see De Zorzi, “Omen Serie *Šumma Izbu*” (2011): 68ff.

¹⁷ For this commentary see Frahm, *Text Commentaries* (2011), 155–60.

¹⁸ Hunger, *Astrological Reports* (1992), 170–71.

⁶ Bottéro, “Noms de Marduk” (1977), 23.

⁷ See Lambert, *Creation Myths* (2013), 499.

⁸ gin (du) is not the most common spelling of the verb /gin/, “to be firm, to establish” which in the Old Babylonian period is usually written with gin₆ (gi), but is quite well attested, see ePSD2 Word ID: o0028256.

⁹ Although nisig is not specifically translated with *urqūtu* in lexical lists, it corresponds to the related word (*w*)arqu, “green,” see CAD U s.v. *urqūtu* lexical section and ePSD2 Word ID: o0036390.

¹⁰ Lambert, *Creation Myths* (2013), 124–25.

¹¹ Cavigneaux, “Aux sources du Midrash” (1987): 247–48.

¹² Frahm, *Text Commentaries* (2011), 70–76.

- obv. 3 [1 30 *ina* IGI].LAL-*š*₂ SI.ME-*š*₂ *tur-ru-ka*
 4 [*pa-ṭar bi-ra*]-*a-ti*
 5 [*a-rad* EN.NUN.MEŠ] *taš-mu-u*₂
 6 [*u sa-li*]-*mu ina* KUR GAL₂-[*š*]
-
- rev. 1 GI: *ta-ra-ki*
 2 GI: *ša₂-la-mu*
 3 GI: *ka-a-nu*
 4 SI.ME-*š*₂ *kun-na*
- obv. 3 [If the moon's] horns at its appearance are very dark
 4 [disbanding of the fortified] outposts,
 5 [retiring the guards]; there will be reconciliation
 6 [and pea]ce in the land.
-
- rev. 1 GI (means) to be dark
 2 GI (means) to be well
 3 GI (means) to be stable
 4 Its horns are stable.

The hermeneutical explanation is based on the homophony of the signs GI, GI₆ and GI₄: the equation GI = *kānu*, “to be stable,” is a common translation; *tarāku*, “to be dark” is equivalent to GI₆; the verb *šalāmu*, “to be well,” is related to the derivate form *šullumu*, “to repay,” which in Sumerian can be written as *šu-gi*.¹⁹

Lexical lists are still another primary source for analogical reasoning as shown by Jay Crisostomo’s study on Old Babylonian Izi.²⁰ In line 222, the sign UTU, “sun,” is glossed as *imērum*, “donkey,” following a sequence of paronomastic associations: the sign UTU is a partial homophone to UTU which means “sheep,” in Akkadian *immeru*, which is itself a partial homophone of *imēru*, “donkey.”²¹

These few examples show how greatly analogical reasoning was developed in ancient Babylonian cuneiform scholarship across different genres. Analogical hermeneutics was not simply a scholarly game designed to show scribes’ ability and proficiency in cuneiform knowledge, but was aimed at the expansion of knowledge.

Analogical reasoning is also well known in ancient Greece and other cultures,²² and I will contend that

¹⁹ Veldhuis, “Theory of Knowledge” (2010), 83–84.

²⁰ Crisostomo, *Translation as Scholarship* (2019). See A30200 obv. v’ 12: *i-me-ru*UTU.

²¹ *Ibid.*, 157–59.

²² Lloyd, *Polarity and Analogy* (1966).

similarities can be drawn between Heraclitean philosophy and the Babylonian intellectual system. Particularly, I will argue that Heraclitus’s fragments can be read in light of Babylonian hermeneutics and vice versa, and that they share a similar epistemological approach to knowledge although the object of the inquiry was different.

The present analysis is based on the interpretation of Heraclitus offered by Charles Kahn²³ and more recently supplemented by Laura Gianvittorio.²⁴ Kahn’s interpretation was grounded on the “intimate connection between the linguistic form and the intellectual content of his (Heraclitus’) discourse.” From this starting point, Kahn elaborated the concept of *linguistic density* and *resonance*. *Linguistic density* is “the phenomenon by which a multiplicity of ideas are expressed in a single word or phrase” and *resonance* is the “relationship between fragments by which a single verbal theme or image is echoed from one text to another in such a way that the meaning of each is enriched when they are understood together.” As Kahn further stated, the two principles are complementary in that

resonance is one factor making for the density of any particular text; and conversely, it is because of the density of the text that resonance is possible and meaningful [. . .] density is a one-many relation between sign and signified; while resonance is a many-one relation between different texts and a single image or theme.²⁵

A third principle assumes that fragments were arranged in a meaningful way that was, however, non-linear: sayings, or γνῶμαι, were “linked together not by logical argument but by interlocking ideas, imagery and verbal echoes.”²⁶

Heraclitus’ discourse was notoriously difficult to understand, and often very different interpretations have been put forth, due to its cryptic style built on paradoxes, similes, word-plays, metaphors, puns and riddles.²⁷ Timon of Phlius called him “the Riddler” and at some point, Heraclitus was bestowed the enduring

²³ Kahn, *Art and Thought* (1979), esp. 89–95.

²⁴ Gianvittorio, *Il discorso di Eraclito* (2010).

²⁵ Kahn, *Art and Thought* (1979), 89.

²⁶ *Ibid.*, 7. One may notice that this organizational principle closely reminds us of Mesopotamian lexical lists (Hilgert Von ‘Listenwissenschaft’ und ‘epistemischen Dingen’ [2009]) and omens (Winitzer, *Early Mesopotamian Divination Literature* [2017]).

²⁷ On Heraclitus’ language and style, see Hölscher, “Paradox, Simile” (1974), Barnes, “Aphorism” (1983).

appellative of “the Obscure.”²⁸ The famous answer of Socrates to Euripides when asked what he thought of Heraclitus’ book synthesizes his reputation for obscurity: “What I understood was good, and no doubt also what I did not understand; but it needs a diver to get to the bottom of it.” Aristotle blamed Heraclitus’s writing for syntactical ambiguity that was combined with a tendency for asyndetic coordination.²⁹ This has led many scholars, ancient and modern, to claim a defiance of logic in Heraclitus’ thought.³⁰ However, as Kahn pointed out, Heraclitus’ ambiguity was intentional and served a hermeneutical function.³¹

As with Babylonian scholarship, analogical reasoning in Heraclitus³² tends to semantic proliferation and ambiguity. I will first illustrate relevant examples showing similarities between Heraclitus and Babylonian scholarship and then I will set the Babylonian epistemological system in light of Heraclitus’ philosophy. Heraclitus’ fragment D 53 (B 48), one of the most famous cases of the identity of opposites, presents a case of paronomasia similar to those seen above from the lexical list Izi or the report of a celestial omen: τῷ οὖν τόξῳ ὄνομα ΒΙΟΣ, ἔργον δὲ θάνατος, “The name of the bow is life, but its work is death.” In this fragment, Heraclitus plays with the ambiguity of the early Greek writing that does not mark the accents:³³ the

²⁸ Guthrie, *History of Greek Philosophy* (1962), 412–13, Barnes, *Presocratic Philosophers* (1979), 57–58, Barnes, “Aphorism” (1983), 100–101, Kirk et al., *Presocratic Philosophers* (1983), 185–86.

²⁹ Barnes, “Aphorism” (1983), 101–102.

³⁰ Barnes, *Presocratic Philosophers* (1979), 72–73.

³¹ Kahn, *Art and Thought* (1979), 91–92; see also Gianvittorio, *Il discorso di Eraclito* (2010), 27–32, 66–68.

³² Heraclitus’s fragments follow the numeration of Laks and Most, *Ionian Thinkers* (2016); Diels-Kranz’ numbers are given in round brackets.

³³ Based on the comparison with the Mesopotamian material where analogical associations work in writing (see Bottéro, “Noms de Marduk” [1977], 16 and 18, and Van De Mieroop, *Philosophy Before the Greeks* [2015], 16–19, 64–65, 76–84, 189–93, 219–24), I do not share Gianvittorio’s belief that this word-play originated in a oro-aural tradition, although Cavigneaux, *Zeichenlisten* (1976), 246, argued that “l’écriture n’est pas un présupposé nécessaire pour réaliser de telle associations ; dans certains cas elles relèvent d’une technique d’analyse associative qui doit être très archaïque et même bien antérieure à tout ce qui nous a été transmis de l’histoire humaine, cependant il se trouve que l’écriture a pu donner à ce mode de réflexion une nouvelle possibilité d’expansion, et les Babyloniens d’ont pas manqué d’en profiter.” Particularly in D 53 (B 48), ambiguity would appear only in writing because in archaic Greek writing accents were not indicated, while in an oral context ambiguity would be immediately loosen by pronunciation; on the written nature of Heraclitus’ book see also Kahn, “Philosophy and the Written World” (1983),

word ΒΙΟΣ could be read both as βίος, “life,” and βίος, “bow” and consequently as a life-threatening weapon.³⁴ Thus through this analogical association Heraclitus claims the identity of life and death. This fragment fully expresses the ambivalent possibilities of words because two completely opposite realities, life and death, are conveyed by the same word, or better two homographic words.³⁵ If we attempted to express this fragment in a “Babylonian” way, we would probably have three lexical entries³⁶ in which by analogical reasoning the concept of death is drawn from its antonym through the word for bow.

BΙΟΣ	=	life
BΙΟΣ	=	bow
BΙΟΣ	=	death

The equivalence of life and death is arrived at in a manuscript of the lexical list Sa stemming from the 13th century BC city of Ugarit in Syria (Ugaritica V 13 = RS 23.493A) where the sign BAD is translated both with *mūtu*, “death”—the regular translation—and with *balātu*, “to live”:

r 8’	DIŠ	BAD	ba ⁷ -la ⁷ -[tu]	to live
r 9’	DIŠ	BAD	ga ⁷ -ma ⁷ -[ru]	to complete
r 10’	DIŠ	BAD	la ⁷ -x ⁷ [...]	
r 11’	[DIŠ]	BAD	mu ⁷ -tum ⁷	death

Although the analogical process works slightly differently from the Heraclitus fragment, this lexical list presents the same antonymic association.³⁷ The sign BAD with reading uš₂ means “to die, death” in Akkadian (*mātu*, *mūtu*), and with reading til means “to (be) complete(d),” Akkadian *gamāru*. Yet, the reading til is homophonic to the reading til₃ of the sign TI, which means “to live,”³⁸ and results in the antonymic translation *balātu*, “to live.” By playing with the reading /til/ of the signs BAD and TI, a single sign is given two opposite translations.

117–18, Hölscher, “Heraklit zwischen Tradition und Aufklärung” (1985): 24.

³⁴ Marcovich, *Eraclito* (1978), 135–37.

³⁵ See Gianvittorio, *Il discorso di Eraclito* (2010), 44.

³⁶ Note that lexical entries represent complete statements: Van De Mieroop, *Philosophy before the Greeks* (2015), 60.

³⁷ In Heraclitus, life and death are subsumed in two homographic words while the reading bad of the sign BAD does not identify either meaning.

³⁸ Note that in Sumerian the sign TI is an arrow.

The identification of life and death is articulated in another Heraclitus' fragment D 16 (B 15) in which Dionysus, the god of fertility and life, is identified with Hades, the god of death:

Εἰ μὴ γὰρ Διονύσω πομπὴν ἐποιοῦντο καὶ ὕμνεον
ἄσμα αἰδοίοισιν, ἀναιδέστατα εἴργαστ' ἄν· ὡτὸς
δὲ Ἄιδης καὶ Διόνυσος, ὅτεω μαίνονται καὶ
ληναίζουσιν,

If it were not for Dionysus that they performed the procession and sang the hymn to the shameful parts, most shamefully would they be acting; but Hades is the same as Dionysus, for whom they go mad and celebrate Lenaia.

In one of the numerous puns contained in this fragment,³⁹ Dionysus and Hades are identified not in an abstract way, but in words and language, through analogical associations: Dionysus is ἀναιδής, “shameless,” but becomes αἰδής, “unseen,” and consequently αἰδοῖος, “respectable,” the opposite of ἀναιδής, allowing the identification of sexual vitality with death.⁴⁰ This word-play represents a hermeneutical and heuristic tool to explore hidden meanings, because as stated by Chris Emlyn-Jones, “Opposites which are formally identified in words of similar form but contrary meaning are literally ‘the same.’”⁴¹ Thus, a naming process allows Dionysus to assume the attributes of Hades and to establish their identity. This process recalls the principles of the fifty names of Marduk in the *Enuma Eliš*, where, through a technique of naming, the god receives many attributes and is connected to the whole world.⁴² The foregoing examples show that analogical reasoning operated in a similar way in cuneiform scholarship and in Heraclitus' fragments.

A Babylonian *šātu*-commentary on physiognomic omens (*Alamdimmū*) provides further examples for the identification of opposite attributes in a single name. In this commentary,⁴³ the same logogram, APIN, “plow,” is read both as father and mother, perhaps based on some

fertility symbolism,⁴⁴ and the same omen is interpreted in two very radically different ways: long life or premature death.⁴⁵

3. DIŠ SAG.DU ḪAPIN GAR *šum₄-ma* AD-*šū₂*
šum₄-ma AMA-*šū₂* UG₇

4. APIN: AD : APIN: AMA:

5. DIŠ SAG.DU *a-ri-bi* GAR U₄.MEŠ-*šū₂* GID₂.DA.MEŠ

6. *ša₂-niš ina* LA-*šū₂* UG₇ (. . .)

If he has the head of a plow, either his father or his mother will die
(because) plow (means) father; plow (means) mother

If he has the head of a raven, his days will be long.

Second (interpretation): he will die in his prime (. . .)

In another much-discussed fragment, D 25a (B 57), Heraclitus states the unity of day and night:

Διδάσκαλος δὲ πλείστων Ἡσίοδος· τοῦτον ἐπίστανται
πλεῖστα εἰδέναι, ὅστις ἡμέρην καὶ εὐφρόνην οὐκ
ἐγίνωσκεν· ἔστι γὰρ ἓν

The teacher of the most people is Hesiod; they are certain that it is he who knows the most things—he who did not understand day and night, for they are one.

Hesiod represents one of the favorite targets of Heraclitus' criticisms of traditional religion and authorities, notably, as in this case, for his polymathy which is a false knowledge and leads to error because he was not able to recognize that day and night are one thing.⁴⁶

³⁹ See Marcovich, *Heraclito* (1978), 176–80, Kahn, *Art and Thought* (1979), 263–66.
⁴⁰ Verdenius, “Heraclitus” (1959), Emlyn-Jones, “Identity of Opposites” (1976): 100, Kahn, *Art and Thought* (1979), 265–66.
⁴¹ Emlyn-Jones, “Identity of Opposites” (1976): 101.
⁴² See Van De Microop, *Philosophy before the Greeks* (2015), 9.
⁴³ W 22312a = SpBTU 1 83, Böck, *Die babylonisch-assyrische Morphoskopie* (2000), 254–56; see also Frahm, *Text Commentaries* (2011), 210–14.
⁴⁴ Frahm, *Text Commentaries* (2011), 212. The identification of father and mother is not unique to this text because in the commentary to the series *Šumma ālu*, K 103 (= CT 41 34), the logogram for father is interpreted as mother: 6' AD *um-mu*. This section of the commentary relates to tablet 103 of *Šumma ālu* which deals with sexual intercourse but unfortunately the entry in the commentary is not known from the omen series; see Jiménez, “Commentary on *Ālu*” (2017); therefore a full understanding of this equivalence is precluded.
⁴⁵ Cavigneaux, “Aux sources du Midrash” (1987): 250.
⁴⁶ Heraclitus' criticism of Hesiod is likely aimed at Theogony 123f, where Hesiod states that Night is the mother of Day. The unity of day and night has received slightly different interpretations mostly as an empirical observation. According to Kirk, *Cosmic Fragments*

The unity of day and night is also attested in the Mesopotamian lexical list Aa III/3.⁴⁷ This list, which is an expanded and longer version of Ea, explains the reading and meaning of simple Sumerian signs providing several Akkadian translations for each sign. Aa is not organized according to a single principle but to a variety of semantic or graphic associations.⁴⁸ In the UD section, the Sumerogram for day, UD, is translated into Akkadian both as *ūmu*, “day,” and *mūšu*, “night.”

30.	𒍪-[ud ²]	UD	MIN	<i>u₄-mu</i>	day
31.				<i>um-š[u²m]</i>	heat
32.				<i>um-šum</i>	hunger
33.				<i>na-ga-gu</i>	to bray
34.				<i>ri-ig-mu</i>	cry
35.				<i>mu-uš-la-lu</i>	midday
36.				<i>el-lu</i>	pure
37.				<i>mu-šu</i>	night

The same lexical list offers another example of the identity of opposites, that between sky and earth:

8.	(u ₃)	(UD)	(<i>ut-tu-u₂</i>)	<i>ša₂-mu-u</i>	sky
9.				<i>er-še-tum</i>	earth

(1954), 156 (see also Kirk et al., *Presocratic Philosophers* [1983], 189; cf. Marcovich, *Eraclito* [1978], 158–59), day and night are one because “they represent different phases of the same process, and at no stage could night have existed independently of day as Hesiod postulated” and therefore the connection between day and night was of “inevitable succession.” Indeed, the same word ἡμέρα represents the total period of twenty-four hours, which includes day and night. Barnes (*Presocratic Philosophers* [1979], 72) also believes that the argument of Heraclitus started from the observation of the continuity of day and night as successive phenomena, but then moved to understanding their identity committing a “fallacy of equivocation”; in Barnes’ view, Heraclitus’ “fallacy lies in dropping the temporal qualifiers” which would have presented the fragments of the unity or identity as rational. According to Kahn (*Art and Thought* [1979], 107–110), Heraclitus’ statement derives from the knowledge of the relative length of day and night, that the Greeks acquired through astronomical observation most likely influenced by Babylonian astronomy. However, this fragment epitomizes the theory of opposites because day and night in traditional view were perceived as opposites and their unity as paradoxical. Emlin-Jones (“Identity of Opposites” [1976]: 106–107), who argued for a theory of the identity of opposites rather than simply their unity, regarded this fragment as “somewhat isolated;” note however Kirk’s remarks on variation in Heraclitus’ style regarding the use of τὸ αὐτό: *Cosmic Fragments* (1954), 115.

⁴⁷ See Cavigneaux, *Zeichenlisten* (1976), 10–11.

⁴⁸ Veldhuis, *Cuneiform Lexical Tradition* (2014), 157–60.

Obviously, one may argue that these lexical entries are rooted in the primordial unity of sky and earth (an-ki) but a lexical equivalence (and with a different sign, UD) departs from the simple mythological explanation.

A recently published Old Babylonian bilingual lexical list presents a more explicit antonymic association:⁴⁹

r i 14	se ₂ -e	SIG ₇	<i>ba-nu-²u²-[um]</i>	good
r i 15		SIG ₇	<i>da-²am²-[qum]</i>	good
r i 16		SIG ₇	<i>wa-²ar²-qu₂-²um²</i>	green
r i 17		SIG ₇	<i>ra-at-bu-²um²</i>	fresh
r i 18		SIG ₇	<i>la ba-nu-um</i>	not good

As with the foregoing identifications of positive and negative qualities, in these lexical entries the sign SIG₇ meaning “good,” Akkadian *banūm*, *damqum*, is also translated with its opposite, *lā banūm*, “not good.” Another example is found in the lexical list Izi where the two opposite directions of movement, coming close and moving away, are associated to the same Sumerian verbal root that originally had only the meaning of “to be near, to approach.”⁵⁰

95.	[TE]	<i>ne₂-su-²u²</i>	to be distant
96.	[TE]	<i>du-up-pu-rum</i>	to move away
97.	TE	<i>sa-na-qu</i>	to approach
98.	TE	<i>te-bu-um</i>	to approach

The first two entries provide antonymic translations of teĝ₃ (TE) that are possibly based on a graphic principle: the sign KAR, which means “to leave,” is a compound sign written TE.A.⁵¹ Therefore a synecdochic (or abbreviated)⁵² equation TE.A : TE results in an antonymic association, although neither *nesū* nor *duppuru* are known to translate KAR.⁵³

These lexical entries can be compared to Heraclitus’ fragment D 51 (B 60) in which opposite movements are considered the same: Ὅδὸς ἄνω κάτω μία καὶ ὠπή, “The way upward and downward: one and the same.”

⁴⁹ Klein and Sefati, *From the Workshop* (2020), 75–198.

⁵⁰ Cavigneaux, *Zeichenlisten* (1976), 109–10, MSL 13, 187; the same entries are found in Aa VIII/1, MSL 14, 494. The verb te/teĝ₃ is translated with *nesū* and *duppuru* also in CUSAS 12, 7.1 A 4: 32–33 (MS 4135), te-ba = *i-si₂* (“be distant!”) // te-ba = *du-up-pi-ir* (“move away!”).

⁵¹ Veldhuis, “Elevation of Ištar” (2018), 190.

⁵² For abbreviated Sumerian signs in lexical lists, see Crisostomo, *Translation as Scholarship* (2019), 156–57.

⁵³ Cf. CAD D s.v. *duppuru*, lexical section, CAD N/2 s.v. *nesū*, lexical section.

With a relativistic approach, Heraclitus simply states that two opposite things are coincident depending on the viewpoint;⁵⁴ an approach that can probably be ascribed to the Izi entries as well.

Antonymic associations are limited to scholarly texts since no scribe would use the sign UD for night outside the realm of speculative thought in scribal circles; no fanciful associations are found in ephemeral or historical documents. Scholars have not given a clear explanation for antonymic associations.⁵⁵ But perhaps Heraclitus' fragment D 47 (B 10) unintentionally offers the best description of the organizational principles of Mesopotamian lexical lists: *Συνάψεις*⁵⁶ ὅλα καὶ οὐχ ὅλα, συμφερόμενον καὶ διαφερόμενον, συνᾶδον διᾶδον, καὶ ἐκ πάντων ἓν καὶ ἐξ ἑνὸς πάντα, "Conjoinings: wholes and not wholes, converging and diverging, harmonious dissonant; and out of all things one, and out of one all things." The usual left-to-right reading of lexical lists led to the proliferation of Akkadian translations in the first millennium and the creation of odd and fictive associations that were grounded on the polysemic nature of cuneiform writing and on analogical reasoning.⁵⁷ However, if we read the lists from right to left—and the increasing use of logograms in the first millennium authorizes us to do so—we find the opposite process, a *reductio ad unum*. Thus, the end of Heraclitus' fragment perfectly describes the intellectual

process that created simultaneous semantic proliferation and simplification. The previously discussed UD section of Aa III/3 is a clear example:

ἐξ ἑνὸς πάντα			
—————→			
30.	𐎶𐎵-[ud ²]	UD MIN	u ₄ -mu day
31.			um-šu[m] heat
32.			um-šum hunger
33.			na-ga-gu to bray
34.			ri-ig-mu cry
35.			mu-us-la-lu midday
36.			el-lu pure
37.			mu-šu night
←————			
ἐκ πάντων ἓν			

In some way, what Oppenheim called "the strange reversal," namely the increasing use of logograms over syllabic signs from around the middle of the second millennium BC, leading to a greater complexity of the writing system, can be surely interpreted (following Marc Van De Mieroop⁵⁸) as an enrichment of meaning, but also as a tendency to condense meanings in a single sign. This is particularly evident in omens where the use of logograms allows a plurality of meanings with an economy of signs.

In Heraclitus, ambiguity—which corresponds to Kahn's definition of linguistic density as "the use of lexical and syntactic indeterminacy as a device for saying several things at once"⁵⁹—and analogical reasoning are not simply stylistic devices but have epistemological functions in revealing the hidden nature of things.⁶⁰ Heraclitus' oracular and polyvalent style has a heuristic

⁵⁴ Kirk, *Cosmic Fragments* (1954), 113–15.

⁵⁵ Cavigneaux, "Aux sources du Midrash" (1987): 245–46.

⁵⁶ Instead of *συνάψεις*, literally "contacts," a variant reports *συλλάψεις*, "conjunctions, comprehensions," which is echoed in fragment 1 of Scythinus of Teos who versified Heraclitus' book: ἀρμόζεται Ζηνὸς εὐειδῆς Ἀπόλλων, πᾶσαν ἀρχὴν καὶ τέλος συλλαβόν, ἔχει δὲ λαμπρὸν πλῆκτρον ἡλίου φάος, "Zeus's son, well-shaped Apollo, who comprehends beginning and end, tunes (the lyre); and he has the sun's light as a gleaming plectrum." Therefore, the form *συλλάψεις* perhaps better fits the context (I thank Francesco Sironi for this suggestion). Note that also Scythinus' fragment 2, which is preserved in Stobaeus in a prose version and closely recalls Heraclitus' fragment D 47 (B 10), relates to the connection of opposites: "From Scythinus' *On Nature*. Time is the last and first of all things and it contains everything, and it is always one and it is not one, since he proceeds from what is now, being present for itself in the opposite direction. For us, in fact, tomorrow is yesterday and yesterday tomorrow;" for Scythinus' fragments and their relation to the Heraclitean philosophy, see Sironi, "Heraclitus in Verse" (2019).

⁵⁷ See how Van De Mieroop (*Philosophy before the Greeks*, 82) describes this process: "Creative processes permitted an almost boundless expansion of these lists—as we saw happened over the centuries: new words could be invented, new meanings added, new pronunciations suggested, each providing new options for understanding and improved means of expression;" see also *ibid.*, 60, 79–80.

⁵⁸ *Ibid.*, 82–83.

⁵⁹ Kahn, *Art and Thought* (1979), 91.

⁶⁰ *Ibid.*, 23 and 201: "The concern with the truth and falsity of names, with 'etymology' understood as a search for the deeper significance hidden in words and naming, is characteristic of archaic thought generally, not only in Greece. But it is particularly striking in the literature and philosophy of the early fifth century." See Gianvittorio, *Il discorso di Eraclito* (2010), 41: "I giochi di parole fanno emergere e rappresentano l'altrettanto invisibile interconnessione tra i distinti fenomenici (elementi naturali, esseri viventi, individui umani, etc.), e dunque la segreta unità del mondo (. . .) Da esperto artigiano della parola, l'Efesio intesse la sua opera di sottili trame foniche e di riecheggiamenti, al fine di rivelare le affinità nascoste tra le cose."

function aiming for knowledge.⁶¹ Thus Kahn states: “word-play for Heraclitus becomes not so much a literary mannerism as a revelation in language of the hidden unity of the universe, a hint of the orderly structure which his logos evokes.”⁶² In Mesopotamia, analogical reasoning and hermeneutics were the highest forms of knowledge,⁶³ aiming at finding the hidden meanings of signs, grounded in the polyvalence of the cuneiform writing.⁶⁴

Perhaps one of the most striking similarities between Heraclitus’ philosophy and the Babylonian intellectual system is embedded in the fragment D 41 (B 93): ‘Ο ἄναξ οὐδὲ τὸ μαντεῖόν ἐστι τὸ ἐν Δελφοῖς, οὔτε λέγει οὔτε κρύπτει, ἀλλὰ σημαίνει, “The lord whose oracle is the one in Delphi neither speaks nor hides but gives signs.” Heraclitus refers to Apollo’s utterance that was delivered through the Delphic oracle in indirect form, by riddles, images, and ambiguity. As argued by Kahn, “the sign, in Heraclitus’ case, is the very form of his discourse, the nature of the logos which he has composed as an expression of his own view of wisdom.”⁶⁵ Like the Delphic oracle, the *logos* has a hidden and enigmatic nature. It is not simply Heraclitus’ discourse that is enigmatic but “it is language itself which, by its dual capacity to reveal and obscure, provides the natural ‘sign’ for the multifarious and largely latent connections between things.”⁶⁶ Indeed, in fragment D 50 (B 54), Heraclitus states Ἄρμονιή ἀφανῆς φανερῆς κρείσσων, “An unapparent connection⁶⁷ is stronger than an apparent one,” clearly pointing to the unseen connection of opposites. Those unable to understand the *logos* are ἀξύνετοι (“uncomprehending”; D 1 = B 1), namely unable to put things together and find connections between things.⁶⁸ Likewise, in Mesopotamia,

finding connections between signs to reveal underlying meanings was the pursuit of true knowledge.⁶⁹ Putting things together and finding underlying and hidden connections are precisely the essence of Babylonian hermeneutics.⁷⁰ A passage of the Examenstext A possibly specifically refers to analogical hermeneutics as the way to reach hidden meanings: eme-gi₇ a-na i₃-zu nig₂-dul₃-bi ur₅-ra bur-ra i-zu-u // *ina šu-me-ri ma-la ta-ḫu-zu ka-tim-ta-šu₂ ki-a-am še-t[ā-a t]i-de-e*, “(The teacher to the student): “Do you know how ‘to spread out’ in the same way, the secrets of Sumerian you have learned?” It is likely that “to spread out” here refers to the required ability of the student to expand knowledge by finding hidden meaning.⁷¹

Like Heraclitus who regarded words as having a hidden meaning beneath the surface,⁷² the Babylonians conceived that signs, words, and texts had a hidden meaning that needed to be unveiled.⁷³ Mesopotamian gods communicated their messages through ominous signs, and they inscribed them in the universe. Divination was like reading a text.⁷⁴ The similarity between Heraclitus and cuneiform scholarship is even stronger if we consider that Heraclitus could have alluded to writing with the verb σημαίνειν in fragment D 41 (B 93), since σήματα in archaic literature means “visible signs”: a writing of the gods.⁷⁵ Heraclitus’ book reflecting the *logos* is a sign itself to be interpreted.⁷⁶ The relation between Apollo’s utterance and the *logos* is the same as that between Mesopotamian gods’ signs inscribed in the universe and the “written world.” Only the wise men were able to decipher these signs and grasp their underlying meanings. This is explicitly stated in the *Enuma Eliš*, where those able to discuss the fifty names

⁶¹ Gianvittorio, *Il discorso di Eraclito* (2010), 66.

⁶² Kahn, “A New Look at Heraclitus” (1964): 193.

⁶³ Note that Van De Mierop (*Philosophy before the Greeks* [2015], 188) describes lexicography (where analogical reasoning is applied to its fullest) as the “purest of Babylonian sciences.”

⁶⁴ See Crisostomo, *Translation as Scholarship* (2019), 140; Van De Mierop, *Philosophy before the Greeks* (2015), 41: “Babylonian lexicography was a scientific activity intended to foster understanding of the world,” and *Ibid.*, 219.

⁶⁵ Kahn, *Art and Thought* (1979), 20, 123–24.

⁶⁶ Kahn, “A New Look at Heraclitus” (1964). See also Hölscher, “Paradox, Simile” (1974), 231–33.

⁶⁷ On the meaning connection of ἀφανῆς see Kirk, *Cosmic Fragments* (1954), 222–26, Gianvittorio, *Il discorso di Eraclito* (2010), 120–23.

⁶⁸ Nussbaum, “ΨΥΧΗ” (1972): 11, Gianvittorio, *Il discorso di Eraclito* (2010), 237–39.

⁶⁹ Bottéro, “Noms de Marduk” (1977), 19–27; Cavigneaux, “Aux sources du Midrash” (1987): 245, 247–52; Seminara, *Lugal-e* (2001), 422–24, 430–51.

⁷⁰ Kahn’s comment of Heraclitus’ polyvalence could be easily applied to Babylonian hermeneutics: “In the case of Heraclitus as in that of Aeschylus, the interpreter’s task is to preserve the original richness of significance by admitting a plurality of alternative senses—some obvious, others recondite, some superficial, others profound” (*Art and Thought* [1979], 92).

⁷¹ Frahm, *Text Commentaries* (2011), 75–76.

⁷² Kahn, *Art and Thought* (1979), 202–204.

⁷³ Seminara, *Lugal-e* (2001), 450–51.

⁷⁴ Van De Mierop, *Philosophy before the Greeks* (2015), 135–40; Rochberg, *Before Nature* (2016), 170–72.

⁷⁵ Gianvittorio, *Il discorso di Eraclito* (2010), 220–21.

⁷⁶ Kahn, “Philosophy and the Written World” (1983), 117.

of Marduk are called “wise” and “learned” (*enqu, mūdū*).⁷⁷

The relation between opposites was central to Heraclitus’ philosophy. As Emlyn-Jones argued, opposites are grounded in language and in their ambiguity rather than in empirical observations:

(. . .) paradox and ambiguity, as revealed in Heraclitus’ utterance, are in no sense peripheral or complementary to a study of the relationship between opposites, but may well be of central importance. Opposites which are formally identified in words of similar form but contrary meaning are literally ‘the same’ (. . .) It seems possible that this, rather than any logical inferences drawn from observation of physical or cosmological changes, may represent the ultimate origin of Heraclitus’ startling assertion of the identity of opposites. At least, such a hypothesis would account in some measure for the lack of conventional explanation of assertions with regard to opposites, which in antiquity gave Heraclitus his celebrated reputation for obscurity. The assertion was, in a sense, its own explanation, since the relationship between opposites was displayed as self-evident in language, which, he believed, reflected the structure of reality. Explanation was neither necessary nor even possible.⁷⁸


This relation is not expressed in abstract terms, as one might expect, but in a casuistic way, as lists of single cases of opposites,⁷⁹ as is exemplified in the first part of the fragment D 48 (B 67): ὁ θεὸς ἡμέρη εὐφρόνη, χειμῶν θέρος, πόλεμος εἰρήνη, κόρος λιμός . . . , “God: day night, winter summer, war peace, satiety hunger . . . ” According to Jonathan Barnes, Heraclitus

was working with a fairly loose, intuitive notion of what “opposites” were; he would, I imagine, have presented a list, not a definition, if asked to explain himself: wet, dry; up, down; straight, crooked; sweet, sour; hot, cold; male, female; and so on. The list would no doubt be long, and its items would, to our eyes, be logically diverse: some pairs seem logical contraries; some express physically incompatible properties; some are el-

liptically expressed relations between which no true incompatibility exists in the form of a list.⁸⁰

In Mesopotamia, to use Van De Mierooop’s words, “binary opposition dominated the Babylonian mindset.”⁸¹ Although the Babylonians never formulated a theory of opposites and did not expressly state their unity, an underlying unity can be understood in the principle of correspondence as argued by Stefano Seminara:

l’idea della corrispondenza tra sumerico e accadico non è altro che una delle molteplici manifestazioni della convinzione babilonese che l’“universo” sia immaginabile come strutturato in serie di coppie speculari o antitetiche in rapporto di corrispondenza biunivoca. Tutta la scienza babilonese pare fondarsi su questo principio: quella teologica, intesa a stabilire corrispondenze tra gli “elementi” del pantheon sumerico e quelli del pantheon accadico, speculazione che ebbe come esito l’elaborazione delle liste divine; quella mantica o divinatoria, che si occupa di mettere in luce i nessi tra macrocosmo e microcosmo, per cui un fenomeno che ha luogo nel primo deve avere un determinato effetto (e non altro) nella sfera del secondo; la lessicografia e la grammatica, la cui struttura è sinottica per definizione; la storiografia, che trovò una sua peculiare espressione, in Mesopotamia, nella creazione di liste sincroniche di re babilonesi e assiri.⁸²

A concept similar to that expressed in the above discussed Heraclitus’ fragment D 50 (B 54) is known in Mesopotamia in the Sumerian word ḥa-mun, meaning something like “harmony (of opposites)” and in its Akkadian translation, *mithurtu*, meaning “opposition, counterpart.” As pointed out by Francesca Rochberg,⁸³ the concept of the harmony of opposites is also expressed graphically because ḥa-mun has a rare writing NAGA.NAGA where the second NAGA is written upside down .⁸⁴ Obviously, Heraclitus went beyond

⁷⁷ *Enuma Eliš* VII 146; see Van De Mierooop, “Babylonian Philosophy” (2018): 33.

⁷⁸ Emlyn-Jones, “Identity of Opposites” (1976): 101.

⁷⁹ Kirk, *Cosmic Fragments* (1954), 100.

⁸⁰ Barnes, *Presocratic Philosophers* (1979), 80.

⁸¹ Van De Mierooop, *Philosophy before the Greeks* (2015), 124; Rochberg, “Anthropology of Science” (2019): 263–66.

⁸² Seminara, *Lugal-e* (2001), 463.

⁸³ Rochberg, “Anthropology of Science” (2019): 266.

⁸⁴ CUSAS 12, 1.1.2: 231, ḥa-mun naga.naga-inv. *ṛmi⁷-it-ḥa-artum*. Note that the sign naga is used to write the name of Nisaba the goddess of writing; thus one may speculate that harmony is also expressed theologically.

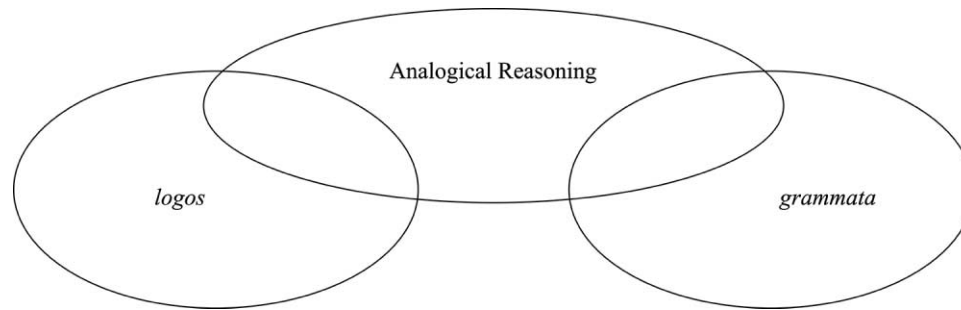


Figure 1—Analogical reasoning.

the unity of opposites by stating their identity.⁸⁵ Polarity in Babylonian scholarship, as in Heraclitus, was not just a game, but a heuristic tool to pursue knowledge which in Mesopotamia was fundamentally cumulative. As with Heraclitus, this research unfolds not through a theoretical conception of opposites but a practical one, a list, that is not only observable in the lexical lists, but also, following Buccellati's interpretation,⁸⁶ in the *Dialogue of Pessimism*.⁸⁷ In this wisdom text, a series of opposites, juxtaposed in a proverbial structure with only an apparently ironic touch, represents the completeness of knowledge, that is, their unity.

We can therefore reach the conclusion that Heraclitus and the Babylonians had different epistemic objects but a similar epistemological approach. For Heraclitus, the object of knowledge was the *logos*⁸⁸ that represented the unifying element.⁸⁹ In Mesopotamia, the object of knowledge was the cuneiform system.⁹⁰ In both systems, the analysis of the minimum semantic units were epistemological tools to expand knowledge: in Heraclitus this unit was the word, while in Mesopotamia it was the cuneiform sign.⁹¹ Heraclitus' book was an inquiry into the *logos*, namely (or which was)

an inquiry into the polysemic and ambiguous value of words to reveal the unity of opposites;⁹² Babylonian scribal scholarship was an inquiry into the cuneiform system, in other words into *grammata*. These inquiries were pursued through analogical reasoning—which, however, was not the only cognitive strategy,⁹³ as shown in Figure 1. The space left to other cognitive strategies is what guarantees that scribes were not using antonymic associations in daily practice.

This interpretation obviously leads to the problem of the relations between epistemological objects and reality. Scholars have long assumed that Heraclitus believed in an ontological relationship between names and things so that names reveal the essence of things.⁹⁴ Assyriologists have argued the same for the Babylonians.⁹⁵ However, more recently, as far as Assyriology is concerned, Crisostomo has contended that this relation was conventional (as with Aristotle and Saussure), and that analogical hermeneutics was simply a scribal

countermeaning. Only with the isolating of the word does the clarifying paradox emerge.”

⁹² This is obviously one of the possible interpretations of Heraclitus; see for instance Barnes, *Presocratic Philosophers* (1979), 148.

⁹³ See Rochberg, *Before Nature* (2016), 150 and 163, respectively: “astrology, magic, and astral medicine employed analogical reasoning, among other cognitive strategies, which worked within normative standards for relating the particulars of phenomena in various meaningful ways”; and again “analogical and associative reasoning functioned as a way to make rational inferences about the meaning of phenomena and did not exclude other kinds of rational reasoning attested in other areas of cuneiform scholarship and in ancient Mesopotamian life in general.”

⁹⁴ Calogero, “Eraclito” (1936): 195ff. and *Logica antica* (1967), 63–107, Di Cesare, *Semantica* (1980), 9–20 and “Heraklit” (1986), 9–16.

⁹⁵ Bottéro, “Noms de Marduk” (1977); Cavigneaux, “Aux sources du Midrash” (1987); Seminara, *Lugal-e* (2001), 420–25; Van De Mieroop, *Philosophy before the Greeks* (2015), 196.

⁸⁵ On the unity versus identity of opposites, see Emlyn-Jones, “Identity of Opposites” (1976). The antonymic correspondences in Mesopotamian sources presented above appear to be occasional and less the core of Babylonian epistemology, as it was in Heraclitus.

⁸⁶ Buccellati, “Tre saggi” (1972): 92–94.

⁸⁷ Lambert, *Babylonian Wisdom Literature* (1960), 139–49.

⁸⁸ Cankaya, “Knowledge in Heraclitus” (2017).

⁸⁹ Kirk et al., *Presocratic Philosophers* (1983), 186–88.

⁹⁰ Note that, according to the literary text “In Praise of the Scribal Art,” the scribal art was called the “nexus of all [wisdom?],” Sjöberg, “In Praise of Scribal Art” (1972): 126 l. 12; Foster, *Before the Muses* (2005): 1023–24; Van De Mieroop, *Philosophy before the Greeks* (2015), 188.

⁹¹ See Hölscher, “Paradox, Simile” (1974), 232: “Heraclitus takes the individual word, as he takes the individual thing, as a symbol. He dives into it, as it were, to discover in its meaning a

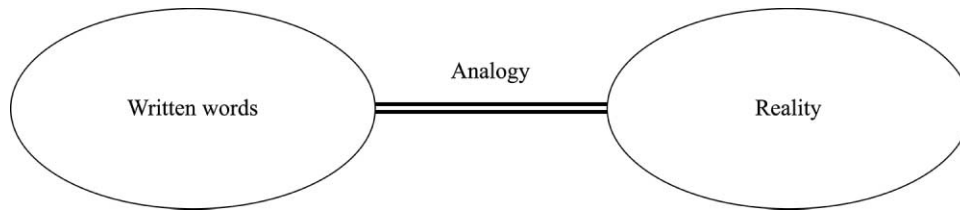


Figure 2—Relation between words and reality.

practice.⁹⁶ Between the ontological and conventional relationships of names and things, we can place Gianvittorio’s interpretation of Heraclitus. She argued for a structural analogy between Heraclitean *logos* and reality:⁹⁷ the *logos* represents a heuristic model of the world and its understanding aids the understanding of the world, and vice versa. Similarly, we can posit that in Mesopotamia written words (or signs) represented an interpretative model of it, but not the world itself. The opposition between a natural and a conventional relation of word and being, can be therefore reformulated in terms of analogy: names and signs are neither the same nor incommensurable, but linked by a relation of analogy, which implies that the signifier resembles the signified but remains different from it (see Fig. 2).

Gianvittorio further contends that between *logos* and names existed the same relation as between unity and multiplicity:

ἕν : πάντα = λόγος : ὀνόματα

Based on the foregoing analysis, we can attempt to apply the same relation between cuneiform scholarship, here intended as the material realization of the cuneiform system, and signs:

unity : multiplicity = cuneiform scholarship : signs

Applying this interpretation to Babylonian scholarship allows us to revise Van De Mieroop’s assessment that cuneiform scholarship, and more generally, analogical reasoning was “not the product of scientific inquiry into reality but studies of the written world.”⁹⁸ Certainly

they were not inquiries into nature⁹⁹—rather studies on the written world—but they did not only serve to teach “people what the possibilities of the writing system were and how they could expand written vocabulary.” Lexical lists, analogical reasoning, and more generally scribal scholarship could have served as interpretative models. Although I do not share Van De Mieroop’s proposal that analogical hermeneutics were aiming as a search for truth,¹⁰⁰ I also refrain from Crisostomo’s reductionist interpretation that “Babylonian and Assyrian hermeneutics reflects not a search for the true nature of a word or a sign but rather a full acknowledgement of the polyvalency and possibilities of words and signs—the conventionality ascribed by the writing system.”¹⁰¹ While, according to Van De Mieroop,¹⁰² “the text preceded reality,”¹⁰³ Crisostomo advocates for a complete separation between writing and reality.¹⁰⁴ The comparison with the Heraclitean fragments allows us to contend constructed practice of writing” as argued by Crisostomo.¹⁰⁵ Their use was more than a simple acknowledgment and a scribal practice, but a methodological approach to knowledge that combined syntheses and semantic proliferation, unity and multiplicity. As stated by Rochberg in regard to divination, “That we can identify the techniques by which an omen signifies should not mean that the system is reducible to the mere

⁹⁹ On the lack of the concept of nature in Mesopotamia, see Rochberg, *Before Nature* (2016).

¹⁰⁰ Van De Mieroop, *Philosophy before the Greeks* (2015), 9–12, 139–40, 196, 219–24; but what kind of truth and what kind of reality? Cf. Crisostomo, *Translation as Scholarship* (2019), 174 n. 12.

¹⁰¹ Crisostomo, *Translation as Scholarship* (2019), 178.

¹⁰² See n. 95, above.

¹⁰³ Van De Mieroop, *Philosophy before the Greeks* (2015), 221: “Physical reality was a written representation of the truth. In that sense Babylonian thought can be seen to resemble Plato’s theory of the ideal types that lay behind the realities we observe.”

¹⁰⁴ Crisostomo, *Translation as Scholarship* (2019), 144.

¹⁰⁵ *Ibid.*, 179; Crisostomo’s interpretation is inspired by Bourdieu’s habitus (*ibid.*, 75–78); for Crisostomo, analogical hermeneutics is an “embedded habitus developed in and as scribal practice” (*ibid.*, 113).

⁹⁶ Crisostomo, *Translation as Scholarship* (2019), 141–44, 167–85; on conventionality, see also Rochberg, *Before Nature* (2016), 93–102.

⁹⁷ Gianvittorio, *Il discorso di Eraclito* (2010), 177–78; for the relation between *logos* and reality see *ibid.*, 172–83.

⁹⁸ Van De Mieroop, *Philosophy before the Greeks* (2015), 65; see also Van De Mieroop, “Babylonian Philosophy” (2018): 23–26.

manipulation of words, symbols, analogies, or any of the other linguistic devices that create meaning.”¹⁰⁶ We can therefore posit that as much as words or signs were connected by analogy, the relationship between the written word/world and reality was neither identity nor total separation but analogy.¹⁰⁷ The main consequence of this interpretation is that the opposition between an ontological and a conventional relation between epistemic objects and reality no longer holds: for the Babylonian scholars, the study of cuneiform writing was a heuristic tool to understand reality, in the same way as it was the comprehension of *logos* for Heraclitus. The identity between epistemic objects and reality would project the Babylonians into a purely irrational and fantastic world, while their complete separation would relegate scribal scholarship to erudition. Conversely, the analogy between the epistemic objects and reality allows the combination of reality and fantasy, science and imagination, divine and human worlds,¹⁰⁸ which had fluid boundaries in the Babylonian intellectual system.¹⁰⁹ This interpretation does not preclude that scribal scholarship and analogical reasoning were inquiries into the written world (Van De Mieroop) or a scribal practice (Crisostomo), but contends that they, as a more complex system of knowledge, were not limited to those purviews. Understanding the epistemic objects of cognitive inquiry, namely *logos* in Heraclitus and signs in cuneiform scholarship, is the way to understand the world; such an understanding can only occur by connecting their single units: this cognitive “com-prehension” turns single words and signs into a meaningful coherent whole.¹¹⁰

The comparison between cuneiform and Greek material has shown that Heraclitus’ fragments share with

cuneiform scholarship a similar epistemic reasoning based on analogy, although the epistemic objects remained different. The question of transmission, or better of contacts, between Mesopotamia and Greece cannot be addressed in the limits of the present study. As for the subject of this article, it is difficult to ascertain whether transmission or contacts occurred and certainly further research is needed. However, it must be recognized that archaic societies across the Mediterranean had much more in common than is normally believed. Mesopotamian scribes and Heraclitus lived in a world that shared a similar intellectual system in which there was no formal logic and that they (obviously) did not measure their intellectual achievements by such a logic.¹¹¹ As Ludwik Fleck would put it, Babylonians and Heraclitus had different “style thoughts” that generated a system which appears alien to us.¹¹² The epistemological approach to knowledge prompted by Mesopotamian scholarship appears not to be restricted to the cuneiform world as advocated by Van De Mieroop,¹¹³ although the potentiality of the Greek alphabetic system was more limited.¹¹⁴ There is nothing in Heraclitus so extreme as the speculations found in Mesopotamian scholarship. Greek analogical reasoning never reached the peaks of Babylonian hermeneutics and was later superseded by formal logic. Mesopotamian creativity went far beyond any possible analogical principle applied by the Greeks and the possibility of adding new meanings was virtually endless.¹¹⁵

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¹⁰⁶ Rochberg, *Before Nature* (2016), 169.

¹⁰⁷ This interpretation would agree with Rochberg’s “generalizing force” governing Babylonian divination according to which “similar things behave in similar ways” (Rochberg, *Before Nature* [2016], 169). It can be posited that this generalizing force not only worked internally, within the divination system, but also externally between the epistemic objects of cuneiform scholarship and reality.

¹⁰⁸ See Rochberg, *Before Nature* (2016), 171–76.

¹⁰⁹ See Van De Mieroop, *Philosophy before the Greeks* (2015), 139; on this matter see also Rochberg, *Before Nature* (2016), 104–105: “The principal qualification must be in designating the objects of this knowledge not as ‘natural objects’ but as observed, imagined, and conceived objects in relation to physical as well as imagined things, and for the focus not on observation of the signs alone, but on their interpretation according to systematic codes embodied in textual compendia.”

¹¹⁰ Cf. Nussbaum, “ΨΥXH” (1972): 10–14.

¹¹¹ For Heraclitus, see Barnes, *Presocratic Philosophers* (1979), 80–81; Kirk et al., *Presocratic Philosophers* (1983), 186; Gianvittorio, *Il discorso di Eraclito* (2010): 61–62.

¹¹² Fleck, *Genesis and Development* (1979), 125–45, see also pp. 38–51; Fleck’s description of alien thought style could be easily applied to Babylonian and Heraclitean thoughts: “Just as we do, these people observed, pondered, found similarities, and associated them. They set up general principles, and yet they constructed as system of knowledge completely different from our own” (p. 127); I thank Francesca Rochberg for the reference.

¹¹³ Van De Mieroop, *Philosophy before the Greeks* (2015), 10–11, and “Babylonian Philosophy” (2018): 34–35.

¹¹⁴ Note however that alphabets can be used for systems of interpretation such as Gematria and Notarikon.

¹¹⁵ Cf. Van De Mieroop, *Philosophy before the Greeks* (2015), 221–22.

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