Mythogeography and hydromythology in the initial sections of Sumerian and Egyptian king-lists

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Abstract: Ancient pseudo-histories may contain kernels of geographic truth. In the Sumerian King List, the long and south-focused antediluvian era may reflect a combination of the Ubaid and Uruk periods, while the initial post-Flood period, which was short and ruled from the north, may reflect the Jemdet Nasr phase. The King List’s subsequent return of kingship southward to Uruk and Ur ushers in the Early Dynastic period. For Egypt, the Heliopolitan mythological sequence in which Seth (patron deity of Upper Egypt) is succeeded by Horus (patron deity of Lower Egypt) may reflect the spread of Naqada culture from southern to northern Egypt in the 4th millennium BCE, with the Upper Egyptian origin of both deities reflecting the unification of the Two Lands under the control of Upper Egypt.

The initial sections of the Sumerian King List and the Royal Annals of Ancient Egypt and Royal Canon of Turin are compared with each other and with their counterparts in the Hellenistic king-lists of Berossos and Manetho. The actual ages of the cities in the antediluvian portion of the Sumerian King List are reflected rather well by their positions in that list. The total time allocated by Berossos to the antediluvian period in Mesopotamia is an order of magnitude higher than the total assigned by Manetho to the mythological/predynastic period in Egypt, perhaps because the Babylonians reckoned time using a sexagesimal (base-60) numeral system whereas the Egyptians used a decimal (base-10) one.

The Mesopotamian and Egyptian myths that signal the beginning of historical time involve direct and indirect references, respectively, to a flood – an event whose nature reflects the actual geography and hydrology its source region. Mythologically, the water motif is used in opposing ways: the Mesopotamian formula involves a cataclysmic deluge which is nevertheless survived by a man, while the Egyptian one involves a benign inundation which receives the body of a slain god. A late embellishment of the Egyptian myth shares with a late version of the Mesopotamian one the image of a wooden box, with someone important inside it, being tossed aimlessly on the waves. Once again, the outcomes are opposite: the Egyptian vessel is a death-chamber in which a god is murdered, whereas the Babylonian one is a life-boat by which humanity is saved.

An interesting contrast to the mythical Great Flood is provided by the real-world aridification that culminated in the 4200 BP drought event, which helped to end both the Egyptian Old Kingdom and the Akkadian empire. It is possible that this sun-driven phenomenon contributed to the rise of the solar cult in 5th-Dynasty Egypt.

1. Introduction

There is no a priori reason why ancient pseudo-histories – while being fanciful in terms of detail – might not contain kernels (or at least occasional nuggets) of anthropological, technological, geographic or historical truth. For example, Hesiod’s Work and Days (ca. 700 BCE) describes five successive types of man or ages of the world: Gold, Silver, Bronze, Heroic and Iron. Of these, the last three are widely accepted as corresponding to the Bronze to Iron Age periods of archaeology. Indeed, Hesiod’s entire sequence can be seen as an accurate reflection of the (pre)history of metallurgy, insofar as gold and silver – being found
naturally in their elemental form as “native metals” that required no smelting3 – were known in the preceding Neolithic period.

A primary objective of the present paper (Section 2) is to examine temporal sequences of spatial/directional information within the initial sections of the main king-lists from Sumer and Egypt to see whether these might in any way reflect the historical and archaeological realities of the times they purport to represent.

In such inventories, the duration of the earliest kings’ reigns tend to be unrealistically large, and the resulting “fantasy numbers” have fuelled much speculation as to their mathematical derivation.4 While individual reign-lengths are clearly symbolic, their sums for particular epochs or dynasties may yet convey some perception of elapsed time in a relative sense; if so, one should disregard the absolute values in favour of calculating the ratio of one era’s longevity to another. This is especially likely to be true for contiguous periods, where the contrast in duration is most obvious and thus most likely to carry meaning.

In this paper, “geography” is understood in a broad sense that encompasses not just cartographic information but also aspects of key landscape features such as rivers. The dynamic behaviour of large rivers with respect to land – their hydrology – was of paramount importance to early agricultural societies in Egypt, which was irrigated by the Nile, and in Mesopotamia, which was watered by the Tigris and Euphrates. Hydrological changes were usually cyclical, the result of seasonal changes.

One hydrological event that features in many ancient chronicles was decidedly not part of the normal annual cycle. The folk-memory of a furious and unending rain-storm in late prehistoric times is widely diffused; the resulting Great Flood proved unforgettable because it almost caused the extinction of all terrestrial life. Insofar as there have been five mass extinction events over the last 600 million years,5 the myth reflects a fundamental reality of evolution – even if none of these biological pinch-points were actually caused by a global inundation.6 Comparative mythology supports the many literary manifestations of the Flood motif “as articulations of a very ancient, prehistoric myth that was particularly fruitful in the ancient Near East and South Asia.”7 Michael Witzel’s recent analysis of world mythology places it in the Pan-Gaean stratum, which relates to the period before the Out of Africa event ca. 65,000 BCE.8 Pan-Gaean mythology “includes a distant otiose High God, his direct or indirect creation of humans, their hubris, and their punishment by mortality and a Great Flood, as well a series of demiurges or tricksters that establish human culture.”9 The ancient and universal flood-myth may have been reinforced in the Near East of the Halaf/Early Ubaid period by a real-world event: the failure of a barrier in the Bosphorus ca. 5600 BCE, which would have subjected the Black Sea region to a devastating marine inundation.10 Irving Finkel believes that Mesopotamia itself suffered a colossal riverine inundation sometime before 4000 BCE; he suggests that “the cuneiform stories reflect or encapsulate one outstanding, tsunami-like devastation, a millennium or more before the advent of writing and history, when the towns and villages between the two rivers were swept down to the gulf with unimaginable destruction and unforgettable loss of life.”11 While the cataclysmic Flood
became a staple of Ancient Near Eastern cosmogonies and origin myths, appearing in the Hebrew bible as Noah’s Flood, it never became a prominent element in Egyptian mythology.

A secondary objective of the present paper (Section 3) is to compare the different types of flood imagery found in Mesopotamian and Egyptian mythology, and to explore their deployment in (and beyond) the Sumerian and Egyptian king-lists in connection with the end of prehistory and the dawn of historical time. A brief excursus (Section 4) also looks at manifestations of the opposite extreme – in particular, the debilitating drought that ultimately helped to end the Old Kingdom of Egypt, and possible responses to it in local religious practices. The impact and record of the same climatological catastrophe in Mesopotamia is also investigated. The analysis concludes with a brief look at the modern relevance of the global inundation motif (Section 5).

2.1 The Sumerian King List

In Mesopotamia, the Great Flood was believed to serve as the (literal!) watershed between prehistory and history – between orality and writing, folklore and factual record. Archaeologically, of course, there is no record of any such large-scale inundation in the Near East. Since “history” in the form of written record-keeping began ca. 3000 BCE, and since several local river-floods in Mesopotamia have been dated to around the same time, this date is also conventionally assigned to the notional Flood. The Flood therefore serves to divide the period of dominance by Uruk (ca. 4000-3100 BCE) from the time of competing Sumerian (i.e., southern Babylonian) city-states in the Early Dynastic period (ca. 2900-2350 BCE). The date of 3000 BCE corresponds to the middle of the Jemdet Nasr period, which spans ca. 3100-2900 BCE.

Despite general agreement on the major points, scholars disagree on the exact place at which the mythical Flood best fits into the relative chronology of Mesopotamia. Some see it as a marker separating the Jemdet Nasr and Early Dynastic periods (JN/ED boundary), while others have placed it between the Ubaid and Jemdet Nasr periods (Ub/JN boundary) or after the first phase of the Early Dynastic period (ca. ED I/II boundary). All three options are potentially consistent with the fact that Enmebaragesi, the 22nd and penultimate king of the Sumerian King List’s first post-Flood dynasty – the 1st Dynasty of Kish – is attested archaeologically as a king of Kish in the Early Dynastic III phase. He is the first king in the King List whose existence has been verified by independent sources. Six of the 57 subsequent pre-Sargonic kings in the King List are also attested in sources from the Early Dynastic period, namely three kings of Uruk (including Bilgames/Gilgamesh) and three kings of Ur.

The initial part of the Sumerian King List (Table 1) – the Antediluvian King List – was a secondary addition to the list of historical kings, one seemingly recruited from independent traditions of primeval rulers. Source WB 62 seems to preserve the earliest form of this section. The historical king-list potentially dates back to the Sargonic period (2300-2100 BCE) and a version survives from Ur III times (2100-2000 BCE). The antediluvian section was prefixed to the historical list during the Isin/Larsa period (ca. 2000-1790), around the time of the earliest unambiguous appearance of the Flood motif in surviving writings from Mesopotamia (Isin, ca. 2017-1896). The internal geography of the antediluvian section
Table 1. Antediluvian kings in the *Sumerian King List* (ca. 1800 BCE) and their counterparts in Berossos’ *Babyloniaca* (ca. 285 BCE).a

<table>
<thead>
<tr>
<th>No.</th>
<th>Sumerian King List b</th>
<th>ULKS c &amp; [Berossos]</th>
<th>Berossos, Babyloniaca c</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>King</td>
<td>City</td>
</tr>
<tr>
<td>1</td>
<td>Alulim</td>
<td>Eridu / Eridug d</td>
<td>28,800</td>
</tr>
<tr>
<td>2</td>
<td>Alalgar</td>
<td>36,000</td>
<td>Drumstick (?) 31</td>
</tr>
<tr>
<td>3</td>
<td>Enmenluana</td>
<td>Bad-tibira / Patibira “Canal” 32 / “Fortress of the Smiths”</td>
<td>43,200</td>
</tr>
<tr>
<td>4</td>
<td>Enmengalana</td>
<td>28,800</td>
<td>Lord of the great ME, of heaven</td>
</tr>
<tr>
<td>5</td>
<td>Dumuzi sipa</td>
<td>36,000</td>
<td>True child, the shepherd</td>
</tr>
<tr>
<td></td>
<td>City total:</td>
<td>64,800</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Ensipadzidana</td>
<td>Larak / Larag</td>
<td>28,800</td>
</tr>
<tr>
<td>7</td>
<td>Enmendurana</td>
<td>Sippar / Zimbir</td>
<td>21,000</td>
</tr>
<tr>
<td>8</td>
<td>Ubartutu f</td>
<td>Shuruppak / Curuppag</td>
<td>18,600</td>
</tr>
<tr>
<td>9</td>
<td>Ziusudra f</td>
<td>36,000</td>
<td>Life of prolonged/distant days 33</td>
</tr>
<tr>
<td></td>
<td>City total:</td>
<td>108,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>WB 444 total (= only kings 1-8):</td>
<td>241,200</td>
<td></td>
</tr>
</tbody>
</table>

**The Flood**

<table>
<thead>
<tr>
<th>No.</th>
<th>King</th>
<th>City</th>
<th>Rule (yrs)</th>
<th>Meaning of name 34</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jucur / Gushur</td>
<td>Kish</td>
<td>1200</td>
<td>Tree-trunk (?)</td>
</tr>
<tr>
<td>2</td>
<td>Kullassina-bel</td>
<td>960</td>
<td>He rules over all of them</td>
<td></td>
</tr>
</tbody>
</table>

**Berossos total:** 432,000
5

<table>
<thead>
<tr>
<th>Reign-Length Total</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>18,000 years</td>
<td>as actually provided in the primary sources, but are also mathematically correct.</td>
</tr>
</tbody>
</table>

6 This table presents a consensus that follows the “canonical” sequence for the Sumerian King List. It matches the order in WB 444 (Ash. 1923.444) except for the inclusion of Ziusudra; the Sumerian flood-hero is not listed in WB 444, but is included in WB 62 (from which his reign-length in the Table is taken) and is also present in UCBC 9-1819 (reign-length >18,000 years). Ziusudra may have been omitted deliberately from WB 444 as the Sumerian King List emphasizes discontinuity and dynastic change, with the kingship resident in just one city at a time, whereas Ziusudra’s post-Flood immortality would have run contrary to this scheme by positioning him as an eternal king. His survival would also have subverted the Sumerian King List’s claim that kingship had been destroyed by the Flood. Other presentations of the data in the table, and variants thereto, can be found in the academic literature. The position of Ensipadzidana (and thus Larak) is somewhat fluid; for example, the Dynastic Chronicle (K11261+), which is effectively a neo-Assyrian variant of the Sumerian King List whose origins may lie in Old Babylonian times, swaps positions 6 and 7.42

7 The antiquity of Eridu’s status as “the first city” is discussed by Peeter Espak; he argues that it dates only from the reign of Shulgi (Ur III, 2092-2045 BCE). In this interpretation, the UCBC 9-1819 version of this king’s name – Enmenduranki – is the complete form, reading “the bond between heaven and earth.” If Ennmdurana is required to serve as the full name in its own right, then perhaps “seat of heaven” is a viable alternative for –durana, reading DUR as “to sit, to dwell.”

8 Steinkeller (2017) traces the name’s etymology back to Šuruppak ušbarx (UR2.RUM), “the one of Shuruppak, a weaver,” with Ubur/Ubar as a later misreading of ušbar. Others read Shuruppak as the father of Ziusudra and thus the son of Ubartutu (the three-generation scheme) or as an epithet of Ziusudra as “the one from Shuruppak” (the two-generation scheme). The alternative interpretations date back at least to the Old Babylonian period and relate to ambiguities in the opening lines of the Early Dynastic III version of the Instructions of Shuruppak.52

9 An Akkadian name. Similarly, Hallo (1971) reads “Friend of the god Tutu.”

10 The reason for invoking Tutu, a city-god of Borsippa, is obscure. Some identify Tutu with Marduk, the patron deity of nearby Babylon.

11 Ziusudra is also the king and flood-hero in the Sumerian Flood Myth / Eridu Genesis. This text lists the first five antediluvian cities in the same order as the Sumerian King List (see Table); Ziusudra, who is introduced soon after this, is presumably to be understood as king of the last-named city – Shuruppak – although the name of his city is either not specified or has been lost. The cognate flood-hero in Akkadian sources is Atrahasis (“Exceeding wise”) who appears in the later Epic of Gilgamesh as Utnapishtim (“He has found life”). Utnapishtim is introduced as the “son of Ubar-Tutu,” consistent with the position of his alter ego Ziusudra as the successor of Ubartutu, king of Shuruppak, in several versions of the Sumerian King List. In terms of historiography, the addition of Ziusudra as the son and heir of Ubartutu used to be
considered as secondary to the original list of antediluvian kings, but the recent and very detailed analysis of Chen (2013) finds that it may well be original; if it is not original, then it is at least canonical. The identification of Utnapishtim with Atrahasis/Ziusudra probably post-dates the Old Babylonian versions of *Gilgamesh*. 

j See Marchesi (2010) for reconstruction of the name as Gushur and its translation as “Tree-trunk.” Gushur is consistent with the lu-Gushurra of MS 3175. Jucur is specified by ETCSL, Ga[ ]ur by Jacobsen (1939). At substantial odds with these names is the Mashikakatu of Hallo (1971), translated as “Harrow.”

k Verbrugghe & Wickersham (1996) do not recognise Amenon/Amelon as a duplication and therefore pair Dumuzi with (A)Megalaros in their table, which remains out of register thereafter.

l Abydenos (2nd–3rd century CE) largely follows Berossos for *ABGAL/apkallu* names, but identifies individually the four sages associated with Dumuzi/Daonos (his “Daos”): their names are Euedokos, Eneugamos, Eneuboulos and Anementos. (Eneuboulos is probably based on Enmebuluga, the *ABGAL/apkallu* associated with Enmeushungalana (=Ensipadzidana/Endorachos) by the *Uruk List of Kings and Sages*, which – anomalously – lists this king before Dumuzi). Abydenos also names the last sage as Anodaphos rather than Utuabzu (*Uruk List*) or Odakon (Berossos).
suggests a time-point for the Flood that is different to any of those listed above. Before the deluge, the kingship was first in Eridu, a key city of the Ubaid period (ca. 5700-4000 BCE) located near the type-site of Ubaid, in southern Babylonia (Fig. 1). After two reigns there, it moved to the nearby city of Bad-tibira, where it stayed for another three reigns. The only central or northern Babylonian cities to hold the kingship in the antediluvian period were Sippar and perhaps Larak, where it spent the next two reigns, before returning southward to Shuruppak for the final reign (Fig. 1). Altogether, the antediluvian era may be reckoned at 241,200-277,200 years, during which the kingship spent 191,400-227,400 years (79-82% of the total time) in the south. After the Flood, the kingship was first in Kish, the

Fig. 1. Map of Babylonia. Ancient river-courses and headwaters of Gulf are coloured teal, modern counterparts grey. The dashed green line suggests an approximate boundary between Northern Babylonia and Southern Babylonia (Sumer). Black disc, site of known location; black circle, possible location of site whose whereabouts is uncertain. Black name, ancient city named in Table 1; blue name, other ancient city; red name, modern place-name (two of which are archaeological type-sites).
“gravity point” of northern Babylonia (Fig. 1), where it resided for 23 reigns, totalling 24,510 years. Interestingly, Kish is located close to Jemdet Nasr, the type-site for the period in which the Flood notionally occurred.

One might therefore propose that the south-focused antediluvian era corresponds to the combined Ubaid and Uruk periods (ca. 5700-3100 BCE; 2600 years), whose key sites were in the south, while the initial postdiluvian period, whose leadership was located at Kish in northern Babylonia, reflects the short Jemdet Nasr phase (ca. 3100-2900 BCE; 200 years), whose key sites were also in the north. The archaeological and mythical time-spans even have approximately the correct proportions; just as the combined Ubaid/Uruk period lasted 13 times longer than the Jemdet Nasr one, the antediluvian era is about 10-11 times longer than the postdiluvian kingship at Kish. After Kish was defeated, the Sumerian King List has the kingship taken south to Uruk and then Ur. We may equate the return of kingship to the south of Babylonia with the start of the Early Dynastic period, in which the southern city-states of Ur and Uruk were prominent.

Viewing the notional Flood as a mid-Jemdet Nasr event does not lessen its utility as a marker that separates the period of dominance by Uruk from the time of competing city-states in the Early Dynastic period, nor does it diminish its value as a dividing line between prehistory and history. It is also potentially consistent with a 60 cm-deep “inundation level” of clay and sand – alluvium from a local flood – at Shuruppak, which was located between strata attributable to the Jemdet Nasr and Early Dynastic I periods. It may be contemporaneous with one of two local flood layers of much lesser dimensions (<0.4 cm each) that have been identified at the beginning of the Early Dynastic period at Kish; the older of these is contiguous with the Jemdet Nasr stratum at Kish and thus could even have occurred within that period. One would expect flood-borne alluvial deposits to be far greater at central and southern sites (e.g. Shuruppak) than at northern ones (e.g. Kish).

2.2 Antediluvian kings, sages and the Mesopotamian Flood

The Sumerian King List imposes the unity of the Akkadian empire onto Mesopotamian history both before and after the Sargonic dynasty from which it draws its paradigm. The entire list is predicated on the understanding that there was only ever one king at a time, and that the kingship moved from one city to another. Kingship itself was divine, having been “lowered from heaven,” but the antediluvian kings of the King List were men, not gods; even Dumuzi – best known as the husband of the goddess Inanna – seems to have begun as a local king of Bad-tibira and/or Uruk who was later divinized. We will encounter a very different situation in the first section of the Royal Canon of Turin, where some of Egypt’s earliest kings are actually core members of the Egyptian pantheon. Even the transfer of kingship between antediluvian cities in the Sumerian King List is not attributed to divine intervention; the same is true for the historical part of the list, where transfers of kingship invariably result from military outcomes. Interestingly, none of the antediluvian capitals had actually been a seat of royal power at the time when this section of the King List was composed, suggesting that it was not drafted to serve the agenda of any historical dynasty or
king. Rather, the cities that it names had long-held reputations as centres of culture and learning. Accordingly, the intention may have been to promote the importance of the priestly and scribal class in an uncertain world where power was shifting from the temple to the palace and the marketplace. Later revivals of, and embellishments to, the antediluvian portion of the *Sumerian King List* were probably motivated by related anxieties felt by the same social and professional group.

Most of the antediluvian cities in the *Sumerian King List* genuinely do predate the *ca. 3000 BCE* date of the notional Flood: Eridu dates from the early Ubaid period, and Bad-tibira also from some time in the Ubaid. Sippar was established in the Uruk period. There was a small town and some villages and in the area of Shuruppak during the Uruk era, but the city did not emerge until the Early Dynastic I period. The precise location of Larak remains unknown; while it is sometimes conflated with Larsa, this identification is unwarranted. Consistent with the proposal of Section 1, the antediluvian era of the *King List* seems to span the Ubaid and Uruk periods. Interestingly, the archaeological antiquity of the four known cities is reflected rather well by the order in which they appear in the *King List* (Table 1).

Only one of the antediluvian kings from the *King List* can be identified in sources from the *3rd millennium BCE*. This is Ubartutu, who is attested in the Early Dynastic version of a wisdom text called *The Instructions of Shuruppak*. Instead, most of the kings’ names follow a priestly formula whose ending (“-ana”) indicates a celestial connection (Table 1) – a paradigm that began in the time of Sargon, and which is best exemplified by the names of the EN-priestesses of Nanna at Ur. As Piotr Steinkeller writes, “By using this name pattern, the authors of the AKL [Antediluvian King List] referenced the high priests of Sargonic and Ur III times, who happened to be linear descendants of the Priest-Kings of Uruk as well. In this way, they were also able to link their antediluvian inventions with the most ancient manifestation of Babylonian kingship.” A fragment of the *Sumerian Flood Myth* (also known as the *Eridu Genesis*) in the Schøyen Collection indicates that Ziusudra was a GUDU-priest of Enki, and thus both a king and a priest. Enmenluana, Enmengalana and Ensipadzidana appear to have been considered as avatars of Dumuzi, whose epithet “the shepherd” may allude to the king’s duty to “be the shepherd of his people” – a Near Eastern analogy which, incidentally, is much less prevalent in Egypt. A newly-reconstructed text of the *Sumerian Flood Myth* has this paradigm reaching back to the first king, Alulim, who was chosen by An, Enlil and Enki “for the shepherdship of the entirety of the many people.” Alulim – whose name refers to a male deer (Table 1) – truly was a shepherd because, at the time when kingship was instituted, people lived like animals in a state of “pristine primitivism.” As a popular Sumerian text dating to *ca. 1800 BCE* explains, “The people of those days [...] went with naked limbs in the land. Like sheep they ate grass with their mouths, and drank water from the ditches.” Interestingly, “Alulim is grammatically marked as nonhuman,” although he seems later to be reprised by a personal pronoun. By way of complement and counterpoint, Sumerian literature up to *ca. 1800 BCE* often portrays animals as acting and speaking like humans; they even appear as “as wise, authoritative interlocutors,” although they rarely talk with men.
In an extension of the priest-king theme of the antediluvian part of the King List, the Enmeduranki Text and The Seed of Kingship credit Enmendurana with receiving the arts of divination and mathematics directly from Shamash and Adad. In later times, the first king, Alulim – who somehow managed to maintain his link with the animal world – came to be regarded as a magician who could control insects, while the last one, the priestly Ziusudra, gave rise to an Akkadian manifestation, Atrahasis, whose name translates as “Exceeding(ly) wise.” It is the latter’s alter ego – Utanapishtim – who passed to Gilgamesh religious information that had otherwise been lost in the Flood. In addition, Sippar, the home of Enmendurana, was later credited by the Hellenistic writer Berossos (whom we shall meet shortly) as the place from which tablets containing antediluvian knowledge were retrieved after the Flood. Eridu, Bad-tibira, Larak and Sippar are associated with the Seven Sages or apkallu (Table 1) – supernatural counsellors of the primeval era who were sent by Ea/Enki to civilize mankind and – an Old Babylonian version of the Sumerian King List even mis-spells the names of Eridu and Sippar with NUN.ME (= ABGAL, “sage”) in place of NUN (“the Prince,” i.e., Ea/Enki). Accordingly, the antediluvian kings seem to be archetypes of ideal kingship: mortal yet semi-divine culture heroes who ruled wisely and whose cities were renowned for their learning.

The term ABGAL dates back to Early Dynastic times; it usually denotes a cultic and ritual specialist, a long-haired priest whose appearance seems to have inspired the Nagelmensch in temple deposits. From Ur III (ca. 2100-2000 BCE) and Old Babylonian times (ca. 1790-1600 BCE) there are references to seven ABGAL/apkallu, and the Standard Version of the Epic of Gilgamesh (ca. 1200 BCE) credits them with founding the walls of Uruk. Traditions about an ABGAL named Adapa find early expression in a Sumerian text of the Old Babylonian period, which actually places him immediately after the Flood rather than before it. Adapa was a priest of Ea/Enki who saved himself from a storm by using ritual power (a curse) to break the wing of the south wind, an innovation that set in train events that culminated in his elevation to heaven and “the descent to earth of the guiding cosmic principles of culture and order,” the ME. Later recensions of the tale can be found in the Amarna Archives (ca.1350-1330 BCE) and in Ashurbanipal’s library (ca. 668-627 BCE); indeed, Ashurbanipal believed that he had read inscriptions on stone that had been written before the Flood and that he “had learned the lore of the wise sage Adapa.” Other 1st-millennium BCE texts relate the story of the Seven Sages (apkallu) who seem to have brought the arts of magic to Babylonia; they are named in the Bīt mēseri incantation, whose earliest extant copy is neo-Assyrian. Their names (Table 1) are anodyne – the three beginning with “En” signify “Lord, who makes good / perfects / refines the ME” – and their epithets too are generic.

Since the apkallu were emissaries from Ea/Enki, the god of civilization who resided at Eridu in the freshwater depths of the ABZU (abyss), they were often characterised as fish-man hybrids who were born in a river and emerged from the sea – an embodiment that probably dates back to Kassite times (ca. 1374-1155 BCE). In the 1st millennium BCE, these Babylonian fish-apkallu featured prominently in protective magic; in consequence, they became enmeshed with similarly apotropaic griffins of Assyrian origin, giving rise to bird-
Seven anthropomorphic but winged *umu-apkallu*, which are likewise of neo-Assyrian origin, also draw upon the Babylonian prototype; these seemingly antediluvian sages are attributed to the cities of Ur, Nippur, Eridu, Kullab, Kesh, Lagash and Shuruppak. A Hellenistic text from Uruk known as the *Uruk List of Kings and Sages* (ca. 164 BCE) associates each *apkallu* from the *Bīt mēseri* incantation with one of the antediluvian kings of the *Sumerian King List*, and thus with one of the pre-Flood capitals (Table 1). In this text, the order of *apkallu* is the same as in *Bīt mēseri*. However, the *Uruk List* has swapped the positions of kings Dumuzi and Ensipadzidana (there named Emmeushumgalana) relative to their order in the *Sumerian King List*; if the consensus sequence of rulers in the *King List* is restored, as in Table 1, the order of the *apkallu* Enmebuluga and Anenlilda is reversed relative to that in *Bīt mēseri*. Whether one should make such an adjustment is debatable, since the sequence of sages in *Bīt mēseri* (which does not anchor the *apkallu* to kings’ reigns) may actually relate to the canonical sequence of rulers. As it happens, the lack of craft specialisation or geographical specificity among the *apkallu* means that the “correction” (or lack thereof) is of little consequence. It is true that Anenlilda is singled out by being assigned an origin – he is “the purification-priest from Eridu” – but since all of the *apkallu* are emissaries of Ea/Enki, they are all ultimately “from Eridu.”

The *apkallu* were the supernatural bringers of culture to the antediluvian world of Mesopotamia. After the Flood, the *Bīt mēseri* text continues the series of *apkallu* with Nungalpiriggaldim, Piriggalnungal, Piriggalabzu and Lu-Nanna, all “of human descent.” But Lu-Nanna is described as two-thirds *apkallu*, which suggests that there was progressive inter-breeding between *apkallu* and humans; later sages are fully human and are designated as *ummanu*. Piriggalnungal and Piriggalabzu act in ways that anger the gods. Their hybrid pedigree and the divine displeasure triggered by their behaviour invite comparison with the *nephilim* of Gen 6:1-8. The biblical account, whose details are expanded in the extra-canonical books of Enoch and Jubilees, relates how a group of angels (“Watchers”) descended to earth and brought technology and culture to human society (1 En 8:1-3, 9:6-7), much as the *apkallu* emerged from the sea to bring the ME of civilization to mankind. (Tellingly, Adapa and the other antediluvian *apkallu* are often described in Mesopotamian texts as “watchers.”) However, the real motive for the angels’ descent was their lust for mortal women, with whom they mated; these forbidden unions produced hybrid offspring called *nephilim* (Gen 6:4; 1 En 6:1-7:6; Jub 7:21-25). In the Enochian account, the corruption that flowed from the fallen angels’ revelation of divine secrets to humans and the impious violence being wreaked by their *nephilim* offspring is what prompted God to ordain the biblical Flood, which was intended to purge and purify the earth. Just as the *apkallu* were banished forever to the APSU/ABZU (“abyss”), the Watchers were condemned to imprisonment “beyond the abyss” until the Day of Judgement (1 En 18:10-19:3).

Having now concluded our digression into Hebrew refractions of the *apkallu*, let us return fully to the world of the *Sumerian King List*. Immediately after the Flood, kingship was revived in the northern and non-Sumerian city of Kish. The principal language of Kish
would have been Akkadian, a Semitic language. Max Mallowan has suggested that “The Flood may [...] have been a contributory cause of the first phase of a movement which, towards the end of the third millennium B.C., led to the replacement of the older Sumerian rulers by wholly ‘Semitic’ Dynasties.” William Hallo provided a literary dimension to the same thinking when he observed that

the Sumerian word for flood, *amaru*, is virtually a homonym of the Sumerian word for Semite – *(a)marru* (Akkadian, *amurrû*) – and the Sumerians did not hesitate to make a play on words equating the Amorites with the Flood. They were, of course, victims of many Semitic irruptions from the west, Amurrû, but they may well have applied the equation first to the original wave of Semites who, as we have suggested, entered the country in force about 2900 [...] It is worth noting that some of the first postdiluvian kings who ruled Kish bore Semitic names.

In fact, about half do: 12 of the 23 names in the 1st Dynasty of Kish are Semitic. The name of the ninth king – Zuqaqip – is the Akkadian word for “Scorpion;” he is therefore named for the same animal as two predynastic kings of Upper Egypt, Scorpion I (Naqada IIIA), the owner of Tomb U-j at Abydos, and Scorpion II (Naqada IIIB), who is attested archaeologically by a mace-head from the Main Deposit at Hierakonpolis.

It is instructive to see the fidelity with which (pseudo-)historical information from the 3rd and 2nd millennia BCE reached Hellenistic authors. Unfortunately, the names given by Berossos to the historical kings in his *Babyloniaca* (“History of Babylonia,” ca. 290-278 BCE) – other than the first two post-diluvian rulers and the kings from Nabu-nasir (r. 747-734 BCE) onward – have all been lost in the text’s transmission. Accordingly, any assessment of the accuracy with which names were transmitted across the gap of up to two millennia that separates the *Sumerian King List* from Berossos is necessarily focused on the names in the antediluvian section, which predates him by about 1500 years. Eusebius reports that Berossos alludes to the paradigm (mentioned earlier in connection with the *King List*) whereby the first people of Mesopotamia lived like animals. Many of Berossos’ names for the antediluvian kings are tolerably good Hellenised matches for their cognates in the *King List* (Table 1), most notably Aiores for Alulim, Alaparos for Alalgar, Amelon and Amenon for Enmenluana, Megalaros for Enmegalana, Otiartes for Ubartutu and Xisuthros for Ziusudra. So, too, are the names of the cities Bad-tibira and Larak preserved well (Table 1). As mentioned above, Berossos’ names for the first two post-Flood kings have also survived, although that of their city has not (Table 1). Of these royal names, the first – Euekhoios – has a potential counterpart in Jucur, one version of the name of the corresponding king in the *Sumerian King List*, who heads the 1st Dynasty of Kish (Table 1). The second – Khomasbelos – is a convincing match for Kullassina-ibel, the name of the second post-Flood king in the *King List*. The reign lengths given by Berossos agree precisely with those in the *King List* for just two of the kings (Amenon/Enmenluana and Daonos/Dumuzi). However, in both sources all of the antediluvian values are in the tens of thousands and the post-Flood reigns are in (or just below) the low thousands, so there is qualitative agreement between these early and late king-lists. Berossos’ antediluvian reigns add up to a total of 432,000 years, or 385,200-388,800 years if one includes just one of the two kings corresponding to Enmenluana. The corresponding total for the *Sumerian King List* (using the reign-lengths
Berossos mentions the Seven Sages, but – with the exception of the first and last – he allocates the apkallu in a different manner to the Uruk List of Kings and Sages, which assigns them one by one to the first seven antediluvian kings (Table 1). Berossos agrees that the first apkallu is assigned to the first king, Alulim. If we accept that Berossos’ kings Amelon and Amenon both correspond to Enmenluana, then the second apkallu is allocated by Berossos to this king and four more are assigned to Dumuzi, while the seventh and final sage is assigned to Enmendurana; the remaining five kings have none (Table 1). The name-matches of cognate apkallu are tolerable: Oannes for Uanna, Annedotos for Enmeduga, and Odakon for Utuabzu (Table 1). Berossos also describes the Flood, which – as expected – occurs when Xisuthros (Ziusudra) is king.

Piotr Michalowski captures the importance of the Sumerian King List as a whole when he writes “Although it is simply a list, the SKL, more than any other early Mesopotamian composition, creates a sense of deep historical time and locates the present in a long mundane stream of hegemony and power.” The structure and divisions of early Mesopotamian history used by Berossos, and indeed by modern Assyriologists, are derived directly from the format of its post-Flood section. The ruling cities named in the Sumerian King List are called “dynasties” by modern historians, and terms like the “Akkad dynasty” and “3rd Dynasty of Ur” / “Ur III” are borrowed almost directly from its content. In contrast, the dynastic structure underpinning that used in modern Egyptology was first introduced in the 3rd century BCE by Berossos’ Egyptian counterpart, Manetho, who used it to organise the inventory of rulers that he had compiled from ancient Egyptian king-lists. We will encounter Manetho and his oeuvre in the next section.

2.3 Egyptian king lists

The Royal Annals of Ancient Egypt, of which the Palermo Stone and Cairo Fragment 1 are the largest surviving pieces, provide the oldest Egyptian counterpart to the Sumerian King List. The compilation appears to date from the 5th Dynasty. Just as the Sumerian inventory opens with the (notional) antediluvian kings of Babylonia, the top register of the Palermo Stone lists (supposed) predynastic kings of Egypt. Its fragmentary nature means that the entries for only nine kings have been preserved, all of them kings of Lower Egypt (Table 2). None of the six names that were preserved corresponds with a historically-attested ruler. There seems to be a slight emphasis on names connected to agriculture (both Seka and Niheb appear to refer to ploughs) and perhaps to bodily strength (Mekhet) which can be used to tread or trample (Tiw, Niheb), resulting in a kingship that withstands scrutiny (Khaiu) positively (Tiw) because it is secure and flourishing (Wadj-adj).

Entries further downstream in this top register occur on Cairo Fragment 1; these kings – with one exception, attributable to scribal error – wear the double crown of Upper and Lower
Table 2: The *Royal Annals of Ancient Egypt* (Dynasty 5, ca. 2400) – Predynastic kings of Egypt from the Palermo Stone and Cairo Fragment 1.a

<table>
<thead>
<tr>
<th>Position b</th>
<th>Title b</th>
<th>Translit</th>
<th>Name</th>
<th>Possible cognates / Other info</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS r.I.1</td>
<td>KLE</td>
<td>...[p]w</td>
<td>...pu</td>
<td></td>
</tr>
<tr>
<td>PS r.I.2</td>
<td>KLE</td>
<td>skꜣ</td>
<td>Seka</td>
<td>skꜣ: one who ploughs</td>
</tr>
<tr>
<td>PS r.I.3</td>
<td>KLE</td>
<td>ḫꜣw</td>
<td>Khaiu</td>
<td>ḫꜣ.w: one who is examined/measured</td>
</tr>
<tr>
<td>PS r.I.4</td>
<td>KLE</td>
<td>ḫꜣw</td>
<td>Tiw</td>
<td>tiw: yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ḫꜣ.w: one who tramples(^{161})</td>
</tr>
<tr>
<td>PS r.I.5</td>
<td>KLE</td>
<td>ṯꜤš</td>
<td>Tjesh</td>
<td>ṯꜤš: female name in Dyn 18 (^{163})</td>
</tr>
<tr>
<td>PS r.I.6</td>
<td>KLE</td>
<td>ṇḫb ꜣ</td>
<td>Niheb</td>
<td>ṇḫb: for the plough</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ṇḫb(y): for the ibis(^{c})</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ṇ(,) ṇḫb(i): of the one who has trodden/travelled/entered</td>
</tr>
<tr>
<td>PS r.I.7</td>
<td>KLE</td>
<td>wꜣḏ ᵭḏ</td>
<td>Wadj-adj</td>
<td>wꜣḏ ᵭḏ(w): sturdy/fortunate/flourishing and safe/whole, cf. ᵭḏ wḏ: “safe and sound”/“prosperous and flourishing.”</td>
</tr>
<tr>
<td>PS r.I.8</td>
<td>KLE</td>
<td>ṃḥ[t]</td>
<td>Mekhet</td>
<td>ṃḥ[t]: in/with/from the body, by means of the body</td>
</tr>
<tr>
<td>PS r.I.9</td>
<td>KLE</td>
<td>...ꜥ</td>
<td>...a</td>
<td></td>
</tr>
<tr>
<td>PS r.I.10-13</td>
<td>K—</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CF1 r.I.1-2</td>
<td>KULE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CF1 r.I.3</td>
<td>KLE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CF1 r.I.4-7</td>
<td>KULE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CF1 r.I.8-10</td>
<td>K—</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a Position, title, transliteration and name mainly from Wilkinson (2000).\(^{165}\)

b Abbreviations: PS, Palermo Stone; CF1, Cairo Fragment 1; KLE, King of Lower Egypt; KULE, King of Upper and Lower Egypt.

c ṇḫb = ṇḥby = an ibis, but this would usually be written using (or have as its determinative) the ibis hieroglyph, G16, not the plough glyph, U13 (ḥḥ). Nevertheless, compare with King Ibis in Table 3, 2.1.
Egypt, despite coming long before the historically-known rulers of the 1st Dynasty. None of their names have been preserved. Unfortunately, any mythogeographic information in the predynastic series, such as whether kingship first appeared in Upper or Lower Egypt, was either not recorded or has been lost.

Let us now turn to the Ramesside-era king-list known as the Royal Canon of Turin (Dynasty 19). Unlike the much older Royal Annals, which—as we have just seen—open with a list of predynastic kings, or the near-contemporary Abydos King-List,\(^1\) which commences with the 1st Dynasty, the Turin Canon prefixes its roll-call of human kings with a “mythological period” in which a united Egypt was ruled first by a series of gods, then demigods and finally spirits of the dead (Table 3).\(^2\) Like the Sumerian King List, it seems that this initial section of the Canon represents a secondary addition to the main inventory—here, one based upon a “mythologizing of prehistory” that was implemented during or after the First Intermediate Period,\(^3\) although parts of it rely heavily on Old Kingdom cosmology. Barry Kemp equates the spirit-kings of the Canon with the predynastic kings of the Royal Annals.\(^4\) No royal name is common to the predynastic sections of the two king-lists, although one might speculate on a connection between the \(hb\) of Niheb (Table 2, PS r.I.6) and the \(hAb\) of King Ibis (Table 3, 2.1; see note f in table). Neither can any archaeologically-attested predynastic ruler of Upper Egypt be identified within the pre-Menes section of the Canon.\(^5\)

As with the Annals, the fragmentary nature of the Canon poses a huge interpretive problem; many of the entries for the mythological period have been lost and (as discussed below) there is uncertainty about the ordering of some of those that have survived. Nevertheless, it seems that the kernel of the sequence of gods corresponds to the ancient divine genealogy known as the Heliopolitan Ennead,\(^6\) which is found inscribed in pyramids from the late 5th Dynasty onwards.\(^7\) The Ennead commences with what may be viewed as universal deities: Re, the sun-god; Shu, god of the air; Geb, god of the earth; Osiris, god of the dead. After Osiris comes his brother Seth, patron deity of Upper Egypt, and then Osiris’s son Horus, patron deity of Lower Egypt (Table 3, 1.12-17).\(^8\) One interpretation of the geographic associations of this sequence is that Egyptian kingship began in Upper Egypt and that the institution (and the associated sense of incipient statehood) then travelled northward to Lower Egypt. This mirrors the mainstream interpretation of archaeological reality in which the Naqada culture of Upper Egypt moved north and displaced the contemporaneous Maadi-Buto cultures of Lower Egypt (Naqada IICD), resulting in cultural unification from ca. 3300 BCE (Naqada IIIAB, “Dynasty 00/0”).\(^9\) (Coincidentally, the directionality of the Egyptian “prehistoric process” mirrors that of Mesopotamia, where both the Ubaid and Uruk cultures spread from south to north.\(^1\)) Political unification in Egypt dates from ca. 3100 BCE, with the 1st Dynasty representing a continuation of Upper Egyptian culture throughout the whole country (Naqada IIIIC).\(^1\) However, the dynastic capital was at Memphis in Lower Egypt,\(^1\) so the Canon records the kingship as passing to Horus.

An inescapable complication is that, in Osirian mythology, it is always Horus who defeats Seth and supplants him as the ruler of the unified Egypt. This is the outcome in the Ramesside Contendings of Horus and Seth (pChester Beatty I), which presents a burlesque version of the story, replete with comic details. So too in the account on the Shabaka Stone, a 25th-Dynasty inscription that claims to preserve an archaic original—a version that, in Jan Assmann’s view, “could just as well belong to the Old Kingdom as the New Kingdom.”\(^1\)
Table 3: Predynastic kings of Egypt from the *Royal Canon of Turin*
(Dynasty 19, ca. 1200 BCE)*a*

<table>
<thead>
<tr>
<th>Col./Row</th>
<th>Attribution</th>
<th>Reign (yrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Blue if only in Jegorović (2013)</td>
</tr>
<tr>
<td>1.1-1.11</td>
<td></td>
<td>Lundström (2018)b</td>
</tr>
<tr>
<td>1.12</td>
<td>Re</td>
<td>Lundström (2018)b</td>
</tr>
<tr>
<td>1.13</td>
<td></td>
<td>Lundström (2018)b</td>
</tr>
<tr>
<td>1.14</td>
<td>Gebb</td>
<td>≥12</td>
</tr>
<tr>
<td>1.15</td>
<td>Osiris</td>
<td></td>
</tr>
<tr>
<td>1.16</td>
<td>Seth</td>
<td>200</td>
</tr>
<tr>
<td>1.17</td>
<td>Horus of the gods</td>
<td>300</td>
</tr>
<tr>
<td>1.18</td>
<td>Thoth</td>
<td>7726</td>
</tr>
<tr>
<td>1.19</td>
<td>Maat</td>
<td>≥200c</td>
</tr>
<tr>
<td>1.20</td>
<td>Horus [the Elder?]</td>
<td></td>
</tr>
<tr>
<td>1.21</td>
<td>[9 kings, Re to Horus (Elder)]</td>
<td></td>
</tr>
<tr>
<td>1.22</td>
<td>9 [kings, the Ennead]</td>
<td></td>
</tr>
<tr>
<td>1.23</td>
<td>Horus [the Elder?]</td>
<td></td>
</tr>
<tr>
<td>1.24</td>
<td>[total for the Ennead?]d</td>
<td>7718c</td>
</tr>
<tr>
<td>1.25</td>
<td></td>
<td>7707</td>
</tr>
<tr>
<td>2.1e</td>
<td>Ibisf / Hab (one who has sent/trodden?)</td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>Goose / Aped</td>
<td></td>
</tr>
<tr>
<td>2.3</td>
<td>Apis-bull / Hepu</td>
<td></td>
</tr>
<tr>
<td>2.4</td>
<td>Follower / Shemsu</td>
<td></td>
</tr>
<tr>
<td>2.5</td>
<td>Permanent / Meni</td>
<td></td>
</tr>
<tr>
<td>2.6</td>
<td>Great of Height / Wer-qa</td>
<td></td>
</tr>
<tr>
<td>2.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.8</td>
<td>If...</td>
<td></td>
</tr>
<tr>
<td>2.9</td>
<td>Seth</td>
<td></td>
</tr>
<tr>
<td>2.10</td>
<td>Doctor [= Thoth]</td>
<td></td>
</tr>
<tr>
<td>2.11</td>
<td>Horus</td>
<td></td>
</tr>
<tr>
<td>2.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.14</td>
<td>Does Not Thirst</td>
<td></td>
</tr>
<tr>
<td>2.15</td>
<td>...Sobek...</td>
<td></td>
</tr>
<tr>
<td>2.16</td>
<td>[Clod of the Shore ?]</td>
<td></td>
</tr>
<tr>
<td>2.17</td>
<td>Under/With Noble Women</td>
<td></td>
</tr>
<tr>
<td>2.18</td>
<td>Protector of [Noble?] Women</td>
<td></td>
</tr>
<tr>
<td>2.19-20h</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.22</td>
<td>Sokar...</td>
<td></td>
</tr>
<tr>
<td>2.23</td>
<td>[Uraeus]</td>
<td></td>
</tr>
<tr>
<td>2.24-26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1</td>
<td></td>
<td>1110</td>
</tr>
<tr>
<td>3.2</td>
<td>Spirits of [Deceased Nobles ...]</td>
<td>≥7</td>
</tr>
<tr>
<td>3.3</td>
<td>Spirits...</td>
<td>330</td>
</tr>
<tr>
<td>3.4</td>
<td>≥10 [70] ...[spirits?]</td>
<td>≥1000</td>
</tr>
</tbody>
</table>

17

<table>
<thead>
<tr>
<th></th>
<th>3.5</th>
<th>19 [] of [Hunut] or the 19 [Builders] of these Walls of the City</th>
<th>11</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6</td>
<td>19 [Followers of Horus] who are in [Thinis]</td>
<td>≥2341</td>
<td>≥2341</td>
<td></td>
</tr>
<tr>
<td>3.7</td>
<td>[Princesses Representing the Father, 7 Women]</td>
<td>≥100</td>
<td>≥100</td>
<td></td>
</tr>
<tr>
<td>3.8</td>
<td>Spirits and Followers of Horus</td>
<td>≥13,420</td>
<td>≥13,420</td>
<td></td>
</tr>
<tr>
<td>3.9</td>
<td>[Their Lifetime] until the end of the Followers of Horus</td>
<td>≥23,200</td>
<td>≥320</td>
<td></td>
</tr>
<tr>
<td>3.10</td>
<td>Menes LPH</td>
<td>Heading for Dynasties 1-10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Mainly follows Lundström (2018). Yellow fill: Some or all of the nsw bity prefix (“King of Upper and Lower Egypt”) preserved. Pink fill: Summaries (entry commences with papyrus scroll), inferred for 1.23-25 &amp; 3.8-9. Entry 3.4 seems to be a subtotal for spirits (3.1-3), with grand totals for the spirits, Followers, etc. (3.1-3 &amp; 3.5-7) appearing in 3.8-9. Green fill: Sacred animals. Cyan fill: Spirits (specified or inferred), for which the Egyptian term (singular) is ḫ.</td>
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<tr>
<td>b</td>
<td>Assmann identifies Geb as the first king of primeval time, his forebears (Re-)Atum and Shu being kings of pre-existence. See von Beckerath (1995) for the assignation of the value 736 to Geb in column 4 of this table.</td>
<td></td>
<td></td>
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<tr>
<td>c</td>
<td>Lundström’s assignation is less credible than that of Helck (1992), so the latter’s value has been used.</td>
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<tr>
<td>d</td>
<td>Since this presumed total cannot include the reign of Thoth, which exceeds it, it may represent the combined reigns of the Ennead.</td>
<td></td>
<td></td>
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<tr>
<td>e</td>
<td>For Canon column 2 name translations, see Ryholt (1997).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f</td>
<td>Many New Kingdom writings of ḫḫ (ibis) use ḫḫb(y/w), the form seen here. Other interpretations (shown in parentheses) are also possible.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g</td>
<td>Cf. the phonetically similar Egyptian town wˁr-kˁ (Wer-ka), on which an attack is implied in the reign of Den by Palermo Stone PS.r.III.10.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h</td>
<td>Jegorović counts only one row here.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i</td>
<td>The first option follows Helck’s [hw]-wn.wt, the second comes from the alternate reading [kd] A24 nn n(.y) inb.w nīw.t 19 [Lundström] and is somewhat akin to Helck’s “Festungen-[Erbauer] 19,” “19 Builders of Fortresses.”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>j</td>
<td>In protodynastic times, the actual Followers of Horus may have been an elite group at Hierakonpolis that allied itself with the Thinite/Abydene rulers who ultimately gained control of the entire country. In Early Dynastic times, the biennial “Following of Horus” (which uses the same Egyptian terminology as entry 3.8) was a royal progress during which the king and his court would travel around the land, allowing the king to present himself to the people, maintain control of economic and political developments in the provinces, and perhaps pronounce judgement on important judicial and civil matters. The earliest surviving “Following of Horus” mentioned on the Palermo Stone occurs in PS.r.II.1, which corresponds to the penultimate year of the reign of Aha.</td>
<td></td>
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</tbody>
</table>
Since Horus is invariably the victor, one might take this to mean that the culture of Lower Egypt prevailed over that of Upper Egypt at the time of cultural and political unification, whereas – as we have already seen – the archaeological evidence indicates the reverse. However, the conundrum may be bypassed if one recalls that the original cult centres of both Horus and Seth were in Upper Egypt, that of Horus being at Nekhen/Hierakonpolis and that of Seth at Nuht/Naqada/Ombos (Fig. 2). Similarly, the Red Crown – the emblem of Lower Egypt – was originally an Upper Egyptian symbol. Originally Horus and Seth may have represented the duality of floodplain and desert, respectively, in Upper Egypt; if so, the pairing seems to have been adapted by Early Dynastic times to fill the need for deities emblematic of Lower and Upper Egypt. The original association of both Horus and Seth with Upper Egypt reflects the historical reality in which unification of the Two Lands was achieved via the domination of the northern culture by the southern one.

Fig. 2. Map of Egypt. River Nile (modern watercourse) in blue, oceans and lakes in cyan. The dashed green line indicates the boundary between Lower Egypt (Nile Delta) and Upper Egypt (Nile Valley). Black disc, site of known location; black circle, likely location of site whose whereabouts is uncertain. Black name, ancient city or site mentioned in text; red name, modern city.
As Horus was the last member of the Ennead and was the deity incarnated in each earthly, historical king, we might expect the *Turin Canon* to begin its sequence of human rulers – legendary or otherwise – at this point, but once again there are complications. The list continues with Thoth (the god of wisdom and writing) and Maat (the goddess of truth, balance and justice) before naming Horus again (Table 3, col. 1.23). After him comes a short section of what seems to be sacred animals (Table 3, col. 2.1-2.3; green fill), which may parallel the animal connections of Alulim, the first king of the *Sumerian King List*, and his role in the *Sumerian Flood Myth / Eridu Genesis* (Section 2.2). After these come some “attribute” names (e.g., *wr k3*, Great of Height) and then more gods, with some deities from the first column of the *Canon* – Seth, Horus, Thoth – repeated in the second, but with Seth always preceding Horus. Beginning in the middle of the second column, there next appear “demigods” with names such as Does Not Thirst, Clod of the Shore, and Possessor of Noble Women – names which probably reflect a transition from the primeval waters to dry land and the creation of people. After these, but still in the second column, comes a series of spirits of the dead (*ifi.w*, details now lost) whose entries – in the form of group summations – continue into the third column (Table 3). It is only after the rule of these spirits has ended (near the middle of the column) that a mortal ascends the throne of Egypt and the human dynasties begin, commencing with King Meni (Menes in Greek). Meni is the first king listed on the *Abydos King-List*; he is probably identical with the historical Narmer.

In the 3rd century BCE, Manetho appears to have relied on a source similar to the *Turin Canon* when drawing up the list of ancient Egyptian kings for his *Aegyptiaca* (“History of Egypt”). In contrast to Berossos’ data (Section 2.2), most of Manetho’s names for the post-mythological kings have survived. His structuring of Egyptian history into dynasties provided the basis for the chronological divisions still used in Egyptology today. Manetho’s “mythological section” (*Table 4*) preserves the sequence of gods in the Ennead, although many of the deities have been transformed into their Greek counterparts. It is actually from Manetho’s terminology that the rulers between the gods and spirits in the *Turin Canon* have been classed as “demigods.”

In Section 2.2, we learned that Berossos’ *Babyloniaca* mentions that tablets containing antediluvian knowledge were retrieved from Sippar after the Flood. In a similar vein, a Judeo-Christian tradition reports that monuments “lying in the Seriadic land,” which had been inscribed in primeval time with hieroglyphic Egyptian texts by Thoth, successfully survived the Flood. These were subsequently translated into Greek and allegedly provided the content for the *Book of Sothis*, whose authorship was attributed to Manetho. The initial section of the king-list in *Sothis*, which is largely compatible with genuine Manethonian data, forms the basis of columns 3 and 4 in Table 4.

Due to the fragmentary nature of the *Turin Canon*, there is disagreement over the gods immediately preceding Geb. If Farina’s reconstruction is correct, then there is a further complication to our geomythological interpretation because Ptah, the creator-god of Memphis, has been inserted immediately ahead of the Ennead. This reconstruction was
<table>
<thead>
<tr>
<th>Manetho (Aegyptiaca) / Eusebius (Armenian)</th>
<th>Reign (yrs)(^c)</th>
<th>pseudo-Manetho (Sothis) / Syncellus(^d)</th>
<th>Reign (yrs)(^c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hephaestus [Ptah]</td>
<td>9000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helios [Re]</td>
<td>992</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sosis(^e) [Shu]</td>
<td></td>
<td>Agathodaemon</td>
<td>700</td>
</tr>
<tr>
<td>Cronos [Geb]</td>
<td></td>
<td></td>
<td>501</td>
</tr>
<tr>
<td>Osiris</td>
<td></td>
<td></td>
<td>433</td>
</tr>
<tr>
<td>Typhon [Seth]</td>
<td></td>
<td></td>
<td>359</td>
</tr>
<tr>
<td>Orus [Horus]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gods down to Bydis</strong></td>
<td></td>
<td><strong>Total [Gods]</strong>(^g,h) 13,900</td>
<td><strong>Total [Gods]</strong> 11,985</td>
</tr>
</tbody>
</table>

| Demigods                                 | 1255            | **Demigods:**                   |                 |
| Other kings                              | 1817            | Orus                            | 100             |
| 30 kings of Memphis                      | 1790            | Ares                            | 92              |
| 10 kings of Thinis                       | 350             | Anubis                          | 68              |
| Spirits and demigods                     | 5813\(^i\)      | Heracles                         | 60              |
| **Total [of last 5 entries]**            | 11,000\(^j\)    | Apollo                          | 100             |
| **Total [of all entries]**               | 24,900\(^k\)    | Ammon                           | 120             |
|                                          |                 | Tithoes                         | 108             |
|                                          |                 | Sosos                           | 128             |
|                                          |                 | Zeus                            | 80              |
|                                          |                 | **Total [Demigods]**            | 858\(^l\)       |

| Dynasty 1: Menes                         |                 | **Biblical Flood**\(^m\)        |                 |

\(^a\) Dates for these sources are from Verbrugghe & Wickersham (1996) and Waddell (1940), respectively;\(^209\) the table’s data are also drawn from these two books. **Pink fill:** Summaries, as provided in the primary sources; these are also mathematically correct, or almost so. **Green fill:** Demigods (aggregated, cols. 1-2; itemised, cols. 3-4). **Yellow fill:** “kings.” **Cyan fill:** Spirits and (additional) demigods.

\(^b\) Note that in the Predynastic table of Verbrugghe & Wickersham (1996)\(^210\) the apparent correspondences between the entries in Manetho, the *Royal Annals* (there called OKA) and the *Turin Canon* (there called T) have no basis in fact or logic. The sole exception is for the reign of the gods from Manetho (Greek gods Hephaistos to Typhon) and the *Turin Canon* (Egyptian gods Ptah to Seth) which do align meaningfully, just as in col. 1 of the present table. Accordingly, the correspondence in Verbrugghe & Wickersham’s table between entries from the *Royal Annals* with entries from either the *Turin Canon* or Manetho is entirely spurious.

\(^c\) The Egyptian years are taken to be solar years, as was no doubt originally intended. For Syncellus, who followed Panodoros’ assumption that by “years” the Egyptians actually meant “months” for gods and “seasons” for demigods, this involved undoing his division of the pseudo-Manethonian year-counts by 12.367 and 4.0, respectively.\(^211\) The resulting figures agree with those in Verbrugghe & Wickersham (1996).\(^212\)

\(^d\) The *Book of Sothis* is disparaged by Verbrugghe & Wickersham (1996) as an ancient hoax,\(^213\) whereas the Loeb edition of Manetho – while acknowledging it as a pseudepigraphal work – asserts its value as “significant for the textual transmission of Manetho.”\(^214\) Verbrugghe & Wickersham, while identifying shortcomings in the dynastic inventory of *Sothis*, concede that “it indeed seems to show some knowledge of

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the genuine History of Egypt by Manetho, and it may be of some interest or even use, especially in regard to
the predynastic dynasties of gods and demigods.”

It is included in the present table (cols. 3-4) because,
unlike the other Manethonian and pseudo-Manethonian survivals, its name-lists and numerical tallies agree
rather well with the most detailed authentic survival from Manetho’s Aegyptiaca (col. 1-2). Indeed,
Verbrugge & Wickersham use Sothis to provide the inventory of Demigod names for their own master-
table, just as has been done above.

c Omitted by the preserved version of Eusebius but included in Malalas; the Loeb edition interpolates Sosis
into the Eusebius text with a footnote to indicate its source.

d Malalas records that the next king after Horus was named Thoulis and presents an anecdote about him that
indicates he was a mortal human.

Excerpta Latina Barbari – which the Loeb edition describes as an “extract made by an anonymous and
ignorant scribe” – presents the divine dynasty as just the first six of these gods, minus Cronos and with Sosis
fused to Osiris as “Sosinosiris,” and assigns the gods reigns that total just 1550 years. Then come demigods
Anubes and Amusis (150 years total), followed by spirits of the dead (2100 years), then the dynasties of
human kings (beginning with that of Mineus, i.e. Menes of Dynasty 1). Thus, for all categories, Excerpta
gives total durations much lower than the sources used to construct the main table. If we assume that these
year counts have been subjected to Panodoros-style corrections (note c above), then reversing this gives
reign totals of 19,169 years for the gods, 600 for the demigods and 2100 (unchanged) for the Spirits – values
that agree qualitatively with those in the table (13,900, 1255 / 858, and <5813 years, respectively).

Malalas gives 1680 days reign for Hephaestus and 4477 days for Helios, and no other durations. He mentions
that the Egyptians “called the period of the day “years.” However, even if these regnal “days” are actually
years, the total (6157) is still far less than the sum for these two gods in the present table (9992).

Given the reappearance of demigods in this heading, one cannot help but wonder if in fact this entry did not
begin life as a summary of the reigns of the demigods (1255 years) plus those of the kings, who are here
termed spirits (1817 + 1790 + 350 years). This would give a total of 5212 years, compared to the actual
value of 5813 years. If correct, this interpretation would actually worsen the agreement between the total
reign lengths in Aegyptiaca and the Turin Canon (see main text for discussion).

Actual total is 11,025.

Actual total is 24,925.

Actual total is 856.

Placed in this column because the interpolations of the Flood quoted in the main text are from Syncellus, and
because the Book of Sothis was, according to its author via Syncellus, “translated after the deluge from the
sacred language [of Egypt] into the Greek language [...] and disposed into books [...] in the inner sancta of
the temples of Egypt.”
doubted by Gardiner; it was later accepted by Hornung\textsuperscript{224} but rejected by Helck,\textsuperscript{225} while Ryholt made no comment either way.\textsuperscript{226} The main impetus for accepting Ptah in this position is that Manetho’s \textit{Aegyptiaca} places Hephaestus – the Greek cognate of Ptah – immediately before the Ennead (Table 4). As mentioned earlier, the \textit{Canon} dates from the Ramesside period (Dynasty 19); prefixing the Ennead with Ptah would reflect a Ramesside development known as the “Memphite Theology,” whose revisionist cosmogony is preserved on the Shabaka Stone (Dynasty 25), an artifact that we have already encountered.\textsuperscript{227} If the patron deity of Memphis, a city in Lower Egypt (Fig. 2), does take precedence over the Ennead in the \textit{Canon}, then it represents a later distortion of the original mythogeographic content of the series.

The \textit{Canon} and Manetho both open their inventories with a series of gods corresponding to the Ennead. In the \textit{Canon} the rule of the Ennead may total 7707-7718 years (Table 4, 1.24), in which case the full period of rule by the gods exceeds 15,600 years; Manethonian totals for the gods (Table 4) are only slightly lower, at 12,000-14,000 in round numbers. The \textit{Canon} follows the Ennead with three further gods (1.18-20), then a discrete group of otherwise unknown kings (including a few sacred animals, repeated gods and aetiological names; 2.1-2.23, no reign lengths known) which should probably be equated with Manetho’s “demigods” (856-1255 years). Finally in the \textit{Canon} come various spirits of the dead and certain “Followers of Horus” (2.24-3.7), who collectively rule for over 13,400 years. Here there is a large discrepancy; to approach the same time-span in Manetho’s list, one would have to sum the reigns of all the non-god rulers, since (in combination) the demigods, kings, and spirits rule for some 10,600-11,000 years. The discrepancy would be even bigger if it turned out that the “Spirits and demigods” entry (5813 years) was originally not an independent and additional period of rule but rather a summary of the preceding demigods plus kings (5212 years, as suggested in Table 4, note i).\textsuperscript{228}

Interestingly, the total time allocated by Manetho to the mythological/predynastic period in Egypt (some 25,000 years; Table 4) is an order of magnitude lower than the corresponding total assigned by Berossos to the equivalent period in Mesopotamia (385,000-432,000 years; Section 2.2). This may in turn reflect a gross difference in the time-periods envisaged by the native traditions that these Hellenistic authors relied upon: tens of thousands of years for Egypt, compared with hundreds of thousands of years for Mesopotamia. The \textit{Sumerian King List} confirms the truth of the latter estimate (Table 1), but we cannot be certain of the total for Egypt; we have already seen that Manetho underestimated the time allocated to the spirits and Followers in the \textit{Canon} (3.1-7), and the sum of the reigns missing from Table 3 might further close the gap. However, a greater mythological time-depth for Mesopotamia relative to Egypt would be consistent with the fact that the former culture counted time using a sexagesimal (base-60) numeral system whereas the latter reckoned (universally) with a decimal (base-10) system.\textsuperscript{229} Mesopotamians therefore constructed protohistoric time using ŠÁRs (Gr. \textit{saroi}), i.e., blocks of 60 x 60 = 3600 years,\textsuperscript{230} while for the same task Egyptians would probably have been thinking in terms of millennia (i.e., 10 x 10 x 10 = 1000 years).
Among the kings preceding the rule of the spirits in Manetho’s list one finds “30 kings of Memphis” followed immediately by “10 kings of Thinis” (Table 4); one must wonder if these 40 kings – who otherwise do not seem to appear in the Canon – are not related to the similarly numerous (specifically, 38) spirits and/or Followers of Horus who sequentially ruled as kings from “Hunut” ([hw]-wn.wt, “Striker of the Fortresses”) and Thinis in the Canon (Table 3, 3.5-6). The walls of the former city, which are singled out for mention in the Canon’s entry, recall the standard Egyptian name for Memphis of inb-HD, “the White Wall;” this name is attested from the 1st Dynasty and may reach back to the protodynastic King Iry-Hor. Both expressions use the same glyph, namely Gardiner O36. Although von Beckerath opposed this identification, the structural similarity between lines 3.1-9 in the Canon and the corresponding section in Manetho’s list led Helck to link his “Hunut” with Memphis. The chronological priority accorded by Manetho to the Lower Egyptian city of Memphis over the Upper Egyptian city of Thinis (Fig. 2) may represent a legacy of the Memphite Theology, just like the possible priority of the Memphite god Ptah in the Canon (see above).

Reading through the early kings of the dynastic section of the Turin Canon (not shown in Table 3), it is not long before similarities emerge between their names – which are presented as nsw-bi.ty names – and those attested from other sources. As mentioned above, the name of the first king – Meni – agrees with that in the Abydos King List and this individual is clearly identical to Manetho’s king Menes, who (as mentioned above) is probably the state-forming king known to archaeology not by this apellation (his personal name) but by his Horus name of Narmer. Manetho assigns the 1st dynasty to Thinis, which suggests that it may have picked up where the “10 kings of Thinis” left off (Table 4); David O’Connor speculates that a Thinite origin for Menes’ dynasty might explain why these kings chose to be buried at Abydos, rather than in the national capital at Memphis (Fig. 2).

In the Canon, the name of the second dynastic king, Ity or It(et), is consistent with its counterparts Teti in the Abydos King List and Athothis in Manetho; modern lists use this king’s Horus name, Aha, but one seal seems to show this name followed by two t glyphs, perhaps suggesting a personal name of Teti. (Personal names of these early kings – who reigned at a time before the titulary became formalised – are considered by some scholars to be nb.ty or “Two Ladies” names, but may well have been interpreted anachronistically as nsw bi.ty names by the annalists of later dynasties.) The Horus name of the Canon’s third king, Djer, is the first that can be read unambiguously from the Annals, where he is also given the “Gold name” of Iti; he is named as Iti or It(et) in the Abydos King List, and a nearly-identical personal name (It) is suggested by one of this king’s sealings. The name of the Canon’s fourth king – seemingly Ity(w) (3.15) – is matched by Ita in the Abydos list, but this ruler appears in modern listings under his Horus name of Djet; however, one of Djet’s sealings may point to It as the personal name of this king as well. The seventh king’s name in the Canon – Semsem (3.18) – is close to that of his Manethonian cognate, Semempses – the penultimate king of the 1st Dynasty – and to that of his archaeological counterpart,
Semerkhet; it is as Semerkhet that this king appears in the *Royal Annals*. The *Canon*’s thirteenth king – Senedj (3.24) – matches almost exactly his historical counterpart Sened, who was the fifth king of the 2nd Dynasty. Other landmark identifications from the *Canon* are Djoserit (4.5) for the well-known Djoser, first king of the 3rd Dynasty, and Snefru (4.9), which matches perfectly the name of the famous first king of the 4th Dynasty.

3. Temporal rupture and flood imagery in Mesopotamia and Egypt

The story of Atrahasis is the oldest Mesopotamian Flood story; it dates from the Old Babylonian period (ca. 1790-1600 BCE). In this Akkadian tale, humans annoy the gods with their noise to the extent that Enlil seeks to reduce their numbers through plague, drought and famine. Thwarted by Ea/Enki (the god of wisdom and civilization) on each occasion, Enlil and the other gods finally decide to use a great flood to obliterate humanity in its entirety. However, Enki intercedes by warning a man named Atrahasis in an unspecified city; the latter builds a boat, and he and his family survive. Ultimately, Enlil obliges Enki to limit human numbers in the post-Flood world by various constraints, which includes imposing a finite life-span on humans. Atrahasis, having been born before the Flood, may have escaped this sanction, or he may have been rewarded with an indefinite lifespan. The immortality of the flood-hero is incidental to this version, whose focus is the survival of humanity as a whole.

The *Sumerian Flood Myth* or *Eridu Genesis* (Section 2.2) is a variant of this narrative written in Sumerian. It too dates from the Old Babylonian period, but is later than the Atrahasis account; the oldest exemplar dates from ca. 1600 BCE. As before, the gods decide to annihilate mankind with a flood. The reason is given in a damaged portion of the text, but the logic seems to parallel that in a text known as the *Lament Over the Destruction of Sumer and Ur*: namely, it was a fulfilment of the divine decree that nothing – including the reign of any particular king, and perhaps even kingship itself – should last forever. As is usual for such texts, good fortune is seen as intrinsically ephemeral and its impermanence is attributed to the fickleness and unpredictability of the gods; modern scholars are apt to see in this divine inconstancy “a deep-seated response to the inherent ecological instability of Mesopotamia.” Enlil, in particular, exercised “control over ‘the sluice gates of heaven’ that [could] drown the earth. […] Enlil was feared and respected rather than loved, since his force was felt primarily in sudden floods, raging storms and, even more threateningly, the shifting of river-courses.” To reprise the plot of the Sumerian myth: the gods decide to annihilate mankind with a flood. After this decree, Enki intercedes by warning the king – seemingly the only ruler of the antediluvian era – who is named Ziusudra. This flood-hero constructs a boat and survives the deluge. Human mortality seems to have been present since the time when men and women were created, but Ziusudra is rewarded with eternal life. The Sumerian narrative appears to exalt kingship; Ziusudra successfully defies the gods’ intention to obliterate the royal office and – through his apotheosis – actually elevates it to a transcendent status.
A later Babylonian reprise of the Atrahasis/Ziusudra story (ca. 1200 BCE) is found in the Standard Version of the *Epic of Gilgamesh*. In this account, which is relatively short, no reason is given for the Flood. The flood-hero is named Utnapishtim; his status as a prince or king of Shuruppak is implied rather than stated explicitly. As in the Sumerian version, the flood-hero is warned by Ea/Enki to construct a boat. Utnapishtim and his wife survive the Flood and – like Ziusudra in the Sumerian account – are granted immortality.

Samuel Chen traces the roots of the Mesopotamian Flood motif to the destruction-and-restoration format shared by the Sumerian city laments; he sees the adaptation especially as an exploration, in the Old Babylonian period, of the fall of the 3rd Dynasty of Ur. The more permissive religious atmosphere of this period allowed criticism of the gods, who were increasingly portrayed as capricious and flawed, and saw the promotion of kingship at their expense (as, for example, in the Ziusudra narrative). This trajectory is in direct opposition to the situation in Egypt, where the divinity and power of the king underwent progressive decline throughout the dynastic period while the power and importance of the gods progressively increased. Broadly, the Egyptian situation unfolded as follows. Before and during the early Old Kingdom (Dynasties 3-4), the Egyptian king had been regarded as the earthly Horus and one with the sun-god Re. During Dynasty 5, the king ceased to be identified directly with the sun-god, who began to be worshipped in sun-temples – obelisk precincts that were more imposing than the contemporary royal pyramid complexes. (We will suggest a possible reason for this rise of the solar cult below, in Section 4.1). With the collapse of the Old Kingdom (end Dynasty 6, ca. 2200 BCE) and onset of the First Intermediate Period, kingship was seen to have failed; accordingly, by the Middle Kingdom (Dynasties 11-12) the divine identity of the king did not extend beyond his being the “son of Re,” which probably no longer signified the sun-god’s equal, heir and successor (as it had in the Old Kingdom) but rather his subservient junior. In the 13th Dynasty, which was roughly coincident with the Old Babylonian period (ca. 1790-1600 BCE), the Middle Kingdom transitioned into the disorder of the Second Intermediate Period, so kingship in Egypt was seen to have suffered a second failure. With this, the king’s status was reduced further; he was now re-envisaged as the “image” of the god and his representative on earth. In the New Kingdom (Dynasties 18-20, ca. 1550-1069 BCE), whose first two dynasties largely coincide with the Middle Babylonian period (ca. 1500-1200 BCE), the king’s legitimacy was derived from his having been chosen or elected by Amun(-Re). With the fall of the New Kingdom and onset of the Third Intermediate Period, the status of human kingship reached its nadir: Amun(-Re) was declared to be the true king of Egypt, and he ruled his theocracy by oracular decree; the country’s earthly rulers were merely servants whose job was to implement the god’s plans.

Although ancient Egypt never subscribed to the notion of a destructive Great Flood, there is a New Kingdom myth – parts of which date back to the First Intermediate Period – that is similar insofar as it describes the near-destruction of mankind by the principal god of the Egyptian pantheon. In this story, Re discovered that humans were plotting against him, so he sent forth Hathor to slaughter the entire population. As Hathor’s murderous campaign progressed, the depth of human suffering moved Re to relent. With this change of heart, he poured red-coloured beer onto the land; Hathor – mistaking it for blood shed by her assault on humanity – drank it and became intoxicated. The consequence of this was that she failed...
to complete her mission. At a conceptual level, the inundation of the land of Egypt with beer provides a parallel to the inundation of the land of Mesopotamia with water.²⁸¹

We have already noted the Mesopotamian use of the Great Flood to mark the division between prehistory and history (Section 2.1). As William Hallo writes, “In Akkadian usage, ‘before the Flood’ meant protohistoric time, and ‘after the Flood’ meant fully historic time.”²⁸² Since the Great Flood was absent from Egyptian mythology, Egyptians were obliged to use a different marker to separate mythological from historical time. As anticipated in the previous section – where we noted that Horus was the last member of the Ennead and the deity incarnated in each earthly, historical king – the event that Egyptians perceived as the dividing-line between these two eras was the murder of Osiris by Seth. In the words of Jan Assmann, “The atrocity committed by Seth brought death and evil into the world. This is evidently the point at which cosmogonic primeval time turns into historical time. The Egyptians saw a break at this point and drew a clear boundary, so that we cannot speak of a ‘continuity of cosmogony and history.’”²⁸³ Since Horus was the deity incarnated in the human king of Upper and Lower Egypt, we can join with John Baines in placing “the ‘Union of the Two Lands’ and the beginning of Egyptian ‘history’ at the start of the First Dynasty.”²⁸⁴ As in Mesopotamia (Section 2.1), the shift to historical time in Egypt occurred ca. 3000 BCE²⁸⁵ and coincided with the maturation of writing;²⁸⁶ as Baines observes, “The separation of ‘history’ from what went before [...] evinces a characteristically Egyptian concern with order and is influenced by the transition from oral to written recording.”²⁸⁷

It is curious that, both in Mesopotamia and Egypt, the point of rupture between primordial time and human time involves the concept of flooding – each embodiment a reflection of the actual geography and hydrology of its source region. For Mesopotamia, home to the violent and unpredictable flooding of the Tigris and Euphrates²⁸⁸ whose spate occurred at a time unhelpful to agriculture²⁸⁹ and could involve sudden changes to the rivers’ courses²⁹⁰ the motif is a cataclysmic, all-consuming deluge that destroys almost all life on earth.²⁹¹ The destruction of cities by flood was a recurring problem in Mesopotamia, and such events were recorded by kings Gudea, Ibbi-Sin, Hammurabi and Nabu-mukin-apli (22nd-10th centuries BCE).²⁹² For Egypt, where the flooding of the Nile was largely predictable,²⁹³ relatively gentle and hugely beneficial to agriculture²⁹⁴ the motif is different; the flood serves as a backdrop to the primal trauma rather than being its cause. Specifically, the corpse of the murdered Osiris ends up in the mud of the Nile floodplain after he “fell on his side” – a euphemism for being struck dead – on the river bank of Nedyet/Nedit (Abydos).²⁹⁵

The riverine setting of Osiris’s death was highly significant. In some Old Kingdom burials, the body of the deceased was laid on a bed of clean sand and then linked ritually with that of Osiris by covering it with a layer of Nile mud; Osirian “mud-burials” of this kind from Dynasty 5 have recently been found at Abusir.²⁹⁶ A link between Osiris and the annual Nile flood is also suggested by Utterance 455 of the Pyramid Texts: “The canals are filled, the waterways are flooded by means of the purification which issued from Osiris.”²⁹⁷ A Ramesside magical spell from pChester Beatty VIII refers to the five locations to which the dismembered parts of Osiris, grouped in five acacia-wood chests, floated on the river.²⁹⁸ In the inscriptions on the Shabaka Stone (Dynasty 25), which preserve texts from the Ramesside period, the river is directly implicated in Osiris’s murder. (A watery demise for Osiris at the
close of the primordial period may have been thought fitting because it reverses the motif by which Atum generated himself from the waters of Nun at its beginning.) In the version on the Shabaka Stone, Osiris was drowned in the Nile near Memphis; the change of location occurs in the context of the Memphite Theology, which was mentioned earlier. By Dynasty 26, it was considered a blessed fate to drown in the Nile, thereby emulating the death of Osiris. In Ptolemaic Egypt, Osiris was associated directly with the annual Nile flood, which (perhaps in a literal reprise of PT 455) was identified as the efflux from his body. The late Ptolemaic pHomilhac relates how Osiris’ dismembered body-parts floated on the river, being collected sequentially over the twelve days of the Khioiat festival, which was celebrated at the end of the flood season. In the 1st/2nd century CE, Plutarch’s De Iside et Osiride has Seth trick Osiris into entering a coffin-like chest (larnax) which he then sealed shut and threw into the Nile. It drifted out to sea and eventually washed ashore in the Levant at Byblos, whence Osiris’s body was ultimately retrieved by Isis. After the repatriation of Osiris’s body to Egypt, Seth chanced upon it and divided it into fourteen parts, which he then scattered throughout Egypt.

Starting with Panodoros (ca. 400 CE), some of the Christian transmitters of Manetho’s legacy interpolated the biblical Flood (Gen 7) – the Hebrew cognate of the Mesopotamian Great Flood – into the Manethonian sequence. They placed it in the position that seemed most logical to them, namely at the end of the mythological era; it therefore separates this prehistoric period from the start of Dynasty 1 (Table 4). Accordingly, a copy of Syncecellus reads: “Here is the account which Eusebius gives of the Egyptian dynasties after the Flood. In succession to the Spirits of the Dead and the Demigods, the Egyptians reckon the First Dynasty to consist of eight kings. Among these was Menes, whose rule in Egypt was illustrious.” Although Osiris was a god rather than a man, there are hints from the same author that Plutarch’s tale of Osiris’s watery journey in the wooden chest was sometimes seen as a parallel to Noah’s voyage in the biblical ark. Specifically, Syncecellus complains of Egyptian and Mesopotamian authors that, “stealing narrative from divinely inspired scriptures concerning the Flood and the chest (larnax) (that is, the ark [kibōtos]), they appropriate it as their own.” It is the otherwise unexpected word larnax that provides the link.

In an unintended modern echo of the function of Osiris’s container, Irving Finkel describes Noah’s ark as “an oblong, coffin-shaped vessel of wood;” indeed, the unusual Hebrew word for Noah’s ark – tebah – has long been thought to be a loan-word based on the Egyptian tb.t, “chest, coffin.” Noah’s ark was indeed modelled on an elongated rectangle: it was 300 cubits long, 50 cubits wide and 30 cubits high (Gen 9:15). In contrast, we now know that Utnapishtim’s boat in the Standard Version the Epic of Gilgamesh took the form of a wooden cube. Ea/Enki’s instructions were that “her length and breadth shall be the same,” a ratio confirmed by Utnapishtim during the vessel’s construction: “ten rods the height of her sides. At ten rods also, the sides of her roof were each the same length.” In consequence, the Babylonian vessel too could be described as a “chest” – a container whose Sumerian antecedent was sealed so hermetically that an opening had to be drilled in order to let in the rays of the post-storm sun. Thus, by some strange coincidence, both a late Mesopotamian narrative of the Great Flood (ca. 1200 BCE) and a (very) late Egyptian account of Osiris’s death (ca. 100 CE) – each a description of the event that marks the onset of historical time in its culture of origin – have in common the motif of a large wooden box, sealed shut with
someone important inside it, bobbing helplessly on the waves. Just like Atrahasis, whose ark became wedged beyond the northern boundary of the world, and Ziusudra, who is reported by Berossos to have landed far to the north in Armenia, and Utnapishtim, who in Assyrian tradition landed to the north at Mount Niṣīr (Pir Omar Gudrun) in the Zagros, and Noah, who made landfall far to the north in Urartu/Ararat (Gen 8:4), Osiris too floated far to the north of his point of origin before running aground at Byblos (Jbeil, Lebanon).

The “floating chest” motif also appears in the indigenous mythologies of Greece and other nations. It is usually emblematic of rebirth and new beginnings, and the ultimate referent of the wooden chest may be the womb of a tree-like mother-goddess. In Mesopotamian incantations, an unborn child within the amniotic fluid of its mother’s womb is likened to a boat in a stormy sea, and – in a reciprocal image – the Epic of Gilgamesh describes how, at the end of the Flood, “The sea grew calm, that had fought like a woman in labour.” The riverine “second births” of Sargon and Moses also draw on the same concept. Accordingly, a childbirth labour-and-delivery trope may underly all such waterborne ordeal-and-rescue motifs. Rebirth is certainly the shared aim of the two “floating chest” accounts that concern us here. The human and animal worlds are reborn from the Mesopotamian ark, Osiris is reassembled and resurrected in the afterlife, and the “floating chests” in both stories are associated with the death of the primeval world and its rebirth with historical time.

4.1 Antithesis of the mythical Flood: Authentic drought in the late 3rd millennium BCE

A possible instance of hydromythology in action might be the rise of the solar cult in Old Kingdom Egypt, which developed in parallel with ever-worsening drought there due to climate change. The climatological decline from Dynasties 1 to 6 manifested itself both in low Nile floods and in the desertification of pastures, punctuated occasionally – and paradoxically – by destructive storms. Records from the Royal Annals and other sources show that the average Nile flood height at Memphis in early Dynasty 1 was 2.8 m, whereas by early Dynasty 5 it had dropped to 1.8 m – equivalent to just 1.3 m of water for a fixed Nilometer at which the river-bed level had risen yearly since its installation. By way of contrast, a “good flood” under Senwosret I (early Dynasty 12) was recorded at 12.5 m at Memphis. While we cannot be sure that some of this large difference is not due to a change in measuring method, strontium isotope ratios in Nile Delta cores – which serve as surrogate indicators of peak flow – confirm that the inundations at the start of the Middle Kingdom would have been much greater than those in Dynasty 5. Indeed, the minimal flood levels indicated by the isotope ratios for Dynasties 5 and 6 were not experienced again until the second half of the Late Period.

Metrics for the Nile flood are not alone in suggesting a progressive drought, Hunting scenes from Dynasty 5 at Saqqara and Abusir imply a desert savannah landscape close to Memphis at this time, and groups of emaciated Bedouin are depicted in the mortuary temple causeways of both Sahure and Unas. It would surely have been evident to the ancient Egyptians that the sun was the root cause of the progressive aridification that threatened their agriculture, pastoralism and hunting.

The population of Egypt effectively doubled between Dynasty 1 and Dynasty 4. During Dynasty 5, the combination of increased population density and long-term reduced productivity would undoubtedly have been impacting the nation’s prosperity and
sustainability. At the same time, there was an upsurge of cultic activity focused on the sun-god Re, to which the royal sun-temples at/near Abusir serve as an enduring witness. In part, the builders of these temples – six of the first seven kings of Dynasty 5 – may have wished to bolster their legitimacy by promoting their filial connection with Re, who by this stage had effectively become the state god of Egypt. But, equally – as I have pointed out elsewhere – “part of the motivation may have been a desire to appease the perceived wrath of the solar orb by increasing the extent of worship and offerings directed toward Re as sun-god.” A ritual response to drought in early Egypt – namely, a running of the Apis bull after a low Nile flood – has been proposed previously, but the possibility of a connection between the aridification of the country and the rise of the cult of Re in the 5th Dynasty appears to have gone unremarked until recently, when I suggested it in Göttinger Miscellen.

There is no direct articulation of the proposed logic in the Egyptian textual or artistic record; however, “Re was known to be capable of inflicting his wrath on an entire land, and it is easy to see why Egyptian rulers would have avoided any direct expression of dissatisfaction with the sun-god or portrayal of their country in an undesirable state due to his hyperactivity.” Indeed, the “Room of the Seasons,” which was integral to sun-temple function, “could be seen as a veiled plea for a return of the cycle of nature to its former munificence.” This would be consistent with the Egyptian propensity for double-think proposed by John Baines, whereby actual “attitudes are the opposite of the assertions that might be read off massive Egyptian monuments [...] assertions [...] that were made in the apprehension that what they said might not be so.”

From the time of Nyuserra onward, marsh-related activities assume a greater importance in tomb decoration. Within this theme, fishing and fowling scenes are four times more frequent than in the pre-Nyuserra repertoire. This may indicate a focus on ideal circumstances (to be fulfilled in the afterlife) in the face of dwindling opportunities for such activities in the real world. Alternatively, the lower levels and weaker current of the Nile may have resulted in greater deposition of nutrients on the river-banks, resulting in a “papyrus bloom,” the accompanying improvement in yields from fishing and fowling may have provided some compensation for the decline in productivity from the diminished floodplain. Either way, an increased focus on food-yielding marshland activities is evident in tomb decoration from the time of Nyuserra, the penultimate king to built a sun-temple. Given the conservative nature of Egyptian funerary art, the real-world change in river ecology is likely to have predated Nyuserra’s reign by quite some time.

If the burgeoning solar cult was in any way intended to halt the ongoing aridification, its inability to break the worsening drought seems to have become evident by the end of Menkauhor’s reign, for the successors of this king abandoned the practice of building sun-temples and (following Menkauhor’s lead) were less inclined to include the theophoric element “Re/Ra” in their names. The solar cult diminished in power thereafter, eclipsed by a growing focus on Osiris. The rise of the latter seems not to have related to this deity’s possible connection with vegetation or the Nile flood (Section 3) so much as to the afterlife that he was perceived to offer. The climatological deterioration continued unabated, culminating in the 4200 BP drought event that helped to end the Old Kingdom and ushered in the famine and social disorder of the First Intermediate Period. In this time, we are told by the Prophecy of Neferty that “The river of Egypt is empty, And the waters may be crossed on
Similarly, Ankhtifi’s autobiography records that “All of Upper Egypt was dying of hunger, to such a degree that everyone had come to eating his children. [...] The entire country had become like a starved (?) grasshopper, with people going to the north and to the south (in search of grain).” Africanus records that Manetho characterised the rulership of Dynasty 7 – the onset of the First Intermediate Period – as “70 kings in 70 days.”

In view of their filial connection with Re (as evidenced by the title s3 R/w) and their promotion of his cult, the 5th Dynasty kings – especially the sun-temple builders from Userkaf to Menkauhor (ca. 2500-2400 BCE) – have been dubbed “Sons of the Sun” by modern scholarship. The very same epithet has recently been applied to the kings of the 1st Dynasty of Uruk (Uruk I, ca. 2800-2700 BCE), which appears in the Sumerian King List immediately after the post-Flood resumption of kingship with the 1st Dynasty of Kish. These rulers are the paradigmatic and quasi-mythical “Priest-Kings of Uruk” mentioned earlier in the quotation from Piotr Steinkeller (Section 2.2). The dynasty’s founder, Mes-kiaggasher, is introduced in the King List as the son of the sun-god Utu (DUMU dUTU). Beyond this, the epic cycle of Uruk provides many points of reinforcement for the solar pedigree (and indeed identity) of this king and his descendants, amongst whom is Gilgamesh. Here, however, there are no grounds for suspecting a geomythological dimension to this sudden preoccupation with the sun-god, whose cult in Uruk was minimal. Rather, the underlying motivation seems to have been a desire to strengthen the familial ties between the these kings and Utu’s twin sister Inanna, the patron deity of Uruk. As a surrogate Dumuzi, the king was Inanna’s lover; as a scion and avatar of Utu, he was also her twin brother.

Moving forward some five centuries from Uruk I, we find that Mesopotamia was not immune from the climate change that progressively weakened the Egyptian Old Kingdom and eventually helped to end it. Indeed, the 4200 BP drought event affected the Ancient Near East as a whole, ushering in a period of disorder that some scholars have dubbed the “Dark Ages.” In Mesopotamia, aridification in the lead-up to this date is now thought to have been a major contributing factor in the collapse of the Akkadian empire founded by Sargon. No clues remain as to whether rituals were undertaken (or new cult practices instituted) with a view to appeasing the Mesopotamian sun-god, Utu/Shamash, or the god of fresh water and civilization, Enki/Ea, or the rain-bearing storm-god, Adad/Ishkur. The Curse of Akkad, which was composed ca. 2000 BCE, actually attributes the fall of Akkad to a desecration wrought by Sargon’s grandson, Naram-Sin, upon Enlil’s temple in Nippur – an atrocity that Enlil promptly avenged by permanently destroying the city of Akkad/Agade. Although the lament correctly identifies the immediate agents of the Akkadian empire’s collapse (which actually occurred under Naram-Sin’s son, ca. 2150 BCE) as the Gutian migrants/invaders from the mountains in the east, its description of the desolation after their onslaught is also consistent with the folk-memory of a drought:

In the gates of the land the doors stood (deep) in dust, [...] The large fields and acres produced no grain, The inundation ponds produced no fish, The irrigated gardens produced no honey (and) wine, The heavy clouds brought not rain, there grew no mashgur-tree. [...] Agade, (instead of) its sweet-flowing water, salt water flowed (there).
Politically, this period of disorder was so confused that the *Sumerian King List* exclaims in frustration: “Who was king? Who was not king!” The parallel with Manetho’s “70 kings in 70 days” is striking.

**4.2. Another antithesis of the mythical Flood: The predicted Great Fire**

Some theoretical schemes imagine an anti-flood that is more extreme than drought. In his *Naturales Quaestiones*, Seneca – a Roman Stoic philosopher of the 1st century CE – attributes to Berossos (Section 2.2) a variant of the Great Year doctrine in which an apocalyptic event – either a Great Flood or its true opposite, a Great Fire – is triggered automatically by the astrological alignment of all the planets:

> Fire and water are lords of the earth. From these it took its rise, and in these it will find its grave. So when a new creation of the world has been resolved upon by Heaven, the sea will be let loose on us from above; or it may be the raging fire, if another variety of destruction is Heaven’s will. Some suppose that in the final catastrophe the earth, too, will be shaken, and through clefts in the ground will uncover sources of fresh rivers which will flow forth from their full source in larger volume. Berosus, the translator of [the records of] Belus, affirms that the whole issue is brought about by the course of the planets. So positive is he on the point that he assigns a definite date both for the conflagration and the deluge. All that the earth inherits will, he assures us, be consigned to flame when the planets, which now move in different orbits, all assemble in Cancer, so arranged in one row that a straight line may pass through their spheres. When the same gathering takes place in Capricorn, then we are in danger of the deluge.

In this scheme, a Great Flood is expected when all of the planets coincide under the zodiacal sign of Capricorn, the place of the summer solstice, whereas a Great Fire will occur when they all line up under Cancer, the place of the winter solstice. Subsequent developments of the Great Year doctrine in Indian and Arabic astrological/astronomical treatises (such as Abū Maʿṣar’s *Kitāb al-Ulūf* or “Book of Thousands”) postulate that the beginning of the present cycle occurred in astronomical year -3101, i.e. 3102 BCE, at which time a conjunction of all the planets under Aries is considered to have caused the Great Flood that we have been examining in this paper. This date is, of course, consistent with the approximation of 3000 BCE that we adopted in Section 2.1 for the same event. Despite widespread agreement on the date of the Great Flood among Late Antique and medieval proponents of the Great Year doctrine, predictions for the date of the expected Great Fire vary according to the system used. Abū Maʿṣar, for example, predicted that the next grand conjunction of the planets would not occur until the year 176,899.

**5. A modern postscript: The impending real flood**

The Mesopotamian and Egyptian myths that signal the beginning of historical time both involve references to a flood. The archetypal inundation is of course the cataclysmic Great Flood (Section 1). The current real-world catastrophe of human-induced climate change, which is already well advanced, also involves global inundation in the form of rising sea levels caused by melting of the earth’s ice caps. Accordingly, human historical time – which began with an imagined universal flood (Sections 1 & 3) – may well end with a real one, accompanied for good measure by droughts and fires (Section 4).
Since the (literal) engine of the impending collapse of our civilization is an addiction to burning fossil fuels that began with the Industrial Revolution, the demise of our world will be consistent with a principle that Egyptologist Miroslav Bárta has named in honour of Heraclitus, the pre-Socratic Greek philosopher who insisted on continual change as the fundamental nature of the universe. In Barta’s words, “The Heraclitus Law describes a mechanism according to which the factors responsible for the rise of a particular civilisation or culture are usually the same as those which, in the end, instigate its crisis, meaning thus a quick and deep loss of its complexity.” In tandem with profit-driven mass deforestation, the greenhouse gas-emitting power stations, factories and vehicles that have powered modern civilization to its current zenith are also set to be its undoing by way of global warming.

6. Conclusion

Ancient pseudo-histories may contain kernels of geographic truth. In the Sumerian King List, the long and south-focused antediluvian era may reflect a combination of the Ubaid and Uruk periods, whose key sites were in the south of Babylonia, while the initial post-Flood period, whose leadership was located in north, may reflect the short Jemdet Nasr phase, whose key sites were also in the north. The King List’s subsequent return of kingship to Uruk and Ur – rival cities in the south – may be equated with the start of the Early Dynastic period. Consistent with the hypothesis is the fact that most of the cities in the antediluvian portion of the King List were indeed founded in the Ubaid or Uruk periods. Moreover, the actual antiquity of each of these cities – where known – is reflected rather well by the city’s position in the antediluvian segment of the King List.

The fragmentary nature of the early parts of the relevant Egyptian king-lists inhibits a mythogeographic analysis of this type for Egypt. Nevertheless, the long-established mythological sequence in which Seth (emblematic of Upper Egypt) is succeeded by Horus (emblematic of Lower Egypt) may reflect the spread of Naqada culture from southern to northern Egypt in the 4th millennium BCE and the establishment of the national capital at Memphis. The (actual) dominance of the southern culture over the northern one in the process of state formation is not evident from the (mythological) victory of Horus over Seth, but can perhaps be discerned in the fact that the origins of both of these deities lie in Upper Egypt.

Comparisons between the antediluvian sections of the Sumerian King List and Berossos’ list (Table 1), and between the mythological sections of the Turin Canon (Table 3) and Manetho’s list (Table 4), reveal the fidelity with which (pseudo-)historical information was transmitted through long stretches of time in the ancient world. The correspondence between Sumerian kings’ names is especially impressive. Another form of validation involves seeking archaeological corroboration for the names in the early “historical” sections of the king-lists. In the Sumerian King List, the first such match occurs with the 22nd king of the post-Flood dynasty (Kish I). In the Turin Canon, names begin to approximate those of historical kings from the 4th king of the 1st Dynasty onward; after the middle of the 2nd Dynasty, some of the matches are unmistakable.

The total time allocated by Manetho to the mythological period in Egypt (tens of thousands of years) is an order of magnitude lower than the corresponding totals assigned by Berossos and by the Sumerian King List to the equivalent period in Mesopotamia (hundreds of thousands of years). If this reflects a difference in the duration of protohistoric time-periods
envisaged by the native traditions, it may well be a consequence of the fact that the Babylonians measured time using a sexagesimal (base-60) numeral system while the Egyptians used a decimal (base-10) one.

While flood and drought are meteorological opposites, they are similar in the devastation that they wreak on human societies. As Ea/Enki says to Enlil in the *Epic of Gilgamesh* (Standard Version, Tablet XI): “Instead of your causing the Deluge, a famine could have happened, and slaughtered the land.”³⁸⁵ I have recently suggested elsewhere that the progressive real-world aridification that culminated in the 4200 BP drought event may have contributed to the rise of the solar cult in 5th-Dynasty Egypt, and have here enlarged upon that proposal. Eventually, the unfavourable change in climate seems to have helped to end both the Old Kingdom in Egypt and the Akkadian empire in Mesopotamia.

The Mesopotamian and Egyptian myths that signal the beginning of historical time involve direct and indirect references to a flood, respectively, which in each case reflects the actual geography and hydrology of its source region. Mythologically, the water motif is used in very different – one might even say opposing – ways. The Mesopotamian formula involves a cataclysmic deluge which is nevertheless survived by a man, while the Egyptian one involves a benign inundation which receives the body of a slain god.

A late embellishment of the Egyptian myth (ca. 100 CE) shares with a late version of the Mesopotamian one (ca. 1200 BCE) the image of a wooden box, with someone important inside it, being tossed aimlessly on the waves. Once again, the outcomes are not just incongruous but opposed: the Egyptian vessel is a death-chamber in which a god is murdered, whereas the Babylonian one is a life-boat by which humanity is saved.

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**Endnotes**

Unless otherwise noted, URLs were accessed 9 Jun, 2019.

¹ Griffiths (1956); Hansen (2005), 237; Graziosi & Haubold (2010), 77.
² Smith (2018). Note that the metal-based concept of “Four Ages” – gold, silver, bronze and iron – predates Hesiod and enjoys a wide geographic distribution in world mythology; Witzel (2012), 160.
³ Copper, too, can occur as a native metal and therefore was known in the Neolithic. Since the Greeks used the same word – *chalkos* – for copper and bronze, Hesiod’s sequence could also be read as gold – silver – copper [= Neolithic] – iron [= Iron Age], or gold – silver – copper [= Neolithic] – bronze [= Bronze Age] – iron [= Iron Age], in addition to the usually accepted interpretation of gold – silver [= Neolithic] – bronze [...]

Bronze Age] – iron [= Iron Age]. All of these, of course, are reasonable reflections of the actual (pre)history of metallurgy.

4 For those in the Sumerian King List, see Friberg (2007), 242.
5 Park (2010), 118-120; Crevecoeur (2018), 89.
6 However, see ahead to Section 5 on the mass extinction event currently in progress. For an ancient tale that does happen to reflect one of the past mass extinction events, see Graham (2017a).
7 George (2016a), 444.
9 Witzel (2012), 368.
10 Ryan et al. (1997); Ryan & Pitman (1998).
11 Finkel (2014), 331-332.
12 Hallo (1971), 36; Kriwaczek (2010), 72; Finkel (2014), 87; Steinkeller (2017), 60.
14 Van de Mieroop (2016), 2. Writing per se was invented slightly earlier – ca. 3200 BCE – in Mesopotamia; Michalowski (2011), 5. In Egypt, it arose independently around the same time; scholars usually award priority to the Mesopotamian invention.
15 Mallowan (1964), 81
16 Kriwaczek (2010), 72; Snell (1997), 17.
17 Kriwaczek (2010), 72.
18 Van de Mieroop (2016), 55.
21 Mallowan (1964), 69-70 & 79 & Pl. XX; Mallowan (1970), 354; Roaf (1990), 84. Similarly, Grayson places the antediluvian rulers in the Early Dynastic period; Grayson (1975), 216 & 249.
22 Mallowan (1964), 68; Frayne (2008): RIME 1.07.22.01-02 (CDLI nos. P431026, P222738, P431027 & P222739, online at https://cdli.ucla.edu). That he was the father of Aga, the final king of the 1st Dynasty of Kish, is attested in three Sumerian sources: the King List, the tale Bilgamesh and Aga, and the Tummal Inscription; ETCSL (2003) – The History of the Tummal, online at http://etcsl.orinst.ox.ac.uk/cgi-bin/etcsl.cgi?text=t.2.1.3#.
23 Marchesi (2010), 236-237.
24 Jacobsen (1939), 55-68 & 70 fn. 1; Finkelstein (1963), 44-45; George (2011), 199; Steinkeller (2017), 59 & 74; Chen (2013), 126 & 188.
25 Chen (2013), 188-190.
26 Steinkeller (2003); Marchesi (2010), 233; Michalowski (2011), 15; Chen (2013), 189.
27 Chen (2013), 124-127, proposes the Flood motif as an innovation in the time of Ur-Ninurta of Isin (ca. 1923-1896 BCE), which is toward the end of the date-range specified in the main text; specifically, it appears in the Instructions of Ur-Ninurta. Allusions in literature from the preceding Ur III period are possible but unproven; George (2016a). Steinkeller posits that its first appearance is in a hymn to Ishme-Dagan of Isin, ca. 1950 BCE, a date earlier than Chen’s but also within the range specified in the main text; Steinkeller (2017), 60 fn. 140. Why the motif appears so late in Mesopotamian literature when comparative mythology dates the mytheme to before 65,000 BCE (Section 1) is a mystery. Finkel (2014), 88-89, suggests a long period of currency in oral tales before it was first committed to writing, consistent with the multiple literary contexts in which it suddenly appears.
28 ETCSL (2001) – The Sumerian King List: Composite Text, lines 1-47, online at http://etcsl.orinst.ox.ac.uk/section2/c211.htm#line1; Kvanvig (2011), 109-110; Steinkeller (2017), 62; Volk (1999); translations of female priestly paradigms (i.e., names commencing with En-) from Westenholz (2013a), 251 & 254.
29 Hallo (1971), 32 (Fig. 6).
31 Hallo (1971), 32 (Fig. 6).
32 Both translations from Hallo (1971), 32 (Fig. 6).
33 Hallo (1971), 35; Chen (2013), 159; Lenzi (2016), 369.
34 Marchesi (2010), 232 fn. 6.
35 Chen (2013), 193. For a comparative table of the dynasties as reported by his main sources, see Chen (2013), 192.
36 Finkelstein (1963), Table II.
37 Chen (2013), 145-146, 194 & 235.
38 Chen (2011), 146-149, 152, 194 & 235. Destruction/restoration ideology of this kind was probably important to the Isin rulers under whom the Antediluvian King List was prefixed to the historical Sumerian King List.
39 Finkelstein (1963), Tables I & II; Friberg (2007), 240.
40 Chen (2013), 191 & 193.
41 Chen (2013), 183.
43 Chen (2013), 190; the sequential adaptations are summarised on his p.196.
44 Jacobsen (1939); Finkelstein (1963), Table II (kings 1-9 from WB 444 and Ziusudra from WB 62); ETCSL (2001) – The Sumerian King List: Translation, lines 1-39, online at http://etcsl.orinst.ox.ac.uk/section2/tr211.htm#para1. Beware that the reign-lengths attributed (without comment) by Friberg (2007) to Enmedurana in WB 444 – variously 18 šár 50 gēš (= 67,800 years) on p.237 and 8 šár 50 gēš (= 31,800 years) on p.240 – differ from the value of 5 šár 50 gēš (= 21,000 years) agreed upon by other authors. Friberg’s variant values seem to be incorrect, since both lead to total antediluvian reign-lengths at odds with the sum reported by WB 444, whereas the 21,000 year value gives the correct total.
45 Verbrugghe & Wickersham (1996).
46 Lenzi (2008), 142.
48 Hilprecht (1904), 464; George (2016b), p.8 of English text; note that Kvanvig (2011), 109 fn. 12 (mis)renders “bond” as “band.” Compare the Egyptian ḫt, “horizon,” the semantically rich junction of earth with sky that is also used to describe the tomb of the king, and the related term ḫt, “effective spirit,” which we will meet as a category (cyan fill) in Table 3; Assmann (2002), 58.
49 Caplice (2002), 37.
50 Steinkeller (2017), 61 fn. 142.
51 Chen (2013), 130-154, esp. fn. 4.
52 Chen (2013), 131.
53 Chen (2013), 137.
54 Hallo (1971), 35.
55 Chen (2013), 137.
56 Westenholz (2013b), 108.
57 Kramer (2011a), 26-27.
58 George (1999), 89.
59 Roaf (1990), 84; Jacobsen (1939), 76 fn. 34; cf. Finkelstein (1963), 47-50.
61 Chen (2013), 158-182.
62 Marchesi (2010), 232.
64 ETCSL (2001) – The Sumerian King List: Translation, line 43, online at http://etcsl.orinst.ox.ac.uk/section2/tr211.htm#para1; Jacobsen (1939), 76-77 incl. fn. 39.
65 Hallo (1971), 41 (Fig. 7).
66 Verbrugghe & Wickersham (1996), 70 (Table B, 1a-b)
67 Verbrugghe & Wickersham (1996), 71 (Table B, 2b).
68 Van de Mieroop (2016), 17; Roaf (1990), 53-56; Leick (2001), 1-29.
Although its exact location is unknown, Larak is “a south Mesopotamian city, perhaps near Isin;” Edzard (1980-1983). Verbrugghe & Wickersham (1996), p.12 (Map 2), speculatively place it (as Berossos’ “Larankhos”) on a bend in the Tigris in the east of central Babylonia, near the site of modern-day Ali al-Garbi, a region otherwise bereft of ancient cities; this putative location is the one used for Larak in Fig. 1 of the present paper. The US CENTCOM Cultural Property Training Resource for Iraq – Entry 046: Madain (ancient Bad Tibira) also states that the location of Larak is unknown; see online at https://www.cemml.colostate.edu/cultural/09476/iraq05-046.html.

Lower era total obtained directly from WB 444 (Ash. 1923.444), the “canonical” text and main source for Table 1 (ETCSL (2001) – The Sumerian King List: Translation, lines 1-39, online at http://etcsl.orinst.ox.ac.uk/section2/tr211.htm#para1, also Finkelstein (1963), Table II). Higher era total obtained by adding in the reign of Ziusudra from WB 62, as in Table 1. Alternative sources: For WB 62, after removing the Larsa interpolation [Finkelstein (1963), 50; Chen (2013), 193; Steinkeiler (2017), 58], the antediluvian kingship lasts ca. 362,400 years, of which ca. 254,400 years (70%) are in the south. For UCBC 9-1819, after restoring the missing reign-length for Ubartutu with the value from WB 444, the antediluvian kingship lasts 204,600 years, of which 198,600 years (97%) are in the south. Thus the conclusion drawn in the main text is true irrespective of which of the three sources is used.

Both periods are subsets of the Chalcolithic era [Leick (2001), xxi]; in combination, they represent the cultural prehistory of southern Mesopotamia [Van de Mieroop (2016), 15 (Chart 1.1); Cauvet & Pouysségur (1998), 204]. The two periods have previously been considered together, e.g. Mallowan (1970) jointly covers the Ubarbaid and Uruk periods (the latter to the end of Uruk 5 in a stratification that runs – as he explains on p.329 – from Uruk 12 to Uruk 4). The joint Ubarbaid-Uruk period in Mesopotamia (5700-3100 BCE) coincides closely with the Predynastic period in Upper Egypt (5300-3100 BCE; Shaw (2000), 481 & Dee et al. (2013), 5-6 (Table 1 & Fig. 1)), which is also conventionally subdivided into two phases (Badarian and Naqada).

When the dynastic duration for Kish I is calculated using non-WB 444 data – wherever these are known to differ from WB 444 values [ETCSL (2001) – The Sumerian King List: Translation, lines 1-39, online at http://etcsl.orinst.ox.ac.uk/section2/tr211.htm#para1] – the total is 22,535 years (see two notes previously). The ratio of this value to the antediluvian total from WB 444 is 10.7, rising to 12.3 if Ziusudra’s reign is added in (Table 1); if, instead, one uses the average of the antediluvian totals from non-WB 444 sources (WB 62 and UCBC 9-1819, calculated as in note 72 above) the ratio rises further to 12.6. All of these values for the mythological ratio are in good agreement with the historical ratio’s value of 13 – they are as close or closer to it than the range for the mythological ratio value of ca. 10-11 presented in the main text, which was obtained using WB 444 data. This shows that the proposed correspondence is robust across alternate sources of regnal data, and that there is no special dependence on WB 444. The conclusions also remain unchanged when recently published reign-lengths from tablets in the Schøyen Collection are substituted into the calculations; George (2011), 199-203.

Schmidt (1931), 200-201 & 216-217. Leick (2001), 83, reports that Shuruppak was relocated after this flood event. A later survey at the site noted that “Many Jamdat Nasr and ED I pottery types are very similar,” so much so that “in the survey the two periods were treated together.” This suggests that an accurate positioning of the “inundation layer” within the combined JN-ED I range may not be possible. See Martin (1983), 26.

Mallowan (1964), 78-81. Note that Mallowan himself assigns these Shuruppak and Kish floods to the ED I/II boundary (his Plate XX), while admitting that the Shuruppak layer “intervened between the underlying Jamdat-Nasr stratum, and the overlying Early Dynastic stratum.”

Mallowan (1964), 79.
Similarly, the Egyptian king-lists present competing and/or contemporaneous dynasties in the politically decentralised “Intermediate Periods” as though they were sequential; Assmann (2002), 81.

The language can be read as the narrator dropping the topic of city A and proceeding to discuss city B, or as city A falling, with the kingship being taken away to city B. Compare Jacobsen (1939) and Finkelstein (1963) with Friberg (2007).

Michalowski (2011), 16-21, provides counter-examples from other text genres – instances where dynastic turns are attributed to the will of the gods, especially Enlil.

Marchesi (2010), 234. Michalowski (2011), 15. Similarly, the Egyptian king-lists present competing and/or contemporaneous dynasties in the politically decentralised “Intermediate Periods” as though they were sequential; Assmann (2002), 81.

Black & Green (1992), 72; Steinkeller (2017), 63.

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Steinkeller (2017), 76-77

Steinkeller (2017), 78-81.

Leick (2001), 5-6.

Mallowan (1970), 373.

Leick (2001), 171.

Leick (2001), 62.

See note 70 above and Mallowan (1971), 289.

Also consistent with the proposal is the fact that Kish was a city in the Jemdet Nasr period; however, its occupation dates back to the Ubaid period [Matthews (2000)]. Likewise, the foundation of Ur and Uruk long predate the Early Dynastic period that they are proposed to represent in the Sumerian King List.

Steinkeller (2017), 61.

Steinkeller (2017), 61. This text actually provided the basis for the genealogy of the last antediluvian dynasty, and thus is probably not an independent attestation; Chen (2013), 126 & 129-158. See also the note on Ubartutu in Table 1.


For the text of the main tablet, referred to as PBS V 1 by Jacobsen (1939), see Kramer (2011a).

Finkel (2014), 91.

Quotation from Winter (2008), 83. “Shepherd” is also an element within the name Ensipadzidana (Table 1).

Even though the first hieroglyph of ḫk (“rule,” “ruler”) is a shepherd’s crook [Sign S38; Gardiner (1957), 508] and the Egyptian king carried a crook and flail as insignia of his rulership [Wilkinson (1999), 160-161], the shepherd metaphor is uncommon in textual references. However, it is not entirely absent; for example, in the Teaching for King Merikare – which is set in the First Intermediate Period – the king is urged to “Shepherd the people, the cattle of God, For it is for their sake that He created heaven and earth;” Tobin (2003a), 164. Assmann (2002), 155-156 & 234, claims that from this period until the New Kingdom “the role of social reformer and ‘good shepherd’ was a part of the official image of the king.” In Egyptian historiography, the “shepherd-kings” or “king-shepherds” – terms derived from Josephus’ mistranslation of Manetho’s Greek term Hyksos – were a people from the Levant whose kings ruled Egypt from Avaris in the Second Intermediate Period. “Hyksos” is in fact based on the Egyptian phrase ḫk: ḫs.wt, “Ruler of Foreign Lands;” Whiston (1999), 942; Verbrugghe & Wickersham (1996), 99 (fn. 18) & 139-140.

Peterson (2018), 39-40 & 44.

Peterson (2018), 39-40; Woods (2009), 205-206. Since the historical section of the Sumerian King List developed independently of the Antediluvian King List (Section 2.1), the same logic may underpin the thinking behind the many kings’ names in the first post-Flood dynasty (Kish I) that also refer to animals: Kalibum (Dog), Qalumum (Lamb), Zuqapp (Scorpion), Arwium son of Sabitum (Gazelle son of Hind), and Enmenunna/Niminunna (Butterfly); Hallo (1971), 41 (Fig. 7).


Peterson (2018), 47. Here, the editor of the reconstructed text remarks that it is possible that “Alulim was not a personal name, but rather an entity to which the first king belonged [...] or which] otherwise describes him.”

Richardson (2019), 11-16 & 36-37. Personhood was however withdrawn from animals in Akkadian literature, as part of human alienation from a divine world “in which nature and theology were bound together as natural theology.” The Akkadian orientation was instead toward “individual human protagonists, heroes, and sufferers” and the scribal transmission and exegesis of hidden truths; “epistemically, the animal world was the antithesis of Akkadian literature’s justified source of wisdom.” While the “pristine primitivism” of Alulim’s merged human and animal world must lie in the holistic Sumerian view of nature,
the animalistic behaviour of the first humans in this Sumerian text of ca. 1800 BCE probably also elicited a disdain typical of Akkadian thought. The promotion of men as rulers and custodians of the animal world – as its shepherd-kings, so to speak – is also an Akkadian development; Richardson (2019), 29-31.

Richardson (2019), 26-27, comments specifically on the Sumerian “pastorales of the world at its dawning,” noting that “animals and men alike existed in a cthonic state, and had neither yet been named nor assigned or taught their cultic duties[...]. In this primitive order, not only were men like animals, uncivilized and in a bestial state, but the animals themselves had not yet taken on their own fundamental characteristics.”

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Steinkeller (2017), 63.

George et al. (2010), 136-7; Peterson (2018), 40.

As mentioned in Table 1, note i. Steinkeller (2017), 64; ETCSL (2001) – The Flood Story: Translation, Segment C, lines 1-27, online at http://etcsl.orinst.ox.ac.uk/section1/tr174.htm.

Steinkeller (1999), 1; Steinkeller (2017), 75.

Steinkeller (2017), 64; Chen (2013), 151; Verbrugghe & Wickersham (1996), 49-50. The Erra Epic claims that Sippar was the only city that was not destroyed by the Flood, thereby providing an alternative mode for the city to transmit antediluvian knowledge to the historical era; Steinkeller (2017), 64. The Seed of Kingship has Nebuchadnezzar I (an Old Babylonian king) inherit pre-Flood knowledge from his ancestor, Enmeduranki (Enmedurana), the antediluvian king of Sippar (Table 1); Chen (2013), 150 & 176. Of course, Gilgamesh brought back antediluvian knowledge (obtained without any reference to Sippar) by visiting Utunapishtim; Chen (2013), 180-181.

George (2011), 224; Sparks (2005), 346. Chen (2013), 257, cautions that the tradition about the sages is a late development that is only secondarily synchronised with the Flood tradition. More will be said of the apkallu later in this section.

George (2011), 201; Steinkeller (2017), 64 & 67.

Steinkeller (2017), 63. The primacy of Eridu as a seat of learning was, however, largely mythical; as Leick (2001), 28-29, observes, “Eridu never was a ‘centre of theological learning’ in the historical period, since it never was a political centre or even a viable city in its own right.” Rather, it was a symbol of Mesopotamian cultural longevity that depended heavily on nearby Ur. At times, Eridu had to withstand “long periods of actual physical decay and neglect,” while at other times it was “magnificently reconstructed.” A similar role seems to have been played in Early Dynastic Egypt by Abydos: “By the mid-First Dynasty, Abydos was probably a back-water. Its town site is not large and the necropolis contains no large nonroyal tombs, in contrast with the great numbers in the Memphite area. This maintenance of old practices at a remote location may have had its artificial aspects. Perhaps because so much ideology was at stake and expressed in a mortuary idiom, the practices did not change until the dynasty changed. [...] Peribsen, perhaps its [i.e., the 2nd Dynasty’s] second to last king, was buried back at Abydos in a tomb similar to those of the First Dynasty, as was Khasekhemwy, the last king, who occupied the largest tomb on the site.” Baines (1995), 140-141.

Steinkeller (2017), 65-70.

Steinkeller (2017), 70.

George (1999), 2. The walls were subsequently completed by Gilgamesh; Steinkeller (2017), 75.

Sanders (2017), 41-42.

Sanders (2017), 41-44. Adapa’s gift to post-Flood humanity is therefore equivalent to the recovery of correct cultic procedure by the retrieval of the antediluvian tablets from Sippar, by Gilgamesh’s visit to the Flood-survivor Utnapishtim, etc.; Tinney (2015).

Speiser (2011), 73-74; Sanders (2017), 41-44. In the later versions, Adapa is sent back to earth as a human. That he is cheated of a blessing (eternal life in heaven as a god) because he obeys Ea’s injunction not to consume divine provisions (the bread/water that he will be offered in heaven by Anu) constitutes an interesting counterpoint to the biblical motif in which Adam loses a blessing (his tenure in Paradise) because he disobeys God’s injunction not to consume divine provisions (the fruit of the Tree of Knowledge). On scholarly attempts to identify Adam with Adapa, see Andreasen (1981).

Steinkeller (2017), 76; Finkel (2014), 50.


Steinkeller (2017), 71. The association of fish with knowledge is not unique to Mesopotamia. For example, in Irish mythology, a salmon ate nine hazelnuts that fell into the Well of Wisdom from nine hazel trees that
surrounded the well, thereby gaining all the world’s knowledge. The first person to taste of the flesh of this fish – which was known as the Salmon of Knowledge – would in turn gain this wisdom; Ellis (1987), 124.

Further to note 106 above, though, Richardson (2019), 37, notes of the Akkadian apkallu that “Their representation as part-fish assimilated them to the god Enki and the sweet water of the Abzu which lay beneath the earth; but it did not allude to any numinous power of fish or water as such. This was an etiology of knowledge that coded it as eschatological rather than natural.” In ethnographic studies, the apkallu Adapa has been proposed as a prototype merman, the male counterpart of the mermaid; Viscardi et al., 101.

Wiggermann (1992), 75-76.

Wiggermann (1992), 73-75. Kesh is not to be confused with Kish; see Fig. 1.

Tablet W 20030,7; Lenzi (2008), 142.

Kvanvig (2011), 108. Note that this change is unrelated to the reversed order of Sippar and Larak (and their respective kings) in the Dynastic Chronicle (K 11261+), a neo-Assyrian variant of the Sumerian King List; Grayson (1975), 40-42 & 139-144 (Chronicle 18).

Helge Kvanvig would probably advise against the correction, since in his view the sequence in Bit mēseri represents “a stable tradition extending over several hundred years about the names and order of the seven apkallus living before the flood;” Kvanvig (2011), 109.

Wiggermann (1992), 76.


Kvanvig (2011), 111.


Ruiten (2000), 183-190; Wright (2005), 220-223; Orlov (2011); Reeves (forthcoming).

Graham (2002a).

Their ambivalent natures and role as culture-heroes suggest that the Watchers and apkallu are examples of “series of demiurges or tricksters that establish human culture,” an ancient and widely-diffused mythological motif that was mentioned in Section 1. (Adapa’s original timing after the Flood, and Bit mēseri tradition that continues the series of Mesopotamian sages after the Flood, are both consistent with the underlying world-mythology paradigm in which trickster-deities bring culture to humans after the Flood; Witzel (2012), 79, 180 & 358 (Table 6.1).) Note that Plutarch assigns to the living Osiris an Egyptian culture-hero role similar to that played in Mesopotamia by the apkallu; see note 304 below. Outside the Ancient Near East, mythical bringers of technology who straddle the human and divine/demonic realms include the Tuatha Dé Danann of Irish Mythology, who – like the biblical Watchers – arrived en masse on a mountain-top and, after their eventual defeat, ended up in a subterranean realm (in this case, accessed via sídhe mounds). Similarly, the Tingari ancestors brought culture, customs and Aboriginal law to the Western Desert of Australia, after which they too retreated into the earth. For the Watchers as culture-heroes, see Collins (2013); for the Tuatha Dé, Thanisch (2012), esp. fn. 64; for the Tingari, Graham (2002b).

Kvanvig (2011), 127-128. Elsewhere, the seven apkallu as a group are referred to as “watchers;” Kvanvig (2011), 132-135.

For a general overview, see Graham (2002a).

Leick (2001), 26; Kilmer (1987), 43. The Erra Epic (Tablet I, lines 147-153) associates this banishment with the antediluvian apkallu, who were thus condemned at the time of the Flood. The pre-Flood apkallu of the Erra tradition seem to have been viewed as deviant (or at least troublesome) in the same manner as the post-Flood ones of the Bit mēseri tradition.

Marchesi (2010), 232.

Mallowan (1964), 81-82. Jan Assman compares the early Mesopotamian north/south dichotomy of Akkad/Sumer (and the later one of Assyria/Babylonia) to that of the “Two Lands” of Egypt, namely Lower and Upper Egypt; Assmann (2002), 29.

Hallo (1971), 36.


Wengrow (2006), 213-214 & 276. King Djet of Dynasty 1 is also named for a venomous animal, in this case the cobra; Narmer, the first king of Dynasty 1, means “Fearsome Sheathfish” [Assmann (2002), 36] or “Mean Catfish” [Baines (1995), 123]. Accordingly, the few names of early historical Egyptian kings that are based on animals are probably meant to convey their bearers’ dangerousness toward their enemies [Baines...
(1995, 111-113); Wilkinson (1999), 162], as do the names not based on animals – Fighter, Strong, Arm-Raiser [Wilkinson (1999), 172] – rather than to reflect any “pristine primitivism” of the earliest dynasties when men lived as animals (as suggested earlier in this section for the animal-based names of antediluvian and perhaps Kish I kings in Mesopotamia, which largely reference benign creatures). With a few possible exceptions, the same trend is apparent among the regional rulers in protodynastic Egypt; their names are thought to include Crocodile, Elephant, Bull, Canine, Falcon and Lion [Hassan et al. (2006), 689-691]. For a recent treatment of animal symbolism in Egyptian thought, see Fleuren (2019).

147 Verbrugghe & Wickersham (1996), 15.
148 King of Babylonia, coincident with the better-known Tiglath-Pileser III of Assyria; Verbrugghe & Wickersham (1996), 76-77 (Table 4 – note that their table spans both pages).
149 Verbrugghe & Wickersham (1996), 30 & 33. As we shall see in Section 2.3, Manetho’s list of Egyptian kings’ names has – fortunately – not suffered the same fate.
150 Verbrugghe & Wickersham (1996), 44.
151 This is the name given by the composite text in ETCSL (2001) – The Sumerian King List: Translation, line 43, online at http://etcsl.orinst.ox.ac.uk/section2/tr211.htm#para1.
152 Hallo (1971), 41 (Fig. 7); ETCSL (2001) – The Sumerian King List: Translation, line 46, online at http://etcsl.orinst.ox.ac.uk/section2/tr211.htm#para1; Marchesi (2010), 232 fn. 6.
153 Verbrugghe & Wickersham (1996), 48 & 71 (Table 2a).
154 Lenzi (2008), 141-142.
156 Michalowski (2011), 15.
158 Hassan et al. (2006), 696.
159 There is no way to tell whether it is grain or territory that is being trampled.
160 Faulkner (1961); for participle forms of verbs, see Ockinga (2012), 63-64.
161 Thesaurus Linguae Aegyptiae, online at http://aaew.bbaw.de/tla.
162 Ranke (1935), 378 no. 6.
163 Ranke (1935), 394 no. 19.
164 Faulkner (1961), 157-158.
166 Dynasty 5 and 19, respectively.
169 Kemp (2006), 92.
170 Some names of “Dynasty 0” rulers of Upper Egypt are listed by Wengrow (2006), 276 (Table 5, which only shows the final few rulers) and by Andelković (2011), 30, but the most comprehensive treatment is given by Hassan et al. (2006), 689-696. See also the more recent discussion in Heagy (2014), 73-74. For completeness, we should note the orthographic overlap between Ka in that list and Seka, the king of Lower Egypt recorded in PS.r.I.2 of the Palermo Stone (Table 2). Both names involve Gardiner glyph D28 (kA). Different glyphs are used to form the similar-sounding second element of wr kA (Wer-qa), the king listed in Turin Canon 2.6 (Table 3).
171 Assmann (2001), 119-122. Assmann (2002), 348, describes it as “a ‘Great Tradition,’ an authoritative, interregional, pan-Egyptian cosmo-cratology. Every local cosmology was bound to take its bearings from this universally valid theology [...] namely ] the unassailable, universally valid tradition of Heliopolis.”
174 Mark (1997), 19-21 & 103-104; Wengrow (2006), 38, 72, 83-84, 89 & 215; Andelković (2011), 29-30; Ciłowicz (2013), 56-57 & 64. Stevenson (2016), 440-441, rightly stresses the complexity of the “Naqada expansion” and cautions against simplistic models that propose a “complete Upper Egyptian ascendance over Lower Egyptian communities.” The expression “Naqada expansion” for the Naqada IICD period self-consciously mirrors the name of the roughly contemporaneous “Uruk expansion” in Mesopotamia, a process alluded to in the next sentence of the main text. Buechz & Midant-Reynes (2011) argue for such an expansion based on the dramatic changes in burial and other practices in Lower Egypt at the time of the
cultural unification. In contrast, Köhler (2014) contests the widely accepted model of Naqada cultural expansion from south to north, arguing that Upper and Lower Egyptian farmers always had much in common, that intra-regional variation in material culture was always considerable, and that cultural unification was never unidirectional (p.174-176); she does, however, concede that the larger pottery-producing centres of Naqada II are in Upper Egypt whereas in Naqada III they also appear in Lower Egypt (in what would become the Memphite region), from which “increased standardization can be detected as time goes by” (p.174).

Van de Mieroop (2016), 15 (Chart 1.1). In the intervening territory of the Levant, but some two millennia later, the same directionality can be discerned for Israel in the formation of the biblical United Monarchy, in which the southern state of Judah emerged as politically dominant over the northern state of Israel. Accordingly, the Israelites’ “Two Lands” were ruled from the Judean capital, Jerusalem. Miller & Hayes (2006).

175 Wengrow (2006), 273; Mark(1997), 20-21 & 103-104. Heagy (2014), 65-66, cites the iconography of the Narmer Palette and other late Predynastic / Protodynastic records as evidence for a militaristic component to the political unification, whether the outcome was achieved by outright violence or merely by intimidation.

176 Bard (2003), 64; Ockinga (2010), 101 & 106-107. Accordingly, Herodotus [Histories II.99] credits “Min, the first king of Egypt” – i.e., Menes – with the construction of Memphis; de Séliccourt (1972), 165-166. Wilkinson (1999), 59, attributes the choice to Aha.

177 Assmann (2001), 134-141; quotation from p.138. The Horus-and-Seth story on the stone is part of the Memphite Theology, of which more will be said later.


182 Assmann (2001), 121.

183 Von Beckerath (1995), 225 & Fig. 1.

184 Helek (1992), 153.

185 Ryholt (1997), 24-25.

186 The original cult centre of Horus (in nome 3) is in fact south of that of Seth (in nome 5), so that aspect of the gods’ relative geography has been inverted by the new association – a fact noted by Assmann (2002), 43. See also the further (post-pharaonic) inversion described at the end of the next note, which in a sense restores the original polarity.

187 Indeed, an Upper Egyptian symbol dating back to Naqada I times; Baines (1995), 96 & 149 (Fig. 3.1); Wilkinson (1999), 162; Heagy (2014), 72.

188 Assmann (2002), 43-44, asserts that the Seth/Horus conflict originally represented a local conflict between Naqada and Hierakonpolis, but recognises that the vanquishing of Seth by Horus “also stands for the Naqada period superseded by the establishment of the state.” Mark (1997), 116, argues that the identification of
Horus with Lower Egypt dates back to predynastic times; Caleb Hamilton (2019) considers that it dates back at least to the Early Dynastic period. The pairing of Horus and Seth is attested from at least the middle of Dynasty 1; Wilkinson (1999), 253 & 255. The identity of Seth continued to evolve during pharaonic times. In the New Kingdom, Seth acquired a “new role as the representative of the Asiatic world,” which in the Late Period mutated into “an Asiatic conqueror [...] who is the very quintessence of religious sacrilege;” Assmann (2002), 200 & 342. In Greco-Roman times, this saw Seth reconfigured as an invader from the north who was repulsed by Horus in the south – a reversal of the usual geographic polarity in which Seth and Horus represent southern and northern Egypt, respectively; Assmann (2002), 411.

198 Redrawn from Shaw & Nicholson (2008), 254, with augmentation from other sources.
199 Memphite satellites such as Saqqara and Abusir are too close to Memphis to show separately on the map.
201 In a previous reconstruction of the Canon, a sub-series of names from this section (Table 1, 2.1-2.6) was considered to be an unexpected interpolation within the king-list for the 14th Dynasty; von Beckerath (1984), 76-77 (note 6).
202 Ryholt (2004), 139.
203 Ryholt (2004), 139.
204 Žabkar (1968), 6-7.
206 Verbrugghe & Wickersham (1996), 105.
207 Verbrugghe & Wickersham (1996), 120.
208 Verbrugghe & Wickersham (1996), 174-175.
209 Verbrugghe & Wickersham (1996), 96-97 & 102; Waddell (2964), 234 fn. 1.
212 Verbrugghe & Wickersham (1996), 175-177. The sole (and very minor) exception is 991 years for Helios versus the published value of 992 years. The latter value has been used in Table 4 since it provides the correct tally for divine rule (11, 985 years) nominated by the Book of Sothis, as preserved by Syncellus.
214 Waddell (1964), xxviii.
216 Verbrugghe & Wickersham (1996), 186.
217 Verbrugghe & Wickersham (1996), 130 & 153. Due to the omission of Sosis from Eusebius, their p.130 fn. 4 claims an equivalence of Kronos with Shu, whereas Kronos is usually identified with Geb. The omission is rectified in their table on p.186, with the result that Kronos now does correspond with Geb.
218 Waddell (1964), 2 fn. 2.
220 Waddell (1964), 20 fn. 2.
221 Waddell (1964), 5 fn. 6.
222 Waddell (1964), 5 fn. 6.
224 Žabkar (1968), 6 fn. 11; Hornung (1982), 232.
225 That the summary line 1.32 mentions 9 [gods] rather than 10 can be seen as an indication that Ptah has not been interpolated; moreover, the supplementation of the Ennead with Thoth and Maat (1.18-19) point to a Heliopolitan rather than Memphite influence. Helck (1992), 154-156.
227 For translation, see Lichtheim (1973), 51-57; for appraisal and discussion, see Assmann (2002), 345-354, and Ockinga (2010). The Memphite Theology sees Ptah, the local deity of Memphis, promoted to a preeminent and universal god who gave rise to the Hermopolitan Ogdoad and who thought/spoke the Heliopolitan Ennead into existence. It therefore resembles the Enuma elish in which Marduk, the local god of Babylon, assumes cosmogonic preeminence (e.g., it is he who formed heaven and earth and gave Ea/Enki the idea of creating mankind); Marduk thereby becomes king of the pantheon, subsuming some 50 other gods into his own nature. George (2016b), p.11-16 of English text; Hundley (2013), 100; Finkel (2014), 243-244.
The idea that the Manethonian kings might also be labelled as spirits gains some support from the comparison done later in this section whereby some of the entries in Manetho’s king-section (Table 4, yellow fill) are tentatively equated with some of the entries in the “spirits and Followers of Horus” section of the Royal Canon of Turin (Table 3, cyan fill). On the other hand, the possible spirit-only subtotal in the Canon (Table 3, 3.4) suggests that this source may consider the spirits (Table 3, 3.2-3) to be distinct from the rulers tentatively identified with the Manethonian kings (Table 3, 3.5-6).


Tallet & Laisney (2012), 385-387; these authors claim that hieroglyphs giving the name of the city above the name of Iry-Hor are very clear (their Fig., 9, which includes a photo). Others complain that the symbol for “walls” is incomplete, insofar as one side (seemingly the base) is missing, allowing this predynastic instance of the city name to be disputed; Heagy (2014), 76. Other evidence shows that Memphis may well have been founded near the end of the Naqada II period [Wilkinson (1999), 293 & 309-313] and that Iry-Hor was recognised in Lower as well as Upper Egypt [Ciałowicz (2013), 63 & Fig. 6.15].

Mark (1997), 92, remarks that “the inh’hj sign was sometimes abbreviated to inh or the Wall.” For a recent discovery that strengthens this claim, see Verner (2012); note that in this 5th-Dynasty example the wall glyph is not the usual O36 but rather O33, the palace-façade symbol, suggesting that the walls of Memphis were of mudbrick with complex niching.

Von Beckerath (1956), 8.

Helck (1992), 161-162.


Thinis is the last capital to be mentioned in the mythological sections of the Turin Canon and Manetho’s king-list, and in both it represents the last mention of “human” kings before the dynastic/historical section commences.

O’Connor (2009), 147


E.g., Baines (1995), 127; see the recent discussion by Heagy (2014), 76. Although the Two Ladies first appeared as a concept during the reign of Aha, most scholars accept that a nb.ty name for the king did not appear until toward the end of Dynasty 1; Wilkinson (1999), 174. It began as an additional part of the nsw bi.ty name and then became a title in its own right; Wilkinson (1999), 171 & 174-175. It became a formal element of the king’s titulary only in the time of Semerkhet, the penultimate king of Dynasty 1; Heagy (2014), 64. It is interesting that – apart from the use of different determinatives – the name for the king’s titulary, nb.t, is identical to the name of one of the Two Ladies, namely that of the vulture-goddess Nekhbet; Faulkner (1962), 138.

Cervelló-Autuori (2003), 171-172.


For Ity, David & David (1992), 41; for Itet, Cervelló-Autuori (2003), 172.

Cervelló-Autuori (2003), 172-173.


Historical kings of Dynasty 1 from Wengrow (2006), 276 (Table 5).

Cervelló-Autuori (2003), 173.

Waddell (1964), 28-29; Verbrugghe & Wickersham (1996), 132 & 188.

CF1 r.III.2; Wilkinson (2000), 193-194. The various correspondences of the last four kings of the 1st Dynasty, including Semerket, are presented by Cervelló-Autuori (2003), 171.

Chen (2013), 129.

Sparks (2005), 313.

Sparks (2005), 313. In this version there is no mention of Atrahasis being granted immortality, although it could have been in a portion of the text that is now lost; Foster, “Atra-ählen,” Context of Scripture Online 1.130, online at https://referenceworks.brillonline.com/entries/context-of-scripture/*-aCOSB_1_130.
Chen (2013), 163. Finkel (2014), 93, claims that Atrahasis and his family are made immortal; on p.95 he reveals that the Ark Tablet has Ea/Enki say “Atra-hasīs, pay heed to my advice / That you may live for ever!”


Sparks (2005), 310-311.

ETCSL (2003) “The Lament for Sumer and Urim,” Translation t.2.2.3, lines 364-370, online at http://etcsl.orinst.ox.ac.uk/cgi-bin/etcsl.cgi?text=t.2.2.3#. This text, in turn, is modelled on the Curse of Akkad, which was mentioned in Section 4.1; Leick (2001), 138.

Chen (2013), 234-235.

Leick (2001), 147.


Chen (2013), 130, 151 & 194. Ziusudra is probably king of Shuruppak, although the city name has been lost; Kramer (2011a), 27. Other scholars think that, like the Sumerian King List, early versions of this myth may have included a list of antediluvian rulers; Sparks (2005), 310.

Presumably he instructs him to build a boat, and how to do so, although this section has been lost. Berossos, writing in the Hellenistic period, does describe the boat of Xisuthros (Ziusudra) as part of his re-telling of the Flood myth; Verbrugghe & Wickersham (1996), 50.

Chen (2013), 162-163, although on p.169 he suggests that human mortality – Ziusudra excepted – may have been instigated along with the Flood.

Chen (2013), 152 (incl. fn. 30) & 177.

Sparks (2005), 316-317.

George (1999), 88-95; Finkel (2014), 214.

Utnapishtim of Shuruppak is introduced as the “son of Ubar-Tutu” [Gilgamesh XI, line 23; George (1999), 89], consistent with the position of his alter ego Ziusudra as the successor of Ubartutu, king of Shuruppak, in several versions of the Sumerian King List (Table 1). Utnapishtim also has a palace to give away [Gilgamesh XI, lines 95-96; George (1999), 91]. In reality, as opposed to myth, Shuruppak’s heyday was in the Early Dynastic period and its abrupt demise was caused not by flood but by fire; Leick (2001), 61-62 & 78.

Chen (2013), 178 (fn. 90) posits the flood-hero’s wife as a late development.

Chen (2013), 197-254.

Chen (2013), 197-252, esp. 251-252.

Hornung (1982), 191.


Ockinga (1996), 79.

Ockinga (1996), 80; Taylor (2003), 326-327.

Assmann (2002), 301. For example, Wenamon refers to the Tanite king and queen, Smendes and Tanetamon, as “the planners Amon has installed in the north of his land;” Wente (2003), 121.

Sparks (2005), 326.

In some versions, Sekhmet.

Moyer (2013), 218 fn. 20.

Hallo (1971), 36.

Assmann (2001), 123.


For the Egyptian state, “Historical foundation dates vary widely and recent estimates range from 3400 to 2900 BCE;” Dee et al. (2013), 2. The start of the 1st Dynasty coincides with the onset of the Naqada IIIC phase, which has been radiocarbon dated to 3085 cal BCE; Stevenson (2016), 425 (Table 2), from Dee et al. (2013), 5. Dee et al. (2013), 5 (Table 1), identify state formation with the accession of Aha, an event that they carbon-date to 3111-3045 cal BCE (68% lpd range). Accordingly, a slightly earlier date-range would be warranted for the accession of his predecessor Narmer, whom these authors admit “most probably held
political control over the whole state;” Dee et al. (2013), 2. Using conventional scholarship, Wilkinson (1999), 155, dates the unification of Egypt to ca. 3100 BCE and Wengrow (2006), 273 (Table 2), to ca. 3060 BCE.

286 The local scripts, of course, took very different forms: cuneiform in Mesopotamia, hieroglyphs in Egypt. On the invention of the latter, see Wengrow (2011).


288 The Upper Tigris in particular has a very steep gradient; for most of its path north of Baghdad the slope is 50-56 cm per km. In spate, the Tigris at Baghdad has been known to carry eighty times the water volume carried at low water, and, in full flood, to reach a water velocity of 10 knots; the river’s volume may double in just 48 hours. In consequence, the river bed of the Tigris is a much deeper channel than that of the Euphrates. Potts (1997), 7-9.

289 Full spate occurred in March/April for the Tigris and April/May for the Euphrates. The Mesopotamian barley harvest took place during late March/early April in Old Babylonian times and late April/early May in the neo-Babylonian period. Spate therefore coincided with the barley harvest, making Egyptian-style cultivation by sowing directly into silt from the annual inundation impractical. Sowing actually took place in the autumn, i.e. Sep-Nov, after the heat of summer had abated. Potts (1997), 6-9 & 71-74.

290 Mallowan (1964), 64; Morozova (2005); Leick (2001), 9, 93, 145-146 & 152-153; Chen (2013), 254; Finkel (2014), 86-87, 310 & 331.

291 Chen (2013), 254.

292 Mallowan (1964), 66.


294 Moyer (2013), 218. For a detailed comparison of irrigation patterns in Upper Egypt and Mesopotamia, see Butzer (1976), 42. Although much better behaved than its Mesopotamian counterparts, the Nile was not always benign. In Egyptian prehistory, the end of the Paleolithic (14,000-10,000 BP) was a time of “Wild Niles;” Wetterstrom (1993), 180-181. Even during the Naqada period, the annual flood was “an especially chaotic moment in the cosmic cycle of renewal that required extraordinary powers to negotiate;” Friedman (2011), 36. In Dynasty 12, extraordinarily high floods occurred in the period 1840-1770 BCE; Wetterstrom (1993), 194. Destructively excessive Nile floods have occasionally occurred in recent times, as in 1818-1819, 1874 and 1878 CE; Butzer (1976), 51 and Wetterstrom (1993), 194.

295 Hart (2005), 117. The trauma associated with Osiris’s murder was such that references to the event are minimised in Egyptian writings, so Utterances 482 and 532 of the Pyramid Texts are uncharacteristically frank: “They have found Osiris, his brother Seth having laid him low in Nedit” [Utterance 532; Faulkner (2007), 200]; then, addressing Osiris directly, “Your eldest sister [Isis] is she who gathered up your flesh, who closed your hands, who sought you and found you on your side on the river-bank of Nedit” [Utterance 482; Faulkner (2007), 169-170]. On the etymology of the toponym Nedit from ndi (“to smite”) and its mapping onto the sacred topography of Abydos, see Smith (2008), 56-57.

296 Bárta & Dulíková (2019).

297 Faulkner (2007), 151.

298 Chester Beatty VIII vs. 4,1-7,5; Borghouts (1978), 7-10. A possible but less likely alternate reading is that one chest with all of the body parts visited the five locations sequentially, as understood by Ayali-Darshan (2017), 15.

299 At PsS.t-&A.wy, “Division of the Two Lands” (lines 8-9); Lichtheim (1973), 52; Assmann (2001), 138.

300 See Section 2.3. The Shabaka Stone preserves the Memphite Theology.

301 Hart (2005), 117 & 125.

302 Assmann (2002), 410; Smith (2017), 450.

303 pJumilhac III 19–V 9; Ayali-Darshan (2017), 16 (incl. fn. 52).

304 Plutarch’s De Iside et Osiride; Babbitt (1936), Section 13. Interestingly, in this section Plutarch assigns to the living Osiris a culture-hero role similar to that played in Mesopotamia by the antediluvian apkallu, who raised the Sumerians under King Alulim from their animal-like state: “One of the first acts related of Osiris in his reign was to deliver the Egyptians from their destitute and brutish manner of living. This he did by
showing them the fruits of cultivation, by giving them laws, and by teaching them to honour the gods. Later he travelled over the whole earth civilizing it...”.

305 Plutarch’s De Iside et Osiride; Babbitt (1936), Section 15. On the drifting and/or drowning of Osiris in the chest, see Vernus (1991).

306 Plutarch’s De Iside et Osiride; Babbitt (1936), Section 15-18.

307 Plutarch’s De Iside et Osiride; Babbitt (1936), Section 18. How Seth distributed Osiris’ body-parts around Egypt is not specified, but – as the country’s main transport artery – the Nile is likely to be involved; the river was certainly used for the one body-part that was eaten by fish. It seems inevitable that this “second death” in Plutarch’s narrative reflects some of the older material (mentioned earlier in the main text) in which Osiris’ body-parts were distributed throughout Egypt by the Nile. Both the Ramesside magical spell in pChester Beatty VIII and the narrative in pJamilhay contain elements of this kind.

308 Moyer (2013), 220.

309 Waddell (1964), 31; similarly Africanus, on p.27. For both, the phrase “after the Flood” – which is present in the Greek of the extant copies – appears in square brackets in the Loeb edition. In each case, it was probably added as a gloss to the original text by a redactor in the chain of transmission.


311 Brown-Driver-Briggs Hebrew and English Lexicon, excerpted under BibleHub – “8392. tebah” at https://biblehub.com/hebrew/8392.htm; also Finkel (2014), 146-147. Faulkner (1961), 304, gives Middle Egyptian ṭb as “crate” and ṭb.t as “vase,” so the sense of “container” is certainly present in the Egyptian root; the Thesaurus Linguae Aegyptiae (online at http://aaew.bbaw.de/tla/servlet/TlaLogin) gives one meaning of ṭb as “a box (for birds)” [Wb. 5, 360.12]. However, the usual Middle Egyptian word for “coffin” is krs.w; Faulkner (1961), 281. Finkel (2014), 147-149, suggests a new etymology in which the Hebrew word tévāh / tebah is related to ṭubbûh, the Akkadian word for a barge-like boat used for crossing rivers in Mesopotamia (as on British Museum tablet BM 32873).

312 On the likely temple symbolism of the shape and size of Noah’s ark, see Crawford (2013), 6-7. Similarly, the length, width and height of Utanapishtim’s cubic vessel (see main text and next note) correspond with those of the ziggurat of Marduk at Babylon; Crawford (2013), 8-9. That Utanapishtim’s boat was cubic rather than ziggurat-shaped is evident from Ea/Enki’s instruction “her length and breadth shall be the same, cover her with a roof, like the ocean below” and “ten rods [was] the height of her sides. At ten rods also, the sides of her roof were each the same length.” Tablet XI; George (1999), 89-90; see also Finkel (2014), 349.

313 The prototype vessel in the earliest versions of the Flood myth seems to have been a vesica piscis-shaped longboat, a form preserved in two extant accounts, one of which is the Sumerian Flood Myth. (Berossos’ Hellenistic retelling of this story – to which we will return at the end of this note – presents the proportions of Ziusudra’s boat as 5 x 2 stades; Verbrugghe & Wickersham (1996), 50; Finkel (2014), 154). The longboat was then superseded by a more robust circular design that resembles a giant coracle. Construction of the latter by Atrahasis is specified in great detail on the recently-discovered “Ark Tablet,” and – with hindsight – the same plan can now be discerned in other extant accounts, including the Old Babylonian version of Atrahasis. In the Standard version of the Epic of Gilgamesh the ark – now built by Utanapishtim – has become a cube, seemingly based on a misinterpretation of the injunction that the (circular) boat should be equal in length and breadth. In its final incarnation as Noah’s ark, the template comes full circle by reverting to a longboat design, in this case one that takes the form of a barge of 300 x 50 x 30 cubits (Gen 9:15). Since Berossos’ account of the Sumerian Flood Myth is only preserved in the writings of Jewish and Christian writers (e.g., the 5 x 2 stades size mentioned earlier was given by Syncellus), it is possible that the shape and proportions that these witnesses report for Ziusudra’s longboat have been influenced by the biblical specifications of Noah’s barge-like ark. Finkel (2014), 119-132, 153, 311-315 & 345-346; see also the previous note.

314 Tablet XI; George (1999), 89-90.

315 “Zi-ud-sura could drill an opening in the huge boat and hero Utu entered the huge boat with his rays;” ETCSL (2001) – The Flood Story: Translation, Segment D, lines 1-11, online at http://etcsl.orinst.ox.ac.uk/section1/tr174.htm. Atrahasis used pitch to seal the door in his boat (Foster, “Atra-asis,” Context of Scripture Online 1.130, ii 51; online at https://referenceworks.brillonline.com/entries/context-of-scripture/*-aCOSB_1_130); in the Ark Tablet, he instructs his shipwright “When I shall have gone into the boat, Caulk the frame of her door!” [lines 59-60; Finkel (2014), 384]. In the Atrahasis narrative (COS Online 1.130), the text section in which the flood-hero might have cut open a similarly-sealed window (or drilled an aperture in the roof) is lost in a lacuna.
On Nagû IV, the fourth of the eight world-encircling mountains on the *Babylonian Map of the World*, which lies north of Urartu; Finkel (2014), 261-276 & p.294.

Finkel (2014), 101 & 292; Verbrugghe & Wickersham (1996), 50. Consistent with this northern landfall, kingship too moves north – from Shuruppak to Kish – in the *Sumerian King List*. Paradoxically, the Mesopotamian ark might be expected to have been washed southward if the Flood is derived from the Euphrates and/or Tigris, as these rivers flow from north to south; Mallowan (1964), 69.


In Islam, the resting-place of Nuh's ark is Mount Judi, i.e. Mount Cudi Dagh (*Qur'an*, Sura 11:44); this tradition may date back to neo-Assyrian times. Mount Cudi Dagh lies to the north-west of Mount Niṣır, so once again the ark's voyage was northwards; Finkel (2014), 284-295.

Holley (1949).


Childbirth is often used in Ancient Near Eastern writing as a metaphor for crisis, including warfare, e.g. Jer 48:40-41 & 49:22-24; Bergmann (2008). The latter connection may in turn be related to the fact that the region’s polytheistic cultures often viewed a single goddess (e.g., Inanna/Ishtar in Mesopotamia, Hathor in Egypt) as responsible for both love/sex and war/destruction; Harris (1991), esp. 271, and Hart (2005), 64-65.

A large-scale slaughter by Hathor was mentioned earlier in this section of the main text.

Graham (2019).


Bell (1970). The 1.8 m value cited is an average for the last king of Dynasty 4, Shepseskaf, and the first two kings of Dynasty 5, Userkaf and Sahure (4 years in total). Bell’s survey shows that the progressive decrease in flood level began from the time of state formation, with the height being 2.8 m in the time of Djer (8 years), 2.4 m in the time of Den (15 years), and 2.3 m in the time of Semerkhet (5 years). The average flood height for mid-Dynasty 2 (Nynetjer; 13 years) was 1.77 m, equal to 1.50 m water if Nilometer readings have to be corrected for the cumulative rise in alluvium. At the Dynasty 2/3 changeover (Khasekhemwy, Nebka; 12 years) it was 1.83 m, equal to 1.50 m water after correction, and for early Dynasty 4 (Snefru, Khufu; 6 years) it was 1.78 m, equal to 1.36 m water after correction. If measurements were taken using a portable rather than a fixed Nilometer, no correction for alluvial accumulation should be made.

Friedman (2008), 1752.

Friedman (2008), 1751.

Stanley *et al.* 2003, p.399 (Fig. 2).

Stanley *et al.* 2003, p.399 (Fig. 2).

Butzer (1976), 27; cited in greater detail than here by Graham (2019).

Hawass & Verner (1996). As observed by Graham (2019), the indication of drought and/or famine on Sauhure’s causeway at Abusir is of greater significance to the present proposal since he ruled early in Dynasty 5 (as its second king) and built one of the sun-temples.

Graham (2019).

Improvements to irrigation control (consisting of levees, dams, overflow channels, sluice-gates, etc.) may have gone some way towards mitigating the lower flood levels of Dynasties 3-6, but the basic practice had been in place since Dynasty 1 and the system remained simple, crude, decentralised and limited in scope throughout the Old Kingdom. It was “inadequate to cope with excessive or deficient floods, or with long-term trends of decreasing flood volume;” Butzer (1976), 47, 50-51 & 107. As Kathryn Bard observes, “Possibly the state could have responded to environmental problems of low Nile floods with technological intervention, such as sponsoring irrigation works, but this did not happen;” Bard (2015), 176.

Graham (2019).


Helck (1966), 76-77; contested by Krauss (1996), 45 fn. 22.
Graham (2019).
Burn (2013), 36-37.
Burn (2013), 45-46.
Graham (2019).
Butzer (1976), 54-55; Hassan (2007), 357-378; Stanley et al. (2003); Welc & Marks (2014).
Tobin (2003b), 216.
Bell (1971), 9.
Butzer (1976), 55; Verbrugghe & Wickersham (1996), 137.
Verner (2014).
Woods (2012).
Start of col. iii; Jacobsen (1939), 84-85.
Woods (2012).
Although the Uruk epics date to the Ur III period, the emphasis on Utu may well reflect the reality at the time of the 1st Dynasty of Uruk; Woods (2012), 93.
Woods (2012), 80.
Woods (2012).
Monson & Lancaster (2014), overview chart inside back cover.
Weiss (1993); Kerr (1998); Cullen et al. (2000); Riehl (2008); Watanabe et al. (2019); NOAA – National Centers for Environmental Information – Drought and the Akkadian Empire, online at https://www.ncdc.noaa.gov/abrupt-climate-change/Drought%20and%20the%20Akkadian%20Empire.
Chen (2013), 248, provides a later (neo-Assyrian) formula for how the king should respond to drought in Akkad (K761, 1-5): “Seek the door of Adad, bring meal in front of it. May the offering of sesame-meal be pleasing to him. May he rain down a mist in the morning, so that the field will furtively bear water. When rain has become scarce in the land of Akkad, do this.”
Kramer (2011b); Sparks (2005), 284-285.
Van de Mieroop (2016), 76 & 348.
Kramer (2011b) 420 & 423, with two minor adjustments from Leick (2001), 106.
Van de Mieroop (2016), 76; Jacobsen (1939), 113.
Seneca, Naturales Quaestiones III, ch. 28-29; translation from Clarke (1910), 150-151.
Seneca, Naturales Quaestiones III, ch. 29; Clarke (1910), 151.
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Wallace-Wells (2019); IPCC (Intergovernmental Panel on Climate Change), online at https://www.ipcc.ch/.
Bárta (2018).
Interestingly, the Fon people of West Africa seem to have anticipated this principle in one of their proverbs; for them, “The same divination sign that proclaims longevity, health and prosperity also announces a person’s death;” Blier (1995), 95.

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